

S5700 Series Ethernet Switches

Hardware Description

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1 About This Document



Intended Audience

This document provides an overall description of the switch hardware, helping you obtain detailed information about each chassis, card, power module, fan module, cable, and optical module.

This document is intended for network engineers responsible for network design and deployment. You should understand your network well, including the network topology and service requirements.

Symbol Conventions

The symbols that may be found in this document are defined as follows.

Symbol	Description
	Indicates a potentially hazardous situation which, if not avoided, could result in equipment damage, data loss, performance deterioration, or unanticipated results. NOTICE is used to address practices not related to personal injury.
	Supplements the important information in the main text. NOTE is used to address information not related to personal injury, equipment damage, and environment deterioration.

Command Conventions

The command conventions that may be found in this document are defined as follows.

Convention	Description
Boldface	The keywords of a command line are in boldface .

Convention	Description
<i>Italic</i>	Command arguments are in <i>italics</i> .
[]	Items (keywords or arguments) in brackets [] are optional.
{ x y ... }	Optional items are grouped in braces and separated by vertical bars. One item is selected.
[x y ...]	Optional items are grouped in brackets and separated by vertical bars. One item is selected or no item is selected.
{ x y ... }*	Optional items are grouped in braces and separated by vertical bars. A minimum of one item or a maximum of all items can be selected.
[x y ...]*	Optional items are grouped in brackets and separated by vertical bars. Several items or no item can be selected.
&<1-n>	The parameter before the & sign can be repeated 1 to n times.
#	A line starting with the # sign is comments.

Disclaimer

- This document is designed as a reference for you to configure your devices. Its contents, including web pages, command line input and output, are based on laboratory conditions. It provides instructions for general scenarios, but does not cover all use cases of all product models. The examples given may differ from your use case due to differences in software versions, models, and configuration files. When configuring your device, alter the configuration depending on your use case.
- The specifications provided in this document are tested in a lab environment (for example, a certain type of cards have been installed on the tested device or only one protocol is run on the device). Results may differ from the listed specifications when you attempt to obtain the maximum values due to factors such as differences in hardware configurations and carried services.
- In this document, public IP addresses may be used in feature introduction and configuration examples and are for reference only unless otherwise specified.

Device Dimension Conventions

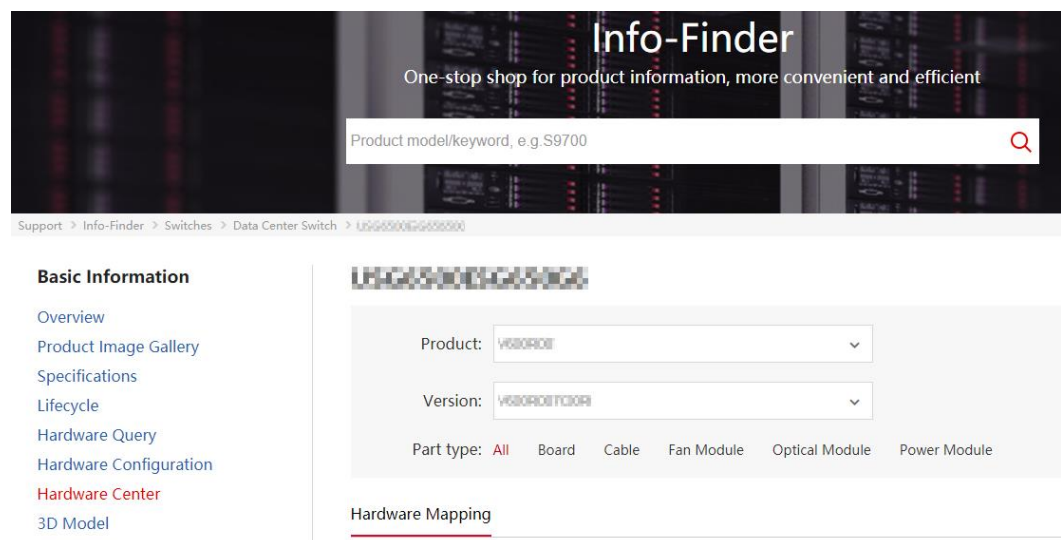
The dimensions described in this document are theoretically typical dimensions and do not include dimension tolerances.

2 Using the Info-Finder

Info-Finder is a tool platform, as shown in Figure 2-1. It allows you to search for key product information by product series and model. The key product information includes basic information such as the software specifications, life cycles, and hardware information, and operation and maintenance information such as the licenses, alarms, logs, commands, and MIBs. The hardware-related tools are as follows:

- **Product image gallery:** provides product photos and network element icons for you to produce design drawings and networking diagrams.
- **Hardware configuration:** automatically generates hardware configuration diagrams after you select components are required and calculates the weight, power consumption, and heat consumption.
- **Hardware center:** provides the technical specifications of devices and components, as well as the mapping between devices, components, and versions.
- **3D model:** Using this function, you can query product images, product overview, and component insertion/removal videos, enabling you to quickly obtain product information in one-stop mode.

Figure 2-1 Info-Finder GUI



 **NOTE**

The heat consumption of a device can be calculated as follows based on its power consumption:

Heat consumption (BTUs per hour) = Power consumption (W) x 3.4121

3

Version Requirements for Components

This document describes all the device models and modules supported in a version. To obtain accurate subscription information, visit <http://e.huawei.com> or contact Huawei local sales offices. You can also pay attention to the product change notices (PCNs) and lifecycle management bulletins on this website.

The figures in this document are for reference only.

4 Chassis

- 4.1 Chassis Overview
- 4.2 Naming Conventions
- 4.3 Port Numbering Conventions
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- 4.22 S5730-HI
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- 4.24 S5731S-S

- 4.25 S5731-H
- 4.26 S5731S-H
- 4.27 S5732-H
- 4.28 S5735-L
- 4.29 S5735S-L
- 4.30 S5735-L1
- 4.31 S5735S-L1
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- 4.33 S5735-L-I
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- 4.35 S5735-S-I
- 4.36 S5735S-S
- 4.37 S5735S-H
- 4.38 S5736-S

4.1 Chassis Overview

The S series fixed Ethernet switches integrate the access and transmission functions to provide reliable access/aggregation and high-quality transmission of services on enterprise networks. The switches are built on an integrated hardware platform, and the hardware system consists of the chassis, power module, fan module, extended cards, and Switch Control Unit (SCU).

The S series fixed Ethernet switches are available in a variety of models for you to choose based on your network requirements.

The S5700 series includes the S5700-LI, S5700S-LI, S5700-LI-BAT, S5710-LI, S5720-LI, S5720S-LI, S5700-SI, S5720-SI, S5730-SI, S5720S-SI, S5720I-SI, S5700-EI, S5710-EI, S5720-EI, S5730S-EI, S5700-HI, S5710-HI, S5720-HI, S5730-HI, S5731-L-RU, S5731S-L-RU, S5731-S, S5731S-S, S5731-H, S5731S-H, S5732-H, S5735-L, S5735-L-I, S5735S-L, S5735S-L-M, S5735-L1, S5735S-L1, S5735-S, S5735-S-I, S5735S-H, S5736-S, and S5735S-S subseries. The S5700-LI, S5700S-LI, S5700-LI-BAT, S5710-LI, S5720-LI, S5720S-LI, S5731-L-RU, S5731S-L-RU, S5735-L, S5735S-L, S5735-L1, S5735S-L1, and S5735S-L-M switches are Layer 2 switches, and all the other models in this series are Layer 3 switches.

4.2 Naming Conventions

Figure 4-1 S5700 switch naming conventions (applicable to S5731/S5732/S5735/S5736 models)

S5731S-H48T4XC-MA

A B C D E F G H I J K L M

NOTE

The device names in this figure are used as examples and do not represent specific devices.

The uplink and downlink ports mentioned in this document refer to the recommended usage of the port, and do not indicate that the corresponding port can be used only for the downlink or uplink.

Table 4-1 S5700 switch naming convention description (applicable to S5731/S5732/S5735/S5736 models)

Identifier	Description
A	Product type (1 character) The value is fixed at S, indicating that the device is an S series switch.
B	Role on the network (1 character) <ul style="list-style-type: none"> 6: aggregation switch 5: access switch
C	Market positioning (1 character) 7 : switch for enterprise networks
D	Product sub-series (2 characters) The left character indicates the generation, for example, S5720 and S5730. The right character is reserved.
E	Industry identifier (0 to 2 characters) <ul style="list-style-type: none"> By default, this field is left empty. S: channel distribution model
F	Level type (1 character) <ul style="list-style-type: none"> H: high-level S: standard L: lightweight
G	Number of downlink ports (1 or 2 characters)
H	Downlink port type (1 or 3 characters) <ul style="list-style-type: none"> T: GE electrical port

Identifier	Description
	<ul style="list-style-type: none"> • P: GE electrical port, supporting PoE+ or PoE++ • FT: FE electrical port and GE electrical port • ST: GE optical port and GE electrical port • U: GE electrical port, supporting PoE++ • UM: MultiGE electrical port, supporting PoE++ • XUM: MultiGE electrical port supporting PoE++ or 10GE optical port • X: 10GE optical port • S: GE optical port • Y: 25GE optical port • HB: GE or 10GE hybrid optical-electrical port
I	Number of uplink ports (1 character)
J	Uplink port type (1 character) <ul style="list-style-type: none"> • S: GE optical port • ST: GE optical port and GE electrical port • X: 10GE optical port • C: 100GE optical port • Q: 40GE optical port • Y: 25GE optical port • H: GE hybrid optical-electrical port • HT: GE hybrid optical-electrical port and GE electrical port
K	Card or installation type (0 or 1 character) <ul style="list-style-type: none"> • Empty: The switch does not support pluggable cards. • C or Z: The switch supports pluggable cards. • W: The device can be installed on a wall in a duct. <p>NOTE The S5731-H48T4XC-B contains the C flag, but does not support pluggable cards.</p>
L	Special function type (0 or 1 characters) <ul style="list-style-type: none"> • I: The switch supports a wide temperature range. • M: The switch supports monitoring functions. • B: The switch adopts the back-to-front airflow design. • Q: The switch uses natural heat dissipation. • RU: The device is a remote unit.
M	Power module type (0 to 2 characters) <ul style="list-style-type: none"> • Empty: The switch uses pluggable power modules. • A or A1: <ul style="list-style-type: none"> – The switch is sold with AC power module. – The switch uses built-in AC power module.

Identifier	Description
	<ul style="list-style-type: none"> - The switch uses power adapter. • D or D1: <ul style="list-style-type: none"> - The switch is sold with DC power module. - The switch uses built-in DC power module. <p>NOTE This convention is not applicable to the S5735-S4T2X-IA150G1, S5735-S8P2X-IA200H1, and S5735-S8P2X-IA200G1.</p>

Figure 4-2 S5700 switch naming conventions (applicable to S5700/S5710/S5720/S5730 models)

S5700S-52P-PWR-LI-24S-AC

A B C D E F G H I J K

 **NOTE**

The device names in this figure are used as examples and do not represent specific devices.

The uplink and downlink ports mentioned in this document refer to the recommended usage of the port, and do not indicate that the corresponding port can be used only for the downlink or uplink.

Table 4-2 S5700 switch naming convention description (applicable to S5700/S5710/S5720/S5730 models)

Identifier	Description
A	Switch
B	<ul style="list-style-type: none"> • 6: 10GE downlink ports • 5: GE downlink ports • 3: Layer 3 switch with 100M downlink ports • 2: Layer 2 switch with 100M downlink ports
C	7 : switch for enterprise networks
D	Product sub-series (such as 00 or 10)
E	<ul style="list-style-type: none"> • S: channel distribution model • SV2: enhanced channel distribution model • I: model supporting a wide temperature range
F	Maximum number of ports

Identifier	Description
	<p>NOTE</p> <p>On an S5710-EI switch (such as S5710-28C-EI), this field indicates the maximum number of fixed ports on the switch.</p>
G	<p>Uplink port type:</p> <ul style="list-style-type: none"> • C: The product supports pluggable cards and its uplink ports are provided by a pluggable card or are fixed 10GE ports. • PC: The product supports pluggable cards and its uplink ports are provided by a pluggable card or are fixed GE ports. • X: The product has fixed 10GE uplink ports. • TP: The uplink ports of the product include combo ports consisting of electrical and optical ports. • P: The uplink ports of the product are fixed GE optical ports. <p>NOTE</p> <p>If the product name does not contain this field, the switch has no uplink port.</p>
H	<ul style="list-style-type: none"> • PWR: The product supports Power over Ethernet (PoE). • PWH: The product supports PoE++. <p>NOTE</p> <p>If the product name does not contain this field, the switch does not support PoE.</p>
I	<p>Level type:</p> <ul style="list-style-type: none"> • LI: lightweight edition • SI: standard edition • EI: enhanced edition • HI: high-end edition, which supports high-performance operation, administration, and maintenance (OAM) and built-in real-time clock (RTC)
J	<p>Downlink port type:</p> <ul style="list-style-type: none"> • 24S: 24 downlink SFP optical ports • 48CS: 48 downlink compact SFP (CSFP) optical ports <p>NOTE</p> <p>If the product name does not contain this field, all downlink ports of the switch are electrical ports.</p>
K	<p>Power supply type:</p> <ul style="list-style-type: none"> • AC or AC1: switch using AC power supply • ACF: switch using AC power supply and supporting high-power PoE power modules • ACL: switch using AC power supply and having a built-in low-power PoE power module • DC or DC1: switch using DC power supply • BAT: battery LAN switch <p>NOTE</p> <p>Some product models that support pluggable power modules are sold with AC or DC power modules (standard configuration), and their product names contain "-AC" or "-DC". However, the silkscreen or nameplate on the chassis does not contain "-AC" or</p>

Identifier	Description
	<p>"-DC".</p> <p>For example, the S5720-56C-HI supports pluggable AC and DC power modules. If its standard configuration includes AC power modules, its product name is S5720-56C-HI-AC, but the name on its silkscreen or nameplate is still S5720-56C-HI.</p>

4.3 Port Numbering Conventions

Physical ports are numbered in the following way:

A stacked switch uses stack ID/subcard ID/port sequence number to identify physical ports.

- Stack ID: indicates the ID of a stacked switch. The value ranges from 0 to 8.
- Subcard ID: indicates the ID of a subcard.
- Port sequence number: indicates the sequence number of a port on the switch.

NOTE

For the S5731-H and S5731S-H optical-electrical hybrid models, the four 10GE optical-electrical hybrid ports and the four 10GE SFP+ Ethernet optical ports have the same sequence numbers and are distinguished by subcard ID. The subcard ID of the four 10GE optical-electrical hybrid ports is 1, and the subcard ID of the four 10GE SFP+ Ethernet optical ports is 2.

Table 4-3 Port numbering conventions

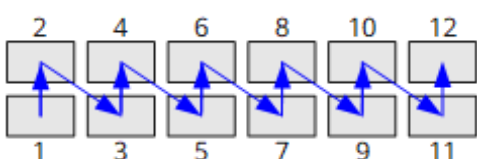
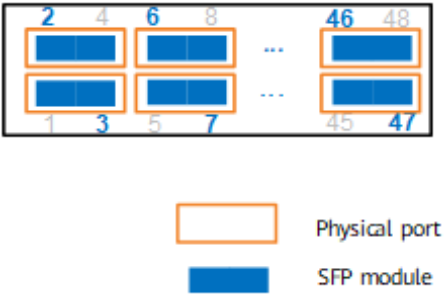
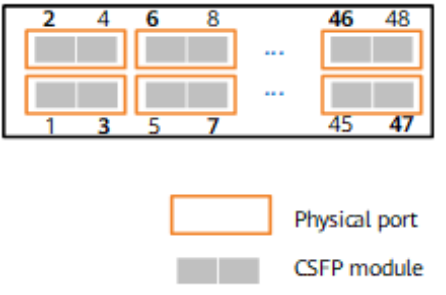
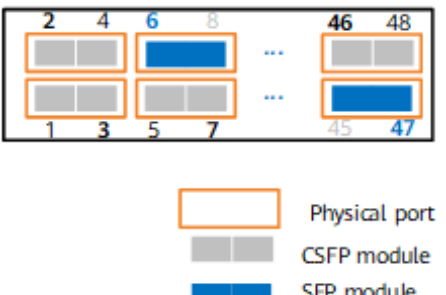
Port Numbering Diagram	Description
	<p>There are two rows of service ports on the device. These ports are numbered from bottom to top and left to right, starting from 1.</p> <p>For example, the port on the top left is numbered 0/0/2.</p> <p>Ports of different speeds are numbered separately. For example, the first 100M port is numbered ethernet 0/0/1, and the first GE port is numbered gigabitethernet 0/0/1. Other 100M and GE ports are numbered in ascending order following the two ports respectively.</p>

Table 4-4 describes the CSFP port numbering conventions.

Table 4-4 CSFP port numbering conventions

Port Numbering Diagram	Description
	<p>For example, an S5700-52X-LI-48CS-AC has 24 physical ports located in two rows of service ports, 12 ports in each row. When all the ports have SFP optical modules installed, the ports are numbered as follows:</p> <ul style="list-style-type: none"> The ports in the lower row are numbered starting with 3 from left to right, with an increment of 4. The ports in the upper row are numbered starting with 2 from left to right, with an increment of 4. <p>For example, with SFP optical modules installed, the first port at the lower left of the panel is numbered 0/0/3; the second port at the lower left is numbered 0/0/7; the first port at the upper left is numbered 0/0/2; the second port at the upper left is numbered 0/0/6.</p>
	<p>When all the ports have CSFP optical modules installed, each port functions as two ports. The switch has a total of 48 ports in this case. These ports are numbered starting with 1 from bottom to top, and left to right.</p> <p>For example, if a CSFP optical module is installed on the first port at the lower left, the port is split into two ports numbered 0/0/1 and 0/0/3. If a CSFP optical module is installed on the first port at the upper left, the port is split into two ports numbered 0/0/2 and 0/0/4.</p>
	<p>If some ports on the switch use CSFP optical modules and some use SFP optical modules, the ports are numbered following the respective numbering conventions.</p> <p>Assume that the first port at the lower left uses a CSFP optical module and the second port at the upper left uses an SFP optical module. In this case, the two ports derived from the first CSFP port are numbered 0/0/1 and 0/0/3, and the second SFP port is numbered 0/0/6.</p>

4.4 S5700-LI

4.4.1 S5700-10P-LI-AC

Version Mapping

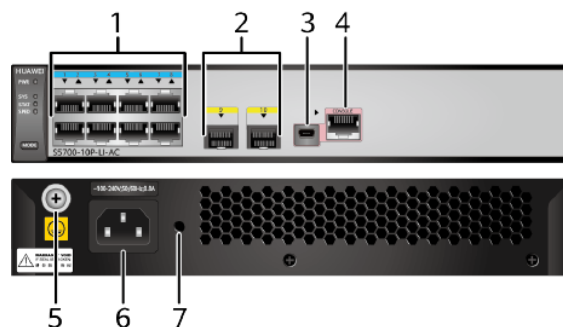
Table 4-5 lists the mapping between the S5700-10P-LI-AC chassis and software versions.

Table 4-5 Version mapping

Series	Model	Software Version
S5700-LI	S5700-10P-LI-AC	V200R002C00 to V200R012C00 versions NOTE This model does not match V200R003C02, V200R003C10, V200R005C00SPC500, V200R005C01, V200R005C02, V200R005C03, or V200R007C10.

Appearance and Structure

Figure 4-3 S5700-10P-LI-AC appearance



1	Eight 10/100/1000BASE-T ports	2	Two 1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules
3	One mini USB port	4	One console port
5	Ground screw NOTE It is used with a 9.1 Ground Cable.	6	AC socket NOTE It is used with an 9.8 AC Power Cable.

7	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.	-	-
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Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-6 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-6 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. Table 4-7 describes the attributes of a 1000BASE-X Ethernet optical port.

Table 4-7 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-8.

Table 4-8 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

Indicator Description

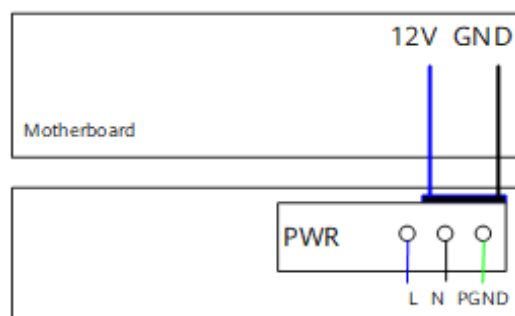
The S5700-10P-LI-AC has similar indicators to those of the S5700-28X-LI-AC, except that the S5700-10P-LI-AC does not have RPS and STCK indicators and two GE optical ports do not support the Speed mode. For details, see [Indicator Description](#).

Power Supply Configuration

The S5700-10P-LI-AC has a built-in power module and does not support pluggable power modules.

Figure 4-4 shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 4-4 Power supply mode of a built-in AC power module



L: live wire

N: neutral wire

PGND: protection ground wire

GND: 12 V reference ground

Heat Dissipation

The S5700-10P-LI-AC has no fans and uses natural heat dissipation.

Technical Specifications

Table 4-9 lists technical specifications of the S5700-10P-LI-AC.

Table 4-9 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	200 MB
Mean time between failures (MTBF)	44.41 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 250.0 mm x 180.0 mm (1.72 in. x 9.8 in. x 7.1 in.)
Weight (with packaging)	1.3 kg (2.87 lb)
Stack ports	Not supported
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput)	11.5 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	9.71 W

Item	Description
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02354036

4.4.2 S5700-10P-PWR-LI-AC

Version Mapping

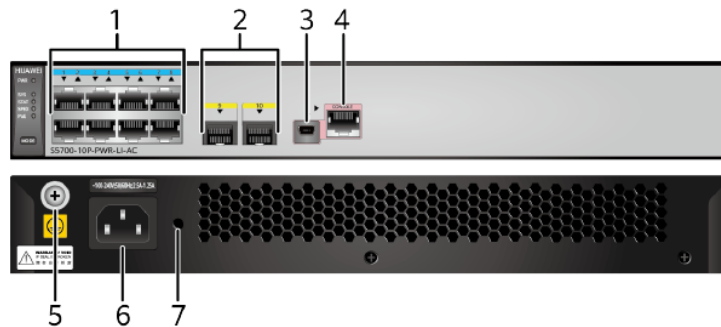
Table 4-10 lists the mapping between the S5700-10P-PWR-LI-AC chassis and software versions.

Table 4-10 Version mapping

Series	Model	Software Version
S5700-LI	S5700-10P-PWR-LI-AC	V200R002C00 to V200R012C00 versions NOTE This model does not match V200R001C01, V200R003C02, V200R003C10, V200R005C00SPC500, V200R005C01, V200R005C02, V200R005C03, or V200R007C10.

Appearance and Structure

Figure 4-5 S5700-10P-PWR-LI-AC appearance



1	Eight PoE+ 10/100/1000BASE-T ports	2	Two 1000BASE-X ports Applicable modules: • 10.5 GE eSFP Optical Modules • 10.10 GE SFP Copper Modules
3	One mini USB port	4	One console port
5	Ground screw NOTE It is used with a 9.1 Ground Cable.	6	AC socket NOTE It is used with an 9.8 AC Power Cable.
7	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-11 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-11 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. Table 4-12 describes the attributes of a 1000BASE-X Ethernet optical port.

Table 4-12 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-13.

Table 4-13 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

Indicator Description

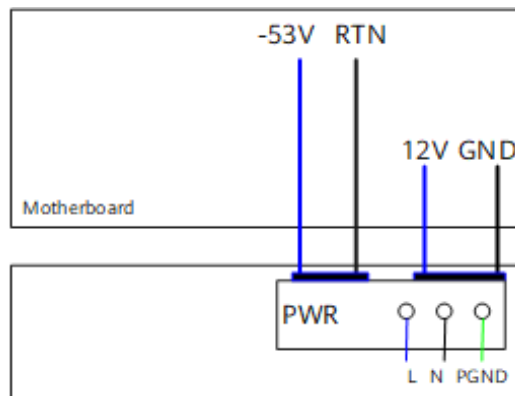
The S5700-10P-PWR-LI-AC has similar indicators to those of the S5700-28X-PWR-LI-AC, except that the S5700-10P-PWR-LI-AC does not have RPS and STCK indicators and two GE optical ports do not support the Speed mode. For details, see [Indicator Description](#).

Power Supply Configuration

The S5700-10P-PWR-LI-AC has a built-in power module and does not support pluggable power modules. The built-in power module can provide 124 W PoE power, which ensures full PoE power on 8 ports in compliance with 802.3af or on 4 ports in compliance with 802.3at. The switch cannot connect to an RPS power supply.

Figure 4-6 shows the power supply mode of a built-in AC PoE power module (PWR). The PWR module receives AC power from an external power source and provides two outputs: 12 V and -53 V. The 12 V output is provided for the chassis, and the -53 V output is provided for PDs.

Figure 4-6 Power supply by a built-in AC PoE power module



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground RTN: -53 V reference ground

Heat Dissipation

The S5700-10P-PWR-LI-AC has no fans and uses natural heat dissipation.

Technical Specifications

Table 4-14 lists technical specifications of the S5700-10P-PWR-LI-AC.

Table 4-14 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	200 MB
Mean time between failures (MTBF)	36.89 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999

Item	Description
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 320.0 mm x 220.0 mm (1.72 in. x 12.6 in. x 8.7 in.)
Weight (with packaging)	2.3 kg (5.07 lb)
Stack ports	Not supported
RTC	Not supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full PoE)	142.4 W (system power consumption: 18.4 W, PoE: 124 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	13.51 W
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)

Item	Description
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02354037

4.4.3 S5700-28P-LI-AC

Version Mapping

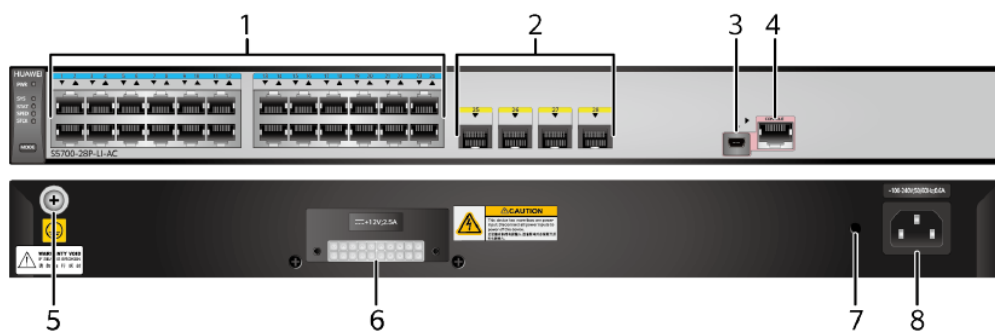
Table 4-15 lists the mapping between the S5700-28P-LI-AC chassis and software versions.

Table 4-15 Version mapping

Series	Model	Software Version
S5700-LI	S5700-28P-LI-AC	V200R001C00 to V200R012C00 versions NOTE This model does not match V200R001C01, V200R003C02, V200R003C10, V200R005C00SPC500, V200R005C01, V200R005C02, V200R005C03, or V200R007C10.

Appearance and Structure

Figure 4-7 S5700-28P-LI-AC appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 1000BASE-X ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules
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			<ul style="list-style-type: none"> • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.11 SFP Stack Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	One mini USB port	4	One console port
5	Ground screw NOTE It is used with a 9.1 Ground Cable.	6	RPS socket NOTE It is used with an 9.12 RPS Cable, which is not hot swappable.
7	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.	8	AC socket NOTE It is used with an 9.8 AC Power Cable.

Port Description

10/100/1000BASE-T Ethernet Electrical Port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-16 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-16 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X Ethernet Optical Port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. Table 4-17 describes the attributes of a 1000BASE-X Ethernet optical port.

Table 4-17 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
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Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-18.

Table 4-18 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

Indicator Description

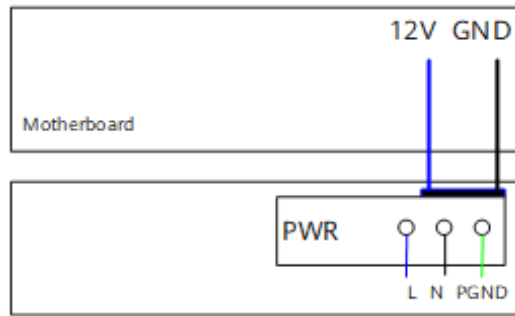
The S5700-28P-LI-AC has similar indicators to those on the S5700-28X-LI-AC, except that the S5700-28P-LI-AC does not have an RPS indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5700-28P-LI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

Figure 4-8 shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 4-8 Power supply mode of a built-in AC power module



L: live wire

N: neutral wire

PGND: protection ground wire

GND: 12 V reference ground

Heat Dissipation

The S5700-28P-LI-AC has no fans and uses natural heat dissipation.

Technical Specifications

Table 4-19 lists specifications of the S5700-28P-LI-AC.

Table 4-19 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	<ul style="list-style-type: none"> V200R001: 64 MB V200R002 and later versions: 200 MB
Mean time between failures (MTBF)	49.69 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	2.8 kg (6.17 lb)
Stack ports	<ul style="list-style-type: none"> V200R010 and earlier versions: the last two uplink 1000BASE-X optical ports

Item	Description
	<ul style="list-style-type: none"> V200R011 and later versions: four uplink 1000BASE-X optical ports
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput)	24 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> Tested according to ATIS standard EEE enabled No PoE power consumption 	19.3 W
Operating temperature	0 °C to 50 °C (32 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The operating temperature of the switch is 0 °C to 45 °C (32 °F to 113 °F) when it uses SFP optical modules with 80 km or longer transmission distances.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> EMC certification Safety certification Manufacturing certification
Part number	02353173

4.4.4 S5700-28P-LI-DC

Version Mapping

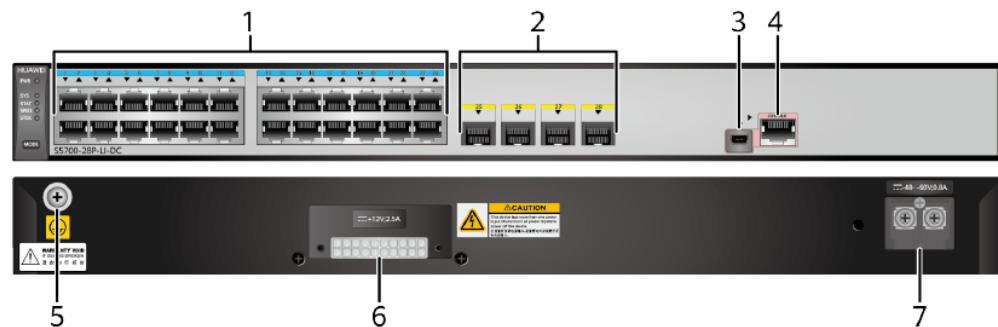
Table 4-20 lists the mapping between the S5700-28P-LI-DC chassis and software versions.

Table 4-20 Version mapping

Series	Model	Software Version
S5700-LI	S5700-28P-LI-DC	V200R001C00 to V200R012C00 versions NOTE This model does not match V200R001C01, V200R003C02, V200R003C10, V200R005C00SPC500, V200R005C01, V200R005C02, V200R005C03, or V200R007C10.

Appearance and Structure

Figure 4-9 S5700-28P-LI-DC appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 1000BASE-X ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.11 SFP Stack Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	One mini USB port	4	One console port

5	Ground screw NOTE It is used with a 9.1 Ground Cable.	6	RPS socket NOTE It is used with an 9.12 RPS Cable, which is not hot swappable.
7	DC power terminal NOTE It is used together with a 9.5 DC Power Cable (with OT and Cord End Terminals).	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-21 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-21 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. Table 4-22 describes the attributes of a 1000BASE-X Ethernet optical port.

Table 4-22 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-23.

Table 4-23 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

Indicator Description

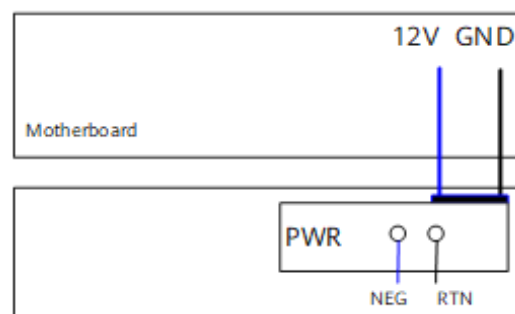
The S5700-28P-LI-DC has similar indicators to those on the S5700-28X-LI-AC, except that the S5700-28P-LI-DC does not have an RPS indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5700-28P-LI-DC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

Figure 4-10 shows the power supply mode of a single DC power module. The built-in DC power module (PWR) receives DC power from an external power source and provides a 12 V output to the chassis.

Figure 4-10 Power supply by a single DC power module



NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

Heat Dissipation

The S5700-28P-LI-DC has no fans and uses natural heat dissipation.

Technical Specifications

Table 4-24 lists technical specifications of the S5700-28P-LI-DC.

Table 4-24 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	<ul style="list-style-type: none"> V200R001: 64 MB V200R002 and later versions: 200 MB
Mean time between failures (MTBF)	49.69 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	2.8 kg (6.18 lb)
Stack ports	<ul style="list-style-type: none"> V200R010 and earlier versions: the last two uplink 1000BASE-X optical ports V200R011 and later versions: four uplink 1000BASE-X optical ports
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	-48 V DC to -60 V DC
Maximum voltage range	-36 V DC to -72 V DC
Maximum power consumption (100% throughput)	24 W
Typical power consumption (30%)	17.6 W

Item	Description
of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	
Operating temperature	0 °C to 50 °C (32 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The operating temperature of the switch is 0 °C to 45 °C (32 °F to 113 °F) when it uses SFP optical modules with 80 km or longer transmission distances.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-3000 m (0-9483 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02353831

4.4.5 S5700-28P-PWR-LI-AC

Version Mapping

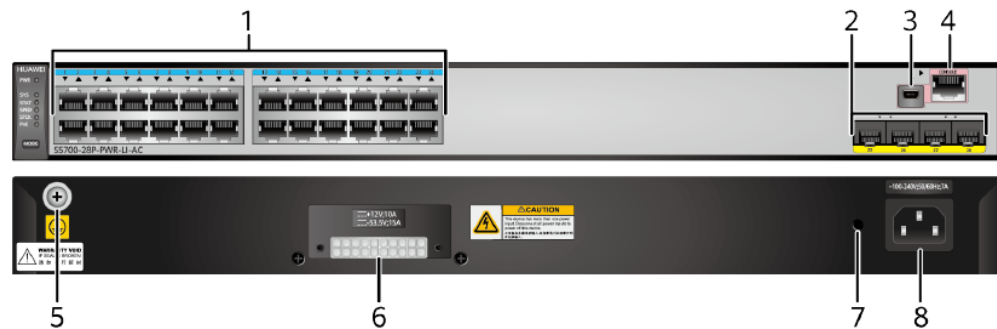
Table 4-25 lists the mapping between the S5700-28P-PWR-LI-AC chassis and software versions.

Table 4-25 Version mapping

Series	Model	Software Version
S5700-LI	S5700-28P-PWR-LI-AC	V200R001C00 to V200R012C00 versions NOTE This model does not match V200R001C01, V200R003C02, V200R003C10, V200R005C00SPC500, V200R005C01, V200R005C02, V200R005C03, or V200R007C10.

Appearance and Structure

Figure 4-11 S5700-28P-PWR-LI-AC appearance



1	Twenty-four PoE+ 10/100/1000BASE-T ports	2 Four 1000BASE-X ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.11 SFP Stack Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	One mini USB port	4 One console port
5	Ground screw NOTE It is used with a 9.1 Ground Cable.	6 RPS socket NOTE <ul style="list-style-type: none"> • It is used with an 9.12 RPS Cable which is not hot swappable. • A PoE switch can have an RPS power supply connected to this socket to provide inputs for system power supply and PoE power supply. The two inputs are independent of each other. The RPS power supply can also be used as a backup of the system power supply when it does not provide PoE power.
7	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.	8 AC socket NOTE It is used with an 9.8 AC Power Cable.

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-26 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-26 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. Table 4-27 describes the attributes of a 1000BASE-X Ethernet optical port.

Table 4-27 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-28.

Table 4-28 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards	RS-232

Attribute	Description
compliance	
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

Indicator Description

The S5700-28P-PWR-LI-AC has similar indicators to those on the S5700-28X-PWR-LI-AC, except that the S5700-28P-PWR-LI-AC does not have an RPS indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5700-28P-PWR-LI-AC has a built-in power module and does not support pluggable power modules.

It can provide PoE power supply and connect to an RPS1800 power supply for power redundancy. Table 4-29 lists its power supply configurations.

Table 4-29 Power supply configurations

Power Supply Configuration	Available PoE Power	Maximum Number of Ports (Fully Loaded)
No RPS used	369.6 W	<ul style="list-style-type: none">802.3af (15.4 W per port): 24802.3at (30 W per port): 12
RPS used	<ul style="list-style-type: none">V200R001: 369.6 WVersions later than V200R001: 800 W	<ul style="list-style-type: none">802.3af (15.4 W per port): 24802.3at (30 W per port): 24

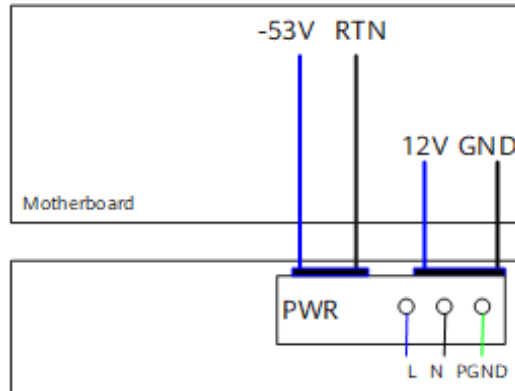
NOTE

When an S5700-28P-PWR-LI-AC switch of V200R001 connects to an RPS1800, the RPS1800 only provides PoE power backup and does not increase the switch's PoE power.

Figure 4-12 shows the power supply mode of a built-in AC PoE power module (PWR). The PWR module receives AC power from an external power source and provides two outputs: 12

V and -53 V. The 12 V output is provided for the chassis, and the -53 V output is provided for PDs.

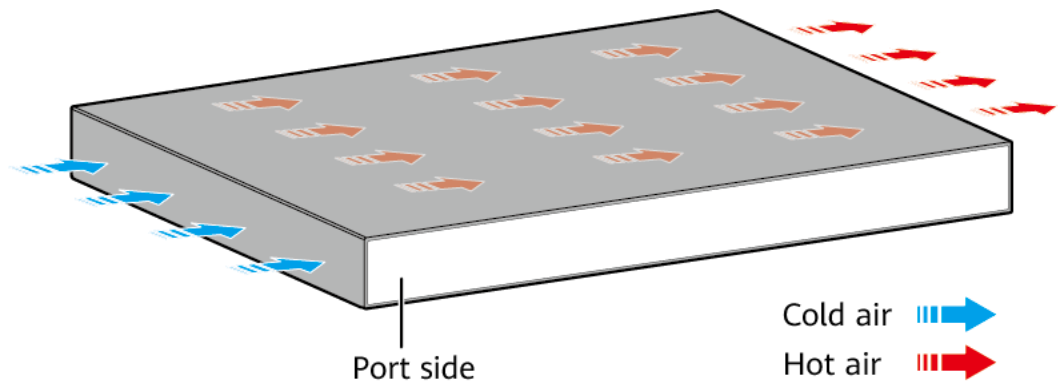
Figure 4-12 Power supply by a built-in AC PoE power module



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground RTN: -53 V reference ground

Heat Dissipation

The S5700-28P-PWR-LI-AC has three built-in fans for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-30 lists technical specifications of the S5700-28P-PWR-LI-AC.

Table 4-30 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	<ul style="list-style-type: none"> V200R001: 64 MB

Item	Description
	<ul style="list-style-type: none"> V200R002 and later versions: 200 MB
Mean time between failures (MTBF)	44.24 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 310.0 mm (1.72 in. x 17.4 in. x 12.2 in.)
Weight (with packaging)	4 kg (8.82 lb)
Stack ports	<ul style="list-style-type: none"> V200R010 and earlier versions: the last two uplink 1000BASE-X optical ports V200R011 and later versions: four uplink 1000BASE-X optical ports
RTC	Supported
RPS	Supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, 100% PoE loads, full speed of fans)	436.5 W (system power consumption: 66.5 W, PoE: 370 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> Tested according to ATIS standard EEE enabled No PoE power consumption 	29.2 W
Operating temperature	0 °C to 50 °C (32 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE

Item	Description
	When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 49.2 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02353175

4.4.6 S5700-52P-LI-AC

Version Mapping

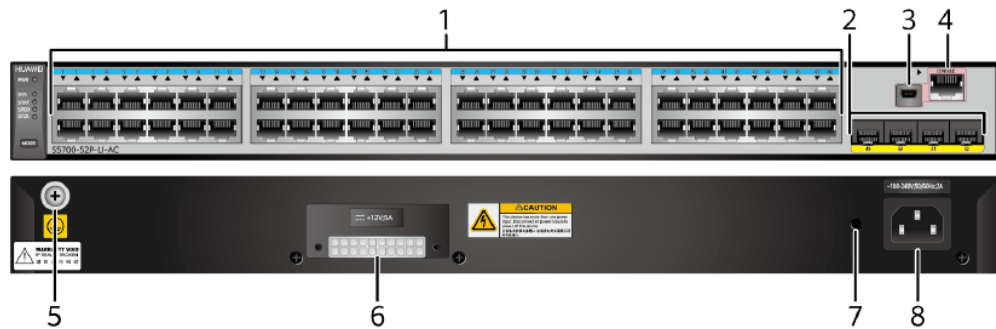
Table 4-31 lists the mapping between the S5700-52P-LI-AC chassis and software versions.

Table 4-31 Version mapping

Series	Model	Software Version
S5700-LI	S5700-52P-LI-AC	V200R001C00 to V200R012C00 versions NOTE This model does not match V200R001C01, V200R003C02, V200R003C10, V200R005C00SPC500, V200R005C01, V200R005C02, V200R005C03, or V200R007C10.

Appearance and Structure

Figure 4-13 S5700-52P-LI-AC appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 1000BASE-X ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.11 SFP Stack Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	One mini USB port	4	One console port
5	Ground screw NOTE It is used with a 9.1 Ground Cable.	6	RPS socket NOTE It is used with an 9.12 RPS Cable, which is not hot swappable.
7	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.	8	AC socket NOTE It is used with an 9.8 AC Power Cable.

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-32 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-32 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. Table 4-33 describes the attributes of a 1000BASE-X Ethernet optical port.

Table 4-33 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-34.

Table 4-34 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

Indicator Description

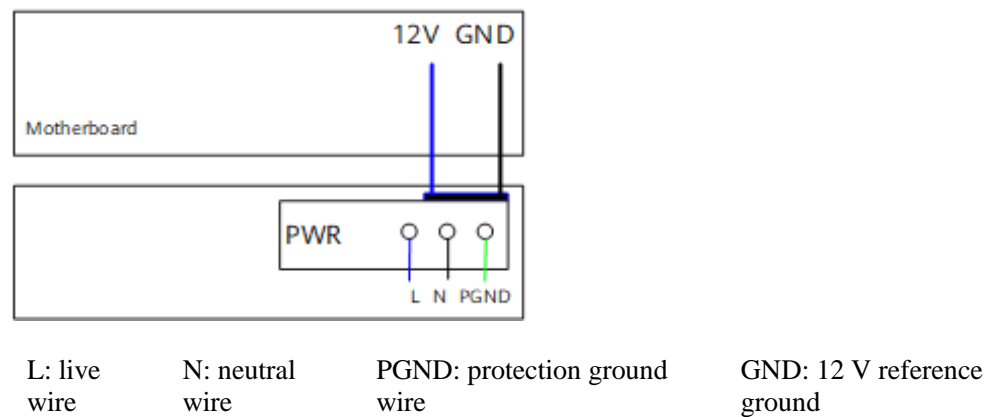
The S5700-52P-LI-AC has similar indicators to those on the S5700-28X-LI-AC, except that the S5700-52P-LI-AC does not have an RPS indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5700-52P-LI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

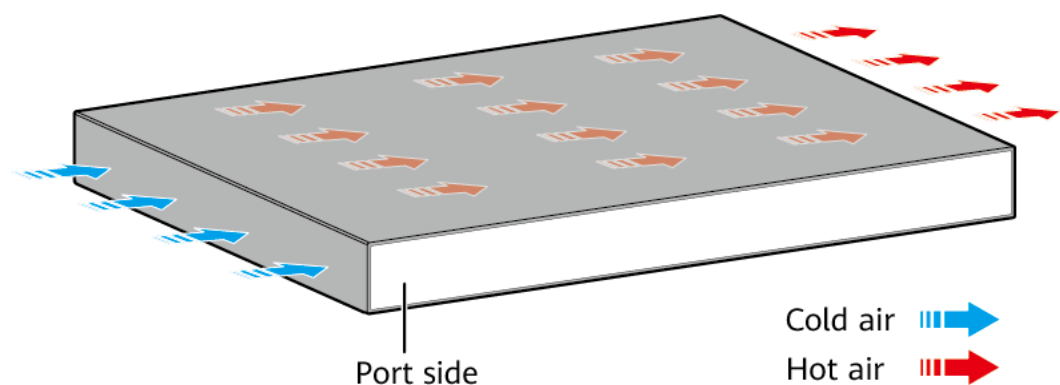
Figure 4-14 shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 4-14 Power supply mode of a built-in AC power module



Heat Dissipation

The S5700-52P-LI-AC has a built-in fan for forced air cooling. The airflow direction is left-to-right.



 **NOTE**

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-35 lists technical specifications of the S5700-52P-LI-AC.

Table 4-35 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	<ul style="list-style-type: none">V200R001: 64 MBV200R002 and later versions: 200 MB
Mean time between failures (MTBF)	39.26 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 310.0 mm (1.72 in. x 17.4 in. x 12.2 in.)
Weight (with packaging)	3.5 kg (7.72 lb)
Stack ports	<ul style="list-style-type: none">V200R010 and earlier versions: the last two uplink 1000BASE-X optical portsV200R011 and later versions: four uplink 1000BASE-X optical ports
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	48.4 W
Typical power	32.5 W

Item	Description
consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	
Operating temperature	0 °C to 50 °C (32 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 43.8 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02353174

4.4.7 S5700-52P-LI-DC

Version Mapping

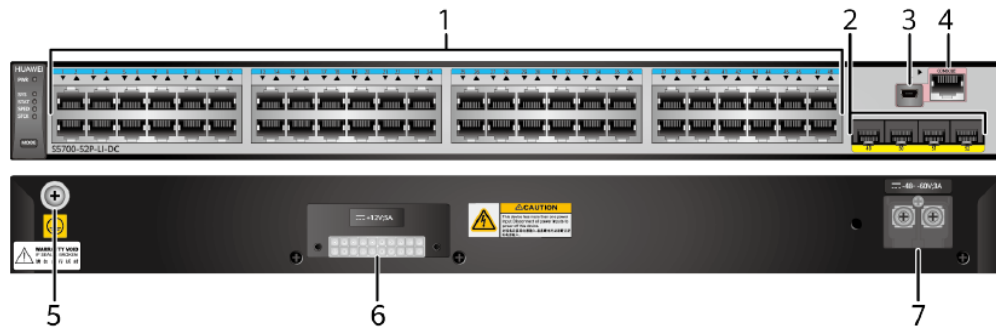
Table 4-36 lists the mapping between the S5700-52P-LI-DC chassis and software versions.

Table 4-36 Version mapping

Series	Model	Software Version
S5700-LI	S5700-52P-LI-DC	V200R001C00 to V200R012C00 versions NOTE This model does not match V200R001C01, V200R003C02, V200R003C10, V200R005C00SPC500, V200R005C01, V200R005C02, V200R005C03, or V200R007C10.

Appearance and Structure

Figure 4-15 S5700-52P-LI-DC appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 1000BASE-X ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.11 SFP Stack Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	One mini USB port	4	One console port
5	Ground screw NOTE It is used with a 9.1 Ground Cable.	6	RPS socket NOTE It is used with an 9.12 RPS Cable, which is not hot swappable.
7	DC power terminal NOTE It is used together with a 9.5 DC Power Cable (with OT and Cord End Terminals).	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-37 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-37 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. Table 4-38 describes the attributes of a 1000BASE-X Ethernet optical port.

Table 4-38 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-39.

Table 4-39 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

Indicator Description

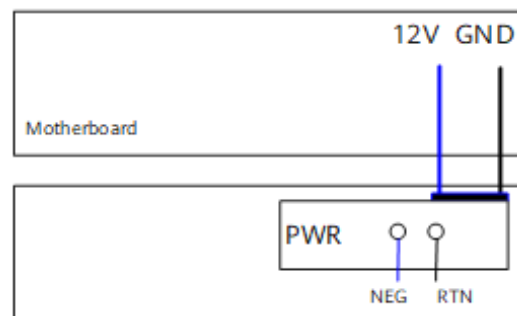
The S5700-52P-LI-DC has similar indicators to those on the S5700-28X-LI-AC, except that the S5700-52P-LI-DC does not have an RPS indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5700-52P-LI-DC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

Figure 4-16 shows the power supply mode of a single DC power module. The built-in DC power module (PWR) receives DC power from an external power source and provides a 12 V output to the chassis.

Figure 4-16 Power supply by a single DC power module



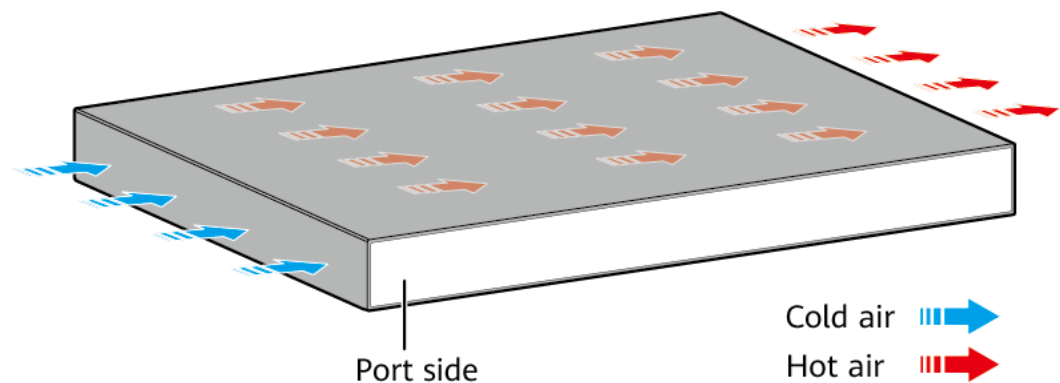
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

Heat Dissipation

The S5700-52P-LI-DC has a built-in fan for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-40 lists technical specifications of the S5700-52P-LI-DC.

Table 4-40 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	<ul style="list-style-type: none">V200R001: 64 MBV200R002 and later versions: 200 MB
Mean time between failures (MTBF)	39.26 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 310.0 mm (1.72 in. x 17.4 in. x 12.2 in.)
Weight (with packaging)	3.5 kg (7.72 lb)
Stack port	<ul style="list-style-type: none">V200R010 and earlier versions: the last two uplink 1000BASE-X optical portsV200R011 and later versions: four uplink 1000BASE-X optical ports
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	-48 V DC to -60 V DC
Maximum voltage range	-36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	48.3 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">Tested according to	30.3 W

Item	Description
ATIS standard <ul style="list-style-type: none"> • EEE enabled • No PoE power consumption 	
Operating temperature	0 °C to 50 °C (32 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 43.8 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02353830

4.4.8 S5700-52P-PWR-LI-AC

Version Mapping

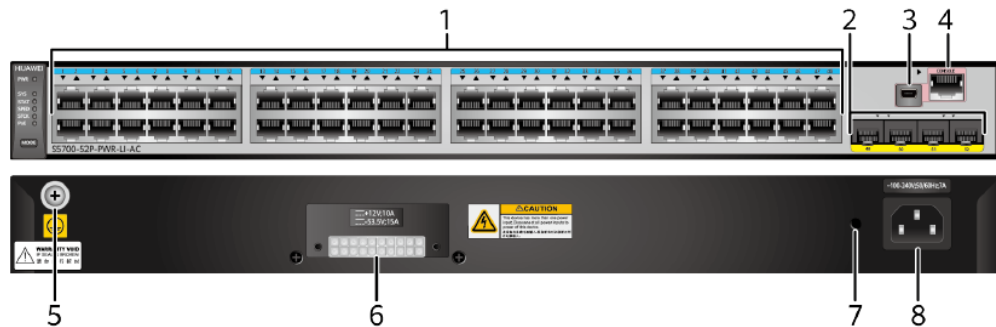
Table 4-41 lists the mapping between the S5700-52P-PWR-LI-AC chassis and software versions.

Table 4-41 Version mapping

Series	Model	Software Version
S5700-LI	S5700-52P-PWR-LI-AC	V200R001C00 to V200R012C00 versions NOTE This model does not match V200R001C01, V200R003C02, V200R003C10, V200R005C00SPC500, V200R005C01, V200R005C02, V200R005C03, or V200R007C10.

Appearance and Structure

Figure 4-17 S5700-52P-PWR-LI-AC appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	Four 1000BASE-X ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.11 SFP Stack Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	One mini USB port	4	One console port
5	Ground screw NOTE It is used with a 9.1 Ground Cable.	6	RPS socket NOTE <ul style="list-style-type: none"> • It is used with an 9.12 RPS Cable which is not hot swappable. • A PoE switch can have an RPS power supply connected to this socket to provide inputs for system power supply and PoE power supply. The two inputs are independent of each other. The RPS power supply can also be used as a backup of the system power supply when it does not provide PoE power.
7	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.	8	AC socket NOTE It is used with an 9.8 AC Power Cable.

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-42 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-42 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. Table 4-43 describes the attributes of a 1000BASE-X Ethernet optical port.

Table 4-43 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-44.

Table 4-44 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)

Attribute	Description
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

Indicator Description

The S5700-52P-PWR-LI-AC has similar indicators to those on the S5700-28X-PWR-LI-AC, except that the S5700-52P-PWR-LI-AC does not have an RPS indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5700-52P-PWR-LI-AC has a built-in power module and does not support pluggable power modules.

It can provide PoE power supply and connect to an RPS1800 power supply for power redundancy. Table 4-45 lists its power supply configurations.

Table 4-45 Power supply configurations

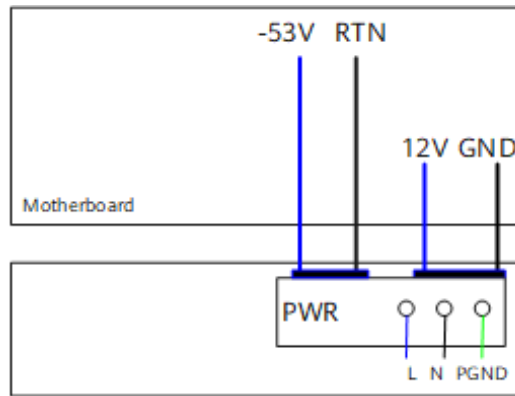
Power Supply Configuration	Available PoE Power	Maximum Number of Ports (Fully Loaded)
No RPS used	369.6 W	<ul style="list-style-type: none">802.3af (15.4 W per port): 24802.3at (30 W per port): 12
RPS used	<ul style="list-style-type: none">V200R001: 369.6 WVersions later than V200R001: 800 W	<ul style="list-style-type: none">802.3af (15.4 W per port): 48802.3at (30 W per port): 26

NOTE

When an S5700-52P-PWR-LI-AC switch of V200R001 connects to an RPS1800, the RPS1800 only provides PoE power backup and does not increase the switch's PoE power.

Figure 4-18 shows the power supply mode of a built-in AC PoE power module (PWR). The PWR module receives AC power from an external power source and provides two outputs: 12 V and -53 V. The 12 V output is provided for the chassis, and the -53 V output is provided for PDs.

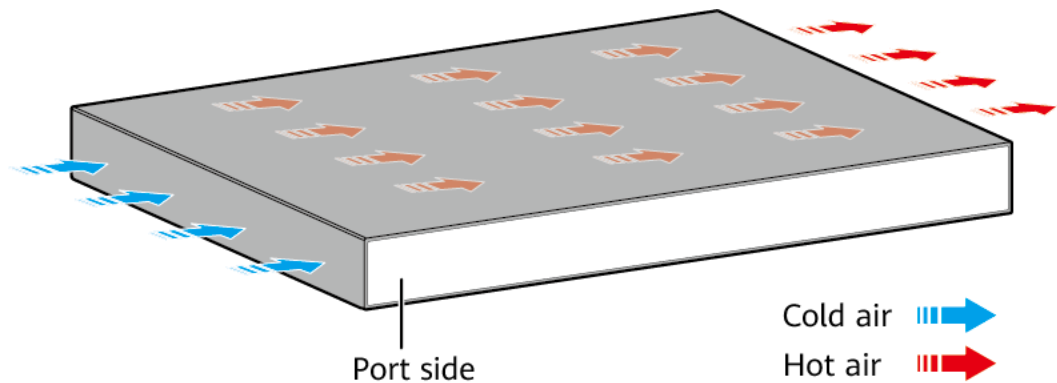
Figure 4-18 Power supply by a built-in AC PoE power module



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground RTN: -53 V reference ground

Heat Dissipation

The S5700-52P-PWR-LI-AC has three built-in fans for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-46 lists technical specifications of the S5700-52P-PWR-LI-AC.

Table 4-46 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	<ul style="list-style-type: none"> V200R001: 64 MB V200R002 and later versions: 200 MB
Mean time between	35.70 years

Item	Description
failures (MTBF)	
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 310.0 mm (1.72 in. x 17.4 in. x 12.2 in.)
Weight (with packaging)	6 kg (13.23 lb)
Stack port	<ul style="list-style-type: none"> V200R010 and earlier versions: the last two uplink 1000BASE-X optical ports V200R011 and later versions: four uplink 1000BASE-X optical ports
RTC	Supported
RPS	Supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, 100% PoE loads, full speed of fans)	464.5 W (system power consumption: 94.5 W, PoE: 370 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> Tested according to ATIS standard EEE enabled No PoE power consumption 	41.2 W
Operating temperature	0 °C to 50 °C (32 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).

Item	Description
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 49.2 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02353176

4.4.9 S5700-28TP-LI-AC

Version Mapping

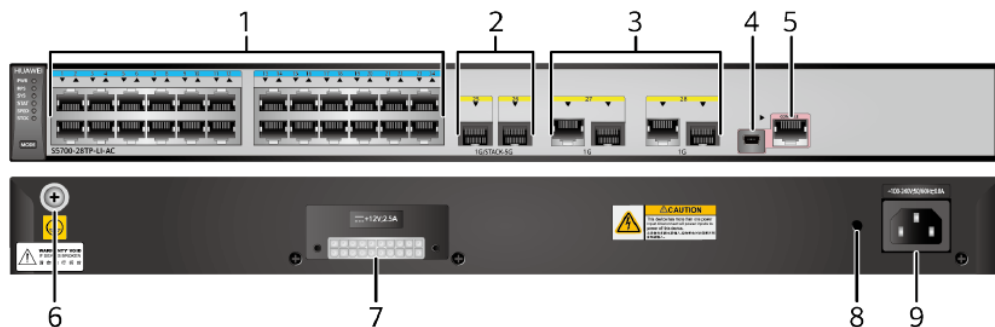
Table 4-47 lists the mapping between the S5700-28TP-LI-AC chassis and software versions.

Table 4-47 Version mapping

Series	Model	Software Version
S5700-LI	S5700-28TP-LI-AC	V200R003C10 to V200R012C00 versions NOTE This model does not match V200R005C00, V200R005C01, V200R005C02, V200R005C03, or V200R007C10.

Appearance and Structure

Figure 4-19 S5700-28TP-LI-AC appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Two 1000BASE-X ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.11 SFP Stack Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	Two combo ports (10/100/1000BASE-T + 100/1000BASE-X) Modules applicable to combo optical ports: <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules 	4	One mini USB port
5	One console port	6	Ground screw NOTE It is used with a 9.1 Ground Cable.
7	RPS socket NOTE It is used with an 9.12 RPS Cable, which is not hot swappable.	8	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.
9	AC socket NOTE It is used with an 9.8 AC Power Cable.	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-48 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-48 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
-----------	-------------

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. Table 4-49 describes the attributes of a 1000BASE-X Ethernet optical port.

Table 4-49 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-50.

Table 4-50 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

Indicator Description

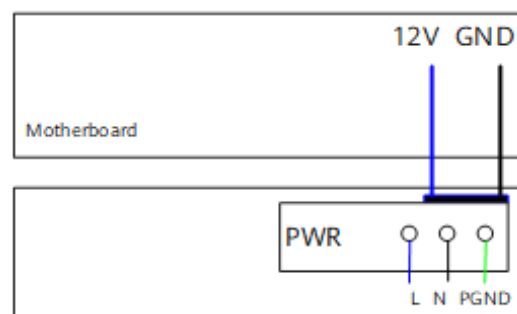
The S5700-28TP-LI-AC has the same types of indicators as the S5700-28X-LI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5700-28TP-LI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

Figure 4-20 shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 4-20 Power supply mode of a built-in AC power module



L: live wire

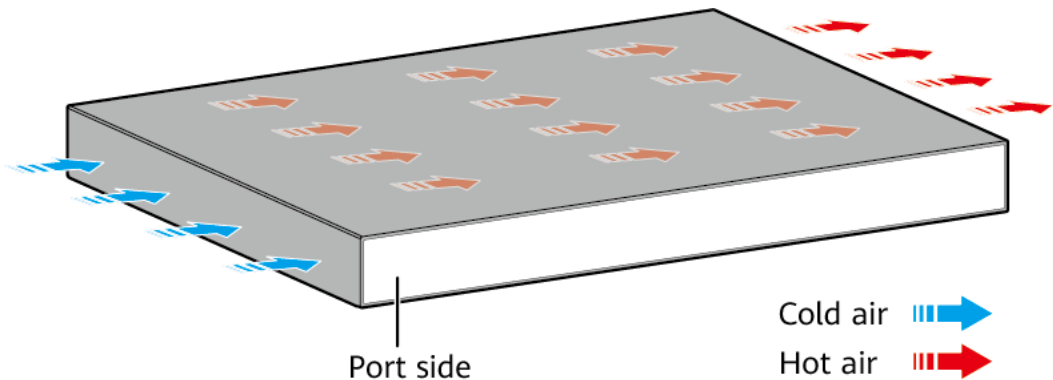
N: neutral wire

PGND: protection ground wire

GND: 12 V reference ground

Heat Dissipation

The S5700-28TP-LI-AC has a built-in fan for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-51 lists technical specifications of the S5700-28TP-LI-AC.

Table 4-51 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	200 MB
Mean time between failures (MTBF)	65.66 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	4.1 kg (9.04 lb)
Stack ports	Two uplink 1000BASE-X optical ports (non-combo ports)
RTC	Supported
RPS	Supported

Item	Description
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	26.4 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	23.4 W
Operating temperature	0 °C to 50 °C (32 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 39.5 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010536

4.4.10 S5700-28TP-PWR-LI-AC

Version Mapping

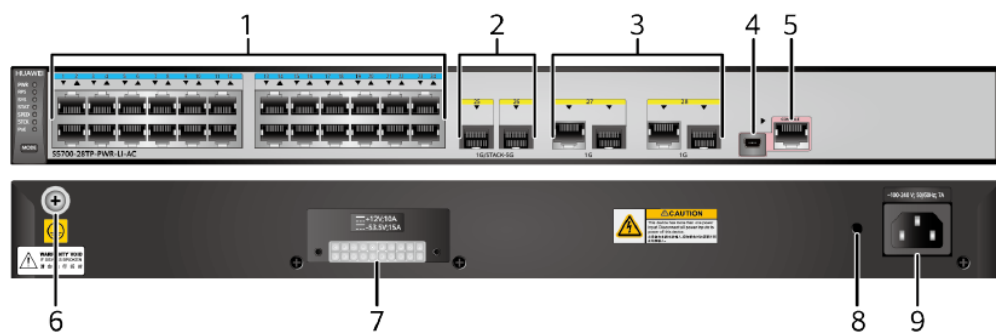
Table 4-52 lists the mapping between the S5700-28TP-PWR-LI-AC chassis and software versions.

Table 4-52 Version mapping

Series	Model	Software Version
S5700-LI	S5700-28TP-PWR-LI-AC	V200R003C10 to V200R012C00 versions NOTE This model does not match V200R005C00, V200R005C01, V200R005C02, V200R005C03, or V200R007C10.

Appearance and Structure

Figure 4-21 S5700-28TP-PWR-LI-AC appearance



1	Twenty-four PoE+ 10/100/1000BASE-T ports	2	Two 1000BASE-X ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.11 SFP Stack Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	Two combo ports (10/100/1000BASE-T + 100/1000BASE-X) Modules applicable to combo optical ports: <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules 	4	One mini USB port

	<ul style="list-style-type: none"> 10.9 GE-DWDM eSFP Optical Modules 		
5	One console port	6	Ground screw NOTE It is used with a 9.1 Ground Cable.
7	RPS socket NOTE <ul style="list-style-type: none"> It is used with an 9.12 RPS Cable which is not hot swappable. A PoE switch can have an RPS power supply connected to this socket to provide inputs for system power supply and PoE power supply. The two inputs are independent of each other. The RPS power supply can also be used as a backup of the system power supply when it does not provide PoE power. 	8	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.
9	AC socket NOTE It is used with an 9.8 AC Power Cable.	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-53 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-53 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. Table 4-54 describes the attributes of a 1000BASE-X Ethernet optical port.

Table 4-54 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-55.

Table 4-55 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

Indicator Description

The S5700-28TP-PWR-LI-AC has the same types of indicators as the S5700-28X-PWR-LI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

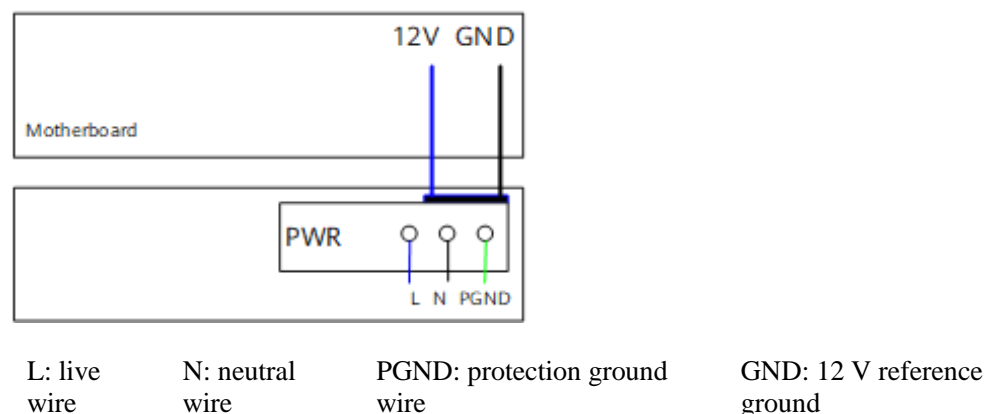
The S5700-28TP-PWR-LI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy. Table 4-56 lists its power supply configurations.

Table 4-56 Power supply configurations

Power Supply Configuration	Available PoE Power	Maximum Number of Ports (Fully Loaded)
No RPS used	369.6 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 12
RPS used	800 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 24

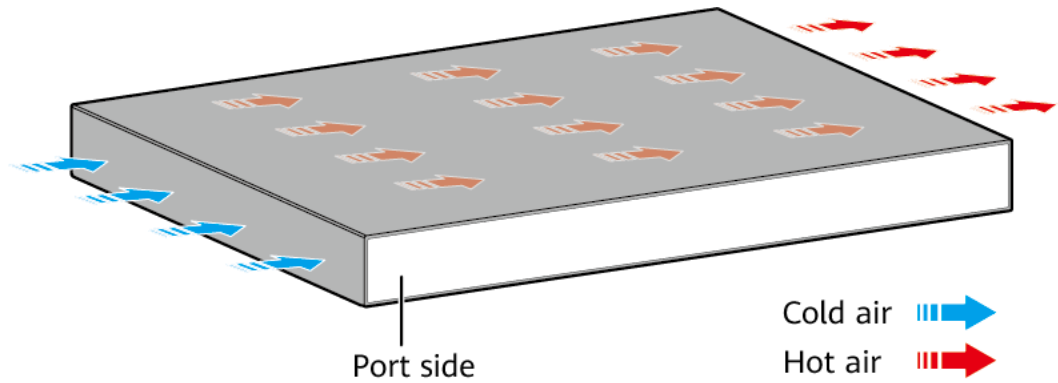
Figure 4-22 shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 4-22 Power supply mode of a built-in AC power module



Heat Dissipation

The S5700-28TP-PWR-LI-AC has two built-in fans for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-57 lists technical specifications of the S5700-28TP-PWR-LI-AC.

Table 4-57 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	200 MB
Mean time between failures (MTBF)	46.2 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 310.0 mm (1.72 in. x 17.4 in. x 12.2 in.)
Weight (with packaging)	5.8 kg (12.79 lb)
Stack ports	Two uplink 1000BASE-X optical ports (non-combo ports)
RTC	Supported
RPS	Supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage	90 V AC to 264 V AC, 47 Hz to 63 Hz

Item	Description
range	
Maximum power consumption (100% throughput, 100% PoE loads, full speed of fans)	469.7 W (system power consumption: 99.7 W, PoE: 370 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	32 W
Operating temperature	0 °C to 50 °C (32 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 48 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010537

4.4.11 S5701-28TP-PWR-LI-AC

Version Mapping

Table 4-58 lists the mapping between the S5701-28TP-PWR-LI-AC chassis and software versions.

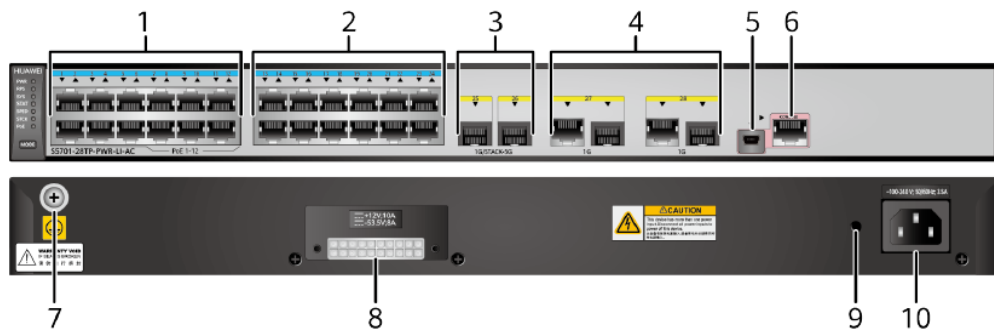
Table 4-58 Version mapping

Series	Model	Software Version
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Series	Model	Software Version
S5700-LI	S5701-28TP-PWR-LI-AC	V200R003C10 to V200R012C00 versions NOTE This model does not match V200R005C00, V200R005C01, V200R005C02, V200R005C03, or V200R007C10.

Appearance and Structure

Figure 4-23 S5701-28TP-PWR-LI-AC appearance



1	Twelve PoE+ 10/100/1000BASE-T ports	2	Twelve 10/100/1000BASE-T ports
3	Two 1000BASE-X ports Applicable modules and cables: <ul style="list-style-type: none"> 10.5 GE eSFP Optical Modules 10.7 GE-CWDM eSFP Optical Modules 10.9 GE-DWDM eSFP Optical Modules 10.10 GE SFP Copper Modules 10.11 SFP Stack Optical Modules 9.15 Copper Cable 9.3 Optical Fiber 9.14 Dedicated Stack Cable 	4	Two combo ports (10/100/1000BASE-T + 100/1000BASE-X) Modules applicable to combo optical ports: <ul style="list-style-type: none"> 10.4 FE SFP/eSFP Optical Modules 10.5 GE eSFP Optical Modules 10.7 GE-CWDM eSFP Optical Modules 10.9 GE-DWDM eSFP Optical Modules
5	One mini USB port	6	One console port
7	Ground screw NOTE It is used with a 9.1 Ground Cable.	8	RPS socket NOTE <ul style="list-style-type: none"> It is used with an 9.12 RPS Cable which is not hot swappable. A PoE switch can have an RPS power supply connected to this socket to provide inputs for system power supply

			and PoE power supply. The two inputs are independent of each other. The RPS power supply can also be used as a backup of the system power supply when it does not provide PoE power.
9	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.	10	AC socket NOTE It is used with an 9.8 AC Power Cable.

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-59 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-59 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. Table 4-60 describes the attributes of a 1000BASE-X Ethernet optical port.

Table 4-60 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-61.

Table 4-61 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

Indicator Description

The S5701-28TP-PWR-LI-AC has the same types of indicators as the S5700-28X-PWR-LI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

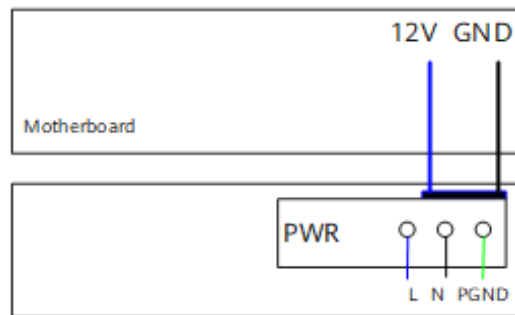
The S5701-28TP-PWR-LI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy. Table 4-62 lists its power supply configurations.

Table 4-62 Power supply configurations

Power Supply Configuration	Available PoE Power	Maximum Number of Ports (Fully Loaded)
No RPS used	184.8 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 12 802.3at (30 W per port): 6
RPS used	184.8 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 12 802.3at (30 W per port): 6

Figure 4-24 shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 4-24 Power supply mode of a built-in AC power module



L: live wire

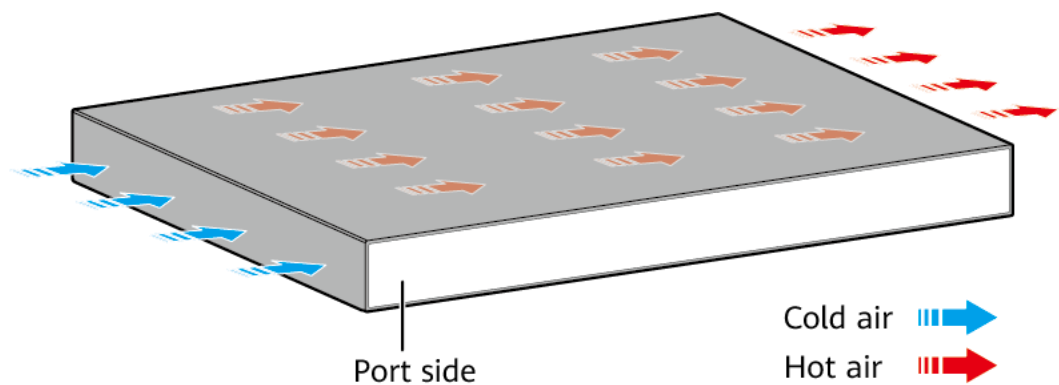
N: neutral wire

PGND: protection ground

GND: 12 V reference ground

Heat Dissipation

The S5701-28TP-PWR-LI-AC has two built-in fans for forced air cooling. The airflow direction is left-to-right.



 **NOTE**

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-63 lists technical specifications of the S5701-28TP-PWR-LI-AC.

Table 4-63 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	200 MB
Mean time between failures (MTBF)	45.91 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 310.0 mm (1.72 in. x 17.4 in. x 12.2 in.)
Weight (with packaging)	5.7 kg (12.57 lb)
Stack ports	Two uplink 1000BASE-X optical ports (non-combo ports)
RTC	Supported
RPS	Supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, 100% PoE loads, full speed of fans)	238.7 W (system power consumption: 53.9 W, PoE: 184.8 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to	29 W

Item	Description
ATIS standard <ul style="list-style-type: none"> • EEE enabled • No PoE power consumption 	
Operating temperature	0 °C to 50 °C (32 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 45 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010538

4.4.12 S5700-28X-LI-AC

Version Mapping

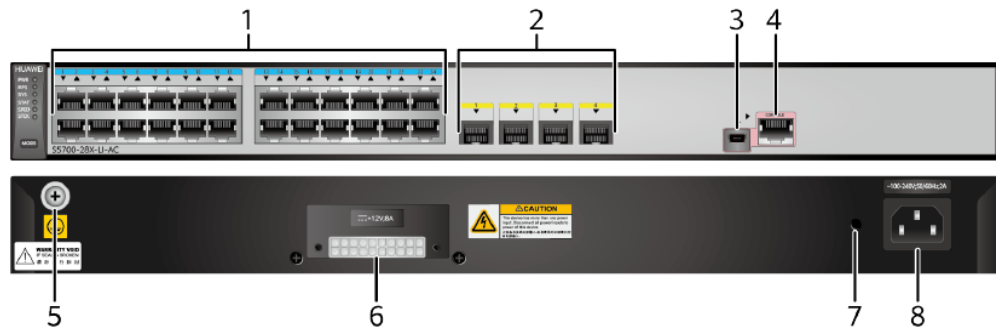
Table 4-64 lists the mapping between the S5700-28X-LI-AC chassis and software versions.

Table 4-64 Version mapping

Series	Model	Software Version
S5700-LI	S5700-28X-LI-AC	V200R002C00 to V200R012C00 versions NOTE This model does not match V200R003C02, V200R003C10, V200R005C00SPC500, V200R005C01, V200R005C02, V200R005C03, or V200R007C10.

Appearance and Structure

Figure 4-25 S5700-28X-LI-AC appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	One mini USB port	4	One console port
5	Ground screw NOTE It is used with a 9.1 Ground Cable.	6	RPS socket NOTE It is used with an 9.12 RPS Cable, which is not hot swappable.
7	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.	8	AC socket NOTE It is used with an 9.8 AC Power Cable.

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-65 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-65 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-66 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-66 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-67.

Table 4-67 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)

Attribute	Description
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

Indicator Description

NOTE

In V200R007 and later versions, you can hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
- If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
- If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore to the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 4-26 Indicators on the S5700-28X-LI-AC

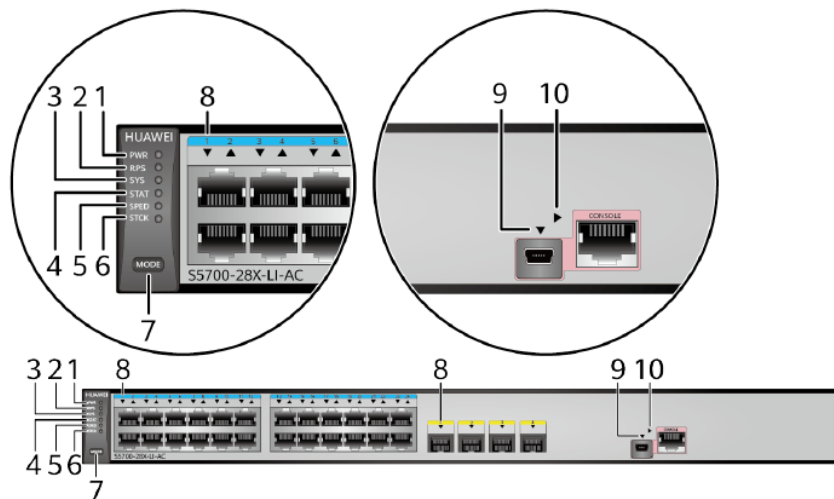


Table 4-68 Description of indicators on the switch

Number	Indicator/Button	Color	Description
1	PWR: internal power supply	-	Off: The switch is powered off.
		Green	Steady on: The switch is powered on.

Number	Indicator/Button	Color	Description
	indicator	Yellow	Steady on: The built-in power module is faulty, and the switch is powered by the RPS system.
2	RPS: RPS power supply indicator	-	Off: No RPS is connected to the switch.
		Green	<ul style="list-style-type: none"> Steady on: The RPS is in cold backup state. Blinking: The RPS is providing power for another device.
		Yellow	Blinking: The RPS is providing power for the switch and the built-in power module of the switch is faulty.
3	SYS: system status indicator	-	Off: The system is not running.
		Green	<p>Fast blinking:</p> <ul style="list-style-type: none"> The system is starting. The system is copying the system software and configuration file from a USB flash drive during a USB-based upgrade (only applicable to S5701-28X-LI-AC). <p>Slow blinking: The system is running normally.</p>
		Yellow	<p>Blinking:</p> <ul style="list-style-type: none"> The switch is in sleeping mode. During a USB-based upgrade, this indicator blinks after the switch downloads required files and restarts. At this time, the upgrade is successful and you can remove the USB flash drive (only applicable to S5701-28X-LI-AC). <p>NOTE The system can wake from the sleeping state if you press the MODE button. The S5700-10P-LI-AC does not support the sleeping function.</p>
		Red	<ul style="list-style-type: none"> Steady on: The system does not work normally after registration, or a fan or temperature alarm has been generated. Blinking: The system cannot be upgraded after a USB flash drive is inserted. The USB-based upgrade failed (only applicable to S5701-28X-LI-AC).
4	STAT: status	Green	<ul style="list-style-type: none"> Off: The status mode is not selected.

Number	Indicator/Button	Color	Description
	indicator		<ul style="list-style-type: none"> Steady on: The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
5	SPED: speed indicator	Green	<ul style="list-style-type: none"> Off: The speed mode is not selected. Steady on: The speed mode is selected. If the speed mode is selected, the service port indicator shows the port speed state. After 45 seconds, the service port indicators automatically restore to the status mode.
6	STCK: stack indicator NOTE This indicator has different states and meanings in different versions. Here are the indicator states and meaning in versions earlier than V200R003C00.	Green	<ul style="list-style-type: none"> Off: The stack mode is not selected. Steady on: The service port indicators show the stack information. After 45 seconds, the service port indicators automatically restore to the status mode. Blinking: The switch is the master switch in a stack or a standalone switch.
	STCK: stack indicator NOTE This indicator has different states and meanings in different versions. Here are the indicator states and meaning in V200R003C00 and later versions.	Green	If you are not changing the indicator mode (default): <ul style="list-style-type: none"> Off: The switch is in stack standby or slave state or the stacking function is not enabled on the switch. Blinking: The switch is a stack master switch or a standalone switch with the stacking function enabled.
			If you are changing the indicator mode: <ul style="list-style-type: none"> Off: The stack mode is not selected. Steady on: The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch. Blinking: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. After 45 seconds, the service port indicators automatically restore to the

Number	Indicator/Button	Color	Description
			status mode.
7	MODE: mode switch button	-	<ul style="list-style-type: none"> When you press this button once, the service port indicators change to the speed mode and show the speed of each service port. When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch. When you press this button a third time, the service port indicators restore to the default mode, and the STAT indicator turns green. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED indicator is off, and the STCK indicator is off or blinking green.</p>
8	Service port indicator <ul style="list-style-type: none"> GE electrical ports: The ports are numbered from bottom to top and left to right, starting with 1. SFP/SFP+ optical ports: Each port has an indicator above it. 	Meanings of service port indicators vary in different modes. For details, see Table 4-69.	
9	Mini USB indicator	Green	<ul style="list-style-type: none"> Off: The Mini USB port is not active, and the console port is active. Steady on: The Mini USB port is active. <p>When this indicator is on, the console indicator is off.</p>
10	Console indicator	Green	<ul style="list-style-type: none"> Off: The console port is not active, and the Mini USB port is active. Steady on (default): The console port is active. <p>When this LED is on, the Mini USB port</p>

Number	Indicator/Button	Color	Description
			indicator is off.

Table 4-69 Description of service port indicators in different modes (one indicator for each port)

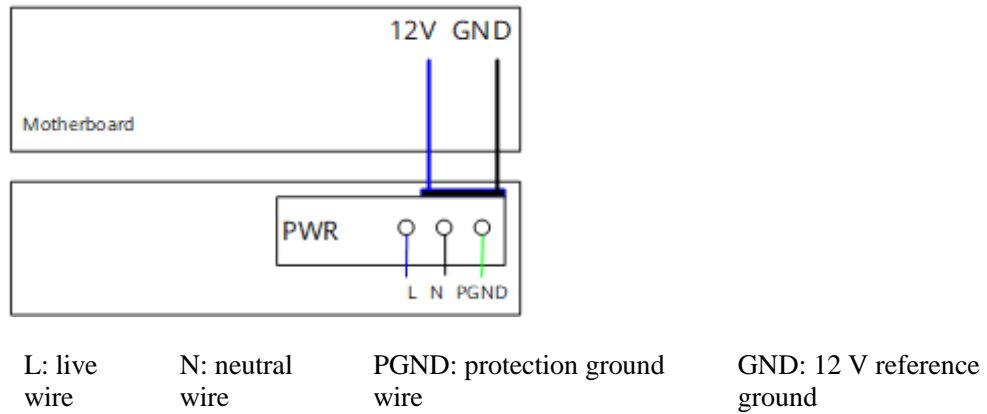
Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is blinking, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Power Supply Configuration

The S5700-28X-LI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

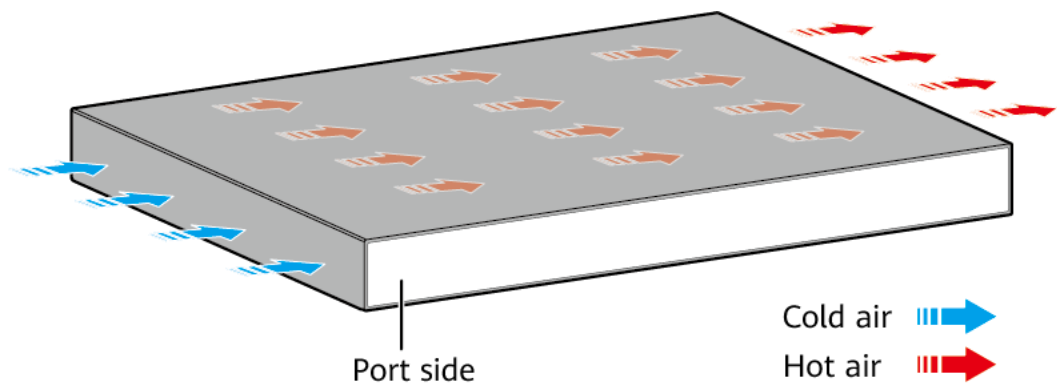
Figure 4-27 shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 4-27 Power supply mode of a built-in AC power module



Heat Dissipation

The S5700-28X-LI-AC has a built-in fan for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-70 lists technical specifications of the S5700-28X-LI-AC.

Table 4-70 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	200 MB
Mean time between failures (MTBF)	68.95 years
Mean time to repair (MTTR)	2 hours

Item	Description
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	3.4 kg (7.5 lb)
Stack ports	Four uplink 10GE SFP+ ports
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	41 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	29.7 W
Operating temperature	0 °C to 50 °C (32 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 44.9 dB(A)
Relative humidity	5% to 95%, noncondensing

Item	Description
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02354215

4.4.13 S5700-28X-LI-DC

Version Mapping

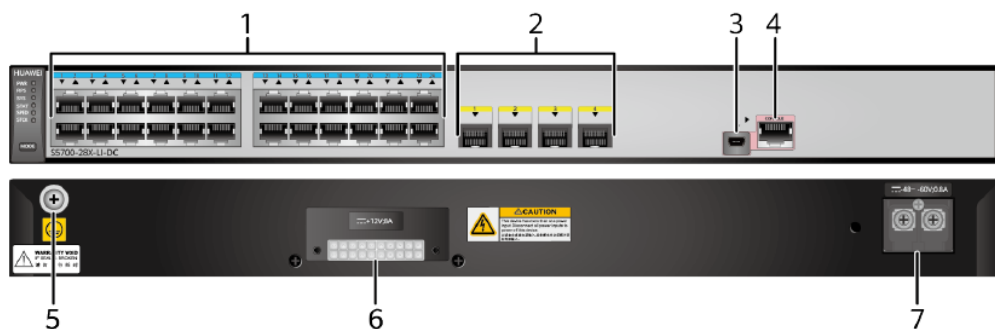
Table 4-71 lists the mapping between the S5700-28X-LI-DC chassis and software versions.

Table 4-71 Version mapping

Series	Model	Software Version
S5700-LI	S5700-28X-LI-DC	V200R002C00 to V200R012C00 versions NOTE This model does not match V200R003C02, V200R003C10, V200R005C00SPC500, V200R005C01, V200R005C02, V200R005C03, or V200R007C10.

Appearance and Structure

Figure 4-28 S5700-28X-LI-DC appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules
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			<ul style="list-style-type: none"> • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	One mini USB port	4	One console port
5	Ground screw NOTE It is used with a 9.1 Ground Cable.	6	RPS socket NOTE It is used with an 9.12 RPS Cable, which is not hot swappable.
7	DC power terminal NOTE It is used together with a 9.5 DC Power Cable (with OT and Cord End Terminals).	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-72 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-72 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-73 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-73 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-74.

Table 4-74 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

Indicator Description

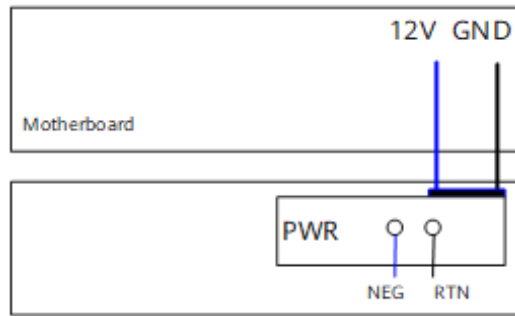
The S5700-28X-LI-DC has the same types of indicators as the S5700-28X-LI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5700-28X-LI-DC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

Figure 4-29 shows the power supply mode of a single DC power module. The built-in DC power module (PWR) receives DC power from an external power source and provides a 12 V output to the chassis.

Figure 4-29 Power supply by a single DC power module



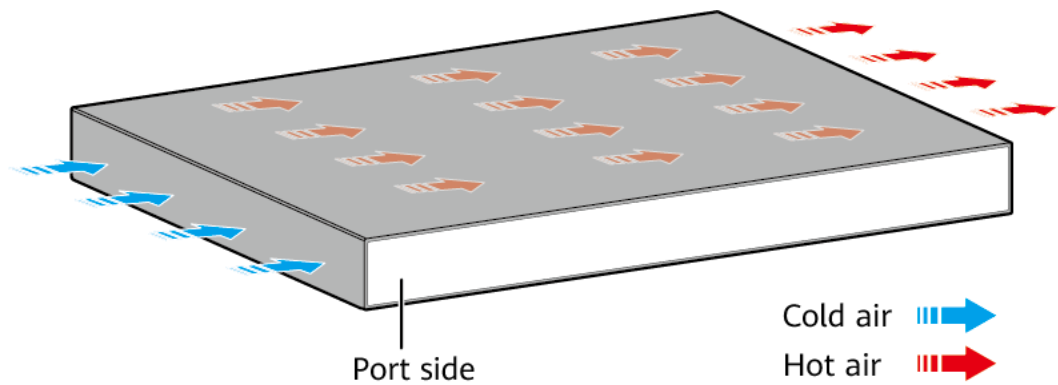
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

Heat Dissipation

The S5700-28X-LI-DC has a built-in fan for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-75 lists technical specifications of the S5700-28X-LI-DC.

Table 4-75 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	200 MB
Mean time between failures (MTBF)	68.95 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999

Item	Description
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	3.3 kg (7.28 lb)
Stack ports	Four uplink 10GE SFP+ ports
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	-48 V DC to -60 V DC
Maximum voltage range	-36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	42 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	30.7 W
Operating temperature	0 °C to 50 °C (32 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 44.9 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-2000 m (0-6562 ft.)

Item	Description
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02354234

4.4.14 S5700-28X-PWR-LI-AC

Version Mapping

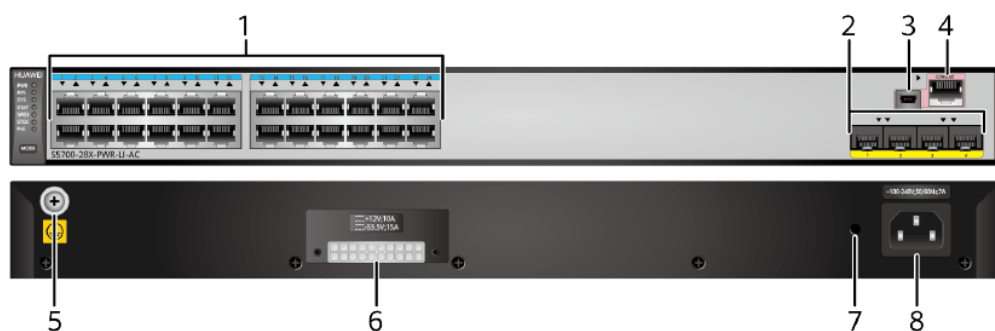
Table 4-76 lists the mapping between the S5700-28X-PWR-LI-AC chassis and software versions.

Table 4-76 Version mapping

Series	Model	Software Version
S5700-LI	S5700-28X-PWR-LI-AC	V200R002C00 to V200R012C00 versions NOTE This model does not match V200R003C02, V200R003C10, V200R005C00SPC500, V200R005C01, V200R005C02, V200R005C03, or V200R007C10.

Appearance and Structure

Figure 4-30 S5700-28X-PWR-LI-AC appearance



1	Twenty-four PoE+ 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules
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			<ul style="list-style-type: none"> • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	One mini USB port	4	One console port
5	Ground screw NOTE It is used with a 9.1 Ground Cable.	6	RPS socket NOTE <ul style="list-style-type: none"> • It is used with an 9.12 RPS Cable which is not hot swappable. • A PoE switch can have an RPS power supply connected to this socket to provide inputs for system power supply and PoE power supply. The two inputs are independent of each other. The RPS power supply can also be used as a backup of the system power supply when it does not provide PoE power.
7	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.	8	AC socket NOTE It is used with an 9.8 AC Power Cable.

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-77 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-77 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-78 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-78 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-79.

Table 4-79 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

Indicator Description

NOTE

In V200R007 and later versions, you can hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
- If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.

- If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore to the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 4-31 Indicators on the S5700-28X-PWR-LI-AC

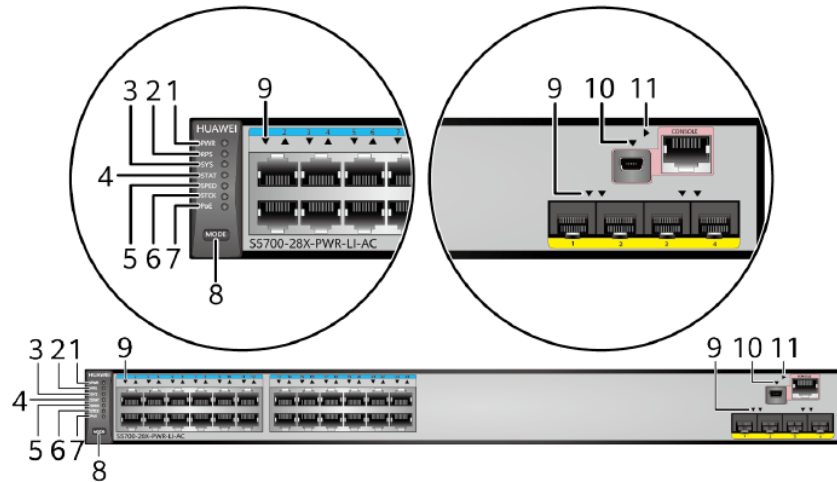


Table 4-80 Description of indicators on the switch

Number	Indicator/Butt on	Color	Description
1	PWR: internal power supply indicator	-	Off: The switch is powered off.
		Green	Steady on: The switch is powered on.
		Yellow	Steady on: The built-in power module is faulty, and the switch is powered by the RPS system.
2	RPS: RPS power supply indicator	-	Off: No RPS is connected to the switch.
		Green	<ul style="list-style-type: none"> • Steady on: The RPS is in cold backup state or forced power-on state. • Blinking: The RPS is providing power for another device.
		Yellow	<ul style="list-style-type: none"> • Steady on: The RPS is in alarm state. (No 870 W PoE power module is available in the RPS1800 or the RPS1800 cannot provide power supply to the local switch at this time.) • Blinking: The RPS is providing power for the switch and the built-in power module of the switch is faulty.
3	SYS: system	-	Off: The system is not running.

Number	Indicator/Button	Color	Description
	status indicator	Green	<ul style="list-style-type: none"> Fast blinking: The system is starting. Slow blinking: The system is running normally.
		Red	Steady on: The system does not work normally after registration, or a fan or temperature alarm has been generated.
4	STAT: status indicator	Green	<ul style="list-style-type: none"> Off: The status mode is not selected. Steady on: The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
5	SPED: speed indicator	Green	<ul style="list-style-type: none"> Off: The speed mode is not selected. Steady on: The speed mode is selected. If the speed mode is selected, the service port indicator shows the port speed state. After 45 seconds, the service port indicators automatically restore to the status mode.
6	STCK: stack indicator NOTE This indicator has different states and meanings in different versions. Here are the indicator states and meaning in versions earlier than V200R003C00.	Green	<ul style="list-style-type: none"> Off: The stack mode is not selected. Steady on: The service port indicators show the stack information. After 45 seconds, the service port indicators automatically restore to the status mode. Blinking: The switch is the master switch in a stack or a standalone switch.
	STCK: stack indicator NOTE This indicator has different states and meanings in different versions. Here are the indicator states and meaning in V200R003C00 and later versions.	Green	<p>If you are not changing the indicator mode (default):</p> <ul style="list-style-type: none"> Off: The switch is in stack standby or slave state or the stacking function is not enabled on the switch. Blinking: The switch is a stack master switch or a standalone switch with the stacking function enabled.
			<p>If you are changing the indicator mode:</p> <ul style="list-style-type: none"> Off: The stack mode is not selected. Steady on: The switch is a standby or slave switch in a stack, and the

Number	Indicator/Butt on	Color	Description
			<p>service port indicators show the stack ID of the switch.</p> <ul style="list-style-type: none"> Blinking: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>
7	PoE: PoE indicator	Green	<ul style="list-style-type: none"> Off: The PoE mode is not selected. Steady on: The service port indicators show the PoE status. After 45 seconds, the service port indicators automatically restore to the status mode.
8	MODE: mode switch button	-	<ul style="list-style-type: none"> When you press this button once, the service port indicators change to the speed mode and show the speed of each service port. When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch. When you press this button a third time, the service port indicators change to PoE mode and show the PoE status of ports. When you press this button a fourth time, the service port indicators restore to the default mode, and the STAT indicator turns green. <p>NOTE</p> <p>On the S5700-52P-PWR-LI-AC and S5700-28P-PWR-LI-AC of the V200R001 version, the indicator switching sequence is Speed -> PoE -> Stack.</p> <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED and PoE indicators are off, and the STCK indicator is off or blinking green.</p>
9	Service port indicator <ul style="list-style-type: none"> GE electrical 	Meanings of service port indicators vary in different modes. For details, see Table 4-81.	

Number	Indicator/Butt on	Color	Description
	<p>ports: The ports are numbered from bottom to top and left to right, starting with 1.</p> <ul style="list-style-type: none"> 10GE optical ports: Each port has an indicator above it. 		
10	Mini USB indicator	Green	<ul style="list-style-type: none"> Off: The Mini USB port is not active, and the console port is active. Steady on: The Mini USB port is active. <p>When this indicator is on, the console indicator is off.</p>
11	Console indicator	Green	<ul style="list-style-type: none"> Off: The console port is not active, and the Mini USB port is active. Steady on (default): The console port is active. <p>When this LED is on, the Mini USB port indicator is off.</p>

Table 4-81 Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.

Display Mode	Color	Status	Description
PoE	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.
	Yellow	Steady on	The PoE function is disabled on the port.
	Yellow	Blinking	The port stops providing PoE power because of an exception (for example, an incompatible PD is connected to the port).
	Green and yellow	Blinking green and yellow alternately	The port fails to supply power to a PD due to one of the following reasons: <ul style="list-style-type: none">• The power required by the connected PD exceeds the maximum power or the configured power threshold of the port.• The total power consumption of PDs has reached the maximum power of the switch.• The manual power management mode is used and the port is not enabled to provide power to the PD.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none">• If the indicator of a port is steady on, the number of this port is the stack ID of the switch.• If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none">• If the indicator of a port is blinking, the number of this port is the stack ID of the switch.• If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Power Supply Configuration

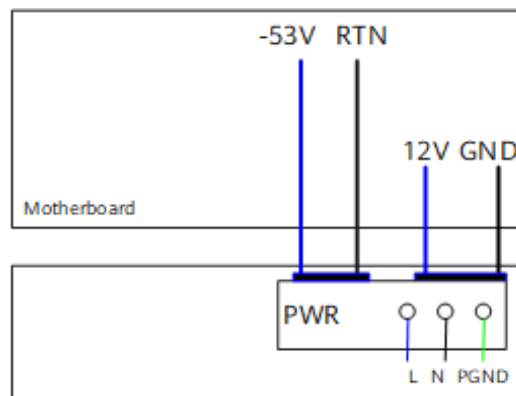
The S5700-28X-PWR-LI-AC has a built-in power module and does not support pluggable power modules. It can provide PoE power supply and connect to an RPS1800 power supply for power redundancy. Table 4-82 lists its power supply configurations.

Table 4-82 Power supply configurations

Power Supply Configuration	Available PoE Power	Maximum Number of Ports (Fully Loaded)
No RPS used	369.6 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 12
RPS used	800 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 24

Figure 4-32 shows the power supply mode of a built-in AC PoE power module (PWR). The PWR module receives AC power from an external power source and provides two outputs: 12 V and -53 V. The 12 V output is provided for the chassis, and the -53 V output is provided for PDs.

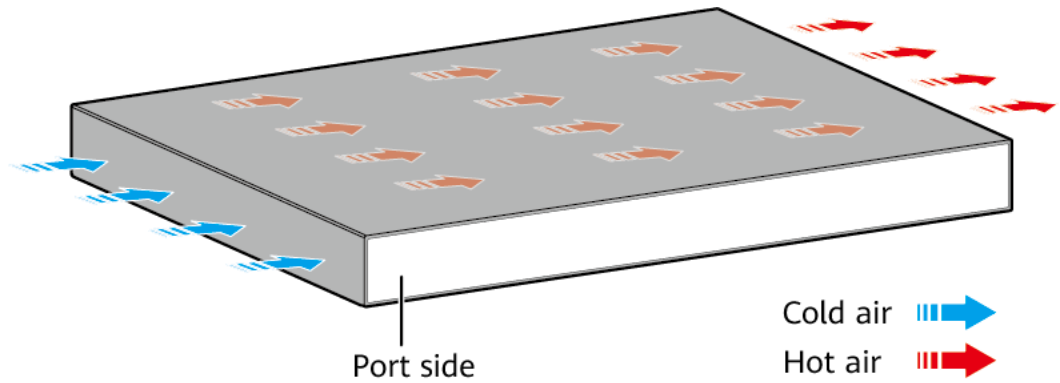
Figure 4-32 Power supply by a built-in AC PoE power module



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground RTN: -53 V reference ground

Heat Dissipation

The S5700-28X-PWR-LI-AC has three built-in fans for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-83 lists technical specifications of the S5700-28X-PWR-LI-AC.

Table 4-83 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	200 MB
Mean time between failures (MTBF)	61.53 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 310.0 mm (1.72 in. x 17.4 in. x 12.2 in.)
Weight (with packaging)	4.7 kg (10.36 lb)
Stack ports	Four uplink 10GE SFP+ ports
RTC	Supported
RPS	Supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage	90 V AC to 264 V AC, 47 Hz to 63 Hz

Item	Description
range	
Maximum power consumption (100% throughput, 100% PoE loads, full speed of fans)	448.8 W (system power consumption: 78.8 W, PoE: 370 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	39.4 W
Operating temperature	0 °C to 50 °C (32 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 49.5 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02354217

4.4.15 S5700-28X-LI-24S-AC

Version Mapping

Table 4-84 lists the mapping between the S5700-28X-LI-24S-AC chassis and software versions.

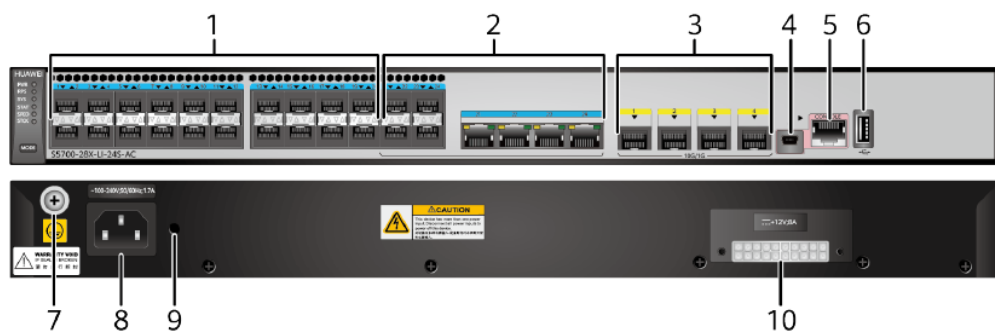
Table 4-84 Version mapping

Series	Model	Software Version
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Series	Model	Software Version
S5700-LI	S5700-28X-LI-24S-AC	V200R003C00 to V200R012C00 versions NOTE This model does not match V200R003C02, V200R003C10, V200R005C00SPC500, V200R005C01, V200R005C02, V200R005C03, or V200R007C10.

Appearance and Structure

Figure 4-33 S5700-28X-LI-24S-AC appearance



1	<p>Twenty 100/1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules 	2	<p>Four combo ports (10/100/1000BASE-T + 100/1000BASE-X)</p> <p>Modules applicable to combo optical ports:</p> <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules
3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical 	4	<p>One mini USB port</p>

	<p>Modules</p> <ul style="list-style-type: none"> • 9.15 Copper Cable • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable 		
5	One console port	6	One USB port
7	<p>Ground screw</p> <p>NOTE It is used with a 9.1 Ground Cable.</p>	8	<p>AC socket</p> <p>NOTE It is used with an 9.8 AC Power Cable.</p>
9	<p>Jack for AC power cable locking strap</p> <p>NOTE The AC power cable locking strap is not delivered with the switch.</p>	10	<p>RPS socket</p> <p>NOTE It is used with an 9.12 RPS Cable, which is not hot swappable.</p>

Port Description

100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. Table 4-85 describes the attributes of a 100/1000BASE-X port.

Table 4-85 Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.

- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-86 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-86 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-87.

Table 4-87 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB flash drive used on a switch must comply with USB 1.1.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

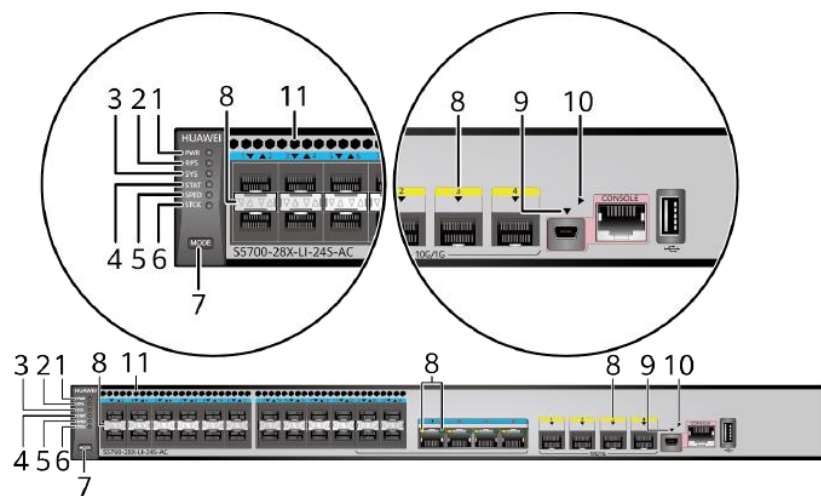
Indicator Description

NOTE

In V200R007 and later versions, you can hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
- If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
- If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore to the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 4-34 Indicators on the S5700-28X-LI-24S-AC



NOTE

The S5701-28X-LI-24S-AC, S5700-28X-LI-24S-AC, and S5700-28X-LI-24S-DC have air holes above the 24 optical ports for heat dissipation (numbered 11 in Figure 4-34). The indicators for the service ports are numbered 8 in Figure 4-34.

Table 4-88 Description of indicators on the switch

Number	Indicator/Button	Color	Description
1	PWR: internal	-	Off: The switch is powered off.

Number	Indicator/Button	Color	Description
	power supply indicator	Green	Steady on: The switch is powered on.
		Yellow	Steady on: The built-in power module is faulty, and the switch is powered by the RPS system.
2	RPS: RPS power supply indicator	-	Off: No RPS is connected to the switch.
		Green	<ul style="list-style-type: none"> Steady on: The RPS is in cold backup state. Blinking: The RPS is providing power for another device.
		Yellow	Blinking: The RPS is providing power for the switch and the built-in power module of the switch is faulty.
3	SYS: system status indicator	-	Off: The system is not running.
		Green	<ul style="list-style-type: none"> Fast blinking: The system is starting or is copying the system software and configuration file from a USB flash drive during a USB-based upgrade. Slow blinking: The system is running normally.
		Yellow	Blinking: The switch has restarted after a successful upgrade using a USB flash drive. You can remove the USB flash drive from the switch.
		Red	<ul style="list-style-type: none"> Steady on: The system does not work normally after registration, or a fan or temperature alarm has been generated. Blinking: The system cannot be upgraded after a USB flash drive is inserted. The USB-based upgrade failed.
4	STAT: status indicator	Green	<ul style="list-style-type: none"> Off: The status mode is not selected. Steady on: The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
5	SPED: speed indicator	Green	<ul style="list-style-type: none"> Off: The speed mode is not selected. Steady on: The speed mode is selected. If the speed mode is selected, the service port indicator shows the port speed state. After 45 seconds, the service port indicators automatically restore to the status mode.

Number	Indicator/Button	Color	Description
6	STCK: stack indicator	Green	<p>If you are not changing the indicator mode (default):</p> <ul style="list-style-type: none"> Off: The switch is in stack standby or slave state or the stacking function is not enabled on the switch. Blinking: The switch is a stack master switch or a standalone switch with the stacking function enabled.
			<p>If you are changing the indicator mode:</p> <ul style="list-style-type: none"> Off: The stack mode is not selected. Steady on: The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch. Blinking: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>
7	MODE: mode switch button	-	<ul style="list-style-type: none"> When you press this button once, the service port indicators change to the speed mode and show the speed of each service port. When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch. When you press this button a third time, the service port indicators restore to the default mode, and the STAT mode turns green. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED indicator is off, and the STCK indicator is off or blinking green.</p>
8	<p>Service port indicator</p> <p>NOTE Arrowheads show the positions of ports. A down</p>	<p>Meanings of service port indicators vary in different modes. For details, see Table 4-89 and Table 4-90.</p>	

Number	Indicator/Button	Color	Description
	arrowhead indicates a port at the bottom, and an up arrowhead indicates a port at the top.		
9	Mini USB indicator	Green	<ul style="list-style-type: none"> Off: The Mini USB port is not active, and the console port is active. Steady on: The Mini USB port is active. When this indicator is on, the console indicator is off.
10	Console indicator	Green	<ul style="list-style-type: none"> Off: The console port is not active, and the Mini USB port is active. Steady on (default): The console port is active. When this LED is on, the Mini USB port indicator is off.

Table 4-89 Description of service port indicators in different modes (two indicators for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Yellow	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green and yellow	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 100M/1000M port: The port is operating at 100 Mbit/s.
	Green and yellow	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 100M/1000M port: The port is operating at 1000 Mbit/s.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green and yellow	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the

Display Mode	Color	Status	Description
			switch. <ul style="list-style-type: none"> If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
	Green and yellow	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is blinking, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Table 4-90 Description of service port indicators in different modes (one indicator for each port)

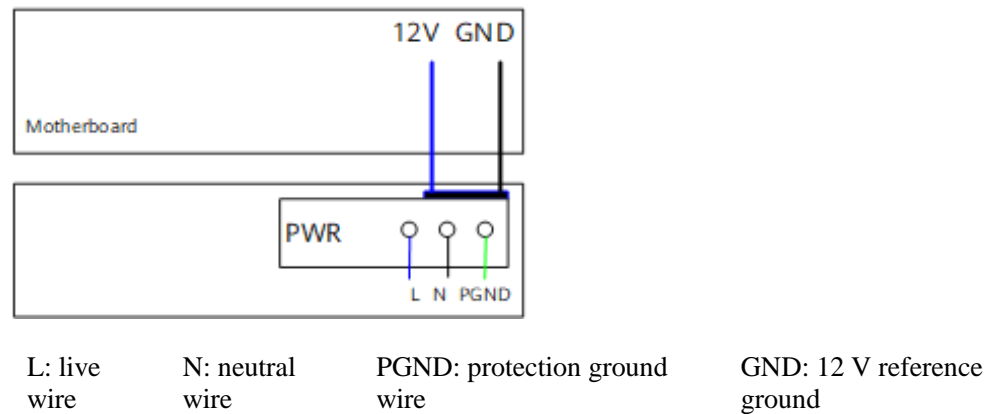
Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is blinking, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Power Supply Configuration

The S5700-28X-LI-24S-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

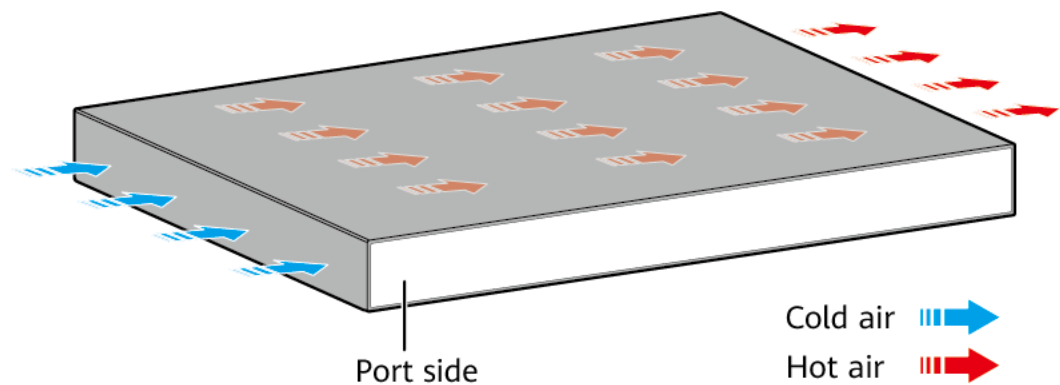
Figure 4-35 shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 4-35 Power supply mode of a built-in AC power module



Heat Dissipation

The S5700-28X-LI-24S-AC has two built-in fans for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-91 lists specifications of the S5700-28X-LI-24S-AC.

Table 4-91 Technical specifications

Item	Description
------	-------------

Item	Description
Memory (RAM)	256 MB
Flash	200 MB
Mean time between failures (MTBF)	89.91 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	3.5 kg (7.72 lb)
Stack ports	Four uplink 10GE SFP+ ports
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	60 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	49.7 W
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220

Item	Description
	m (722 ft.).
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 49.6 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02355271

4.4.16 S5700-28X-LI-24S-DC

Version Mapping

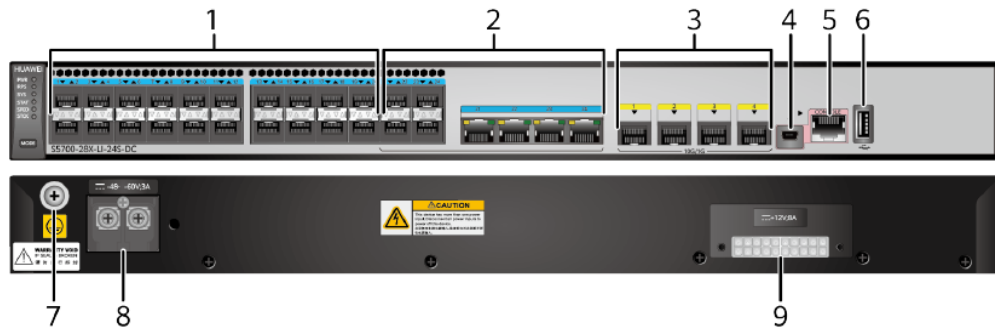
Table 4-92 lists the mapping between the S5700-28X-LI-24S-DC chassis and software versions.

Table 4-92 Version mapping

Series	Model	Software Version
S5700-LI	S5700-28X-LI-24S-DC	V200R003C00 to V200R012C00 versions NOTE This model does not match V200R003C02, V200R003C10, V200R005C00SPC500, V200R005C01, V200R005C02, V200R005C03, or V200R007C10.

Appearance and Structure

Figure 4-36 S5700-28X-LI-24S-DC appearance



1	<p>Twenty 100/1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules 	<p>2</p> <p>Four combo ports (10/100/1000BASE-T + 100/1000BASE-X)</p> <p>Modules applicable to combo optical ports:</p> <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules
3	<p>4</p> <p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable 	<p>4</p> <p>One mini USB port</p>
5	<p>5</p> <p>One console port</p>	<p>6</p> <p>One USB port</p>
7	<p>7</p> <p>Ground screw</p> <p>NOTE It is used with a 9.1 Ground Cable.</p>	<p>8</p> <p>DC power terminal</p> <p>NOTE It is used together with a 9.5 DC Power</p>

			Cable (with OT and Cord End Terminals).
9	RPS socket NOTE It is used with an 9.12 RPS Cable, which is not hot swappable.	-	-

Port Description

100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. Table 4-93 describes the attributes of a 100/1000BASE-X port.

Table 4-93 Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-94 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-94 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-95.

Table 4-95 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB flash drive used on a switch must comply with USB 1.1.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

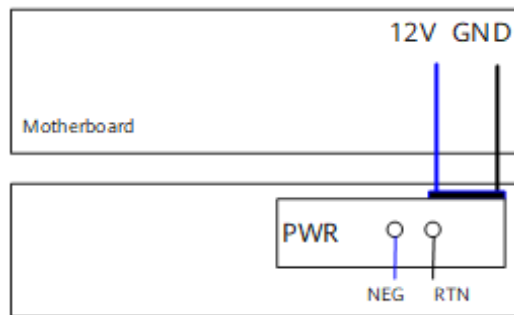
The S5700-28X-LI-24S-DC has the same types of indicators as the S5700-28X-LI-24S-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5700-28X-LI-24S-DC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

Figure 4-37 shows the power supply mode of a single DC power module. The built-in DC power module (PWR) receives DC power from an external power source and provides a 12 V output to the chassis.

Figure 4-37 Power supply by a single DC power module



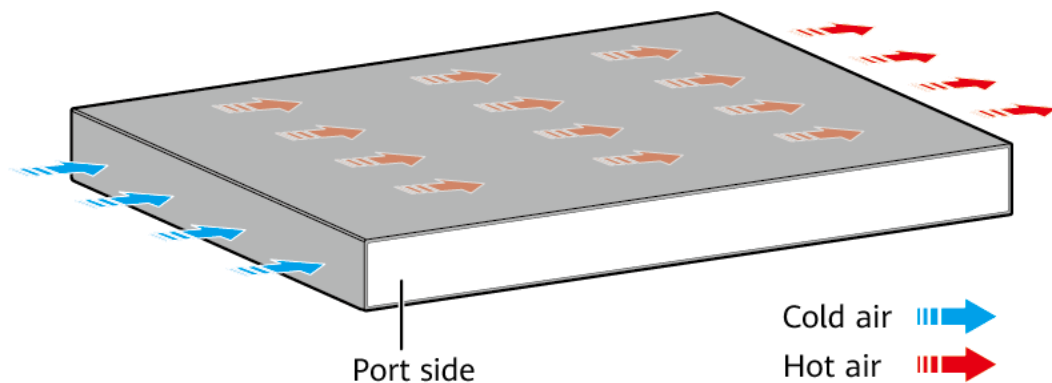
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

Heat Dissipation

The S5700-28X-LI-24S-DC has two built-in fans for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-96 lists technical specifications of the S5700-28X-LI-24S-DC.

Table 4-96 Technical specifications

Item	Description
Memory (RAM)	256 MB

Item	Description
Flash	200 MB
Mean time between failures (MTBF)	89.91 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	3.5 kg (7.72 lb)
Stack ports	Four uplink 10GE SFP+ ports
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	-48 V DC to -60 V DC
Maximum voltage range	-36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	57 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	46.9 W
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).

Item	Description
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 49.6 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02355303

4.4.17 S5701-28X-LI-AC

Version Mapping

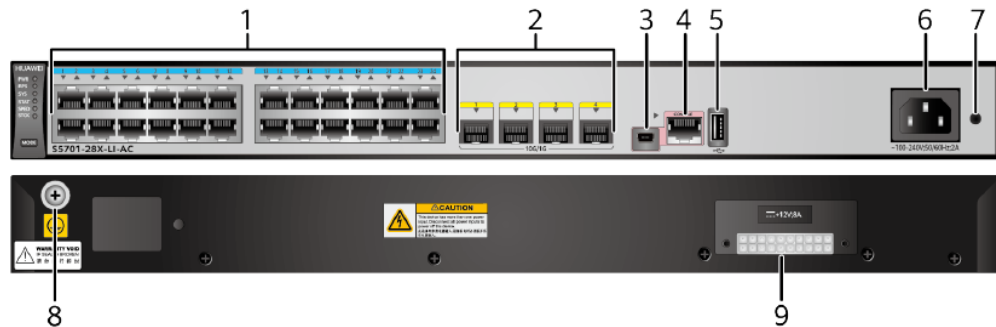
Table 4-97 lists the mapping between the S5701-28X-LI-AC chassis and software versions.

Table 4-97 Version mapping

Series	Model	Software Version
S5700-LI	S5701-28X-LI-AC	V200R003C00 to V200R012C00 versions NOTE This model does not match V200R003C02, V200R003C10, V200R005C00SPC500, V200R005C01, V200R005C02, V200R005C03, or V200R007C10.

Appearance and Structure

Figure 4-38 S5701-28X-LI-AC appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	One mini USB port	4	One console port
5	One USB port	6	AC socket NOTE It is used with an 9.8 AC Power Cable.
7	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.	8	Ground screw NOTE It is used with a 9.1 Ground Cable.
9	RPS socket NOTE It is used with an 9.12 RPS Cable, which is not hot swappable.	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-98 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-98 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-99 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-99 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-100.

Table 4-100 Attributes of a console port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB flash drive used on a switch must comply with USB 1.1.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

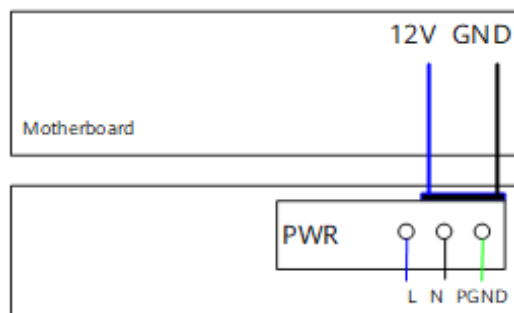
The S5701-28X-LI-AC has the same types of indicators as the S5700-28X-LI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5701-28X-LI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

Figure 4-39 shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 4-39 Power supply mode of a built-in AC power module

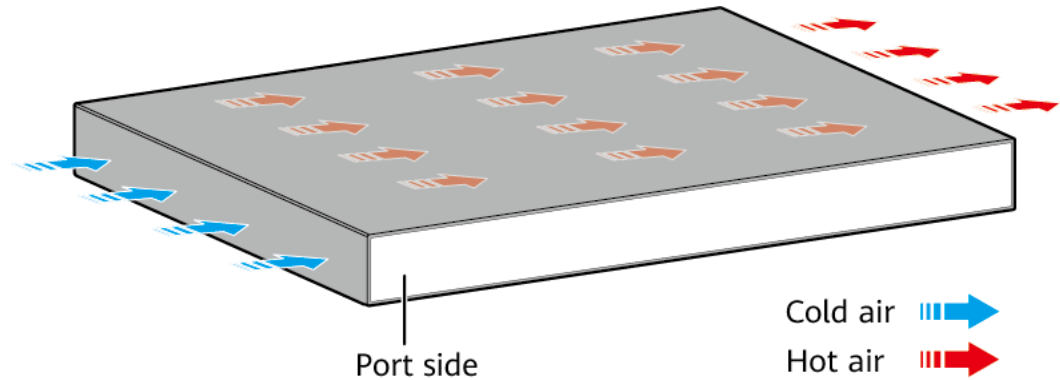


L: live N: neutral PGND: protection ground GND: 12 V reference

wire wire wire ground

Heat Dissipation

The S5701-28X-LI-AC has a built-in fan for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-101 lists technical specifications of the S5701-28X-LI-AC.

Table 4-101 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	200 MB
Mean time between failures (MTBF)	70.32 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	3 kg (11.02 lb)

Item	Description
Stack ports	Four uplink 10GE SFP+ ports
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	41 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	29.7 W
Operating temperature	0 °C to 50 °C (32 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 45.8 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02357675

4.4.18 S5701-28X-LI-24S-AC

Version Mapping

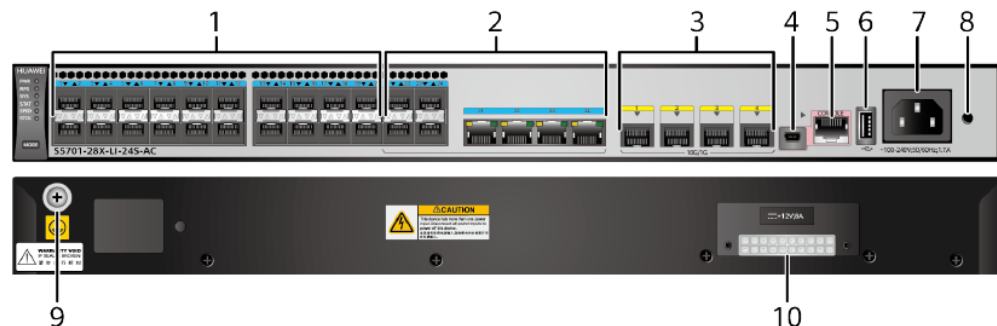
Table 4-102 lists the mapping between the S5701-28X-LI-24S-AC chassis and software versions.

Table 4-102 Version mapping

Series	Model	Software Version
S5700-LI	S5701-28X-LI-24S-AC	V200R003C00 to V200R012C00 versions NOTE This model does not match V200R003C02, V200R003C10, V200R005C00SPC500, V200R005C01, V200R005C02, V200R005C03, or V200R007C10.

Appearance and Structure

Figure 4-40 S5701-28X-LI-24S-AC appearance



1	<p>Twenty 100/1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules 	2	<p>Four combo ports (10/100/1000BASE-T + 100/1000BASE-X)</p> <p>Modules applicable to combo optical ports:</p> <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules
3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules 	4	<p>One mini USB port</p>

	<ul style="list-style-type: none"> • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable 		
5	One console port	6	One USB port
7	AC socket NOTE It is used with an 9.8 AC Power Cable.	8	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.
9	Ground screw NOTE It is used with a 9.1 Ground Cable.	10	RPS socket NOTE It is used with an 9.12 RPS Cable, which is not hot swappable.

Port Description

100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. Table 4-103 describes the attributes of a 100/1000BASE-X port.

Table 4-103 Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-104 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-104 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-105.

Table 4-105 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB flash drive used on a switch must comply with USB 1.1.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

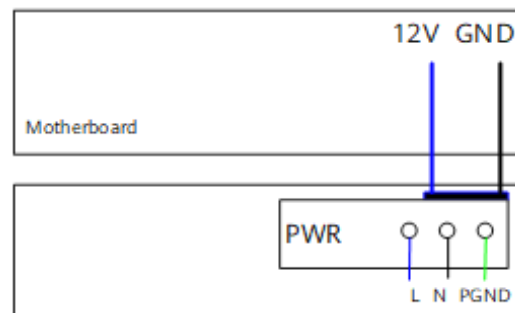
The S5701-28X-LI-24S-AC has the same types of indicators as the S5700-28X-LI-24S-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5701-28X-LI-24S-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

Figure 4-41 shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 4-41 Power supply mode of a built-in AC power module



L: live
wire

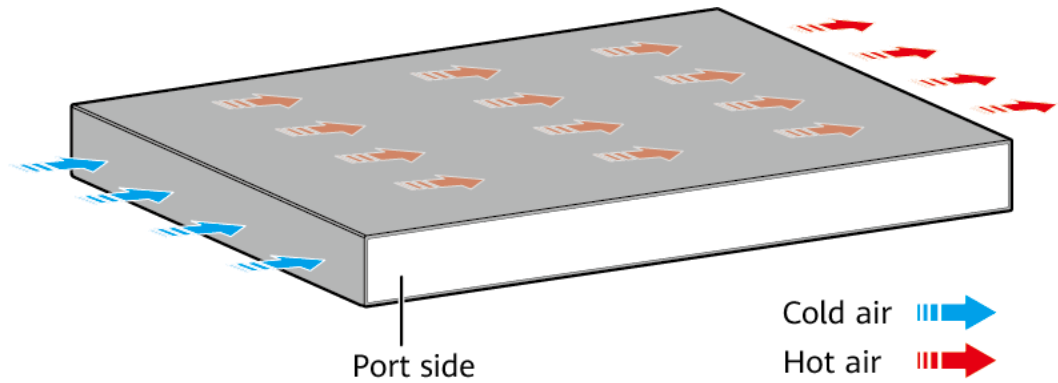
N: neutral
wire

PGND: protection ground
wire

GND: 12 V reference
ground

Heat Dissipation

The S5701-28X-LI-24S-AC has two built-in fans for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-106 lists technical specifications of the S5701-28X-LI-24S-AC.

Table 4-106 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	200 MB
Mean time between failures (MTBF)	89.91 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	3.5 kg (7.72 lb)
Stack ports	Four uplink 10GE SFP+ ports
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage	90 V AC to 264 V AC, 47 Hz to 63 Hz

Item	Description
range	
Maximum power consumption (100% throughput, full speed of fans)	60 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	49.7 W
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 49.6 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02357676

4.4.19 S5700-52X-LI-AC

Version Mapping

Table 4-107 lists the mapping between the S5700-52X-LI-AC chassis and software versions.

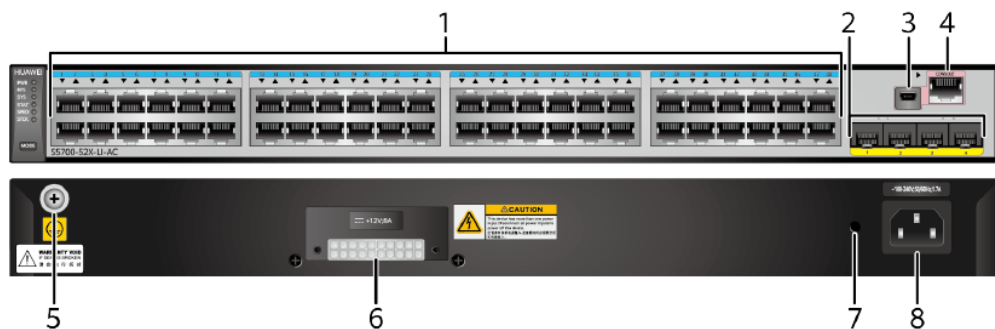
Table 4-107 Version mapping

Series	Model	Software Version
S5700-LI	S5700-52X-LI-AC	V200R002C00 to V200R012C00 versions

Series	Model	Software Version
		<p>NOTE</p> <p>This model does not match V200R003C02, V200R003C10, V200R005C00SPC500, V200R005C01, V200R005C02, V200R005C03, or V200R007C10.</p>

Appearance and Structure

Figure 4-42 S5700-52X-LI-AC appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	One mini USB port	4	One console port
5	Ground screw NOTE It is used with a 9.1 Ground Cable.	6	RPS socket NOTE It is used with an 9.12 RPS Cable, which is not hot swappable.
7	Jack for AC power cable locking strap NOTE	8	AC socket NOTE

	The AC power cable locking strap is not delivered with the switch.		It is used with an 9.8 AC Power Cable.
--	--	--	--

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-108 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-108 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-109 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-109 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-110.

Table 4-110 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

Indicator Description

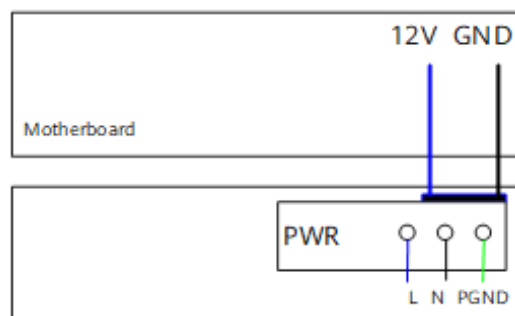
The S5700-52X-LI-AC has the same types of indicators as the S5700-28X-LI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5700-52X-LI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

Figure 4-43 shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 4-43 Power supply mode of a built-in AC power module



L: live wire

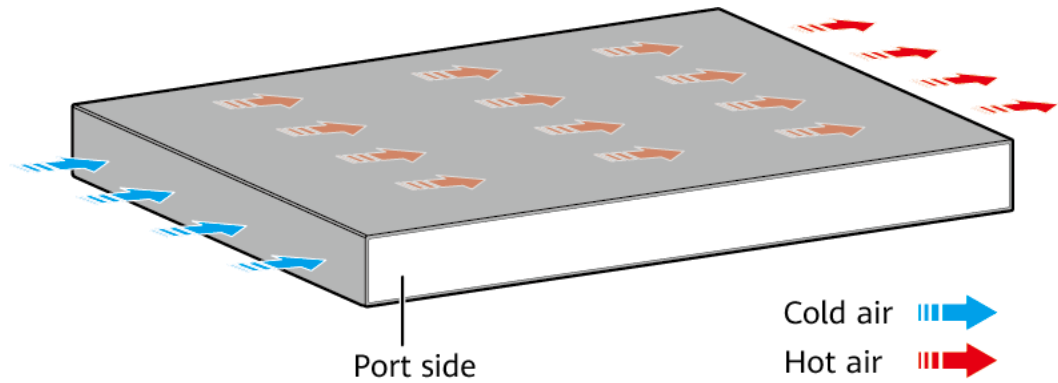
N: neutral wire

PGND: protection ground wire

GND: 12 V reference ground

Heat Dissipation

The S5700-52X-LI-AC has two built-in fans for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-111 lists technical specifications of the S5700-52X-LI-AC.

Table 4-111 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	200 MB
Mean time between failures (MTBF)	61.86 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 310.0 mm (1.72 in. x 17.4 in. x 12.2 in.)
Weight (with packaging)	4.4 kg (9.7 lb)
Stack ports	Four uplink 10GE SFP+ ports
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage	90 V AC to 264 V AC, 47 Hz to 63 Hz

Item	Description
range	
Maximum power consumption (100% throughput, full speed of fans)	61 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	45.5 W
Operating temperature	0 °C to 50 °C (32 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 47.9 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02354216

4.4.20 S5700-52X-LI-DC

Version Mapping

Table 4-112 lists the mapping between the S5700-52X-LI-DC chassis and software versions.

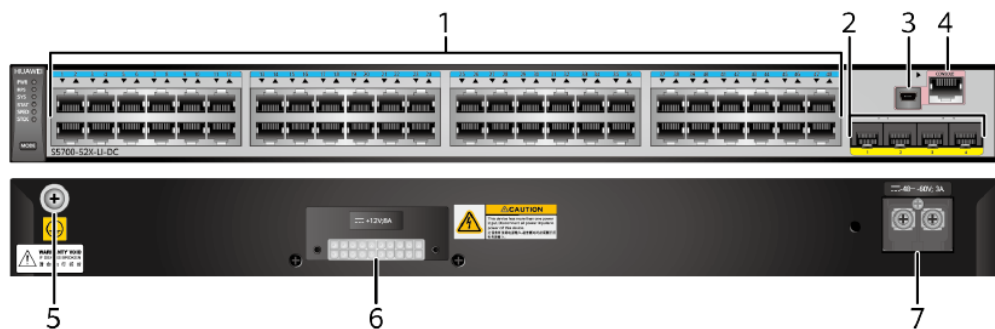
Table 4-112 Version mapping

Series	Model	Software Version
S5700-LI	S5700-52X-LI-DC	V200R002C00 to V200R012C00 versions

Series	Model	Software Version
		<p>NOTE</p> <p>This model does not match V200R003C02, V200R003C10, V200R005C00SPC500, V200R005C01, V200R005C02, V200R005C03, or V200R007C10.</p>

Appearance and Structure

Figure 4-44 S5700-52X-LI-DC appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	One mini USB port	4	One console port
5	Ground screw NOTE It is used with a 9.1 Ground Cable.	6	RPS socket NOTE It is used with an 9.12 RPS Cable, which is not hot swappable.
7	DC power terminal NOTE	-	-

	It is used together with a 9.5 DC Power Cable (with OT and Cord End Terminals).		
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Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-113 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-113 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-114 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-114 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-115.

Table 4-115 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

Indicator Description

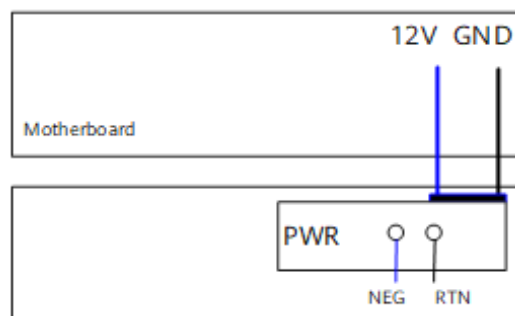
The S5700-52X-LI-DC has the same types of indicators as the S5700-28X-LI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5700-52X-LI-DC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

Figure 4-45 shows the power supply mode of a single DC power module. The built-in DC power module (PWR) receives DC power from an external power source and provides a 12 V output to the chassis.

Figure 4-45 Power supply by a single DC power module



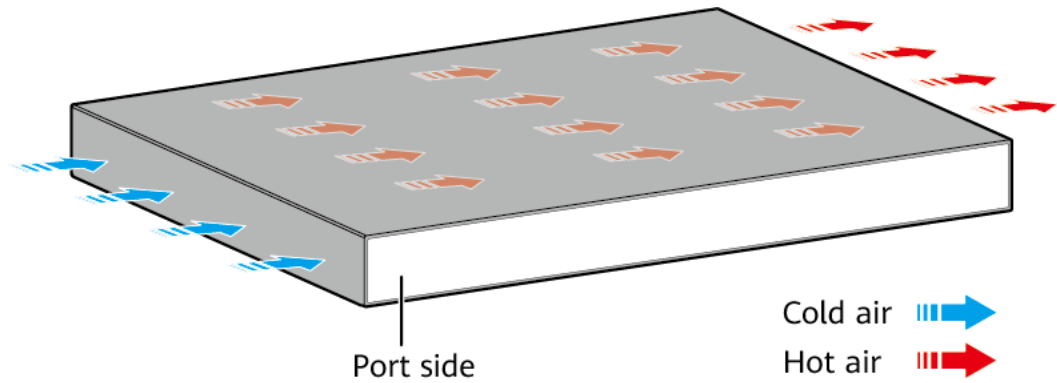
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

Heat Dissipation

The S5700-52X-LI-DC has two built-in fans for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-116 lists technical specifications of the S5700-52X-LI-DC.

Table 4-116 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	200 MB
Mean time between failures (MTBF)	61.86 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 310.0 mm (1.72 in. x 17.4 in. x 12.2 in.)
Weight (with packaging)	4.3 kg (9.48 lb)
Stack ports	Four uplink 10GE SFP+ ports
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	-48 V DC to -60 V DC
Maximum voltage	-36 V DC to -72 V DC

Item	Description
range	
Maximum power consumption (100% throughput, full speed of fans)	60 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	42.2 W
Operating temperature	0 °C to 50 °C (32 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 47.9 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02354235

4.4.21 S5700-52X-PWR-LI-AC

Version Mapping

Table 4-117 lists the mapping between the S5700-52X-PWR-LI-AC chassis and software versions.

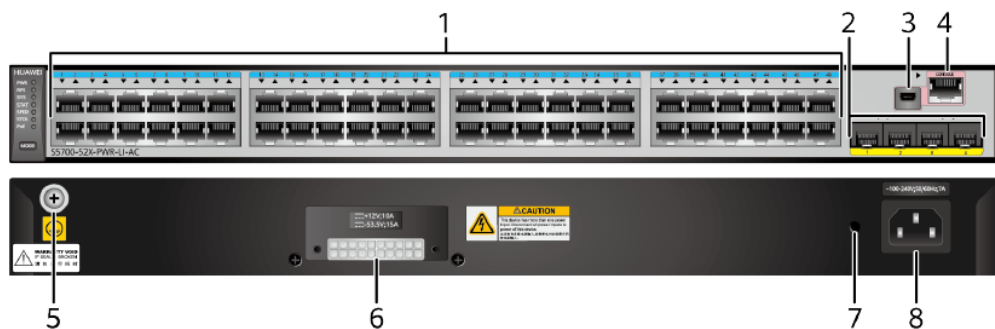
Table 4-117 Version mapping

Series	Model	Software Version
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Series	Model	Software Version
S5700-LI	S5700-52X-PWR-LI-AC	V200R002C00 to V200R012C00 versions NOTE This model does not match V200R003C02, V200R003C10, V200R005C00SPC500, V200R005C01, V200R005C02, V200R005C03, or V200R007C10.

Appearance and Structure

Figure 4-46 S5700-52X-PWR-LI-AC appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	One mini USB port	4	One console port
5	Ground screw NOTE It is used with a 9.1 Ground Cable.	6	RPS socket NOTE <ul style="list-style-type: none"> • It is used with an 9.12 RPS Cable which is not hot swappable. • A PoE switch can have an RPS power

			supply connected to this socket to provide inputs for system power supply and PoE power supply. The two inputs are independent of each other. The RPS power supply can also be used as a backup of the system power supply when it does not provide PoE power.
7	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.	8	AC socket NOTE It is used with an 9.8 AC Power Cable.

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-118 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-118 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-119 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-119 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-120.

Table 4-120 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

Indicator Description

The S5700-52X-PWR-LI-AC has the same types of indicators as the S5700-28X-PWR-LI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5700-52X-PWR-LI-AC has a built-in power module and does not support pluggable power modules. It can provide PoE power supply and connect to an RPS1800 power supply for power redundancy. Table 4-121 lists its power supply configurations.

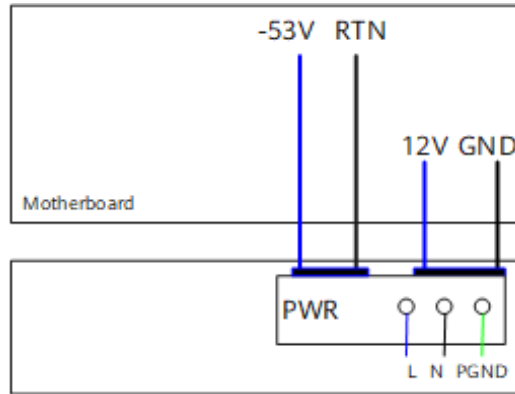
Table 4-121 Power supply configurations

Power Supply Configuration	Available PoE Power	Maximum Number of Ports (Fully Loaded)
No RPS used	369.6 W	<ul style="list-style-type: none">802.3af (15.4 W per port): 24802.3at (30 W per port): 12
RPS used	800 W	<ul style="list-style-type: none">802.3af (15.4 W per port): 48802.3at (30 W per port): 26

Figure 4-47 shows the power supply mode of a built-in AC PoE power module (PWR). The PWR module receives AC power from an external power source and provides two outputs: 12

V and -53 V. The 12 V output is provided for the chassis, and the -53 V output is provided for PDs.

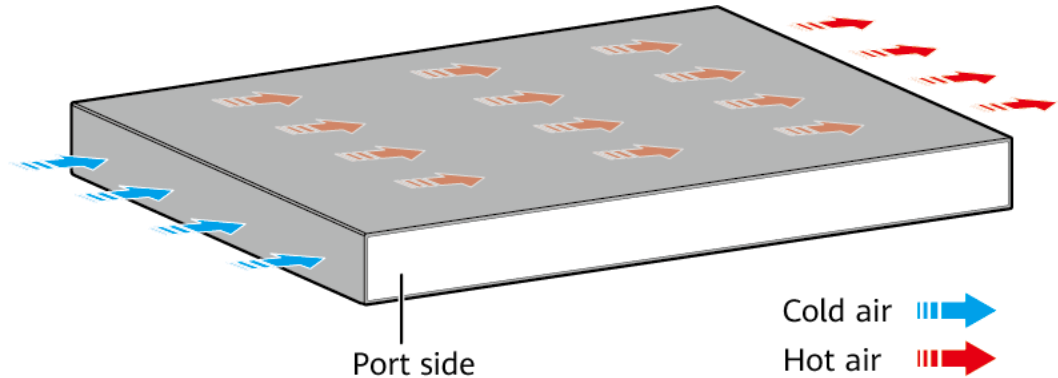
Figure 4-47 Power supply by a built-in AC PoE power module



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground RTN: -53 V reference ground

Heat Dissipation

The S5700-52X-PWR-LI-AC has three built-in fans for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-122 lists technical specifications of the S5700-52X-PWR-LI-AC.

Table 4-122 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	200 MB

Item	Description
Mean time between failures (MTBF)	40.72 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 310.0 mm (1.72 in. x 17.4 in. x 12.2 in.)
Weight (with packaging)	4.8 kg (10.58 lb)
Stack ports	Four uplink 10GE SFP+ ports
RTC	Supported
RPS	Supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, 100% PoE loads, full speed of fans)	479.3 W (system power consumption: 109.3 W, PoE: 370 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	48.6 W
Operating temperature	0 °C to 50 °C (32 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Storage	-40 °C to +70 °C (-40 °F to +158 °F)

Item	Description
temperature	
Noise under normal temperature (27 °C, sound power)	< 50.2 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02354218

4.4.22 S5700-52X-LI-48CS-AC

Version Mapping

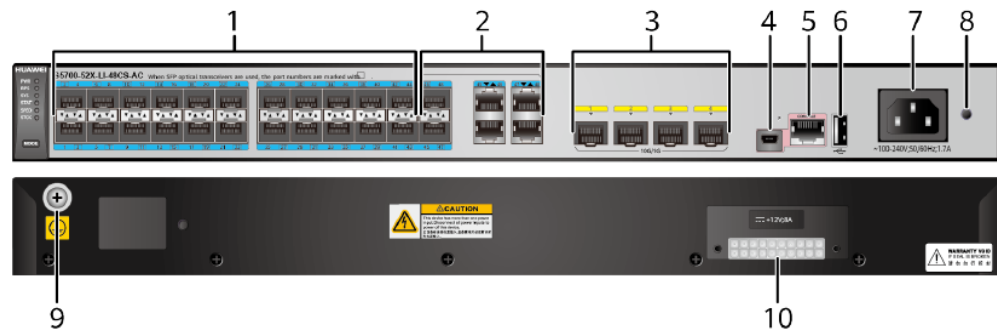
Table 4-123 lists the mapping between the S5700-52X-LI-48CS-AC chassis and software versions.

Table 4-123 Version mapping

Series	Model	Software Version
S5700-LI	S5700-52X-LI-48CS-AC	V200R003C02 to V200R012C00 versions NOTE This model does not match V200R003C10, V200R005C00SPC500, V200R005C01, V200R005C02, V200R005C03, or V200R007C10.

Appearance and Structure

Figure 4-48 S5700-52X-LI-48CS-AC appearance



<p>1 Forty-four 100/1000BASE-X CSFP ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.6 GE CSFP Optical Modules • 10.10 GE SFP Copper Modules <p>NOTE</p> <ul style="list-style-type: none"> • When all the ports have CSFP optical modules installed, each port functions as two ports. The switch has a total of 44 ports in this case. • When all the ports have SFP optical modules installed, each port functions as one port. The switch has a total of 22 ports. 	<p>2 Four combo ports (10/100/1000BASE-T + 100/1000BASE-X)</p> <p>Modules applicable to combo optical ports:</p> <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.6 GE CSFP Optical Modules <p>NOTE</p> <p>The four combo ports (numbered 45, 46, 47, and 48) on a CSFP switch include four electrical ports and two optical ports. The two optical ports can function as four optical modules when they have Compact Small Form-Factor Pluggable (CSFP) optical modules installed. When the two optical ports have SFP optical modules installed, the electrical ports 45 and 48 can be used normally.</p>
<p>3 Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 9.15 Copper Cable 	<p>4 One mini USB port</p>

	<ul style="list-style-type: none"> 9.15 Copper Cable 9.3 Optical Fiber 9.14 Dedicated Stack Cable 		
5	One console port	6	One USB port
7	AC socket NOTE It is used with an 9.8 AC Power Cable.	8	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.
9	Ground screw NOTE It is used with a 9.1 Ground Cable.	10	RPS socket NOTE It is used with an 9.12 RPS Cable, which is not hot swappable.

Port Description

100/1000BASE-X CSFP port

A 100/1000BASE-X CSFP port can send and receive data at 100 Mbit/s or 1000 Mbit/s. When using a CSFP optical module, each 100/1000BASE-X CSFP port works as two ports. When using an SFP optical module, each 100/1000BASE-X CSFP port works as one port. Table 4-124 describes the attributes of a 100/1000BASE-X CSFP port.

Table 4-124 Attributes of a 100/1000BASE-X CSFP port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s

NOTE

CSFP ports using CSFP optical modules cannot connect to each other. A CSFP optical module must be connected to two BIDI SFP optical modules using two optical fibers. You can install an SFP optical module on a CSFP port and use it as a common SFP port.

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-125 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-125 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-126.

Table 4-126 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB flash drive used on a switch must comply with USB 1.1.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

NOTE

In V200R007 and later versions, you can hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
- If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
- If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore to the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 4-49 Indicators on the S5700-52X-LI-48CS-AC

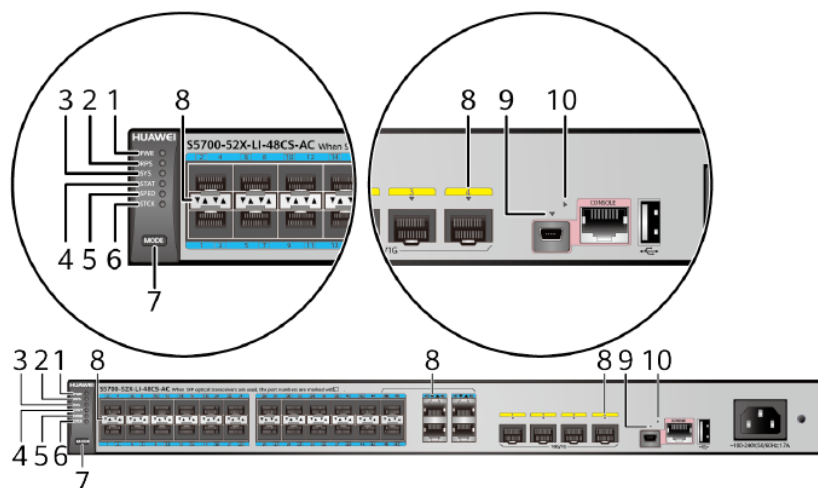


Table 4-127 Description of indicators on the switch

Number	Indicator/Button	Color	Description
1	PWR: internal	-	Off: The switch is powered off.

Number	Indicator/Button	Color	Description
	power supply indicator	Green	Steady on: The switch is powered on.
		Yellow	Steady on: The built-in power module is faulty, and the switch is powered by the RPS system.
2	RPS: RPS power supply indicator	-	Off: No RPS is connected to the switch.
		Green	<ul style="list-style-type: none"> Steady on: The RPS is in cold backup state. Blinking: The RPS is providing power for another device.
		Yellow	Blinking: The RPS is providing power for the switch and the built-in power module of the switch is faulty.
3	SYS: system status indicator	-	Off: The system is not running.
		Green	<ul style="list-style-type: none"> Fast blinking: The system is starting or is copying the system software and configuration file from a USB flash drive during a USB-based upgrade. Slow blinking: The system is running normally.
		Yellow	Blinking: The switch has restarted after a successful upgrade using a USB flash drive. You can remove the USB flash drive from the switch.
		Red	<ul style="list-style-type: none"> Steady on: The system does not work normally after registration, or a fan or temperature alarm has been generated. Blinking: The system cannot be upgraded after a USB flash drive is inserted. The USB-based upgrade failed.
4	STAT: status indicator	Green	<ul style="list-style-type: none"> Off: The status mode is not selected. Steady on: The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
5	SPED: speed indicator	Green	<ul style="list-style-type: none"> Off: The speed mode is not selected. Steady on: The speed mode is selected. If the speed mode is selected, the service port indicator shows the port speed state. After 45 seconds, the service port indicators automatically restore to the status mode.

Number	Indicator/Button	Color	Description
6	STCK: stack indicator	Green	<p>If you are not changing the indicator mode (default):</p> <ul style="list-style-type: none"> Off: The switch is in stack standby or slave state or the stacking function is not enabled on the switch. Blinking: The switch is a stack master switch or a standalone switch with the stacking function enabled.
			<p>If you are changing the indicator mode:</p> <ul style="list-style-type: none"> Off: The stack mode is not selected. Steady on: The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch. Blinking: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>
7	MODE: mode switch button	-	<ul style="list-style-type: none"> When you press this button once, the service port indicators change to the speed mode and show the speed of each service port. When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch. When you press this button a third time, the service port indicators restore to the default mode, and the STAT mode turns green. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED indicator is off, and the STCK indicator is off or blinking green.</p>
8	<p>Service port indicator</p> <p>NOTE Arrowheads show the positions of ports. A down</p>	<p>Meanings of service port indicators vary in different modes. For details, see Table 4-128.</p>	

Number	Indicator/Button	Color	Description
	arrowhead indicates a port at the bottom, and an up arrowhead indicates a port at the top.		
9	Mini USB indicator	Green	<ul style="list-style-type: none"> Off: The Mini USB port is not active, and the console port is active. Steady on: The Mini USB port is active. When this indicator is on, the console indicator is off.
10	Console indicator	Green	<ul style="list-style-type: none"> Off: The console port is not active, and the Mini USB port is active. Steady on (default): The console port is active. When this LED is on, the Mini USB port indicator is off.

Table 4-128 Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the

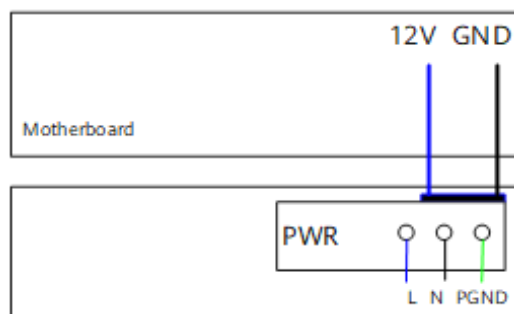
Display Mode	Color	Status	Description
			switch. <ul style="list-style-type: none"> If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is blinking, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Power Supply Configuration

The S5700-52X-LI-48CS-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

Figure 4-50 shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 4-50 Power supply mode of a built-in AC power module



L: live wire

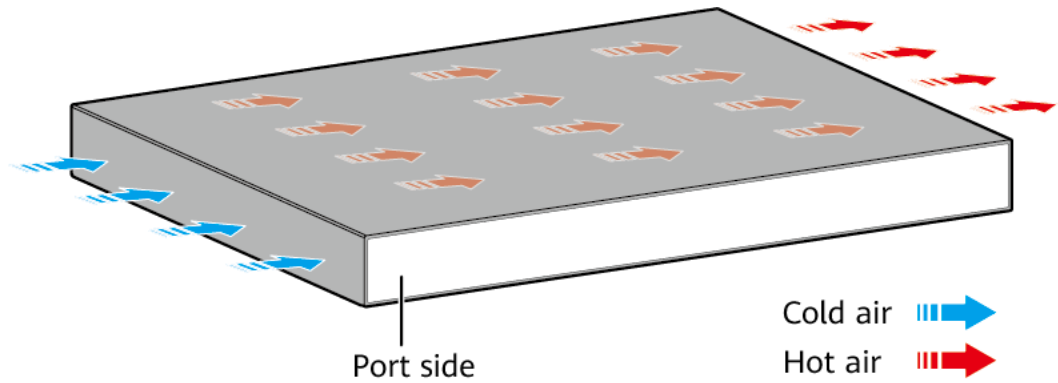
N: neutral wire

PGND: protection ground wire

GND: 12 V reference ground

Heat Dissipation

The S5700-52X-LI-48CS-AC has three built-in fans for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-129 lists technical specifications of the S5700-52X-LI-48CS-AC.

Table 4-129 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	200 MB
Mean time between failures (MTBF)	92.57 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Combo electrical port: ± 2 kV in common mode
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	3.4 kg (7.5 lb)
Stack ports	Four uplink 10GE SFP+ ports
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage	90 V AC to 264 V AC, 47 Hz to 63 Hz

Item	Description
range	
Maximum power consumption (100% throughput, full speed of fans)	79.93 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	69.17 W
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 67.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02357823

4.5 S5700S-LI

4.5.1 S5700S-28P-LI-AC

Version Mapping

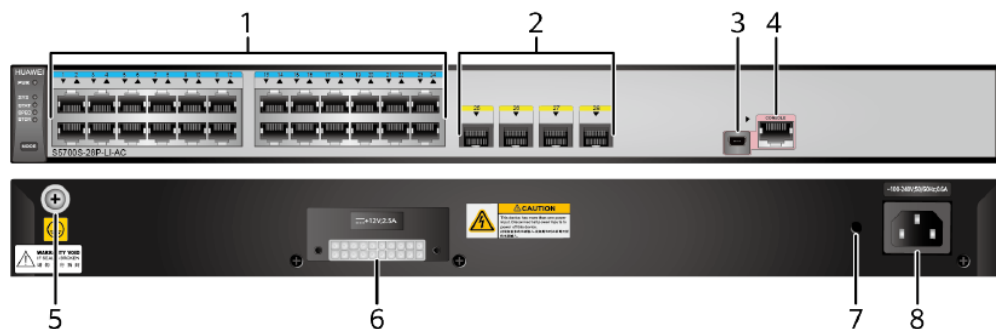
Table 4-130 lists the mapping between the S5700S-28P-LI-AC chassis and software versions.

Table 4-130 Version mapping

Series	Model	Software Version
S5700S-LI	S5700S-28P-LI-AC	V200R001C00 to V200R012C00 versions NOTE This model does not match V200R001C01, V200R003C02, V200R003C10, V200R005C00SPC500, V200R005C01, V200R005C02, V200R005C03, or V200R007C10.

Appearance and Structure

Figure 4-51 S5700S-28P-LI-AC appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 1000BASE-X ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules
3	One mini USB port	4	One console port
5	Ground screw NOTE It is used with a 9.1 Ground Cable.	6	RPS socket NOTE It is used with an 9.12 RPS Cable, which is not hot swappable.
7	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.	8	AC socket NOTE It is used with an 9.8 AC Power Cable.

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-131 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-131 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. Table 4-132 describes the attributes of a 1000BASE-X Ethernet optical port.

Table 4-132 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-133.

Table 4-133 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards	RS-232

Attribute	Description
compliance	
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

Indicator Description

NOTE

In V200R007 and later versions, you can hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
- If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
- If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore to the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 4-52 Indicators on the S5700S-28P-LI-AC

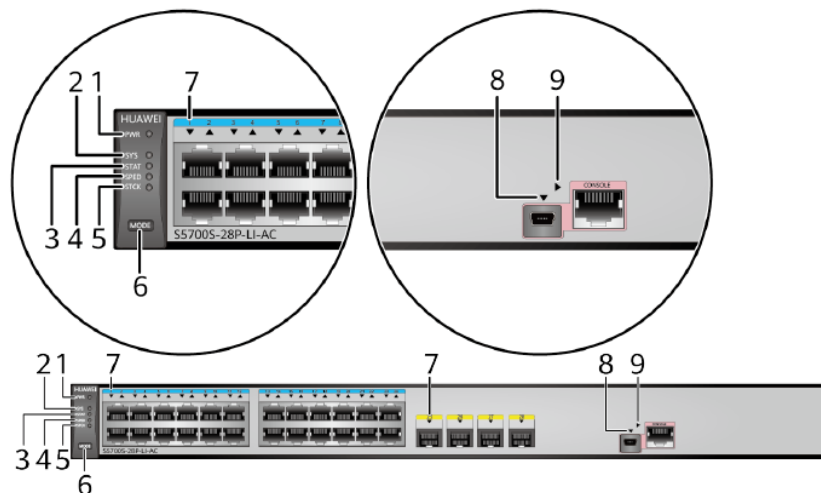


Table 4-134 Description of indicators on the switch

Number	Indicator/Butt on	Color	Description

Number	Indicator/Butt on	Color	Description
1	PWR: built-in power module indicator	-	Off: The switch is powered off.
		Green	Steady on: The switch is powered on.
		Yellow	Steady on: The built-in power module is faulty, and the switch is powered by the RPS system.
2	SYS: system status indicator	-	Off: The system is not running.
		Green	<ul style="list-style-type: none"> Fast blinking: The system is starting. Slow blinking: The system is operating properly.
		Yellow	Blinking: The system is in the sleep state. NOTE The system can wake from the sleeping state if you press the MODE button.
		Red	Steady on: The system does not work normally after registration, or a fan or temperature alarm has been generated.
3	STAT: status indicator	Green	<ul style="list-style-type: none"> Off: The status mode is not selected. Steady on: The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
4	SPED: speed indicator	Green	<ul style="list-style-type: none"> Off: The speed mode is not selected. Steady on: The speed mode is selected. If the speed mode is selected, the service port indicator shows the port speed state. After 45 seconds, the service port indicators automatically restore to the status mode.
5	STCK: stack indicator	-	Currently, the switch does not support stacking. This indicator is reserved for the stacking function.
6	MODE: mode switch button	-	<ul style="list-style-type: none"> When you press this button once, the SPED indicator turns green and the service port indicators show the speed of each service port. When you press the button a second time, the STAT indicator turns green. If you do not press the button within 45 seconds, the indicators restore to the default states. That is, the STAT indicator turns green, and the SPED and

Number	Indicator/Butt on	Color	Description
			STCK indicators are off.
7	Service port indicator <ul style="list-style-type: none"> • GE electrical ports: The ports are numbered from bottom to top and left to right, starting with 1. • GE optical ports: Each port has an indicator above it. 		Meanings of service port indicators vary in different modes. For details, see Table 4-135.
8	Mini USB indicator	Green	<ul style="list-style-type: none"> • Off: The Mini USB port is not active, and the console port is active. • Steady on: The Mini USB port is active. <p>When this indicator is on, the console indicator is off.</p>
9	Console indicator	Green	<ul style="list-style-type: none"> • Off: The console port is not active, and the Mini USB port is active. • Steady on (default): The console port is active. <p>When this LED is on, the Mini USB port indicator is off.</p>

Table 4-135 Description of service port indicators in different modes

Display Mode	Color	Description
Status	Green	<ul style="list-style-type: none"> • Off: The port is not connected or has been shut down. • Steady on: The port is connected. • Blinking: The port is sending or receiving data.
Speed	Green	<ul style="list-style-type: none"> • Off: The port is not connected or has been shut down. • Steady on: 10M/100M/1000M port: The port is operating at 10/100 Mbit/s.

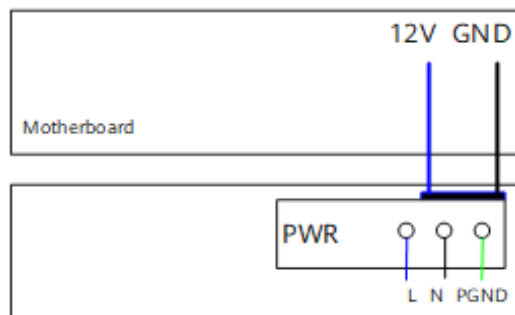
Display Mode	Color	Description
		1000M/10GE port: The port is operating at 1000 Mbit/s. • Blinking: 10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.

Power Supply Configuration

The S5700S-28P-LI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

Figure 4-53 shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 4-53 Power supply mode of a built-in AC power module



L: live wire

N: neutral wire

PGND: protection ground wire

GND: 12 V reference ground

Heat Dissipation

The S5700S-28P-LI-AC has no fans and uses natural heat dissipation.

Technical Specifications

Table 4-136 lists technical specifications of the S5700S-28P-LI-AC.

Table 4-136 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	<ul style="list-style-type: none"> V200R001: 64 MB

Item	Description
	<ul style="list-style-type: none">V200R002 and later versions: 200 MB
Mean time between failures (MTBF)	49.69 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	2.8 kg (6.17 lb)
Stack ports	Not supported
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput)	24 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">Tested according to ATIS standardEEE enabledNo PoE power consumption	19.3 W
Operating temperature	0 °C to 50 °C (32 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The operating temperature of the switch is 0 °C to 45 °C (32 °F to 113 °F) when it uses SFP optical modules with 80 km or longer transmission distances.

Item	Description
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02353836

4.5.2 S5700S-28P-PWR-LI-AC

Version Mapping

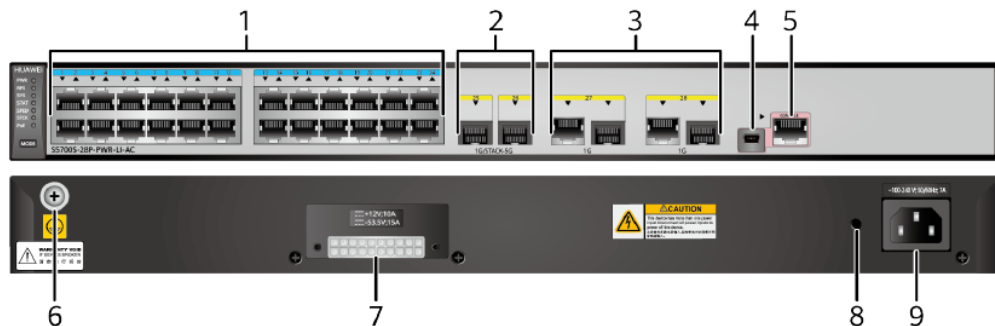
Table 4-137 lists the mapping between the S5700S-28P-PWR-LI-AC chassis and software versions.

Table 4-137 Version mapping

Series	Model	Software Version
S5700S-LI	S5700S-28P-PWR-LI-AC	V200R008C00 to V200R012C00 versions

Appearance and Structure

Figure 4-54 S5700S-28P-PWR-LI-AC appearance



1	Twenty-four PoE+	2	Two 1000BASE-X ports
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	10/100/1000BASE-T ports		Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.11 SFP Stack Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	Two combo ports (10/100/1000BASE-T + 100/1000BASE-X) Modules applicable to combo optical ports: <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules 	4	One mini USB port
5	One console port	6	Ground screw NOTE It is used with a 9.1 Ground Cable.
7	RPS socket NOTE <ul style="list-style-type: none"> • It is used with an 9.12 RPS Cable which is not hot swappable. • A PoE switch can have an RPS power supply connected to this socket to provide inputs for system power supply and PoE power supply. The two inputs are independent of each other. The RPS power supply can also be used as a backup of the system power supply when it does not provide PoE power. 	8	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.
9	AC socket NOTE It is used with an 9.8 AC Power Cable.	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-138 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-138 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. Table 4-139 describes the attributes of a 1000BASE-X Ethernet optical port.

Table 4-139 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-140.

Table 4-140 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

Indicator Description

NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
- If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
- If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 4-55 Indicators on the S5700S-28P-PWR-LI-AC

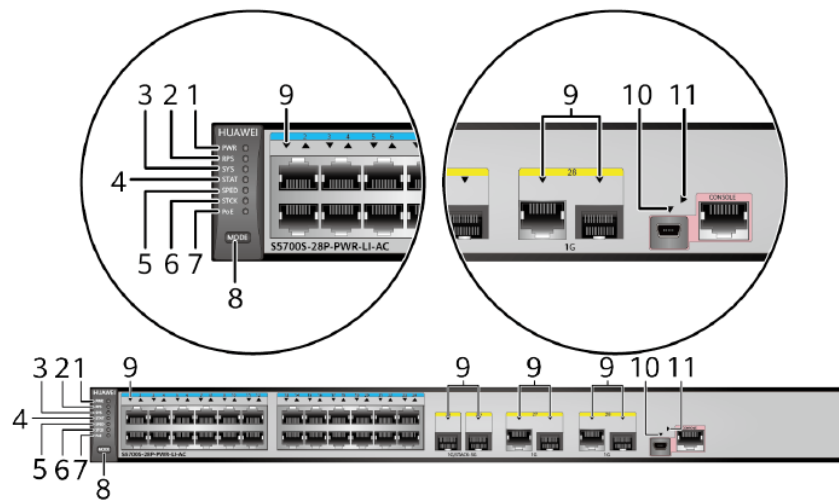


Table 4-141 Description of indicators on the switch

Number	Indicator/Butt on	Color	Description
1	PWR: internal power supply indicator	-	Off: The switch is powered off.
		Green	Steady on: The switch is powered on.
		Yellow	Steady on: The built-in power module is faulty, and the switch is powered by the RPS system.
2	RPS: RPS power supply indicator	-	Off: No RPS is connected to the switch.
		Green	<ul style="list-style-type: none"> Steady on: The RPS is in cold backup state or forced power-on state. Blinking: The RPS is providing power for another device.
		Yellow	<ul style="list-style-type: none"> Steady on: The RPS is in alarm state. (No 870 W PoE power module is available in the RPS1800 or the RPS1800 cannot provide power supply to the local switch at this time.) Blinking: The RPS is providing power for the switch and the built-in power module of the switch is faulty.
3	SYS: system status indicator	-	Off: The system is not running.
		Green	<ul style="list-style-type: none"> Fast blinking: The system is starting. Slow blinking: The system is running normally.

Number	Indicator/Button	Color	Description
		Red	Steady on: The system does not work normally after registration, or a fan or temperature alarm has been generated.
4	STAT: status indicator	Green	<ul style="list-style-type: none"> Off: The status mode is not selected. Steady on: The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
5	SPED: speed indicator	Green	<ul style="list-style-type: none"> Off: The speed mode is not selected. Steady on: The speed mode is selected. If the speed mode is selected, the service port indicator shows the port speed state. After 45 seconds, the service port indicators automatically restore to the status mode.
6	STCK: stack indicator	Green	<p>If you are not changing the indicator mode (default):</p> <ul style="list-style-type: none"> Off: The switch is in stack standby or slave state or the stacking function is not enabled on the switch. Blinking: The switch is a stack master switch or a standalone switch with the stacking function enabled.
			<p>If you are changing the indicator mode:</p> <ul style="list-style-type: none"> Off: The stack mode is not selected. Steady on: The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch. Blinking: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>
7	PoE: PoE indicator	Green	<ul style="list-style-type: none"> Off: The PoE mode is not selected. Steady on: The service port indicators show the PoE status. After 45 seconds, the service port indicators automatically restore to the status mode.

Number	Indicator/Button	Color	Description
8	MODE: mode switch button	-	<ul style="list-style-type: none"> When you press this button once, the service port indicators change to the speed mode and show the speed of each service port. When you press the button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch. When you press the button a third time, the service port indicators change to PoE mode and show the PoE status of ports. When you press the button a fourth time, the service port indicators restore to the default mode, and the STAT indicator turns green. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED and PoE indicators are off, and the STCK indicator is off or blinking green.</p>
9	Service port indicator <ul style="list-style-type: none"> GE electrical ports: The ports are numbered from bottom to top and left to right, starting with 1. 10GE optical ports: Each port has an indicator above it. 		Meanings of service port indicators vary in different modes. For details, see Table 4-142.
10	Mini USB indicator	Green	<ul style="list-style-type: none"> Off: The Mini USB port is not active, and the console port is active. Steady on: The Mini USB port is active. <p>When this indicator is on, the console indicator is off.</p>
11	Console indicator	Green	<ul style="list-style-type: none"> Off: The console port is not active, and the Mini USB port is active.

Number	Indicator/Button	Color	Description
			<ul style="list-style-type: none"> Steady on (default): The console port is active. When this LED is on, the Mini USB port indicator is off.

Table 4-142 Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
PoE	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.
	Yellow	Steady on	The PoE function is disabled on the port.
	Yellow	Blinking	The port stops providing PoE power because of an exception (for example, an incompatible PD is connected to the port).
	Green and yellow	Blinking green and yellow alternately	The port fails to supply power to a PD due to one of the following reasons: <ul style="list-style-type: none"> The power required by the connected PD exceeds the maximum power or the configured power threshold of the port. The total power consumption of PDs has reached the maximum power of the switch. The manual power management mode is used and the port is not enabled to provide power to the PD.
Stack	-	Off	Port indicators do not show the stack ID of the

Display Mode	Color	Status	Description
			switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is blinking, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Power Supply Configuration

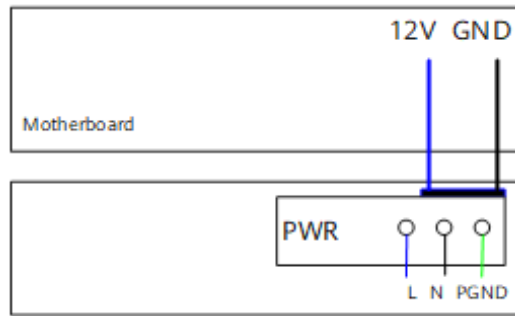
The S5700S-28P-PWR-LI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy. Table 4-143 lists its power supply configurations.

Table 4-143 Power supply configurations

Power Supply Configuration	Available PoE Power	Maximum Number of Ports (Fully Loaded)
No RPS used	369.6 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 12
RPS used	800 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 24

Figure 4-56 shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 4-56 Power supply mode of a built-in AC power module



L: live wire

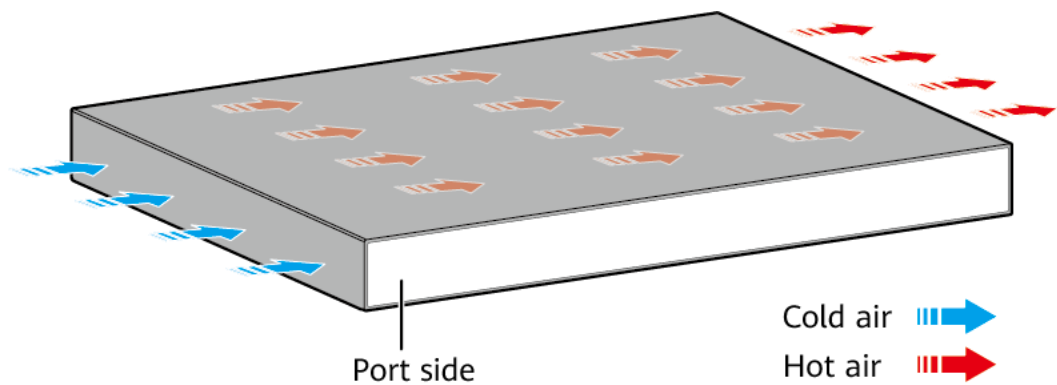
N: neutral wire

PGND: protection ground wire

GND: 12 V reference ground

Heat Dissipation

The S5700S-28P-PWR-LI-AC has two built-in fans for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-144 lists technical specifications of the S5700S-28P-PWR-LI-AC.

Table 4-144 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	200 MB
Mean time between failures (MTBF)	46.2 years
Mean time to repair (MTTR)	2 hours

Item	Description
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 310.0 mm (1.72 in. x 17.4 in. x 12.2 in.)
Weight (with packaging)	5.8 kg (12.79 lb)
Stack ports	Two uplink 1000BASE-X optical ports (non-combo ports)
RTC	Supported
RPS	Supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none">Not providing the PoE function: 45.8 W100% PoE loads: 469.7 W (system power consumption: 100.1 W, PoE: 369.6 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">Tested according to ATIS standardEEE enabledNo PoE power consumption	32 W
Operating temperature	0 °C to 50 °C (32 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 48 dB(A)
Relative humidity	5% to 95%, noncondensing

Item	Description
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010562

4.5.3 S5700S-52P-LI-AC

Version Mapping

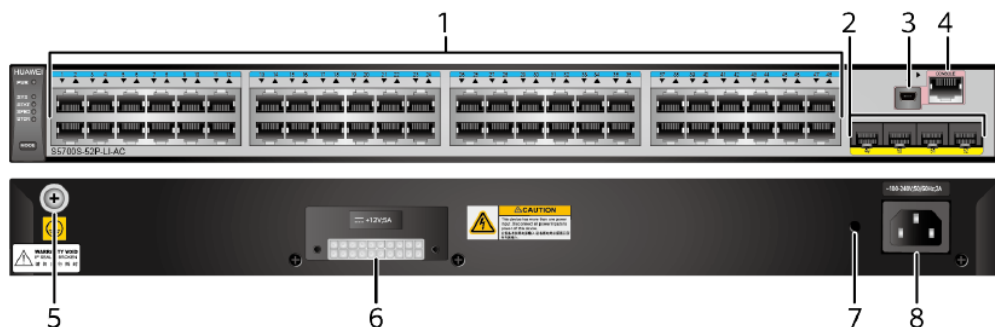
Table 4-145 lists the mapping between the S5700S-52P-LI-AC chassis and software versions.

Table 4-145 Version mapping

Series	Model	Software Version
S5700S-LI	S5700S-52P-LI-AC	V200R001C00 to V200R012C00 versions NOTE This model does not match V200R001C01, V200R003C02, V200R003C10, V200R005C00SPC500, V200R005C01, V200R005C02, V200R005C03, or V200R007C10.

Appearance and Structure

Figure 4-57 S5700S-52P-LI-AC appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 1000BASE-X ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical
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			<p>Modules</p> <ul style="list-style-type: none"> • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules
3	One mini USB port	4	One console port
5	<p>Ground screw</p> <p>NOTE It is used with a 9.1 Ground Cable.</p>	6	<p>RPS socket</p> <p>NOTE It is used with an 9.12 RPS Cable, which is not hot swappable.</p>
7	<p>Jack for AC power cable locking strap</p> <p>NOTE The AC power cable locking strap is not delivered with the switch.</p>	8	<p>AC socket</p> <p>NOTE It is used with an 9.8 AC Power Cable.</p>

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-146 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-146 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. Table 4-147 describes the attributes of a 1000BASE-X Ethernet optical port.

Table 4-147 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port	Depend on the module used

Attribute	Description
attributes	
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-148.

Table 4-148 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

Indicator Description

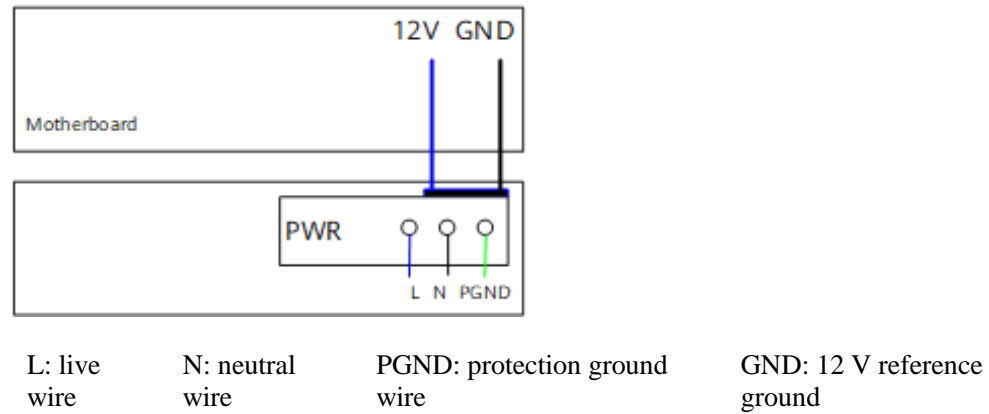
The S5700S-52P-LI-AC has the same types of indicators as the S5700S-28P-LI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5700S-52P-LI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

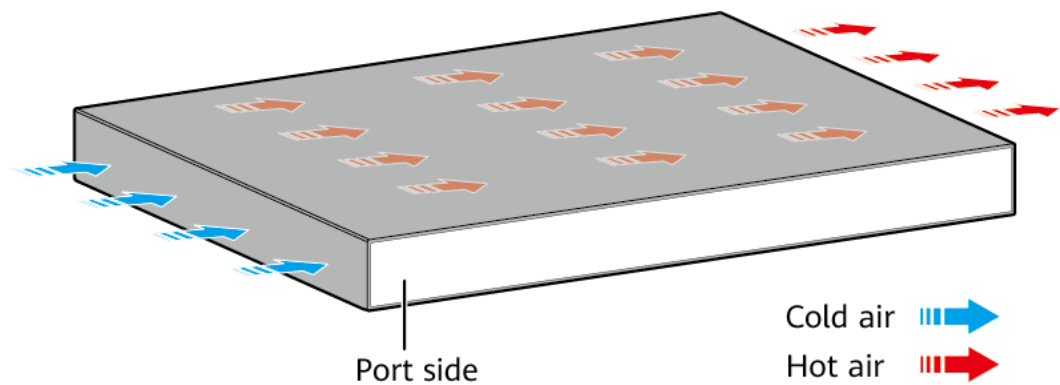
Figure 4-58 shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 4-58 Power supply mode of a built-in AC power module



Heat Dissipation

The S5700S-52P-LI-AC has a built-in fan for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-149 lists technical specifications of the S5700S-52P-LI-AC.

Table 4-149 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	<ul style="list-style-type: none"> V200R001: 64 MB V200R002 and later versions: 200 MB
Mean time between failures (MTBF)	39.26 years
Mean time to repair	2 hours

Item	Description
(MTTR)	
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 310.0 mm (1.72 in. x 17.4 in. x 12.2 in.)
Weight (with packaging)	3.5 kg (7.72 lb)
Stack ports	Not supported
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	48.4 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	32.5 W
Operating temperature	0 °C to 50 °C (32 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 43.8 dB(A)

Item	Description
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02353835

4.5.4 S5700S-28X-LI-AC

Version Mapping

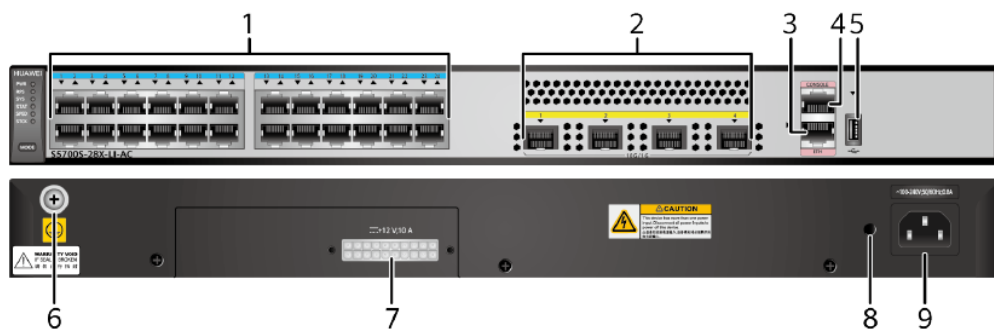
Table 4-150 lists the mapping between the S5700S-28X-LI-AC chassis and software versions.

Table 4-150 Version mapping

Series	Model	Software Version
S5700S-LI	S5700S-28X-LI-AC	V200R008C00 to V200R012C00 versions

Appearance and Structure

Figure 4-59 S5700S-28X-LI-AC appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules
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			<ul style="list-style-type: none"> • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 9.15 Copper Cable • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable • 10.19 GPON Optical Modules <p>NOTE If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>
3	One ETH management port	4	One console port
5	One USB port	6	Ground screw NOTE It is used with a 9.1 Ground Cable.
7	RPS socket NOTE It is used with an 9.12 RPS Cable, which is not hot swappable.	8	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.
9	AC socket NOTE It is used with an 9.8 AC Power Cable.	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-151 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-151 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-152 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-152 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-153.

Table 4-153 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-154 describes the attributes of an ETH management port.

Table 4-154 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards	IEEE802.3

Attribute	Description
compliance	
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

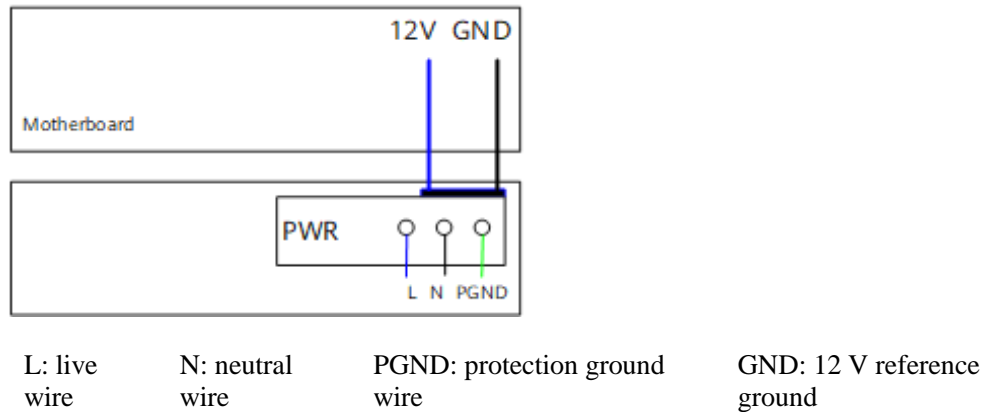
The S5700S-28X-LI-AC has the same types of indicators as the S5700S-52X-LI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5700S-28X-LI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

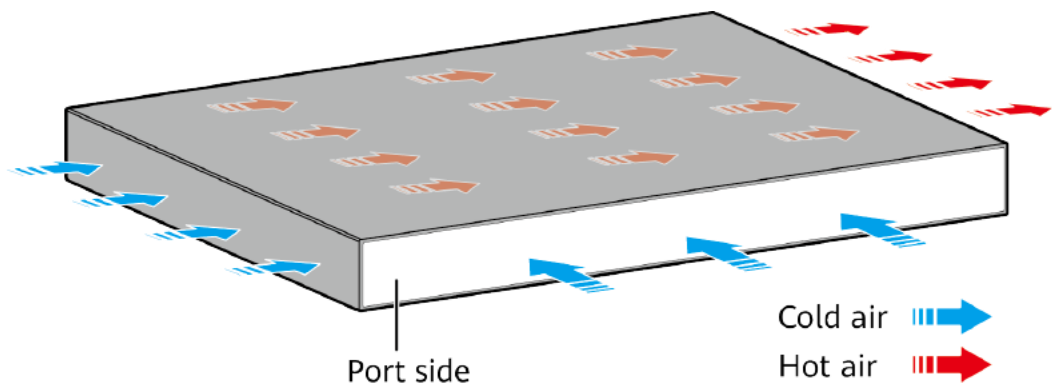
Figure 4-60 shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 4-60 Power supply mode of a built-in AC power module



Heat Dissipation

The S5700S-28X-LI-AC has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-155 lists technical specifications of the S5700S-28X-LI-AC.

Table 4-155 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	100.31 years
Mean time to repair	2 hours

Item	Description
(MTTR)	
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	4.8 kg (10.58 lb)
Stack ports	Four uplink 10GE SFP+ ports
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	32 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	22 W
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 50.2 dB(A)

Item	Description
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02350HEC

4.5.5 S5700S-52X-LI-AC

Version Mapping

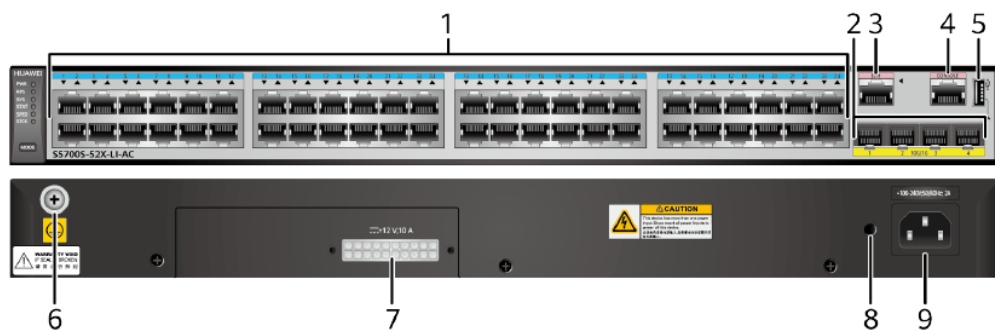
Table 4-156 lists the mapping between the S5700S-52X-LI-AC chassis and software versions.

Table 4-156 Version mapping

Series	Model	Software Version
S5700S-LI	S5700S-52X-LI-AC	V200R008C00 to V200R012C00 versions

Appearance and Structure

Figure 4-61 S5700S-52X-LI-AC appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules
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			<ul style="list-style-type: none"> • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable • 10.19 GPON Optical Modules <p>NOTE If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>
3	One ETH management port	4	One console port
5	One USB port	6	Ground screw NOTE It is used with a 9.1 Ground Cable.
7	RPS socket NOTE It is used with an 9.12 RPS Cable, which is not hot swappable.	8	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.
9	AC socket NOTE It is used with an 9.8 AC Power Cable.	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-157 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-157 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-158 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-158 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-159.

Table 4-159 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-160 describes the attributes of an ETH management port.

Table 4-160 Attributes of an ETH management port

Attribute	Description
-----------	-------------

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

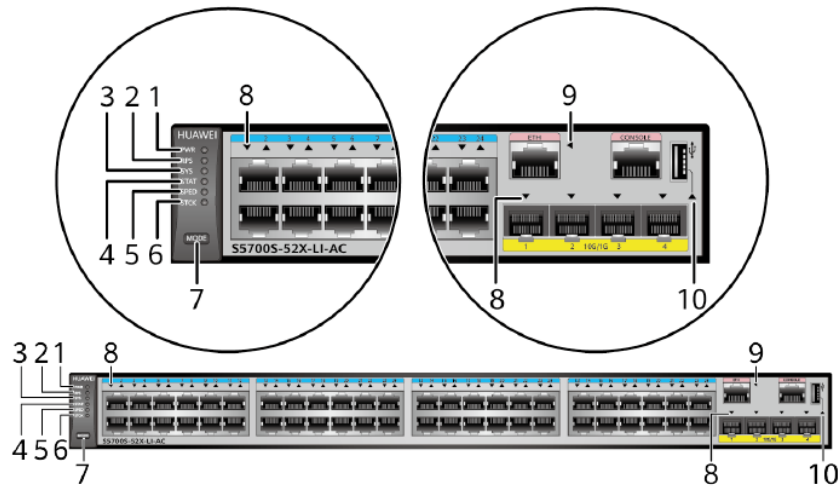
Indicator Description

NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
- If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
- If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 4-62 Indicators on the S5700S-52X-LI-AC



NOTE

The S5700S-52X-LI-AC provides a command that can turn on their fault indicators to help field maintenance personnel find a faulty switch.

The SYS indicator and mode indicators (STAT, SPED, and STCK) are used as fault indicators. When an S5700S-52X-LI-AC switch is faulty, you can run the command to turn on the fault indicators. Then the SYS indicator and mode indicators fast blink red to help field maintenance personnel quickly find the faulty switch.

Table 4-161 Indicator Description

No.	Indicator/Button	Color	Description
1	PWR: built-in power module indicator	-	Off: The switch is not powered on.
		Green	Steady on: The power module is supplying power normally.
		Yellow	Steady on: The power module has failed, and the switch is receiving power from a redundant power supply (RPS).
2	RPS: RPS indicator	-	Off: The switch is not connected to an RPS.
		Green	<ul style="list-style-type: none"> Steady on: The RPS is in cold standby state. Blinking: The RPS is supplying power to another switch.
		Yellow	Blinking: The RPS is supplying power to the local switch, and the built-in power module of the switch has failed.
3	SYS: system status indicator	-	Off: The system is not running.
		Green	<ul style="list-style-type: none"> Fast blinking: The system is starting.

No.	Indicator/Butt on	Color	Description
			<ul style="list-style-type: none"> Slow blinking: The system is running normally.
		Yellow	Blinking: The system is in the sleep state. NOTE The system can wake from the sleeping state if you press the MODE button.
		Red	Steady on: The system does not work normally after registration, or a fan alarm or temperature alarm has been generated.
4	STAT: status indicator	Green	<ul style="list-style-type: none"> Off: The status mode is not selected. Steady on: The status mode (default mode) is selected. In this mode, service port indicators show the port link or activity state.
5	SPED: speed indicator	Green	<ul style="list-style-type: none"> Off: The speed mode is not selected. Steady on: The speed mode is selected. In this mode, service port indicators show port speeds. After 45 seconds, the service port indicators automatically restore to the status mode.
6	STCK: stack indicator	Green	If you are not changing the indicator mode (default state): <ul style="list-style-type: none"> Off: The switch is the standby or slave switch in a stack or a standalone switch with the stacking function disabled. Blinking: The switch is the master switch in a stack or a standalone switch with the stacking function enabled. If you are changing the indicator mode: <ul style="list-style-type: none"> Off: The stack mode is not selected. Steady on: The stack mode is selected. The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch. Blinking: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. After 45 seconds, the service port indicators automatically restore to the

No.	Indicator/Button	Color	Description
			status mode.
7	MODE: mode switch button	-	<ul style="list-style-type: none"> When you press this button once, the service port indicators change to the speed mode and show the speed of each service port. When you press the button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch. When you press the button a third time, the service port indicators restore to the default mode, and the STAT indicator turns green. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED indicator is off, and the STCK indicator is off or blinking green.</p>
8	Service port indicator (one indicator for each port)	Meanings of service port indicators vary in different modes. For details, see Table 4-162.	
9	ETH port indicator	Green	<ul style="list-style-type: none"> Off: The ETH management port is not connected. Steady on: The ETH management port is connected. Blinking: The port is sending or receiving data.
10	USB-based deployment indicator	-	<p>Off:</p> <ul style="list-style-type: none"> No USB flash drive is connected to the switch. The USB port is damaged. The indicator is damaged. The USB flash drive does not have any configuration file and cannot be used for deployment. The switch has been upgraded using the USB flash drive and is restarting.
		Green	<ul style="list-style-type: none"> Steady on: A USB-based deployment has been completed. Blinking: The system is reading data from a USB flash drive.
		Yellow	Steady on: The switch has copied all the

No.	Indicator/Button	Color	Description
			required files and completed the file check. The USB flash drive can be removed from the switch.
		Red	Blinking: An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

Table 4-162 Description of service port indicators in different modes (one indicator for each port)

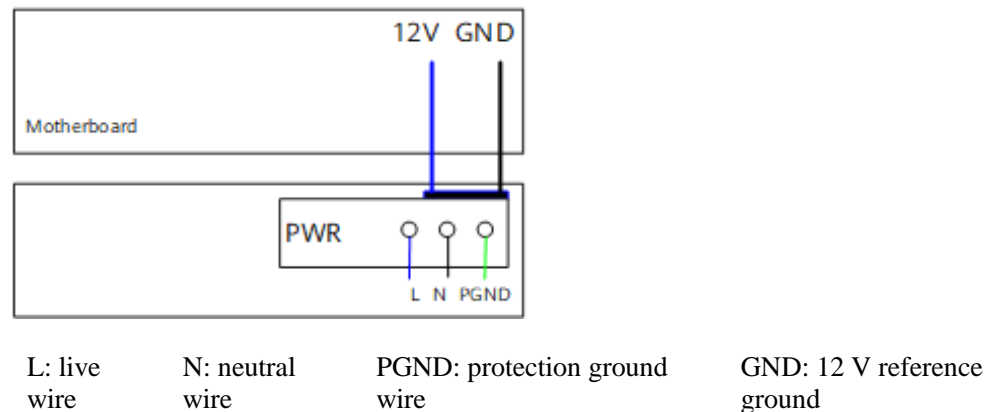
Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is blinking, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Power Supply Configuration

The S5700S-52X-LI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

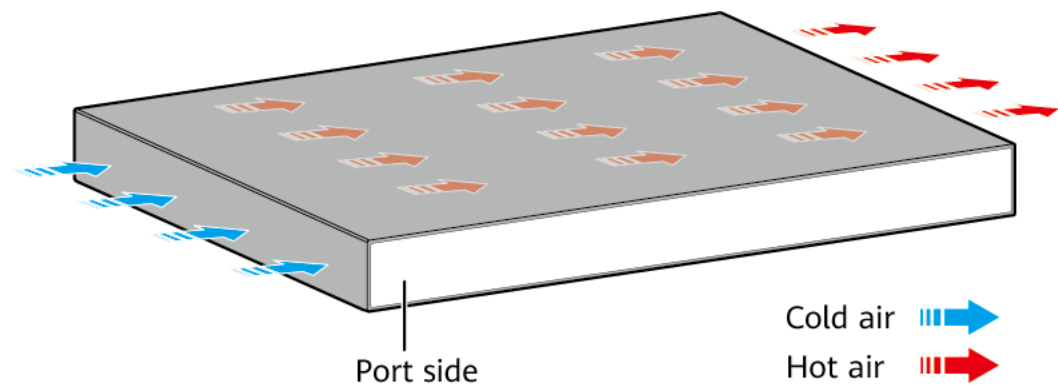
Figure 4-63 shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 4-63 Power supply mode of a built-in AC power module



Heat Dissipation

The S5700S-52X-LI-AC has a built-in fan for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-163 lists technical specifications of the S5700S-52X-LI-AC.

Table 4-163 Technical specifications

Item	Description
------	-------------

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	86.64 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	5 kg (11.02 lb)
Stack ports	Four uplink 10GE SFP+ ports
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	54.7 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	34.4 W
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating

Item	Description
	temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 50.2 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02350HED

4.6 S5700-LI-BAT

NOTE

The S5700-28P-LI-BAT and S5700-28P-LI-24S-BAT support internal batteries. For details about the two models, see the *S5700-LI-BAT Hardware Installation and Maintenance Guide*.

4.6.1 S5700-28P-LI-BAT

Version Mapping

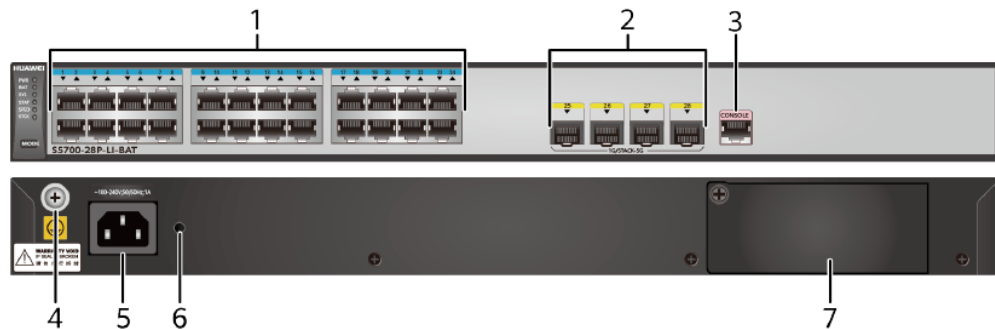
Table 4-164 lists the mapping between the S5700-28P-LI-BAT chassis and software versions.

Table 4-164 Version mapping

Series	Model	Software Version
S5700-LI-BAT	S5700-28P-LI-BAT	V200R003C02 to V200R012C00 versions NOTE This model does not match V200R003C10, V200R005C00SPC500, V200R005C01, V200R005C02, V200R005C03, or V200R007C10.

Appearance and Structure

Figure 4-64 S5700-28P-LI-BAT appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 1000BASE-X ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules
3	One console port	4	Ground screw NOTE It is used with a 9.1 Ground Cable.
5	AC socket NOTE It is used with an 9.8 AC Power Cable.	6	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.
7	Battery slot NOTE Applicable battery modules or power modules: <ul style="list-style-type: none"> • 6.1 BAT-4AHA (Chargeable Lithium Battery) • 6.2 BAT-8AHA (Chargeable Lithium Battery) • 6.3 PBB-12AHA (12AH Lead-Acid Battery Charger Module) • 5.2 LS5M100PWA00/ES0W2PSA0150 (150 W AC Power Module) • 5.3 LS5M100PWD00/ES0W2PSD0150 (150 W DC Power Module) 	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-165 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-165 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. Table 4-166 describes the attributes of a 1000BASE-X Ethernet optical port.

Table 4-166 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-167.

Table 4-167 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards	RS-232

Attribute	Description
compliance	
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Indicator Description

NOTE

In V200R007 and later versions, you can hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
- If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
- If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore to the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 4-65 Indicators on the S5700-28P-LI-BAT

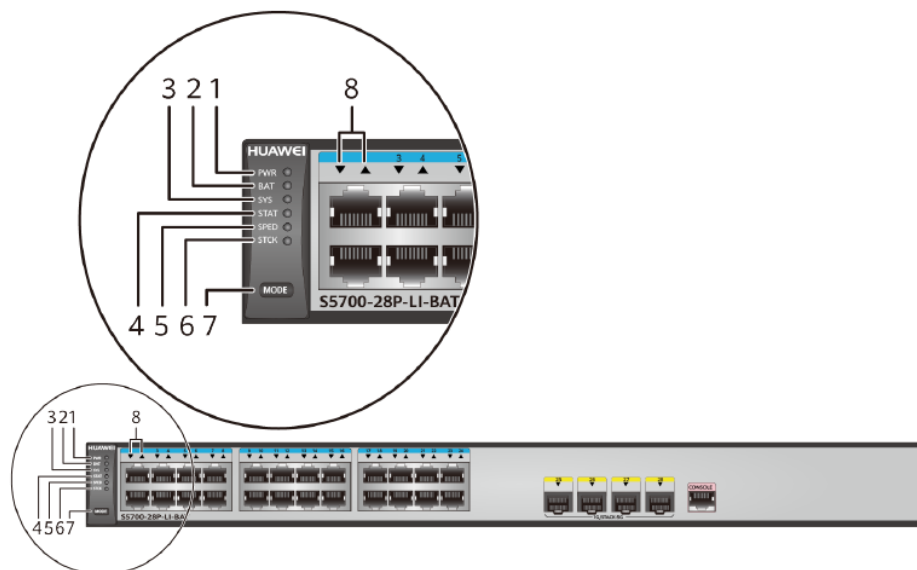


Table 4-168 Description of indicators on the S5700-28P-LI-BAT

No.	Indicator/Button	Color	Description
1	PWR: power	-	Off: The switch is not powered on.

No.	Indicator/Button	Color	Description
	supply indicator	Green	Steady on: The switch is powered on.
		Yellow	Steady on: The built-in power supply has failed, and the switch is powered by a backup power supply.
2	BAT: battery indicator	-	Off: <ul style="list-style-type: none"> No lithium battery is working. No lead-acid battery charger module is working. No power module is working.
		Green	<ul style="list-style-type: none"> Steady on: The lithium battery, lead-acid battery, or power module is working normally. Fast blinking: The lithium battery is supplying power to the switch. Slow blinking: The switch is charging the lithium battery.
		Yellow	<p>Steady on:</p> <ul style="list-style-type: none"> The lithium battery does not work normally. The output of the lead-acid battery is abnormal. No lead-acid battery is connected to the lead-acid battery charger module. The power module does not work normally. <p>Blinking: The lithium battery software is upgrading. (This indicator state is available in V200R005C00 and later versions.)</p>
3	SYS: system status indicator	-	Off: The system is not running.
		Green	<ul style="list-style-type: none"> Fast blinking: The system is starting. Slow blinking: The system is running normally.
		Red	Steady on: The system is not running normally or has generated a temperature or fan alarm.
4	STAT: status indicator	Green	<ul style="list-style-type: none"> Off: The status mode is not selected. Steady on: The service port indicators are in the status mode (default).
5	SPED: speed indicator	Green	<ul style="list-style-type: none"> Off: The speed mode is not selected. Steady on: The service port indicators

No.	Indicator/Button	Color	Description
			show the port speed. After 45 seconds, the service port indicators automatically restore to the status mode.
6	STCK: stack indicator	-	Off NOTE The S5700-LI-BAT series switches do not support the stacking feature. This indicator is reserved for future use.
7	MODE: mode switch button	-	<ul style="list-style-type: none"> When you press this button once, the SPED indicator turns green, and the service port indicators show the speed of each service port. When you press the button a second time, the STAT indicator turns green. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED and STCK indicator are off.</p>
8	Service port indicator <ul style="list-style-type: none"> GE electrical ports: The ports are numbered from bottom to top and left to right, starting with 1. GE optical ports: Each optical port has a corresponding indicator above it. 		Meanings of service port indicators vary in different modes. For details, see Table 4-169.

Table 4-169 Description of service port indicators in different modes

Mode	Color	Description
Status mode	Green	<ul style="list-style-type: none"> Off: The port is not connected or has been shut down.

Mode	Color	Description
		<ul style="list-style-type: none">Steady on: The port is connected.Blinking: The port is sending or receiving data.
Speed mode	Green	<ul style="list-style-type: none">Off: The port is not connected or has been shut down.Steady on: The port is operating at 10/100 Mbit/s.Blinking: The port is operating at 1000 Mbit/s.

Power Supply Configuration

The S5700-28P-LI-BAT switch has a built-in AC power supply unit and can use a pluggable power module or battery for power redundancy. Power modules and batteries for the S5700-28P-LI-BAT switch are hot swappable.

Battery module configuration

The battery installed on an S5700-28P-LI-BAT switch can automatically supply power to the switch in case of a mains power outage, ensuring uninterrupted services. When the AC power supply recovers, the battery turns to the charging state.

The S5700-28P-LI-BAT switch supports the following batteries and battery charger module:

- BAT-4AHA (chargeable lithium battery)
- BAT-8AHA (chargeable lithium battery)
- PBB-12AHA (12AH lead-acid battery charger module)

NOTE

The PBB-12AHA module must connect to a lead-acid battery with 12AH of rated capacity.

The S5700-28P-LI-BAT switch can be configured with a battery to prevent service interruption caused by mains power outages. Table 4-170 lists the power supply time of the batteries.

Table 4-170 Battery configuration

Battery	Power Supply Time
BAT-4AHA	<ul style="list-style-type: none">The switch works with the maximum power consumption and the battery is fully charged: 2.4 hoursThe switch has 70% of ports in Up state, each port transmits 10% of maximum traffic and has the EEE function enabled, and the battery is fully charged: 4.1 hoursThe switch works with the minimum power consumption (no port is working) and the battery is fully charged: 5.6 hours

Battery	Power Supply Time
BAT-8AHA	<ul style="list-style-type: none"> The switch works with the maximum power consumption and the battery is fully charged: 4.8 hours The switch has 70% of ports in Up state, each port transmits 10% of maximum traffic and has the EEE function enabled, and the battery is fully charged: 8.2 hours The switch works with the minimum power consumption (no port is working) and the battery is fully charged: 11.2 hours

NOTE

The power supply time shortens when a battery has been used for a long time.

Battery module configuration

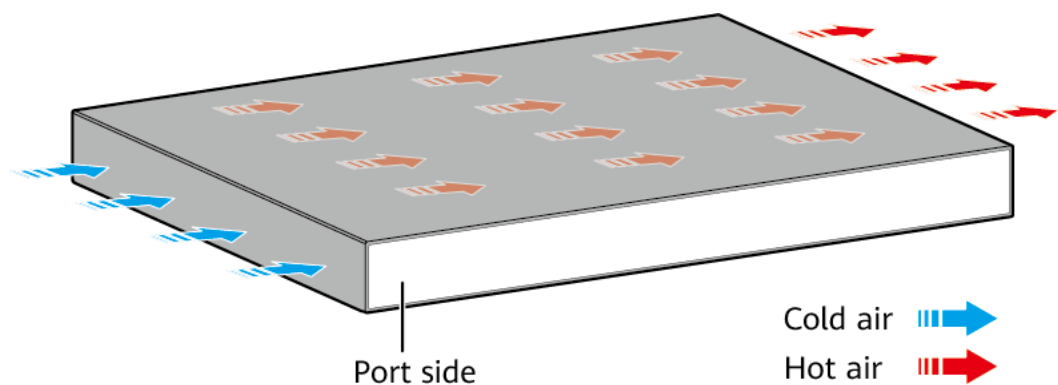
The S5700-28P-LI-BAT switch can be configured with a power module as a backup of the built-in power supply unit to improve power reliability.

The S5700-28P-LI-BAT switch supports the following power modules:

- 150 W AC power module
- 150 W DC power module

Heat Dissipation

The S5700-28P-LI-BAT has a built-in fan for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-171 lists technical specifications of the S5700-28P-LI-BAT.

Table 4-171 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	200 MB
Mean time between failures (MTBF)	57.9 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	<ul style="list-style-type: none">Built-in AC or using AC power modules: ± 6 kV in differential mode, ± 6 kV in common modeUsing DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 310.0 mm (1.72 in. x 17.4 in. x 12.2 in.)
Weight (with packaging)	3.4 kg (7.5 lb)
Stack ports	Not supported
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	23 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">Tested according to ATIS standardEEE enabledNo PoE power consumption	22.7 W

Item	Description
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	<ul style="list-style-type: none"> Pluggable modules not configured: -40 °C to +70 °C (-40 °F to +158 °F) Power modules configured: -40 °C to +70 °C (-40 °F to +158 °F) Lithium battery modules configured: -20 °C to +60 °C (-4 °F to +140 °F) Lead-acid battery modules configured: The storage temperature is determined according to the storage environment of lead-acid batteries.
Noise under normal temperature (27 °C, sound power)	< 43.2 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none"> DC power modules configured: 0-2000 m (0-6562 ft.) AC power modules or battery modules configured: 0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> EMC certification Safety certification Manufacturing certification
Part number	98010509

4.6.2 S5700-28P-LI-24S-BAT

Version Mapping

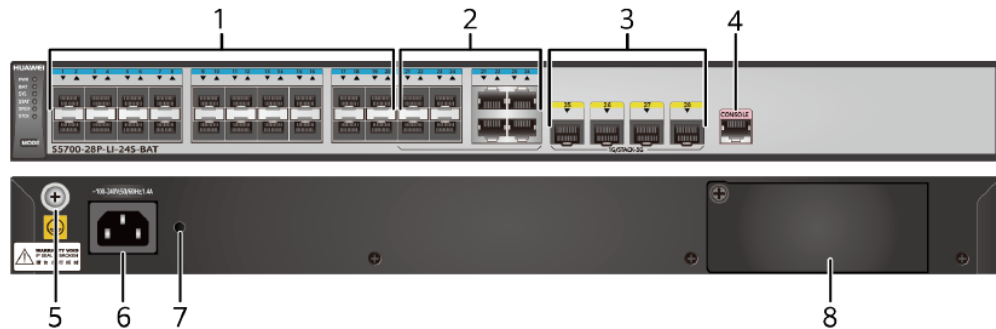
Table 4-172 lists the mapping between the S5700-28P-LI-24S-BAT chassis and software versions.

Table 4-172 Version mapping

Series	Model	Software Version
S5700-LI-BAT	S5700-28P-LI-24S-BAT	V200R003C02 to V200R012C00 versions NOTE This model does not match V200R003C10, V200R005C00SPC500, V200R005C01, V200R005C02, V200R005C03, or V200R007C10.

Appearance and Structure

Figure 4-66 S5700-28P-LI-24S-BAT appearance



1	<p>Twenty 100/1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules 	2	<p>Four combo ports (10/100/1000BASE-T + 100/1000BASE-X)</p> <p>Modules applicable to combo optical ports:</p> <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules
3	<p>Four 1000BASE-X ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules 	4	<p>One console port</p>
5	<p>Ground screw</p> <p>NOTE It is used with a 9.1 Ground Cable.</p>	6	<p>AC socket</p> <p>NOTE It is used with an 9.8 AC Power Cable.</p>
7	<p>Jack for AC power cable locking strap</p> <p>NOTE The AC power cable locking strap is not delivered with the switch.</p>	8	<p>Battery slot</p> <p>NOTE Applicable battery modules or power modules:</p> <ul style="list-style-type: none"> • 6.1 BAT-4AHA (Chargeable Lithium Battery) • 6.2 BAT-8AHA (Chargeable Lithium Battery) • 6.3 PBB-12AHA (12AH Lead-Acid Battery Charger Module) • 5.2 LS5M100PWA00/ES0W2PSA0150 (150 W AC Power Module)

			<ul style="list-style-type: none"> 5.3 LS5M100PWD00/ES0W2PSD0150 (150 W DC Power Module)
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Port Description

100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. Table 4-173 describes the attributes of a 100/1000BASE-X port.

Table 4-173 Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. Table 4-174 describes the attributes of a 1000BASE-X Ethernet optical port.

Table 4-174 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
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Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-175.

Table 4-175 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Indicator Description

The S5700-28P-LI-24S-BAT has the same types of indicators as the S5700-28P-LI-BAT. For details, see [Indicator Description](#).

Power Supply Configuration

The S5700-28P-LI-24S-BAT switch has a built-in AC power supply unit and can use a pluggable power module or battery for power redundancy. Power modules and batteries for the S5700-28P-LI-24S-BAT switch are hot swappable.

Battery module configuration

The battery installed on an S5700-28P-LI-24S-BAT switch can automatically supply power to the switch in case of a mains power outage, ensuring uninterrupted services. When the AC power supply recovers, the battery turns to the charging state.

The S5700-28P-LI-24S-BAT switch supports the following batteries and battery charger module:

- BAT-4AHA (chargeable lithium battery)
- BAT-8AHA (chargeable lithium battery)
- PBB-12AHA (12AH lead-acid battery charger module)

 **NOTE**

The PBB-12AHA module must connect to a lead-acid battery with 12AH of rated capacity.

The S5700-28P-LI-24S-BAT switch can be configured with a battery to prevent service interruption caused by mains power outages. Table 4-176 lists the power supply time of the batteries.

Table 4-176 Battery configuration

Battery	Power Supply Time
BAT-4AHA	<ul style="list-style-type: none"> • The switch works with the maximum power consumption and the battery is fully charged: 1.2 hours • The switch has 70% of ports in Up state, each port transmits 10% of maximum traffic, and the battery is fully charged: 2.1 hours • The switch works with the minimum power consumption (no port is working) and the battery is fully charged: 4.1 hours
BAT-8AHA	<ul style="list-style-type: none"> • The switch works with the maximum power consumption and the battery is fully charged: 2.3 hours • The switch has 70% of ports in Up state, each port transmits 10% of maximum traffic, and the battery is fully charged: 4.2 hours • The switch works with the minimum power consumption (no port is working) and the battery is fully charged: 8.3 hours

 **NOTE**

The power supply time shortens when a battery has been used for a long time.

Battery module configuration

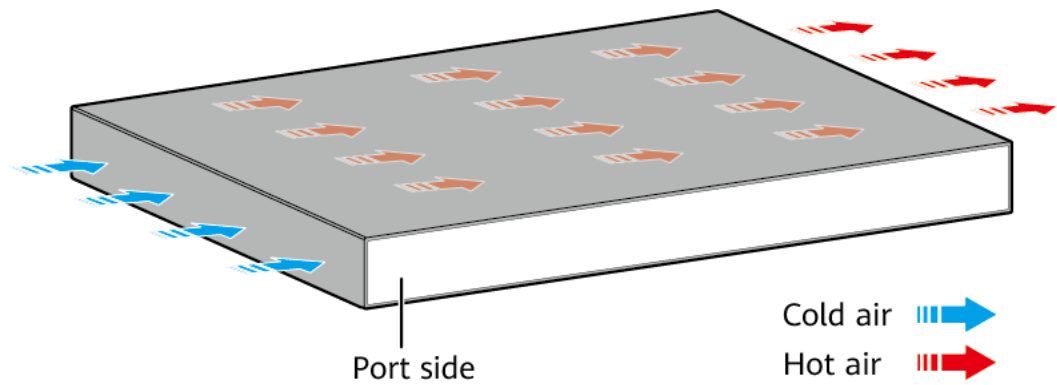
The S5700-28P-LI-24S-BAT switch can be configured with a power module as a backup of the built-in power supply unit to improve power reliability.

The S5700-28P-LI-24S-BAT switch supports the following power modules:

- 150 W AC power module
- 150 W DC power module

Heat Dissipation

The S5700-28P-LI-24S-BAT has two built-in fans for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-177 lists technical specifications of the S5700-28P-LI-24S-BAT.

Table 4-177 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	200 MB
Mean time between failures (MTBF)	45
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	<ul style="list-style-type: none"> Built-in AC or using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 310.0 mm (1.72 in. x 17.4 in. x 12.2 in.)
Weight (with packaging)	3.6 kg (7.94 lb)
Stack ports	Not supported
RTC	Not supported
RPS	Not supported
PoE	Not supported

Item	Description
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	34.1 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	33.4 W
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	<ul style="list-style-type: none"> • Pluggable modules not configured: -40 °C to +70 °C (-40 °F to +158 °F) • Power modules configured: -40 °C to +70 °C (-40 °F to +158 °F) • Lithium battery modules configured: -20 °C to +60 °C (-4 °F to +140 °F) • Lead-acid battery modules configured: The storage temperature is determined according to the storage environment of lead-acid batteries.
Noise under normal temperature (27 °C, sound power)	< 46.1 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none"> • DC power modules configured: 0-2000 m (0-6562 ft.) • AC power modules or battery modules configured: 0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010511

4.7 S5710-LI

4.7.1 S5710-28C-LI

Version Mapping

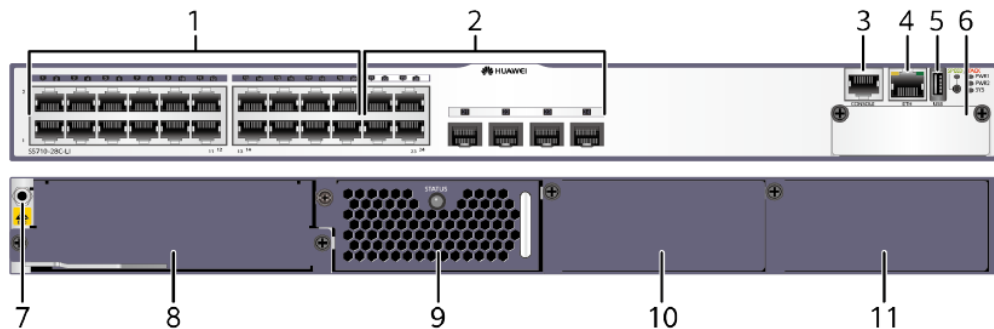
Table 4-178 lists the mapping between the S5710-28C-LI chassis and software versions.

Table 4-178 Version mapping

Series		Model	Software Version
S5710-LI	S5710-C-LI	S5710-28C-LI	V200R001C00 only

Appearance and Structure

Figure 4-67 S5710-28C-LI appearance



1	Twenty 10/100/1000BASE-T ports	2	Four combo ports (10/100/1000BASE-T (PoE+) + 100/1000BASE-X) Modules applicable to combo optical ports: <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules
3	One console port	4	One ETH management port
5	One USB port	6	Front card slot NOTE

			<p>Card supported:</p> <ul style="list-style-type: none"> • 8.6 ES5D00G4SA01 (4-Port GE SFP Front Optical Interface Card) • 8.3 ES5D000X2S00 (2-Port 10GE SFP+ Front Optical Interface Card) • 8.4 ES5D000X4S01 (4-Port 10GE SFP+ Front Optical Interface Card)
7	<p>ESD jack</p> <p>NOTE Before installing or maintaining a switch, wear an ESD wrist strap and insert the other end of the ESD wrist strap into this ESD jack.</p>	8	<p>Rear card slot</p> <p>NOTE Card supported:</p> <ul style="list-style-type: none"> • 8.28 ES5D00ETPC00 (Stack Rear Card) • 8.29 ES5D00ETPB00 (Extended Rear Card)
9	<p>Fan slot</p> <p>NOTE Applicable fan module: 7.1 CX7E1FANA Fan Module</p>	10	<p>Power module slot 2</p> <p>NOTE Applicable power modules:</p> <ul style="list-style-type: none"> • 5.2 LS5M100PWA00/ES0W2PSA0150 (150 W AC Power Module) • 5.3 LS5M100PWD00/ES0W2PSD0150 (150 W DC Power Module)
11	<p>Power module slot 1</p> <p>NOTE Applicable power modules:</p> <ul style="list-style-type: none"> • 5.2 LS5M100PWA00/ES0W2PSA0150 (150 W AC Power Module) • 5.3 LS5M100PWD00/ES0W2PSD0150 (150 W DC Power Module) 	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-179 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-179 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission	100 m

Attribute	Description
distance	

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-180.

Table 4-180 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the *Configuration Guide - Basic Configurations*. Table 4-181 describes the attributes of an ETH management port.

Table 4-181 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB flash drive used on a switch must comply with USB 1.1.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

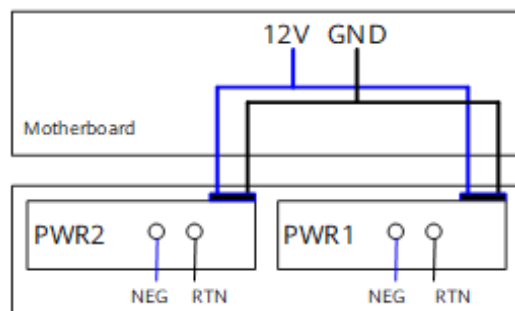
The S5710-28C-LI has the same types of indicators as the S5700-28C-SI. For details, see [Indicator Description](#).

Power Supply Configuration

The S5710-28C-LI uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. The switch cannot use AC and DC power modules simultaneously.

Figure 4-68 shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 4-68 Power supply connections of dual DC power modules



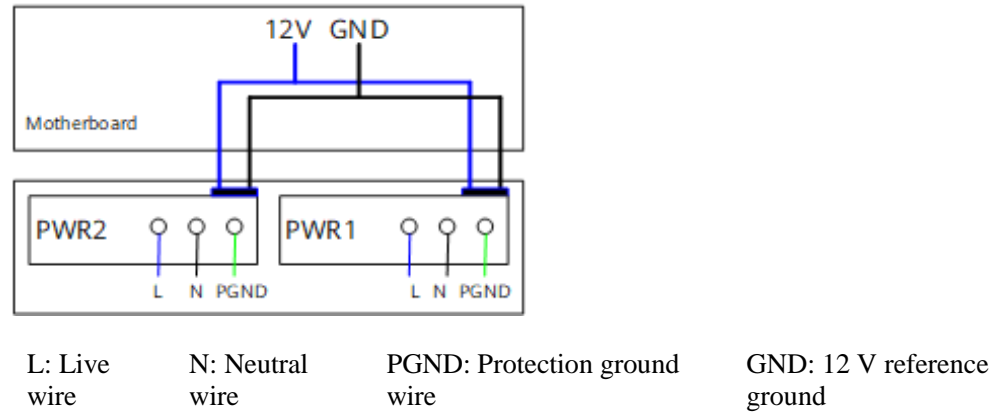
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

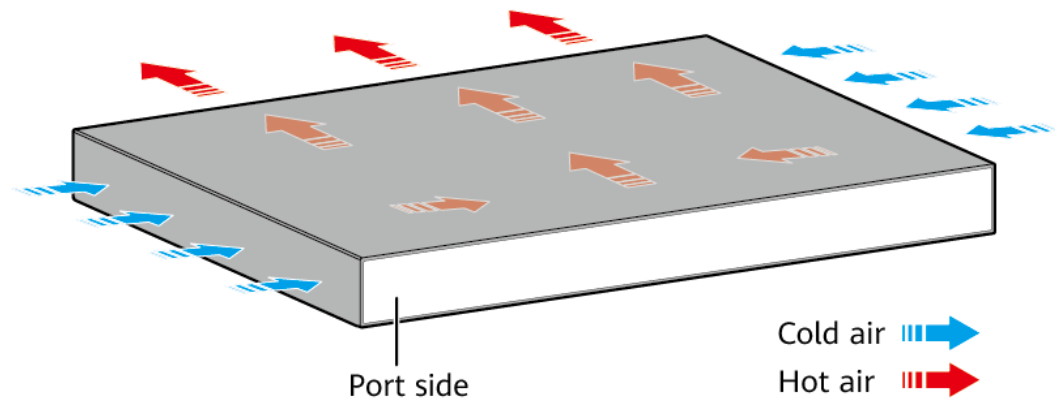
Figure 4-69 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 4-69 Power supply connections of dual AC power modules



Heat Dissipation

The S5710-28C-LI uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



 **NOTE**

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-182 lists technical specifications of the S5710-28C-LI.

Table 4-182 Technical specifications

Item	Description
Memory (RAM)	256 MB

Item	Description
Flash	32 MB
Mean time between failures (MTBF)	53.7 years when a 2-port 10GE interface card is configured, 74.9 years when a 4-port GE front card is configured, 29.58 years when a 4-port 10GE front card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 2 kV
Power supply surge protection	<ul style="list-style-type: none">Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common modeUsing DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)
Weight	<ul style="list-style-type: none">Empty: ≤ 5 kg (11.02 lb)Fully configured: ≤ 8.5 kg (18.74 lb)
Stack ports	Two stack ports available on each stack card
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	56 W
Operating temperature	0 °C to 50 °C (32 °F to 122 °F)
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 41 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none">AC power modules configured: 0-5000 m (0-16404 ft.)DC power modules configured: 0-2000 m (0-6562 ft.)

Item	Description
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02354139

4.7.2 S5710-28C-PWR-LI

Version Mapping

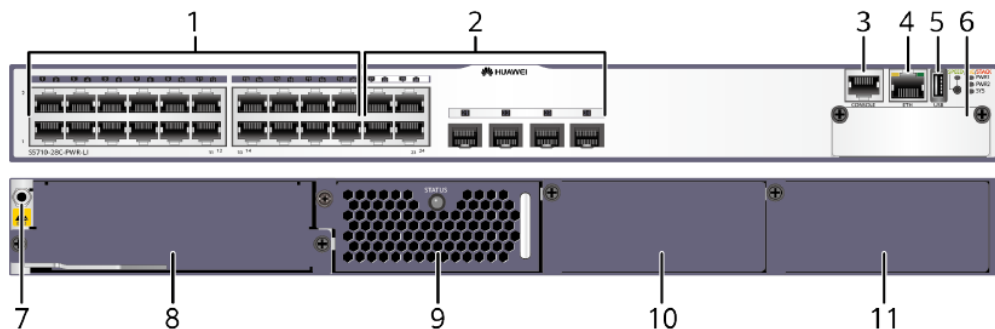
Table 4-183 lists the mapping between the S5710-28C-PWR-LI chassis and software versions.

Table 4-183 Version mapping

Series		Model	Software Version
S5710-LI	S5710-C-LI	S5710-28C-PWR-LI	V200R001C00 only

Appearance and Structure

Figure 4-70 S5710-28C-PWR-LI appearance



1	Twenty PoE+ 10/100/1000BASE-T ports	2	Four combo ports (10/100/1000BASE-T (PoE+) + 100/1000BASE-X) Modules applicable to combo optical ports: <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules
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3	One console port	4	One ETH management port
5	One USB port	6	Front card slot NOTE Card supported: <ul style="list-style-type: none"> 8.6 ES5D00G4SA01 (4-Port GE SFP Front Optical Interface Card) 8.3 ES5D000X2S00 (2-Port 10GE SFP+ Front Optical Interface Card) 8.4 ES5D000X4S01 (4-Port 10GE SFP+ Front Optical Interface Card)
7	ESD jack NOTE Before installing or maintaining a switch, wear an ESD wrist strap and insert the other end of the ESD wrist strap into this ESD jack.	8	Rear card slot NOTE Card supported: <ul style="list-style-type: none"> 8.28 ES5D00ETPC00 (Stack Rear Card) 8.29 ES5D00ETPB00 (Extended Rear Card)
9	Fan slot NOTE Applicable fan module: 7.1 CX7E1FANA Fan Module	10	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none"> 5.5 W0PSA2500 (250 W AC PoE Power Module) 5.6 W0PSA5000/PAC-500WA-BE (500 W AC PoE Power Module)
11	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> 5.5 W0PSA2500 (250 W AC PoE Power Module) 5.6 W0PSA5000/PAC-500WA-BE (500 W AC PoE Power Module) 	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-184 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-184 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing

Attribute	Description
Maximum transmission distance	100 m

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-185.

Table 4-185 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management

port is faster than transfer through the console port. For details on how to use the ETH management port, see the *Configuration Guide - Basic Configurations*. Table 4-186 describes the attributes of an ETH management port.

Table 4-186 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB flash drive used on a switch must comply with USB 1.1.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5710-28C-PWR-LI has the same types of indicators as the S5700-28C-PWR-SI. For details, see [Indicator Description](#).

Power Supply Configuration

The S5710-28C-PWR-LI is a PoE switch. It has two power module slots, each of which can have a 500 W or 250 W power module installed. A power module can provide 369.6 W or 123.2 W of PoE power for powered devices (PDs). Table 4-187 lists its power supply configurations.

Table 4-187 Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
250 W	–	123.2 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 8 • 802.3at (30 W per port): 4
500 W	–	369.6 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 24 • 802.3at (30 W per port):

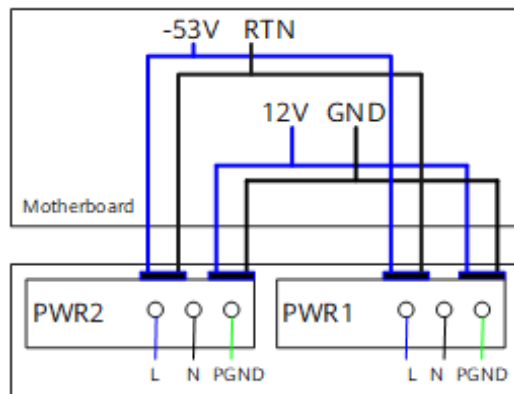
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
			12
250 W	250 W	246.4 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 16 802.3at (30 W per port): 8
500 W	500 W	739.2 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 24

NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

Figure 4-71 shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

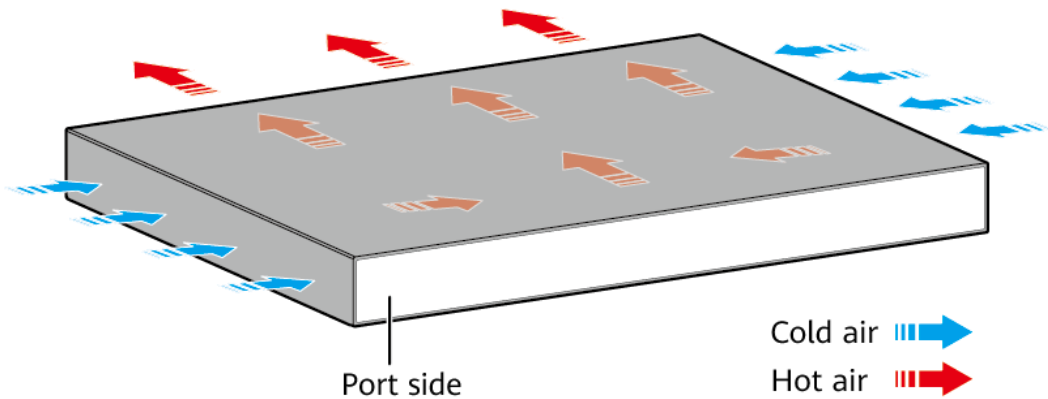
Figure 4-71 Power supply by dual AC PoE power modules



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground RTN: -53 V reference ground

Heat Dissipation

The S5710-28C-PWR-LI uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-188 lists technical specifications of the S5710-28C-PWR-LI.

Table 4-188 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	32 MB
Mean time between failures (MTBF)	53.6 years when a 2-port 10GE interface card is configured, 74.6 years when a 4-port GE front card is configured, 25.68 years when a 4-port 10GE front card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 1 kV
Power supply surge protection	± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)
Weight	<ul style="list-style-type: none"> Empty: ≤ 5 kg (11.02 lb) Fully configured: ≤ 8.5 kg (18.74 lb)
Stack ports	Two stack ports available on each stack card
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz

Item	Description
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, 100% PoE loads, full speed of fans)	836 W (system power consumption: 96 W, PoE: 740 W)
Operating temperature	0 °C to 50 °C (32 °F to 122 °F)
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 45 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02354136

4.7.3 S5710-52C-LI

Version Mapping

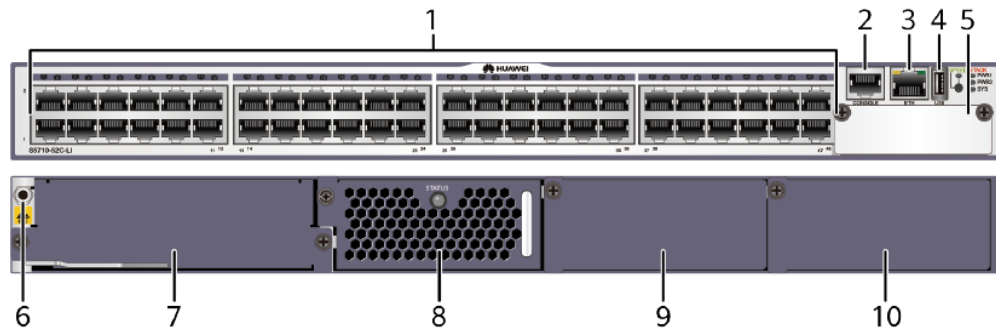
Table 4-189 lists the mapping between the S5710-52C-LI chassis and software versions.

Table 4-189 Version mapping

Series		Model	Software Version
S5710-LI	S5710-C-LI	S5710-52C-LI	V200R001C00 only

Appearance and Structure

Figure 4-72 S5710-52C-LI appearance



1	Forty-eight 10/100/1000BASE-T ports	2	One console port
3	One ETH management port	4	One USB port
5	Front card slot NOTE Card supported: <ul style="list-style-type: none"> 8.6 ES5D00G4SA01 (4-Port GE SFP Front Optical Interface Card) 8.3 ES5D000X2S00 (2-Port 10GE SFP+ Front Optical Interface Card) 8.4 ES5D000X4S01 (4-Port 10GE SFP+ Front Optical Interface Card) 	6	ESD jack NOTE Before installing or maintaining a switch, wear an ESD wrist strap and insert the other end of the ESD wrist strap into this ESD jack.
7	Rear card slot NOTE Card supported: <ul style="list-style-type: none"> 8.28 ES5D00ETPC00 (Stack Rear Card) 8.29 ES5D00ETPB00 (Extended Rear Card) 	8	Fan slot NOTE Applicable fan module: 7.1 CX7E1FANA Fan Module
9	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none"> 5.2 LS5M100PWA00/ES0W2PSA0150 (150 W AC Power Module) 5.3 LS5M100PWD00/ES0W2PSD0150 (150 W DC Power Module) 	10	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> 5.2 LS5M100PWA00/ES0W2PSA0150 (150 W AC Power Module) 5.3 LS5M100PWD00/ES0W2PSD0150 (150 W DC Power Module)

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-190 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-190 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-191.

Table 4-191 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the *Configuration Guide - Basic Configurations*. Table 4-192 describes the attributes of an ETH management port.

Table 4-192 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing

Attribute	Description
Maximum transmission distance	100 m

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB flash drive used on a switch must comply with USB 1.1.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

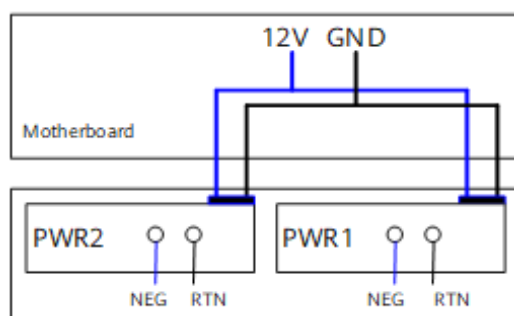
The S5710-52C-LI has the same types of indicators as the S5700-28C-SI. For details, see [Indicator Description](#).

Power Supply Configuration

The S5710-52C-LI uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. The switch cannot use AC and DC power modules simultaneously.

Figure 4-73 shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 4-73 Power supply connections of dual DC power modules



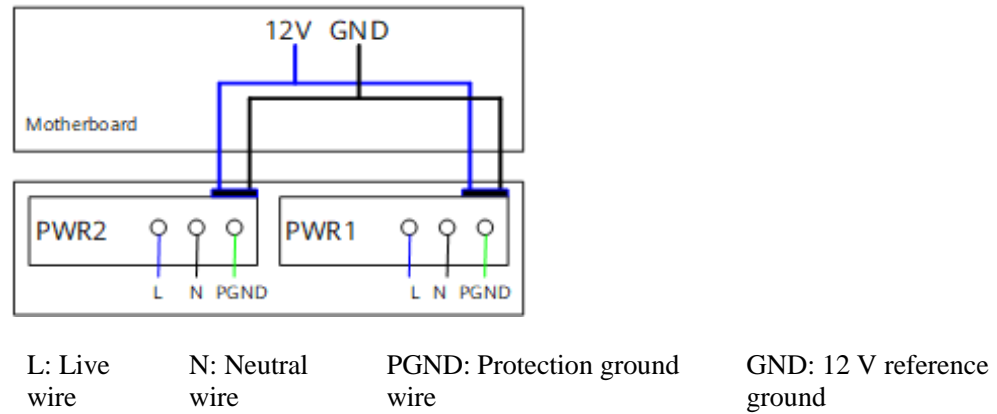
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

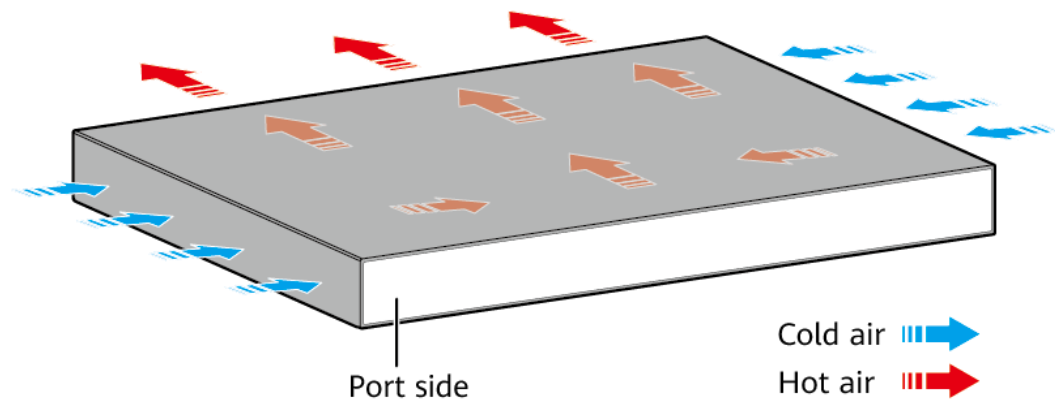
Figure 4-74 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 4-74 Power supply connections of dual AC power modules



Heat Dissipation

The S5710-52C-LI uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-193 lists technical specifications of the S5710-52C-LI.

Table 4-193 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	32 MB
Mean time between failures (MTBF)	51.3 years when a 2-port 10GE interface card is configured, 70.3 years when a 4-port GE front card is configured, 28.58 years when a 4-port 10GE front card is configured
Mean time to repair	2 hours

Item	Description
(MTTR)	
Availability	> 0.99999
Service port surge protection	Common mode: ± 2 kV
Power supply surge protection	<ul style="list-style-type: none">Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common modeUsing DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)
Weight	<ul style="list-style-type: none">Empty: ≤ 5 kg (11.02 lb)Fully configured: ≤ 8.5 kg (18.74 lb)
Stack ports	Two stack ports available on each stack card
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	78 W
Operating temperature	0 °C to 50 °C (32 °F to 122 °F)
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 41 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none">AC power modules configured: 0-5000 m (0-16404 ft.)DC power modules configured: 0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none">EMC certificationSafety certificationManufacturing certification
Part number	02354138

4.7.4 S5710-52C-PWR-LI

Version Mapping

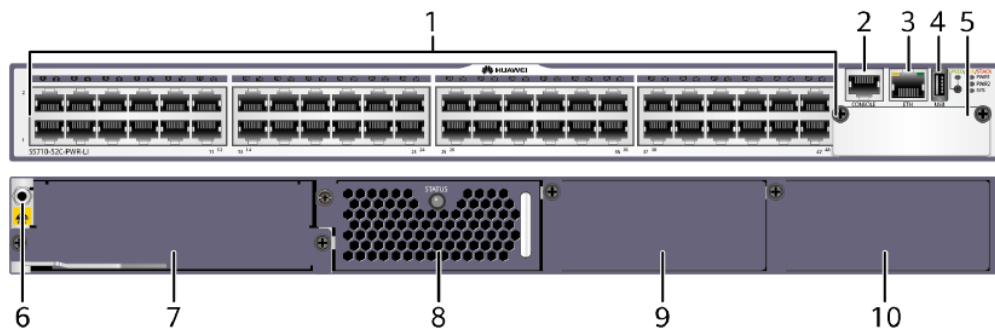
Table 4-194 lists the mapping between the S5710-52C-PWR-LI chassis and software versions.

Table 4-194 Version mapping

Series		Model	Software Version
S5710-LI	S5710-C-LI	S5710-52C-PWR-LI	V200R001C00 only

Appearance and Structure

Figure 4-75 S5710-52C-PWR-LI appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	One console port
3	One ETH management port	4	One USB port
5	Front card slot NOTE Card supported: <ul style="list-style-type: none"> 8.6 ES5D00G4SA01 (4-Port GE SFP Front Optical Interface Card) 8.3 ES5D000X2S00 (2-Port 10GE SFP+ Front Optical Interface Card) 8.4 ES5D000X4S01 (4-Port 10GE SFP+ Front Optical Interface Card) 	6	ESD jack NOTE Before installing or maintaining a switch, wear an ESD wrist strap and insert the other end of the ESD wrist strap into this ESD jack.
7	Rear card slot NOTE Card supported: <ul style="list-style-type: none"> 8.28 ES5D00ETPC00 (Stack Rear 	8	Fan slot NOTE Applicable fan module: 7.1 CX7E1FANA Fan Module

	Card) <ul style="list-style-type: none"> 8.29 ES5D00ETPB00 (Extended Rear Card) 		
9	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none"> 5.5 W0PSA2500 (250 W AC PoE Power Module) 5.6 W0PSA5000/PAC-500WA-BE (500 W AC PoE Power Module) 	10	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> 5.5 W0PSA2500 (250 W AC PoE Power Module) 5.6 W0PSA5000/PAC-500WA-BE (500 W AC PoE Power Module)

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-195 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-195 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-196.

Table 4-196 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the *Configuration Guide - Basic Configurations*. Table 4-197 describes the attributes of an ETH management port.

Table 4-197 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB flash drive used on a switch must comply with USB 1.1.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5710-52C-PWR-LI has the same types of indicators as the S5700-28C-PWR-SI. For details, see [Indicator Description](#).

Power Supply Configuration

The S5710-52C-PWR-LI is a PoE switch. It has two power module slots, each of which can have a 500 W or 250 W power module installed. A power module can provide 369.6 W or 123.2 W of PoE power for powered devices (PDs). Table 4-198 lists its power supply configurations.

Table 4-198 Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
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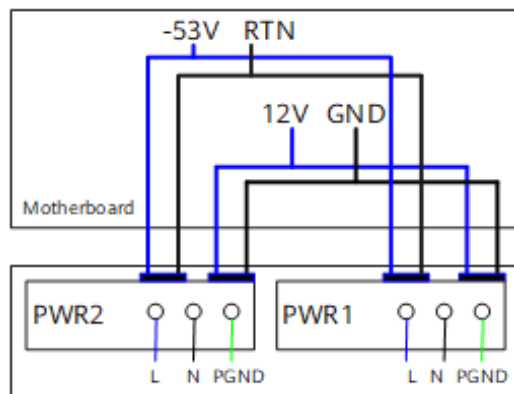
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
250 W	–	123.2 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 8 802.3at (30 W per port): 4
500 W	–	369.6 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 12
250 W	250 W	246.4 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 16 802.3at (30 W per port): 8
500 W	500 W	739.2 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 24

NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

Figure 4-76 shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

Figure 4-76 Power supply by dual AC PoE power modules



L: live wire

N: neutral wire

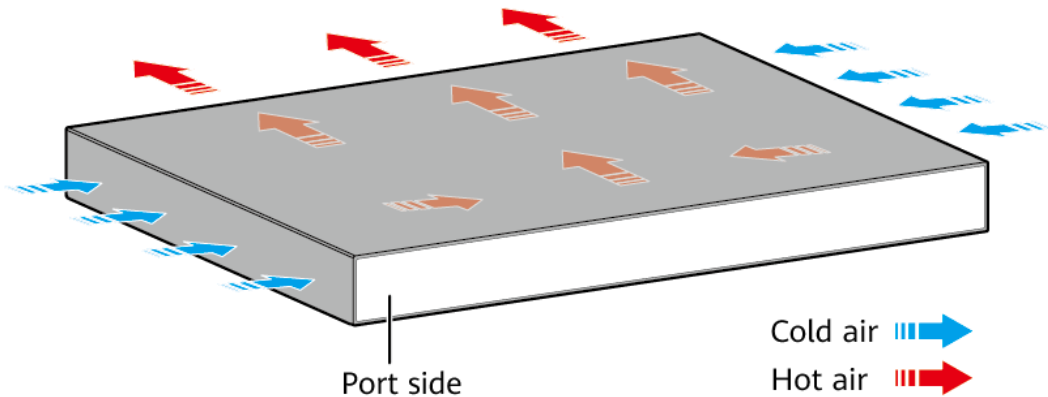
PGND: protection ground wire

GND: 12 V reference ground

RTN: -53 V reference ground

Heat Dissipation

The S5710-52C-PWR-LI uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-199 lists technical specifications of the S5710-52C-PWR-LI.

Table 4-199 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	32 MB
Mean time between failures (MTBF)	50.4 years when a 2-port 10GE interface card is configured, 68.6 years when a 4-port GE front card is configured, 35.58 years when a 4-port 10GE front card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 1 kV
Power supply surge protection	± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)
Weight	<ul style="list-style-type: none"> Empty: ≤ 5 kg (11.02 lb) Fully configured: ≤ 8.5 kg (18.74 lb)
Stack ports	Two stack ports available on each stack card
RPS	Not supported

Item	Description
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, 100% PoE loads, full speed of fans)	917 W (system power consumption: 177 W, PoE: 740 W)
Operating temperature	0 °C to 50 °C (32 °F to 122 °F)
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 45 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02354134

4.7.5 S5710-28X-LI-AC

Version Mapping

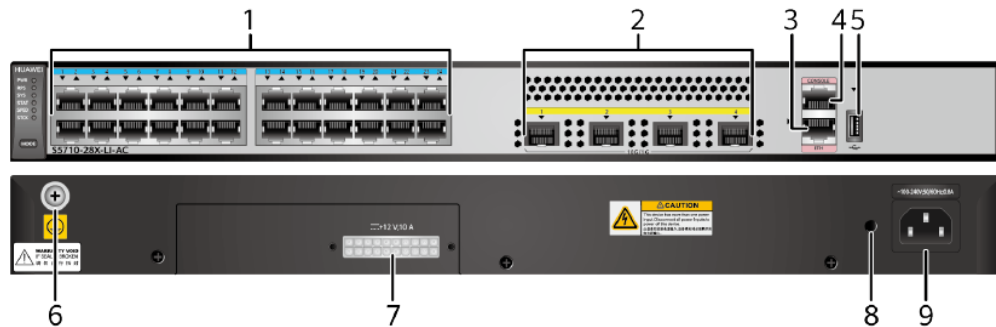
Table 4-200 lists the mapping between the S5710-28X-LI-AC chassis and software versions.

Table 4-200 Version mapping

Series		Model	Software Version
S5710-LI	S5710-X-LI	S5710-28X-LI-AC	V200R008C00 to V200R012C00 versions

Appearance and Structure

Figure 4-77 S5710-28X-LI-AC appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 9.15 Copper Cable • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable • 10.19 GPON Optical Modules NOTE If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.
3	One ETH management port	4	One console port
5	One USB port	6	Ground screw NOTE It is used with a 9.1 Ground Cable.
7	RPS socket NOTE It is used with an 9.12 RPS Cable, which is not hot swappable.	8	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.
9	AC socket NOTE It is used with an 9.8 AC Power Cable.	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-201 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-201 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-202 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-202 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-203.

Table 4-203 Attributes of a console port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-204 describes the attributes of an ETH management port.

Table 4-204 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

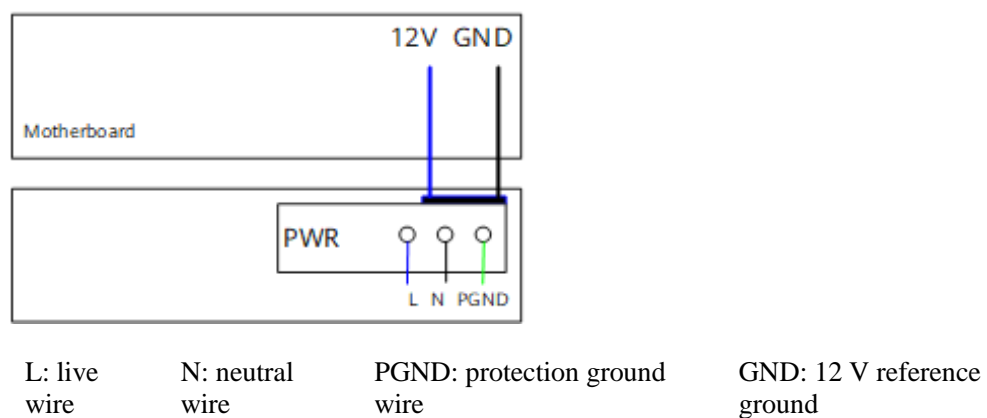
The S5710-28X-LI-AC has the same types of indicators as the S5700S-52X-LI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5710-28X-LI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

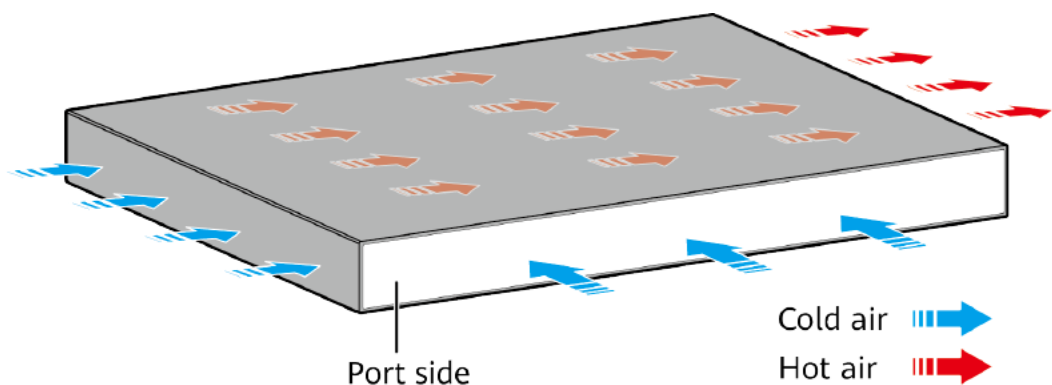
Figure 4-78 shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 4-78 Power supply mode of a built-in AC power module



Heat Dissipation

The S5710-28X-LI-AC has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-205 lists technical specifications of the S5710-28X-LI-AC.

Table 4-205 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	100.31 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	4.8 kg (10.58 lb)
Stack ports	Four uplink 10GE SFP+ ports
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	32 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power	22 W

Item	Description
consumption	
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 50.2 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02350GEM

4.7.6 S5710-52X-LI-AC

Version Mapping

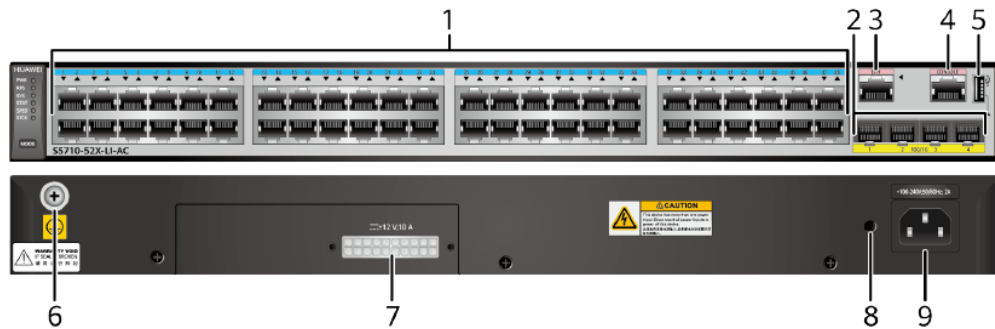
Table 4-206 lists the mapping between the S5710-52X-LI-AC chassis and software versions.

Table 4-206 Version mapping

Series		Model	Software Version
S5710-LI	S5710-X-L I	S5710-52X-LI-AC	V200R008C00 to V200R012C00 versions

Appearance and Structure

Figure 4-79 S5710-52X-LI-AC appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable • 10.19 GPON Optical Modules NOTE If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.
3	One ETH management port	4	One console port
5	One USB port	6	Ground screw NOTE It is used with a 9.1 Ground Cable.
7	RPS socket NOTE It is used with an 9.12 RPS Cable, which is not hot swappable.	8	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.
9	AC socket	-	-

NOTE It is used with an 9.8 AC Power Cable.		
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Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-207 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-207 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-208 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-208 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-209.

Table 4-209 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-210 describes the attributes of an ETH management port.

Table 4-210 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

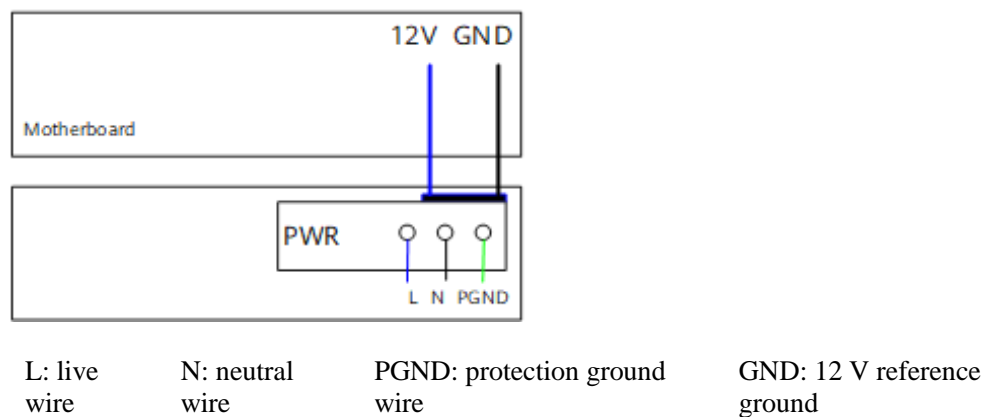
The S5710-52X-LI-AC has the same types of indicators as the S5700S-52X-LI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5710-52X-LI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

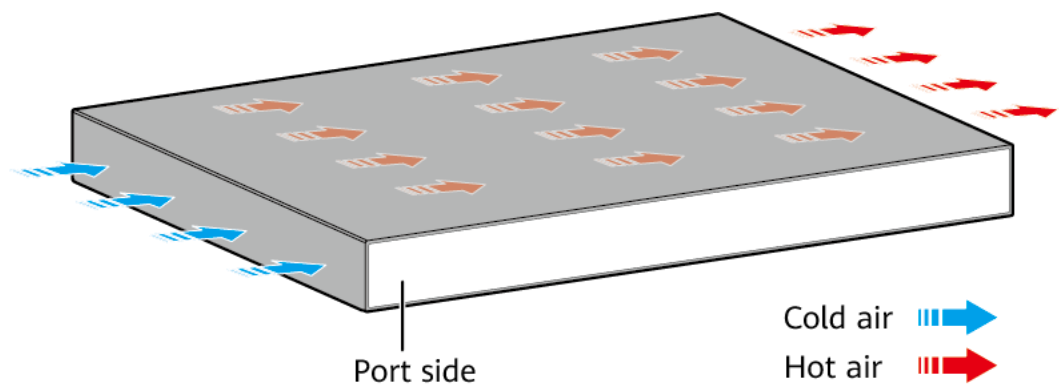
Figure 4-80 shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 4-80 Power supply mode of a built-in AC power module



Heat Dissipation

The S5710-52X-LI-AC has a built-in fan for forced air cooling. The airflow direction is left-to-right.



 **NOTE**

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-211 lists technical specifications of the S5710-52X-LI-AC.

Table 4-211 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	86.64 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	5 kg (11.02 lb)
Stack ports	Four uplink 10GE SFP+ ports
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	54.7 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to	34.4 W

Item	Description
ATIS standard <ul style="list-style-type: none">• EEE enabled• No PoE power consumption	
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 50.2 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02350GEN

4.8 S5720-LI

4.8.1 S5720-12TP-LI-AC

Version Mapping

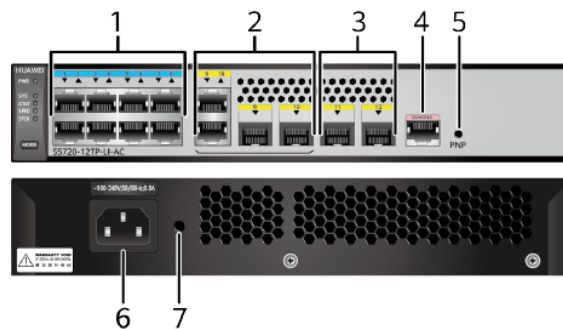
Table 4-212 lists the mapping between the S5720-12TP-LI-AC chassis and software versions.

Table 4-212 Version mapping

Series	Model	Software Version
S5720-LI	S5720-12TP-LI-AC	V200R010C00 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-81 S5720-12TP-LI-AC appearance



1	Eight 10/100/1000BASE-T ports	2 Two combo ports (10/100/1000BASE-T + 100/1000BASE-X) Modules applicable to combo optical ports: <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules (the maximum transmission distance cannot exceed 40 km)
3	Two 1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules (the maximum transmission distance cannot exceed 40 km) • 10.10 GE SFP Copper Modules • 10.11 SFP Stack Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable • 10.19 GPON Optical Modules NOTE If a port uses a GPON optical module, other 1000BASE-X optical ports cannot be used.	4 One console port
5	One PNP button NOTICE Applicable in V200R012C00 and later versions: To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service	6 AC socket NOTE It is used with an 9.8 AC Power Cable.

	interruption. Exercise caution when you press the PNP button.		
7	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-213 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-213 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. Table 4-214 describes the attributes of a 1000BASE-X Ethernet optical port.

Table 4-214 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-215.

Table 4-215 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Indicator Description

NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
- If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
- If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 4-82 Indicators on the S5720-12TP-LI-AC

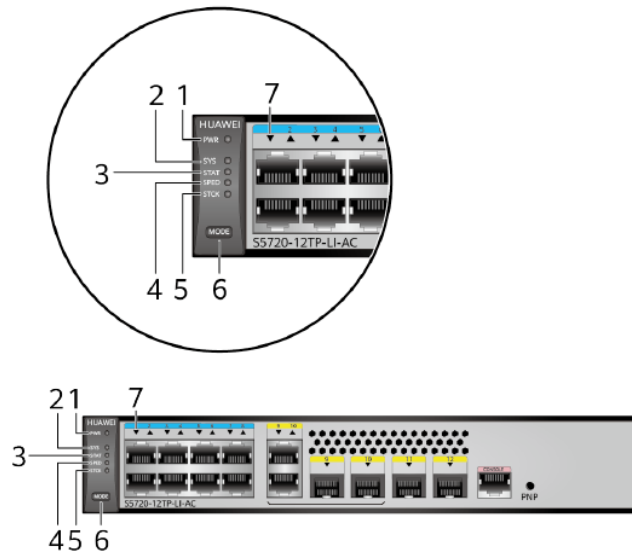


Table 4-216 Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR	Power module indicator	-	Off	The switch is powered off.
			Green	Steady on	The system power supply is normal.
			Yellow or red	Steady on	The built-in power module has failed.
2	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a temperature alarm has been generated.
3	STAT	Status indicator	-	Off	The status mode is not selected.
			Green	Steady on	The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.

No.	Indicator	Name	Color	Status	Description
4	SPED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The service port indicators show the port speeds. After 45 seconds, the service port indicators automatically restore to the status mode.
5	STCK	Stack indicator	-	Off	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is in stack standby or slave state or the stacking function is not enabled on the switch. If you are changing the indicator mode: The stack mode is not selected.
			Green	Steady on	The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is a stack master switch or a standalone switch with the stacking function enabled. If you are changing the indicator mode: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>
6	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> When you press this button once, the service port indicators change to the speed mode and show the speed of each service port. When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch. When you press this button a third time, the service port indicators restore to the default mode, and the STAT indicator turns green. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED indicator is off, and the STCK indicator is off or blinking green.</p>
7	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see Table 4-217.		

Table 4-217 Description of service port indicators in different modes (one indicator for each port)

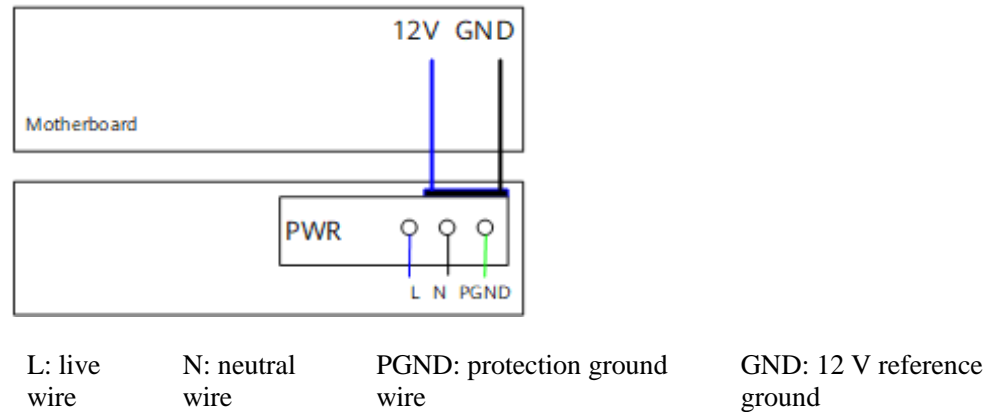
Display Mode	Color	Description
Status	Green	<ul style="list-style-type: none"> Off: The port is not connected or has been shut down. Steady on: The port is connected. Blinking: The port is sending or receiving data.
Speed	Green	<ul style="list-style-type: none"> Off: The port is not connected or has been shut down. Steady on: 10M/100M/1000M port: The port is operating at 10/100 Mbit/s. Blinking: 10M/100M/1000M port: The port is operating at 1000 Mbit/s.
Stack	Green	<p>Off: Port indicators do not show the stack ID of the switch.</p> <p>If the indicator is steady on, the switch is not a master switch:</p> <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0. <p>If the indicator is blinking, the switch is a master switch:</p> <ul style="list-style-type: none"> If the indicator of a port is blinking, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Power Supply Configuration

The S5720-12TP-LI-AC has a built-in power module and does not support pluggable power modules.

Figure 4-83 shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 4-83 Power supply mode of a built-in AC power module



Heat Dissipation

The S5720-12TP-LI-AC has no fans and uses natural heat dissipation.

Technical Specifications

Table 4-218 lists technical specifications of the S5720-12TP-LI-AC.

Table 4-218 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	23.8 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 250.0 mm x 180.0 mm (1.72 in. x 9.8 in. x 7.1 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 250.0 mm x 186.7 mm (1.72 in. x 9.8 in. x 7.35 in.)
Weight (with packaging)	1.8 kg (3.97 lb)

Item	Description
Stack ports	Eight 10/100/1000BASE-T ports and two 1000BASE-X ports
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput)	12.85 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	10.39 W
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The operating temperature of the switch is 0 °C to 40 °C (32 °F to 104 °F) when it uses GE SFP optical modules with 40 km transmission distance.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010567

4.8.2 S5720-12TP-PWR-LI-AC

Version Mapping

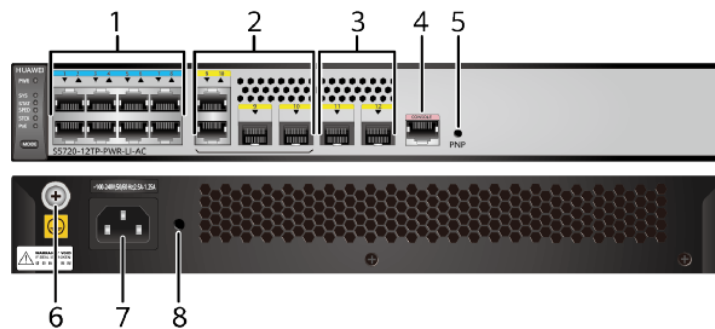
Table 4-219 lists the mapping between the S5720-12TP-PWR-LI-AC chassis and software versions.

Table 4-219 Version mapping

Series	Model	Software Version
S5720-LI	S5720-12TP-PWR-LI-AC	V200R010C00 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-84 S5720-12TP-PWR-LI-AC appearance



1	Eight PoE+ 10/100/1000BASE-T ports	2	Two combo ports (10/100/1000BASE-T + 100/1000BASE-X) Modules applicable to combo optical ports: <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules (the maximum transmission distance cannot exceed 40 km)
3	Two 1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules (the maximum transmission distance cannot exceed 40 km) • 10.10 GE SFP Copper Modules • 10.11 SFP Stack Optical Modules 	4	One console port

	<ul style="list-style-type: none"> • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable • 10.19 GPON Optical Modules <p>NOTE If a port uses a GPON optical module, other 1000BASE-X optical ports cannot be used.</p>		
5	<p>One PNP button</p> <p>NOTICE Applicable in V200R012C00 and later versions: To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	6	<p>Ground screw</p> <p>NOTE It is used with a 9.1 Ground Cable.</p>
7	<p>AC socket</p> <p>NOTE It is used with an 9.8 AC Power Cable.</p>	8	<p>Jack for AC power cable locking strap</p> <p>NOTE The AC power cable locking strap is not delivered with the switch.</p>

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-220 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-220 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A

combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. Table 4-221 describes the attributes of a 1000BASE-X Ethernet optical port.

Table 4-221 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-222.

Table 4-222 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Indicator Description

NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
- If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
- If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 4-85 Indicators on the S5720-12TP-PWR-LI-AC

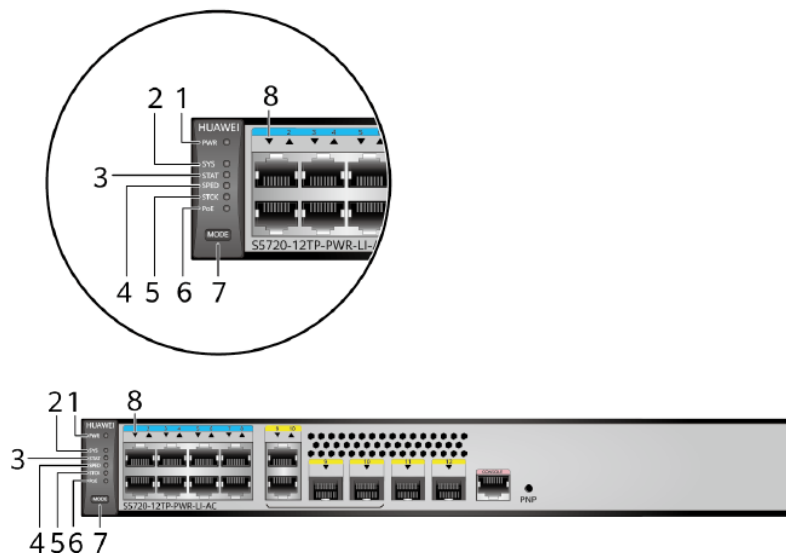


Table 4-223 Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR	Power module indicator	-	Off	The switch is powered off.
			Green	Steady on	The system power supply is normal.
			Yellow or red	Steady on	The built-in power module has failed.
2	SYS	System	-	Off	The system is not running.

No.	Indicator	Name	Color	Status	Description
		status indicator	Green	Fast blinking	The system is starting.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a temperature alarm has been generated.
3	STAT	Status indicator	-	Off	The status mode is not selected.
			Green	Steady on	The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
4	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The service port indicators show the port speeds. After 45 seconds, the service port indicators automatically restore to the status mode.
5	STACK	Stack indicator	-	Off	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is in stack standby or slave state or the stacking function is not enabled on the switch. If you are changing the indicator mode: The stack mode is not selected.
			Green	Steady on	The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is a stack master switch or a standalone switch with the stacking function enabled. If you are changing the indicator mode: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>
6	PoE	PoE indicator	-	Off	The PoE mode is not selected.
			Green	Steady on	The service port indicators show the PoE status. After 45 seconds, the service port indicators automatically restore to the status mode.

No.	Indicator	Name	Color	Status	Description
7	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> When you press this button once, the service port indicators change to the speed mode and show the speed of each service port. When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch. When you press this button a third time, the service port indicators change to the PoE mode and show the PoE status of each service port. When you press this button a fourth time, the service port indicators restore to the default mode, and the STAT indicator turns green. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED and PoE indicators are off, and the STCK indicator is off or blinking green.</p>
8	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see Table 4-224.		

Table 4-224 Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.

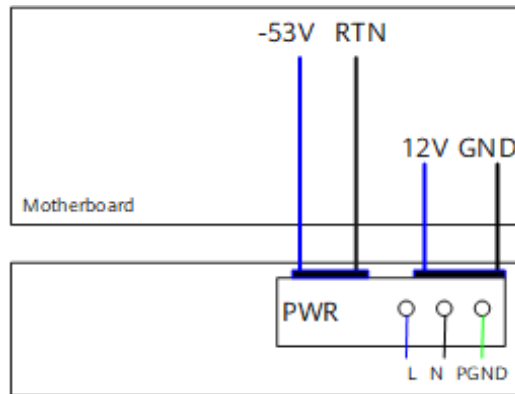
Display Mode	Color	Status	Description
PoE	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.
	Yellow	Steady on	The PoE function is disabled on the port.
	Yellow	Blinking	The port stops providing PoE power because of an exception (for example, an incompatible PD is connected to the port).
	Green and yellow	Blinking green and yellow alternately	The port fails to supply power to a PD due to one of the following reasons: <ul style="list-style-type: none">• The power required by the connected PD exceeds the maximum power or the configured power threshold of the port.• The total power consumption of PDs has reached the maximum power of the switch.• The manual power management mode is used and the port is not enabled to provide power to the PD.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none">• If the indicator of a port is steady on, the number of this port is the stack ID of the switch.• If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none">• If the indicator of a port is blinking, the number of this port is the stack ID of the switch.• If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Power Supply Configuration

The S5720-12TP-PWR-LI-AC has a built-in power module and does not support pluggable power modules. The built-in power module can provide 124 W PoE power, which ensures full PoE power on 8 ports in compliance with 802.3af or on 4 ports in compliance with 802.3at. The switch cannot connect to an RPS power supply.

Figure 4-86 shows the power supply mode of a built-in AC PoE power module (PWR). The PWR module receives AC power from an external power source and provides two outputs: 12 V and -53 V. The 12 V output is provided for the chassis, and the -53 V output is provided for PDs.

Figure 4-86 Power supply by a built-in AC PoE power module



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground RTN: -53 V reference ground

Heat Dissipation

The S5720-12TP-PWR-LI-AC has no fans and uses natural heat dissipation.

Technical Specifications

Table 4-225 lists technical specifications of the S5720-12TP-PWR-LI-AC.

Table 4-225 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	23.8 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 320.0 mm x 220.0 mm (1.72 in. x 12.6 in. x 8.7 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 320.0 mm x 228.3 mm (1.72 in. x 12.6 in. x 8.99 in.)

Item	Description
Weight (with packaging)	3 kg (6.62 lb)
Stack ports	Eight 10/100/1000BASE-T ports and two 1000BASE-X ports
RTC	Not supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput)	<ul style="list-style-type: none">• Not providing the PoE function: 15.61 W• 100% PoE loads: 160.5 W (system power consumption: 37.3 W, PoE: 123.2 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	14.57 W
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The operating temperature of the switch is 0 °C to 40 °C (32 °F to 104 °F) when it uses GE SFP optical modules with 40 km transmission distance.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010570

4.8.3 S5720-28TP-LI-AC

Version Mapping

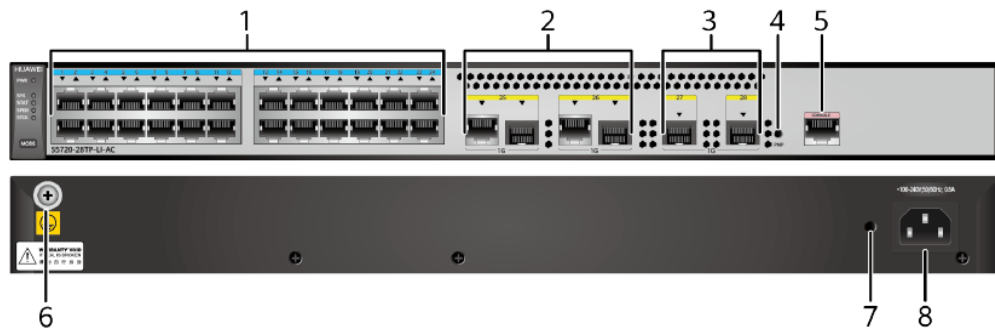
Table 4-226 lists the mapping between the S5720-28TP-LI-AC chassis and software versions.

Table 4-226 Version mapping

Series	Model	Software Version
S5720-LI	S5720-28TP-LI-AC	V200R010C00 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-87 S5720-28TP-LI-AC appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Two combo ports (10/100/1000BASE-T + 100/1000BASE-X) Modules applicable to combo optical ports: <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules (maximum transmission distance ≤ 40 km)
3	Two 1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules (maximum transmission distance ≤ 40 km) • 10.10 GE SFP Copper Modules 	4	One PNP button NOTICE Applicable in V200R012C00 and later versions: To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.

	<ul style="list-style-type: none"> • 10.11 SFP Stack Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable • 10.19 GPON Optical Modules <p>NOTE If a port uses a GPON optical module, other 1000BASE-X optical ports cannot be used.</p>		<p>To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
5	One console port	6	<p>Ground screw</p> <p>NOTE It is used with a 9.1 Ground Cable.</p>
7	<p>Jack for AC power cable locking strap</p> <p>NOTE The AC power cable locking strap is not delivered with the switch.</p>	8	<p>AC socket</p> <p>NOTE It is used with an 9.8 AC Power Cable.</p>

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-227 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-227 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. Table 4-228 describes the attributes of a 1000BASE-X Ethernet optical port.

Table 4-228 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-229.

Table 4-229 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Indicator Description

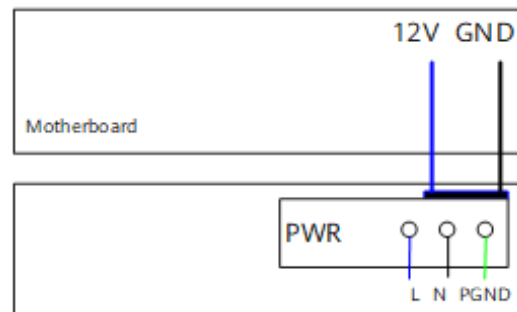
The S5720-28TP-LI-AC has similar indicators to those of the S5720-28TP-PWR-LI-AC except that the S5720-28TP-LI-AC does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-28TP-LI-AC has a built-in power module and does not support pluggable power modules.

Figure 4-88 shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 4-88 Power supply mode of a built-in AC power module



L: live wire

N: neutral wire

PGND: protection ground wire

GND: 12 V reference ground

Heat Dissipation

The S5720-28TP-LI-AC has no fans and uses natural heat dissipation.

Technical Specifications

Table 4-230 lists technical specifications of the S5720-28TP-LI-AC.

Table 4-230 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	43 years
Mean time to repair (MTTR)	2 hours

Item	Description
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 224.8 mm (1.72 in. x 17.4 in. x 8.85 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 233.8 mm (1.72 in. x 17.4 in. x 9.21 in.)
Weight (with packaging)	4 kg (8.82 lb)
Stack ports	Twenty-four 10/100/1000BASE-T ports and two 1000BASE-X ports
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput)	22.1 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">Tested according to ATIS standardEEE enabledNo PoE power consumption	16.2 W
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The operating temperature of the switch is 0 °C to 40 °C (32 °F to 104 °F) when it uses GE SFP optical modules with 40 km transmission distance.
Short-term operating temperature	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE

Item	Description
	<p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none">• The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010639

4.8.4 S5720-28TP-PWR-LI-AC

Version Mapping

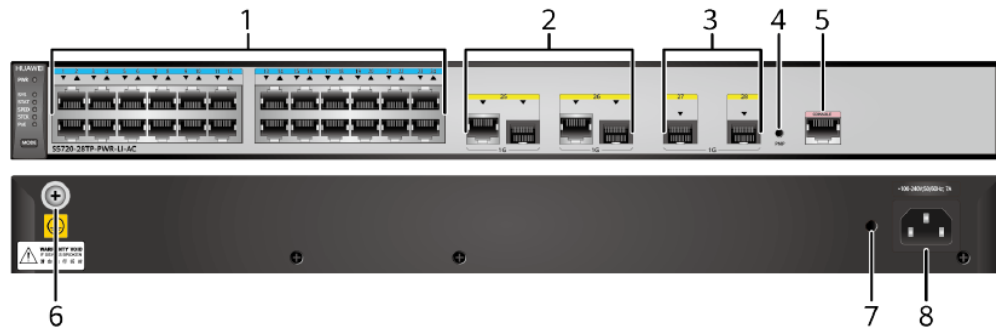
Table 4-231 lists the mapping between the S5720-28TP-PWR-LI-AC chassis and software versions.

Table 4-231 Version mapping

Series	Model	Software Version
S5720-LI	S5720-28TP-PWR-LI-AC	V200R010C00 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-89 S5720-28TP-PWR-LI-AC appearance



1	Twenty-four PoE+ 10/100/1000BASE-T ports	2 Two combo ports (10/100/1000BASE-T + 100/1000BASE-X) Modules applicable to combo optical ports: <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules
3	Two 1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.11 SFP Stack Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable • 10.19 GPON Optical Modules NOTE If a port uses a GPON optical module, other 1000BASE-X optical ports cannot be used.	4 One PNP button NOTICE Applicable in V200R012C00 and later versions: To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
5	One console port	6 Ground screw NOTE It is used with a 9.1 Ground Cable.

7	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.	8	AC socket NOTE It is used with an 9.8 AC Power Cable.
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Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-232 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-232 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X

port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. Table 4-233 describes the attributes of a 1000BASE-X Ethernet optical port.

Table 4-233 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-234.

Table 4-234 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

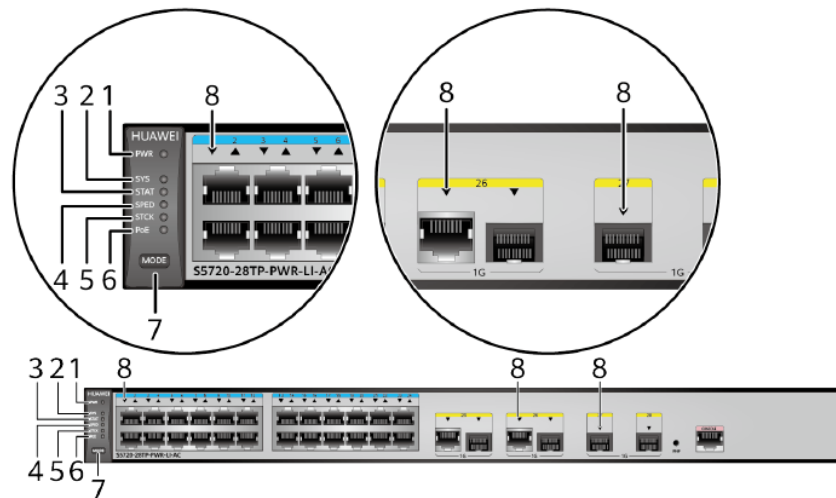
Indicator Description

NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
- If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
- If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 4-90 Indicators on the S5720-28TP-PWR-LI-AC



NOTE

The S5720-LI series switches provide a command for setting fault indicators, which help field maintenance personnel find a faulty switch quickly.

The SYS indicator and mode indicators (STAT, SPED, STCK, and PoE) are used as fault indicators of a switch. If the switch fails, its SYS indicator and mode indicators can be configured to blink red fast so that field maintenance personnel can find this faulty switch.

Table 4-235 Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR	Power module indicator	-	Off	The switch is powered off.
			Green	Steady on	The system power supply is normal.
			Yellow or red	Steady on	The built-in power module has failed.
2	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or temperature alarm has been generated.

No.	Indicator	Name	Color	Status	Description
3	STAT	Status indicator	-	Off	The status mode is not selected.
			Green	Steady on	The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
4	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The service port indicators show the port speeds. After 45 seconds, the service port indicators automatically restore to the status mode.
5	STCK	Stack indicator	-	Off	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is in stack standby or slave state or the stacking function is not enabled on the switch. If you are changing the indicator mode: The stack mode is not selected.
			Green	Steady on	The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is a stack master switch or a standalone switch with the stacking function enabled. If you are changing the indicator mode: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>
6	PoE	PoE indicator	-	Off	The PoE mode is not selected.
			Green	Steady on	The service port indicators show the PoE status. After 45 seconds, the service port indicators automatically restore to the status mode.
7	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> When you press this button once, the service port indicators change to the speed mode and show the speed of each service port. When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch. When you press this button a third time, the service port indicators change to the PoE

No.	Indicator	Name	Color	Status	Description
					<p>mode and show the PoE status of each service port.</p> <ul style="list-style-type: none"> When you press this button a fourth time, the service port indicators restore to the default mode, and the STAT indicator turns green. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED and PoE indicators are off, and the STCK indicator is off or blinking green.</p>
8	-	Service port indicator			Meanings of service port indicators vary in different modes. For details, see Table 4-236.

Table 4-236 Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
PoE	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.
	Yellow	Steady on	The PoE function is disabled on the port.
	Yellow	Blinking	The port stops providing PoE power because of an exception (for example, an incompatible PD is connected to the port).
	Green	Blinking	The port fails to supply power to a PD due to one

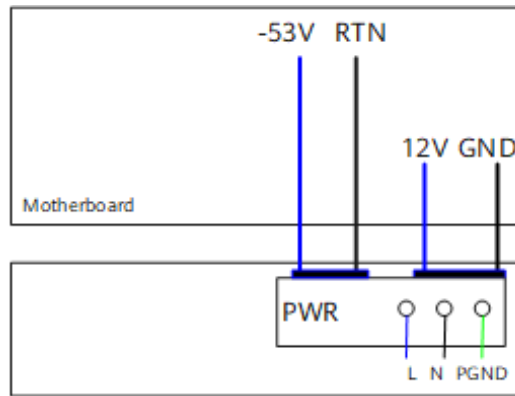
Display Mode	Color	Status	Description
	and yellow	green and yellow alternately	of the following reasons: <ul style="list-style-type: none">The power required by the connected PD exceeds the maximum power or the configured power threshold of the port.The total power consumption of PDs has reached the maximum power of the switch.The manual power management mode is used and the port is not enabled to provide power to the PD.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none">If the indicator of a port is steady on, the number of this port is the stack ID of the switch.If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none">If the indicator of a port is blinking, the number of this port is the stack ID of the switch.If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Power Supply Configuration

The S5720-28TP-PWR-LI-AC has a built-in power module and does not support pluggable power modules. The built-in power module can provide 370 W PoE power, which ensures full PoE power on 24 ports in compliance with 802.3af or on 12 ports in compliance with 802.3at. The switch cannot connect to an RPS power supply.

Figure 4-91 shows the power supply mode of a built-in AC PoE power module (PWR). The PWR module receives AC power from an external power source and provides two outputs: 12 V and -53 V. The 12 V output is provided for the chassis, and the -53 V output is provided for PDs.

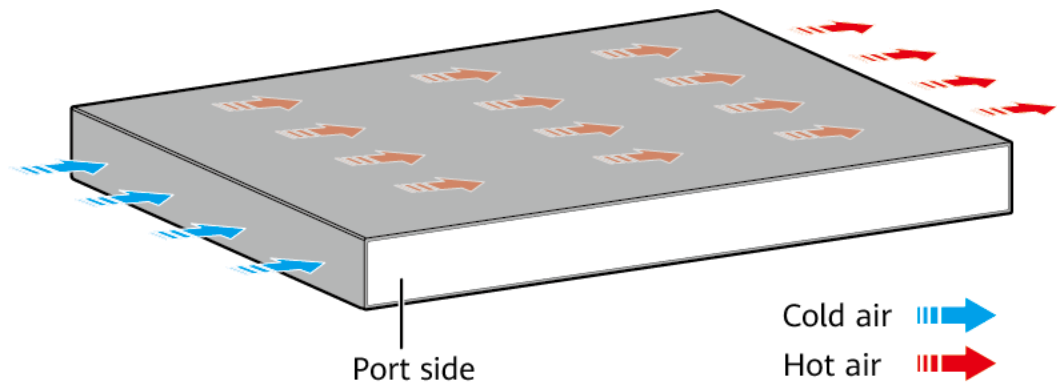
Figure 4-91 Power supply by a built-in AC PoE power module



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground RTN: -53 V reference ground

Heat Dissipation

The S5720-28TP-PWR-LI-AC has two built-in fans for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-237 lists technical specifications of the S5720-28TP-PWR-LI-AC.

Table 4-237 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	40 years

Item	Description
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 314.8 mm (1.72 in. x 17.4 in. x 12.39 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 323.8 mm (1.72 in. x 17.4 in. x 12.75 in.)
Weight (with packaging)	5.3 kg (11.69 lb)
Stack ports	Twenty-four 10/100/1000BASE-T ports and two 1000BASE-X ports
RTC	Not supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none">Not providing the PoE function: 38.8 W100% PoE loads: 444.8 W (system power consumption: 75.2 W, PoE: 369.6 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">Tested according to ATIS standardEEE enabledNo PoE power consumption	27.4 W
Operating temperature	0 °C to 50 °C (32 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Short-term operating	-5 °C to +55 °C (23 °F to 131 °F) at an altitude of 0-1800 m (0-5906

Item	Description
temperature	ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">• The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for no more than 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 48.6 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010637

4.8.5 S5720-28TP-PWR-LI-ACL

Version Mapping

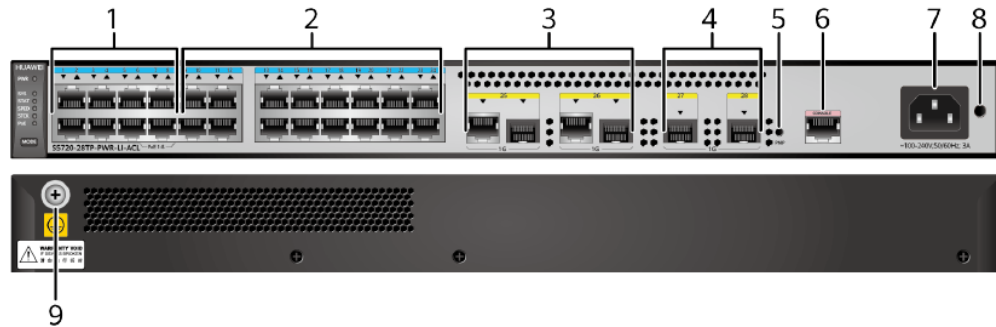
Table 4-238 lists the mapping between the S5720-28TP-PWR-LI-ACL chassis and software versions.

Table 4-238 Version mapping

Series	Model	Software Version
S5720-LI	S5720-28TP-PWR-LI-ACL	V200R010C00 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-92 S5720-28TP-PWR-LI-ACL appearance



1	Eight PoE+ 10/100/1000BASE-T ports	2	Sixteen 10/100/1000BASE-T ports
3	Two combo ports (10/100/1000BASE-T + 100/1000BASE-X) Modules applicable to combo optical ports: <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules (the maximum transmission distance cannot exceed 40 km) 	4	Two 1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules (the maximum transmission distance cannot exceed 40 km) • 10.10 GE SFP Copper Modules • 10.11 SFP Stack Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable • 10.19 GPON Optical Modules NOTE If a port uses a GPON optical module, other 1000BASE-X optical ports cannot be used.
5	One PNP button NOTICE Applicable in V200R012C00 and later versions: To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.	6	One console port
7	AC socket NOTE It is used with an 9.8 AC Power Cable.	8	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.

9	Ground screw NOTE It is used with a 9.1 Ground Cable.	-	-
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Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-239 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-239 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. Table 4-240 describes the attributes of a 1000BASE-X Ethernet optical port.

Table 4-240 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-241.

Table 4-241 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Indicator Description

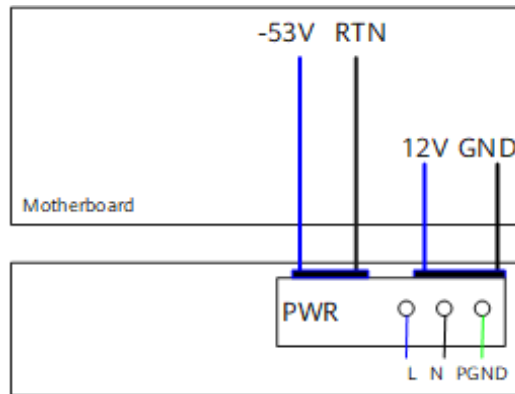
The S5720-28TP-PWR-LI-ACL has the same types of indicators as the S5720-28TP-PWR-LI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-28TP-PWR-LI-ACL has a built-in power module and does not support pluggable power modules. The built-in power module can provide 124 W PoE power, which ensures full PoE power on 8 ports in compliance with 802.3af or on 4 ports in compliance with 802.3at. The switch cannot connect to an RPS power supply.

Figure 4-93 shows the power supply mode of a built-in AC PoE power module (PWR). The PWR module receives AC power from an external power source and provides two outputs: 12 V and -53 V. The 12 V output is provided for the chassis, and the -53 V output is provided for PDs.

Figure 4-93 Power supply by a built-in AC PoE power module



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground RTN: -53 V reference ground

Heat Dissipation

The S5720-28TP-PWR-LI-ACL has no fans and uses natural heat dissipation.

Technical Specifications

Table 4-242 lists technical specifications of the S5720-28TP-PWR-LI-ACL.

Table 4-242 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	42 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 224.8 mm (1.72 in. x 17.4 in. x 8.85 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 233.8 mm (1.72 in. x 17.4 in. x 9.21 in.)

Item	Description
Weight (with packaging)	4.5 kg (9.92 lb)
Stack ports	Twenty-four 10/100/1000BASE-T ports and two 1000BASE-X ports
RTC	Not supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput)	<ul style="list-style-type: none"> Not providing the PoE function: 24.4 W 100% PoE loads: 165.6 W (system power consumption: 42.4 W, PoE: 123.2 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> Tested according to ATIS standard EEE enabled No PoE power consumption 	19.4 W
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The operating temperature of the switch is 0 °C to 40 °C (32 °F to 104 °F) when it uses GE SFP optical modules with 40 km transmission distance.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> EMC certification Safety certification Manufacturing certification
Part number	98010634

4.8.6 S5720-28P-LI-AC

Version Mapping

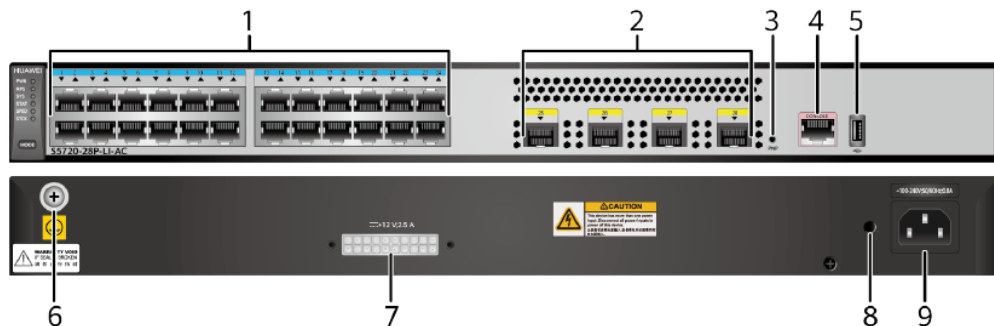
Table 4-243 lists the mapping between the S5720-28P-LI-AC chassis and software versions.

Table 4-243 Version mapping

Series	Model	Software Version
S5720-LI	S5720-28P-LI-AC	V200R011C00 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-94 S5720-28P-LI-AC appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.11 SFP Stack Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable • 10.19 GPON Optical Modules A license can be activated on the switch to increase the speed of the four optical
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			<p>ports to 10 Gbit/s. Applicable modules:</p> <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable • 10.19 GPON Optical Modules <p>NOTE If a port uses a GPON optical module, other 1000BASE-X optical ports cannot be used.</p>
3	<p>One PNP button</p> <p>NOTICE Applicable in V200R012C00 and later versions: To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	4	<p>One console port</p>
5	<p>One USB port</p>	6	<p>Ground screw</p> <p>NOTE It is used with a 9.1 Ground Cable.</p>
7	<p>RPS socket</p> <p>NOTE It is used with an 9.12 RPS Cable, which is not hot swappable.</p>	8	<p>Jack for AC power cable locking strap</p> <p>NOTE The AC power cable locking strap is not delivered with the switch.</p>
9	<p>AC socket</p> <p>NOTE It is used with an 9.8 AC Power Cable.</p>	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-244 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-244 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. Table 4-245 describes the attributes of a 1000BASE-X Ethernet optical port.

Table 4-245 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-246 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-246 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-247.

Table 4-247 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

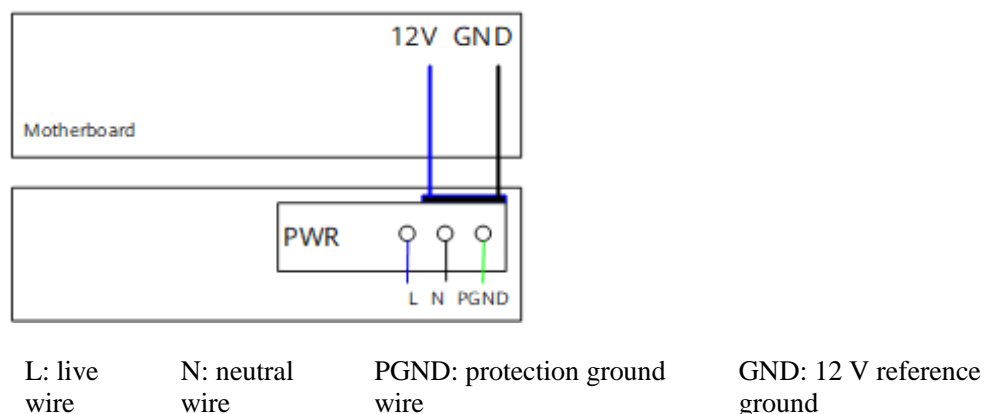
The S5720-28P-LI-AC has similar indicators to those of the S5720-28X-PWR-LI-AC, except that the S5720-28P-LI-AC does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-28P-LI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

Figure 4-95 shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 4-95 Power supply mode of a built-in AC power module



Heat Dissipation

The S5720-28P-LI-AC has no fans and uses natural heat dissipation.

Technical Specifications

Table 4-248 lists technical specifications of the S5720-28P-LI-AC.

Table 4-248 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	45 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 224.8 mm (1.72 in. x 17.4 in. x 8.85 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 233.8 mm (1.72 in. x 17.4 in. x 9.21 in.)
Weight (with packaging)	3.9 kg (8.6 lb)

Item	Description
Stack ports	Twenty-four 10/100/1000BASE-T ports and four 1000BASE-X ports
RTC	Not supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput)	27.9 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	19.6 W
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The operating temperature of the switch is 0 °C to 40 °C (32 °F to 104 °F) when it uses GE SFP optical modules with 40 km or longer transmission distances.
Short-term operating temperature	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">• The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot

Item	Description
	exceed 10 km.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010768

4.8.7 S5720-28P-PWR-LI-AC

Version Mapping

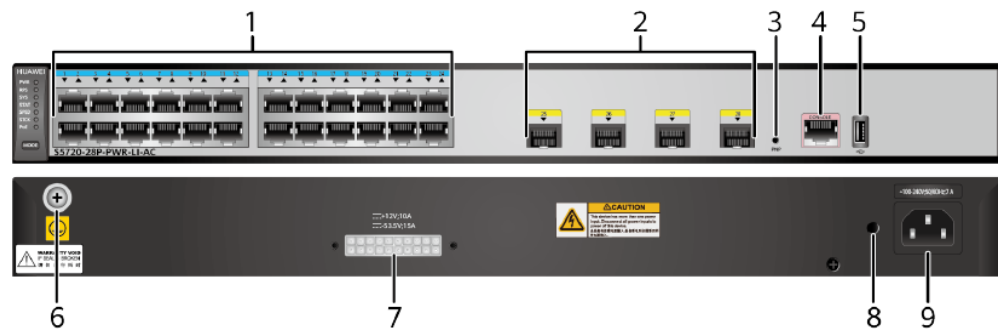
Table 4-249 lists the mapping between the S5720-28P-PWR-LI-AC chassis and software versions.

Table 4-249 Version mapping

Series	Model	Software Version
S5720-LI	S5720-28P-PWR-LI-AC	V200R011C00 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-96 S5720-28P-PWR-LI-AC appearance



1	Twenty-four PoE+ 10/100/1000BASE-T ports	2 Four 1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.11 SFP Stack Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable • 10.19 GPON Optical Modules A license can be activated on the switch to increase the speed of the four optical ports to 10 Gbit/s. Applicable modules: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
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			<ul style="list-style-type: none"> 10.19 GPON Optical Modules <p>NOTE If a port uses a GPON optical module, other 1000BASE-X optical ports cannot be used.</p>
3	<p>One PNP button</p> <p>NOTICE Applicable in V200R012C00 and later versions: To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	4	One console port
5	One USB port	6	<p>Ground screw</p> <p>NOTE It is used with a 9.1 Ground Cable.</p>
7	<p>RPS socket</p> <p>NOTE It is used with an 9.12 RPS Cable, which is not hot swappable.</p>	8	<p>Jack for AC power cable locking strap</p> <p>NOTE The AC power cable locking strap is not delivered with the switch.</p>
9	<p>AC socket</p> <p>NOTE It is used with an 9.8 AC Power Cable.</p>	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-250 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-250 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. Table 4-251 describes the attributes of a 1000BASE-X Ethernet optical port.

Table 4-251 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-252 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-252 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-253.

Table 4-253 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s

Attribute	Description
	Default value: 9600 bit/s

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

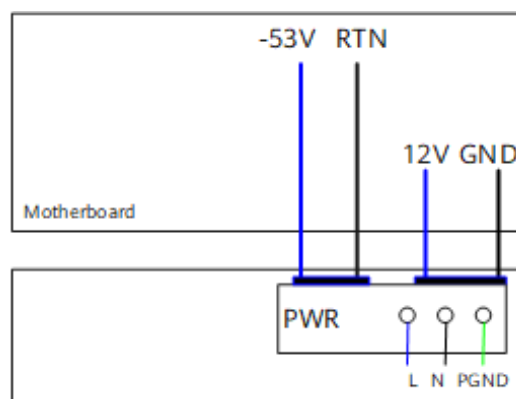
The S5720-28P-PWR-LI-AC has similar indicators to those of the S5720-28X-PWR-LI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-28P-PWR-LI-AC has a built-in power module and does not support pluggable power modules. The built-in power module can provide 370 W PoE power, which ensures full PoE power on 24 ports in compliance with 802.3af or on 12 ports in compliance with 802.3at. The switch can connect to an RPS1800 power supply. The RPS1800 only provides system power redundancy and does not increase the PoE capacity of the switch.

Figure 4-97 shows the power supply mode of a built-in AC PoE power module (PWR). The PWR module receives AC power from an external power source and provides two outputs: 12 V and -53 V. The 12 V output is provided for the chassis, and the -53 V output is provided for PDs.

Figure 4-97 Power supply by a built-in AC PoE power module



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground RTN: -53 V reference ground

Heat Dissipation

The S5720-28P-PWR-LI-AC has two built-in fans for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-254 lists technical specifications of the S5720-28P-PWR-LI-AC.

Table 4-254 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	41 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 314.8 mm (1.72 in. x 17.4 in. x 12.39 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 323.8 mm (1.72 in. x 17.4 in. x 12.75 in.)
Weight (with packaging)	5.2 kg (11.45 lb)

Item	Description
Stack ports	Twenty-four 10/100/1000BASE-T ports and four 1000BASE-X ports
RTC	Not supported
RPS	Supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none">Not providing the PoE function: 42.7 W100% PoE loads: 448.5 W (system power consumption: 78.9 W, PoE: 369.6 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">Tested according to ATIS standardEEE enabledNo PoE power consumption	29.5 W
Operating temperature	0 °C to 50 °C (32 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5 °C to +55 °C (23 °F to 131 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year.The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year.The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.

Item	Description
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 49.1 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010769

4.8.8 S5720-52P-LI-AC

Version Mapping

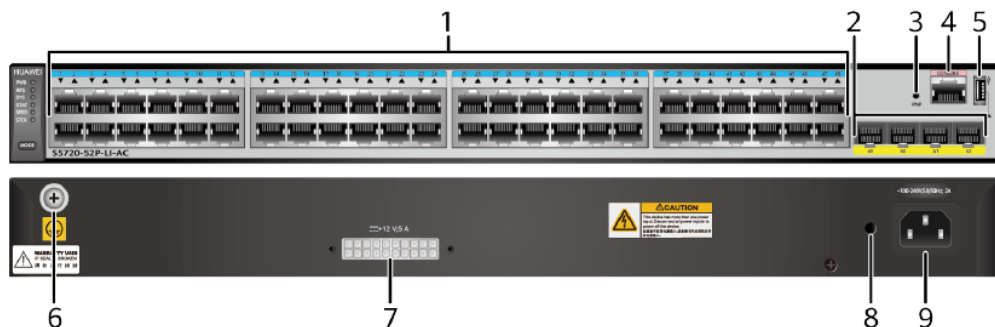
Table 4-255 lists the mapping between the S5720-52P-LI-AC chassis and software versions.

Table 4-255 Version mapping

Series	Model	Software Version
S5720-LI	S5720-52P-LI-AC	V200R011C00 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-98 S5720-52P-LI-AC appearance



1	Forty-eight 10/100/1000BASE-T ports	2	<p>Four 1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.11 SFP Stack Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable • 10.19 GPON Optical Modules <p>A license can be activated on the switch to increase the speed of the four optical ports to 10 Gbit/s. Applicable modules:</p> <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable • 10.19 GPON Optical Modules <p>NOTE If a port uses a GPON optical module, other 1000BASE-X optical ports cannot be used.</p>
3	<p>One PNP button</p> <p>NOTICE Applicable in V200R012C00 and later versions:</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	4	One console port

5	One USB port	6	Ground screw NOTE It is used with a 9.1 Ground Cable.
7	RPS socket NOTE It is used with an 9.12 RPS Cable, which is not hot swappable.	8	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.
9	AC socket NOTE It is used with an 9.8 AC Power Cable.	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-256 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-256 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. Table 4-257 describes the attributes of a 1000BASE-X Ethernet optical port.

Table 4-257 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-258 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-258 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-259.

Table 4-259 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

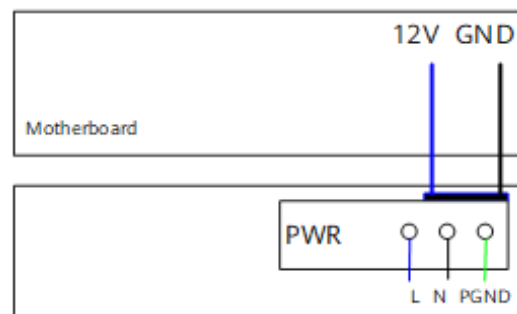
The S5720-52P-LI-AC has similar indicators to those of the S5720-28X-PWR-LI-AC, except that the S5720-52P-LI-AC does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-52P-LI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

Figure 4-99 shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 4-99 Power supply mode of a built-in AC power module



L: live wire

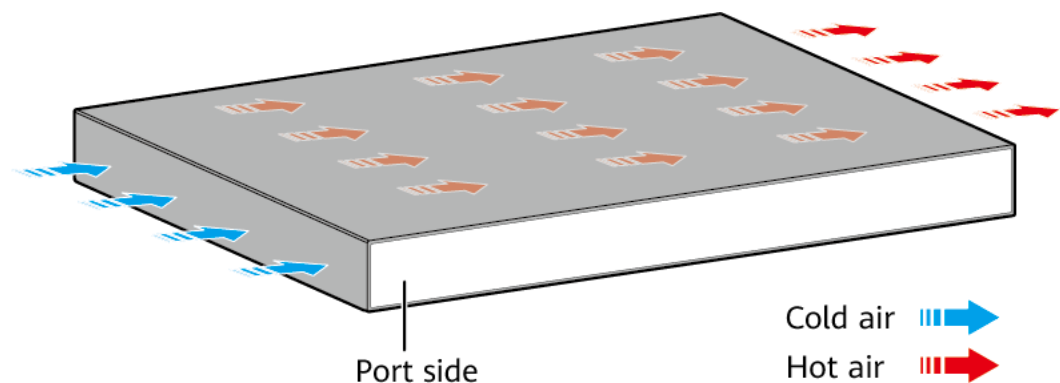
N: neutral wire

PGND: protection ground

GND: 12 V reference ground

Heat Dissipation

The S5720-52P-LI-AC has a built-in fan for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-260 lists technical specifications of the S5720-52P-LI-AC.

Table 4-260 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	41 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 224.8 mm (1.72 in. x 17.4 in. x 8.85 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 233.8 mm (1.72 in. x 17.4 in. x 9.21 in.)
Weight (with packaging)	4.4 kg (9.7 lb)
Stack ports	Forty-eight 10/100/1000BASE-T ports and four 1000BASE-X ports
RTC	Not supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	50.3 W
Typical power consumption (30% of traffic load)	31.6 W
<ul style="list-style-type: none"> Tested according to 	

Item	Description
ATIS standard <ul style="list-style-type: none">• EEE enabled• No PoE power consumption	
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5 °C to +55 °C (23 °F to 131 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">• The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 44.5 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010774

4.8.9 S5720-52P-PWR-LI-AC

Version Mapping

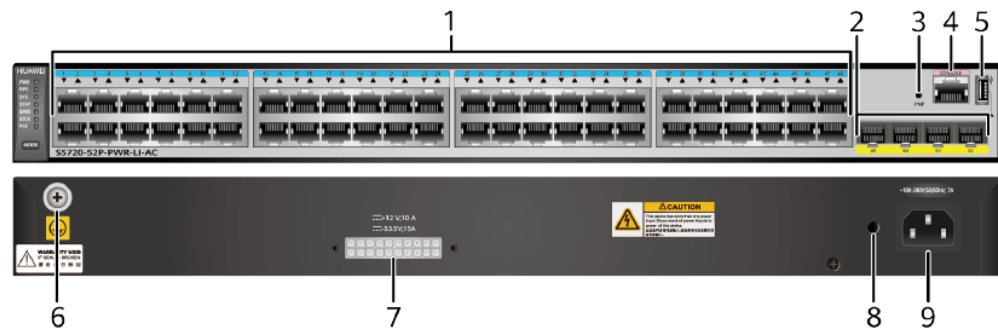
Table 4-261 lists the mapping between the S5720-52P-PWR-LI-AC chassis and software versions.

Table 4-261 Version mapping

Series	Model	Software Version
S5720-LI	S5720-52P-PWR-LI-AC	V200R011C00 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-100 S5720-52P-PWR-LI-AC appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	<p>Four 1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.11 SFP Stack Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable • 10.19 GPON Optical Modules <p>A license can be activated on the switch to increase the speed of the four optical ports to 10 Gbit/s. Applicable modules:</p>
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			<ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable • 10.19 GPON Optical Modules <p>NOTE If a port uses a GPON optical module, other 1000BASE-X optical ports cannot be used.</p>
3	<p>One PNP button</p> <p>NOTICE Applicable in V200R012C00 and later versions: To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	4	<p>One console port</p>
5	<p>One USB port</p>	6	<p>Ground screw</p> <p>NOTE It is used with a 9.1 Ground Cable.</p>
7	<p>RPS socket</p> <p>NOTE It is used with an 9.12 RPS Cable, which is not hot swappable.</p>	8	<p>Jack for AC power cable locking strap</p> <p>NOTE The AC power cable locking strap is not delivered with the switch.</p>
9	<p>AC socket</p> <p>NOTE It is used with an 9.8 AC Power Cable.</p>	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-262 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-262 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. Table 4-263 describes the attributes of a 1000BASE-X Ethernet optical port.

Table 4-263 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-264 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-264 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-265.

Table 4-265 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

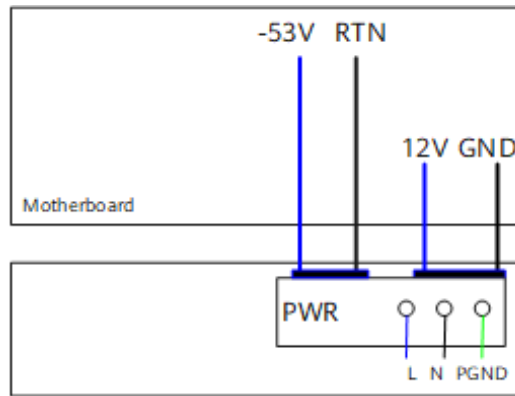
The S5720-52P-PWR-LI-AC has similar indicators to those of the S5720-28X-PWR-LI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-52P-PWR-LI-AC has a built-in power module and does not support pluggable power modules. The built-in power module can provide 370 W PoE power, which ensures full PoE power on 24 ports in compliance with 802.3af or on 12 ports in compliance with 802.3at. The switch can connect to an RPS1800 power supply. The RPS1800 only provides system power redundancy and does not increase the PoE capacity of the switch.

Figure 4-101 shows the power supply mode of a built-in AC PoE power module (PWR). The PWR module receives AC power from an external power source and provides two outputs: 12 V and -53 V. The 12 V output is provided for the chassis, and the -53 V output is provided for PDs.

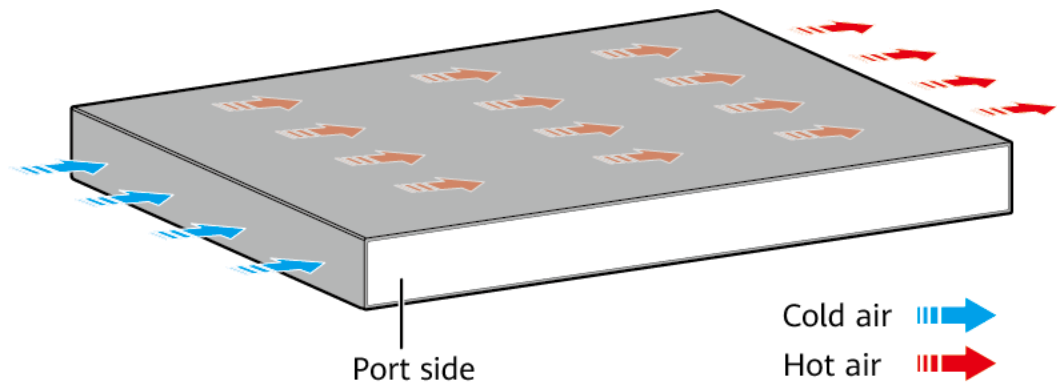
Figure 4-101 Power supply by a built-in AC PoE power module



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground RTN: -53 V reference ground

Heat Dissipation

The S5720-52P-PWR-LI-AC has two built-in fans for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-266 lists technical specifications of the S5720-52P-PWR-LI-AC.

Table 4-266 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	38 years

Item	Description
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 314.8 mm (1.72 in. x 17.4 in. x 12.39 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 323.8 mm (1.72 in. x 17.4 in. x 12.75 in.)
Weight (with packaging)	5.6 kg (12.35 lb)
Stack ports	Forty-eight 10/100/1000BASE-T ports and four 1000BASE-X ports
RTC	Not supported
RPS	Supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> Not providing the PoE function: 63.5 W 100% PoE loads: 464.3 W (system power consumption: 94.7 W, PoE: 369.6 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> Tested according to ATIS standard EEE enabled No PoE power consumption 	42.2 W
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Short-term operating	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906

Item	Description
temperature	ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">• The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for no more than 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 48.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010776

4.8.10 S5720-16X-PWH-LI-AC

Version Mapping

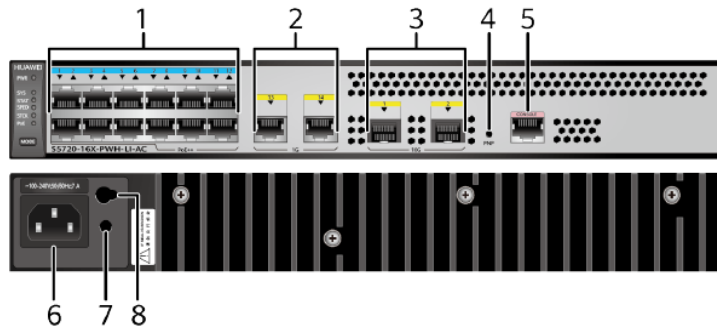
Table 4-267 lists the mapping between the S5720-16X-PWH-LI-AC chassis and software versions.

Table 4-267 Version mapping

Series	Model	Software Version
S5720-LI	S5720-16X-PWH-LI-AC	V200R010C00 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-102 S5720-16X-PWH-LI-AC appearance



1	Twelve PoE++ 10/100/1000BASE-T ports	2	Two 10/100/1000BASE-T ports
3	Two 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.17 Industrial Optical Modules • 10.10 GE SFP Copper Modules • 9.15 Copper Cable • 9.14 Dedicated Stack Cable • 10.19 GPON Optical Modules NOTICE The switch cannot enter the standby mode if it has optical modules installed on its optical ports. If the switch is in the standby mode, installing optical modules on its optical interface will cause the switch to exit from the standby mode. If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.	4	One PNP button NOTICE Applicable in V200R012C00 and later versions: To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
5	One console port	6	AC socket NOTE It is used with an 9.8 AC Power Cable.
7	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.	8	Jack for a connection box adapter plate

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-268 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-268 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-269 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-269 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-270.

Table 4-270 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)

Attribute	Description
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Indicator Description

The S5720-16X-PWH-LI-AC has similar indicators to those of the S5720-28X-PWR-LI-AC, except that the S5720-16X-PWH-LI-AC does not have an RPS or USB indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-16X-PWH-LI-AC has a built-in power module and does not support pluggable power modules. The S5720-16X-PWH-LI-AC is a PoE switch and its built-in power module is a PoE power module.

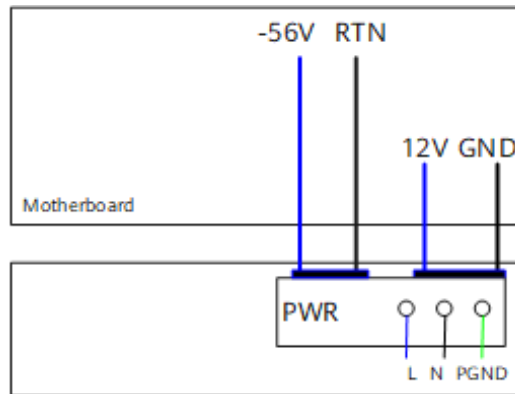
Table 4-271 PoE power supply capacity of the built-in power module

Available PoE Power	Maximum Number of Ports (Fully Loaded)
360 W	<ul style="list-style-type: none">802.3af (15.4 W per port): 12802.3at (30 W per port): 12802.3bt (60 W per port): 6

The S5720-16X-PWH-LI-AC supports the standby mode. In this mode, the switch does not provide PoE power supply and works in low-power state. All ports of the switch, except GE0/0/13 and GE0/0/14, are shut down in the standby mode.

Figure 4-103 shows the power supply mode of the power module in the S5720-16X-PWH-LI-AC switch. The power module receives AC power from an external power source and provides two outputs: 12 V and -56 V. By default, the -56 V output voltage is provided to the switch and powered devices (PDs) connected to the switch. After the switch enters the standby mode, only the 12 V output voltage is provided for power supply of the switch.

Figure 4-103 Power supply by a built-in AC PoE power module



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground RTN: -56 V reference ground

Heat Dissipation

The S5720-16X-PWH-LI-AC has no fans and uses natural heat dissipation.

Technical Specifications

Table 4-272 lists technical specifications of the S5720-16X-PWH-LI-AC.

Table 4-272 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	9.3 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 320.0 mm x 263.0 mm (1.72 in. x 12.6 in. x 10.35 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 324.3 mm x 269.7 mm (1.72 in. x 12.77 in. x 10.62 in.)

Item	Description
Weight (with packaging)	4.7 kg (10.36 lb)
Stack ports	All electrical ports and optical ports
RTC	Not supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput)	<ul style="list-style-type: none"> Not providing the PoE function: 31.5 W 100% PoE loads: 437.5 W (system power consumption: 77.5 W, PoE: 360 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> Tested according to ATIS standard EEE enabled No PoE power consumption 	30.9 W
Operating temperature	0 °C to 55 °C (32 °F to 131 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The operating temperature range for the switch is 0 °C to 45 °C (32 °F to 113 °F) if the switch uses optical modules.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> EMC certification Safety certification Manufacturing certification
Part number	98010657

4.8.11 S5720-28X-LI-AC

Version Mapping

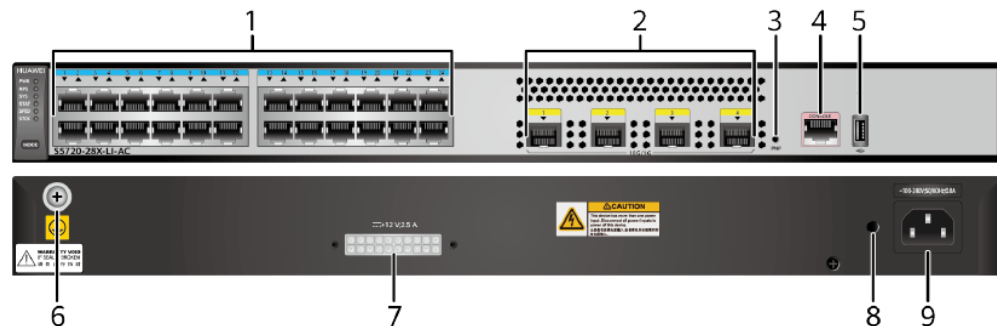
Table 4-273 lists the mapping between the S5720-28X-LI-AC chassis and software versions.

Table 4-273 Version mapping

Series	Model	Software Version
S5720-LI	S5720-28X-LI-AC	V200R010C00 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-104 S5720-28X-LI-AC appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber
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			<ul style="list-style-type: none"> 9.14 Dedicated Stack Cable 10.19 GPON Optical Modules <p>NOTE A switch can use a maximum of two 10GE optical modules with 40 km or longer transmission distances. If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>
3	<p>One PNP button</p> <p>NOTICE Applicable in V200R012C00 and later versions: To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	4	One console port
5	One USB port	6	<p>Ground screw</p> <p>NOTE It is used with a 9.1 Ground Cable.</p>
7	<p>RPS socket</p> <p>NOTE It is used with an 9.12 RPS Cable, which is not hot swappable.</p>	8	<p>Jack for AC power cable locking strap</p> <p>NOTE The AC power cable locking strap is not delivered with the switch.</p>
9	<p>AC socket</p> <p>NOTE It is used with an 9.8 AC Power Cable.</p>	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-274 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-274 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission	100 m

Attribute	Description
distance	

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-275 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-275 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-276.

Table 4-276 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

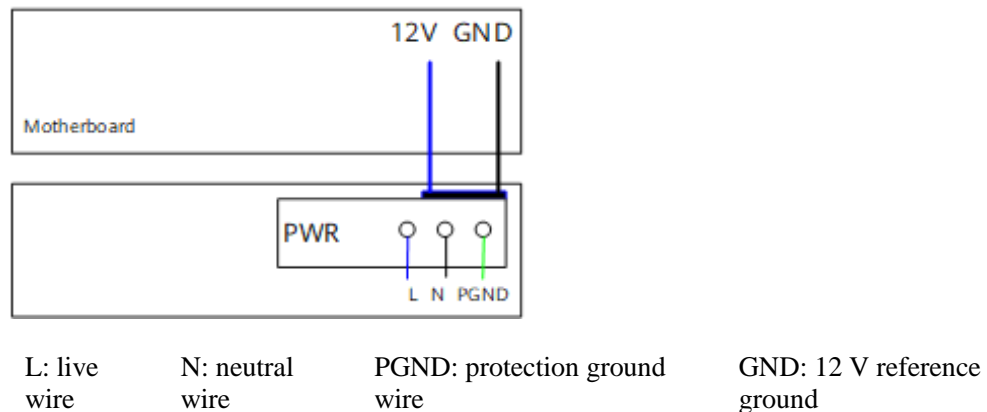
The S5720-28X-LI-AC has similar indicators to those of the S5720-28X-PWR-LI-AC, except that the S5720-28X-LI-AC does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-28X-LI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

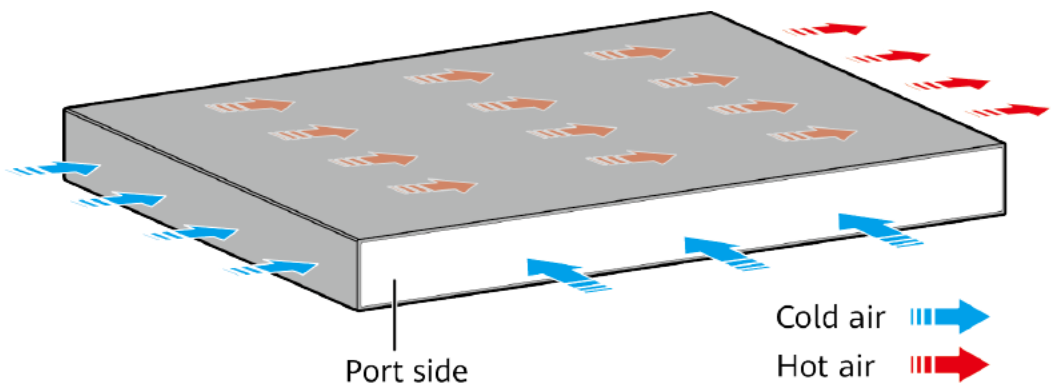
Figure 4-105 shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 4-105 Power supply mode of a built-in AC power module



Heat Dissipation

The S5720-28X-LI-AC has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



 NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-277 lists technical specifications of the S5720-28X-LI-AC.

Table 4-277 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	45 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 224.8 mm (1.72 in. x 17.4 in. x 8.85 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 233.8 mm (1.72 in. x 17.4 in. x 9.21 in.)
Weight (with packaging)	3.9 kg (8.6 lb)
Stack ports	Twenty-four 10/100/1000BASE-T ports and four 10G SFP+ ports
RTC	Not supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	29.5 W
Typical power consumption (30%)	21.4 W

Item	Description
of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5 °C to +55 °C (23 °F to 131 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 47 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010581

4.8.12 S5720-28X-LI-DC

Version Mapping

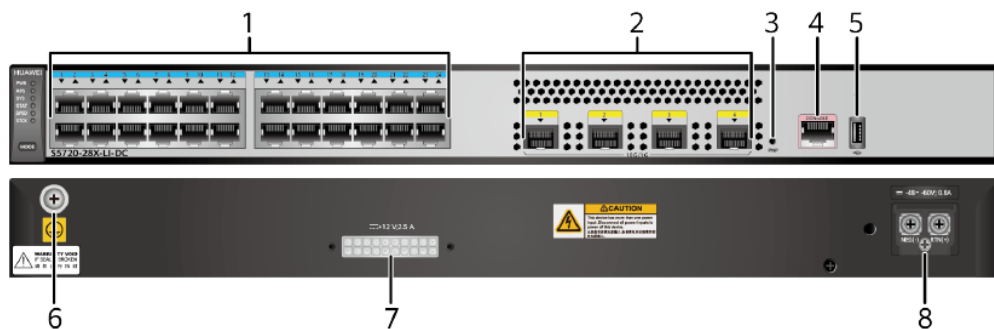
Table 4-278 lists the mapping between the S5720-28X-LI-DC chassis and software versions.

Table 4-278 Version mapping

Series	Model	Software Version
S5720-LI	S5720-28X-LI-DC	V200R010C00 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-106 S5720-28X-LI-DC appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
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			<ul style="list-style-type: none"> 10.19 GPON Optical Modules <p>NOTE A switch can use a maximum of two 10GE optical modules with 40 km or longer transmission distances. If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>
3	<p>One PNP button</p> <p>NOTICE Applicable in V200R012C00 and later versions: To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	4	One console port
5	One USB port	6	<p>Ground screw</p> <p>NOTE It is used with a 9.1 Ground Cable.</p>
7	<p>RPS socket</p> <p>NOTE It is used with an 9.12 RPS Cable, which is not hot swappable.</p>	8	<p>DC power terminal</p> <p>NOTE It is used together with a 9.5 DC Power Cable (with OT and Cord End Terminals).</p>

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-279 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-279 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-280 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-280 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-281.

Table 4-281 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

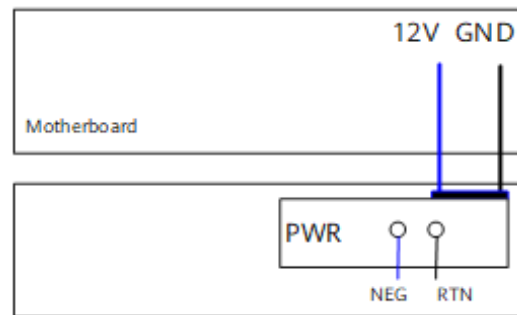
The S5720-28X-LI-DC has similar indicators to those of the S5720-28X-PWR-LI-AC, except that the S5720-28X-LI-DC does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-28X-LI-DC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

Figure 4-107 shows the power supply mode of a single DC power module. The built-in DC power module (PWR) receives DC power from an external power source and provides a 12 V output to the chassis.

Figure 4-107 Power supply by a single DC power module



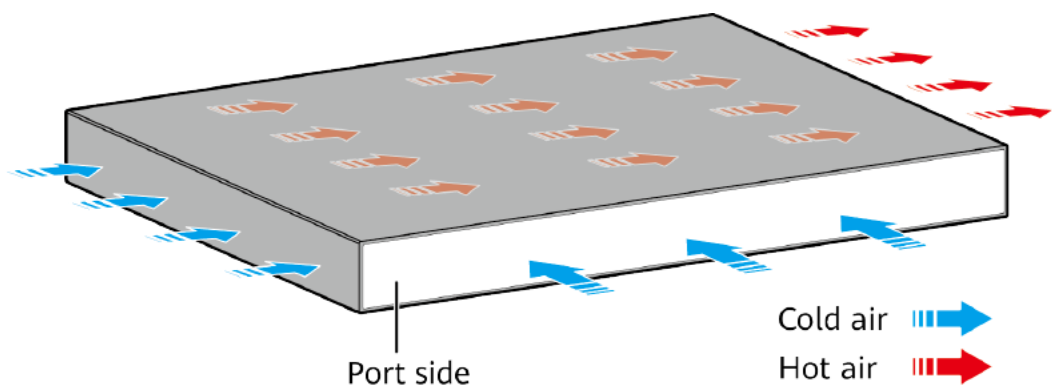
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

Heat Dissipation

The S5720-28X-LI-DC has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-282 lists technical specifications of the S5720-28X-LI-DC.

Table 4-282 Technical specifications

Item	Description
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Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	45 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">• Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 224.8 mm (1.72 in. x 17.4 in. x 8.85 in.)• Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 233.8 mm (1.72 in. x 17.4 in. x 9.21 in.)
Weight (with packaging)	4 kg (8.82 lb)
Stack ports	Twenty-four 10/100/1000BASE-T ports and four 10G SFP+ ports
RTC	Not supported
RPS	Supported
PoE	Not supported
Rated voltage range	-48 V DC to -60 V DC
Maximum voltage range	-36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	31 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	19.8 W

Item	Description
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5 °C to +55 °C (23 °F to 131 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">• The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 47 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-3000 m (0-9483 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010582

4.8.13 S5720-28X-LI-24S-AC

Version Mapping

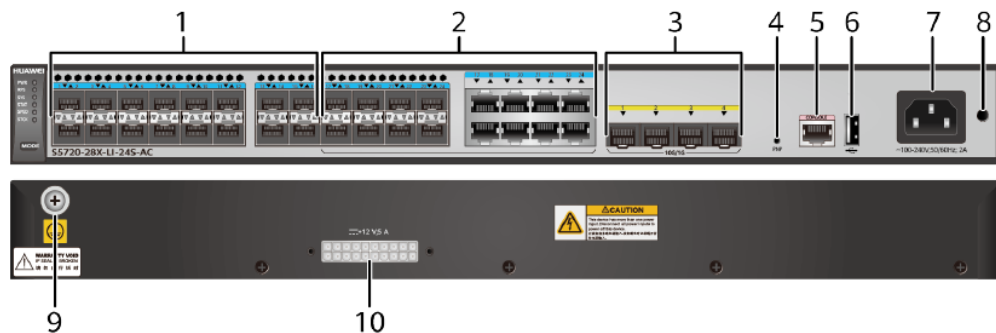
Table 4-283 lists the mapping between the S5720-28X-LI-24S-AC chassis and software versions.

Table 4-283 Version mapping

Series	Model	Software Version
S5720-LI	S5720-28X-LI-24S-AC	V200R010C00 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-108 S5720-28X-LI-24S-AC appearance



1	<p>Sixteen 100/1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.8 GE-CWDM eSFP Optical Modules (Used Only in the OADM scenario) • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules 	2	<p>Eight combo ports (10/100/1000BASE-T + 100/1000BASE-X)</p> <p>Modules applicable to combo optical ports:</p> <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.8 GE-CWDM eSFP Optical Modules (Used Only in the OADM scenario) • 10.9 GE-DWDM eSFP Optical Modules
3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules 	4	<p>One PNP button</p> <p>NOTICE</p> <p>Applicable in V200R012C00 and later versions:</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you</p>

	<ul style="list-style-type: none"> • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable • 10.19 GPON Optical Modules <p>NOTE If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>		press the PNP button.
5	One console port	6	One USB port
7	AC socket NOTE It is used with an 9.8 AC Power Cable.	8	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.
9	Ground screw NOTE It is used with a 9.1 Ground Cable.	10	RPS socket NOTE It is used with an 9.12 RPS Cable, which is not hot swappable.

Port Description

100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. Table 4-284 describes the attributes of a 100/1000BASE-X port.

Table 4-284 Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

Combo port

A combo port consists of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. The electrical and optical ports of a combo port are multiplexed, and only one of them can work at a time. When one of the Ethernet ports is working, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-285 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-285 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-286.

Table 4-286 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

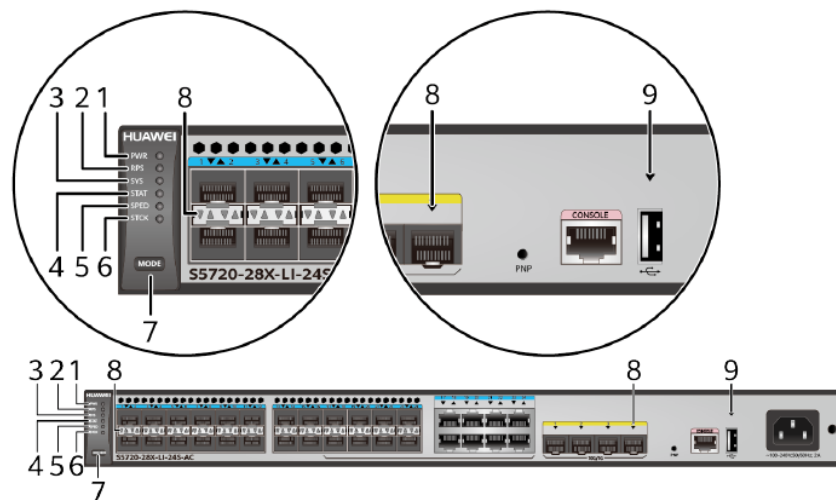
Indicator Description

NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
- If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
- If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 4-109 Indicators on the S5720-28X-LI-24S-AC



NOTE

The S5720-LI series switches provide a command for setting fault indicators, which help field maintenance personnel find a faulty switch quickly.

The SYS indicator and mode indicators (STAT, SPED, STCK, and PoE) are used as fault indicators of a switch. If the switch fails, its SYS indicator and mode indicators can be configured to blink red fast so that field maintenance personnel can find this faulty switch.

Table 4-287 Description of indicators on the switch

No.	Indicator/Button	Name	Color	Status	Description
1	PWR	Power module indicator	-	Off	The switch is powered off.
			Green	Steady on	The system power supply is normal.
			Yellow	Steady on	The built-in power module has failed, and the switch is receiving power from a redundant power supply (RPS).
2	RPS	RPS indicator	-	Off	The switch is not connected to an RPS.
			Green	Steady on	The RPS is in cold standby state.
			Green	Blinking	The RPS is supplying power to another switch.
			Yellow	Blinking	The RPS is supplying power to the local switch, and the built-in power module of the switch has failed.
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or temperature alarm has been generated.
4	STAT	Status indicator	-	Off	The status mode is not selected.
			Green	Steady on	The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
5	SPED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The service port indicators show the port speeds. After 45 seconds, the service port indicators automatically restore to the status mode.
6	STCK	Stack indicator	-	Off	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is in stack standby or slave state or the stacking function is not enabled on the switch.

No.	Indicator/Button	Name	Color	Status	Description
					<ul style="list-style-type: none"> If you are changing the indicator mode: The stack mode is not selected.
			Green	Steady on	The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is a stack master switch or a standalone switch with the stacking function enabled. If you are changing the indicator mode: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>
7	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> When you press this button once, the service port indicators change to the speed mode and show the speed of each service port. When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch. When you press this button a third time, the service port indicators restore to the default mode, and the STAT indicator turns green. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED indicator is off, and the STCK indicator is off or blinking green.</p>
8	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see Table 4-288 and Table 4-289.		
9	-	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> No USB flash drive is connected to the switch. The USB port is damaged. The indicator is damaged. The USB flash drive does not have any configuration file and cannot be used for deployment. The switch has been upgraded using the

No.	Indicator/Button	Name	Color	Status	Description
					USB flash drive and is restarting.
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from the USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

Table 4-288 Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
	Green	Blinking	The switch is the master switch in a stack.

Display Mode	Color	Status	Description
			<ul style="list-style-type: none"> If the indicator of a port is blinking, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Table 4-289 Description of service port indicators in different modes (two indicators for each port)

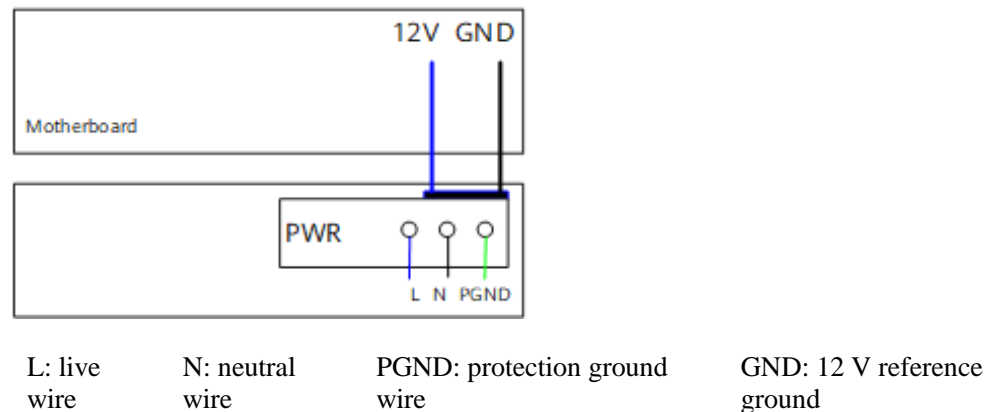
Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Yellow	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green and yellow	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 100M/1000M port: The port is operating at 100 Mbit/s.
	Green and yellow	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 100M/1000M port: The port is operating at 1000 Mbit/s.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green and yellow	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
	Green and yellow	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is blinking, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Power Supply Configuration

The S5720-28X-LI-24S-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

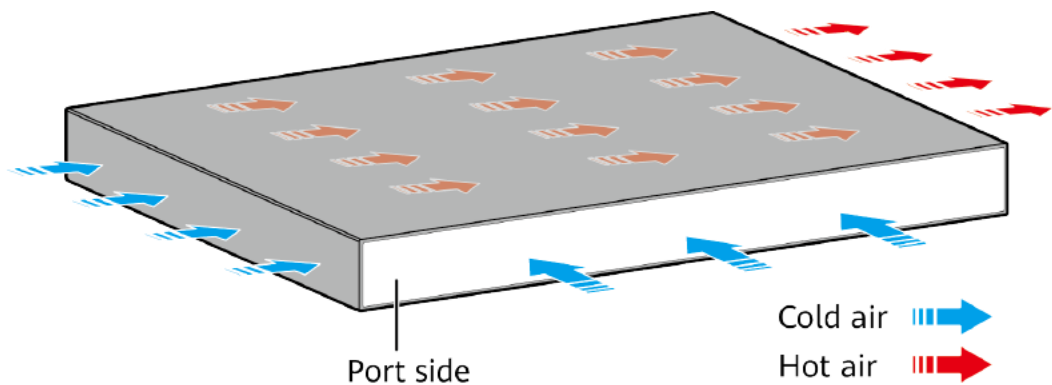
Figure 4-110 shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 4-110 Power supply mode of a built-in AC power module



Heat Dissipation

The S5720-28X-LI-24S-AC has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-290 lists technical specifications of the S5720-28X-LI-24S-AC.

Table 4-290 Technical specifications

Item	Description
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Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	41 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">• Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 224.8 mm (1.72 in. x 17.4 in. x 8.85 in.)• Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 233.8 mm (1.72 in. x 17.4 in. x 9.21 in.)
Weight (with packaging)	4.1 kg (9.04 lb)
Stack ports	GE SFP optical ports and 10GE SFP+ optical ports except combo ports on the front panel
RTC	Not supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	41.7 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	28.9 W

Item	Description
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5 °C to +55 °C (23 °F to 131 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">• The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 43 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010629

4.8.14 S5720-28X-LI-24S-DC

Version Mapping

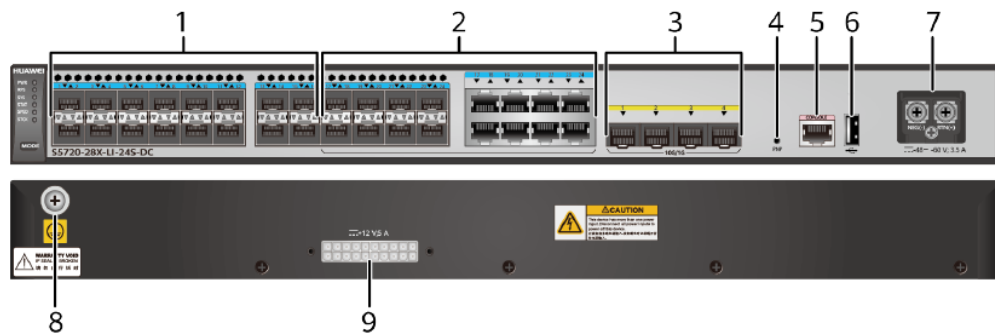
Table 4-291 lists the mapping between the S5720-28X-LI-24S-DC chassis and software versions.

Table 4-291 Version mapping

Series	Model	Software Version
S5720-LI	S5720-28X-LI-24S-DC	V200R010C00 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-111 S5720-28X-LI-24S-DC appearance



1	<p>Sixteen 100/1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.8 GE-CWDM eSFP Optical Modules (Used Only in the OADM scenario) • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules 	2	<p>Eight combo ports (10/100/1000BASE-T + 100/1000BASE-X)</p> <p>Modules applicable to combo optical ports:</p> <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.8 GE-CWDM eSFP Optical Modules (Used Only in the OADM scenario) • 10.9 GE-DWDM eSFP Optical Modules
3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules 	4	<p>One PNP button</p> <p>NOTICE</p> <p>Applicable in V200R012C00 and later versions:</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you</p>

	<ul style="list-style-type: none"> • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable • 10.19 GPON Optical Modules <p>NOTE If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>		press the PNP button.
5	One console port	6	One USB port
7	DC power terminal NOTE It is used together with a 9.5 DC Power Cable (with OT and Cord End Terminals).	8	Ground screw NOTE It is used with a 9.1 Ground Cable.
9	RPS socket NOTE It is used with an 9.12 RPS Cable, which is not hot swappable.	-	-

Port Description

100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. Table 4-292 describes the attributes of a 100/1000BASE-X port.

Table 4-292 Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

Combo port

A combo port consists of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. The electrical and optical ports of a combo port are multiplexed, and only one of them can work at a time. When one of the Ethernet ports is working, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-293 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-293 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-294.

Table 4-294 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

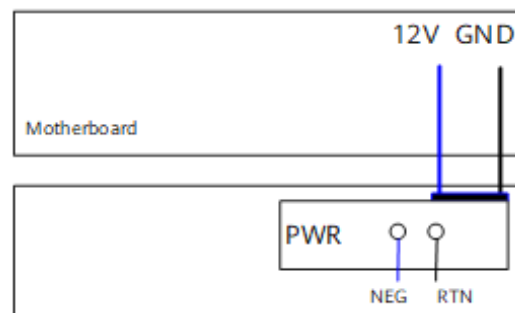
The S5720-28X-LI-24S-DC has the same types of indicators as the S5720-28X-LI-24S-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-28X-LI-24S-DC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

Figure 4-112 shows the power supply mode of a single DC power module. The built-in DC power module (PWR) receives DC power from an external power source and provides a 12 V output to the chassis.

Figure 4-112 Power supply by a single DC power module



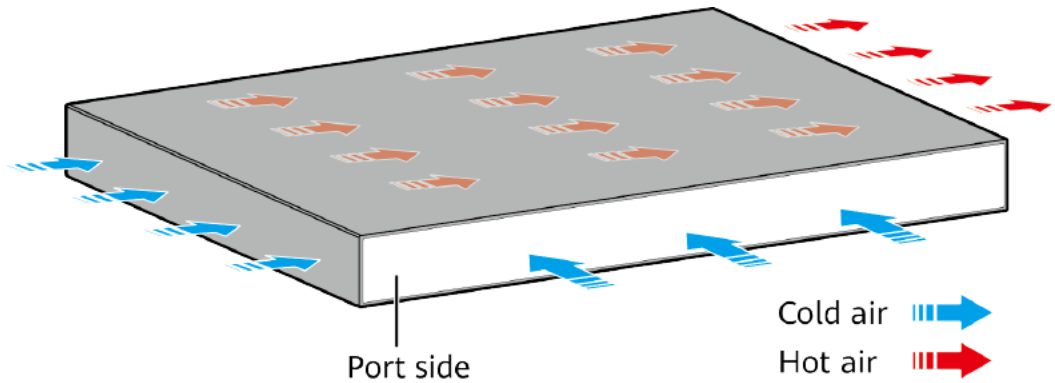
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

Heat Dissipation

The S5720-28X-LI-24S-DC has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-295 lists technical specifications of the S5720-28X-LI-24S-DC.

Table 4-295 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	41 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 224.8 mm (1.72 in. x 17.4 in. x 8.85 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 233.8 mm (1.72 in. x 17.4 in. x 9.21 in.)
Weight (with packaging)	4.1 kg (9.04 lb)
Stack ports	GE SFP optical ports and 10GE SFP+ optical ports except combo ports on the front panel
RTC	Not supported

Item	Description
RPS	Supported
PoE	Not supported
Rated voltage range	-48 V DC to -60 V DC
Maximum voltage range	-36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	42.7 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	30.3 W
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5 °C to +55 °C (23 °F to 131 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">• The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal	< 43 dB(A)

Item	Description
temperature (27 °C, sound power)	
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010631

4.8.15 S5720-28X-PWR-LI-AC

Version Mapping

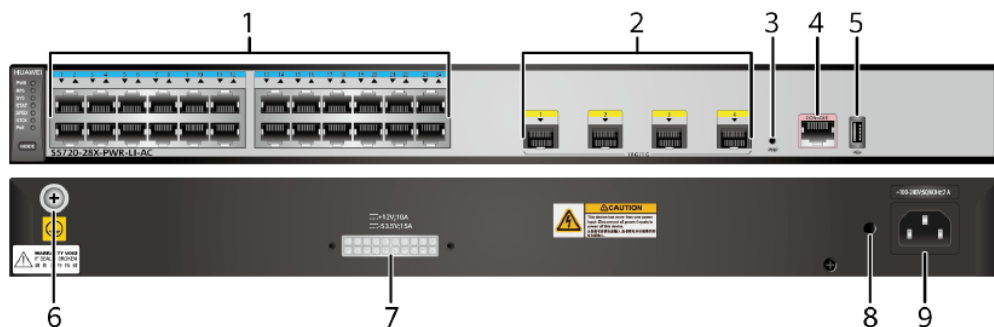
Table 4-296 lists the mapping between the S5720-28X-PWR-LI-AC chassis and software versions.

Table 4-296 Version mapping

Series	Model	Software Version
S5720-LI	S5720-28X-PWR-LI-AC	V200R010C00 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-113 S5720-28X-PWR-LI-AC appearance



1	Twenty-four PoE+ 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables:
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			<ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable • 10.19 GPON Optical Modules <p>NOTE If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>
3	<p>One PNP button</p> <p>NOTICE Applicable in V200R012C00 and later versions: To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	4	<p>One console port</p>
5	<p>One USB port</p>	6	<p>Ground screw</p> <p>NOTE It is used with a 9.1 Ground Cable.</p>
7	<p>RPS socket</p> <p>NOTE It is used with an 9.12 RPS Cable, which is not hot swappable.</p>	8	<p>Jack for AC power cable locking strap</p> <p>NOTE The AC power cable locking strap is not delivered with the switch.</p>
9	<p>AC socket</p> <p>NOTE It is used with an 9.8 AC Power Cable.</p>	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-297 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-297 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-298 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-298 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-299.

Table 4-299 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

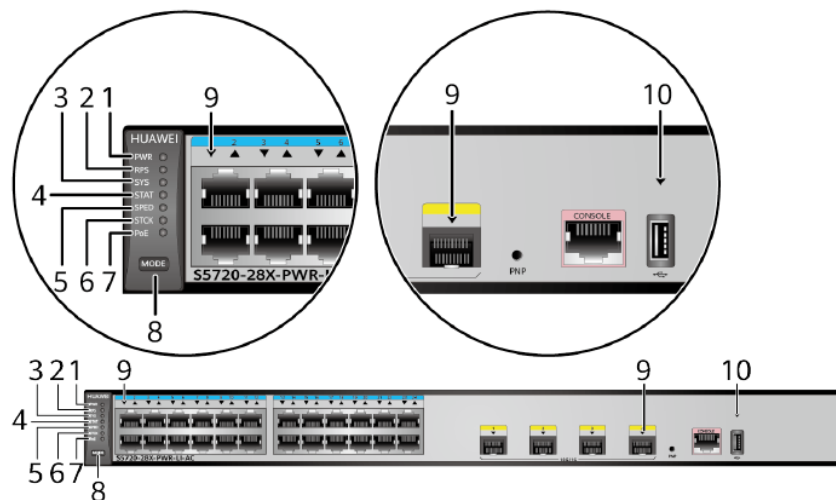
Indicator Description

NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
- If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
- If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 4-114 Indicators on the S5720-28X-PWR-LI-AC



NOTE

The S5720-LI series switches provide a command for setting fault indicators, which help field maintenance personnel find a faulty switch quickly.

The SYS indicator and mode indicators (STAT, SPED, STCK, and PoE) are used as fault indicators of a switch. If the switch fails, its SYS indicator and mode indicators can be configured to blink red fast so that field maintenance personnel can find this faulty switch.

Table 4-300 Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR	Power module indicator	-	Off	The switch is powered off.
			Green	Steady on	The system power supply is normal.
			Yellow	Steady on	<ul style="list-style-type: none"> The built-in power module has failed, and the switch is receiving power from a redundant power supply (RPS). The built-in PoE power module has failed.
2	RPS	RPS indicator	-	Off	The switch is not connected to an RPS.
			Green	Steady on	The RPS is in cold standby state.
			Green	Blinking	The RPS is supplying power to another switch.
			Yellow	Blinking	The RPS is supplying power to the local switch, and the built-in power module of the switch has failed.
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or temperature alarm has been generated.
4	STAT	Status indicator	-	Off	The status mode is not selected.
			Green	Steady on	The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
5	SPED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The service port indicators show the port speeds. After 45 seconds, the service port indicators automatically restore to the status mode.
6	STCK	Stack indicator	-	Off	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is in stack standby or slave state or the stacking function is not enabled on the switch. If you are changing the indicator mode: The

No.	Indicator	Name	Color	Status	Description
					stack mode is not selected.
			Green	Steady on	The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is a stack master switch or a standalone switch with the stacking function enabled. If you are changing the indicator mode: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>
7	PoE	PoE indicator	-	Off	The PoE mode is not selected.
			Green	Steady on	The service port indicators show the PoE status. After 45 seconds, the service port indicators automatically restore to the status mode.
8	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> When you press this button once, the service port indicators change to the speed mode and show the speed of each service port. When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch. When you press this button a third time, the service port indicators change to the PoE mode and show the PoE status of each service port. When you press this button a fourth time, the service port indicators restore to the default mode, and the STAT indicator turns green. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED and PoE indicators are off, and the STCK indicator is off or blinking green.</p>
9	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see Table 4-301.		

No.	Indicator	Name	Color	Status	Description
10	-	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> No USB flash drive is connected to the switch. The USB port is damaged. The indicator is damaged. The USB flash drive does not have any configuration file and cannot be used for deployment. The switch has been upgraded using the USB flash drive and is restarting.
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from the USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

Table 4-301 Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
PoE	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.

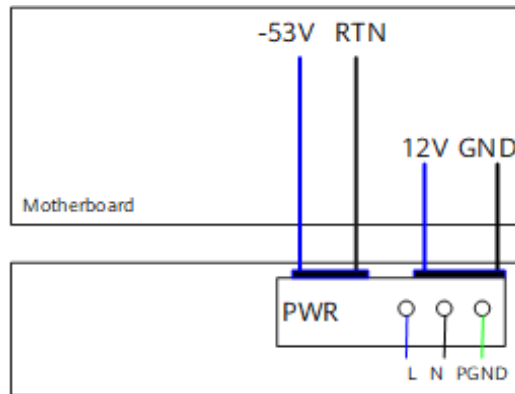
Display Mode	Color	Status	Description
	Yellow	Steady on	The PoE function is disabled on the port.
	Yellow	Blinking	The port stops providing PoE power because of an exception (for example, an incompatible PD is connected to the port).
	Green and yellow	Blinking green and yellow alternately	The port fails to supply power to a PD due to one of the following reasons: <ul style="list-style-type: none">• The power required by the connected PD exceeds the maximum power or the configured power threshold of the port.• The total power consumption of PDs has reached the maximum power of the switch.• The manual power management mode is used and the port is not enabled to provide power to the PD.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none">• If the indicator of a port is steady on, the number of this port is the stack ID of the switch.• If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none">• If the indicator of a port is blinking, the number of this port is the stack ID of the switch.• If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Power Supply Configuration

The S5720-28X-PWR-LI-AC has a built-in power module and does not support pluggable power modules. The built-in power module can provide 370 W PoE power, which ensures full PoE power on 24 ports in compliance with 802.3af or on 12 ports in compliance with 802.3at. The switch can connect to an RPS1800 power supply. The RPS1800 only provides system power redundancy and does not increase the PoE capacity of the switch.

Figure 4-115 shows the power supply mode of a built-in AC PoE power module (PWR). The PWR module receives AC power from an external power source and provides two outputs: 12 V and -53 V. The 12 V output is provided for the chassis, and the -53 V output is provided for PDs.

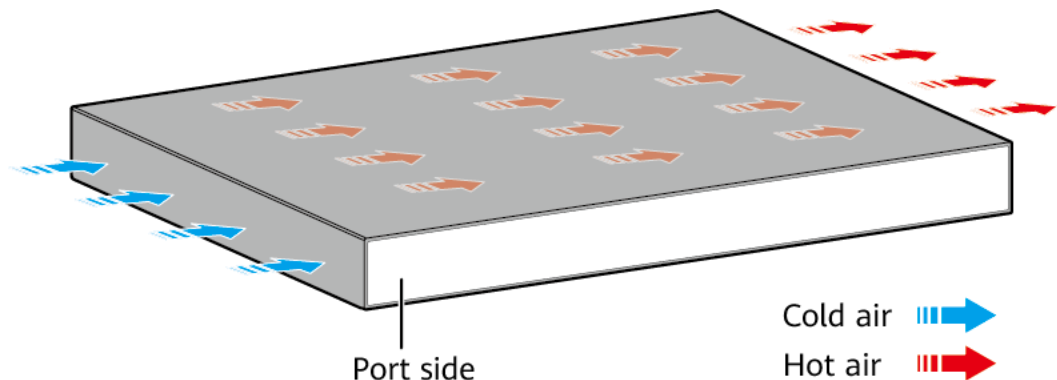
Figure 4-115 Power supply by a built-in AC PoE power module



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground RTN: -53 V reference ground

Heat Dissipation

The S5720-28X-PWR-LI-AC has two built-in fans for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-302 lists technical specifications of the S5720-28X-PWR-LI-AC.

Table 4-302 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	41 years

Item	Description
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 314.8 mm (1.72 in. x 17.4 in. x 12.39 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 323.8 mm (1.72 in. x 17.4 in. x 12.75 in.)
Weight (with packaging)	5.2 kg (11.45 lb)
Stack ports	Twenty-four 10/100/1000BASE-T ports and four 10G SFP+ ports
RTC	Not supported
RPS	Supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none">Not providing the PoE function: 42.7 W100% PoE loads: 448.5 W (system power consumption: 78.9 W, PoE: 369.6 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">Tested according to ATIS standardEEE enabledNo PoE power consumption	29.5 W
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Short-term operating	-5 °C to +55 °C (23 °F to 131 °F) at an altitude of 0-1800 m (0-5906

Item	Description
temperature	ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45 °C (113 °F) for no more than 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 49.1 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010593

4.8.16 S5720-28X-PWR-LI-ACF

Version Mapping

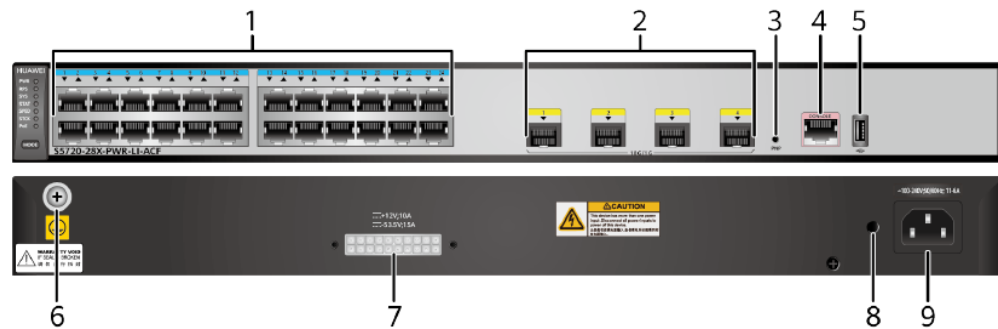
Table 4-303 lists the mapping between the S5720-28X-PWR-LI-ACF chassis and software versions.

Table 4-303 Version mapping

Series	Model	Software Version
S5720-LI	S5720-28X-PWR-LI-ACF	V200R013C00 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-116 S5720-28X-PWR-LI-ACF appearance



1	<p>Twenty-four PoE+ 10/100/1000BASE-T ports</p>	<p>2 Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable • 10.19 GPON Optical Modules <p>NOTE If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>
3	<p>One PNP button</p> <p>NOTICE Applicable in V200R012C00 and later versions: To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you</p>	<p>4 One console port</p>

	press the PNP button.		
5	One USB port	6	Ground screw NOTE It is used with a 9.1 Ground Cable.
7	RPS socket NOTE It is used with an 9.12 RPS Cable, which is not hot swappable.	8	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.
9	AC socket NOTE It is used with an 9.8 AC Power Cable.	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-304 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-304 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-305 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-305 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae

Attribute	Description
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-306.

Table 4-306 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

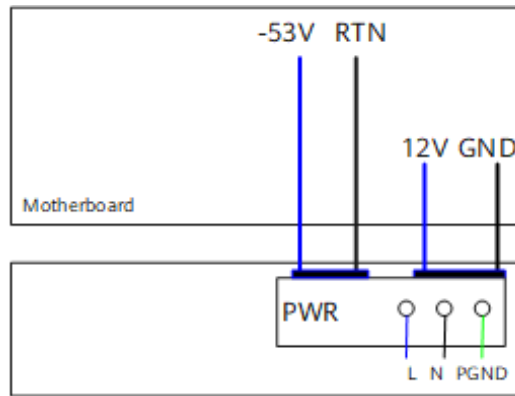
The S5720-28X-PWR-LI-ACF has the same types of indicators as the S5720-28X-PWR-LI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-28X-PWR-LI-ACF has a built-in power module and does not support pluggable power modules. The built-in power module can provide 740 W PoE power, which ensures full PoE power on 24 ports in compliance with 802.3af or 802.3at. The switch can connect to an RPS1800 power supply. The RPS1800 only provides system power redundancy and does not increase the PoE capacity of the switch.

Figure 4-117 shows the power supply mode of a built-in AC PoE power module (PWR). The PWR module receives AC power from an external power source and provides two outputs: 12 V and -53 V. The 12 V output is provided for the chassis, and the -53 V output is provided for PDs.

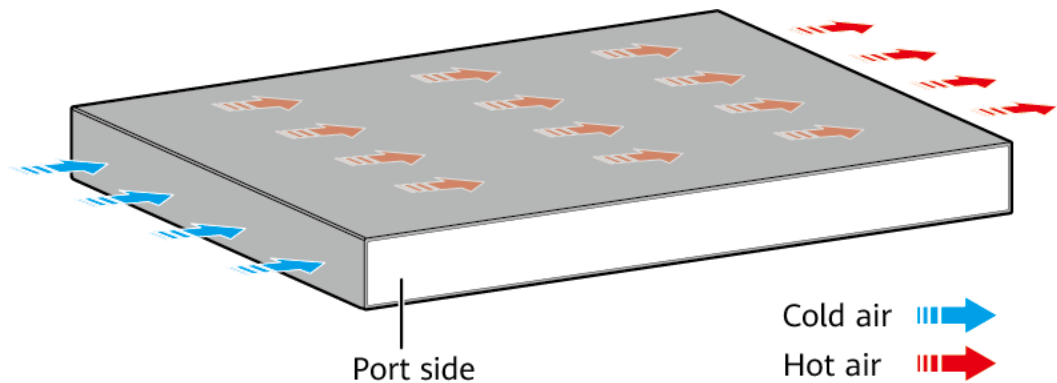
Figure 4-117 Power supply by a built-in AC PoE power module



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground RTN: -53 V reference ground

Heat Dissipation

The S5720-28X-PWR-LI-ACF has two built-in fans for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-307 lists technical specifications of the S5720-28X-PWR-LI-ACF.

Table 4-307 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	41 years

Item	Description
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 314.8 mm (1.72 in. x 17.4 in. x 12.39 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 323.8 mm (1.72 in. x 17.4 in. x 12.75 in.)
Weight (with packaging)	5.9 kg (13.01 lb)
Stack ports	Twenty-four 10/100/1000BASE-T ports and four 10G SFP+ ports
RTC	Not supported
RPS	Supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> Not providing the PoE function: 45 W 100% PoE loads: 984 W (PoE: 739.2 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> Tested according to ATIS standard EEE enabled No PoE power consumption 	33 W
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Short-term operating	-5 °C to +55 °C (23 °F to 131 °F) at an altitude of 0-1800 m (0-5906

Item	Description
temperature	ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">• The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for no more than 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 59.1 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010595

4.8.17 S5720-28X-PWH-LI-AC

Version Mapping

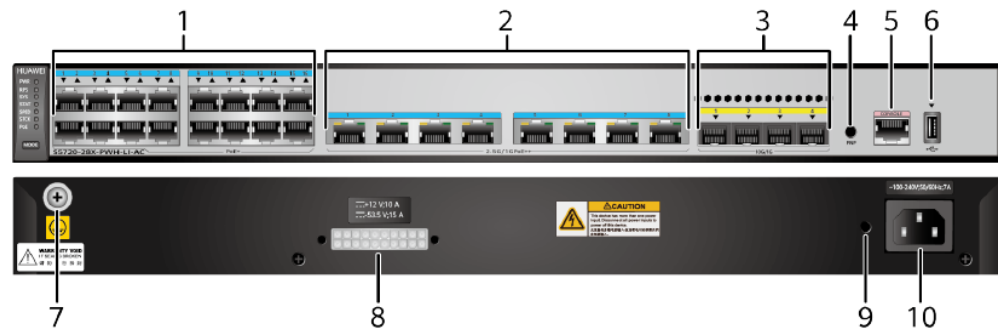
Table 4-308 lists the mapping between the S5720-28X-PWH-LI-AC chassis and software versions.

Table 4-308 Version mapping

Series	Model	Software Version
S5720-LI	S5720-28X-PWH-LI-AC	V200R011C00 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-118 S5720-28X-PWH-LI-AC appearance



1	Sixteen PoE+ 10/100/1000BASE-T ports	2	Eight PoE++ 100M/1000M/2.5G BASE-T ports (MultiGE port)
3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable • 10.19 GPON Optical Modules <p>NOTE If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>	4	<p>One PNP button</p> <p>NOTICE Applicable in V200R012C00 and later versions: To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
5	One console port	6	One USB port
7	<p>Ground screw</p> <p>NOTE It is used with a 9.1 Ground Cable.</p>	8	<p>RPS socket</p> <p>NOTE It is used with an 9.12 RPS Cable, which is not hot swappable.</p>
9	Jack for AC power cable locking strap	10	AC socket

NOTE The AC power cable locking strap is not delivered with the switch.	NOTE It is used with an 9.8 AC Power Cable.
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Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-309 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-309 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

100M/1000M/2.5G BASE-T port

A 100M/1000M/2.5G BASE-T port (MultiGE port) sends and receives service data at 100 Mbit/s, 1 Gbit/s, or 2.5 Gbit/s, and must use an 9.4 Ethernet Cable. If the 2.5 Gbit/s speed is required, the port must use an Ethernet cable of Cat5e or higher category. Table 4-310 describes the attributes of a 100M/1000M/2.5G BASE-T port.

Table 4-310 Attributes of a 100M/1000M/2.5G BASE-T port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3u, IEEE802.3ab, IEEE802.3bz, mgbase-t
Working Mode	100/1000/2500 Mbit/s auto-sensing

A 100M/1000M/2.5G BASE-T port supports the connection with the following devices:

- All switches providing FE electrical interfaces or GE electrical interfaces
- All devices providing MultiGE interfaces defined by the NBASE-T Alliance
- All devices providing MultiGE interfaces that comply with the 802.3bz standard

Table 4-311 lists the maximum transmission distances of different cables on MultiGE ports.

Table 4-311 Maximum transmission distances of different cables on MultiGE ports

Cable Type (6-a-1 Bundle)	MultiGE Port (Different Rates)	
	100M/1000M	2.5GE
Category 5e unshielded twisted pair (Cat5e UTP)	100 m	100 m
Category 5e shielded twisted pair (Cat5e STP)	100 m	200 m Only the APs listed below are supported if the transmission distance is longer than 100 m: <ul style="list-style-type: none"> • AP7052DN/AP7152 DN • AP6052DN • AP8082DN/AP8182 DN • AP7052DE • AP7060DN
Category 6 unshielded twisted pair (Cat6 UTP)	100 m	100 m
Category 6 shielded twisted pair (Cat6 STP)	100 m	200 m Only the APs listed below are supported if the transmission distance is longer than 100 m: <ul style="list-style-type: none"> • AP7052DN/AP7152 DN • AP6052DN • AP8082DN/AP8182 DN • AP7052DE • AP7060DN
Category 6A unshielded twisted pair (Cat6A U/UTP)	100 m	100 m
Category 6A foiled/unshielded twisted pair (Cat6A F/UTP)	100 m	200 m Only the APs listed below are supported if the transmission distance is longer than 100 m: <ul style="list-style-type: none"> • AP7052DN/AP7152 DN • AP6052DN • AP8082DN/AP8182 DN

Cable Type (6-a-1 Bundle)	MultiGE Port (Different Rates)	
	100M/1000M	2.5GE
		<ul style="list-style-type: none"> • AP7052DE • AP7060DN
Category 6A shielded twisted pair (Cat6A STP)	100 m	200 m Only the APs listed below are supported if the transmission distance is longer than 100 m: <ul style="list-style-type: none"> • AP7052DN/AP7152 DN • AP6052DN • AP8082DN/AP8182 DN • AP7052DE • AP7060DN
Category 7 shielded twisted pair (Cat7)	100 m	200 m Only the APs listed below are supported if the transmission distance is longer than 100 m: <ul style="list-style-type: none"> • AP7052DN/AP7152 DN • AP6052DN • AP8082DN/AP8182 DN • AP7052DE • AP7060DN

 **NOTE**

6-a-1 stands for the six-around-one cable bundle mode, with one cable in the center and six cables bundled evenly around it.

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-312 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-312 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port	Depend on the optical module used

Attribute	Description
attributes	
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-313.

Table 4-313 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5720-28X-PWH-LI-AC has the same types of indicators as the S5720-28X-PWR-LI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

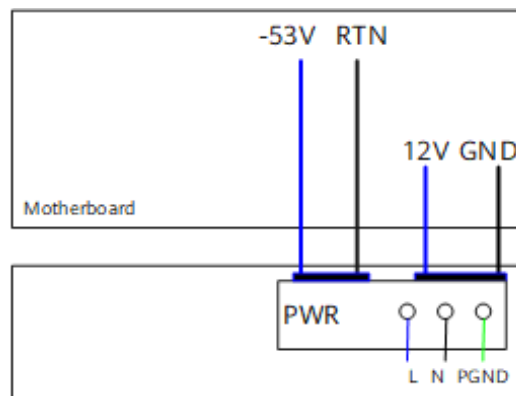
The S5720-28X-PWH-LI-AC has a built-in power module and does not support pluggable power modules. It is a PoE switch. In addition to the built-in PoE power module, the switch can also connect to an RPS1800 for power redundancy.

Table 4-314 PoE power supply capacity of the built-in power module

Available PoE Power	Maximum Number of Ports (Fully Loaded)
360 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 23 802.3at (30 W per port): 12 802.3bt (60 W per port): 6 (only PoE++ ports)

Figure 4-119 shows the power supply mode of a built-in AC PoE power module (PWR). The PWR module receives AC power from an external power source and provides two outputs: 12 V and -53 V. The 12 V output is provided for the chassis, and the -53 V output is provided for PDs.

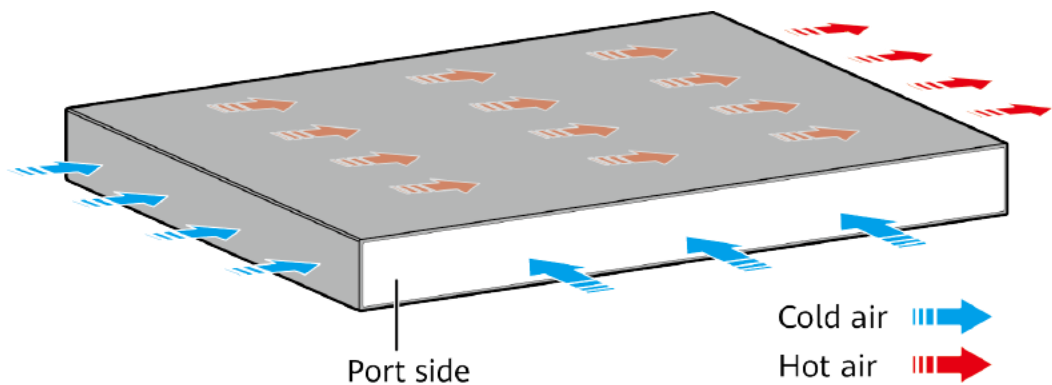
Figure 4-119 Power supply by a built-in AC PoE power module



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground RTN: -53 V reference ground

Heat dissipation

The S5720-28X-PWH-LI-AC has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-315 lists technical specifications of the S5720-28X-PWH-LI-AC.

Table 4-315 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	50.6 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 314.9 mm (1.72 in. x 17.4 in. x 12.39 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 323.9 mm (1.72 in. x 17.4 in. x 12.75 in.)
Weight (with packaging)	5.9 kg (13.01 lb)
Stack ports	Sixteen 10/100/1000BASE-T ports and four 10GE SFP+ ports
RTC	Not supported
RPS	Supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput)	<ul style="list-style-type: none">Not providing the PoE function: 67.3 W100% PoE loads: 473 W (system power consumption: 113 W, PoE: 360 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">Tested according to	51.6 W

Item	Description
ATIS standard <ul style="list-style-type: none"> • EEE enabled • No PoE power consumption 	
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 55.2 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010659

4.8.18 S5720-52X-LI-AC

Version Mapping

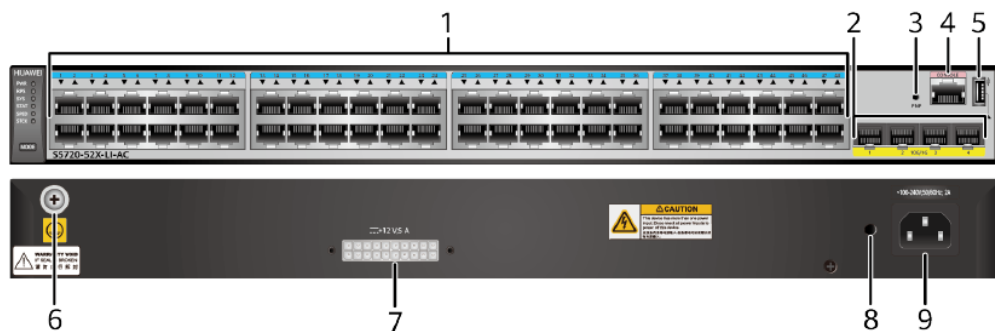
Table 4-316 lists the mapping between the S5720-52X-LI-AC chassis and software versions.

Table 4-316 Version mapping

Series	Model	Software Version
S5720-LI	S5720-52X-LI-AC	V200R010C00 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-120 S5720-52X-LI-AC appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
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			<ul style="list-style-type: none"> 10.19 GPON Optical Modules <p>NOTE If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>
3	<p>One PNP button</p> <p>NOTICE Applicable in V200R012C00 and later versions: To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	4	One console port
5	One USB port	6	<p>Ground screw</p> <p>NOTE It is used with a 9.1 Ground Cable.</p>
7	<p>RPS socket</p> <p>NOTE It is used with an 9.12 RPS Cable, which is not hot swappable.</p>	8	<p>Jack for AC power cable locking strap</p> <p>NOTE The AC power cable locking strap is not delivered with the switch.</p>
9	<p>AC socket</p> <p>NOTE It is used with an 9.8 AC Power Cable.</p>	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-317 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-317 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-318 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-318 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-319.

Table 4-319 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

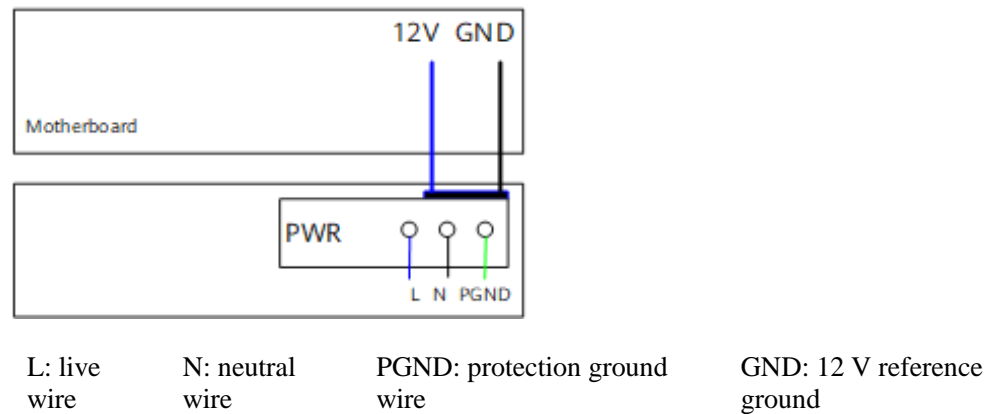
The S5720-52X-LI-AC has similar indicators to those of the S5720-28X-PWR-LI-AC, except that the S5720-52X-LI-AC does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-52X-LI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

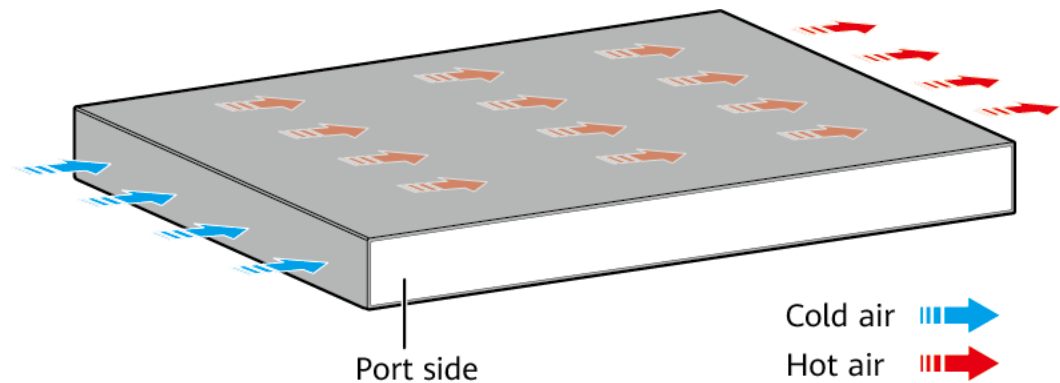
Figure 4-121 shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 4-121 Power supply mode of a built-in AC power module



Heat Dissipation

The S5720-52X-LI-AC has a built-in fan for forced air cooling. The airflow direction is left-to-right.



 **NOTE**

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-320 lists technical specifications of the S5720-52X-LI-AC.

Table 4-320 Technical specifications

Item	Description
------	-------------

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	41 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 224.8 mm (1.72 in. x 17.4 in. x 8.85 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 233.8 mm (1.72 in. x 17.4 in. x 9.21 in.)
Weight (with packaging)	4.4 kg (9.7 lb)
Stack ports	Forty-eight 10/100/1000BASE-T ports and four 10G SFP+ ports
RTC	Not supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	50.3 W
Typical power consumption (30% of traffic load)	31.6 W <ul style="list-style-type: none"> Tested according to ATIS standard EEE enabled No PoE power consumption

Item	Description
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5 °C to +55 °C (23 °F to 131 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">• The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 44.5 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010606

4.8.19 S5720-52X-LI-DC

Version Mapping

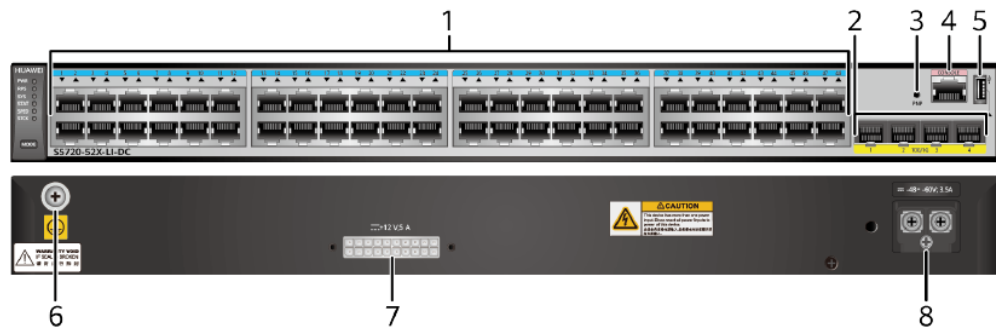
Table 4-321 lists the mapping between the S5720-52X-LI-DC chassis and software versions.

Table 4-321 Version mapping

Series	Model	Software Version
S5720-LI	S5720-52X-LI-DC	V200R010C00 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-122 S5720-52X-LI-DC appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable • 10.19 GPON Optical Modules NOTE If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.
3	One PNP button NOTICE	4	One console port

	<p>Applicable in V200R012C00 and later versions:</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>		
5	One USB port	6	<p>Ground screw</p> <p>NOTE It is used with a 9.1 Ground Cable.</p>
7	<p>RPS socket</p> <p>NOTE It is used with an 9.12 RPS Cable, which is not hot swappable.</p>	8	<p>DC power terminal</p> <p>NOTE It is used together with a 9.5 DC Power Cable (with OT and Cord End Terminals).</p>

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-322 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-322 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-323 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-323 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port	Depend on the optical module used

Attribute	Description
attributes	
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-324.

Table 4-324 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

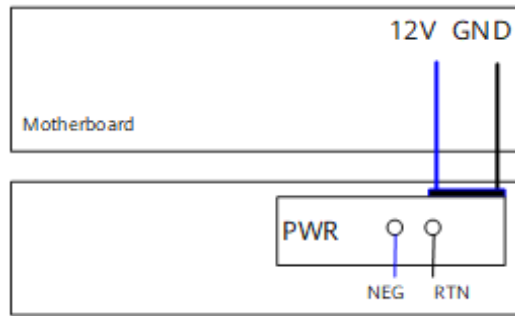
The S5720-52X-LI-DC has similar indicators to those of the S5720-28X-PWR-LI-AC, except that the S5720-52X-LI-DC does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-52X-LI-DC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

Figure 4-123 shows the power supply mode of a single DC power module. The built-in DC power module (PWR) receives DC power from an external power source and provides a 12 V output to the chassis.

Figure 4-123 Power supply by a single DC power module



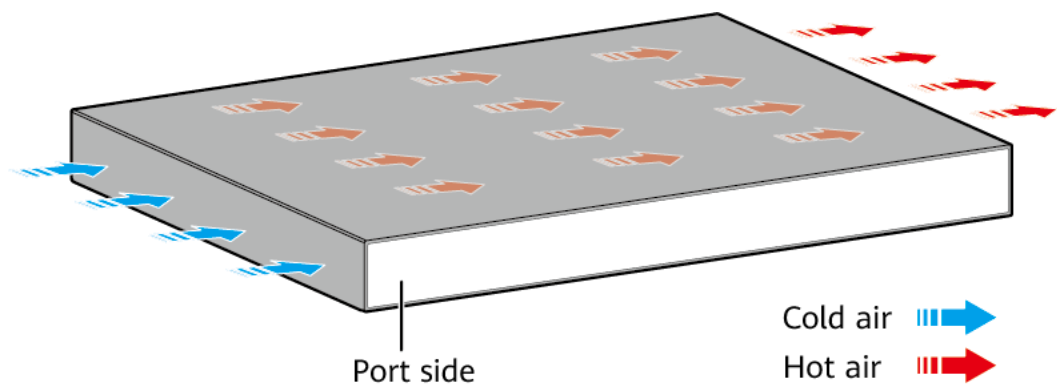
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

Heat Dissipation

The S5720-52X-LI-DC has a built-in fan for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-325 lists technical specifications of the S5720-52X-LI-DC.

Table 4-325 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	41 years
Mean time to repair (MTTR)	2 hours

Item	Description
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 224.8 mm (1.72 in. x 17.4 in. x 8.85 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 233.8 mm (1.72 in. x 17.4 in. x 9.21 in.)
Weight (with packaging)	4.4 kg (9.7 lb)
Stack ports	Forty-eight 10/100/1000BASE-T ports and four 10G SFP+ ports
RTC	Not supported
RPS	Supported
PoE	Not supported
Rated voltage range	-48 V DC to -60 V DC
Maximum voltage range	-36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	51.6 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">Tested according to ATIS standardEEE enabledNo PoE power consumption	33.1 W
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5 °C to +55 °C (23 °F to 131 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating

Item	Description
	<p>temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none">• The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 44.5 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010607

4.8.20 S5720-52X-PWR-LI-AC

Version Mapping

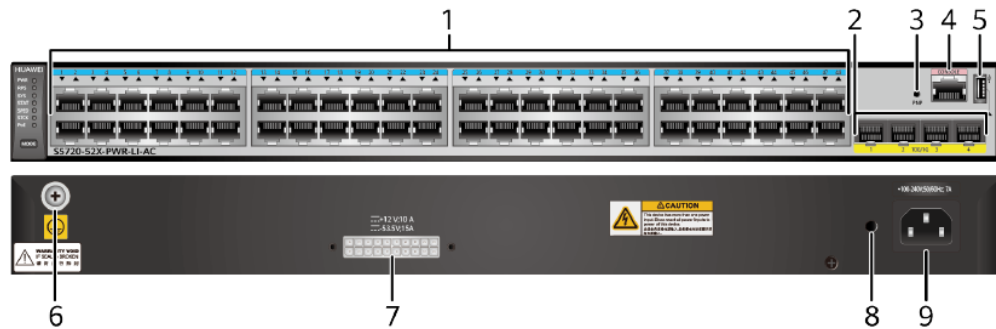
Table 4-326 lists the mapping between the S5720-52X-PWR-LI-AC chassis and software versions.

Table 4-326 Version mapping

Series	Model	Software Version
S5720-LI	S5720-52X-PWR-LI-AC	V200R010C00 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-124 S5720-52X-PWR-LI-AC appearance



1	<p>Forty-eight PoE+ 10/100/1000BASE-T ports</p>	<p>2 Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable • 10.19 GPON Optical Modules <p>NOTE If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>
3	<p>One PNP button</p> <p>NOTICE Applicable in V200R012C00 and later versions: To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	<p>4 One console port</p>
5	<p>One USB port</p>	<p>6 Ground screw</p>

			NOTE It is used with a 9.1 Ground Cable.
7	RPS socket NOTE It is used with an 9.12 RPS Cable, which is not hot swappable.	8	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.
9	AC socket NOTE It is used with an 9.8 AC Power Cable.	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-327 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-327 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-328 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-328 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-329.

Table 4-329 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

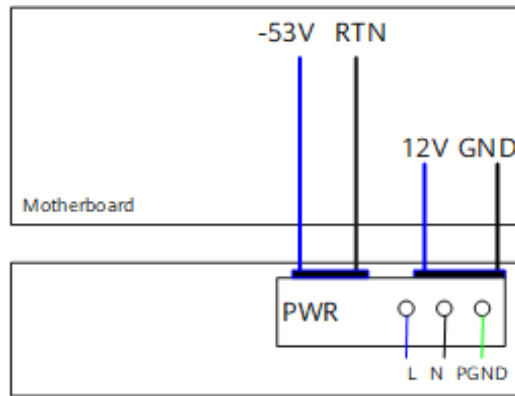
The S5720-52X-PWR-LI-AC has the same types of indicators as the S5720-28X-PWR-LI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-52X-PWR-LI-AC has a built-in power module and does not support pluggable power modules. The built-in power module can provide 370 W PoE power, which ensures full PoE power on 24 ports in compliance with 802.3af or on 12 ports in compliance with 802.3at. The switch can connect to an RPS1800 power supply. The RPS1800 only provides system power redundancy and does not increase the PoE capacity of the switch.

Figure 4-125 shows the power supply mode of a built-in AC PoE power module (PWR). The PWR module receives AC power from an external power source and provides two outputs: 12 V and -53 V. The 12 V output is provided for the chassis, and the -53 V output is provided for PDs.

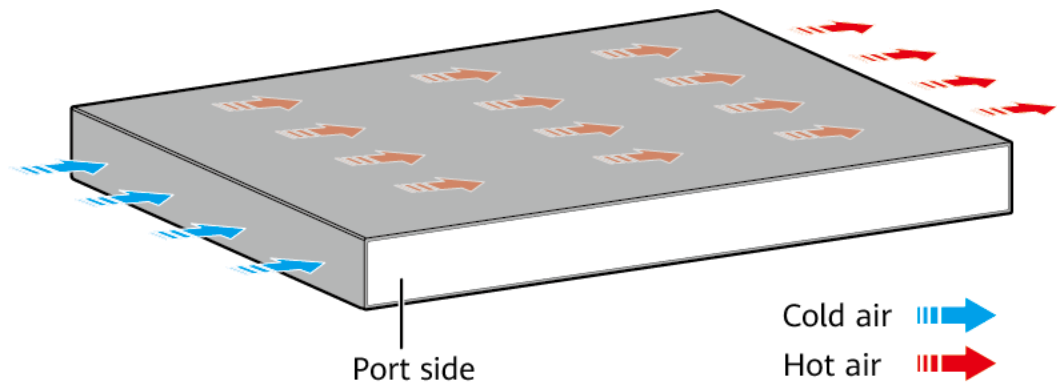
Figure 4-125 Power supply by a built-in AC PoE power module



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground RTN: -53 V reference ground

Heat Dissipation

The S5720-52X-PWR-LI-AC has two built-in fans for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-330 lists technical specifications of the S5720-52X-PWR-LI-AC.

Table 4-330 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	38 years

Item	Description
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 314.8 mm (1.72 in. x 17.4 in. x 12.39 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 323.8 mm (1.72 in. x 17.4 in. x 12.75 in.)
Weight (with packaging)	5.6 kg (12.35 lb)
Stack ports	Forty-eight 10/100/1000BASE-T ports and four 10G SFP+ ports
RTC	Not supported
RPS	Supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none">Not providing the PoE function: 63.5 W100% PoE loads: 464.3 W (system power consumption: 94.7 W, PoE: 369.6 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">Tested according to ATIS standardEEE enabledNo PoE power consumption	42.2 W
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Short-term operating	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906

Item	Description
temperature	ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">• The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for no more than 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 48.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010619

4.8.21 S5720-52X-PWR-LI-ACF

Version Mapping

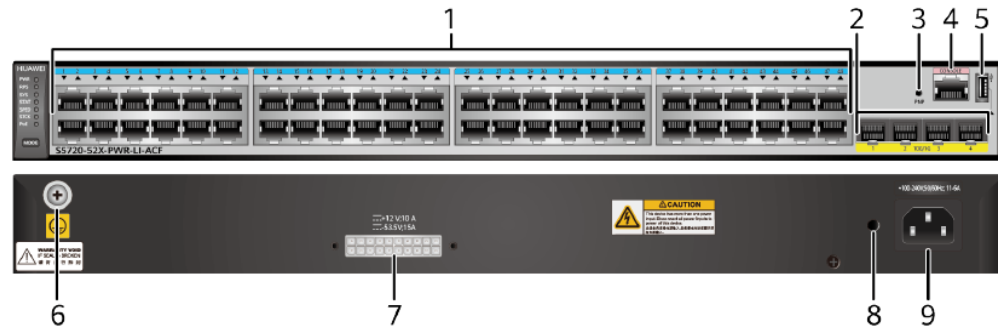
Table 4-331 lists the mapping between the S5720-52X-PWR-LI-ACF chassis and software versions.

Table 4-331 Version mapping

Series	Model	Software Version
S5720-LI	S5720-52X-PWR-LI-ACF	V200R011C10 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-126 S5720-52X-PWR-LI-ACF appearance



1	<p>Forty-eight PoE+ 10/100/1000BASE-T ports</p>	<p>2 Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable • 10.19 GPON Optical Modules <p>NOTE If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>
3	<p>One PNP button</p> <p>NOTICE Applicable in V200R012C00 and later versions: To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you</p>	<p>4 One console port</p>

	press the PNP button.		
5	One USB port	6	Ground screw NOTE It is used with a 9.1 Ground Cable.
7	RPS socket NOTE It is used with an 9.12 RPS Cable, which is not hot swappable.	8	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.
9	AC socket NOTE It is used with an 9.8 AC Power Cable.	-	-

Interface Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-332 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-332 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-333 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-333 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae

Attribute	Description
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-334.

Table 4-334 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

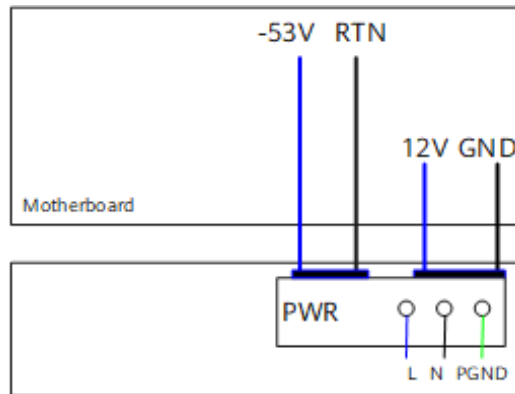
The S5720-52X-PWR-LI-ACF has the same types of indicators as the S5720-28X-PWR-LI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-52X-PWR-LI-ACF has a built-in power module and does not support pluggable power modules. The built-in power module can provide 740 W PoE power, which ensures full PoE power on 48 ports in compliance with 802.3af or on 24 ports in compliance with 802.3at. The switch can connect to an RPS1800 power supply. The RPS1800 only provides system power redundancy and does not increase the PoE capacity of the switch.

Figure 4-127 shows the power supply mode of a built-in AC PoE power module (PWR). The PWR module receives AC power from an external power source and provides two outputs: 12 V and -53 V. The 12 V output is provided for the chassis, and the -53 V output is provided for PDs.

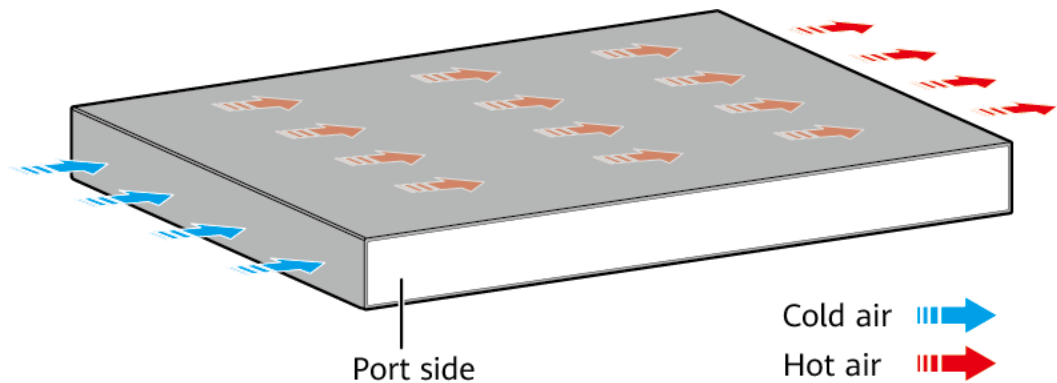
Figure 4-127 Power supply by a built-in AC PoE power module



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground RTN: -53 V reference ground

Heat Dissipation

The S5720-52X-PWR-LI-ACF have two built-in fans for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-335 lists technical specifications of the S5720-52X-PWR-LI-ACF.

Table 4-335 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	45 years

Item	Description
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 314.8 mm (1.72 in. x 17.4 in. x 12.39 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 323.8 mm (1.72 in. x 17.4 in. x 12.75 in.)
Weight (with packaging)	6.6 kg (14.55 lb)
Stack ports	Forty-eight 10/100/1000BASE-T ports and four 10G SFP+ ports
RTC	Not supported
RPS	Supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> Not providing the PoE function: 52.1 W 100% PoE loads: 977 W (system power consumption: 237.8 W, PoE: 739.2 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> Tested according to ATIS standard EEE enabled No PoE power consumption 	42.9 W
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Short-term operating	-5 °C to +55 °C (23 °F to 131 °F) at an altitude of 0-1800 m (0-5906

Item	Description
temperature	ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">• The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for no more than 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 53.9 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010621

4.8.22 S5720-52X-LI-48S-AC

Version Mapping

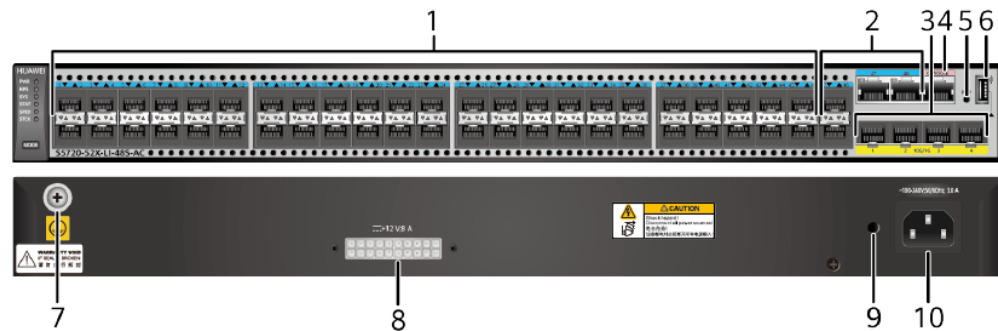
Table 4-336 lists the mapping between the S5720-52X-LI-48S-AC chassis and software versions.

Table 4-336 Version mapping

Series	Model	Software Version
S5720-LI	S5720-52X-LI-48S-AC	V200R013C00 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-128 S5720-52X-LI-48S-AC appearance



1	<p>Forty-six 100/1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.8 GE-CWDM eSFP Optical Modules (Used Only in the OADM scenario) • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules 	2	<p>Two combo ports (10/100/1000BASE-T + 100/1000BASE-X)</p> <p>Modules applicable to combo optical ports:</p> <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.8 GE-CWDM eSFP Optical Modules (Used Only in the OADM scenario)
3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable 	4	<p>One console port</p>

	<ul style="list-style-type: none">10.19 GPON Optical Modules NOTE If one port uses a GPON optical module, other ports cannot be used.		
5	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.	6	One USB port
7	Ground screw NOTE It is used with a 9.1 Ground Cable.	8	RPS socket NOTE It is used with an 9.12 RPS Cable, which is not hot swappable.
9	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.	10	AC socket NOTE It is used with an 9.8 AC Power Cable.

Port Description

100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. Table 4-337 describes the attributes of a 100/1000BASE-X port.

Table 4-337 Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

Combo port

A combo port consists of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. The electrical and optical ports of a combo port are multiplexed, and only one of them can work at a time. When one of the Ethernet ports is working, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-338 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-338 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-339.

Table 4-339 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

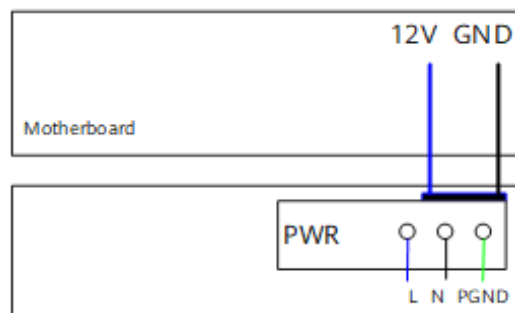
The S5720-52X-LI-48S-AC has the same types of indicators as the S5720-28X-LI-24S-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-52X-LI-48S-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

Figure 4-129 shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 4-129 Power supply mode of a built-in AC power module



L: live
wire

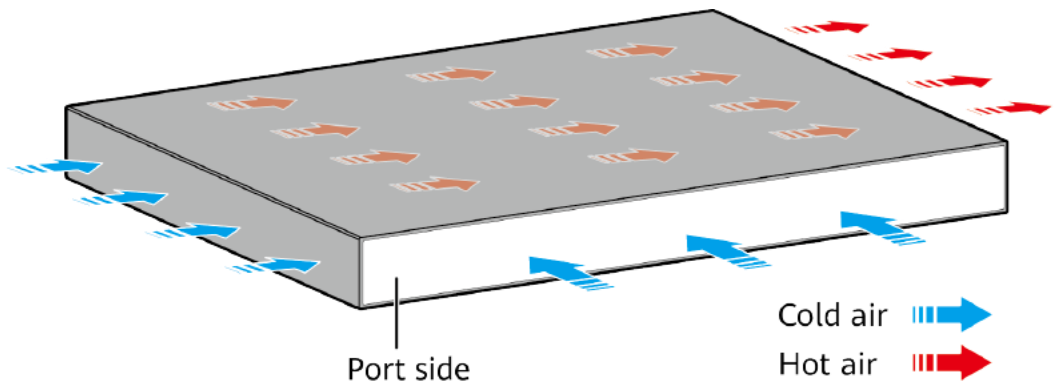
N: neutral
wire

PGND: protection
ground
wire

GND: 12 V reference
ground

Heat Dissipation

The S5720-52X-LI-48S-AC has three built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-340 lists technical specifications of the S5720-52X-LI-48S-AC.

Table 4-340 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	34.91 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 224.9 mm (1.72 in. x 17.4 in. x 8.85 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 233.9 mm (1.72 in. x 17.4 in. x 9.21 in.)
Weight (with packaging)	5.25 kg (11.57 lb)
Stack ports	GE optical ports and 10GE SFP+ optical ports except combo ports on the front panel
RTC	Not supported

Item	Description
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	83 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	68 W
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5 °C to +55 °C (23 °F to 131 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal	< 49 dB(A)

Item	Description
temperature (27 °C, sound power)	
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010813

4.9 S5720S-LI

4.9.1 S5720S-12TP-LI-AC

Version Mapping

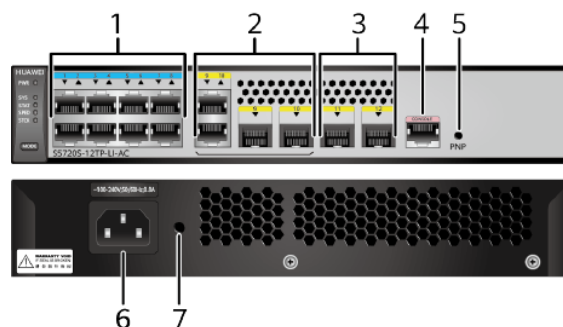
Table 4-341 lists the mapping between the S5720S-12TP-LI-AC chassis and software versions.

Table 4-341 Version mapping

Series	Model	Software Version
S5720S-LI	S5720S-12TP-LI-AC	V200R010C00 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-130 S5720S-12TP-LI-AC appearance



1	Eight 10/100/1000BASE-T ports	2	Two combo ports (10/100/1000BASE-T + 100/1000BASE-X) Modules applicable to combo optical ports: <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules (the maximum transmission distance cannot exceed 40 km)
3	Two 1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules (the maximum transmission distance cannot exceed 40 km) • 10.10 GE SFP Copper Modules • 10.11 SFP Stack Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable • 10.19 GPON Optical Modules NOTE If a port uses a GPON optical module, other 1000BASE-X optical ports cannot be used.	4	One console port
5	One PNP button NOTICE Applicable in V200R012C00 and later versions: To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.	6	AC socket NOTE It is used with an 9.8 AC Power Cable.
7	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-342 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-342 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. Table 4-343 describes the attributes of a 1000BASE-X Ethernet optical port.

Table 4-343 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-344.

Table 4-344 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Indicator Description

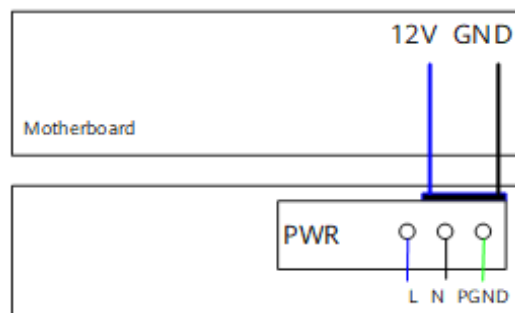
The S5720S-12TP-LI-AC has the same types of indicators as the S5720-12TP-LI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720S-12TP-LI-AC has a built-in power module and does not support pluggable power modules.

Figure 4-131 shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 4-131 Power supply mode of a built-in AC power module



L: live wire

N: neutral wire

PGND: protection ground wire

GND: 12 V reference ground

Heat Dissipation

The S5720S-12TP-LI-AC has no fans and uses natural heat dissipation.

Technical Specifications

Table 4-345 lists technical specifications of the S5720S-12TP-LI-AC.

Table 4-345 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	23.8 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 250.0 mm x 180.0 mm (1.72 in. x 9.8 in. x 7.1 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 250.0 mm x 186.7 mm (1.72 in. x 9.8 in. x 7.35 in.)
Weight (with packaging)	1.8 kg (3.97 lb)
Stack ports	Eight 10/100/1000BASE-T ports and two 1000BASE-X ports
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput)	12.85 W
Typical power consumption (30%)	10.39 W

Item	Description
of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The operating temperature of the switch is 0 °C to 40 °C (32 °F to 104 °F) when it uses GE SFP optical modules with 40 km transmission distance.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010568

4.9.2 S5720S-12TP-PWR-LI-AC

Version Mapping

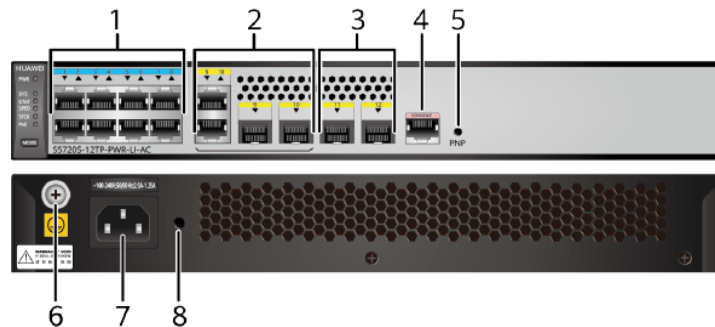
Table 4-346 lists the mapping between the S5720S-12TP-PWR-LI-AC chassis and software versions.

Table 4-346 Version mapping

Series	Model	Software Version
S5720S-LI	S5720S-12TP-PWR-LI-AC	V200R010C00 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-132 S5720S-12TP-PWR-LI-AC appearance



1	Eight PoE+ 10/100/1000BASE-T ports	2 Two combo ports (10/100/1000BASE-T + 100/1000BASE-X) Modules applicable to combo optical ports: <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules (the maximum transmission distance cannot exceed 40 km)
3	Two 1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules (the maximum transmission distance cannot exceed 40 km) • 10.10 GE SFP Copper Modules • 10.11 SFP Stack Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable • 10.19 GPON Optical Modules NOTE If a port uses a GPON optical module, other 1000BASE-X optical ports cannot be used.	4 One console port
5	One PNP button NOTICE Applicable in V200R012C00 and later versions: To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service	6 Ground screw NOTE It is used with a 9.1 Ground Cable.

	interruption. Exercise caution when you press the PNP button.		
7	AC socket NOTE It is used with an 9.8 AC Power Cable.	8	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-347 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-347 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. Table 4-348 describes the attributes of a 1000BASE-X Ethernet optical port.

Table 4-348 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-349.

Table 4-349 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Indicator Description

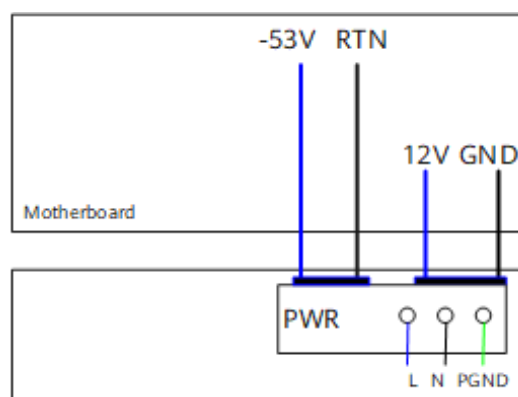
The S5720S-12TP-PWR-LI-AC has the same types of indicators as the S5720-12TP-PWR-LI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720S-12TP-PWR-LI-AC has a built-in power module and does not support pluggable power modules. The built-in power module can provide 124 W PoE power, which ensures full PoE power on 8 ports in compliance with 802.3af or on 4 ports in compliance with 802.3at. The switch cannot connect to an RPS power supply.

Figure 4-133 shows the power supply mode of a built-in AC PoE power module (PWR). The PWR module receives AC power from an external power source and provides two outputs: 12 V and -53 V. The 12 V output is provided for the chassis, and the -53 V output is provided for PDs.

Figure 4-133 Power supply by a built-in AC PoE power module



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground RTN: -53 V reference ground

Heat Dissipation

The S5720S-12TP-PWR-LI-AC has no fans and uses natural heat dissipation.

Technical Specifications

Table 4-350 lists technical specifications of the S5720S-12TP-PWR-LI-AC.

Table 4-350 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	23.8 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 320.0 mm x 220.0 mm (1.72 in. x 12.6 in. x 8.7 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 320.0 mm x 228.3 mm (1.72 in. x 12.6 in. x 8.99 in.)

Item	Description
Weight (with packaging)	3 kg (6.62 lb)
Stack ports	Eight 10/100/1000BASE-T ports and two 1000BASE-X ports
RTC	Not supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput)	<ul style="list-style-type: none">• Not providing the PoE function: 15.61 W• 100% PoE loads: 160.5 W (system power consumption: 37.3 W, PoE: 123.2 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	14.57 W
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The operating temperature of the switch is 0 °C to 40 °C (32 °F to 104 °F) when it uses GE SFP optical modules with 40 km transmission distance.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010571

4.9.3 S5720S-28TP-PWR-LI-ACL

Version Mapping

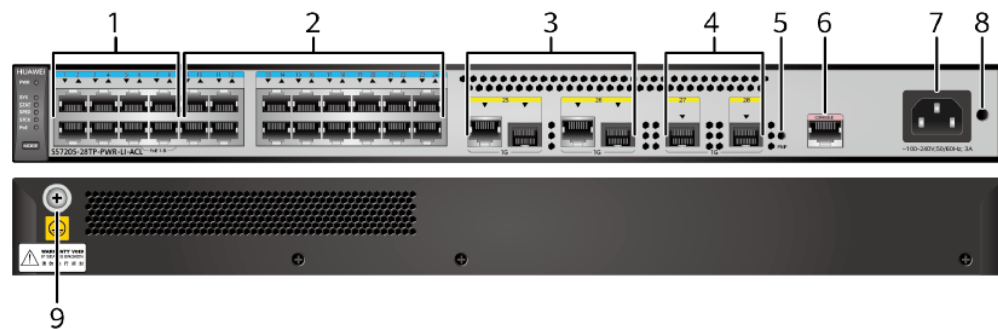
Table 4-351 lists the mapping between the S5720S-28TP-PWR-LI-ACL chassis and software versions.

Table 4-351 Version mapping

Series	Model	Software Version
S5720S-LI	S5720S-28TP-PWR-LI-ACL	V200R010C00 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-134 S5720S-28TP-PWR-LI-ACL appearance



1	Eight PoE+ 10/100/1000BASE-T ports	2	Sixteen 10/100/1000BASE-T ports
3	Two combo ports (10/100/1000BASE-T + 100/1000BASE-X) Modules applicable to combo optical ports: <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules (the maximum transmission distance cannot exceed 40 km) 	4	Two 1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules (the maximum transmission distance cannot exceed 40 km) • 10.10 GE SFP Copper Modules • 10.11 SFP Stack Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable • 10.19 GPON Optical Modules NOTE If a port uses a GPON optical module, other

			1000BASE-X optical ports cannot be used.
5	One PNP button NOTICE Applicable in V200R012C00 and later versions: To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.	6	One console port
7	AC socket NOTE It is used with an 9.8 AC Power Cable.	8	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.
9	Ground screw NOTE It is used with a 9.1 Ground Cable.	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-352 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-352 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

 **NOTE**

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. Table 4-353 describes the attributes of a 1000BASE-X Ethernet optical port.

Table 4-353 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-354.

Table 4-354 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Indicator Description

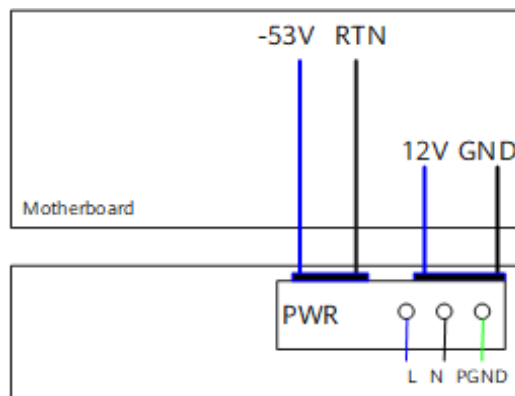
The S5720S-28TP-PWR-LI-ACL has the same types of indicators as the S5720-28TP-PWR-LI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720S-28TP-PWR-LI-ACL has a built-in power module and does not support pluggable power modules. The built-in power module can provide 124 W PoE power, which ensures full PoE power on 8 ports in compliance with 802.3af or on 4 ports in compliance with 802.3at. The switch cannot connect to an RPS power supply.

Figure 4-135 shows the power supply mode of a built-in AC PoE power module (PWR). The PWR module receives AC power from an external power source and provides two outputs: 12 V and -53 V. The 12 V output is provided for the chassis, and the -53 V output is provided for PDs.

Figure 4-135 Power supply by a built-in AC PoE power module



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground RTN: -53 V reference ground

Heat Dissipation

The S5720S-28TP-PWR-LI-ACL has no fans and uses natural heat dissipation.

Technical Specifications

Table 4-355 lists technical specifications of the S5720S-28TP-PWR-LI-ACL.

Table 4-355 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between	42 years

Item	Description
failures (MTBF)	
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 224.8 mm (1.72 in. x 17.4 in. x 8.85 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 233.8 mm (1.72 in. x 17.4 in. x 9.21 in.)
Weight (with packaging)	4.5 kg (9.92 lb)
Stack ports	Twenty-four 10/100/1000BASE-T ports and two 1000BASE-X ports
RTC	Not supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput)	<ul style="list-style-type: none">Not providing the PoE function: 24.4 W100% PoE loads: 165.6 W (system power consumption: 42.4 W, PoE: 123.2 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">Tested according to ATIS standardEEE enabledNo PoE power consumption	19.4 W
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The operating temperature of the switch is 0 °C to 40 °C (32 °F to 104 °F) when

Item	Description
	it uses GE SFP optical modules with 40 km transmission distance.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010635

4.9.4 S5720S-28P-LI-AC

Version Mapping

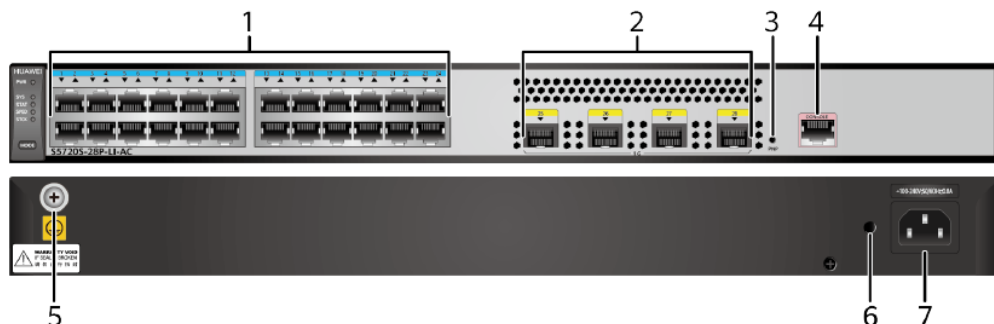
Table 4-356 lists the mapping between the S5720S-28P-LI-AC chassis and software versions.

Table 4-356 Version mapping

Series	Model	Software Version
S5720S-LI	S5720S-28P-LI-AC	V200R010C00 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-136 S5720S-28P-LI-AC appearance



1	Twenty-four 10/100/1000BASE-T ports	2	<p>Four 1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.11 SFP Stack Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable • 10.19 GPON Optical Modules <p>NOTE If a port uses a GPON optical module, other 1000BASE-X optical ports cannot be used.</p>
3	<p>One PNP button</p> <p>NOTICE Applicable in V200R012C00 and later versions: To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	4	One console port
5	<p>Ground screw</p> <p>NOTE It is used with a 9.1 Ground Cable.</p>	6	<p>Jack for AC power cable locking strap</p> <p>NOTE The AC power cable locking strap is not delivered with the switch.</p>
7	<p>AC socket</p> <p>NOTE It is used with an 9.8 AC Power Cable.</p>	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-357 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-357 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. Table 4-358 describes the attributes of a 1000BASE-X Ethernet optical port.

Table 4-358 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-359.

Table 4-359 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Indicator Description

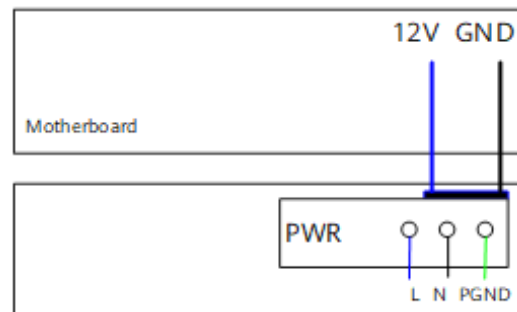
The S5720S-28P-LI-AC has similar indicators to those of the S5720-28X-PWR-LI-AC except that the S5720S-28P-LI-AC does not have an RPS, USB, or PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720S-28P-LI-AC has a built-in power module and does not support pluggable power modules.

Figure 4-137 shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 4-137 Power supply mode of a built-in AC power module



L: live wire

N: neutral wire

PGND: protection ground

GND: 12 V reference ground

Heat Dissipation

The S5720S-28P-LI-AC has no fans and uses natural heat dissipation.

Technical Specifications

Table 4-360 lists technical specifications of the S5720S-28P-LI-AC.

Table 4-360 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	45 years
Mean time to repair (MTTR)	2 hours

Item	Description
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 224.8 mm (1.72 in. x 17.4 in. x 8.85 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 233.8 mm (1.72 in. x 17.4 in. x 9.21 in.)
Weight (with packaging)	3.9 kg (8.6 lb)
Stack ports	Twenty-four 10/100/1000BASE-T ports and four 1000BASE-X ports
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput)	20.2 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">Tested according to ATIS standardEEE enabledNo PoE power consumption	16.1 W
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The operating temperature of the switch is 0 °C to 40 °C (32 °F to 104 °F) when it uses GE SFP optical modules with 40 km or longer transmission distances.
Short-term operating	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.)

Item	Description
temperature	<p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none">• The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010578

4.9.5 S5720SV2-28P-LI-AC

Version Mapping

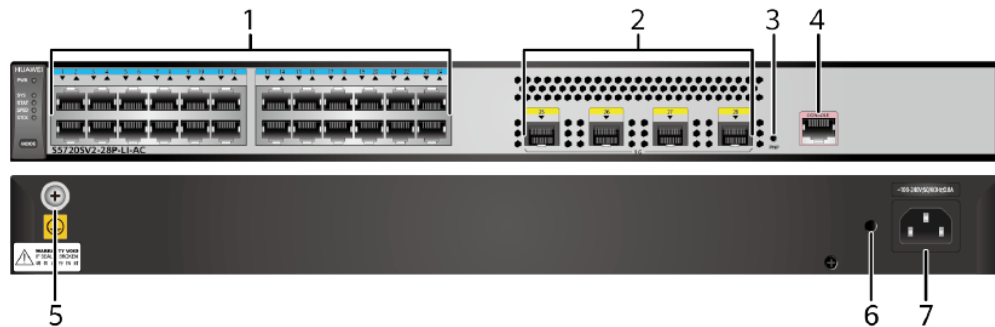
Table 4-361 lists the mapping between the S5720SV2-28P-LI-AC chassis and software versions.

Table 4-361 Version mapping

Series	Model	Software Version
S5720S-LI	S5720SV2-28P-LI-AC	V200R012C20 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-138 S5720SV2-28P-LI-AC appearance



1	Twenty-four 10/100/1000BASE-T ports	2 Four 1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.11 SFP Stack Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable • 10.19 GPON Optical Modules NOTE If a port uses a GPON optical module, other 1000BASE-X optical ports cannot be used.
3	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.	4 One console port
5	Ground screw NOTE It is used with a 9.1 Ground Cable.	6 Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.
7	AC socket NOTE	- -

	It is used with an 9.8 AC Power Cable.		
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Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-362 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-362 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. Table 4-363 describes the attributes of a 1000BASE-X Ethernet optical port.

Table 4-363 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-364.

Table 4-364 Attributes of a console port

Attribute	Description
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Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Indicator Description

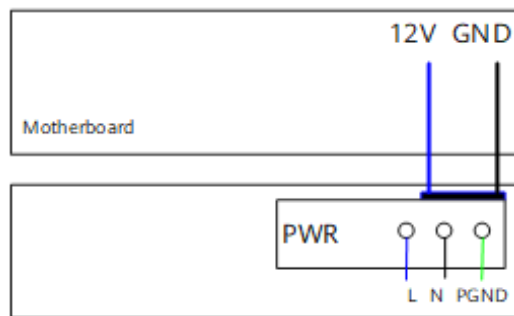
The S5720SV2-28P-LI-AC has similar indicators to those of the S5720-28X-PWR-LI-AC except that the S5720SV2-28P-LI-AC does not have an RPS, USB, or PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720SV2-28P-LI-AC has a built-in power module and does not support pluggable power modules.

Figure 4-139 shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 4-139 Power supply mode of a built-in AC power module



L: live wire

N: neutral wire

PGND: protection ground wire

GND: 12 V reference ground

Heat Dissipation

The S5720SV2-28P-LI-AC has no fans and uses natural heat dissipation.

Technical Specifications

Table 4-365 lists technical specifications of the S5720SV2-28P-LI-AC.

Table 4-365 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	45 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">• Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 224.8 mm (1.72 in. x 17.4 in. x 8.85 in.)• Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 233.8 mm (1.72 in. x 17.4 in. x 9.21 in.)
Weight (with packaging)	3.9 kg (8.6 lb)
Stack ports	Twenty-four 10/100/1000BASE-T ports and four 1000BASE-X ports
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput)	20.2 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power	16.1 W

Item	Description
consumption	
Operating temperature	<p>0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>The operating temperature of the switch is 0 °C to 40 °C (32 °F to 104 °F) when it uses GE SFP optical modules with 40 km or longer transmission distances.</p>
Short-term operating temperature	<p>-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010852

4.9.6 S5720S-28P-PWR-LI-AC

Version Mapping

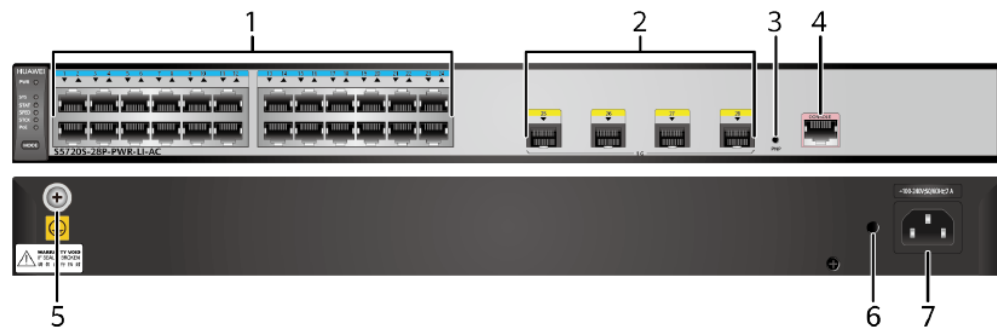
Table 4-366 lists the mapping between the S5720S-28P-PWR-LI-AC chassis and software versions.

Table 4-366 Version mapping

Series	Model	Software Version
S5720S-LI	S5720S-28P-PWR-LI-AC	V200R010C00 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-140 S5720S-28P-PWR-LI-AC appearance



1	Twenty-four PoE+ 10/100/1000BASE-T ports	2	Four 1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.11 SFP Stack Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable • 10.19 GPON Optical Modules NOTE If a port uses a GPON optical module, other 1000BASE-X optical ports cannot be used.
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3	<p>One PNP button</p> <p>NOTICE</p> <p>Applicable in V200R012C00 and later versions:</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	4	One console port
5	<p>Ground screw</p> <p>NOTE</p> <p>It is used with a 9.1 Ground Cable.</p>	6	<p>Jack for AC power cable locking strap</p> <p>NOTE</p> <p>The AC power cable locking strap is not delivered with the switch.</p>
7	<p>AC socket</p> <p>NOTE</p> <p>It is used with an 9.8 AC Power Cable.</p>	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-367 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-367 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. Table 4-368 describes the attributes of a 1000BASE-X Ethernet optical port.

Table 4-368 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-369.

Table 4-369 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Indicator Description

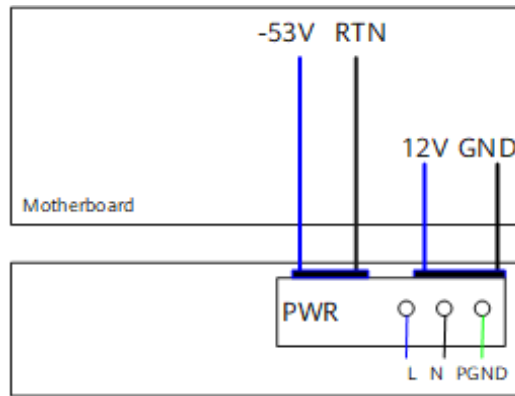
The S5720S-28P-PWR-LI-AC has similar indicators to those of the S5720-28X-PWR-LI-AC, except that the S5720S-28P-PWR-LI-AC does not have an RPS or USB indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720S-28P-PWR-LI-AC has a built-in power module and does not support pluggable power modules. The built-in power module can provide 370 W PoE power, which ensures full PoE power on 24 ports in compliance with 802.3af or on 12 ports in compliance with 802.3at. The switch cannot connect to an RPS power supply.

Figure 4-141 shows the power supply mode of a built-in AC PoE power module (PWR). The PWR module receives AC power from an external power source and provides two outputs: 12 V and -53 V. The 12 V output is provided for the chassis, and the -53 V output is provided for PDs.

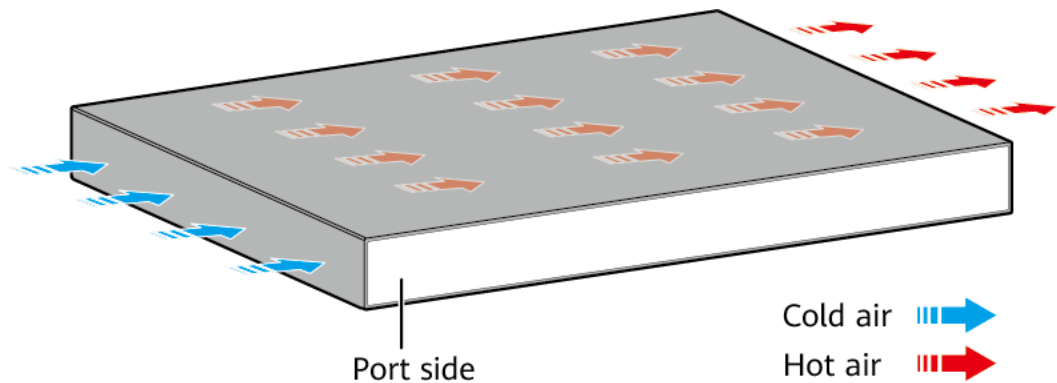
Figure 4-141 Power supply by a built-in AC PoE power module



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground RTN: -53 V reference ground

Heat Dissipation

The S5720S-28P-PWR-LI-AC has two built-in fans for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-370 lists technical specifications of the S5720S-28P-PWR-LI-AC.

Table 4-370 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	41 years

Item	Description
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 314.8 mm (1.72 in. x 17.4 in. x 12.39 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 323.8 mm (1.72 in. x 17.4 in. x 12.75 in.)
Weight (with packaging)	5.2 kg (11.45 lb)
Stack ports	Twenty-four 10/100/1000BASE-T ports and four 1000BASE-X ports
RTC	Not supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> Not providing the PoE function: 40.4 W 100% PoE loads: 446.7 W (system power consumption: 77.1 W, PoE: 369.6 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> Tested according to ATIS standard EEE enabled No PoE power consumption 	26 W
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Short-term	-5 °C to +55 °C (23 °F to 131 °F) at an altitude of 0-1800 m (0-5906

Item	Description
operating temperature	ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 49.1 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010589

4.9.7 S5720S-52P-LI-AC

Version Mapping

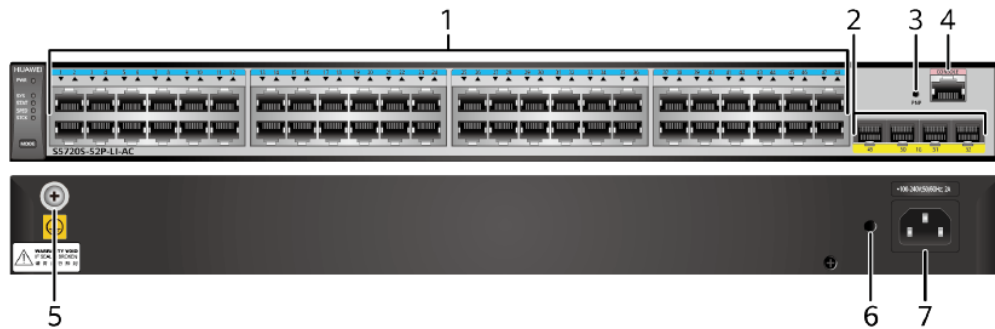
Table 4-371 lists the mapping between the S5720S-52P-LI-AC chassis and software versions.

Table 4-371 Version mapping

Series	Model	Software Version
S5720S-LI	S5720S-52P-LI-AC	V200R010C00 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-142 S5720S-52P-LI-AC appearance



1	Forty-eight 10/100/1000BASE-T ports	2 Four 1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.11 SFP Stack Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable • 10.19 GPON Optical Modules NOTE If a port uses a GPON optical module, other 1000BASE-X optical ports cannot be used.
3	One PNP button NOTICE Applicable in V200R012C00 and later versions: To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.	4 One console port
5	Ground screw NOTE It is used with a 9.1 Ground Cable.	6 Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.

7	AC socket NOTE It is used with an 9.8 AC Power Cable.	-	-
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Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-372 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-372 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. Table 4-373 describes the attributes of a 1000BASE-X Ethernet optical port.

Table 4-373 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-374.

Table 4-374 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Indicator Description

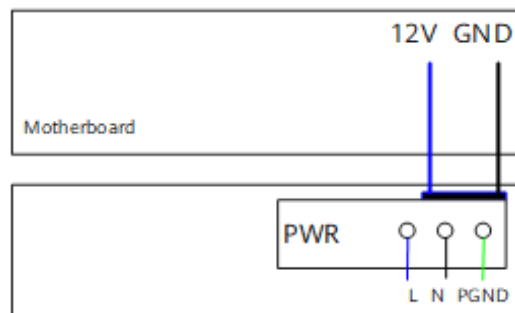
The S5720S-52P-LI-AC has similar indicators to those of the S5720-28X-PWR-LI-AC except that the S5720S-52P-LI-AC does not have an RPS, USB, or PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720S-52P-LI-AC has a built-in power module and does not support pluggable power modules.

Figure 4-143 shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 4-143 Power supply mode of a built-in AC power module



L: live wire

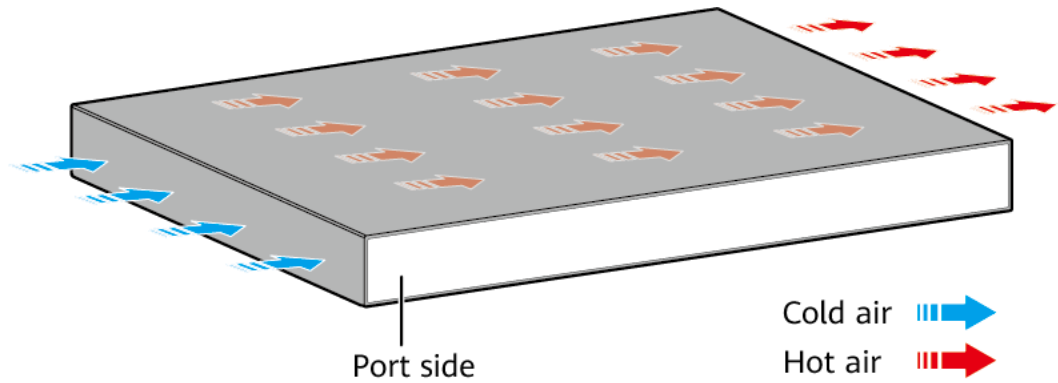
N: neutral wire

PGND: protection ground wire

GND: 12 V reference ground

Heat Dissipation

The S5720S-52P-LI-AC has a built-in fan for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-375 lists technical specifications of the S5720S-52P-LI-AC.

Table 4-375 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	41 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 224.8 mm (1.72 in. x 17.4 in. x 8.85 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 233.8 mm (1.72 in. x 17.4 in. x 9.21 in.)
Weight (with packaging)	4.4 kg (9.7 lb)
Stack ports	Forty-eight 10/100/1000BASE-T ports and four 1000BASE-X ports
RTC	Not supported
RPS	Not supported

Item	Description
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	47.3 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	29.9 W
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5 °C to +55 °C (23 °F to 131 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 44.5 dB(A)

Item	Description
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010601

4.9.8 S5720SV2-52P-LI-AC

Version Mapping

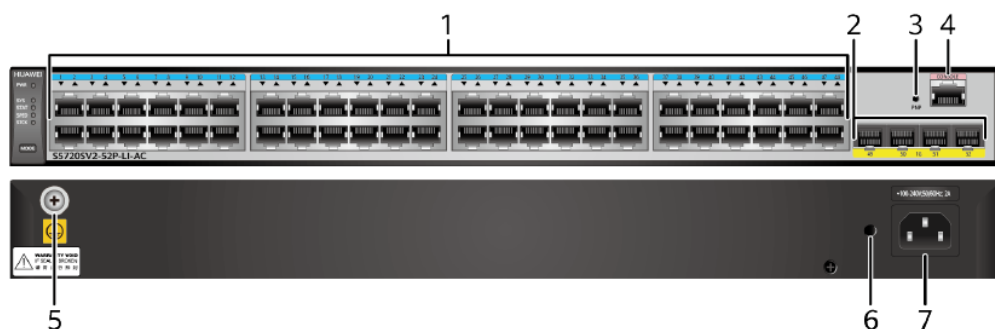
Table 4-376 lists the mapping between the S5720SV2-52P-LI-AC chassis and software versions.

Table 4-376 Version mapping

Series	Model	Software Version
S5720S-LI	S5720SV2-52P-LI-AC	V200R012C20 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-144 S5720SV2-52P-LI-AC appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical
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			<p>Modules</p> <ul style="list-style-type: none"> • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.11 SFP Stack Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable • 10.19 GPON Optical Modules <p>NOTE If a port uses a GPON optical module, other 1000BASE-X optical ports cannot be used.</p>
3	<p>One PNP button</p> <p>NOTICE</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	4	<p>One console port</p>
5	<p>Ground screw</p> <p>NOTE</p> <p>It is used with a 9.1 Ground Cable.</p>	6	<p>Jack for AC power cable locking strap</p> <p>NOTE</p> <p>The AC power cable locking strap is not delivered with the switch.</p>
7	<p>AC socket</p> <p>NOTE</p> <p>It is used with an 9.8 AC Power Cable.</p>	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-377 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-377 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission	100 m

Attribute	Description
distance	

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. Table 4-378 describes the attributes of a 1000BASE-X Ethernet optical port.

Table 4-378 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-379.

Table 4-379 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Indicator Description

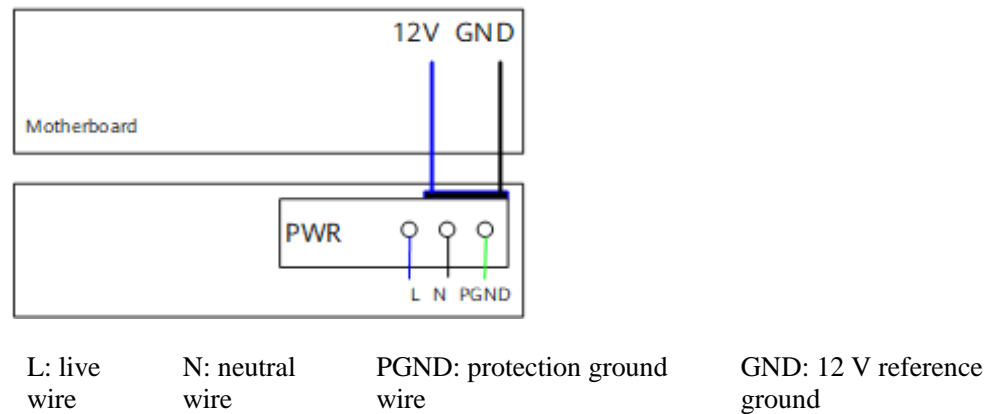
The S5720SV2-52P-LI-AC has similar indicators to those of the S5720-28X-PWR-LI-AC except that the S5720SV2-52P-LI-AC does not have an RPS, USB, or PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720SV2-52P-LI-AC has a built-in power module and does not support pluggable power modules.

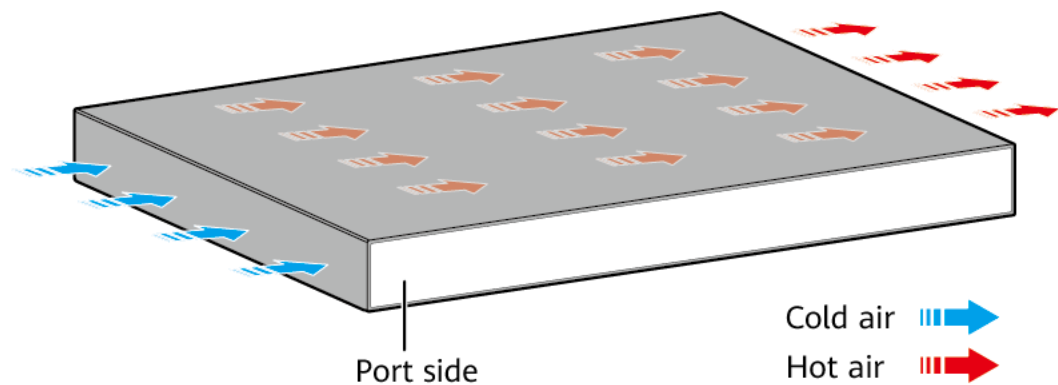
Figure 4-145 shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 4-145 Power supply mode of a built-in AC power module



Heat Dissipation

The S5720SV2-52P-LI-AC has a built-in fan for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-380 lists technical specifications of the S5720SV2-52P-LI-AC.

Table 4-380 Technical specifications

Item	Description
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Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	41 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">• Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 224.8 mm (1.72 in. x 17.4 in. x 8.85 in.)• Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 233.8 mm (1.72 in. x 17.4 in. x 9.21 in.)
Weight (with packaging)	4.4 kg (9.7 lb)
Stack ports	Forty-eight 10/100/1000BASE-T ports and four 1000BASE-X ports
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	47.3 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	29.9 W

Item	Description
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5 °C to +55 °C (23 °F to 131 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">• The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 44.5 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010853

4.9.9 S5720S-52P-PWR-LI-AC

Version Mapping

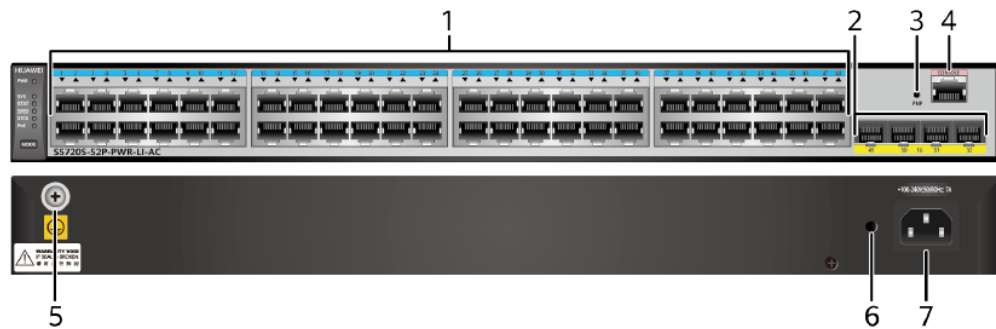
Table 4-381 lists the mapping between the S5720S-52P-PWR-LI-AC chassis and software versions.

Table 4-381 Version mapping

Series	Model	Software Version
S5720S-LI	S5720S-52P-PWR-LI-AC	V200R010C00 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-146 S5720S-52P-PWR-LI-AC appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	Four 1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.11 SFP Stack Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable • 10.19 GPON Optical Modules NOTE If a port uses a GPON optical module, other 1000BASE-X optical ports cannot be used.
3	One PNP button NOTICE Applicable in V200R012C00 and later versions: To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.	4	One console port

	To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.		
5	Ground screw NOTE It is used with a 9.1 Ground Cable.	6	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.
7	AC socket NOTE It is used with an 9.8 AC Power Cable.	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-382 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-382 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. Table 4-383 describes the attributes of a 1000BASE-X Ethernet optical port.

Table 4-383 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-384.

Table 4-384 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Indicator Description

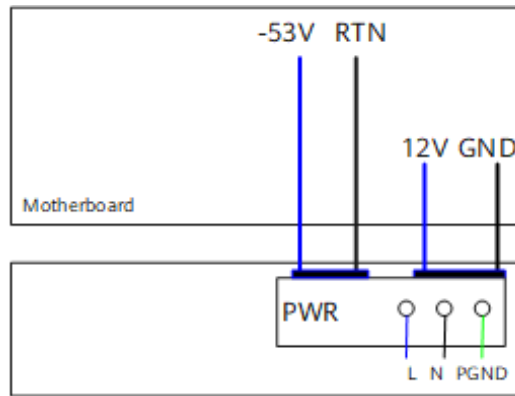
The S5720S-52P-PWR-LI-AC has similar indicators to those of the S5720-28X-PWR-LI-AC, except that the S5720S-52P-PWR-LI-AC does not have an RPS or USB indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720S-52P-PWR-LI-AC has a built-in power module and does not support pluggable power modules. The built-in power module can provide 370 W PoE power, which ensures full PoE power on 24 ports in compliance with 802.3af or on 12 ports in compliance with 802.3at. The switch cannot connect to an RPS power supply.

Figure 4-147 shows the power supply mode of a built-in AC PoE power module (PWR). The PWR module receives AC power from an external power source and provides two outputs: 12 V and -53 V. The 12 V output is provided for the chassis, and the -53 V output is provided for PDs.

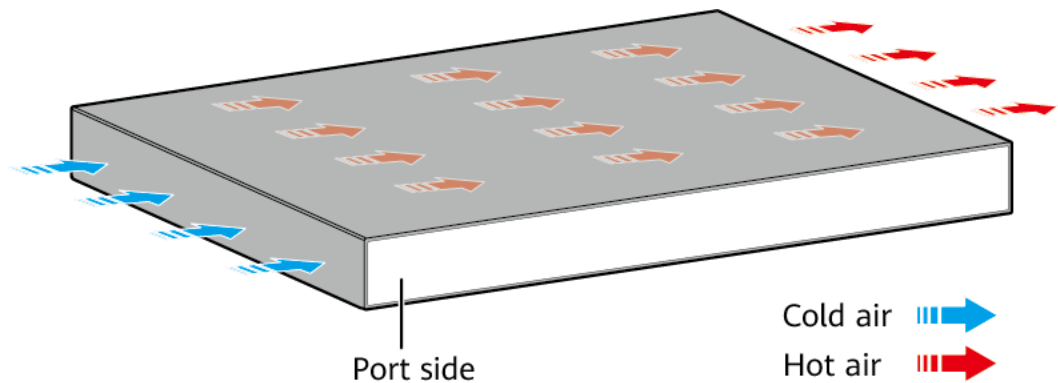
Figure 4-147 Power supply by a built-in AC PoE power module



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground RTN: -53 V reference ground

Heat Dissipation

The S5720S-52P-PWR-LI-AC has two built-in fans for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-385 lists technical specifications of the S5720S-52P-PWR-LI-AC.

Table 4-385 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	38 years

Item	Description
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 314.8 mm (1.72 in. x 17.4 in. x 12.39 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 323.8 mm (1.72 in. x 17.4 in. x 12.75 in.)
Weight (with packaging)	5.6 kg (12.35 lb)
Stack ports	Forty-eight 10/100/1000BASE-T ports and four 1000BASE-X ports
RTC	Not supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none">Not providing the PoE function: 61.7 W100% PoE loads: 461.8 W (system power consumption: 92.2 W, PoE: 369.6 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">Tested according to ATIS standardEEE enabledNo PoE power consumption	42 W
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Short-term operating	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906

Item	Description
temperature	ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">• The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 48.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010613

4.9.10 S5720S-28X-LI-AC

Version Mapping

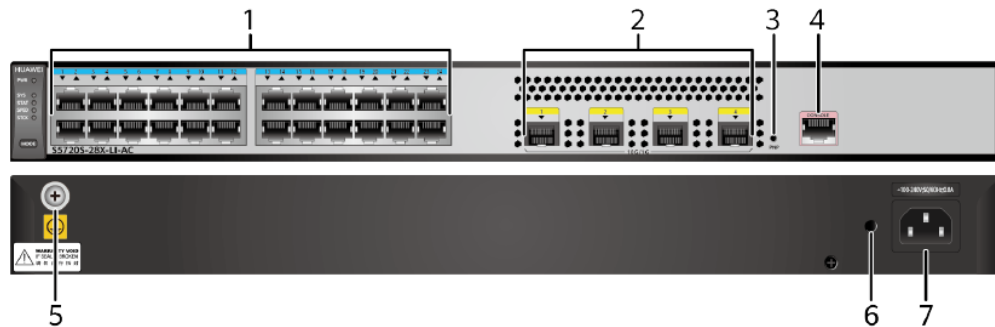
Table 4-386 lists the mapping between the S5720S-28X-LI-AC chassis and software versions.

Table 4-386 Version mapping

Series	Model	Software Version
S5720S-LI	S5720S-28X-LI-AC	V200R010C00 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-148 S5720S-28X-LI-AC appearance



1	<p>Twenty-four 10/100/1000BASE-T ports</p>	<p>2 Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable • 10.19 GPON Optical Modules <p>NOTE</p> <p>A switch can use a maximum of two 10GE optical modules with 40 km or longer transmission distances.</p> <p>If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>
3	<p>One PNP button</p> <p>NOTICE</p> <p>Applicable in V200R012C00 and later versions:</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you</p>	<p>4 One console port</p>

	press the PNP button.		
5	Ground screw NOTE It is used with a 9.1 Ground Cable.	6	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.
7	AC socket NOTE It is used with an 9.8 AC Power Cable.	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-387 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-387 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-388 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-388 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-389.

Table 4-389 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Indicator Description

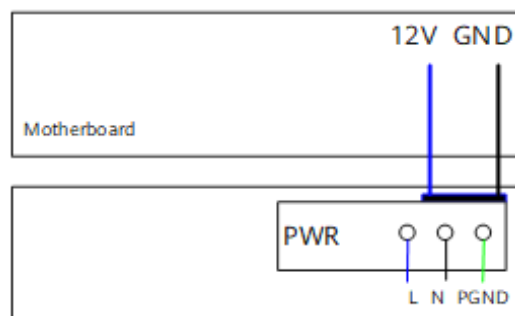
The S5720S-28X-LI-AC has similar indicators to those of the S5720-28X-PWR-LI-AC except that the S5720S-28X-LI-AC does not have an RPS, USB, or PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720S-28X-LI-AC has a built-in power module and does not support pluggable power modules.

Figure 4-149 shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 4-149 Power supply mode of a built-in AC power module



L: live wire

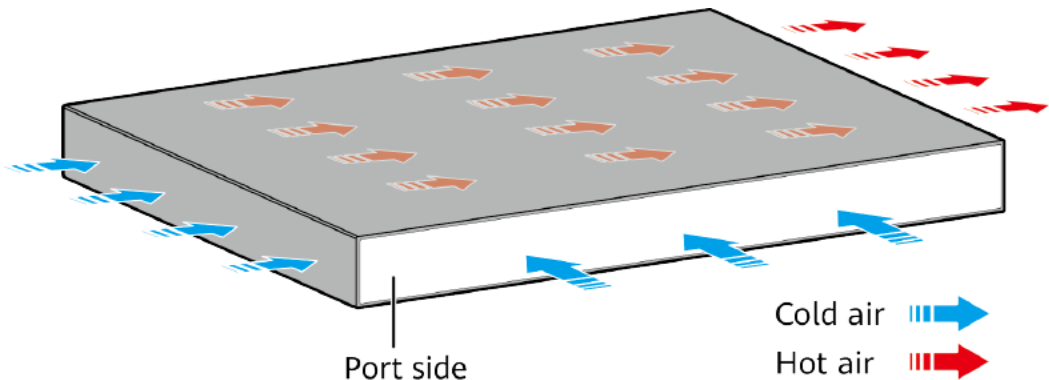
N: neutral wire

PGND: protection ground wire

GND: 12 V reference ground

Heat Dissipation

The S5720S-28X-LI-AC has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-390 lists technical specifications of the S5720S-28X-LI-AC.

Table 4-390 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	45 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 224.8 mm (1.72 in. x 17.4 in. x 8.85 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 233.8 mm (1.72 in. x 17.4 in. x 9.21 in.)
Weight (with packaging)	3.9 kg (8.6 lb)

Item	Description
Stack ports	Twenty-four 10/100/1000BASE-T ports and four 10G SFP+ ports
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	29.5 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	21.4 W
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5 °C to +55 °C (23 °F to 131 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">• The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.

Item	Description
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 47 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010585

4.9.11 S5720S-28X-LI-24S-AC

Version Mapping

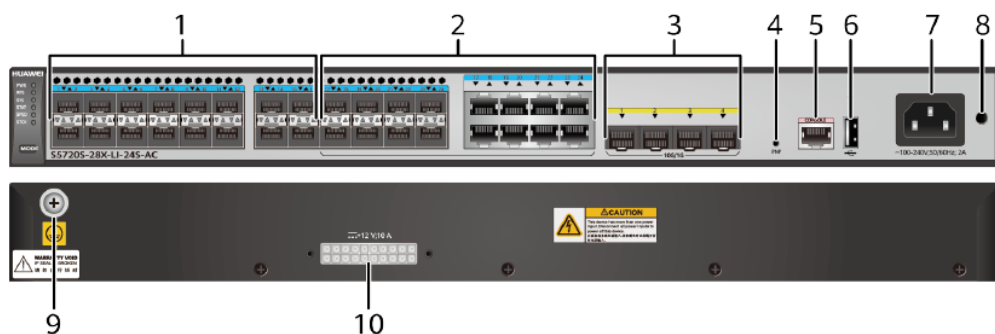
Table 4-391 lists the mapping between the S5720S-28X-LI-24S-AC chassis and software versions.

Table 4-391 Version mapping

Series	Model	Software Version
S5720S-LI	S5720S-28X-LI-24S-AC	V200R010C00 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-150 S5720S-28X-LI-24S-AC appearance



1	<p>Sixteen 100/1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.8 GE-CWDM eSFP Optical Modules (Used Only in the OADM scenario) • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules 	2	<p>Eight combo ports (10/100/1000BASE-T + 100/1000BASE-X)</p> <p>Modules applicable to combo optical ports:</p> <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.8 GE-CWDM eSFP Optical Modules (Used Only in the OADM scenario) • 10.9 GE-DWDM eSFP Optical Modules
3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable • 10.19 GPON Optical Modules <p>NOTE If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>	4	<p>One PNP button</p> <p>NOTICE Applicable in V200R012C00 and later versions: To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
5	One console port	6	One USB port
7	<p>AC socket</p> <p>NOTE It is used with an 9.8 AC Power Cable.</p>	8	<p>Jack for AC power cable locking strap</p> <p>NOTE The AC power cable locking strap is not delivered with the switch.</p>
9	<p>Ground screw</p> <p>NOTE It is used with a 9.1 Ground Cable.</p>	10	<p>RPS socket</p> <p>NOTE It is used with an 9.12 RPS Cable, which is not hot swappable.</p>

Port Description

100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. Table 4-392 describes the attributes of a 100/1000BASE-X port.

Table 4-392 Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

Combo port

A combo port consists of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. The electrical and optical ports of a combo port are multiplexed, and only one of them can work at a time. When one of the Ethernet ports is working, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-393 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-393 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used

Attribute	Description
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-394.

Table 4-394 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

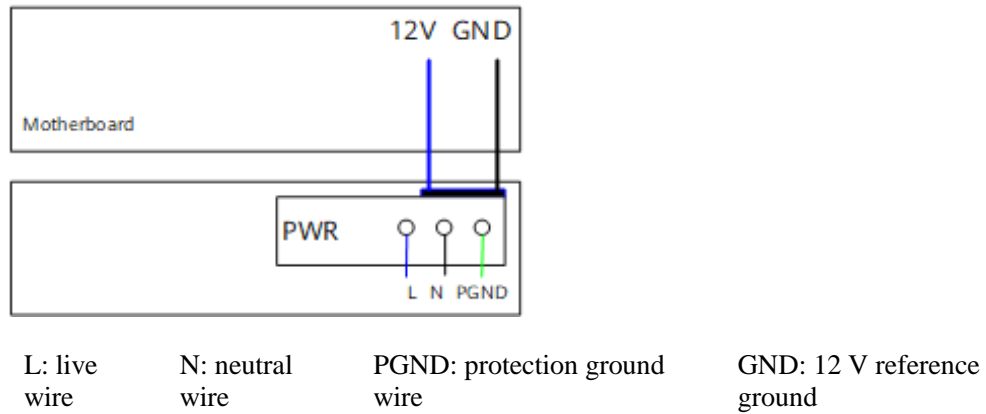
The S5720S-28X-LI-24S-AC has the same types of indicators as the S5720-28X-LI-24S-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720S-28X-LI-24S-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

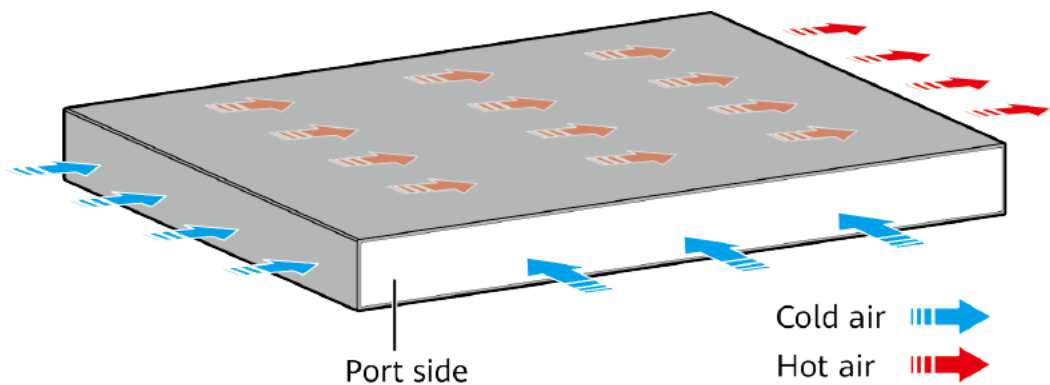
Figure 4-151 shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 4-151 Power supply mode of a built-in AC power module



Heat Dissipation

The S5720S-28X-LI-24S-AC has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-395 lists technical specifications of the S5720S-28X-LI-24S-AC.

Table 4-395 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	41 years
Mean time to repair	2 hours

Item	Description
(MTTR)	
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">• Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 224.8 mm (1.72 in. x 17.4 in. x 8.85 in.)• Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 233.8 mm (1.72 in. x 17.4 in. x 9.21 in.)
Weight (with packaging)	4.1 kg (9.04 lb)
Stack ports	GE SFP optical ports and 10GE SFP+ optical ports except combo ports on the front panel
RTC	Not supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	41.7 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	28.9 W
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Short-term operating	-5 °C to +55 °C (23 °F to 131 °F) at an altitude of 0-1800 m (0-5906 ft.)

Item	Description
temperature	<p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 43 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010630

4.9.12 S5720S-28X-PWR-LI-AC

Version Mapping

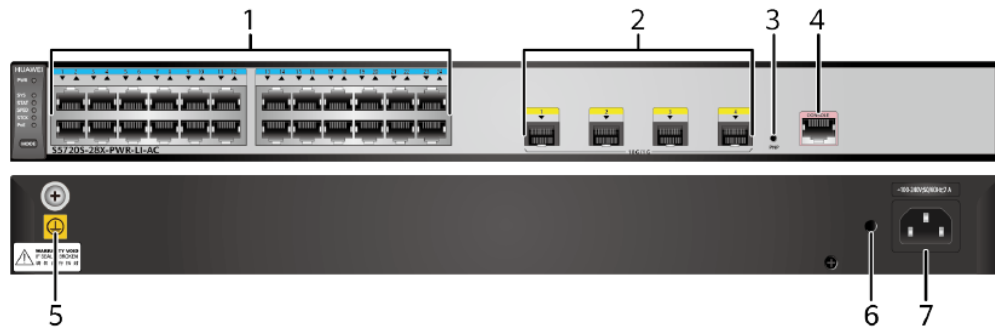
Table 4-396 lists the mapping between the S5720S-28X-PWR-LI-AC chassis and software versions.

Table 4-396 Version mapping

Series	Model	Software Version
S5720S-LI	S5720S-28X-PWR-LI-AC	V200R010C00 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-152 S5720S-28X-PWR-LI-AC appearance



1	<p>Twenty-four PoE+ 10/100/1000BASE-T ports</p>	<p>2 Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable • 10.19 GPON Optical Modules <p>NOTE If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>
3	<p>One PNP button</p> <p>NOTICE Applicable in V200R012C00 and later versions: To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	<p>4 One console port</p>
5	<p>Ground screw</p>	<p>6 Jack for AC power cable locking strap</p>

	NOTE It is used with a 9.1 Ground Cable.		NOTE The AC power cable locking strap is not delivered with the switch.
7	AC socket NOTE It is used with an 9.8 AC Power Cable.	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-397 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-397 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-398 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-398 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-399.

Table 4-399 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Indicator Description

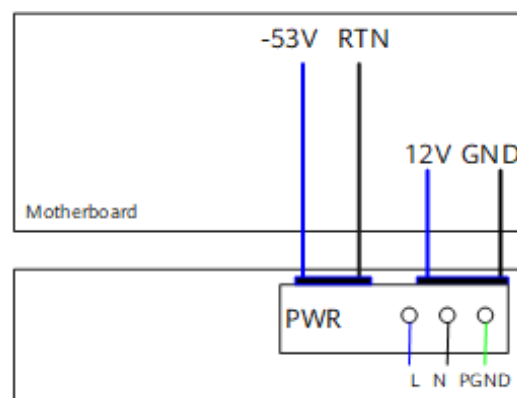
The S5720S-28X-PWR-LI-AC has similar indicators to those of the S5720-28X-PWR-LI-AC, except that the S5720S-28X-PWR-LI-AC does not have an RPS or USB indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720S-28X-PWR-LI-AC has a built-in power module and does not support pluggable power modules. The built-in power module can provide 370 W PoE power, which ensures full PoE power on 24 ports in compliance with 802.3af or on 12 ports in compliance with 802.3at. The switch cannot connect to an RPS power supply.

Figure 4-153 shows the power supply mode of a built-in AC PoE power module (PWR). The PWR module receives AC power from an external power source and provides two outputs: 12 V and -53 V. The 12 V output is provided for the chassis, and the -53 V output is provided for PDs.

Figure 4-153 Power supply by a built-in AC PoE power module



L: live wire

N: neutral wire

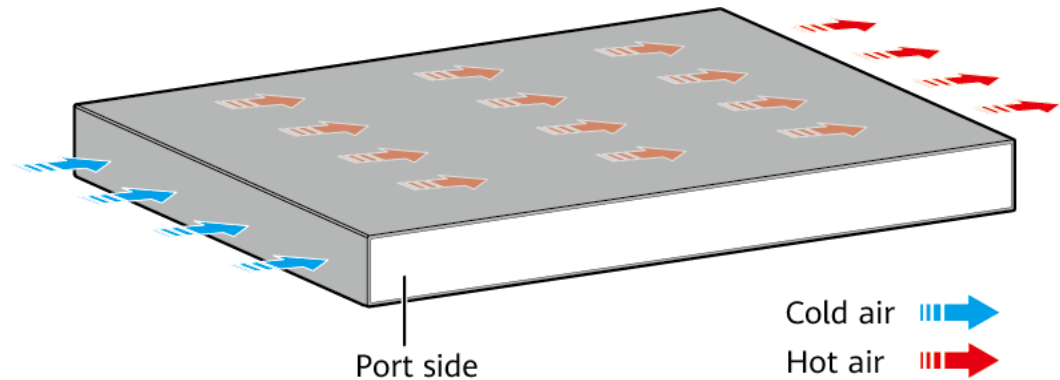
PGND: protection ground wire

GND: 12 V reference ground

RTN: -53 V reference ground

Heat Dissipation

The S5720S-28X-PWR-LI-AC has two built-in fans for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-400 lists technical specifications of the S5720S-28X-PWR-LI-AC.

Table 4-400 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	41 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 314.8 mm (1.72 in. x 17.4 in. x 12.39 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 323.8 mm (1.72 in. x 17.4 in. x 12.75 in.)

Item	Description
Weight (with packaging)	5.2 kg (11.45 lb)
Stack ports	Twenty-four 10/100/1000BASE-T ports and four 10G SFP+ ports
RTC	Not supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none">• Not providing the PoE function: 42.7 W• 100% PoE loads: 448.5 W (system power consumption: 78.9 W, PoE: 369.6 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	29.5 W
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5 °C to +55 °C (23 °F to 131 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">• The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.

Item	Description
	The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 49.1 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010597

4.9.13 S5720S-52X-LI-AC

Version Mapping

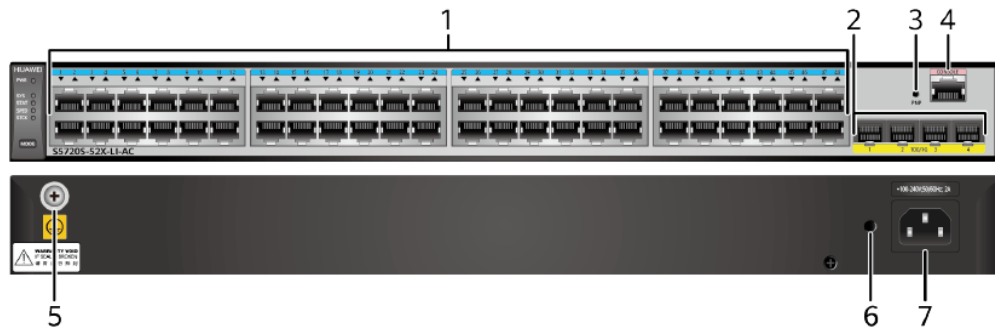
Table 4-401 lists the mapping between the S5720S-52X-LI-AC chassis and software versions.

Table 4-401 Version mapping

Series	Model	Software Version
S5720S-LI	S5720S-52X-LI-AC	V200R010C00 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-154 S5720S-52X-LI-AC appearance



1	Forty-eight 10/100/1000BASE-T ports	2 Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable • 10.19 GPON Optical Modules NOTE If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.
3	One PNP button NOTICE Applicable in V200R012C00 and later versions: To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.	4 One console port
5	Ground screw	6 Jack for AC power cable locking strap

	NOTE It is used with a 9.1 Ground Cable.		NOTE The AC power cable locking strap is not delivered with the switch.
7	AC socket NOTE It is used with an 9.8 AC Power Cable.	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-402 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-402 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-403 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-403 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-404.

Table 4-404 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Indicator Description

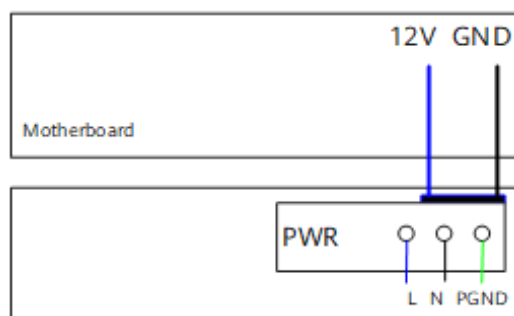
The S5720S-52X-LI-AC has similar indicators to those of the S5720-28X-PWR-LI-AC except that the S5720S-52X-LI-AC does not have an RPS, USB, or PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720S-52X-LI-AC has a built-in power module and does not support pluggable power modules.

Figure 4-155 shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 4-155 Power supply mode of a built-in AC power module



L: live wire

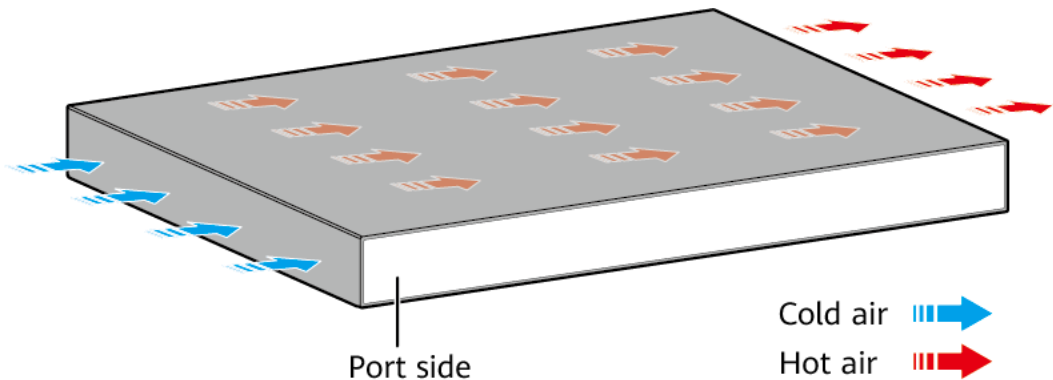
N: neutral wire

PGND: protection ground wire

GND: 12 V reference ground

Heat Dissipation

The S5720S-52X-LI-AC has a built-in fan for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-405 lists technical specifications of the S5720S-52X-LI-AC.

Table 4-405 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	41 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 224.8 mm (1.72 in. x 17.4 in. x 8.85 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 233.8 mm (1.72 in. x 17.4 in. x 9.21 in.)
Weight (with packaging)	4.4 kg (9.7 lb)

Item	Description
Stack ports	Forty-eight 10/100/1000BASE-T ports and four 10G SFP+ ports
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	50.3 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	31.6 W
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5 °C to +55 °C (23 °F to 131 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">• The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.

Item	Description
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 44.5 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010604

4.9.14 S5720S-52X-PWR-LI-AC

Version Mapping

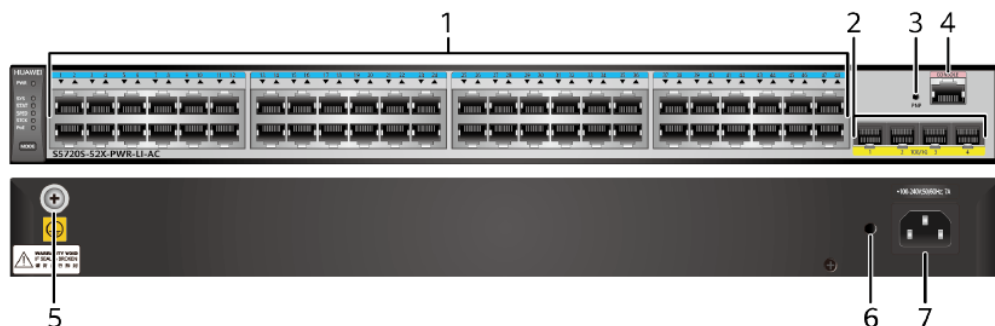
Table 4-406 lists the mapping between the S5720S-52X-PWR-LI-AC chassis and software versions.

Table 4-406 Version mapping

Series	Model	Software Version
S5720S-LI	S5720S-52X-PWR-LI-AC	V200R010C00 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-156 S5720S-52X-PWR-LI-AC appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable • 10.19 GPON Optical Modules <p>NOTE If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>
3	<p>One PNP button</p> <p>NOTICE Applicable in V200R012C00 and later versions:</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	4	One console port
5	<p>Ground screw</p> <p>NOTE It is used with a 9.1 Ground Cable.</p>	6	<p>Jack for AC power cable locking strap</p> <p>NOTE The AC power cable locking strap is not delivered with the switch.</p>
7	<p>AC socket</p> <p>NOTE It is used with an 9.8 AC Power Cable.</p>	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-407 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-407 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-408 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-408 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-409.

Table 4-409 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Indicator Description

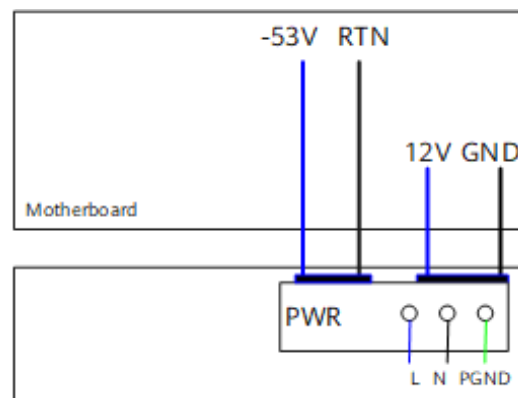
The S5720S-52X-PWR-LI-AC has similar indicators to those of the S5720-28X-PWR-LI-AC, except that the S5720S-52X-PWR-LI-AC does not have an RPS or USB indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720S-52X-PWR-LI-AC has a built-in power module and does not support pluggable power modules. The built-in power module can provide 370 W PoE power, which ensures full PoE power on 24 ports in compliance with 802.3af or on 12 ports in compliance with 802.3at. The switch cannot connect to an RPS power supply.

Figure 4-157 shows the power supply mode of a built-in AC PoE power module (PWR). The PWR module receives AC power from an external power source and provides two outputs: 12 V and -53 V. The 12 V output is provided for the chassis, and the -53 V output is provided for PDs.

Figure 4-157 Power supply by a built-in AC PoE power module



L: live
wire

N: neutral
wire

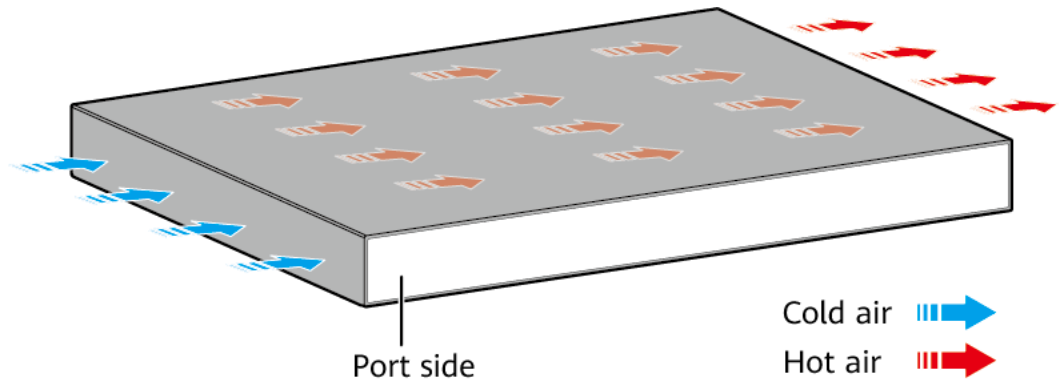
PGND: protection
ground wire

GND: 12 V
reference ground

RTN: -53 V
reference ground

Heat Dissipation

The S5720S-52X-PWR-LI-AC has two built-in fans for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-410 lists technical specifications of the S5720S-52X-PWR-LI-AC.

Table 4-410 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	38 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 314.8 mm (1.72 in. x 17.4 in. x 12.39 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 323.8 mm (1.72 in. x 17.4 in. x 12.75 in.)
Weight (with packaging)	5.6 kg (12.35 lb)
Stack ports	Forty-eight 10/100/1000BASE-T ports and four 10G SFP+ ports
RTC	Not supported
RPS	Not supported

Item	Description
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> Not providing the PoE function: 63.5 W 100% PoE loads: 464.3 W (system power consumption: 94.7 W, PoE: 369.6 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> Tested according to ATIS standard EEE enabled No PoE power consumption 	42.2 W
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year. The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year. The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 48.3 dB(A)

Item	Description
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010617

4.10 S5700-SI

4.10.1 S5700-24TP-SI-AC

Version Mapping

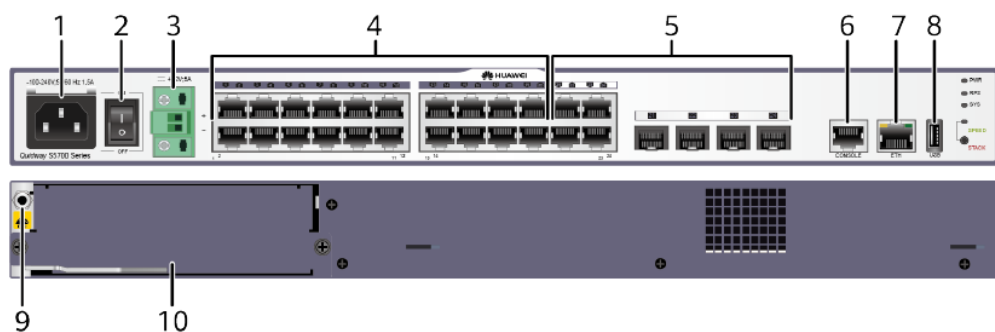
Table 4-411 lists the mapping between the S5700-24TP-SI-AC chassis and software versions.

Table 4-411 Version mapping

Series	Model	Software Version
S5700-SI	S5700-24TP-SI-AC	V100R005C01 to V200R005C02 NOTE This model does not match V100R006C01, V200R001C01, V200R003C02, V200R003C10, or V200R005C01.

Appearance and Structure

Figure 4-158 S5700-24TP-SI-AC appearance



1	AC socket NOTE It is used with an 9.8 AC Power Cable.	2	Power switch
3	Backup power socket NOTE This socket can be connected to a backup power supply unit. The backup power supply unit must provide 12 V DC output voltage (ranging from 11 V to 13 V) and a minimum power of 100 W.	4	Twenty 10/100/1000BASE-T ports
5	Four combo ports (10/100/1000BASE-T + 100/1000BASE-X) Modules applicable to combo optical ports: <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules 	6	One console port
7	One ETH management port	8	One USB port
9	ESD jack NOTE Before installing or maintaining a switch, wear an ESD wrist strap and insert the other end of the ESD wrist strap into this ESD jack.	10	Rear card slot NOTE Card supported: <ul style="list-style-type: none"> • 8.28 ES5D00ETPC00 (Stack Rear Card)

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-412 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-412 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-413.

Table 4-413 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the *Configuration Guide - Basic Configurations*. Table 4-414 describes the attributes of an ETH management port.

Table 4-414 Attributes of an ETH management port

Attribute	Description
-----------	-------------

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB flash drive used on a switch must comply with USB 1.1.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

Figure 4-159 Indicators on the S5700-24TP-SI-AC

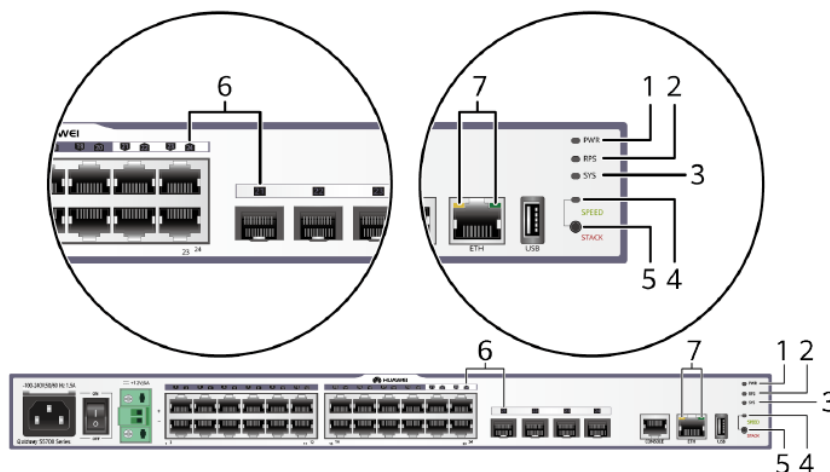


Table 4-415 Description of indicators on the switch

Number	Indicator/Button	Color	Description
1	PWR: power supply indicator	-	Off: The switch is powered off.
		Green	Steady on: The switch is powered on.

Number	Indicator/Button	Color	Description
		Yellow	Steady on: The built-in power module is faulty, and the switch is powered by the backup power.
2	RPS: backup power supply indicator	Green	<ul style="list-style-type: none"> Off: No backup power is connected to the switch or the backup power is faulty. Steady on: The backup power is connected to the switch.
3	SYS: system status indicator	-	Off: The system is not running.
		Green	<ul style="list-style-type: none"> Steady on: The system is not operating properly or is starting. Slow blinking: The system is running normally. Fast blinking: The system is copying the system software and configuration file from a USB flash drive.
		Yellow	<ul style="list-style-type: none"> Steady on: The system is performing self-check during startup. Blinking: The system has been successfully upgraded using a USB flash drive and the switch has restarted. You can remove the USB flash drive from the switch.
		Red	<ul style="list-style-type: none"> Steady on: The system does not work normally after registration, or a fan or temperature alarm has been generated. Blinking: The system cannot be upgraded after a USB flash drive is inserted. The USB-based upgrade failed.
4	Mode indicator	-	Off: The service port indicators are in the status mode (default). In the status mode, the service port indicator shows the port link or activity state.
		Green	Steady on: The service port indicators show the port speed. After 45 seconds, the service port indicators automatically restore to the status mode.
		Red	Steady on: The service port indicators show the stack ID of the switch. After 45 seconds, the service port indicators automatically restore to the status mode.
5	Mode switch	-	<ul style="list-style-type: none"> When you press this button once, the mode indicator turns green and the

Number	Indicator/Butt on	Color	Description
	button		<p>service port indicators show the speed of each service port.</p> <ul style="list-style-type: none"> When you press this button a second time, the mode indicator turns red and the service port indicators show the stack status. When you press this button a third time, the mode indicator turns off. <p>If you do not press the button within 45 seconds, the mode indicator restores to status mode.</p>
6	Service port indicator	Meanings of service port indicators vary in different modes. For details, see Table 4-416.	
7	ETH indicator	-	Off: No link is established on the port.
		Green	Steady on: The port is connected.
		Yellow	Blinking: The port is sending or receiving data.

Table 4-416 Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	<p>10M/100M/1000M port: The port is operating at 10/100 Mbit/s.</p> <p>1000M/10GE port: The port is operating at 1000 Mbit/s.</p>
	Green	Blinking	<p>10M/100M/1000M port: The port is operating at 1000 Mbit/s.</p> <p>1000M/10GE port: The port is operating at 10 Gbit/s.</p>
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	<p>The switch is not the master switch in a stack.</p> <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the

Display Mode	Color	Status	Description
			switch. <ul style="list-style-type: none"> If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is blinking, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Power Supply Configuration

The S5700-24TP-SI-AC has a built-in power module and can connect to an external DC power supply for power redundancy.

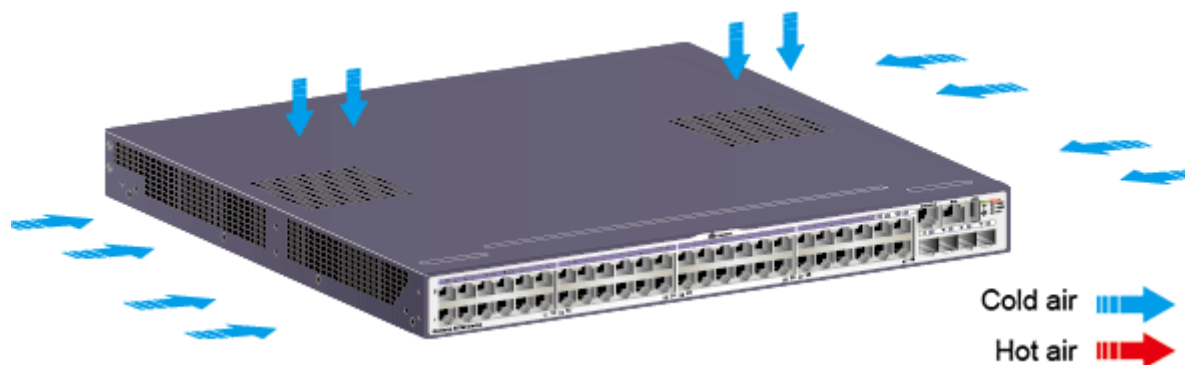
Heat Dissipation

NOTE

The fans can work in the intelligent mode or forcible mode:

- In the intelligent mode, the fans start to operate only when the ambient temperature goes higher than a specified value. In V200R003C00 and later versions, you can run the **display fan speed-adjust threshold minus** command on the switches that use the intelligent heat dissipation mode to view the temperature thresholds for the fans to start and stop running. The **set fan speed-adjust threshold minus** command can be used to lower these temperature thresholds.
- In the forcible mode, the fans operate immediately when the switch starts. You can run the **display fan speed-adjust threshold minus** on the switches that support intelligent fan speed adjustment to view the temperature thresholds for the fans to increase and decrease rotating speeds. The **set fan speed-adjust threshold minus** command can lower these temperature thresholds.

The S5700-24TP-SI-AC has a built-in fan for intelligent air cooling. Air flows in from the left, right, and top sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-417 lists technical specifications of the S5700-24TP-SI-AC.

Table 4-417 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	32 MB
Mean time between failures (MTBF)	37 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	±2 kV in common mode
Power supply surge protection	±6 kV in differential mode, ±6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight	<ul style="list-style-type: none">Empty: ≤ 5 kg (11.02 lb)Fully configured: ≤ 8.5 kg (18.74 lb)
Stack ports	Two stack ports available on each stack card
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	40 W
Operating temperature	0 °C to 50 °C (32 °F to 122 °F)
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	Silent
Relative humidity	5% to 95%, noncondensing

Item	Description
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02352360

4.10.2 S5700-24TP-SI-DC

Version Mapping

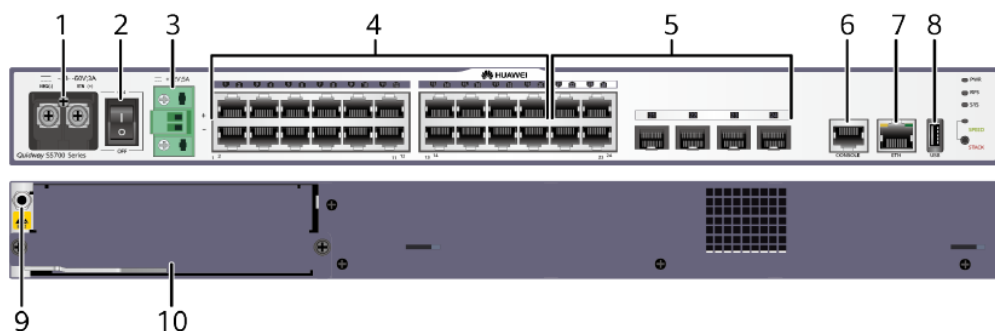
Table 4-418 lists the mapping between the S5700-24TP-SI-DC chassis and software versions.

Table 4-418 Version mapping

Series	Model	Software Version
S5700-SI	S5700-24TP-SI-DC	V100R005C01 to V200R005C02 NOTE This model does not match V100R006C01, V200R001C01, V200R003C02, V200R003C10, or V200R005C01.

Appearance and Structure

Figure 4-160 S5700-24TP-SI-DC appearance



1	DC power terminal NOTE It is used together with a 9.5 DC Power Cable (with OT and Cord End Terminals).	2	Power switch
3	Backup power socket	4	Twenty 10/100/1000BASE-T ports

	<p>NOTE</p> <p>This socket can be connected to a backup power supply unit. The backup power supply unit must provide 12 V DC output voltage (ranging from 11 V to 13 V) and a minimum power of 100 W.</p>		
5	<p>Four combo ports (10/100/1000BASE-T + 100/1000BASE-X)</p> <p>Modules applicable to combo optical ports:</p> <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules 	6	One console port
7	One ETH management port	8	One USB port
9	<p>ESD jack</p> <p>NOTE</p> <p>Before installing or maintaining a switch, wear an ESD wrist strap and insert the other end of the ESD wrist strap into this ESD jack.</p>	10	<p>Rear card slot</p> <p>NOTE</p> <p>Card supported:</p> <ul style="list-style-type: none"> • 8.28 ES5D00ETPC00 (Stack Rear Card)

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-419 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-419 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-420.

Table 4-420 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the *Configuration Guide - Basic Configurations*. Table 4-421 describes the attributes of an ETH management port.

Table 4-421 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing

Attribute	Description
Maximum transmission distance	100 m

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB flash drive used on a switch must comply with USB 1.1.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5700-24TP-SI-DC has the same types of indicators as the S5700-24TP-SI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5700-24TP-SI-DC has a built-in power module and can connect to an external DC power supply for power redundancy.

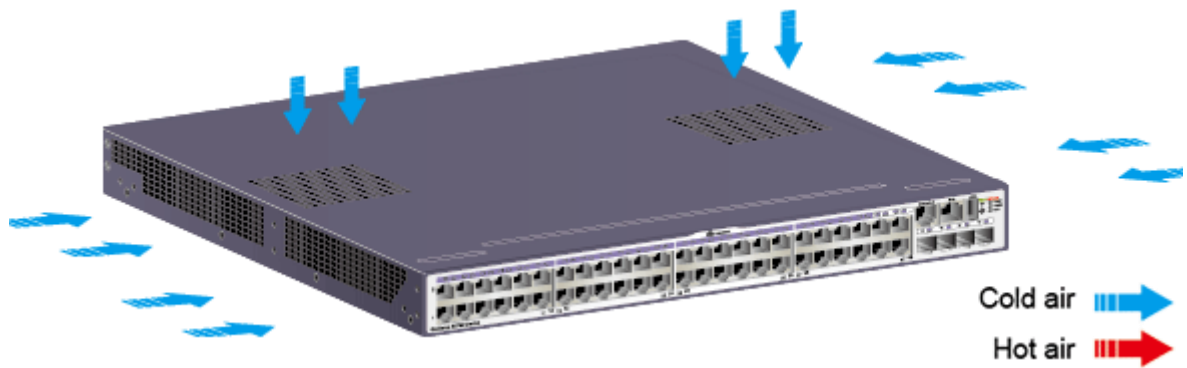
Heat Dissipation

NOTE

The fans can work in the intelligent mode or forcible mode:

- In the intelligent mode, the fans start to operate only when the ambient temperature goes higher than a specified value. In V200R003C00 and later versions, you can run the **display fan speed-adjust threshold minus** command on the switches that use the intelligent heat dissipation mode to view the temperature thresholds for the fans to start and stop running. The **set fan speed-adjust threshold minus** command can be used to lower these temperature thresholds.
- In the forcible mode, the fans operate immediately when the switch starts. You can run the **display fan speed-adjust threshold minus** on the switches that support intelligent fan speed adjustment to view the temperature thresholds for the fans to increase and decrease rotating speeds. The **set fan speed-adjust threshold minus** command can lower these temperature thresholds.

The S5700-24TP-SI-DC has a built-in fan for intelligent air cooling. Air flows in from the left, right, and top sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-422 lists technical specifications of the S5700-24TP-SI-DC.

Table 4-422 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	32 MB
Mean time between failures (MTBF)	37 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	±2 kV in common mode
Power supply surge protection	±1 kV in differential mode, ±2 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight	<ul style="list-style-type: none"> Empty: ≤ 5 kg (11.02 lb) Fully configured: ≤ 8.5 kg (18.74 lb)
Stack ports	Two stack ports available on each stack card
RPS	Not supported
PoE	Not supported
Rated voltage range	-48 V DC to -60 V DC
Maximum voltage range	-36 V DC to -72 V DC

Item	Description
Maximum power consumption (100% throughput, full speed of fans)	40 W
Operating temperature	0 °C to 50 °C (32 °F to 122 °F)
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	Silent
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02352343

4.10.3 S5700-24TP-PWR-SI

Version Mapping

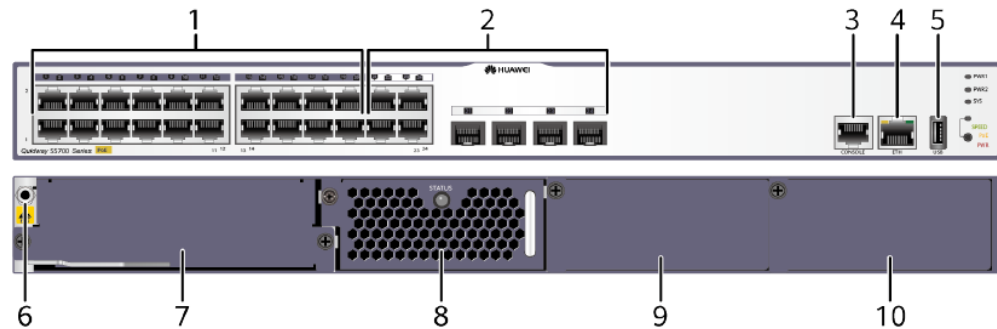
Table 4-423 lists the mapping between the S5700-24TP-PWR-SI chassis and software versions.

Table 4-423 Version mapping

Series	Model	Software Version
S5700-SI	S5700-24TP-PWR-SI	V100R005C01 to V200R005C02 NOTE This model does not match V100R006C01, V200R001C01, V200R003C02, V200R003C10, or V200R005C01.

Appearance and Structure

Figure 4-161 S5700-24TP-PWR-SI appearance



1	Twenty PoE+ 10/100/1000BASE-T ports	2	Four combo ports (10/100/1000BASE-T (PoE+) + 100/1000BASE-X) Modules applicable to combo optical ports: <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules
3	One console port	4	One ETH management port
5	One USB port	6	ESD jack NOTE Before installing or maintaining a switch, wear an ESD wrist strap and insert the other end of the ESD wrist strap into this ESD jack.
7	Rear card slot NOTE Card supported: <ul style="list-style-type: none"> • 8.28 ES5D00ETPC00 (Stack Rear Card) 	8	Fan slot NOTE Applicable fan module: 7.1 CX7E1FANA Fan Module
9	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none"> • 5.5 W0PSA2500 (250 W AC PoE Power Module) • 5.6 W0PSA5000/PAC-500WA-BE (500 W AC PoE Power Module) 	10	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> • 5.5 W0PSA2500 (250 W AC PoE Power Module) • 5.6 W0PSA5000/PAC-500WA-BE (500 W AC PoE Power Module)

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-424 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-424 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-425.

Table 4-425 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232

Attribute	Description
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the *Configuration Guide - Basic Configurations*. Table 4-426 describes the attributes of an ETH management port.

Table 4-426 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB flash drive used on a switch must comply with USB 1.1.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5700-24TP-PWR-SI has the same types of indicators as the S5700-28C-PWR-SI. For details, see [Indicator Description](#).

Power Supply Configuration

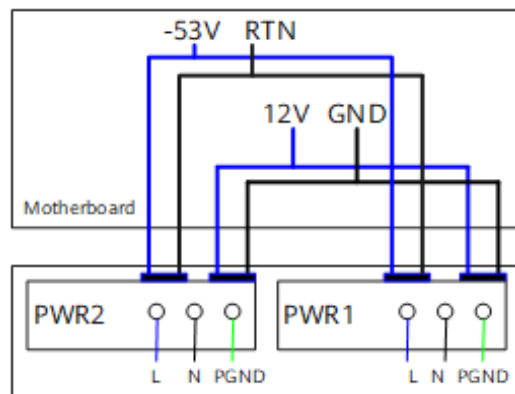
The S5700-24TP-PWR-SI has two power module slots, each of which can have a 500 W or 250 W power module installed. A power module can provide 369.6 W or 123.2 W of PoE power for powered devices (PDs). Table 4-427 lists its power supply configurations.

Table 4-427 Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
250 W	–	123.2 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 8 802.3at (30 W per port): 4
500 W	–	369.6 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 12
250 W	250 W	246.4 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 16 802.3at (30 W per port): 8
500 W	500 W	369.6 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 12

Figure 4-162 shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

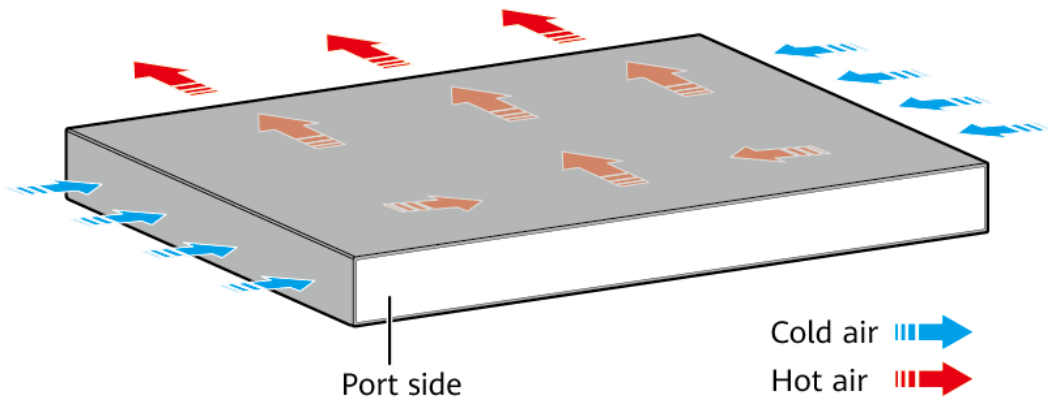
Figure 4-162 Power supply by dual AC PoE power modules



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground RTN: -53 V reference ground

Heat Dissipation

The S5700-24TP-PWR-SI uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-428 lists technical specifications of the S5700-24TP-PWR-SI.

Table 4-428 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	32 MB
Mean time between failures (MTBF)	84.3 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	±1 kV in common mode
Power supply surge protection	±2 kV in differential mode, ±4 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)
Weight	<ul style="list-style-type: none"> Empty: ≤ 5 kg (11.02 lb) Fully configured: ≤ 8.5 kg (18.74 lb)
Stack ports	Two stack ports available on each stack card
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage	90 V AC to 264 V AC, 47 Hz to 63 Hz

Item	Description
range	
Maximum power consumption (100% throughput, 100% PoE loads, full speed of fans)	455 W (system power consumption: 85 W, PoE: 370 W)
Operating temperature	0 °C to 50 °C (32 °F to 122 °F)
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 51 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02352369

4.10.4 S5700-48TP-SI-AC

Version Mapping

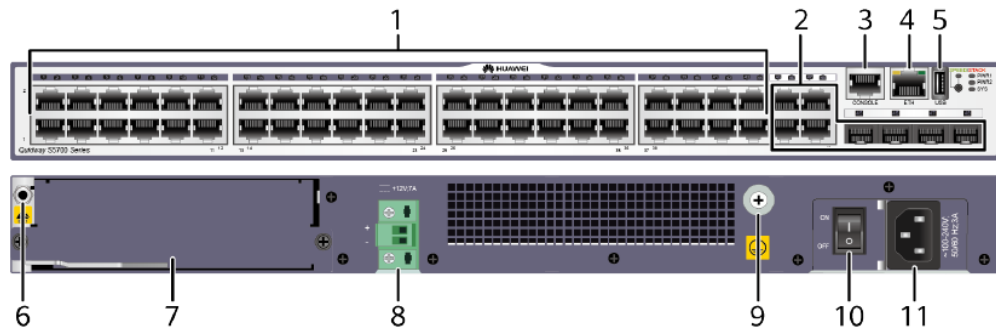
Table 4-429 lists the mapping between the S5700-48TP-SI-AC chassis and software versions.

Table 4-429 Version mapping

Series	Model	Software Version
S5700-SI	S5700-48TP-SI-AC	V100R005C01 to V200R005C02 NOTE This model does not match V100R006C01, V200R001C01, V200R003C02, V200R003C10, or V200R005C01.

Appearance and Structure

Figure 4-163 S5700-48TP-SI-AC appearance



1	Forty-four 10/100/1000BASE-T ports	2	Four combo ports (10/100/1000BASE-T + 100/1000BASE-X) Modules applicable to combo optical ports: <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules
3	One console port	4	One ETH management port
5	One USB port	6	ESD jack NOTE Before installing or maintaining a switch, wear an ESD wrist strap and insert the other end of the ESD wrist strap into this ESD jack.
7	Rear card slot NOTE Card supported: <ul style="list-style-type: none"> • 8.28 ES5D00ETPC00 (Stack Rear Card) 	8	Backup power socket NOTE This socket can be connected to a backup power supply unit. The backup power supply unit must provide 12 V DC output voltage (ranging from 11 V to 13 V) and a minimum power of 100 W.
9	Ground screw NOTE It is used with a 9.1 Ground Cable.	10	Power switch
11	AC socket NOTE It is used with an 9.8 AC Power Cable.	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-430 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-430 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-431.

Table 4-431 Attributes of a console port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the *Configuration Guide - Basic Configurations*. Table 4-432 describes the attributes of an ETH management port.

Table 4-432 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB flash drive used on a switch must comply with USB 1.1.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5700-48TP-SI-AC has the same types of indicators as the S5700-24TP-SI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5700-48TP-SI-AC has a built-in power module and can connect to an external DC power supply for power redundancy.

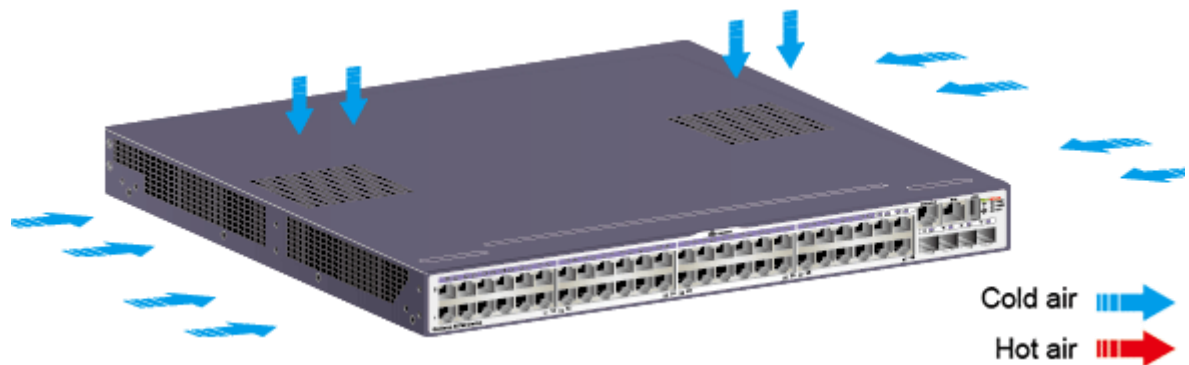
Heat Dissipation

NOTE

The fans can work in the intelligent mode or forcible mode:

- In the intelligent mode, the fans start to operate only when the ambient temperature goes higher than a specified value. In V200R003C00 and later versions, you can run the **display fan speed-adjust threshold minus** command on the switches that use the intelligent heat dissipation mode to view the temperature thresholds for the fans to start and stop running. The **set fan speed-adjust threshold minus** command can be used to lower these temperature thresholds.
- In the forcible mode, the fans operate immediately when the switch starts. You can run the **display fan speed-adjust threshold minus** on the switches that support intelligent fan speed adjustment to view the temperature thresholds for the fans to increase and decrease rotating speeds. The **set fan speed-adjust threshold minus** command can lower these temperature thresholds.

The S5700-48TP-SI-AC has two built-in fans for intelligent air cooling. Air flows in from the left, right, and top sides, and exhausts from the rear panel.



Technical Specifications

Table 4-433 lists technical specifications of the S5700-48TP-SI-AC.

Table 4-433 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	32 MB
Mean time between failures (MTBF)	34 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 2 kV

Item	Description
Power supply surge protection	±6 kV in differential mode, ±6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)
Weight	<ul style="list-style-type: none">• Empty: ≤ 5 kg (11.02 lb)• Fully configured: ≤ 8.5 kg (18.74 lb)
Stack ports	Two stack ports available on each stack card
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	64 W
Operating temperature	0 °C to 50 °C (32 °F to 122 °F)
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	Silent
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02352353

4.10.5 S5700-48TP-SI-DC

Version Mapping

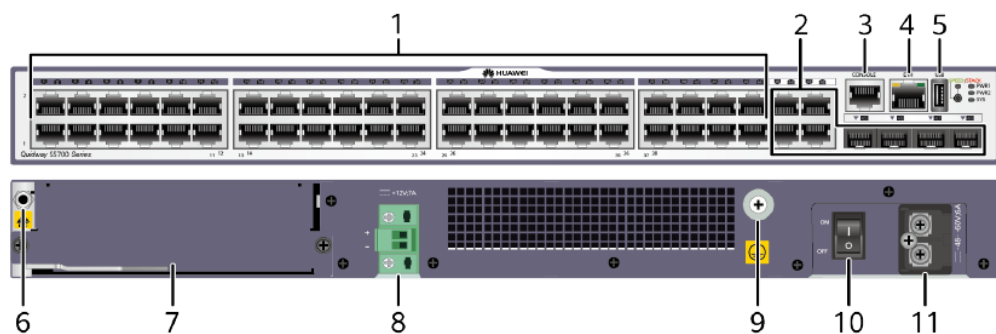
Table 4-434 lists the mapping between the S5700-48TP-SI-DC chassis and software versions.

Table 4-434 Version mapping

Series	Model	Software Version
S5700-SI	S5700-48TP-SI-DC	V100R005C01 to V200R005C02 NOTE This model does not match V100R006C01, V200R001C01, V200R003C02, V200R003C10, or V200R005C01.

Appearance and Structure

Figure 4-164 S5700-48TP-SI-DC appearance



1	Forty-four 10/100/1000BASE-T ports	2	Four combo ports (10/100/1000BASE-T + 100/1000BASE-X) Modules applicable to combo optical ports: <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules
3	One console port	4	One ETH management port
5	One USB port	6	ESD jack NOTE Before installing or maintaining a switch, wear an ESD wrist strap and insert the other end of the ESD wrist strap into this ESD jack.
7	Rear card slot NOTE Card supported: <ul style="list-style-type: none"> • 8.28 ES5D00ETPC00 (Stack Rear Card) 	8	Backup power socket NOTE This socket can be connected to a backup power supply unit. The backup power supply unit must provide 12 V DC output voltage (ranging from 11 V to 13 V) and a

			minimum power of 100 W.
9	Ground screw NOTE It is used with a 9.1 Ground Cable.	10	Power switch
11	DC power terminal NOTE It is used together with a 9.5 DC Power Cable (with OT and Cord End Terminals).	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-435 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-435 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-436.

Table 4-436 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the *Configuration Guide - Basic Configurations*. Table 4-437 describes the attributes of an ETH management port.

Table 4-437 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB flash drive used on a switch must comply with USB 1.1.

 NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5700-48TP-SI-DC has the same types of indicators as the S5700-24TP-SI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5700-48TP-SI-DC has a built-in power module and can connect to an external DC power supply for power redundancy.

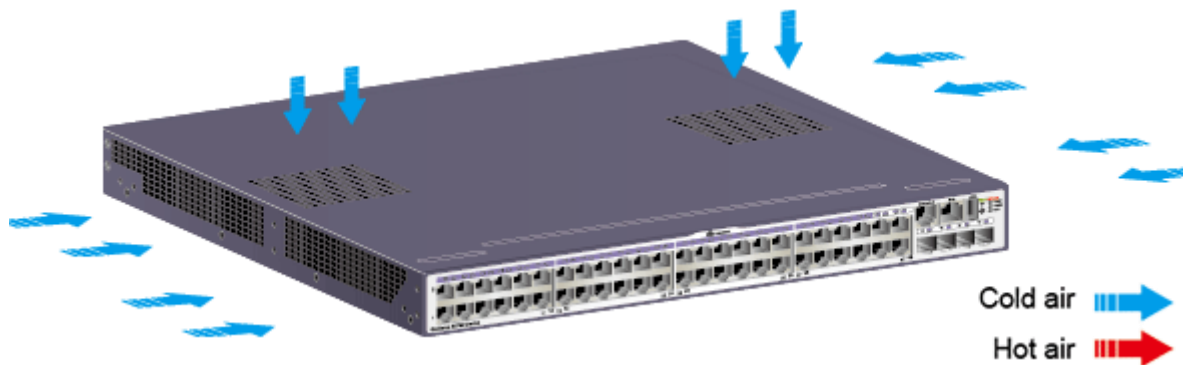
Heat Dissipation

 NOTE

The fans can work in the intelligent mode or forcible mode:

- In the intelligent mode, the fans start to operate only when the ambient temperature goes higher than a specified value. In V200R003C00 and later versions, you can run the **display fan speed-adjust threshold minus** command on the switches that use the intelligent heat dissipation mode to view the temperature thresholds for the fans to start and stop running. The **set fan speed-adjust threshold minus** command can be used to lower these temperature thresholds.
- In the forcible mode, the fans operate immediately when the switch starts. You can run the **display fan speed-adjust threshold minus** on the switches that support intelligent fan speed adjustment to view the temperature thresholds for the fans to increase and decrease rotating speeds. The **set fan speed-adjust threshold minus** command can lower these temperature thresholds.

The S5700-48TP-SI-DC has two built-in fans for intelligent air cooling. Air flows in from the left, right, and top sides, and exhausts from the rear panel.



Technical Specifications

Table 4-438 lists technical specifications of the S5700-48TP-SI-DC.

Table 4-438 Technical specifications

Item	Description
Memory (RAM)	256 MB

Item	Description
Flash	32 MB
Mean time between failures (MTBF)	34 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 2 kV
Power supply surge protection	± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)
Weight	<ul style="list-style-type: none">• Empty: ≤ 5 kg (11.02 lb)• Fully configured: ≤ 8.5 kg (18.74 lb)
Stack ports	Two stack ports available on each stack card
RPS	Not supported
PoE	Not supported
Rated voltage range	-48 V DC to -60 V DC
Maximum voltage range	-36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	64 W
Operating temperature	0 °C to 50 °C (32 °F to 122 °F)
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	Silent
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02352357

4.10.6 S5700-48TP-PWR-SI

Version Mapping

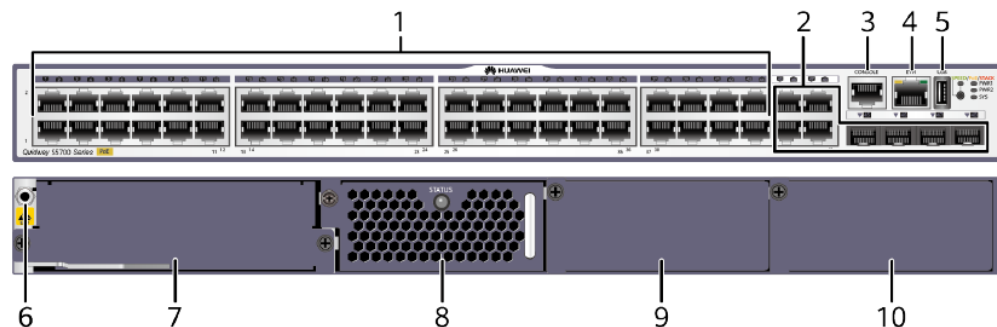
Table 4-439 lists the mapping between the S5700-48TP-PWR-SI chassis and software versions.

Table 4-439 Version mapping

Series	Model	Software Version
S5700-SI	S5700-48TP-PWR-SI	V100R005C01 to V200R005C02 NOTE This model does not match V100R006C01, V200R001C01, V200R003C02, V200R003C10, or V200R005C01.

Appearance and Structure

Figure 4-165 S5700-48TP-PWR-SI appearance



1	Forty-four PoE+ 10/100/1000BASE-T ports	2	Four combo ports (10/100/1000BASE-T (PoE+) + 100/1000BASE-X) Modules applicable to combo optical ports: <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules
3	One console port	4	One ETH management port
5	One USB port	6	ESD jack NOTE Before installing or maintaining a switch,

			wear an ESD wrist strap and insert the other end of the ESD wrist strap into this ESD jack.
7	Rear card slot NOTE Card supported: <ul style="list-style-type: none"> 8.28 ES5D00ETPC00 (Stack Rear Card) 	8	Fan slot NOTE Applicable fan module: <ul style="list-style-type: none"> 7.1 CX7E1FANA Fan Module
9	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none"> 5.5 W0PSA2500 (250 W AC PoE Power Module) 5.6 W0PSA5000/PAC-500WA-BE (500 W AC PoE Power Module) 	10	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> 5.5 W0PSA2500 (250 W AC PoE Power Module) 5.6 W0PSA5000/PAC-500WA-BE (500 W AC PoE Power Module)

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-440 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-440 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.

- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-441.

Table 4-441 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the *Configuration Guide - Basic Configurations*. Table 4-442 describes the attributes of an ETH management port.

Table 4-442 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB flash drive used on a switch must comply with USB 1.1.

 **NOTE**

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5700-48TP-PWR-SI has the same types of indicators as the S5700-28C-PWR-SI. For details, see [Indicator Description](#).

Power Supply Configuration

The S5700-48TP-PWR-SI has two power module slots, each of which can have a 500 W or 250 W power module installed. A power module can provide 369.6 W or 123.2 W of PoE power for powered devices (PDs). Table 4-443 lists its power supply configurations.

Table 4-443 Power supply configurations

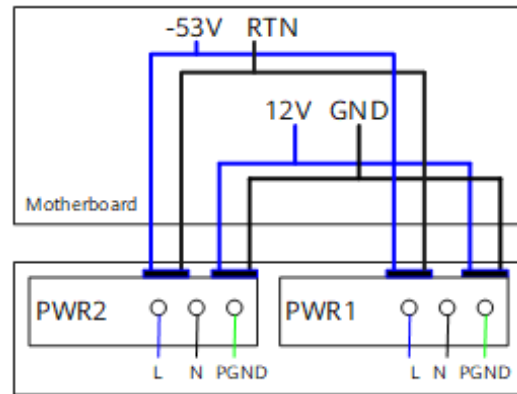
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
250 W	–	123.2 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 8 802.3at (30 W per port): 4
500 W	–	369.6 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 12
250 W	250 W	246.4 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 16 802.3at (30 W per port): 8
500 W	500 W	739.2 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 24

 **NOTE**

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

Figure 4-166 shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

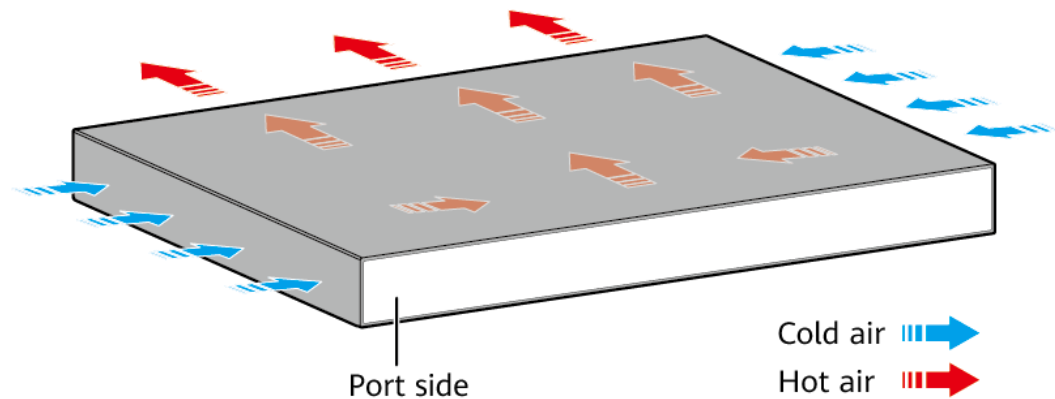
Figure 4-166 Power supply by dual AC PoE power modules



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground RTN: -53 V reference ground

Heat Dissipation

The S5700-48TP-PWR-SI uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-444 lists technical specifications of the S5700-48TP-PWR-SI.

Table 4-444 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	32 MB
Mean time between failures (MTBF)	71.7 years

Item	Description
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 1 kV
Power supply surge protection	± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)
Weight	<ul style="list-style-type: none">• Empty: ≤ 5 kg (11.02 lb)• Fully configured: ≤ 8.5 kg (18.74 lb)
Stack ports	Two stack ports available on each stack card
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, 100% PoE loads, full speed of fans)	907 W (system power consumption: 167 W, PoE: 740 W)
Operating temperature	0 °C to 50 °C (32 °F to 122 °F)
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 51 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02352371

4.10.7 S5700-26X-SI-12S-AC

Version Mapping

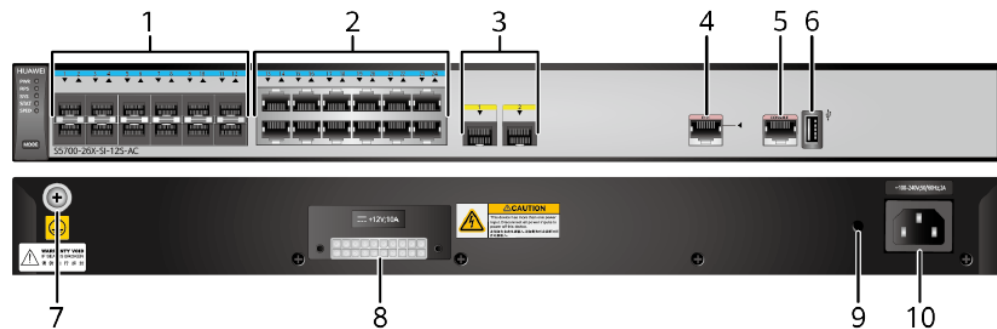
Table 4-445 lists the mapping between the S5700-26X-SI-12S-AC chassis and software versions.

Table 4-445 Version mapping

Series	Model	Software Version
S5700-SI	S5700-26X-SI-12S-AC	V200R002C00 to V200R005C02 NOTE This model does not match V200R003C02, V200R003C10, or V200R005C01.

Appearance and Structure

Figure 4-167 S5700-26X-SI-12S-AC appearance



1	Twelve 100/1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules 	2	Twelve 10/100/1000BASE-T ports
3	Two 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules 	4	One ETH management port

	<ul style="list-style-type: none"> • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber 		
5	One console port	6	One USB port
7	Ground screw NOTE It is used with a 9.1 Ground Cable.	8	RPS socket NOTE It is used with an 9.12 RPS Cable, which is not hot swappable.
9	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.	10	AC socket NOTE It is used with an 9.8 AC Power Cable.

Port Description

100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. Table 4-446 describes the attributes of a 100/1000BASE-X port.

Table 4-446 Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-447 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-447 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab

Attribute	Description
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-448 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-448 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-449.

Table 4-449 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the

ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the *Configuration Guide - Basic Configurations*. Table 4-450 describes the attributes of an ETH management port.

Table 4-450 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB flash drive used on a switch must comply with USB 1.1.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

Figure 4-168 Indicators on the S5700-26X-SI-12S-AC

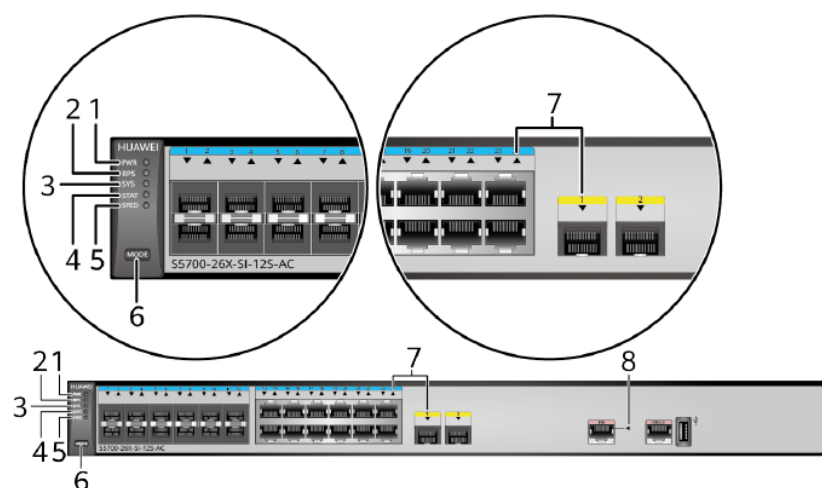


Table 4-451 Description of indicators on the switch

Number	Indicator/Button	Color	Description
1	PWR: power supply indicator	-	Off: The switch is powered off.
		Green	Steady on: The switch is powered on.
		Yellow	Steady on: The built-in power module is faulty, and the switch is powered by the RPS system.
2	RPS: RPS power supply indicator	-	Off: No RPS is connected to the switch.
		Green	<ul style="list-style-type: none"> Steady on: The RPS is in cold backup state. Blinking: The RPS is providing power for another device and cannot provide power for the current switch.
		Yellow	Blinking: The RPS is providing power for the switch and the built-in power module of the switch is faulty.
3	SYS: system status indicator	-	Off: The system is not running.
		Green	<ul style="list-style-type: none"> Fast blinking: The system is starting or is copying the system software and configuration file from a USB flash drive. Slow blinking: The system is running normally.
		Yellow	Blinking: The system has been successfully upgraded using a USB flash drive and the switch has restarted. You can remove the USB flash drive from the switch.
		Red	<ul style="list-style-type: none"> Steady on: The system does not work normally after registration, or a fan or temperature alarm has been generated. Blinking: The system cannot be upgraded after a USB flash drive is inserted. The USB-based upgrade failed.
4	STAT: status indicator	Green	<ul style="list-style-type: none"> Off: The status mode is not selected. Steady on: The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
5	SPED: speed indicator	Green	<ul style="list-style-type: none"> Off: The speed mode is not selected. Steady on: The speed mode is selected. If the speed mode is

Number	Indicator/Button	Color	Description
			selected, the service port indicator shows the port speed state. After 45 seconds, the service port indicators automatically restore to the status mode.
6	MODE: mode switch button	-	<ul style="list-style-type: none"> When you press this button once, the SPED indicator turns green and the service port indicators show the speed of each service port. When you press this button a second time, the STAT indicator turns green. <p>If you do not press the button within 45 seconds, the indicators restore to the default status. That is, the STAT indicator turns green, and the SPED indicator is off.</p>
7	Service port indicator <ul style="list-style-type: none"> GE electrical/optical ports: The ports are numbered from bottom to top and left to right, starting with 1. 10GE optical ports: Each port has an indicator above it. 	Meanings of service port indicators vary in different modes. For details, see Table 4-452.	
8	ETH indicator	Green	<ul style="list-style-type: none"> Off: No link is established on the port. Steady on: The port is connected. Blinking: The port is sending or receiving data.

Table 4-452 Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.

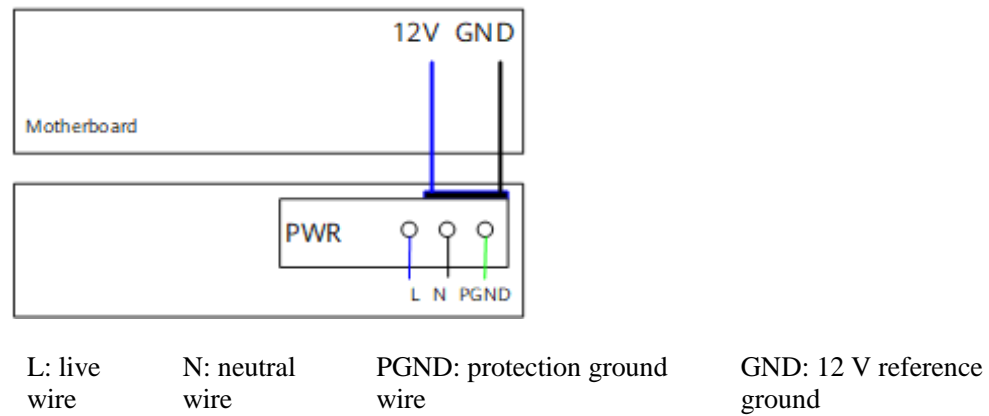
Display Mode	Color	Status	Description
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none">• If the indicator of a port is steady on, the number of this port is the stack ID of the switch.• If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none">• If the indicator of a port is blinking, the number of this port is the stack ID of the switch.• If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Power Supply Configuration

The S5700-26X-SI-12S-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

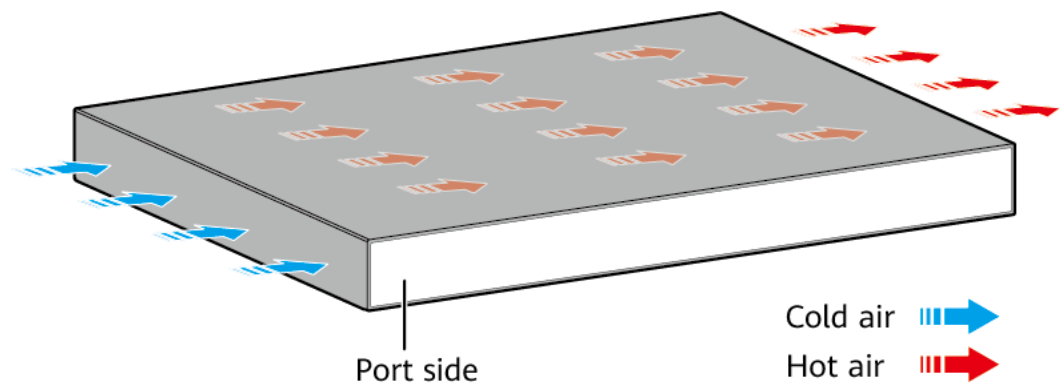
Figure 4-169 shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 4-169 Power supply mode of a built-in AC power module



Heat Dissipation

The S5700-26X-SI-12S-AC has two built-in fans for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-453 lists technical specifications of the S5700-26X-SI-12S-AC.

Table 4-453 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	200 MB
Mean time between failures (MTBF)	91.74 years
Mean time to repair (MTTR)	2 hours

Item	Description
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 310.0 mm (1.72 in. x 17.4 in. x 12.2 in.)
Weight	≤ 5 kg (11.02 lb)
Stack ports	Not supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	42.3 W
Operating temperature	0 °C to 50 °C (32 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 56.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02354039

4.10.8 S5700-28C-SI

Version Mapping

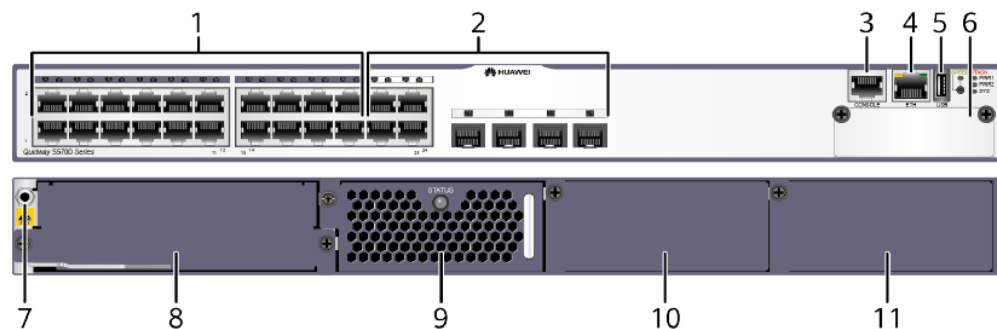
Table 4-454 lists the mapping between the S5700-28C-SI and software versions.

Table 4-454 Version mapping

Series	Model	Software Version
S5700-SI	S5700-28C-SI	V100R005C01 to V200R005C02 NOTE This model does not match V100R006C01, V200R001C01, V200R003C02, V200R003C10, or V200R005C01.

Appearance and Structure

Figure 4-170 S5700-28C-SI appearance



1	Twenty 10/100/1000BASE-T ports	2	Four combo ports (10/100/1000BASE-T + 100/1000BASE-X) Modules applicable to combo optical ports: <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules
3	One console port	4	One ETH management port
5	One USB port	6	Front card slot NOTE Card supported: <ul style="list-style-type: none"> • 8.6 ES5D00G4SA01 (4-Port GE SFP Front Optical Interface Card) • 8.3 ES5D000X2S00 (2-Port 10GE

			<p>SFP+ Front Optical Interface Card)</p> <ul style="list-style-type: none"> 8.4 ES5D000X4S01 (4-Port 10GE SFP+ Front Optical Interface Card)
7	<p>ESD jack</p> <p>NOTE Before installing or maintaining a switch, wear an ESD wrist strap and insert the other end of the ESD wrist strap into this ESD jack.</p>	8	<p>Rear card slot</p> <p>NOTE Card supported:</p> <ul style="list-style-type: none"> 8.28 ES5D000ETPC00 (Stack Rear Card) 8.29 ES5D000ETPB00 (Extended Rear Card)
9	<p>Fan slot</p> <p>NOTE Applicable fan module: 7.1 CX7E1FANA Fan Module</p>	10	<p>Power module slot 2</p> <p>NOTE Applicable power modules:</p> <ul style="list-style-type: none"> 5.2 LS5M100PWA00/ES0W2PSA0150 (150 W AC Power Module) 5.3 LS5M100PWD00/ES0W2PSD0150 (150 W DC Power Module)
11	<p>Power module slot 1</p> <p>NOTE Applicable power modules:</p> <ul style="list-style-type: none"> 5.2 LS5M100PWA00/ES0W2PSA0150 (150 W AC Power Module) 5.3 LS5M100PWD00/ES0W2PSD0150 (150 W DC Power Module) 	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-455 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-455 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-456.

Table 4-456 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the *Configuration Guide - Basic Configurations*. Table 4-457 describes the attributes of an ETH management port.

Table 4-457 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB flash drive used on a switch must comply with USB 1.1.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

Figure 4-171 Indicators on the S5700-28C-SI

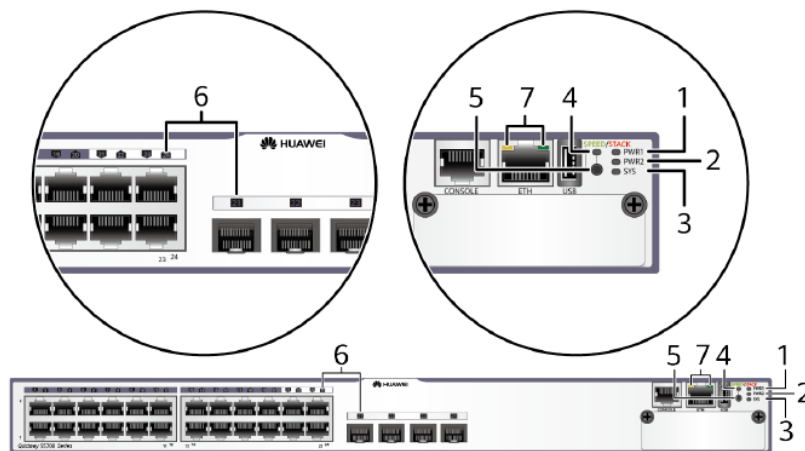


Table 4-458 Description of indicators on the switch

Number	Indicator/Button	Color	Description
1	PWR1: power supply indicator	-	Off: No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.
		Green	Steady on: A power module is installed in

Number	Indicator/Button	Color	Description
			power module slot 1 and is working normally.
		Red	Steady on: The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none"> The power module in power module slot 1 is available but its power switch is not switched on. The power module in power module slot 1 is available but is not connected to a power source. The power module in power module slot 1 fails.
2	PWR2: power supply indicator	-	Off: No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
		Green	Steady on: A power module is installed in power module slot 2 and is working normally.
		Red	Steady on: The switch has two power modules installed. Any of the following situations occurs in power module slot 2: <ul style="list-style-type: none"> The power module in power module slot 2 is available but its power switch is not switched on. A power module is available in this slot but it is not connected to a power source. The power module in power module slot 2 fails.
3	SYS: system status indicator	-	Off: The system is not running.
		Green	<ul style="list-style-type: none"> Steady on: The system is not operating properly or is starting. Slow blinking: The system is running normally. Fast blinking: The system is copying the system software and configuration file from a USB flash drive.
		Yellow	<ul style="list-style-type: none"> Steady on: The system is performing self-check during startup. Blinking: The system has been successfully upgraded using a USB flash drive and the switch has

Number	Indicator/Button	Color	Description
			restarted. You can remove the USB flash drive from the switch.
		Red	<ul style="list-style-type: none">Steady on: The system does not work normally after registration, or a fan or temperature alarm has been generated.Blinking: The system cannot be upgraded after a USB flash drive is inserted. The USB-based upgrade failed.
4	MODE: mode indicator	-	Off: The service port indicators are in the status mode (default). In the status mode, the service port indicator shows the port link or activity state.
		Green	Steady on: The service port indicators show the port speed. After 45 seconds, the service port indicators automatically restore to the status mode.
		Red	Steady on: The service port indicators show the stack ID of the switch. After 45 seconds, the service port indicators automatically restore to the status mode.
5	Mode switch button	-	<ul style="list-style-type: none">When you press this button once, the mode indicator turns green and the service port indicators show the speed of each service port.When you press this button a second time, the mode indicator turns red and the service port indicators show the stack status.When you press this button a third time, the mode indicator turns off. If you do not press the button within 45 seconds, the mode indicator restores to status mode.
6	Service port indicator		Meanings of service port indicators vary in different modes. For details, see Table 4-459.
7	ETH indicator	-	Off: No link is established on the port.
		Green	Steady on: The port is connected.
		Yellow	Blinking: The port is sending or receiving data.

Table 4-459 Description of service port indicators in different modes (one indicator for each port)

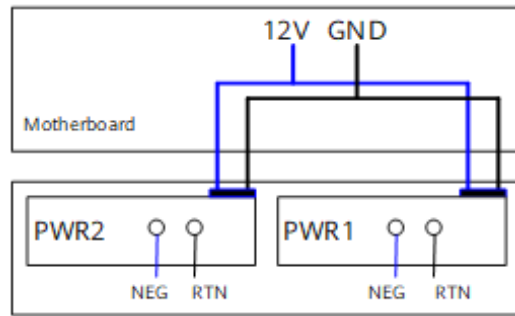
Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is blinking, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Power Supply Configuration

The S5700-28C-SI can use a single power module or double power modules for 1+1 power redundancy. In versions prior to V200R005C00, the AC and DC power modules cannot be configured on the same device, while in V200R005C00 and later versions, they can be configured on the same device.

Figure 4-172 shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

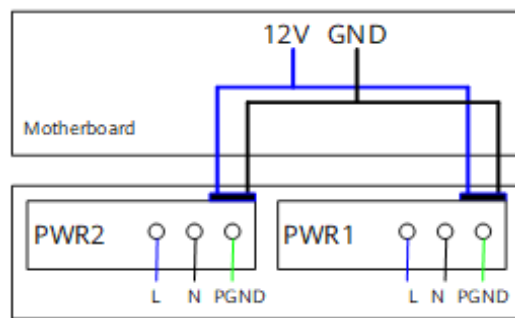
Figure 4-172 Power supply connections of dual DC power modules



NEG: negative wire RTN: positive wire GND: 12 V reference ground

Figure 4-173 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

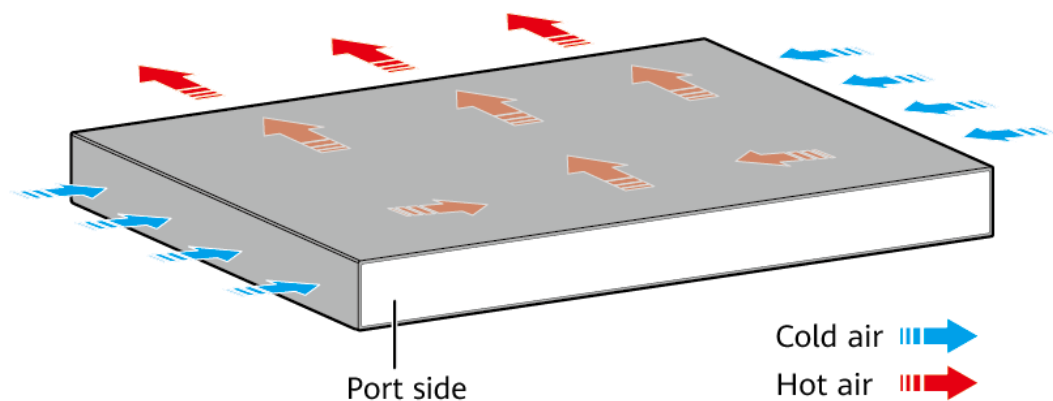
Figure 4-173 Power supply connections of dual AC power modules





L: Live wire N: Neutral wire PGND: Protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5700-28C-SI uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



Cold air 
 Hot air 

 **NOTE**

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-460 lists technical specifications of the S5700-28C-SI.

Table 4-460 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	32 MB
Mean time between failures (MTBF)	53.7 years when a 2-port 10GE interface card is configured, 74.9 years when a 4-port GE front card is configured, 29.58 years when a 4-port 10GE front card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	± 2 kV in common mode
Power supply surge protection	<ul style="list-style-type: none">Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common modeUsing DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)
Weight	<ul style="list-style-type: none">Empty: ≤ 5 kg (11.02 lb)Fully configured: ≤ 8.5 kg (18.74 lb)
Stack ports	Two stack ports available on each stack card
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	56 W
Operating temperature	0 °C to 50 °C (32 °F to 122 °F)

Item	Description
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 41 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none">AC power modules configured: 0-5000 m (0-16404 ft.)DC power modules configured: 0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none">EMC certificationSafety certificationManufacturing certification
Part number	02352341

4.10.9 S5700-28C-PWR-SI

Version Mapping

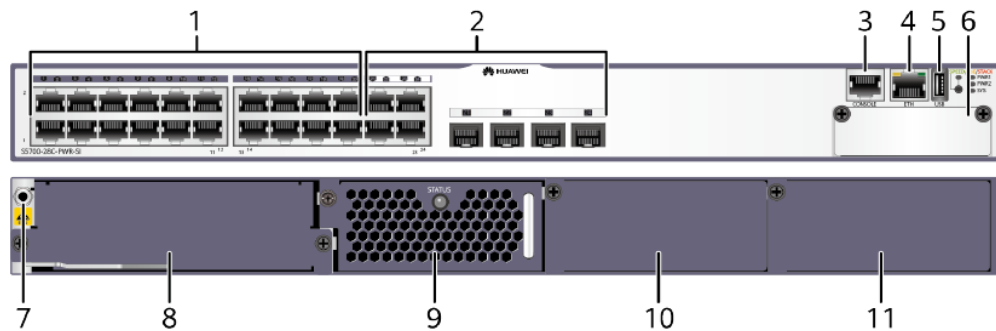
Table 4-461 lists the mapping between the S5700-28C-PWR-SI and software versions.

Table 4-461 Version mapping

Series	Model	Software Version
S5700-SI	S5700-28C-PWR-SI	V200R001C00 to V200R005C02 NOTE This model does not match V200R001C01, V200R003C02, V200R003C10, or V200R005C01.

Appearance and Structure

Figure 4-174 S5700-28C-PWR-SI appearance



1	Twenty PoE+ 10/100/1000BASE-T ports	2	Four combo ports (10/100/1000BASE-T (PoE+) + 100/1000BASE-X) Modules applicable to combo optical ports: <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules
3	One console port	4	One ETH management port
5	One USB port	6	Front card slot NOTE Card supported: <ul style="list-style-type: none"> • 8.6 ES5D00G4SA01 (4-Port GE SFP Front Optical Interface Card) • 8.3 ES5D000X2S00 (2-Port 10GE SFP+ Front Optical Interface Card) • 8.4 ES5D000X4S01 (4-Port 10GE SFP+ Front Optical Interface Card)
7	ESD jack NOTE Before installing or maintaining a switch, wear an ESD wrist strap and insert the other end of the ESD wrist strap into this ESD jack.	8	Rear card slot NOTE Card supported: <ul style="list-style-type: none"> • 8.28 ES5D00ETPC00 (Stack Rear Card) • 8.29 ES5D00ETPB00 (Extended Rear Card)
9	Fan slot NOTE Applicable fan module: 7.1 CX7E1FANA Fan Module	10	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none"> • 5.5 W0PSA2500 (250 W AC PoE Power Module) • 5.6 W0PSA5000/PAC-500WA-BE

			(500 W AC PoE Power Module)
11	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> • 5.5 W0PSA2500 (250 W AC PoE Power Module) • 5.6 W0PSA5000/PAC-500WA-BE (500 W AC PoE Power Module) 	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-462 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-462 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-463.

Table 4-463 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the *Configuration Guide - Basic Configurations*. Table 4-464 describes the attributes of an ETH management port.

Table 4-464 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB flash drive used on a switch must comply with USB 1.1.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

Figure 4-175 Indicators on the S5700-28C-PWR-SI

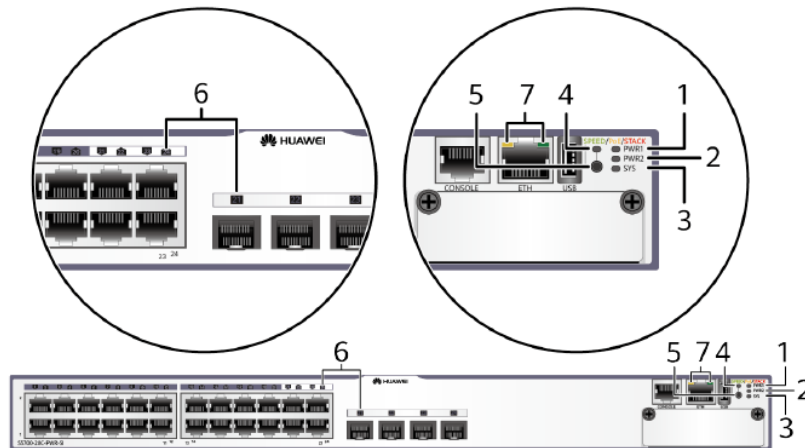


Table 4-465 Description of indicators on the switch

Number	Indicator/Button	Color	Description
1	PWR1: power supply indicator	-	Off: No power module is available in power module slot 1, or the power module is faulty when a single power module is configured.
		Green	Steady on: The power module in power module slot 1 is working properly.
		Red	Steady on: The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none"> A power module is available in this slot but its power switch is in the OFF position. The power module in power module slot 1 is available but is not connected to a power source. The system power and PoE power are faulty.
		Yellow	Steady on: If a single power module is installed, the PoE power is out of range. If dual power modules are installed, the

Number	Indicator/Button	Color	Description
			system power or PoE power is out of range.
2	PWR2: power supply indicator	-	Off: No power module is available in power module slot 2, or the power module is faulty when a single power module is configured.
		Green	Steady on: The power module in power module slot 2 is working properly.
		Red	Steady on: The switch has two power modules installed. Any of the following situations occurs in power module slot 2: <ul style="list-style-type: none"> A power module is available in this slot but its power switch is in the OFF position. A power module is available in this slot but it is not connected to a power source. The system power and PoE power are faulty.
		Yellow	Steady on: If a single power module is installed, the PoE power is out of range. If dual power modules are installed, the system power or PoE power is out of range.
3	SYS: system status indicator	-	Off: The system is not running.
		Green	<ul style="list-style-type: none"> Steady on: The system is not operating properly or is starting. Slow blinking: The system is running normally. Fast blinking: The system is copying the system software and configuration file from a USB flash drive.
		Yellow	<ul style="list-style-type: none"> Steady on: The system is performing self-check during startup. Blinking: The system has been successfully upgraded using a USB flash drive and the switch has restarted. You can remove the USB flash drive from the switch.
		Red	<ul style="list-style-type: none"> Steady on: The system does not work normally after registration, or a fan or temperature alarm has been generated. Blinking: The system cannot be upgraded after a USB flash drive is

Number	Indicator/Button	Color	Description
			inserted. The USB-based upgrade failed.
4	Mode indicator	-	Off: The service port indicators are in the status mode (default). In the status mode, the service port indicator shows the port link or activity state.
		Green	Steady on: The service port indicators show the port speed. After 45 seconds, the service port indicators automatically restore to the status mode.
		Red	Steady on: The service port indicators show the stack ID of the switch. After 45 seconds, the service port indicators automatically restore to the status mode.
		Yellow	Steady on: The service port indicators show the PoE status. After 45 seconds, the service port indicators automatically restore to the status mode.
5	Mode switch button	-	<ul style="list-style-type: none"> When you press this button once, the mode indicator turns green and the service port indicators show the speed of each service port. When you press this button a second time, the mode indicator turns red and the service port indicators show the stack status. When you press this button a third time, the mode indicator turns yellow and the service port indicators show the PoE status. When you press this button a fourth time, the mode indicator turns off. <p>If you do not press the button within 45 seconds, the mode indicator restores to status mode.</p>
6	Service port indicator	Meanings of service port indicators vary in different modes. For details, see Table 4-466.	
7	ETH indicator	-	Off: No link is established on the port.
		Green	Steady on: The port is connected.
		Yellow	Blinking: The port is sending or receiving data.

Table 4-466 Description of service port indicators in different modes

Display Mode	Color	Description
Status	Green	<ul style="list-style-type: none"> Off: The port is not connected or has been shut down. Steady on: The port is connected. Blinking: The port is sending or receiving data.
Speed	Green	<ul style="list-style-type: none"> Off: The port is not connected or has been shut down. Steady on: <ul style="list-style-type: none"> 10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s. Blinking: <ul style="list-style-type: none"> 10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
PoE	Green	<ul style="list-style-type: none"> Off: The port does not provide PoE power. Steady on: The port is providing PoE power. Blinking: The PD connected to the port is not a standard PD or its power exceeds the maximum power or power threshold of the port.
Stack	Green	<ul style="list-style-type: none"> Off: The STCK mode is not selected. If the indicator is steady on, the switch is not a master switch: <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0. If the indicator is blinking, the switch is a master switch: <ul style="list-style-type: none"> If the indicator of a port is blinking, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Power Supply Configuration

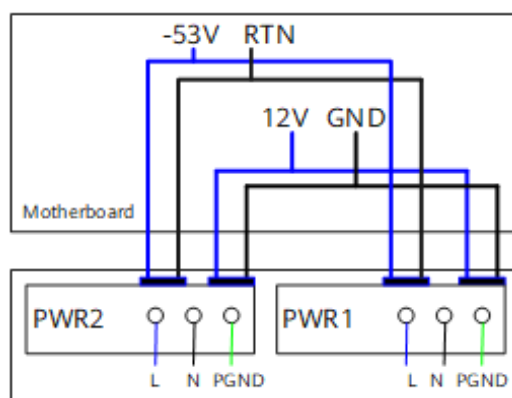
The S5700-28C-PWR-SI is a PoE switch. It has two power module slots, each of which can have a 500 W or 250 W power module installed. A power module can provide 369.6 W or 123.2 W of PoE power for powered devices (PDs). Table 4-467 lists its power supply configurations.

Table 4-467 Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
250 W	–	123.2 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 8 802.3at (30 W per port): 4
500 W	–	369.6 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 12
250 W	250 W	246.4 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 16 802.3at (30 W per port): 8
500 W	500 W	369.6 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 12

Figure 4-176 shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

Figure 4-176 Power supply by dual AC PoE power modules



L: live wire

N: neutral wire

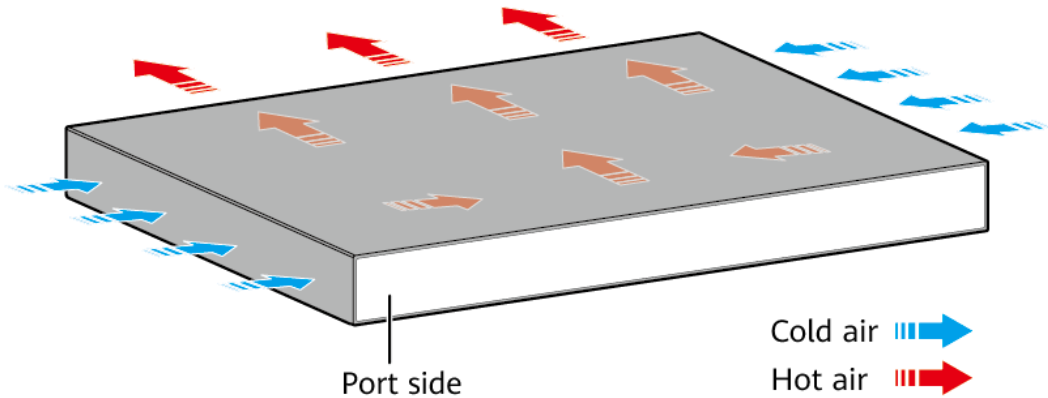
PGND: protection ground wire

GND: 12 V reference ground

RTN: -53 V reference ground

Heat Dissipation

The S5700-28C-PWR-SI uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-468 lists technical specifications of the S5700-28C-PWR-SI.

Table 4-468 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	32 MB
Mean time between failures (MTBF)	53.6 years when a 2-port 10GE interface card is configured, 74.6 years when a 4-port GE front card is configured, 25.68 years when a 4-port 10GE front card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	±1 kV in common mode
Power supply surge protection	±2 kV in differential mode, ±4 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)
Weight	<ul style="list-style-type: none"> Empty: ≤ 5 kg (11.02 lb) Fully configured: ≤ 8.5 kg (18.74 lb)

Item	Description
Stack ports	Two stack ports available on each stack card
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, 100% PoE loads, full speed of fans)	466 W (system power consumption: 96 W, PoE: 370 W)
Operating temperature	0 °C to 50 °C (32 °F to 122 °F)
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 45 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02354137

4.10.10 S5700-52C-SI

Version Mapping

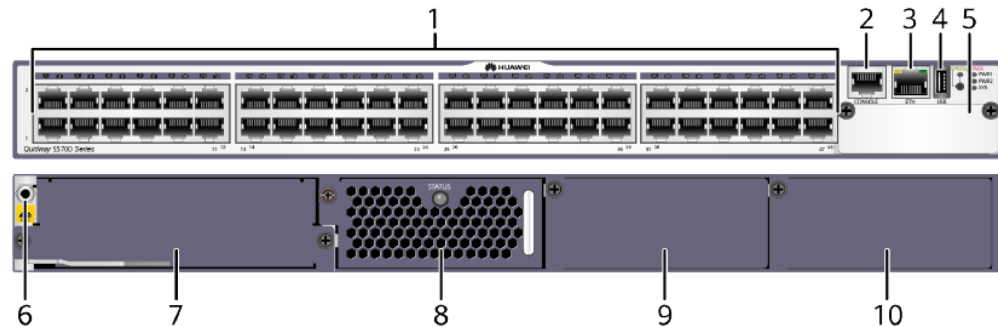
Table 4-469 lists the mapping between the S5700-52C-SI and software versions.

Table 4-469 Version mapping

Series	Model	Software Version
S5700-SI	S5700-52C-SI	V100R005C01 to V200R005C02 NOTE This model does not match V100R006C01, V200R001C01, V200R003C02, V200R003C10, or V200R005C01.

Appearance and Structure

Figure 4-177 S5700-52C-SI appearance



1	Forty-eight 10/100/1000BASE-T ports	2	One console port
3	One ETH management port	4	One USB port
5	Front card slot NOTE Card supported: <ul style="list-style-type: none"> 8.6 ES5D00G4SA01 (4-Port GE SFP Front Optical Interface Card) 8.3 ES5D000X2S00 (2-Port 10GE SFP+ Front Optical Interface Card) 8.4 ES5D000X4S01 (4-Port 10GE SFP+ Front Optical Interface Card) 	6	ESD jack NOTE Before installing or maintaining a switch, wear an ESD wrist strap and insert the other end of the ESD wrist strap into this ESD jack.
7	Rear card slot NOTE Card supported: <ul style="list-style-type: none"> 8.28 ES5D00ETPC00 (Stack Rear Card) 8.29 ES5D00ETPB00 (Extended Rear Card) 	8	Fan slot NOTE Applicable fan module: 7.1 CX7E1FANA Fan Module
9	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none"> 5.2 LS5M100PWA00/ES0W2PSA0150 (150 W AC Power Module) 5.3 LS5M100PWD00/ES0W2PSD0150 (150 W DC Power Module) 	10	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> 5.2 LS5M100PWA00/ES0W2PSA0150 (150 W AC Power Module) 5.3 LS5M100PWD00/ES0W2PSD0150 (150 W DC Power Module)

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-470 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-470 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-471.

Table 4-471 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the *Configuration Guide - Basic Configurations*. Table 4-472 describes the attributes of an ETH management port.

Table 4-472 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB flash drive used on a switch must comply with USB 1.1.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

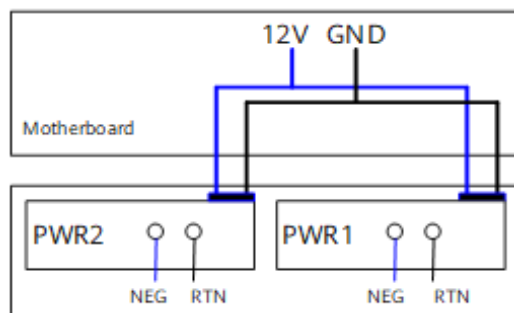
The S5700-52C-SI has the same types of indicators as the S5700-28C-SI. For details, see [Indicator Description](#).

Power Supply Configuration

The S5700-52C-SI can use a single power module or double power modules for 1+1 power redundancy. In versions prior to V200R005C00, the switch cannot use pluggable AC and DC power modules simultaneously. In V200R005C00 and later versions, the switch supports mixing of pluggable AC and DC power modules.

Figure 4-178 shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 4-178 Power supply connections of dual DC power modules



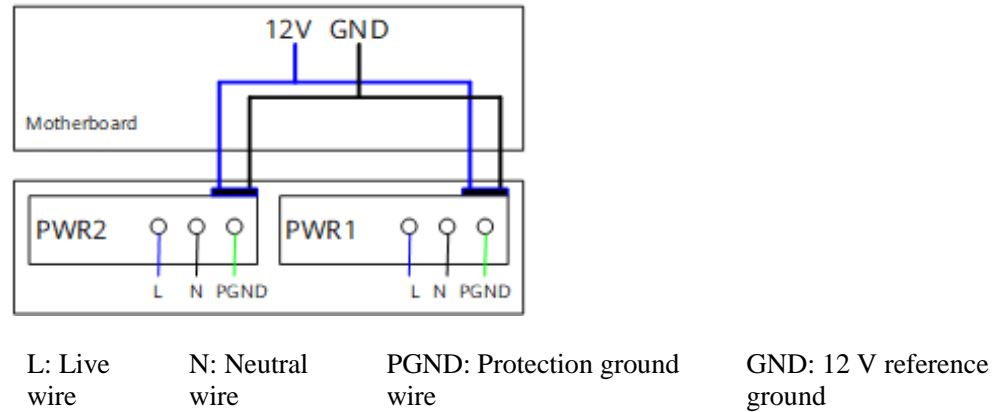
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

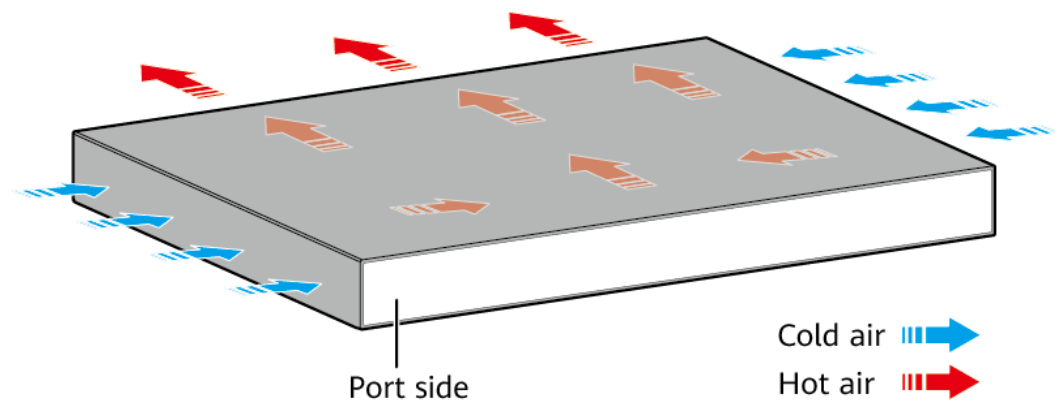
Figure 4-179 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 4-179 Power supply connections of dual AC power modules



Heat Dissipation

The S5700-52C-SI uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-473 lists technical specifications of the S5700-52C-SI.

Table 4-473 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	32 MB

Item	Description
Mean time between failures (MTBF)	51.3 years when a 2-port 10GE interface card is configured, 70.3 years when a 4-port GE front card is configured, 28.58 years when a 4x10GE front card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 2 kV
Power supply surge protection	<ul style="list-style-type: none">Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common modeUsing DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)
Weight	<ul style="list-style-type: none">Empty: ≤ 5 kg (11.02 lb)Fully configured: ≤ 8.5 kg (18.74 lb)
Stack ports	Two stack ports available on each stack card
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	78 W
Operating temperature	0 °C to 50 °C (32 °F to 122 °F)
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 41 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none">AC power modules configured: 0-5000 m (0-16404 ft.)DC power modules configured: 0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none">EMC certification

Item	Description
	<ul style="list-style-type: none"> Safety certification Manufacturing certification
Part number	02352356

4.10.11 S5700-52C-PWR-SI

Version Mapping

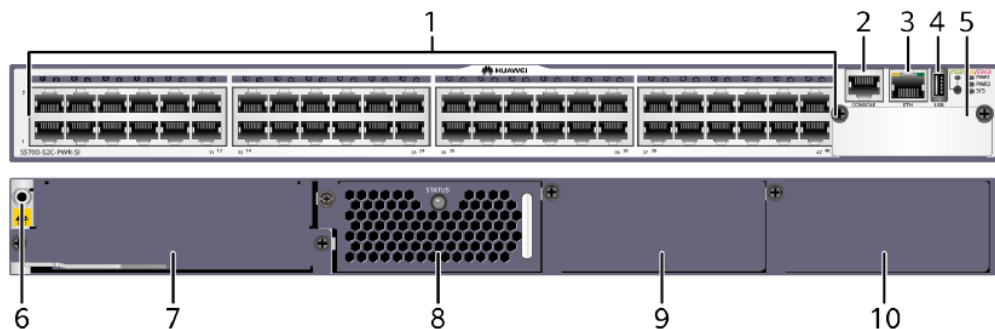
Table 4-474 lists the mapping between the S5700-52C-PWR-SI and software versions.

Table 4-474 Version mapping

Series	Model	Software Version
S5700-SI	S5700-52C-PWR-SI	V200R001C00 to V200R005C02 NOTE This model does not match V200R001C01, V200R003C02, V200R003C10, or V200R005C01.

Appearance and Structure

Figure 4-180 S5700-52C-PWR-SI appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	One console port
3	One ETH management port	4	One USB port
5	Front card slot NOTE Card supported: <ul style="list-style-type: none"> 8.6 ES5D00G4SA01 (4-Port GE SFP Front Optical Interface Card) 	6	ESD jack NOTE Before installing or maintaining a switch, wear an ESD wrist strap and insert the other end of the ESD wrist strap into this ESD

	<ul style="list-style-type: none"> 8.3 ES5D000X2S00 (2-Port 10GE SFP+ Front Optical Interface Card) 8.4 ES5D000X4S01 (4-Port 10GE SFP+ Front Optical Interface Card) 		jack.
7	<p>Rear card slot</p> <p>NOTE Card supported:</p> <ul style="list-style-type: none"> 8.28 ES5D00ETPC00 (Stack Rear Card) 8.29 ES5D00ETPB00 (Extended Rear Card) 	8	<p>Fan slot</p> <p>NOTE Applicable fan module: 7.1 CX7E1FANA Fan Module</p>
9	<p>Power module slot 2</p> <p>NOTE Applicable power modules:</p> <ul style="list-style-type: none"> 5.5 W0PSA2500 (250 W AC PoE Power Module) 5.6 W0PSA5000/PAC-500WA-BE (500 W AC PoE Power Module) 	10	<p>Power module slot 1</p> <p>NOTE Applicable power modules:</p> <ul style="list-style-type: none"> 5.5 W0PSA2500 (250 W AC PoE Power Module) 5.6 W0PSA5000/PAC-500WA-BE (500 W AC PoE Power Module)

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-475 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-475 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-476.

Table 4-476 Attributes of a console port

Attribute	Description
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Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the *Configuration Guide - Basic Configurations*. Table 4-477 describes the attributes of an ETH management port.

Table 4-477 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB flash drive used on a switch must comply with USB 1.1.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5700-52C-PWR-SI has the same types of indicators as the S5700-28C-PWR-SI. For details, see [Indicator Description](#).

Power Supply Configuration

The S5700-52C-PWR-SI is a PoE switch. It has two power module slots, each of which can have a 500 W or 250 W power module installed. A power module can provide 369.6 W or 123.2 W of PoE power for powered devices (PDs). Table 4-478 lists its power supply configurations.

Table 4-478 Power supply configurations

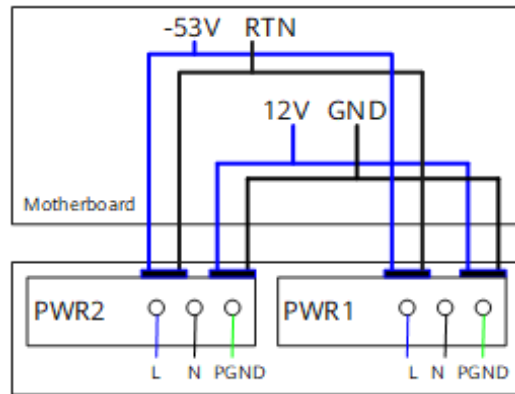
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
250 W	–	123.2 W	<ul style="list-style-type: none">802.3af (15.4 W per port): 8802.3at (30 W per port): 4
500 W	–	369.6 W	<ul style="list-style-type: none">802.3af (15.4 W per port): 24802.3at (30 W per port): 12
250 W	250 W	246.4 W	<ul style="list-style-type: none">802.3af (15.4 W per port): 16802.3at (30 W per port): 8
500 W	500 W	739.2 W	<ul style="list-style-type: none">802.3af (15.4 W per port): 48802.3at (30 W per port): 24

NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

Figure 4-181 shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

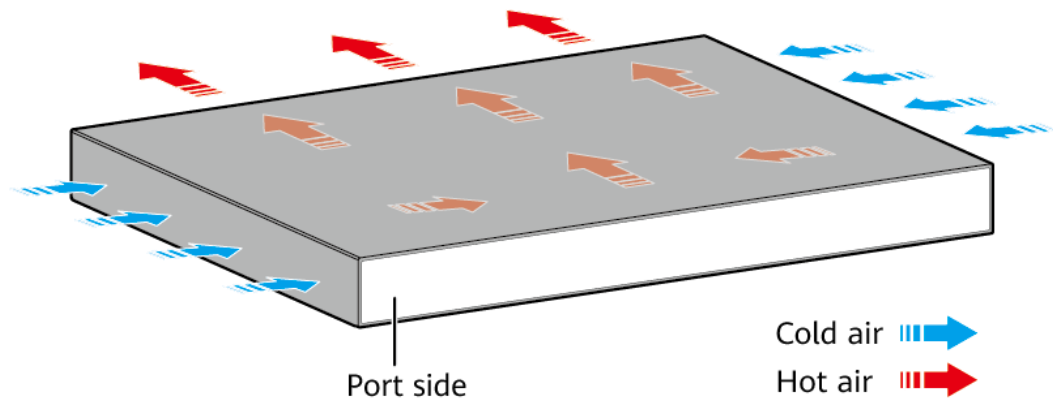
Figure 4-181 Power supply by dual AC PoE power modules



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground RTN: -53 V reference ground

Heat Dissipation

The S5700-52C-PWR-SI uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-479 lists technical specifications of the S5700-52C-PWR-SI.

Table 4-479 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	32 MB
Mean time between failures (MTBF)	50.4 years when a 2-port 10GE interface card is configured, 68.6 years when a 4-port GE front card is configured, 35.58 years when a

Item	Description
	4x10GE front card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 1 kV
Power supply surge protection	± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)
Weight	<ul style="list-style-type: none">Empty: ≤ 5 kg (11.02 lb)Fully configured: ≤ 8.5 kg (18.74 lb)
Stack port	Two stack ports available on each stack card
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, 100% PoE loads, full speed of fans)	917 W (system power consumption: 177 W, PoE: 740 W)
Operating temperature	0 °C to 50 °C (32 °F to 122 °F)
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 45 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">EMC certificationSafety certificationManufacturing certification
Part number	02354135

4.11 S5720-SI

4.11.1 S5720-14X-PWH-SI-AC

Version Mapping

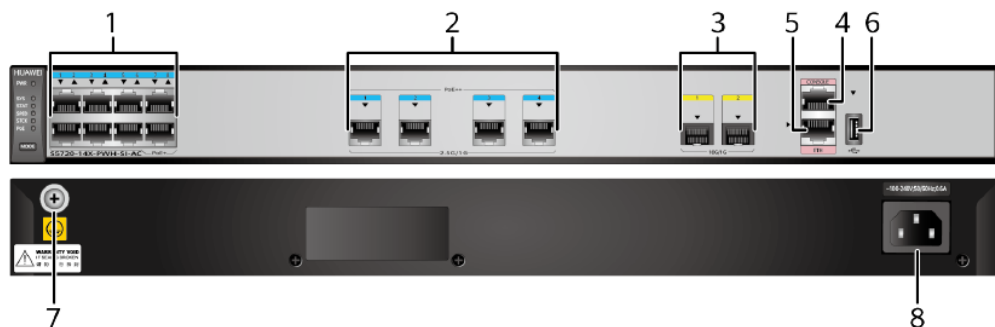
Table 4-480 lists the mapping between the S5720-14X-PWH-SI-AC chassis and software versions.

Table 4-480 Version mapping

Series		Model	Software Version
S5720-SI	S5720-X-SI	S5720-14X-PWH-SI-AC	V200R009C00 to V200R019C10 versions

Appearance and Structure

Figure 4-182 S5720-14X-PWH-SI-AC appearance



1	Eight PoE+ 10/100/1000BASE-T ports	2	Four PoE++ 100M/1000M/2.5GE BASE-T ports (MultiGE port)
3	Two 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules 	4	One console port NOTE It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.

	<ul style="list-style-type: none"> • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable 		
5	One ETH management port	6	One USB port
7	Ground screw NOTE It is used with a 9.1 Ground Cable.	8	AC socket NOTE It is used with an 9.8 AC Power Cable.

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-481 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-481 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

100M/1000M/2.5G BASE-T port

A 100M/1000M/2.5G BASE-T port (MultiGE port) sends and receives service data at 100 Mbit/s, 1000 Mbit/s, or 2.5 Gbit/s, and must use an 9.4 Ethernet Cable. If the 2.5 Gbit/s speed is required, the port must use an Ethernet cable of Cat5e or higher category. Table 4-482 describes the attributes of a 100M/1000M/2.5G BASE-T port.

Table 4-482 Attributes of a 100M/1000M/2.5G BASE-T port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3u, IEEE802.3ab, IEEE802.3bz, mgbase-t
Working mode	100/1000/2500 Mbit/s auto-sensing
Maximum transmission distance	100 m

A 100M/1000M/2.5G BASE-T Ethernet port can connect to the following devices:

- All switches providing FE electrical interfaces, GE electrical interfaces or MultiGE electrical interfaces
- AP: AP7050DN-E (with 2.5G uplink interfaces) running V200R007C00 and AP5030DN-S (with GE uplink interfaces)
- Pico: BTS3911B running V100R010C10SPC092T

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-483 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-483 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-484.

Table 4-484 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the

ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-485 describes the attributes of an ETH management port.

Table 4-485 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

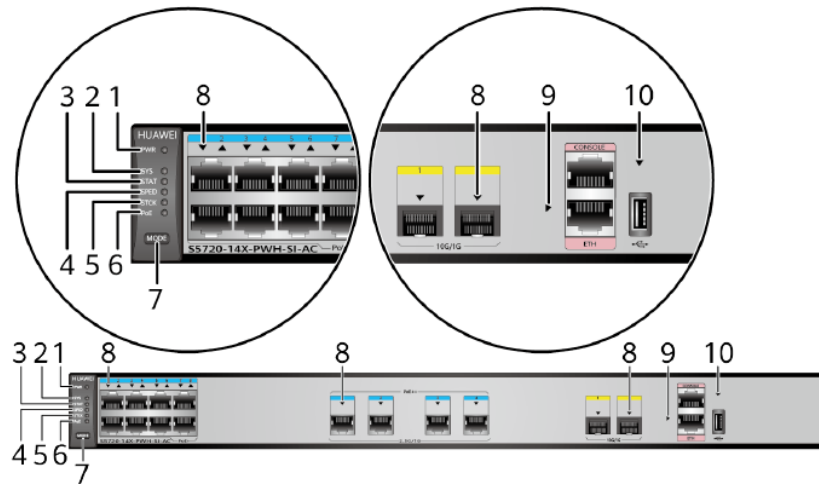
Indicator Description

NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
- If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
- If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 4-183 Indicators on the S5720-14X-PWH-SI-AC



NOTE

The S5720-SI series switches provide a command for setting fault indicators, which help field maintenance personnel find a faulty switch quickly.

The SYS indicator and mode indicators (STAT, SPED, STCK, and PoE) are used as fault indicators. When an S5720-SI switch is faulty, you can run the command to turn on the fault indicators. Then the SYS indicator and mode indicators fast blink red to help field maintenance personnel quickly find the faulty switch.

Table 4-486 Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR	Power module indicator	-	Off	The switch is powered off.
			Green	Steady on	The system power supply is normal.
			Yellow or red	Steady on	The built-in power module has failed.
2	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or temperature alarm has been generated.

No.	Indicator	Name	Color	Status	Description
3	STAT	Status indicator	-	Off	The status mode is not selected.
			Green	Steady on	The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
4	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The service port indicators show the port speeds. After 45 seconds, the service port indicators automatically restore to the status mode.
5	STCK	Stack indicator	-	Off	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is in stack standby or slave state or the stacking function is not enabled on the switch. If you are changing the indicator mode: The stack mode is not selected.
			Green	Steady on	The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is a stack master switch or a standalone switch with the stacking function enabled. If you are changing the indicator mode: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>
6	PoE	PoE indicator	-	Off	The PoE mode is not selected.
			Green	Steady on	The service port indicators show the PoE status. After 45 seconds, the service port indicators automatically restore to the status mode.
7	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> When you press this button once, the service port indicators change to the speed mode and show the speed of each service port. When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch. When you press this button a third time, the service port indicators change to the PoE

No.	Indicator	Name	Color	Status	Description
					<p>mode and show the PoE status of each service port.</p> <ul style="list-style-type: none"> When you press this button a fourth time, the service port indicators restore to the default mode, and the STAT indicator turns green. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED and PoE indicators are off, and the STCK indicator is off or blinking green.</p>
8	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see Table 4-487.		
9	-	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The ETH port is sending or receiving data.
10	-	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> No USB flash drive is connected to the switch. The USB port is damaged. The indicator is damaged. The USB flash drive does not have any configuration file and cannot be used for deployment. The switch has been upgraded using the USB flash drive and is restarting.
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from the USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

Table 4-487 Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
PoE	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.
	Yellow	Steady on	The PoE function is disabled on the port.
	Yellow	Blinking	The port stops providing PoE power because of an exception (for example, an incompatible PD is connected to the port).
	Green and yellow	Blinking green and yellow alternately	The port fails to supply power to a PD due to one of the following reasons: <ul style="list-style-type: none"> The power required by the connected PD exceeds the maximum power or the configured power threshold of the port. The total power consumption of PDs has reached the maximum power of the switch. The manual power management mode is used and the port is not enabled to provide power to the PD.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
	Green	Blinking	The switch is the master switch in a stack.

Display Mode	Color	Status	Description
			<ul style="list-style-type: none"> If the indicator of a port is blinking, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Power Supply Configuration

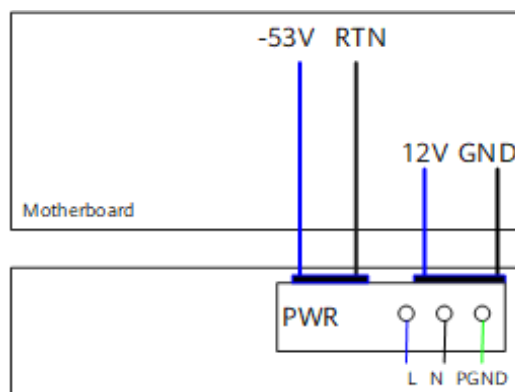
The S5720-14X-PWH-SI-AC has a built-in power module and does not support pluggable power modules. The S5720-14X-PWH-SI-AC is a PoE switch and has a built-in PoE power module.

Table 4-488 Power supply configurations (built-in power module)

Available PoE Power	Maximum Number of Ports (Fully Loaded)
369.6 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 12 802.3at (30 W per port): 12 Non-standard (90 W per port): 4 (only PoE++ ports) <p>NOTE A PoE++ port is a non-standard port and can only provide 90 W power for the attached PD.</p>

Figure 4-184 shows the power supply mode of a built-in AC PoE power module (PWR). The PWR module receives AC power from an external power source and provides two outputs: 12 V and -53 V. The 12 V output is provided for the chassis, and the -53 V output is provided for PDs.

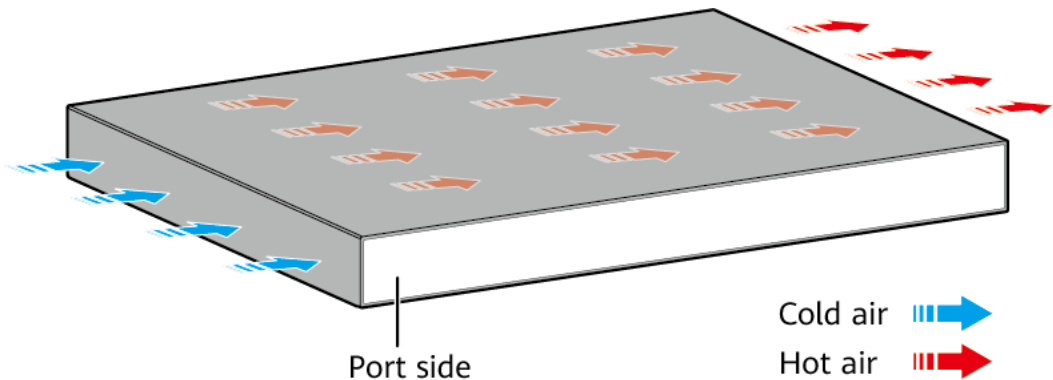
Figure 4-184 Power supply by a built-in AC PoE power module



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground RTN: -53 V reference ground

Heat Dissipation

The S5720-14X-PWH-SI-AC has three built-in fans for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-489 lists technical specifications of the S5720-14X-PWH-SI-AC.

Table 4-489 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	86.55 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 315.0 mm (1.72 in. x 17.4 in. x 12.4 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 324.0 mm (1.72 in. x 17.4 in. x 12.76 in.)
Weight (with packaging)	5.9 kg (13.01 lb)

Item	Description
Stack ports	First eight GE electrical ports 10GE SFP+ ports (V200R010C00 and later versions)
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none">Not providing the PoE function: 52 W100% PoE loads: 422 W (system power consumption: 52 W, PoE: 370 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">Tested according to ATIS standardEEE enabledNo PoE power consumption	44.94 W
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year.The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year.The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot

Item	Description
	exceed 10 km.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 52.8 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02350MTV

4.11.2 S5720-28P-SI-AC

Version Mapping

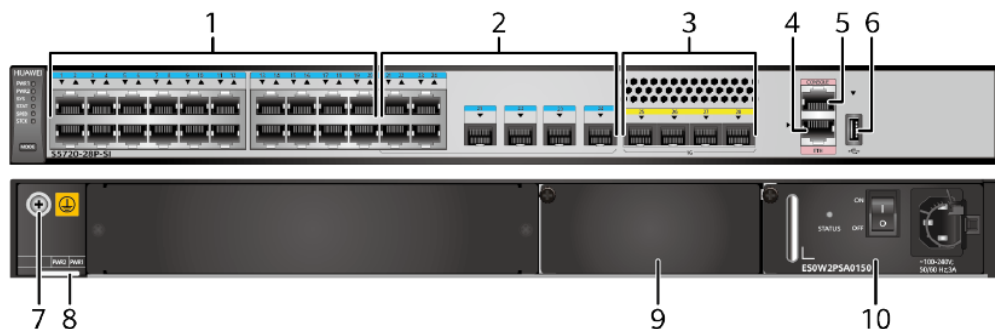
Table 4-490 lists the mapping between the S5720-28P-SI-AC chassis and software versions.

Table 4-490 Version mapping

Series		Model	Software Version
S5720-SI	S5720-P-SI	S5720-28P-SI-AC	V200R008C00 to V200R019C10 versions

Appearance and Structure

Figure 4-185 S5720-28P-SI-AC appearance



1	Twenty 10/100/1000BASE-T ports	2	Four combo ports (10/100/1000BASE-T + 100/1000BASE-X) Modules applicable to combo optical ports: <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules
3	Four 1000BASE-X ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 9.15 Copper Cable • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable • 10.19 GPON Optical Modules NOTE If a port uses a GPON optical module, other 1000BASE-X optical ports cannot be used.	4	One ETH management port
5	One console port NOTE It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.	6	One USB port
7	Ground screw NOTE It is used with a 9.1 Ground Cable.	8	ESN label NOTE You can draw it out to view the ESN and MAC address of the switch.
9	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none"> • 5.1 PAC-60WA-L (60 W AC Power Module) (supported in V200R011C10 and later versions) • 5.2 LS5M100PWA00/ES0W2PSA0150 (150 W AC Power Module) • 5.3 LS5M100PWD00/ES0W2PSD0150 	10	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> • 5.1 PAC-60WA-L (60 W AC Power Module) (supported in V200R011C10 and later versions) • 5.2 LS5M100PWA00/ES0W2PSA0150 (150 W AC Power Module) • 5.3 LS5M100PWD00/ES0W2PSD0150

	(150 W DC Power Module)		(150 W DC Power Module)
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Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-491 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-491 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. When a 1000BASE-X port uses a 10GE optical module, SFP+ high-speed copper cable, or active optical cable (AOC), the port can only be used for stack connection. Table 4-492 describes the attributes of a 1000BASE-X port.

Table 4-492 Attributes of a 1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-493.

Table 4-493 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-494 describes the attributes of an ETH management port.

Table 4-494 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5720-28P-SI-AC has similar indicators to those on the S5720-52X-PWR-SI-AC, except that the S5720-28P-SI-AC does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

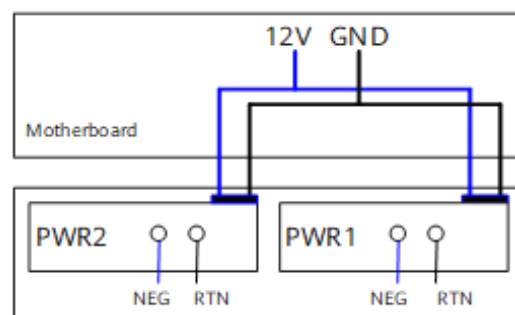
The S5720-28P-SI-AC uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

NOTE

If a 60 W power module and a 150 W power module is used in the same switch, the maximum output power of the 150 W power module is 60 W.

Figure 4-186 shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 4-186 Power supply connections of dual DC power modules



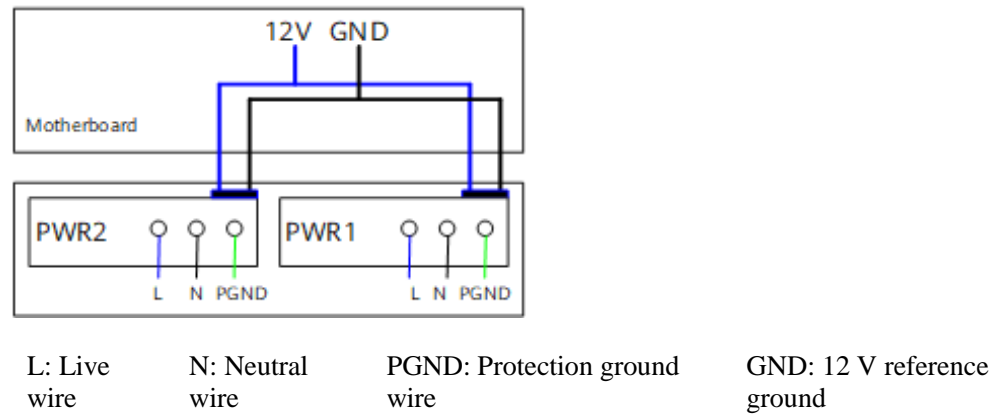
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

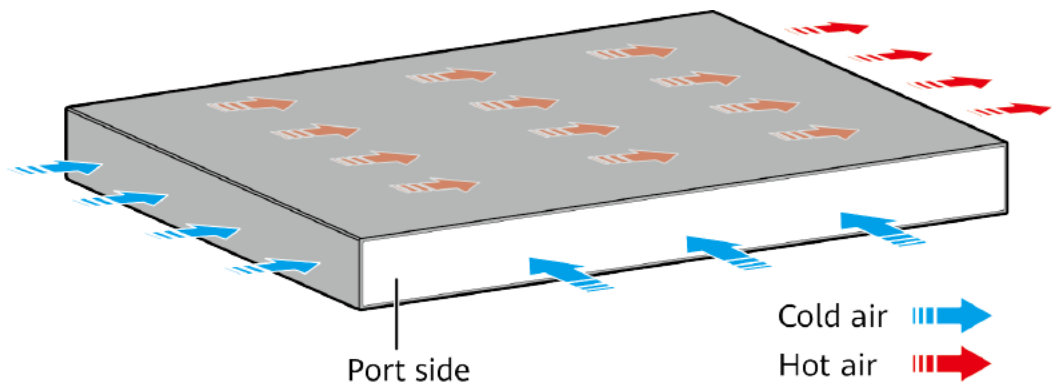
Figure 4-187 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 4-187 Power supply connections of dual AC power modules



Heat Dissipation

The S5720-28P-SI-AC has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-495 lists technical specifications of the S5720-28P-SI-AC.

Table 4-495 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the

Item	Description
	display version command.
Mean time between failures (MTBF)	85.48 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	<ul style="list-style-type: none">Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common modeUsing DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.7 mm (1.75 in. x 17.4 in. x 16.72 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.8 mm (1.75 in. x 17.4 in. x 17.79 in.)
Weight (with packaging)	9.1 kg (20.06 lb)
Stack ports	GE electrical ports and GE SFP optical ports except combo ports on the front panel
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	34.6 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">Tested according to ATIS standardEEE enabledNo PoE power	21.2 W

Item	Description
consumption	
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">• The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 52 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none">• AC power modules configured: 0-5000 m (0-16404 ft.)• DC power modules configured: 0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02350DLS

4.11.3 S5720-52P-SI-AC

Version Mapping

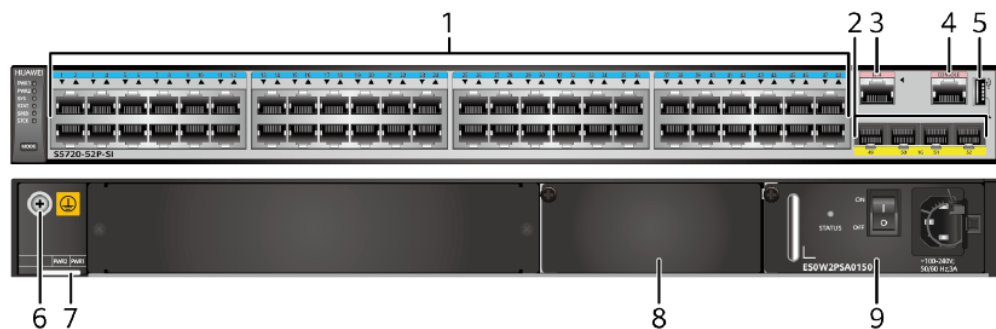
Table 4-496 lists the mapping between the S5720-52P-SI-AC chassis and software versions.

Table 4-496 Version mapping

Series		Model	Software Version
S5720-SI	S5720-P-SI	S5720-52P-SI-AC	V200R008C00 to V200R019C10 versions

Appearance and Structure

Figure 4-188 S5720-52P-SI-AC appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 1000BASE-X ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 9.15 Copper Cable • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable • 10.19 GPON Optical Modules NOTE If a port uses a GPON optical module, other 1000BASE-X optical ports cannot be used.
3	One ETH management port	4	One console port NOTE It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.
5	One USB port	6	Ground screw

			NOTE It is used with a 9.1 Ground Cable.
7	ESN label NOTE You can draw it out to view the ESN and MAC address of the switch.	8	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none"> • 5.1 PAC-60WA-L (60 W AC Power Module) (supported in V200R011C10 and later versions) • 5.2 LS5M100PWA00/ES0W2PSA0150 (150 W AC Power Module) • 5.3 LS5M100PWD00/ES0W2PSD0150 (150 W DC Power Module)
9	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> • 5.1 PAC-60WA-L (60 W AC Power Module) (supported in V200R011C10 and later versions) • 5.2 LS5M100PWA00/ES0W2PSA0150 (150 W AC Power Module) • 5.3 LS5M100PWD00/ES0W2PSD0150 (150 W DC Power Module) 	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-497 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-497 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. When a 1000BASE-X port uses a 10GE optical module, SFP+ high-speed

copper cable, or active optical cable (AOC), the port can only be used for stack connection. Table 4-498 describes the attributes of a 1000BASE-X port.

Table 4-498 Attributes of a 1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-499.

Table 4-499 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-500 describes the attributes of an ETH management port.

Table 4-500 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing

Attribute	Description
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5720-52P-SI-AC has similar indicators to those on the S5720-52X-PWR-SI-AC, except that the S5720-52P-SI-AC does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

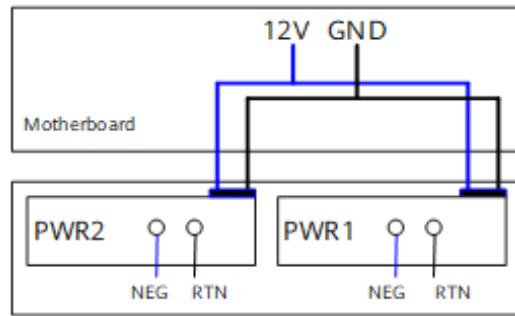
The S5720-52P-SI-AC uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

NOTE

If a 60 W power module and a 150 W power module is used in the same switch, the maximum output power of the 150 W power module is 60 W.

Figure 4-189 shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

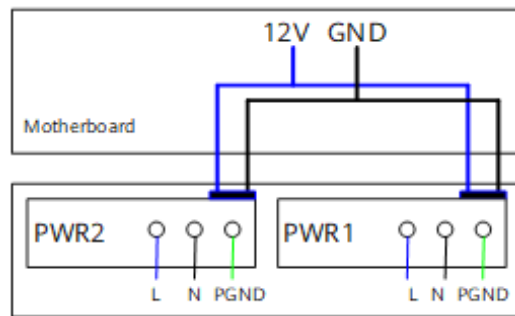
Figure 4-189 Power supply connections of dual DC power modules



NEG: negative wire RTN: positive wire GND: 12 V reference ground

Figure 4-190 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

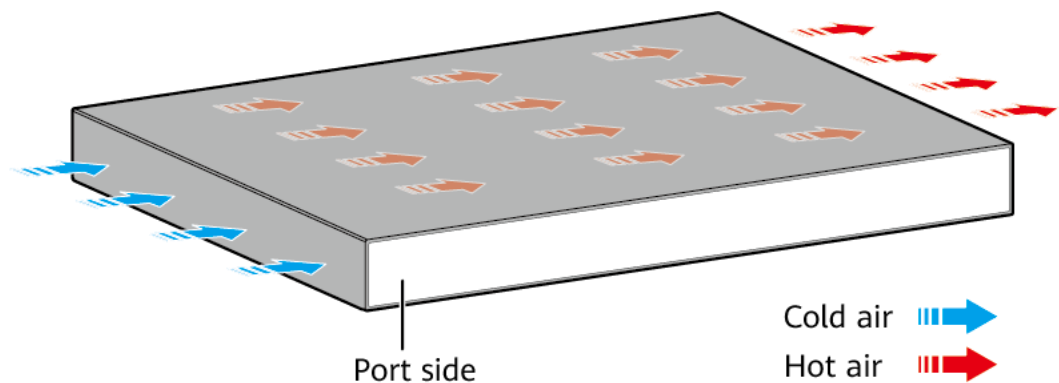
Figure 4-190 Power supply connections of dual AC power modules



L: Live wire N: Neutral wire PGND: Protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5720-52P-SI-AC has a built-in fan for forced air cooling. The airflow direction is left-to-right.



 **NOTE**

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-501 lists technical specifications of the S5720-52P-SI-AC.

Table 4-501 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	75.66 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	<ul style="list-style-type: none">Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common modeUsing DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.7 mm (1.75 in. x 17.4 in. x 16.72 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.8 mm (1.75 in. x 17.4 in. x 17.79 in.)
Weight (with packaging)	9.5 kg (20.95 lb)
Stack ports	GE electrical ports and GE SFP optical ports on the front panel
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption	53.6 W

Item	Description
(100% throughput, full speed of fans)	
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	32.2 W
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">• The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 52 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none">• AC power modules configured: 0-5000 m (0-16404 ft.)• DC power modules configured: 0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification

Item	Description
	<ul style="list-style-type: none"> Manufacturing certification
Part number	02350DLU

4.11.4 S5720-28X-SI-AC

Version Mapping

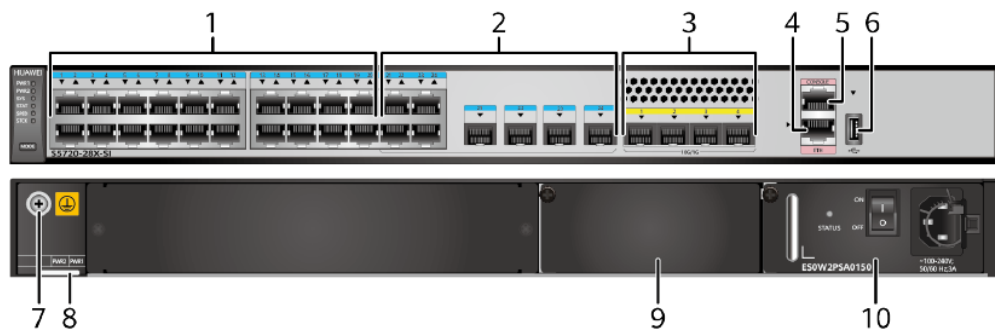
Table 4-502 lists the mapping between the S5720-28X-SI-AC chassis and software versions.

Table 4-502 Version mapping

Series		Model	Software Version
S5720-SI	S5720-X-SI	S5720-28X-SI-AC	V200R008C00 to V200R019C10 versions

Appearance and Structure

Figure 4-191 S5720-28X-SI-AC appearance



1	Twenty 10/100/1000BASE-T ports	2	Four combo ports (10/100/1000BASE-T + 100/1000BASE-X) Modules applicable to combo optical ports: <ul style="list-style-type: none"> 10.4 FE SFP/eSFP Optical Modules 10.5 GE eSFP Optical Modules 10.7 GE-CWDM eSFP Optical Modules 10.9 GE-DWDM eSFP Optical Modules
3	Four 10GE SFP+ ports	4	One ETH management port

	<p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable • 10.19 GPON Optical Modules <p>NOTE If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>		
5	<p>One console port</p> <p>NOTE It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>	6	<p>One USB port</p>
7	<p>Ground screw</p> <p>NOTE It is used with a 9.1 Ground Cable.</p>	8	<p>ESN label</p> <p>NOTE You can draw it out to view the ESN and MAC address of the switch.</p>
9	<p>Power module slot 2</p> <p>NOTE Applicable power modules:</p> <ul style="list-style-type: none"> • 5.1 PAC-60WA-L (60 W AC Power Module) (supported in V200R011C10 and later versions) • 5.2 LS5M100PWA00/ES0W2PSA0150 (150 W AC Power Module) • 5.3 LS5M100PWD00/ES0W2PSD0150 (150 W DC Power Module) 	10	<p>Power module slot 1</p> <p>NOTE Applicable power modules:</p> <ul style="list-style-type: none"> • 5.1 PAC-60WA-L (60 W AC Power Module) (supported in V200R011C10 and later versions) • 5.2 LS5M100PWA00/ES0W2PSA0150 (150 W AC Power Module) • 5.3 LS5M100PWD00/ES0W2PSD0150 (150 W DC Power Module)

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-503 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-503 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-504 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-504 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-505.

Table 4-505 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-506 describes the attributes of an ETH management port.

Table 4-506 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

 **NOTE**

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5720-28X-SI-AC has similar indicators as those on the S5720-52X-PWR-SI-AC, except that the S5720-28X-SI-AC does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

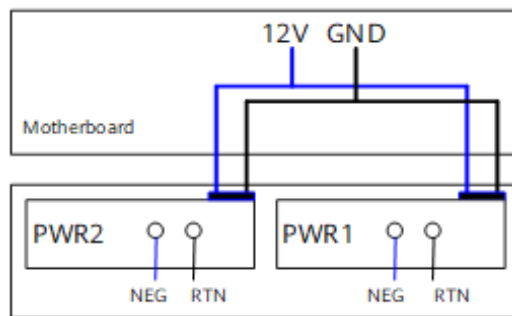
The S5720-28X-SI-AC uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

 **NOTE**

If a 60 W power module and a 150 W power module is used in the same switch, the maximum output power of the 150 W power module is 60 W.

Figure 4-192 shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 4-192 Power supply connections of dual DC power modules



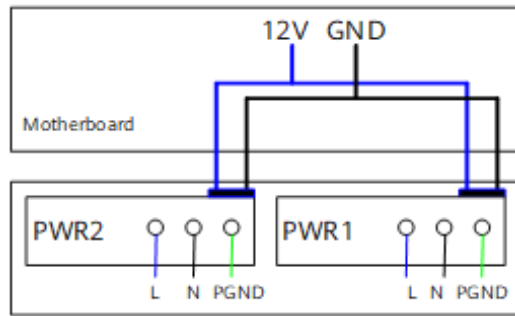
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

Figure 4-193 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 4-193 Power supply connections of dual AC power modules



L: Live wire

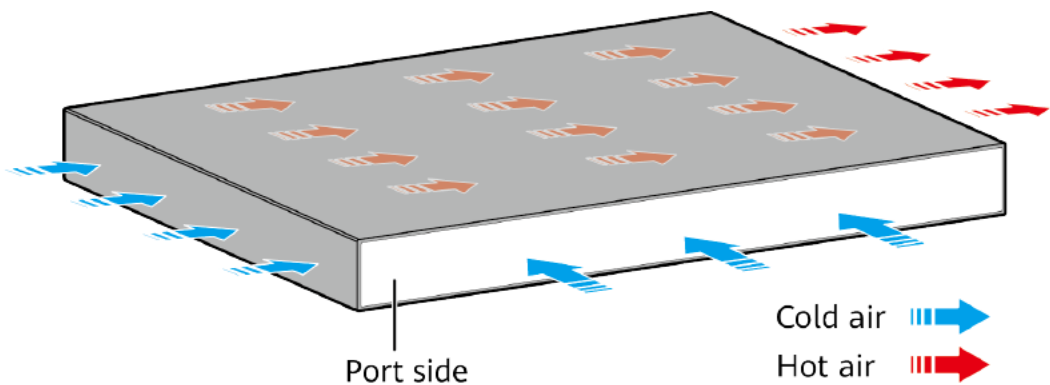
N: Neutral wire

PGND: Protection ground wire

GND: 12 V reference ground

Heat Dissipation

The S5720-28X-SI-AC has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-507 lists technical specifications of the S5720-28X-SI-AC.

Table 4-507 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	82.4 years
Mean time to repair	2 hours

Item	Description
(MTTR)	
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	<ul style="list-style-type: none">Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common modeUsing DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.7 mm (1.75 in. x 17.4 in. x 16.72 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.8 mm (1.75 in. x 17.4 in. x 17.79 in.)
Weight (with packaging)	9.1 kg (20.06 lb)
Stack ports	GE electrical ports and 10GE SFP+ optical ports except combo ports on the front panel
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	37.5 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">Tested according to ATIS standardEEE enabledNo PoE power consumption	22.3 W
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220

Item	Description
	m (722 ft.).
Short-term operating temperature	<p>-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 52 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none"> • AC power modules configured: 0-5000 m (0-16404 ft.) • DC power modules configured: 0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02350DLT

4.11.5 S5720-28X-SI-DC

Version Mapping

Table 4-508 lists the mapping between the S5720-28X-SI-DC chassis and software versions.

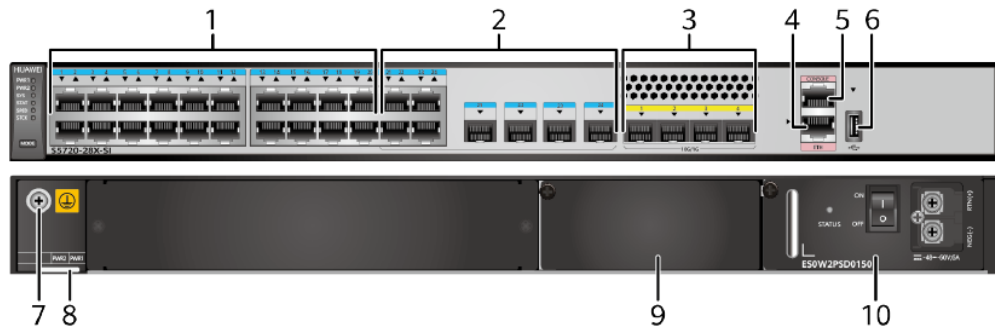
Table 4-508 Version mapping

Series		Model	Software Version
S5720-SI	S5720-X-S	S5720-28X-SI-DC	V200R009C00 to V200R019C10

Series		Model	Software Version
	I		versions

Appearance and Structure

Figure 4-194 S5720-28X-SI-DC appearance



1	Twenty 10/100/1000BASE-T ports	2	Four combo ports (10/100/1000BASE-T + 100/1000BASE-X) Modules applicable to combo optical ports: <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules
3	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.15 Copper Cable 	4	One ETH management port

	<ul style="list-style-type: none"> 9.3 Optical Fiber 9.14 Dedicated Stack Cable 10.19 GPON Optical Modules <p>NOTE If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>		
5	<p>One console port</p> <p>NOTE It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>	6	One USB port
7	<p>Ground screw</p> <p>NOTE It is used with a 9.1 Ground Cable.</p>	8	<p>ESN label</p> <p>NOTE You can draw it out to view the ESN and MAC address of the switch.</p>
9	<p>Power module slot 2</p> <p>NOTE Applicable power modules:</p> <ul style="list-style-type: none"> 5.1 PAC-60WA-L (60 W AC Power Module) (supported in V200R011C10 and later versions) 5.2 LS5M100PWA00/ES0W2PSA0150 (150 W AC Power Module) 5.3 LS5M100PWD00/ES0W2PSD0150 (150 W DC Power Module) 	10	<p>Power module slot 1</p> <p>NOTE Applicable power modules:</p> <ul style="list-style-type: none"> 5.1 PAC-60WA-L (60 W AC Power Module) (supported in V200R011C10 and later versions) 5.2 LS5M100PWA00/ES0W2PSA0150 (150 W AC Power Module) 5.3 LS5M100PWD00/ES0W2PSD0150 (150 W DC Power Module)

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-509 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-509 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-510 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-510 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-511.

Table 4-511 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)

Attribute	Description
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-512 describes the attributes of an ETH management port.

Table 4-512 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5720-28X-SI-DC has similar indicators to those on the S5720-52X-PWR-SI-AC, except that the S5720-28X-SI-DC does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

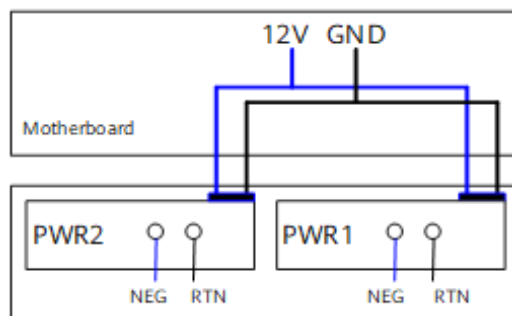
The S5720-28X-SI-DC uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

NOTE

If a 60 W power module and a 150 W power module is used in the same switch, the maximum output power of the 150 W power module is 60 W.

Figure 4-195 shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

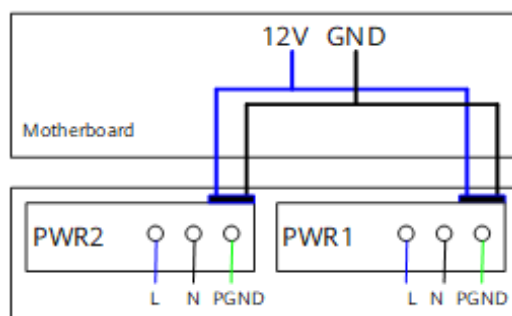
Figure 4-195 Power supply connections of dual DC power modules



NEG: negative wire RTN: positive wire GND: 12 V reference ground

Figure 4-196 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

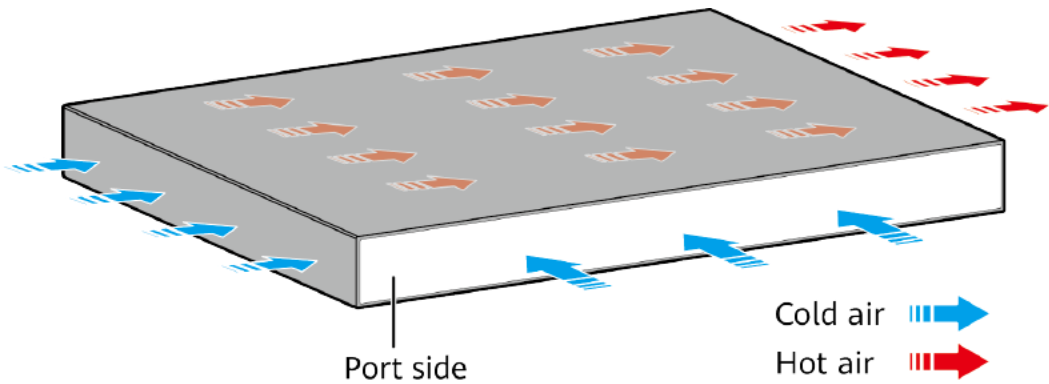
Figure 4-196 Power supply connections of dual AC power modules



L: Live wire N: Neutral wire PGND: Protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5720-28X-SI-DC has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-513 lists technical specifications of the S5720-28X-SI-DC.

Table 4-513 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	82.4 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.7 mm (1.75 in. x 17.4 in. x 16.72 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.8 mm (1.75 in. x 17.4 in. x 17.79 in.)
Weight (with	9.1 kg (20.06 lb)

Item	Description
packaging)	
Stack ports	GE electrical ports and 10GE SFP+ optical ports except combo ports on the front panel
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	36.9 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	22.5 W
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">• The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.

Item	Description
	The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 52 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none"> AC power modules configured: 0-5000 m (0-16404 ft.) DC power modules configured: 0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none"> EMC certification Safety certification Manufacturing certification
Part number	02350NGU

4.11.6 S5720-28X-PWR-SI-AC

Version Mapping

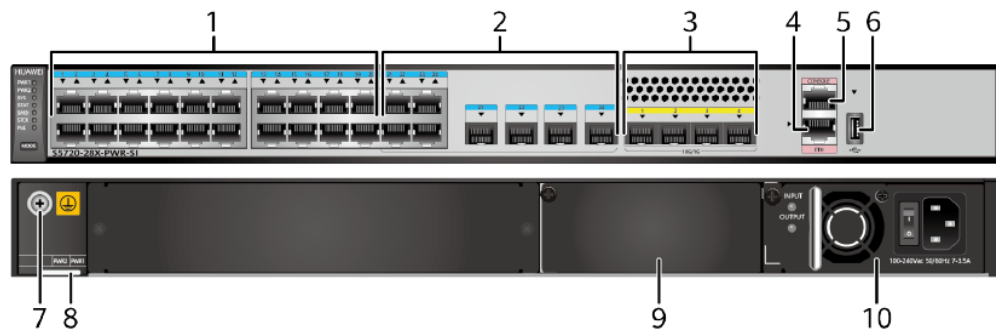
Table 4-514 lists the mapping between the S5720-28X-PWR-SI-AC chassis and software versions.

Table 4-514 Version mapping

Series		Model	Software Version
S5720-SI	S5720-X-SI	S5720-28X-PWR-SI-AC	V200R008C00 to V200R019C10 versions

Appearance and Structure

Figure 4-197 S5720-28X-PWR-SI-AC appearance



1	Twenty PoE+ 10/100/1000BASE-T ports	2	<p>Four combo ports (10/100/1000BASE-T (PoE+) + 100/1000BASE-X)</p> <p>Modules applicable to combo optical ports:</p> <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules
3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable • 10.19 GPON Optical Modules <p>NOTE If a port uses a GPON optical module, other</p>	4	One ETH management port

	10GE SFP+ optical ports cannot be used.		
5	One console port NOTE It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.	6	One USB port
7	Ground screw NOTE It is used with a 9.1 Ground Cable.	8	ESN label NOTE You can draw it out to view the ESN and MAC address of the switch.
9	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none"> • 5.6 W0PSA5000/PAC-500WA-BE (500 W AC PoE Power Module) • 5.8 PDC-650WA-BE (650 W DC PoE Power Module) 	10	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> • 5.6 W0PSA5000/PAC-500WA-BE (500 W AC PoE Power Module) • 5.8 PDC-650WA-BE (650 W DC PoE Power Module)

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-515 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-515 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-516 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-516 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-517.

Table 4-517 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-518 describes the attributes of an ETH management port.

Table 4-518 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5720-28X-PWR-SI-AC has the same types of indicators as the S5720-52X-PWR-SI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-28X-PWR-SI-AC is a PoE switch. It has two power module slots, each of which can have a 500 W or 650 W power module installed. A power module can provide 369.6 W of PoE power for powered devices (PDs). A 500 W AC power module and a 650 W DC power module can be used together in the switch. Table 4-519 lists its power supply configurations.

Table 4-519 Power supply configurations

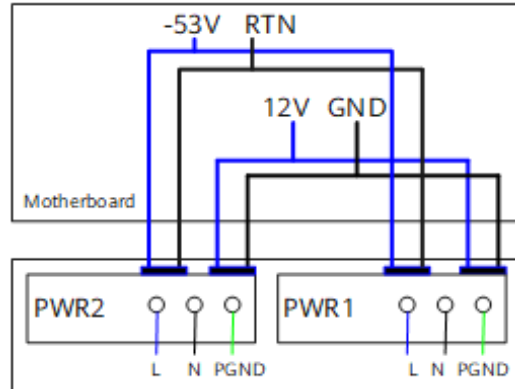
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
500 W or 650 W	-	369.6 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 12
500 W or 650 W	500 W or 650 W	739.2 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 24

NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

Figure 4-198 shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

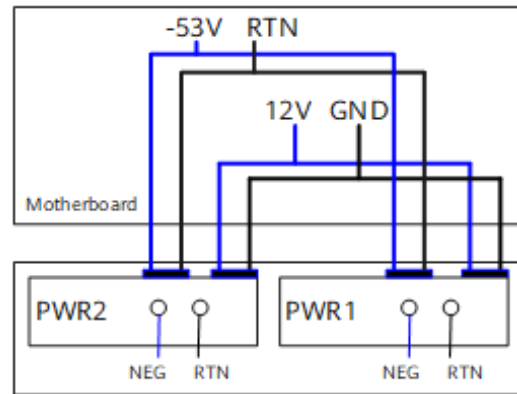
Figure 4-198 Power supply by dual AC PoE power modules



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground RTN: -53 V reference ground

Figure 4-199 shows the power supply connections of dual DC PoE power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V and -53 V output voltages, and the motherboard provides 12 V voltage for the entire device and -53 V voltage for the PDs.

Figure 4-199 Power supply connections of dual DC PoE power modules



NEG: negative wire

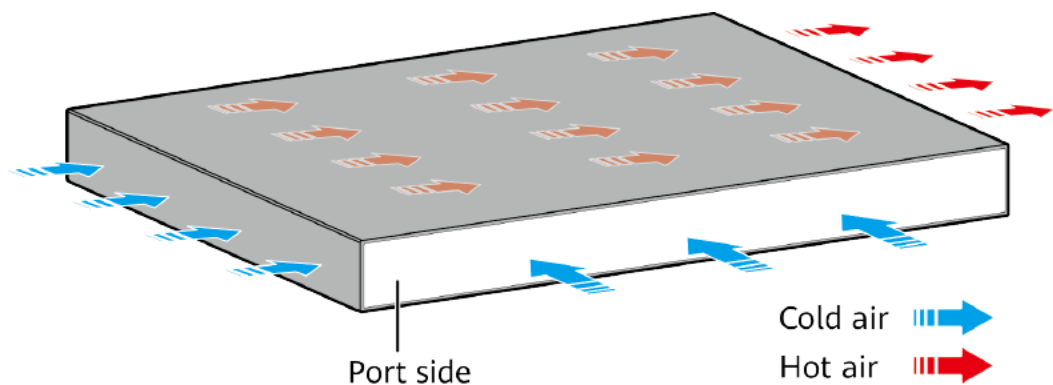
RTN: positive wire

GND: 12 V reference ground

RTN: -53 V reference ground

Heat Dissipation

The S5720-28X-PWR-SI-AC has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-520 lists technical specifications of the S5720-28X-PWR-SI-AC.

Table 4-520 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between	66.78 years

Item	Description
failures (MTBF)	
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	<ul style="list-style-type: none">Using 500 W AC power modules: ± 6 kV in differential mode, ± 6 kV in common modeUsing 650 W DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.7 mm (1.75 in. x 17.4 in. x 16.72 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.8 mm (1.75 in. x 17.4 in. x 17.79 in.)
Weight (with packaging)	9.3 kg (20.51 lb)
Stack ports	GE electrical ports and 10GE SFP+ optical ports except combo ports on the front panel
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none">Not providing the PoE function: 56.1 W100% PoE loads: 913 W (system power consumption: 173 W, PoE: 740 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">Tested according to ATIS standardEEE enabledNo PoE power consumption	31.8 W
Operating	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.)

Item	Description
temperature	NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">• The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 56.5 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02350DLW

4.11.7 S5720-28X-PWR-SI-DC

Version Mapping

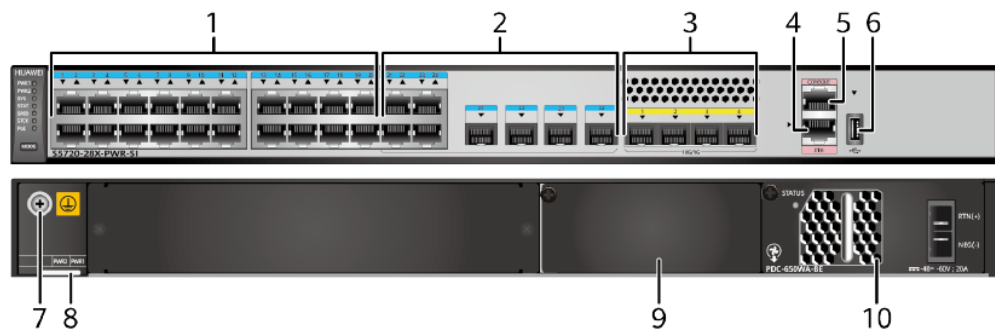
Table 4-521 lists the mapping between the S5720-28X-PWR-SI-DC chassis and software versions.

Table 4-521 Version mapping

Series		Model	Software Version
S5720-SI	S5720-X-SI	S5720-28X-PWR-SI-DC	V200R009C00 to V200R019C10 versions

Appearance and Structure

Figure 4-200 S5720-28X-PWR-SI-DC appearance



1	Twenty PoE+ 10/100/1000BASE-T ports	2	Four combo ports (10/100/1000BASE-T (PoE+) + 100/1000BASE-X) Modules applicable to combo optical ports: <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules
3	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules 	4	One ETH management port

	<ul style="list-style-type: none"> 9.15 Copper Cable 9.15 Copper Cable 9.3 Optical Fiber 9.14 Dedicated Stack Cable 10.19 GPON Optical Modules <p>NOTE If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>		
5	<p>One console port</p> <p>NOTE It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>	6	One USB port
7	<p>Ground screw</p> <p>NOTE It is used with a 9.1 Ground Cable.</p>	8	<p>ESN label</p> <p>NOTE You can draw it out to view the ESN and MAC address of the switch.</p>
9	<p>Power module slot 2</p> <p>NOTE Applicable power modules:</p> <ul style="list-style-type: none"> 5.6 WOPSA5000/PAC-500WA-BE (500 W AC PoE Power Module) 5.8 PDC-650WA-BE (650 W DC PoE Power Module) 	10	<p>Power module slot 1</p> <p>NOTE Applicable power modules:</p> <ul style="list-style-type: none"> 5.6 WOPSA5000/PAC-500WA-BE (500 W AC PoE Power Module) 5.8 PDC-650WA-BE (650 W DC PoE Power Module)

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-522 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-522 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-523 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-523 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-524.

Table 4-524 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)

Attribute	Description
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-525 describes the attributes of an ETH management port.

Table 4-525 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5720-28X-PWR-SI-DC has the same types of indicators as the S5720-52X-PWR-SI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-28X-PWR-SI-DC is a PoE switch. It has two power module slots, each of which can have a 500 W or 650 W power module installed. A power module can provide 369.6 W of PoE power for powered devices (PDs). A 500 W AC power module and a 650 W DC power module can be used together in the switch. Table 4-526 lists its power supply configurations.

Table 4-526 Power supply configurations

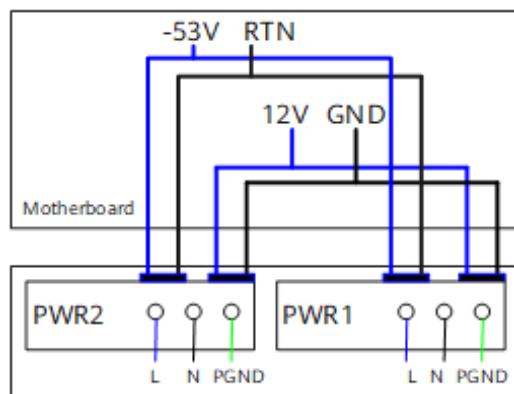
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
500 W or 650 W	-	369.6 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 12
500 W or 650 W	500 W or 650 W	739.2 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 24

NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

Figure 4-201 shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

Figure 4-201 Power supply by dual AC PoE power modules

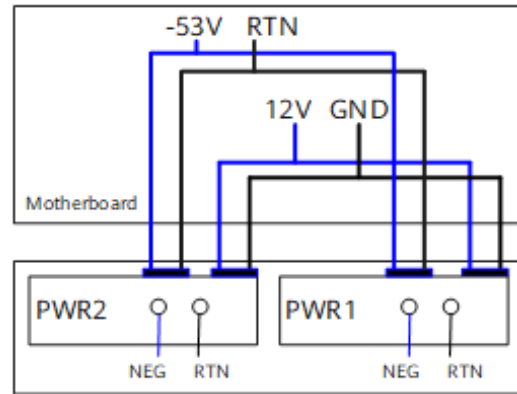


L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground RTN: -53 V reference ground

Figure 4-202 shows the power supply connections of dual DC PoE power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V and -53 V output

voltages, and the motherboard provides 12 V voltage for the entire device and -53 V voltage for the PDs.

Figure 4-202 Power supply connections of dual DC PoE power modules



NEG: negative wire

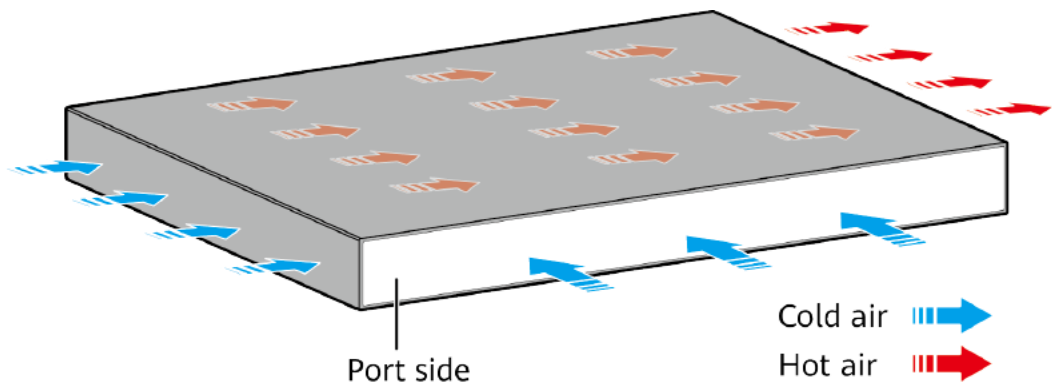
RTN: positive wire

GND: 12 V reference ground

RTN: -53 V reference ground

Heat Dissipation

The S5720-28X-PWR-SI-DC has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-527 lists technical specifications of the S5720-28X-PWR-SI-DC.

Table 4-527 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the

Item	Description
	display version command.
Mean time between failures (MTBF)	66.78 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	<ul style="list-style-type: none">Using 500 W AC power modules: ± 6 kV in differential mode, ± 6 kV in common modeUsing 650 W DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.7 mm (1.75 in. x 17.4 in. x 16.72 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.8 mm (1.75 in. x 17.4 in. x 17.79 in.)
Weight (with packaging)	9.3 kg (20.51 lb)
Stack ports	GE electrical ports and 10GE SFP+ optical ports except combo ports on the front panel
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none">Not providing the PoE function: 56.3 W100% PoE loads: 887 W (system power consumption: 147 W, PoE: 740 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">Tested according to ATIS standardEEE enabledNo PoE power	32.6 W

Item	Description
consumption	
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">• The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 56.5 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02350NGW

4.11.8 S5720-28X-SI-24S-AC

Version Mapping

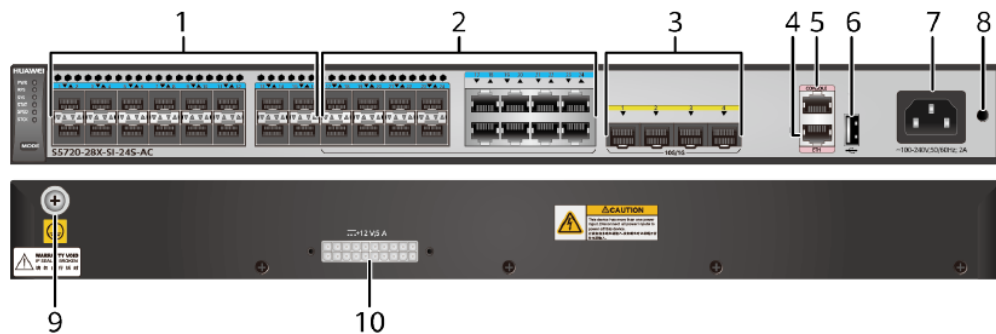
Table 4-528 lists the mapping between the S5720-28X-SI-24S-AC chassis and software versions.

Table 4-528 Version mapping

Series		Model	Software Version
S5720-SI	S5720-X-SI	S5720-28X-SI-24S-AC	V200R010C00 to V200R019C10 versions

Appearance and Structure

Figure 4-203 S5720-28X-SI-24S-AC appearance



1	<p>Sixteen 100/1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.8 GE-CWDM eSFP Optical Modules (Used Only in the OADM scenario) • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules 	2	<p>Eight combo ports (10/100/1000BASE-T + 100/1000BASE-X)</p> <p>Modules applicable to combo optical ports:</p> <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.8 GE-CWDM eSFP Optical Modules (Used Only in the OADM scenario) • 10.9 GE-DWDM eSFP Optical Modules
3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical 	4	<p>One ETH management port</p>

	<p>Modules</p> <ul style="list-style-type: none"> • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable • 10.19 GPON Optical Modules <p>NOTE If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>		
5	<p>One console port</p> <p>NOTE It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>	6	One USB port
7	<p>AC socket</p> <p>NOTE It is used with an 9.8 AC Power Cable.</p>	8	<p>Jack for AC power cable locking strap</p> <p>NOTE The AC power cable locking strap is not delivered with the switch.</p>
9	<p>Ground screw</p> <p>NOTE It is used with a 9.1 Ground Cable.</p>	10	<p>RPS socket</p> <p>NOTE It is used with an 9.12 RPS Cable, which is not hot swappable.</p>

Port Description

100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. Table 4-529 describes the attributes of a 100/1000BASE-X port.

Table 4-529 Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

Combo port

A combo port consists of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. The electrical and optical ports

of a combo port are multiplexed, and only one of them can work at a time. When one of the Ethernet ports is working, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-530 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-530 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-531.

Table 4-531 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s

Attribute	Description
	Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-532 describes the attributes of an ETH management port.

Table 4-532 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

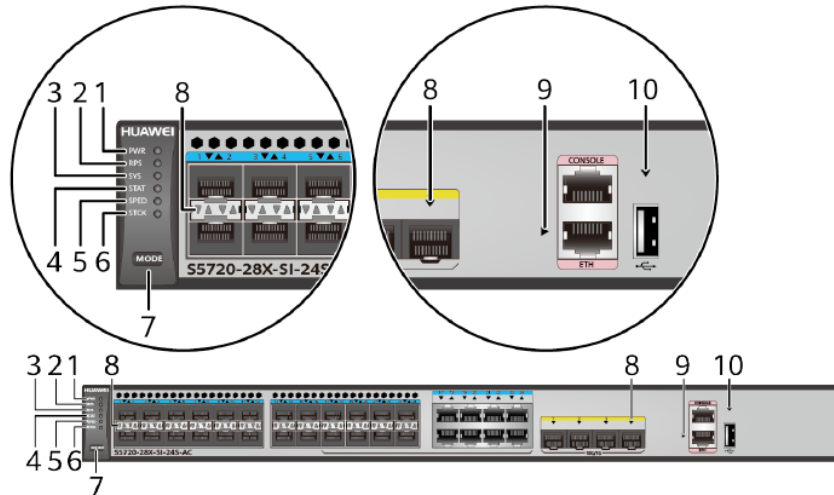
NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:

- If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
- If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 4-204 Indicators on the S5720-28X-SI-24S-AC



NOTE

The S5720-SI series switches provide a command for setting fault indicators, which help field maintenance personnel find a faulty switch quickly.

The SYS indicator and mode indicators (STAT, SPED, and STCK) are used as fault indicators of a switch. If the switch fails, its SYS indicator and mode indicators can be configured to blink red fast so that field maintenance personnel can find this faulty switch.

Table 4-533 Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR	Power module indicator	-	Off	The switch is powered off.
			Green	Steady on	The system power supply is normal.
			Yellow	Steady on	The built-in power module has failed, and the switch is receiving power from a redundant power supply (RPS).
2	RPS	RPS indicator	-	Off	The switch is not connected to an RPS.
			Green	Steady on	The RPS is in cold standby state.
			Green	Blinking	The RPS is supplying power to another switch.

No.	Indicator	Name	Color	Status	Description
			Yellow	Blinking	The RPS is supplying power to the local switch, and the built-in power module of the switch has failed.
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or temperature alarm has been generated.
4	STAT	Status indicator	-	Off	The status mode is not selected.
			Green	Steady on	The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
5	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The service port indicators show the port speeds. After 45 seconds, the service port indicators automatically restore to the status mode.
6	STCK	Stack indicator	-	Off	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is in stack standby or slave state or the stacking function is not enabled on the switch. If you are changing the indicator mode: The stack mode is not selected.
			Green	Steady on	The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is a stack master switch or a standalone switch with the stacking function enabled. If you are changing the indicator mode: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>

No.	Indicator	Name	Color	Status	Description
7	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> When you press this button once, the service port indicators change to the speed mode and show the speed of each service port. When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch. When you press this button a third time, the service port indicators restore to the default mode, and the STAT indicator turns green. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED indicator is off, and the STCK indicator is off or blinking green.</p>
8	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see Table 4-534 and Table 4-535.		
9	-	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The ETH port is sending or receiving data.
10	-	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> No USB flash drive is connected to the switch. The USB port is damaged. The indicator is damaged. The USB flash drive does not have any configuration file and cannot be used for deployment. The switch has been upgraded using the USB flash drive and is restarting.
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from the USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data

No.	Indicator	Name	Color	Status	Description
					from the USB flash drive.

Table 4-534 Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is blinking, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Table 4-535 Description of service port indicators in different modes (two indicators for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.

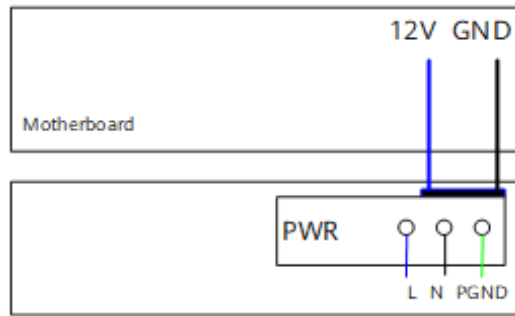
Display Mode	Color	Status	Description
	Green	Steady on	A link has been established on the port.
	Yellow	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green and yellow	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 100M/1000M port: The port is operating at 100 Mbit/s.
	Green and yellow	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 100M/1000M port: The port is operating at 1000 Mbit/s.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green and yellow	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none">• If the indicator of a port is steady on, the number of this port is the stack ID of the switch.• If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
	Green and yellow	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none">• If the indicator of a port is blinking, the number of this port is the stack ID of the switch.• If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Power Supply Configuration

The S5720-28X-SI-24S-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

Figure 4-205 shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 4-205 Power supply mode of a built-in AC power module



L: live wire

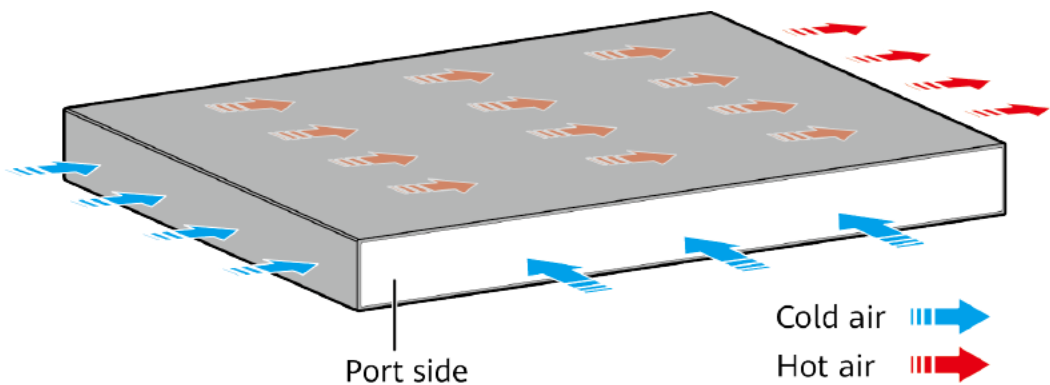
N: neutral wire

PGND: protection ground wire

GND: 12 V reference ground

Heat Dissipation

The S5720-28X-SI-24S-AC has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-536 lists technical specifications of the S5720-28X-SI-24S-AC.

Table 4-536 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	41 years
Mean time to repair	2 hours

Item	Description
(MTTR)	
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 224.8 mm (1.72 in. x 17.4 in. x 8.85 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 233.8 mm (1.72 in. x 17.4 in. x 9.21 in.)
Weight (with packaging)	4.1 kg (9.04 lb)
Stack ports	GE SFP optical ports and 10GE SFP+ optical ports except combo ports on the front panel
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	41.7 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">Tested according to ATIS standardEEE enabledNo PoE power consumption	28.9 W
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Short-term operating	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.)

Item	Description
temperature	<p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 43 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010625

4.11.9 S5720-28X-SI-24S-DC

Version Mapping

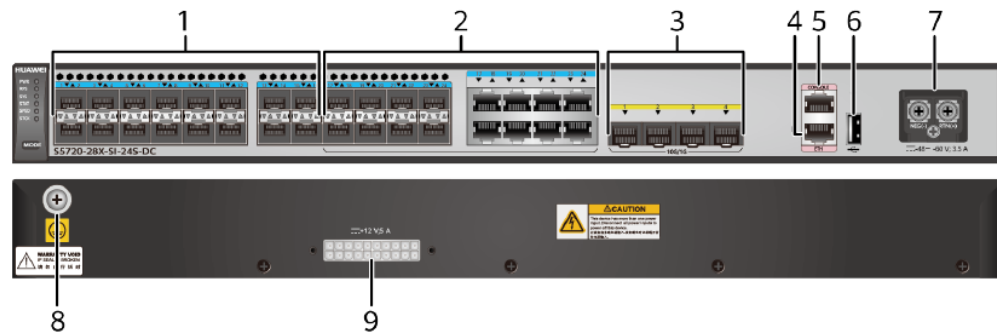
Table 4-537 lists the mapping between the S5720-28X-SI-24S-DC chassis and software versions.

Table 4-537 Version mapping

Series		Model	Software Version
S5720-SI	S5720-X-SI	S5720-28X-SI-24S-DC	V200R010C00 to V200R019C10 versions

Appearance and Structure

Figure 4-206 S5720-28X-SI-24S-DC appearance



1	<p>Sixteen 100/1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.8 GE-CWDM eSFP Optical Modules (Used Only in the OADM scenario) • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules 	<p>2</p> <p>Eight combo ports (10/100/1000BASE-T + 100/1000BASE-X)</p> <p>Modules applicable to combo optical ports:</p> <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.8 GE-CWDM eSFP Optical Modules (Used Only in the OADM scenario) • 10.9 GE-DWDM eSFP Optical Modules
3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable • 10.19 GPON Optical Modules 	<p>4</p> <p>One ETH management port</p>

	<p>NOTE If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>		
5	<p>One console port</p> <p>NOTE It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>	6	One USB port
7	<p>DC power terminal</p> <p>NOTE It is used together with a 9.5 DC Power Cable (with OT and Cord End Terminals).</p>	8	<p>Ground screw</p> <p>NOTE It is used with a 9.1 Ground Cable.</p>
9	<p>RPS socket</p> <p>NOTE It is used with an 9.12 RPS Cable, which is not hot swappable.</p>	-	-

Port Description

100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. Table 4-538 describes the attributes of a 100/1000BASE-X port.

Table 4-538 Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

Combo port

A combo port consists of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. The electrical and optical ports of a combo port are multiplexed, and only one of them can work at a time. When one of the Ethernet ports is working, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.

- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-539 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-539 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-540.

Table 4-540 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management

port is faster than transfer through the console port. Table 4-541 describes the attributes of an ETH management port.

Table 4-541 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

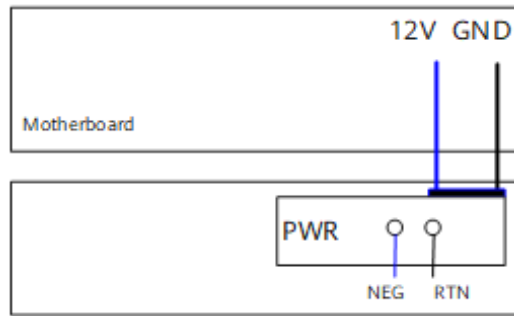
The S5720-28X-SI-24S-DC has the same types of indicators as the S5720-28X-SI-24S-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-28X-SI-24S-DC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

Figure 4-207 shows the power supply mode of a single DC power module. The built-in DC power module (PWR) receives DC power from an external power source and provides a 12 V output to the chassis.

Figure 4-207 Power supply by a single DC power module



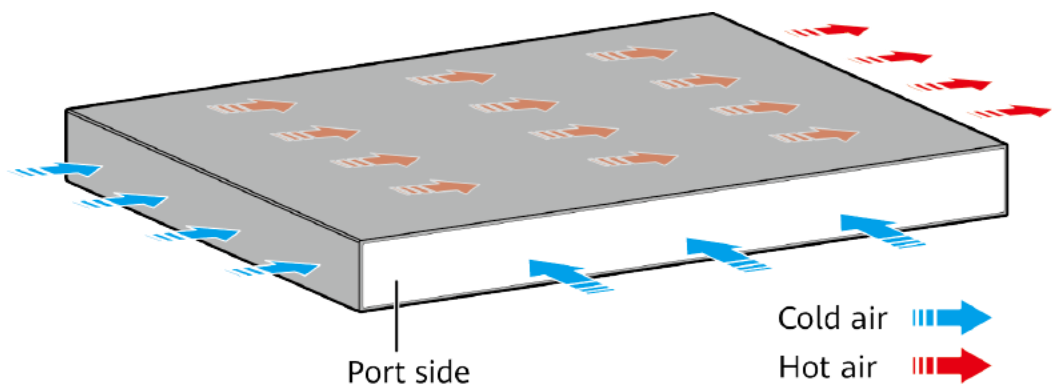
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

Heat Dissipation

The S5720-28X-SI-24S-DC has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-542 lists technical specifications of the S5720-28X-SI-24S-DC.

Table 4-542 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	41 years
Mean time to repair (MTTR)	2 hours

Item	Description
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 224.8 mm (1.72 in. x 17.4 in. x 8.85 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 233.8 mm (1.72 in. x 17.4 in. x 9.21 in.)
Weight (with packaging)	4.1 kg (9.04 lb)
Stack ports	GE SFP optical ports and 10GE SFP+ optical ports except combo ports on the front panel
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	-48 V DC to -60 V DC
Maximum voltage range	-36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	42.7 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">Tested according to ATIS standardEEE enabledNo PoE power consumption	30.3 W
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE

Item	Description
	<p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none">• The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 43 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010626

4.11.10 S5721-28X-SI-24S-AC

Version Mapping

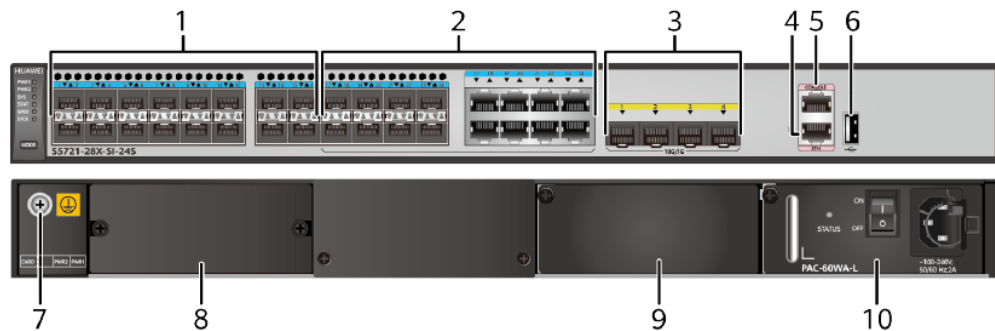
Table 4-543 lists the mapping between the S5721-28X-SI-24S-AC chassis and software versions.

Table 4-543 Version mapping

Series		Switch Model	Software Version
S5720-SI	S5720-X-SI	S5721-28X-SI-24S-AC	V200R011C10 to V200R019C10 versions

Appearance and Structure

Figure 4-208 S5721-28X-SI-24S-AC appearance



1	<p>Sixteen 100/1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.8 GE-CWDM eSFP Optical Modules (Used Only in the OADM scenario) • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules 	2	<p>Eight combo ports (10/100/1000BASE-T + 100/1000BASE-X)</p> <p>Modules applicable to combo optical ports:</p> <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.8 GE-CWDM eSFP Optical Modules (Used Only in the OADM scenario) • 10.9 GE-DWDM eSFP Optical Modules
3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable • 10.19 GPON Optical Modules 	4	<p>One ETH management port</p>

	NOTE If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.		
5	One console port NOTE It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.	6	One USB port
7	Ground screw NOTE It is used with a 9.1 Ground Cable.	8	Rear card slot NOTE This slot is reserved for future use.
9	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none"> • 5.1 PAC-60WA-L (60 W AC Power Module) • 5.3 LS5M100PWD00/ES0W2PSD0150 (150 W DC Power Module) 	10	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> • 5.1 PAC-60WA-L (60 W AC Power Module) • 5.3 LS5M100PWD00/ES0W2PSD0150 (150 W DC Power Module)

Port Description

100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. Table 4-544 describes the attributes of a 100/1000BASE-X port.

Table 4-544 Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

Combo port

A combo port consists of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. The electrical and optical ports of a combo port are multiplexed, and only one of them can work at a time. When one of the Ethernet ports is working, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-545 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-545 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-546.

Table 4-546 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-547 describes the attributes of an ETH management port.

Table 4-547 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

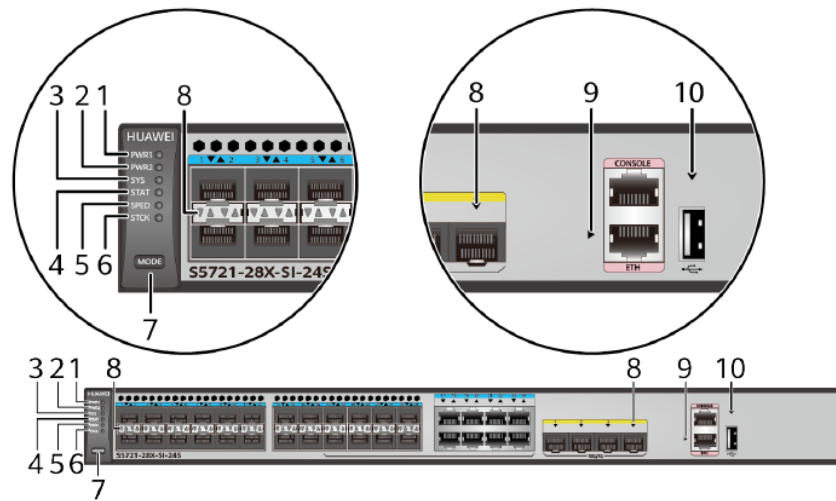
Indicator Description

NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
- If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
- If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 4-209 Indicators on the S5721-28X-SI-24S-AC



NOTE

The S5720-SI series switches provide a command for setting fault indicators, which help field maintenance personnel find a faulty switch quickly.

The SYS indicator and mode indicators (STAT, SPED, and STCK) are used as fault indicators of a switch. If the switch fails, its SYS indicator and mode indicators can be configured to blink red fast so that field maintenance personnel can find this faulty switch.

Table 4-548 Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR1	Power module indicator	-	Off	No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 1 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none"> A power module is available in this slot but its power switch is in the OFF position. A power module is available in this slot but it is not connected to a power source. The power module in this slot has failed.
2	PWR2	Power module indicator	-	Off	No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module

No.	Indicator	Name	Color	Status	Description
			en	on	slot 2 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 2: <ul style="list-style-type: none"> A power module is available in this slot but its power switch is in the OFF position. A power module is available in this slot but it is not connected to a power source. The power module in this slot has failed.
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or temperature alarm has been generated.
4	STAT	Status indicator	-	Off	The status mode is not selected.
			Green	Steady on	The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
5	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The service port indicators show the port speeds. After 45 seconds, the service port indicators automatically restore to the status mode.
6	STACK	Stack indicator	-	Off	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is in stack standby or slave state or the stacking function is not enabled on the switch. If you are changing the indicator mode: The stack mode is not selected.
			Green	Steady on	The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is a stack master switch or a standalone switch with the stacking function enabled. If you are changing the indicator mode: The

No.	Indicator	Name	Color	Status	Description
					<p>switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch.</p> <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>
7	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> When you press this button once, the service port indicators change to the speed mode and show the speed of each service port. When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch. When you press this button a third time, the service port indicators restore to the default mode, and the STAT indicator turns green. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED indicator is off, and the STCK indicator is off or blinking green.</p>
8	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see Table 4-549 and Table 4-550.		
9	-	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The ETH port is sending or receiving data.
10	-	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> No USB flash drive is connected to the switch. The USB port is damaged. The indicator is damaged. The USB flash drive does not have any configuration file and cannot be used for deployment. The switch has been upgraded using the USB flash drive and is restarting.
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from the USB flash

No.	Indicator	Name	Color	Status	Description
			Green	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Yellow	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

Table 4-549 Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is blinking, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Table 4-550 Description of service port indicators in different modes (two indicators for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Yellow	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green and yellow	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 100M/1000M port: The port is operating at 100 Mbit/s.
	Green and yellow	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 100M/1000M port: The port is operating at 1000 Mbit/s.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green and yellow	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
	Green and yellow	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is blinking, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Power Supply Configuration

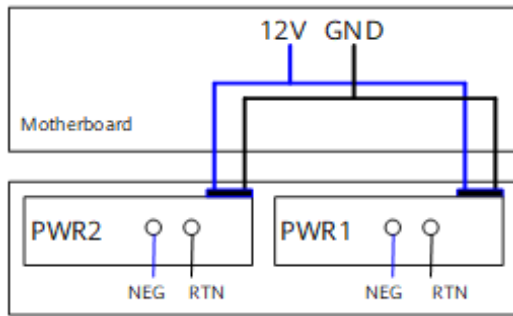
The S5721-28X-SI-24S-AC uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

NOTE

If a 60 W AC power module and a 150 W DC power module is used in the same switch, the maximum output power of the 150 W DC power module is 60 W.

Figure 4-210 shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

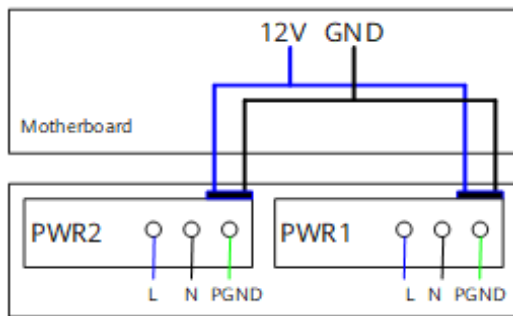
Figure 4-210 Power supply connections of dual DC power modules



NEG: negative wire RTN: positive wire GND: 12 V reference ground

Figure 4-211 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

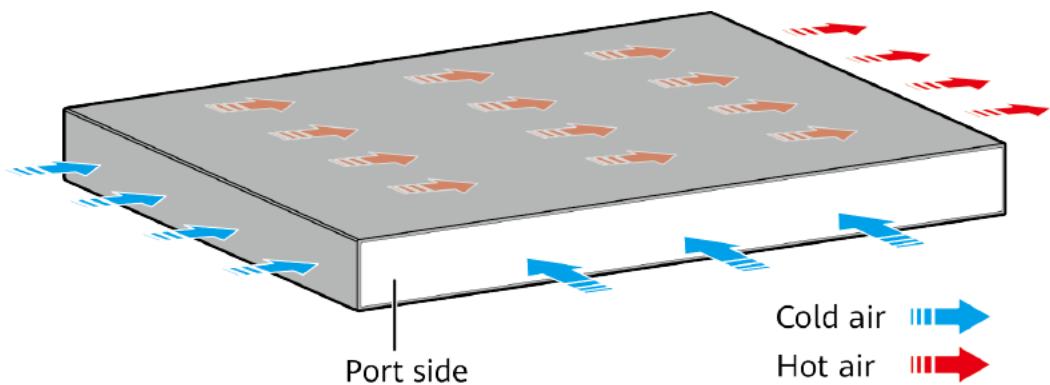
Figure 4-211 Power supply connections of dual AC power modules



L: Live wire N: Neutral wire PGND: Protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5721-28X-SI-24S-AC has one built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



 NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-551 lists technical specifications of the S5721-28X-SI-24S-AC.

Table 4-551 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	36 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	<ul style="list-style-type: none">Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common modeUsing DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 425.0 mm (1.75 in. x 17.4 in. x 16.73 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.3 mm (1.75 in. x 17.4 in. x 17.77 in.)
Weight (including package)	8.6 kg (18.96 lb)
Stack ports	GE optical ports and 10GE SFP+ optical ports except combo ports on the front panel
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power	41 W

Item	Description
consumption (100% throughput, full speed of fans)	
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	34.5 W
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">• The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 50.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none">• AC power modules configured: 0-5000 m (0-16404 ft.)• DC power modules configured: 0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none">• EMC certification

Item	Description
	<ul style="list-style-type: none"> Safety certification Manufacturing certification
Part number	98010661

4.11.11 S5720-52X-SI-AC

Version Mapping

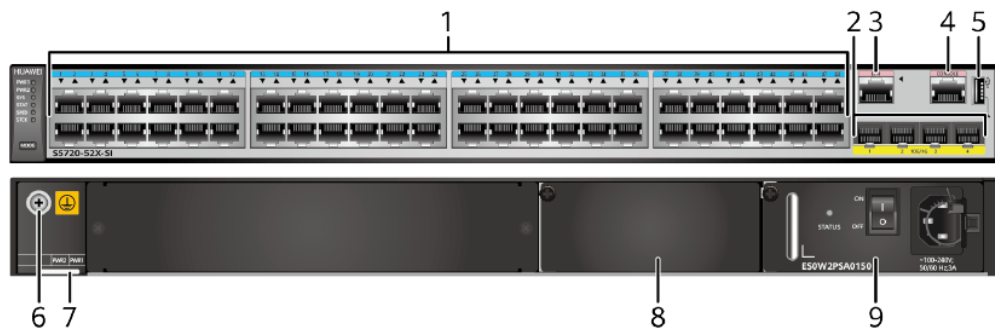
Table 4-552 lists the mapping between the S5720-52X-SI-AC chassis and software versions.

Table 4-552 Version mapping

Series		Model	Software Version
S5720-SI	S5720-X-SI	S5720-52X-SI-AC	V200R008C00 to V200R019C10 versions

Appearance and Structure

Figure 4-212 S5720-52X-SI-AC appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> 10.5 GE eSFP Optical Modules 10.7 GE-CWDM eSFP Optical Modules 10.9 GE-DWDM eSFP Optical Modules 10.10 GE SFP Copper Modules 10.12 10GE SFP+ Optical Modules 10.13 10GE-CWDM SFP+ Optical Modules
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			<ul style="list-style-type: none"> • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable • 10.19 GPON Optical Modules <p>NOTE If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>
3	One ETH management port	4	<p>One console port</p> <p>NOTE It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>
5	One USB port	6	<p>Ground screw</p> <p>NOTE It is used with a 9.1 Ground Cable.</p>
7	<p>ESN label</p> <p>NOTE You can draw it out to view the ESN and MAC address of the switch.</p>	8	<p>Power module slot 2</p> <p>NOTE Applicable power modules:</p> <ul style="list-style-type: none"> • 5.1 PAC-60WA-L (60 W AC Power Module) (supported in V200R011C10 and later versions) • 5.2 LS5M100PWA00/ES0W2PSA0150 (150 W AC Power Module) • 5.3 LS5M100PWD00/ES0W2PSD0150 (150 W DC Power Module)
9	<p>Power module slot 1</p> <p>NOTE Applicable power modules:</p> <ul style="list-style-type: none"> • 5.1 PAC-60WA-L (60 W AC Power Module) (supported in V200R011C10 and later versions) • 5.2 LS5M100PWA00/ES0W2PSA0150 (150 W AC Power Module) • 5.3 LS5M100PWD00/ES0W2PSD0150 (150 W DC Power Module) 	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-553 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-553 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-554 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-554 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-555.

Table 4-555 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-556 describes the attributes of an ETH management port.

Table 4-556 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5720-52X-SI-AC has similar indicators to those on the S5720-52X-PWR-SI-AC, except that the S5720-52X-SI-AC does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

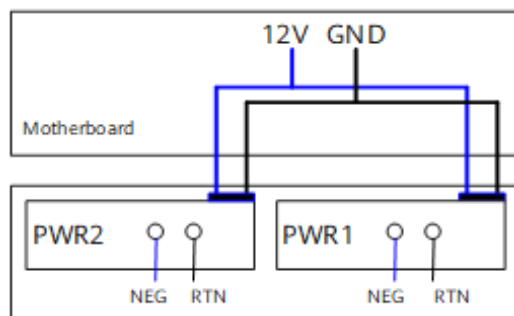
The S5720-52X-SI-AC uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

NOTE

If a 60 W power module and a 150 W power module is used in the same switch, the maximum output power of the 150 W power module is 60 W.

Figure 4-213 shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 4-213 Power supply connections of dual DC power modules



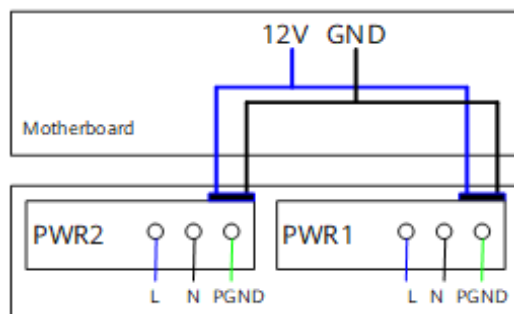
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

Figure 4-214 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 4-214 Power supply connections of dual AC power modules



L: Live wire

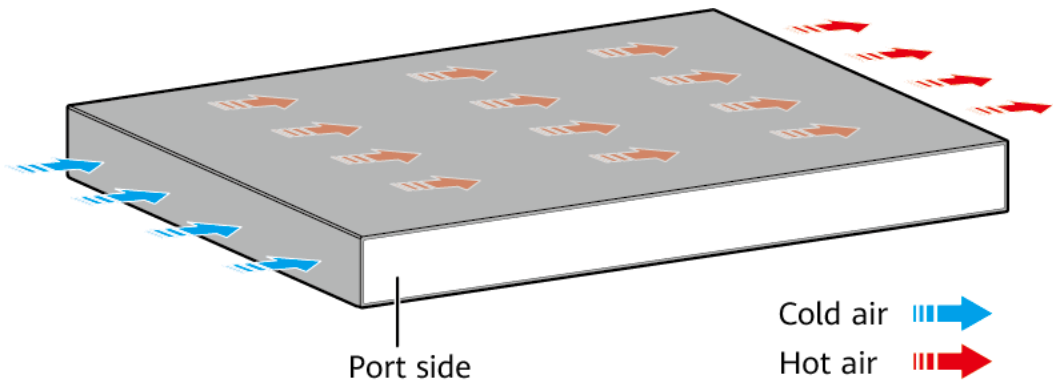
N: Neutral wire

PGND: Protection ground wire

GND: 12 V reference ground

Heat Dissipation

The S5720-52X-SI-AC has a built-in fan for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-557 lists technical specifications of the S5720-52X-SI-AC.

Table 4-557 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	73.23 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.7 mm (1.75 in. x 17.4 in. x 16.72 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.8 mm (1.75 in. x 17.4 in. x 17.79 in.)
Weight (with	9.5 kg (20.95 lb)

Item	Description
packaging)	
Stack ports	GE electrical ports and 10GE SFP+ optical ports on the front panel
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	56.8 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	33.8 W
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0 °C (32 °F).

Item	Description
	The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 52 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none">AC power modules configured: 0-5000 m (0-16404 ft.)DC power modules configured: 0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none">EMC certificationSafety certificationManufacturing certification
Part number	02350DLV

4.11.12 S5720-52X-SI-DC

Version Mapping

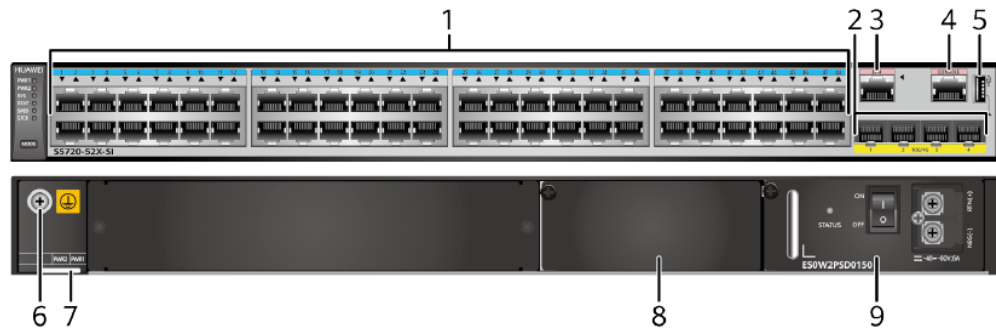
Table 4-558 lists the mapping between the S5720-52X-SI-DC chassis and software versions.

Table 4-558 Version mapping

Series		Model	Software Version
S5720-SI	S5720-X-SI	S5720-52X-SI-DC	V200R009C00 to V200R019C10 versions

Appearance and Structure

Figure 4-215 S5720-52X-SI-DC appearance



1	Forty-eight 10/100/1000BASE-T ports	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable • 10.19 GPON Optical Modules <p>NOTE If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>
3	One ETH management port	4	<p>One console port</p> <p>NOTE It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>
5	One USB port	6	<p>Ground screw</p> <p>NOTE It is used with a 9.1 Ground Cable.</p>
7	ESN label	8	Power module slot 2

	<p>NOTE</p> <p>You can draw it out to view the ESN and MAC address of the switch.</p>		<p>NOTE</p> <p>Applicable power modules:</p> <ul style="list-style-type: none"> • 5.1 PAC-60WA-L (60 W AC Power Module) (supported in V200R011C10 and later versions) • 5.2 LS5M100PWA00/ES0W2PSA0150 (150 W AC Power Module) • 5.3 LS5M100PWD00/ES0W2PSD0150 (150 W DC Power Module)
9	<p>Power module slot 1</p> <p>NOTE</p> <p>Applicable power modules:</p> <ul style="list-style-type: none"> • 5.1 PAC-60WA-L (60 W AC Power Module) (supported in V200R011C10 and later versions) • 5.2 LS5M100PWA00/ES0W2PSA0150 (150 W AC Power Module) • 5.3 LS5M100PWD00/ES0W2PSD0150 (150 W DC Power Module) 	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-559 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-559 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-560 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-560 Attributes of a 10GE SFP+ port

Attribute	Description
-----------	-------------

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-561.

Table 4-561 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-562 describes the attributes of an ETH management port.

Table 4-562 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission	100 m

Attribute	Description
distance	

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5720-52X-SI-DC has similar indicators to those on the S5720-52X-PWR-SI-AC, except that the S5720-52X-SI-DC does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

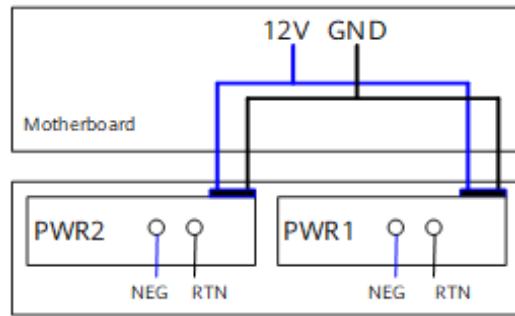
The S5720-52X-SI-DC uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

NOTE

If a 60 W power module and a 150 W power module is used in the same switch, the maximum output power of the 150 W power module is 60 W.

Figure 4-216 shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

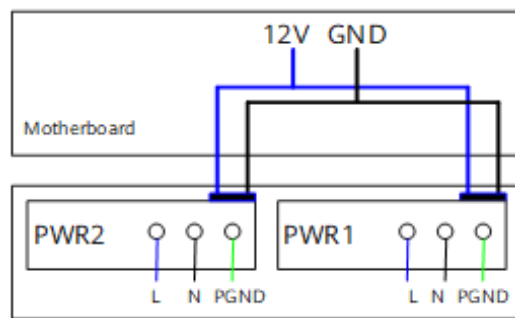
Figure 4-216 Power supply connections of dual DC power modules



NEG: negative wire RTN: positive wire GND: 12 V reference ground

Figure 4-217 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

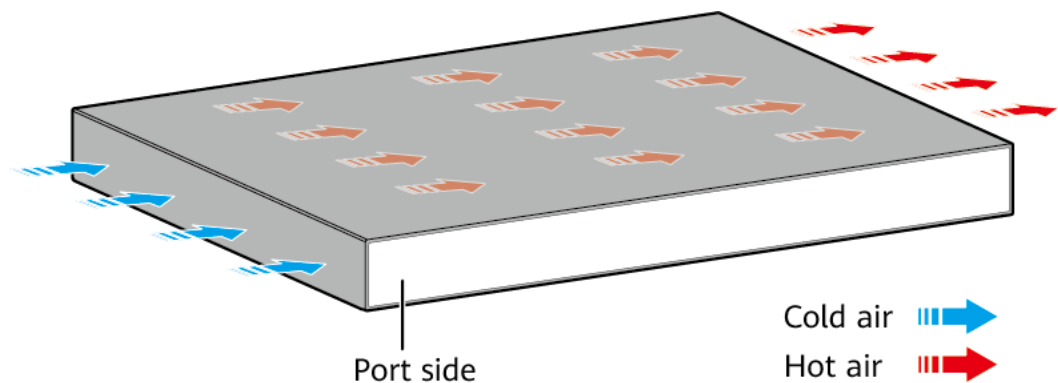
Figure 4-217 Power supply connections of dual AC power modules



L: Live wire N: Neutral wire PGND: Protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5720-52X-SI-DC has a built-in fan for forced air cooling. The airflow direction is left-to-right.



 NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-563 lists technical specifications of the S5720-52X-SI-DC.

Table 4-563 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	73.23 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	<ul style="list-style-type: none">Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common modeUsing DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.7 mm (1.75 in. x 17.4 in. x 16.72 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.8 mm (1.75 in. x 17.4 in. x 17.79 in.)
Weight (with packaging)	9.5 kg (20.95 lb)
Stack ports	GE electrical ports and 10GE SFP+ optical ports on the front panel
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption	57.9 W

Item	Description
(100% throughput, full speed of fans)	
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	34 W
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">• The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 52 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none">• AC power modules configured: 0-5000 m (0-16404 ft.)• DC power modules configured: 0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification

Item	Description
	<ul style="list-style-type: none"> Manufacturing certification
Part number	02350NGV

4.11.13 S5720-52X-PWR-SI-AC

Version Mapping

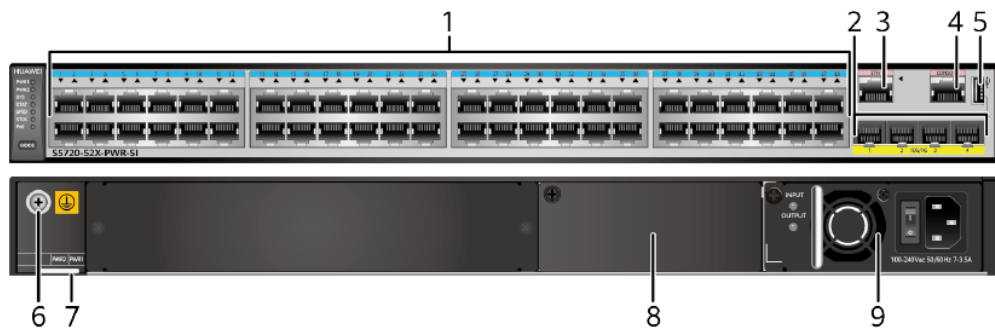
Table 4-564 lists the mapping between the S5720-52X-PWR-SI-AC chassis and software versions.

Table 4-564 Version mapping

Series		Model	Software Version
S5720-SI	S5720-X-SI	S5720-52X-PWR-SI-AC	V200R008C00 to V200R019C10 versions

Appearance and Structure

Figure 4-218 S5720-52X-PWR-SI-AC appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> 10.5 GE eSFP Optical Modules 10.7 GE-CWDM eSFP Optical Modules 10.9 GE-DWDM eSFP Optical Modules 10.10 GE SFP Copper Modules 10.12 10GE SFP+ Optical Modules 10.13 10GE-CWDM SFP+ Optical Modules
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			<ul style="list-style-type: none"> • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable • 10.19 GPON Optical Modules <p>NOTE If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>
3	One ETH management port	4	<p>One console port</p> <p>NOTE It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>
5	One USB port	6	<p>Ground screw</p> <p>NOTE It is used with a 9.1 Ground Cable.</p>
7	<p>ESN label</p> <p>NOTE You can draw it out to view the ESN and MAC address of the switch.</p>	8	<p>Power module slot 2</p> <p>NOTE Applicable power modules:</p> <ul style="list-style-type: none"> • 5.6 W0PSA5000/PAC-500WA-BE (500 W AC PoE Power Module) • 5.8 PDC-650WA-BE (650 W DC PoE Power Module)
9	<p>Power module slot 1</p> <p>NOTE Applicable power modules:</p> <ul style="list-style-type: none"> • 5.6 W0PSA5000/PAC-500WA-BE (500 W AC PoE Power Module) • 5.8 PDC-650WA-BE (650 W DC PoE Power Module) 	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-565 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-565 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab

Attribute	Description
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-566 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-566 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-567.

Table 4-567 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the

ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-568 describes the attributes of an ETH management port.

Table 4-568 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

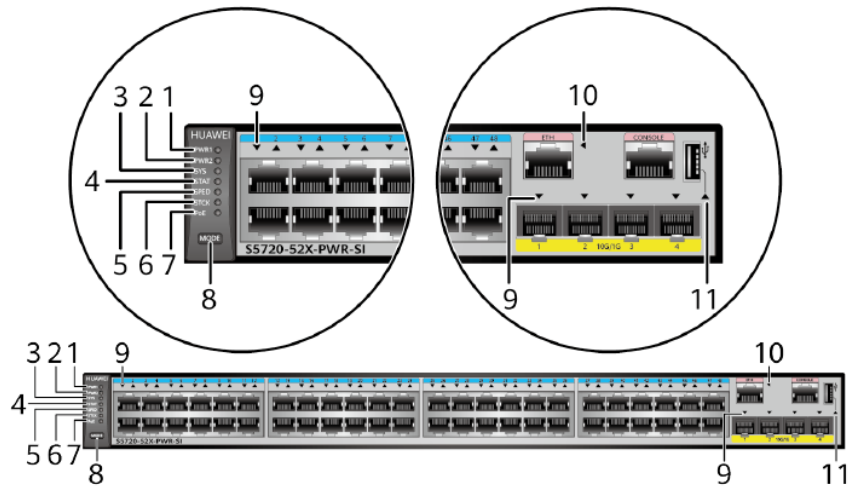
Indicator Description

NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
- If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
- If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 4-219 Indicators on the S5720-52X-PWR-SI-AC



NOTE

The S5720-SI series switches provide a command for setting fault indicators, which help field maintenance personnel find a faulty switch quickly.

The SYS indicator and mode indicators (STAT, SPED, STCK, and PoE) are used as fault indicators. When an S5720-SI switch is faulty, you can run the command to turn on the fault indicators. Then the SYS indicator and mode indicators fast blink red to help field maintenance personnel quickly find the faulty switch.

Table 4-569 Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR 1	Power module indicator	-	Off	No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 1 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none"> A power module is available in this slot but its power switch is in the OFF position. A power module is available in this slot but it is not connected to a power source. The power module in this slot has failed.
2	PWR 2	Power module indicator	-	Off	No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
			Green	Steady	A power module is installed in power module

No.	Indicator	Name	Color	Status	Description
			Green	On	slot 2 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 2: <ul style="list-style-type: none"> A power module is available in this slot but its power switch is in the OFF position. A power module is available in this slot but it is not connected to a power source. The power module in this slot has failed.
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Slow blinking	The system is running normally.
			Yellow	Blinking	The system is in the sleep state. NOTE The system can wake from the sleeping state if you press the MODE button. Only non-PoE model supports sleep state.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or temperature alarm has been generated.
4	STAT	Status indicator	-	Off	The status mode is not selected.
			Green	Steady on	The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
5	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The service port indicators show the port speeds. After 45 seconds, the service port indicators automatically restore to the status mode.
6	STACK	Stack indicator	-	Off	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is in stack standby or slave state or the stacking function is not enabled on the switch. If you are changing the indicator mode: The stack mode is not selected.
			Green	Steady on	The switch is a standby or slave switch in a stack, and the service port indicators show the

No.	Indicator	Name	Color	Status	Description
					stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is a stack master switch or a standalone switch with the stacking function enabled. If you are changing the indicator mode: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>
7	PoE	PoE indicator	-	Off	The PoE mode is not selected.
			Green	Steady on	The service port indicators show the PoE status. After 45 seconds, the service port indicators automatically restore to the status mode.
8	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> When you press this button once, the service port indicators change to the speed mode and show the speed of each service port. When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch. When you press this button a third time, the service port indicators change to the PoE mode and show the PoE status of each service port. When you press this button a fourth time, the service port indicators restore to the default mode, and the STAT indicator turns green. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED and PoE indicators are off, and the STCK indicator is off or blinking green.</p>
9	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see Table 4-570.		
10	-	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.

No.	Indicator	Name	Color	Status	Description
			Green	Blinking	The ETH port is sending or receiving data.
11	-	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> No USB flash drive is connected to the switch. The USB port is damaged. The indicator is damaged. The USB flash drive does not have any configuration file and cannot be used for deployment. The switch has been upgraded using the USB flash drive and is restarting.
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from the USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

Table 4-570 Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
PoE	-	Off	The port is not providing power to a powered

Display Mode	Color	Status	Description
			device (PD).
	Green	Steady on	The port is providing power to a PD.
	Yellow	Steady on	The PoE function is disabled on the port.
	Yellow	Blinking	The port stops providing PoE power because of an exception (for example, an incompatible PD is connected to the port).
	Green and yellow	Blinking green and yellow alternately	The port fails to supply power to a PD due to one of the following reasons: <ul style="list-style-type: none"> The power required by the connected PD exceeds the maximum power or the configured power threshold of the port. The total power consumption of PDs has reached the maximum power of the switch. The manual power management mode is used and the port is not enabled to provide power to the PD.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is blinking, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Power Supply Configuration

The S5720-52X-PWR-SI-AC is a PoE switch. It has two power module slots, each of which can have a 500 W or 650 W power module installed. A power module can provide 369.6 W of PoE power for powered devices (PDs). A 500 W AC power module and a 650 W DC power module can be used together in the switch. Table 4-571 lists its power supply configurations.

Table 4-571 Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)

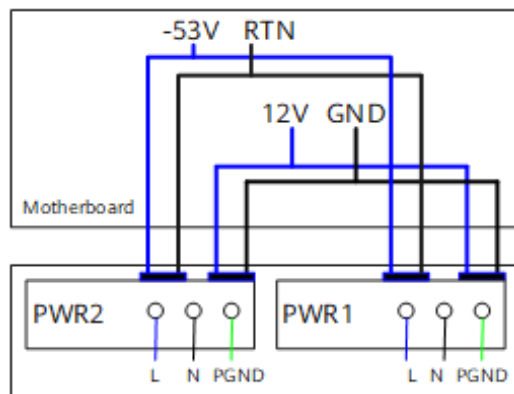
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
500 W or 650 W	-	369.6 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 12
500 W or 650 W	500 W or 650 W	739.2 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 24

NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

Figure 4-220 shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

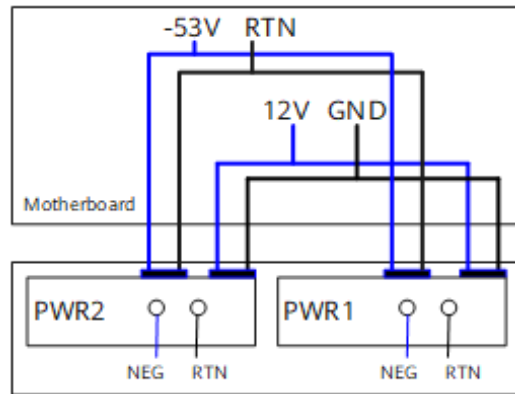
Figure 4-220 Power supply by dual AC PoE power modules



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground RTN: -53 V reference ground

Figure 4-221 shows the power supply connections of dual DC PoE power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V and -53 V output voltages, and the motherboard provides 12 V voltage for the entire device and -53 V voltage for the PDs.

Figure 4-221 Power supply connections of dual DC PoE power modules



NEG: negative wire

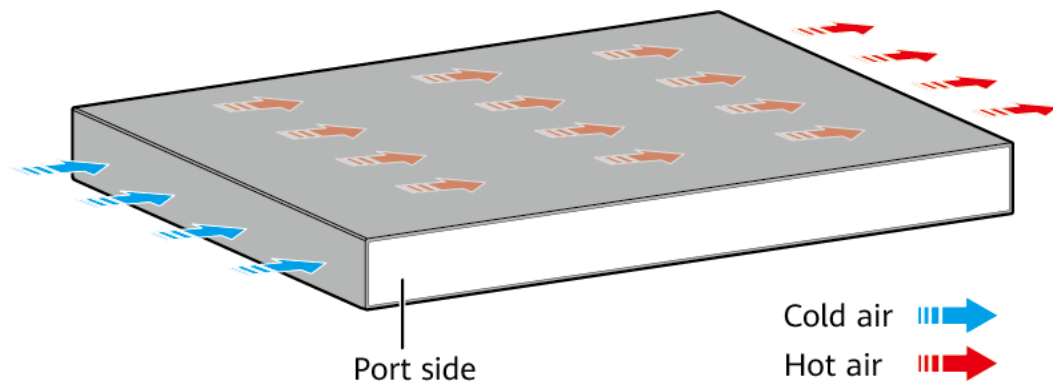
RTN: positive wire

GND: 12 V reference ground

RTN: -53 V reference ground

Heat Dissipation

The S5720-52X-PWR-SI-AC has a built-in fan for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-572 lists technical specifications of the S5720-52X-PWR-SI-AC.

Table 4-572 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between	50.86 years

Item	Description
failures (MTBF)	
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	<ul style="list-style-type: none">Using 500 W AC power modules: ± 6 kV in differential mode, ± 6 kV in common modeUsing 650 W DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.7 mm (1.75 in. x 17.4 in. x 16.72 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.8 mm (1.75 in. x 17.4 in. x 17.79 in.)
Weight (with packaging)	9.6 kg (21.17 lb)
Stack ports	GE electrical ports and 10GE SFP+ optical ports on the front panel
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none">Not providing the PoE function: 93.1 W100% PoE loads: 943.2 W (system power consumption: 203.2 W, PoE: 740 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">Tested according to ATIS standardEEE enabledNo PoE power consumption	51 W
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE

Item	Description
	When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	<p>-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 56.5 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02350DLX

4.11.14 S5720-52X-PWR-SI-DC

Version Mapping

Table 4-573 lists the mapping between the S5720-52X-PWR-SI-DC chassis and software versions.

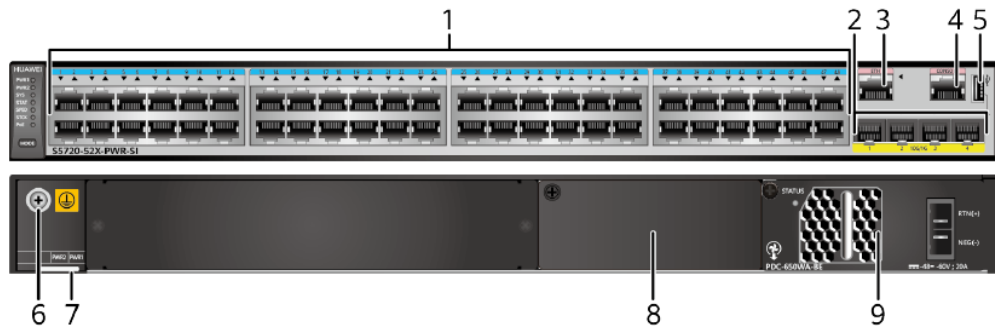
Table 4-573 Version mapping

Series	Model	Software Version
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Series		Model	Software Version
S5720-SI	S5720-X-SI	S5720-52X-PWR-SI-DC	V200R009C00 to V200R019C10 versions

Appearance and Structure

Figure 4-222 S5720-52X-PWR-SI-DC appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable • 10.19 GPON Optical Modules <p>NOTE If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>
3	One ETH management port	4	<p>One console port</p> <p>NOTE It is used with a console cable. The console cable is not delivered with the switch and</p>

			needs to be separately purchased if needed.
5	One USB port	6	Ground screw NOTE It is used with a 9.1 Ground Cable.
7	ESN label NOTE You can draw it out to view the ESN and MAC address of the switch.	8	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none"> • 5.6 W0PSA5000/PAC-500WA-BE (500 W AC PoE Power Module) • 5.8 PDC-650WA-BE (650 W DC PoE Power Module)
9	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> • 5.6 W0PSA5000/PAC-500WA-BE (500 W AC PoE Power Module) • 5.8 PDC-650WA-BE (650 W DC PoE Power Module) 	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-574 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-574 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-575 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-575 Attributes of a 10GE SFP+ port

Attribute	Description
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Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-576.

Table 4-576 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-577 describes the attributes of an ETH management port.

Table 4-577 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission	100 m

Attribute	Description
distance	

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5720-52X-PWR-SI-DC has the same types of indicators as the S5720-52X-PWR-SI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-52X-PWR-SI-DC is a PoE switch. It has two power module slots, each of which can have a 500 W or 650 W power module installed. A power module can provide 369.6 W of PoE power for powered devices (PDs). A 500 W AC power module and a 650 W DC power module can be used together in the switch. Table 4-578 lists its power supply configurations.

Table 4-578 Power supply configurations

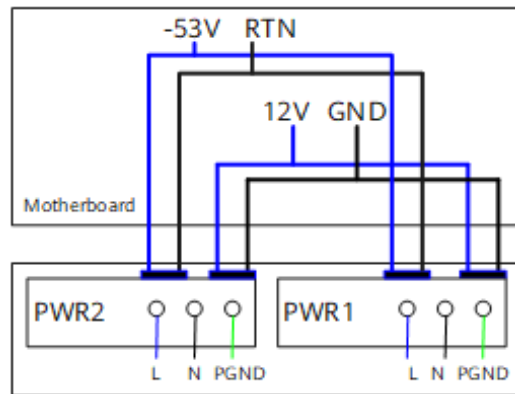
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
500 W or 650 W	-	369.6 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 24 • 802.3at (30 W per port): 12
500 W or 650 W	500 W or 650 W	739.2 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 48 • 802.3at (30 W per port): 24

NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

Figure 4-223 shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

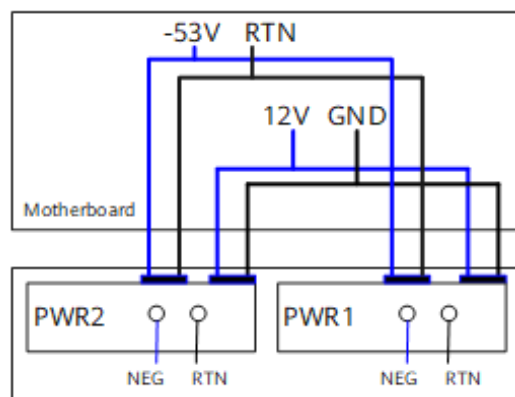
Figure 4-223 Power supply by dual AC PoE power modules



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground RTN: -53 V reference ground

Figure 4-224 shows the power supply connections of dual DC PoE power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V and -53 V output voltages, and the motherboard provides 12 V voltage for the entire device and -53 V voltage for the PDs.

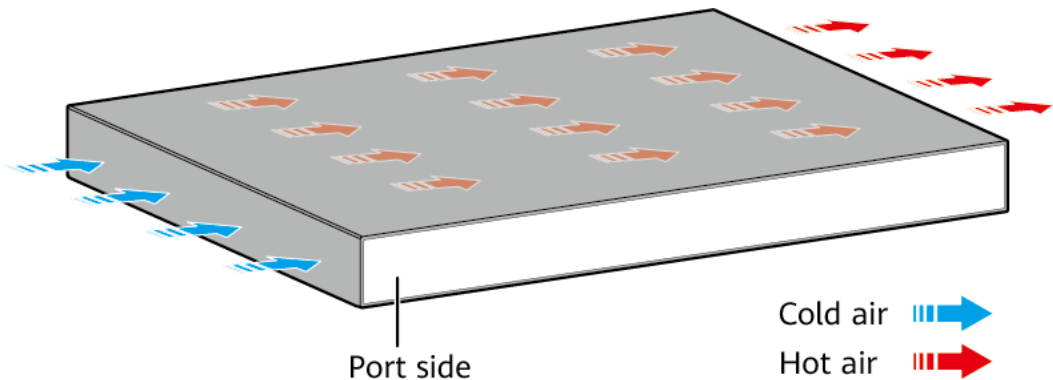
Figure 4-224 Power supply connections of dual DC PoE power modules



NEG: negative wire RTN: positive wire GND: 12 V reference ground RTN: -53 V reference ground

Heat Dissipation

The S5720-52X-PWR-SI-DC has a built-in fan for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-579 lists technical specifications of the S5720-52X-PWR-SI-DC.

Table 4-579 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	50.86 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	<ul style="list-style-type: none"> Using 500 W AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using 650 W DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.7 mm (1.75 in. x 17.4 in. x 16.72 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.8 mm (1.75 in. x 17.4 in. x 17.79 in.)
Weight (with	9.6 kg (21.17 lb)

Item	Description
packaging)	
Stack ports	GE electrical ports and 10GE SFP+ optical ports on the front panel
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none">• Not providing the PoE function: 93.1 W• 100% PoE loads: 943.2 W (system power consumption: 203.2 W, PoE: 740 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	51 W
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">• The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0 °C (32 °F).

Item	Description
	The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 56.5 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02350NGX

4.11.15 S5720-52X-PWR-SI-ACF

Version Mapping

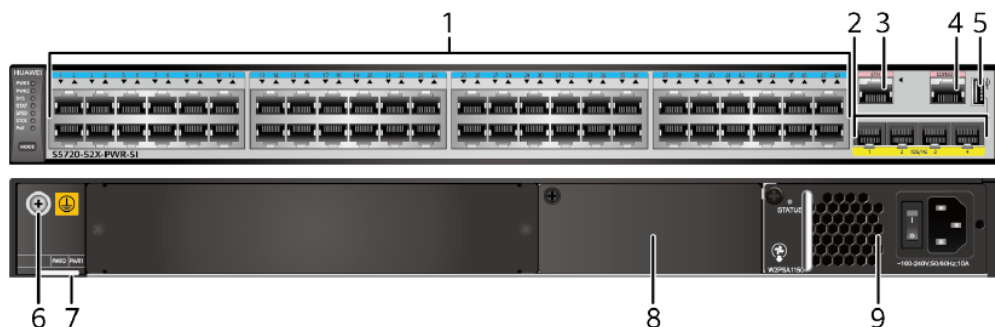
Table 4-580 lists the mapping between the S5720-52X-PWR-SI-ACF chassis and software versions.

Table 4-580 Version mapping

Series		Model	Software Version
S5720-SI	S5720-X-SI	S5720-52X-PWR-SI-ACF	V200R008C00 to V200R019C10 versions

Appearance and Structure

Figure 4-225 S5720-52X-PWR-SI-ACF appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable • 10.19 GPON Optical Modules <p>NOTE If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>
3	One ETH management port	4	<p>One console port</p> <p>NOTE It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>
5	One USB port	6	<p>Ground screw</p> <p>NOTE It is used with a 9.1 Ground Cable.</p>
7	<p>ESN label</p> <p>NOTE You can draw it out to view the ESN and MAC address of the switch.</p>	8	<p>Power module slot 2</p> <p>NOTE Applicable power module:</p> <ul style="list-style-type: none"> • 5.10 W2PSA1150 (1150 W AC PoE Power Module) • 5.9 PAC1000D5412 (1000 W AC PoE Power Module) (applicable in V200R013C00 and later versions)
9	<p>Power module slot 1</p> <p>NOTE Applicable power module:</p> <ul style="list-style-type: none"> • 5.10 W2PSA1150 (1150 W AC PoE Power Module) • 5.9 PAC1000D5412 (1000 W AC PoE Power Module) (applicable in V200R013C00 and later versions) 	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-581 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-581 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-582 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-582 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-583.

Table 4-583 Attributes of a console port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-584 describes the attributes of an ETH management port.

Table 4-584 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5720-52X-PWR-SI-ACF has the same types of indicators as the S5720-52X-PWR-SI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-52X-PWR-SI-ACF is a PoE switch. It has two power module slots and uses 1150 W AC PoE power modules or 1000 W AC PoE power modules (applicable in V200R013C00 and later versions). A 1150 W AC PoE power module and a 1000 W AC PoE power module can be used together. Table 4-585 lists its power supply configurations.

Table 4-585 Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1150 W (220 V)	-	785.4 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 26
1150 W (220 V)	1150 W (220 V)	1440 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 48
1150 W (110 V)	-	446.6 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 29 802.3at (30 W per port): 14
1150 W (110 V)	1150 W (110 V)	893.2 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 29
1000 W (220 V)	-	754.6 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 25
1000 W (220 V)	1000 W (220 V)	1440 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 48
1000 W (110 V)	-	754.6 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 25
1000 W (110 V)	1000 W (110 V)	1440 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48

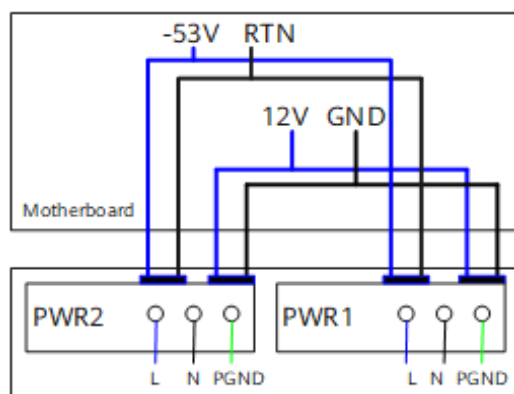
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
			<ul style="list-style-type: none"> 802.3at (30 W per port): 48
1000 W (220 V)	1150 W (220 V)	1440 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 48
1150 W (220 V)	1000 W (220 V)	1440 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 48
1000 W (110 V)	1150 W (110 V)	893.2 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 29
1150 W (110 V)	1000 W (110 V)	893.2 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 29

NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

Figure 4-226 shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

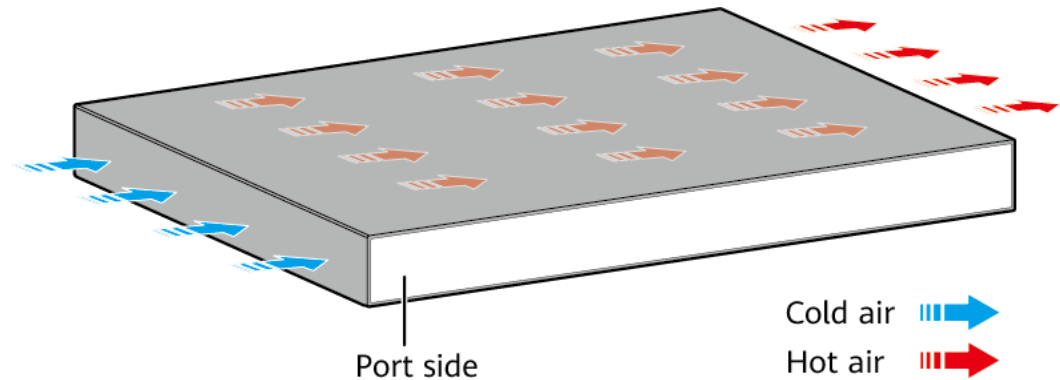
Figure 4-226 Power supply by dual AC PoE power modules



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground RTN: -53 V reference ground

Heat Dissipation

The S5720-52X-PWR-SI-ACF has a built-in fan for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-586 lists technical specifications of the S5720-52X-PWR-SI-ACF.

Table 4-586 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	50.86 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	<ul style="list-style-type: none"> Using 1000 W AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using 1150 W AC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 510.5 mm (1.75 in. x 17.4 in. x 20.1 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm

Item	Description
	x 541.1 mm (1.75 in. x 17.4 in. x 21.3 in.)
Weight (with packaging)	10 kg (22.05 lb)
Stack ports	GE electrical ports and 10GE SFP+ optical ports on the front panel
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none">• Not providing the PoE function: 94.8 W• 100% PoE loads: 1631.5 W (system power consumption: 191.5 W, PoE: 1440 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	57 W
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">• The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.

Item	Description
	The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 56.5 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02350DLY

4.11.16 S5720-52X-SI-48S

Version Mapping

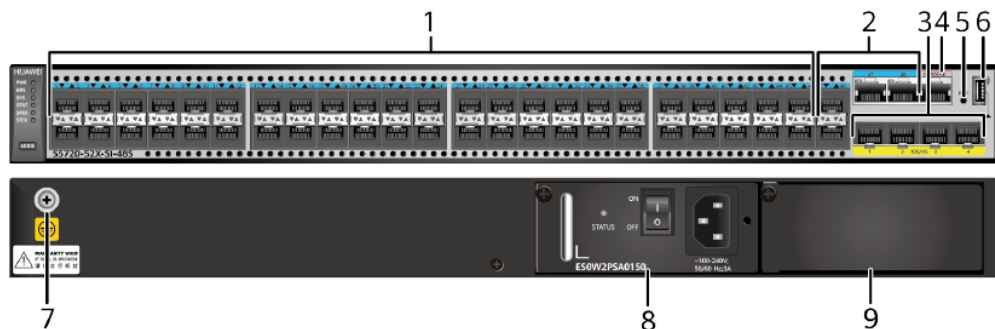
Table 4-587 lists the mapping between the S5720-52X-SI-48S chassis and software versions.

Table 4-587 Version mapping

Series		Model	Software Version
S5720-SI	S5720-X-SI	S5720-52X-SI-48S	V200R013C00 to V200R019C10 versions

Appearance and Structure

Figure 4-227 S5720-52X-SI-48S appearance



1	<p>Forty-six 100/1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.8 GE-CWDM eSFP Optical Modules (Used Only in the OADM scenario) • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules 	2	<p>Two combo ports (10/100/1000BASE-T + 100/1000BASE-X)</p> <p>Modules applicable to combo optical ports:</p> <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.8 GE-CWDM eSFP Optical Modules (Used Only in the OADM scenario)
3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable • 10.19 GPON Optical Modules <p>NOTE If one port uses a GPON optical module, other ports cannot be used.</p>	4	<p>One console port</p> <p>NOTE It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>
5	<p>One PNP button</p> <p>NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	6	<p>One USB port</p>
7	<p>Ground screw</p> <p>NOTE It is used with a 9.1 Ground Cable.</p>	8	<p>Power module slot 2</p> <p>NOTE Applicable power modules:</p> <ul style="list-style-type: none"> • 5.2 LS5M100PWA00/ES0W2PSA0150

			(150 W AC Power Module) <ul style="list-style-type: none"> 5.3 LS5M100PWD00/ES0W2PSD0150 (150 W DC Power Module)
9	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> 5.2 LS5M100PWA00/ES0W2PSA0150 (150 W AC Power Module) 5.3 LS5M100PWD00/ES0W2PSD0150 (150 W DC Power Module) 	-	-

Port Description

100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. Table 4-588 describes the attributes of a 100/1000BASE-X port.

Table 4-588 Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

Combo port

A combo port consists of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. The electrical and optical ports of a combo port are multiplexed, and only one of them can work at a time. When one of the Ethernet ports is working, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-589 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-589 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-590.

Table 4-590 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

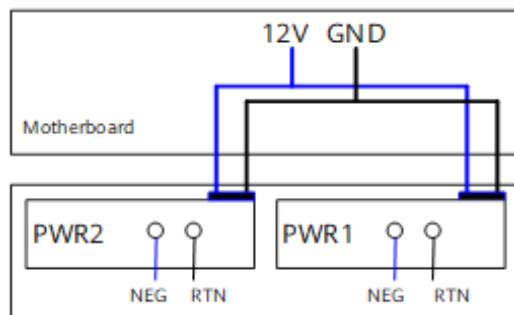
The S5720-52X-SI-48S has similar indicators to those of the S5721-28X-SI-24S-AC, except that the S5720-52X-SI-48S does not have an ETH management port. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-52X-SI-48S uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

Figure 4-228 shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

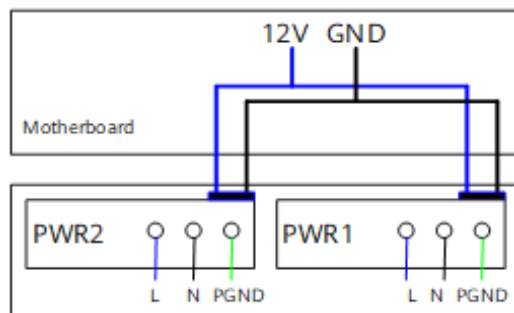
Figure 4-228 Power supply connections of dual DC power modules



NEG: negative wire RTN: positive wire GND: 12 V reference ground

Figure 4-229 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

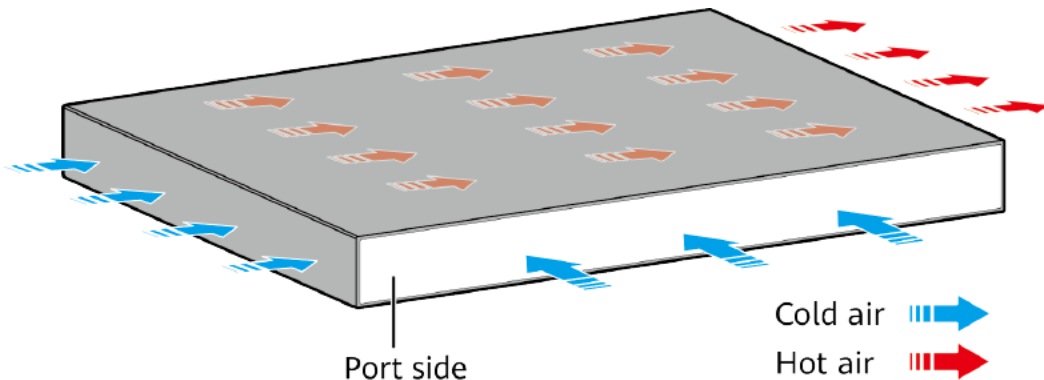
Figure 4-229 Power supply connections of dual AC power modules



L: Live wire N: Neutral wire PGND: Protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5720-52X-SI-48S has three built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-591 lists technical specifications of the S5720-52X-SI-48S.

Table 4-591 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	35.23 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.9 mm (1.75 in. x 17.4 in. x 16.73 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.3 mm (1.75 in. x 17.4 in. x 17.77 in.)
Weight (with	8.05 kg (17.75 lb)

Item	Description
packaging)	
Stack ports	GE optical ports and 10GE SFP+ optical ports except combo ports on the front panel
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	85 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	65 W
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5 °C to +55 °C (23 °F to 131 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.

Item	Description
	The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 49 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none">AC power modules configured: 0-5000 m (0-16404 ft.)DC power modules configured: 0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none">EMC certificationSafety certificationManufacturing certification
Part number	98010814

4.12 S5720S-SI

4.12.1 S5720S-28P-SI-AC

Version Mapping

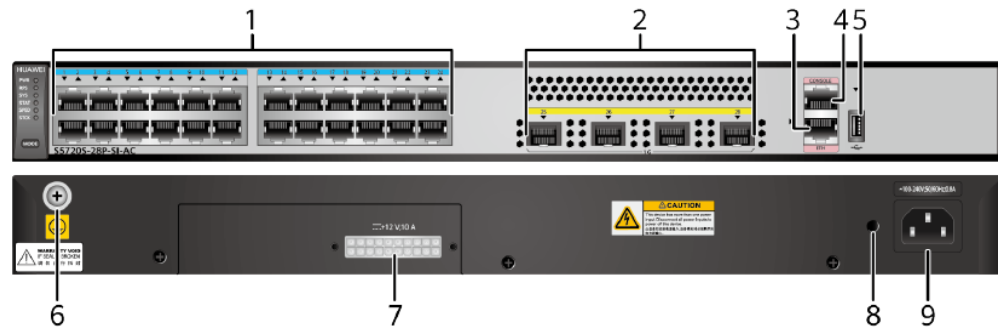
Table 4-592 lists the mapping between the S5720S-28P-SI-AC chassis and software versions.

Table 4-592 Version mapping

Series		Model	Software Version
S5720S-SI	S5720S-P-SI	S5720S-28P-SI-AC	V200R008C00 to V200R019C10 versions

Appearance and Structure

Figure 4-230 S5720S-28P-SI-AC appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 1000BASE-X ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 9.15 Copper Cable • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable • 10.19 GPON Optical Modules NOTE If a port uses a GPON optical module, other 1000BASE-X optical ports cannot be used.
3	One ETH management port	4	One console port NOTE It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.
5	One USB port	6	Ground screw NOTE It is used with a 9.1 Ground Cable.
7	RPS socket NOTE It is used with an 9.12 RPS Cable, which is not hot swappable.	8	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.
9	AC socket	-	-

	NOTE It is used with an 9.8 AC Power Cable.		
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Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-593 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-593 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. When a 1000BASE-X port uses a 10GE optical module, SFP+ high-speed copper cable, or active optical cable (AOC), the port can only be used for stack connection. Table 4-594 describes the attributes of a 1000BASE-X port.

Table 4-594 Attributes of a 1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-595.

Table 4-595 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-596 describes the attributes of an ETH management port.

Table 4-596 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

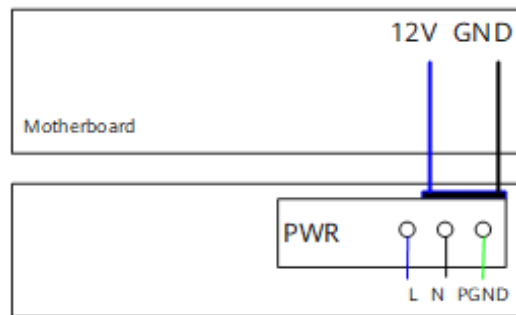
The S5720S-28P-SI-AC has the same types of indicators as the S5720S-52X-SI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720S-28P-SI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

Figure 4-231 shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

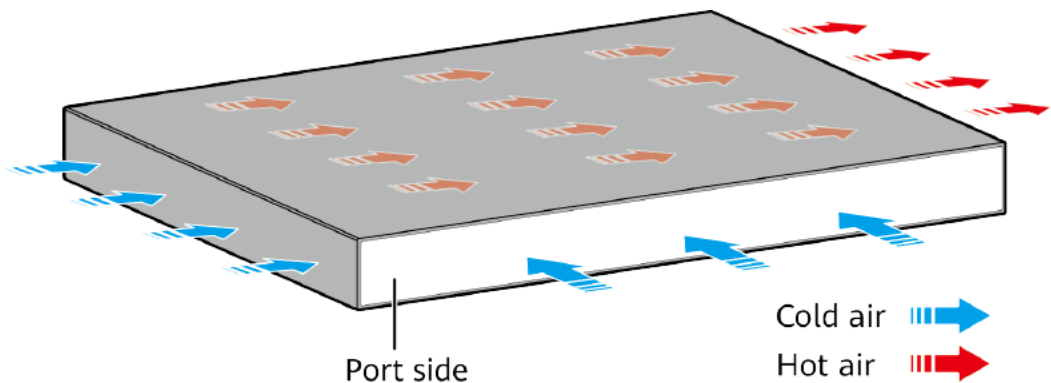
Figure 4-231 Power supply mode of a built-in AC power module



L: live wire N: neutral wire PGND: protection ground GND: 12 V reference ground

Heat Dissipation

The S5720S-28P-SI-AC has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



 NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-597 lists technical specifications of the S5720S-28P-SI-AC.

Table 4-597 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	104.92 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 224.9 mm (1.72 in. x 17.4 in. x 8.85 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 237.3 mm (1.72 in. x 17.4 in. x 9.34 in.)
Weight (with packaging)	4.8 kg (10.58 lb)
Stack ports	GE electrical ports and GE SFP optical ports on the front panel
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	29.1 W
Typical power consumption (30%)	20.2 W

Item	Description
of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 50.2 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02350DLN

4.12.2 S5720S-52P-SI-AC

Version Mapping

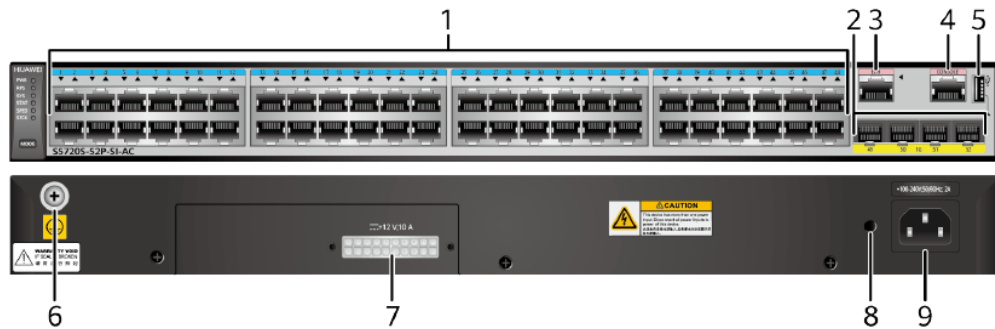
Table 4-598 lists the mapping between the S5720S-52P-SI-AC chassis and software versions.

Table 4-598 Version mapping

Series		Model	Software Version
S5720S-SI	S5720S-P-SI	S5720S-52P-SI-AC	V200R008C00 to V200R019C10 versions

Appearance and Structure

Figure 4-232 S5720S-52P-SI-AC appearance



1	Forty-eight 10/100/1000BASE-T ports	2	<p>Four 1000BASE-X ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 9.15 Copper Cable • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable • 10.19 GPON Optical Modules <p>NOTE</p> <p>If a port uses a GPON optical module, other 1000BASE-X optical ports cannot be used.</p>
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3	One ETH management port	4	One console port NOTE It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.
5	One USB port	6	Ground screw NOTE It is used with a 9.1 Ground Cable.
7	RPS socket NOTE It is used with an 9.12 RPS Cable, which is not hot swappable.	8	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.
9	AC socket NOTE It is used with an 9.8 AC Power Cable.	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-599 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-599 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. When a 1000BASE-X port uses a 10GE optical module, SFP+ high-speed copper cable, or active optical cable (AOC), the port can only be used for stack connection. Table 4-600 describes the attributes of a 1000BASE-X port.

Table 4-600 Attributes of a 1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-601.

Table 4-601 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-602 describes the attributes of an ETH management port.

Table 4-602 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

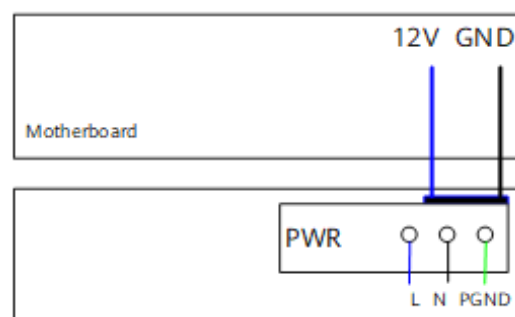
The S5720S-52P-SI-AC has the same types of indicators as the S5720S-52X-SI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720S-52P-SI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

Figure 4-233 shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 4-233 Power supply mode of a built-in AC power module



L: live wire

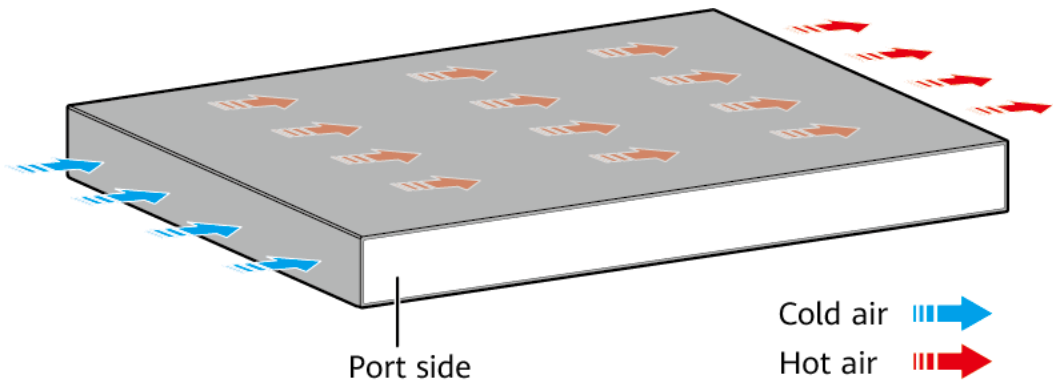
N: neutral wire

PGND: protection ground wire

GND: 12 V reference ground

Heat Dissipation

The S5720S-52P-SI-AC has a built-in fan for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-603 lists technical specifications of the S5720S-52P-SI-AC.

Table 4-603 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	90.07 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 224.9 mm (1.72 in. x 17.4 in. x 8.85 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 237.3 mm (1.72 in. x 17.4 in. x 9.34 in.)
Weight (with packaging)	5 kg (11.02 lb)

Item	Description
Stack ports	GE electrical ports and GE SFP optical ports on the front panel
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	51.5 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	33 W
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">• The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.

Item	Description
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 50.2 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02350DLQ

4.12.3 S5720S-28X-SI-AC

Version Mapping

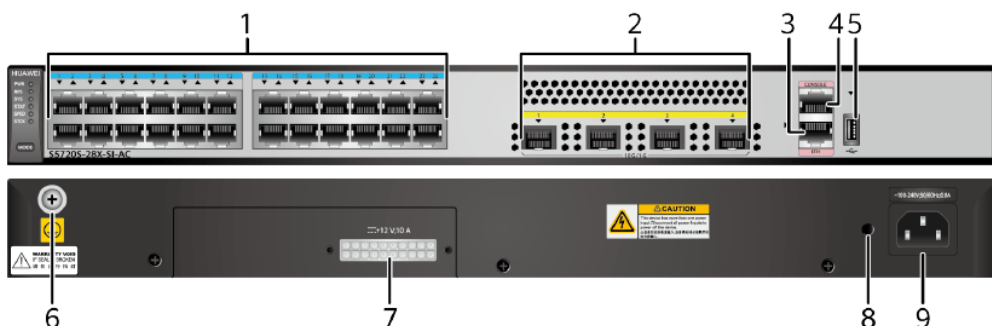
Table 4-604 lists the mapping between the S5720S-28X-SI-AC chassis and software versions.

Table 4-604 Version mapping

Series		Model	Software Version
S5720S-SI	S5720S-X-SI	S5720S-28X-SI-AC	V200R008C00 to V200R019C10 versions

Appearance and Structure

Figure 4-234 S5720S-28X-SI-AC appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports
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			<p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 9.15 Copper Cable • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable • 10.19 GPON Optical Modules <p>NOTE If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>
3	One ETH management port	4	<p>One console port</p> <p>NOTE It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>
5	One USB port	6	<p>Ground screw</p> <p>NOTE It is used with a 9.1 Ground Cable.</p>
7	<p>RPS socket</p> <p>NOTE It is used with an 9.12 RPS Cable, which is not hot swappable.</p>	8	<p>Jack for AC power cable locking strap</p> <p>NOTE The AC power cable locking strap is not delivered with the switch.</p>
9	<p>AC socket</p> <p>NOTE It is used with an 9.8 AC Power Cable.</p>	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-605 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-605 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab

Attribute	Description
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-606 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-606 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-607.

Table 4-607 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the

ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-608 describes the attributes of an ETH management port.

Table 4-608 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

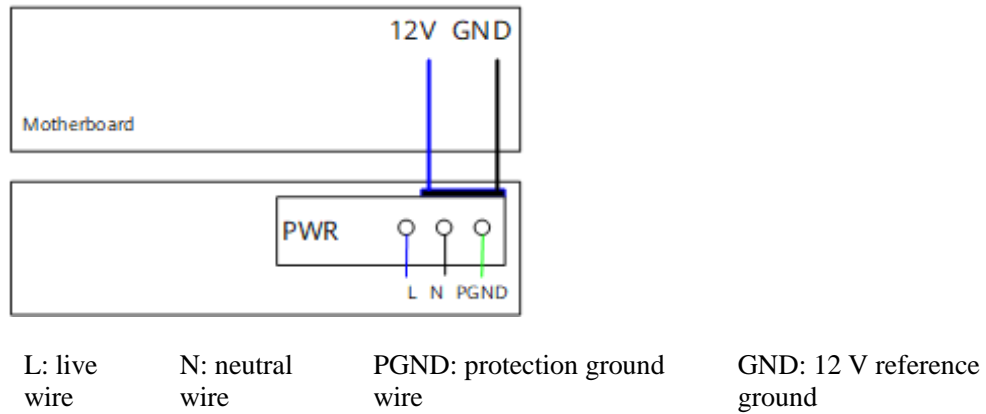
The S5720S-28X-SI-AC has the same types of indicators as the S5720S-52X-SI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720S-28X-SI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

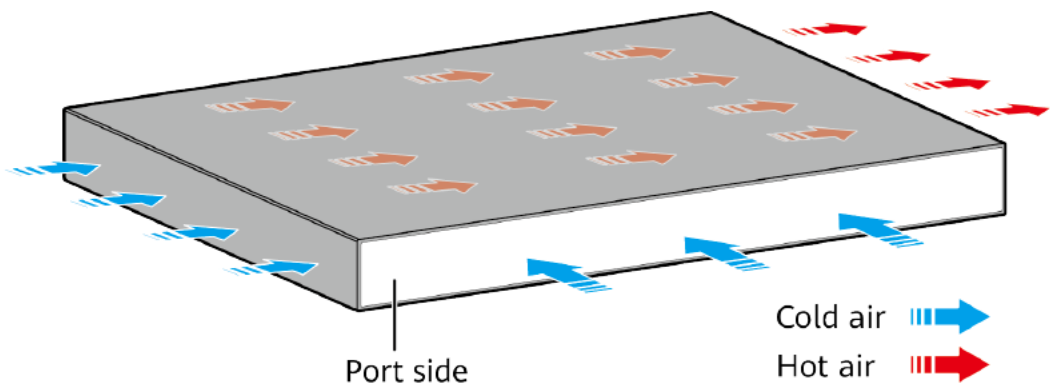
Figure 4-235 shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 4-235 Power supply mode of a built-in AC power module



Heat Dissipation

The S5720S-28X-SI-AC has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-609 lists technical specifications of the S5720S-28X-SI-AC.

Table 4-609 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	100.31 years
Mean time to repair	2 hours

Item	Description
(MTTR)	
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 224.9 mm (1.72 in. x 17.4 in. x 8.85 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 237.3 mm (1.72 in. x 17.4 in. x 9.34 in.)
Weight (with packaging)	4.8 kg (10.58 lb)
Stack ports	GE electrical ports and 10GE SFP+ optical ports on the front panel
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	32 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">Tested according to ATIS standardEEE enabledNo PoE power consumption	22 W
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE

Item	Description
	<p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 50.2 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02350DLP

4.12.4 S5720S-28X-SI-DC

Version Mapping

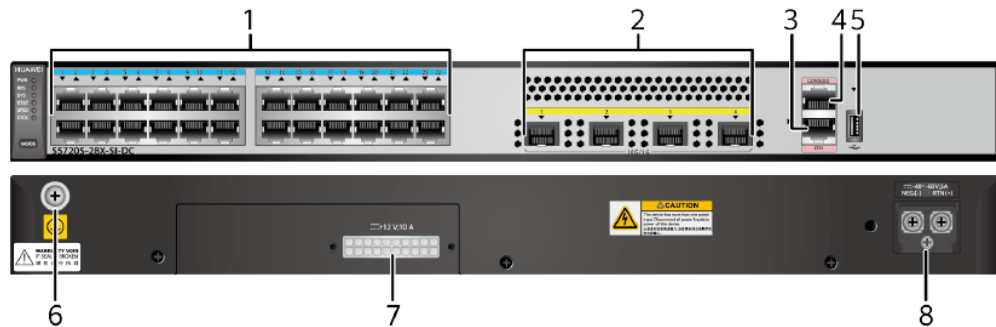
Table 4-610 lists the mapping between the S5720S-28X-SI-DC chassis and software versions.

Table 4-610 Version mapping

Series		Model	Software Version
S5720S-SI	S5720S-X-SI	S5720S-28X-SI-DC	V200R009C00 to V200R019C10 versions

Appearance and Structure

Figure 4-236 S5720S-28X-SI-DC appearance



1	Twenty-four 10/100/1000BASE-T ports	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 9.15 Copper Cable • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable • 10.19 GPON Optical Modules <p>NOTE If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>
3	One ETH management port	4	<p>One console port</p> <p>NOTE It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>
5	One USB port	6	<p>Ground screw</p> <p>NOTE It is used with a 9.1 Ground Cable.</p>
7	<p>RPS socket</p> <p>NOTE It is used with an 9.12 RPS Cable, which is not hot swappable.</p>	8	<p>DC power terminal</p> <p>NOTE It is used together with a 9.5 DC Power Cable (with OT and Cord End Terminals).</p>

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-611 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-611 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-612 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-612 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-613.

Table 4-613 Attributes of a console port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-614 describes the attributes of an ETH management port.

Table 4-614 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

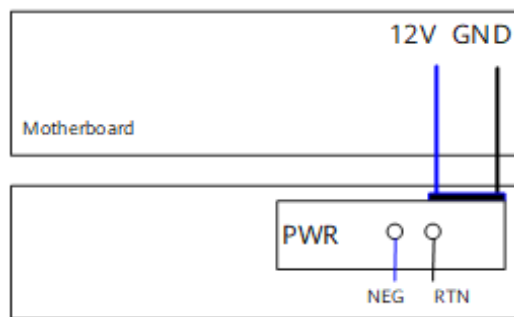
The S5720S-28X-SI-DC has the same types of indicators as the S5720S-52X-SI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720S-28X-SI-DC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

Figure 4-237 shows the power supply mode of a single DC power module. The built-in DC power module (PWR) receives DC power from an external power source and provides a 12 V output to the chassis.

Figure 4-237 Power supply by a single DC power module



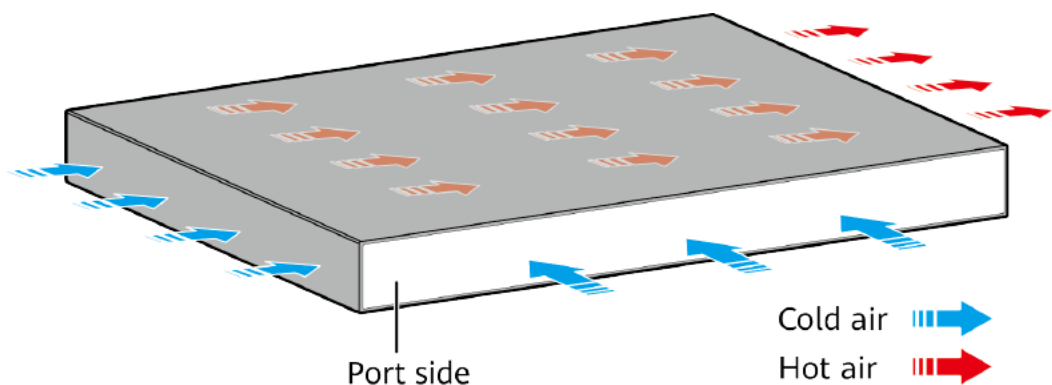
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

Heat Dissipation

The S5720S-28X-SI-DC has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-615 lists technical specifications of the S5720S-28X-SI-DC.

Table 4-615 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	100.31 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 224.9 mm (1.72 in. x 17.4 in. x 8.85 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 237.3 mm (1.72 in. x 17.4 in. x 9.34 in.)
Weight (with packaging)	4.8 kg (10.58 lb)
Stack ports	GE electrical ports and 10GE SFP+ optical ports on the front panel
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	-48 V DC to -60 V DC
Maximum voltage range	-36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	33 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">Tested according to ATIS standardEEE enabledNo PoE power	21.9 W

Item	Description
consumption	
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">• The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 50.2 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02350NGY

4.12.5 S5720S-52X-SI-AC

Version Mapping

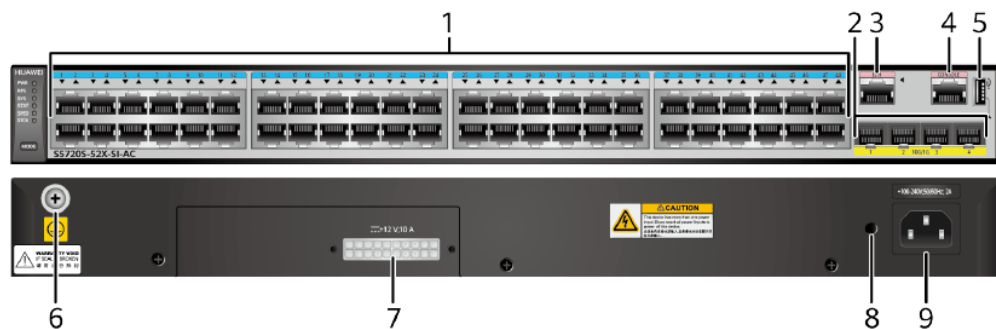
Table 4-616 lists the mapping between the S5720S-52X-SI-AC chassis and software versions.

Table 4-616 Version mapping

Series		Model	Software Version
S5720S-SI	S5720S-X-SI	S5720S-52X-SI-AC	V200R008C00 to V200R019C10 versions

Appearance and Structure

Figure 4-238 S5720S-52X-SI-AC appearance



1	Forty-eight 10/100/1000BASE-T ports	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable • 10.19 GPON Optical Modules <p>NOTE If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>
3	One ETH management port	4	<p>One console port</p> <p>NOTE It is used with a console cable. The console</p>

			cable is not delivered with the switch and needs to be separately purchased if needed.
5	One USB port	6	Ground screw NOTE It is used with a 9.1 Ground Cable.
7	RPS socket NOTE It is used with an 9.12 RPS Cable, which is not hot swappable.	8	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.
9	AC socket NOTE It is used with an 9.8 AC Power Cable.	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-617 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-617 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-618 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-618 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards	IEEE802.3ae

Attribute	Description
compliance	
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-619.

Table 4-619 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-620 describes the attributes of an ETH management port.

Table 4-620 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device

for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

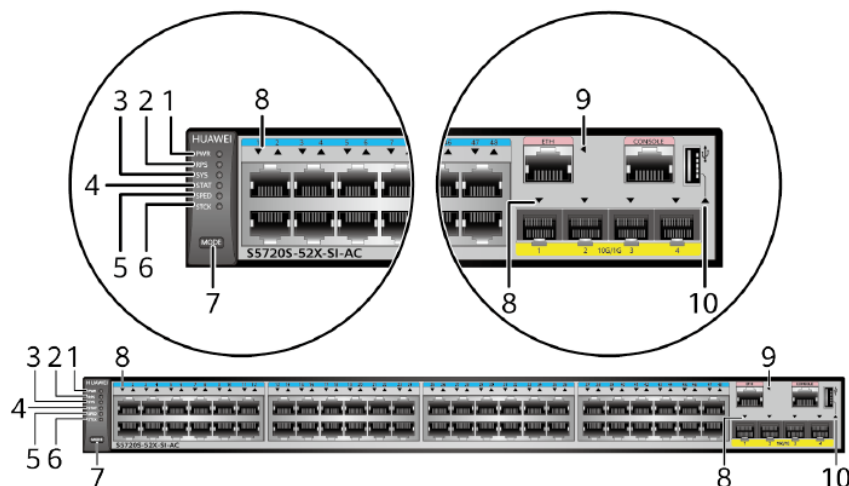
Indicator Description

NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
- If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
- If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 4-239 Indicators on the S5720S-52X-SI-AC



NOTE

The S5720S-SI series switches provide a command for setting fault indicators, which help field maintenance personnel find a faulty switch quickly.

The SYS indicator and mode indicators (STAT, SPED, and STCK) are used as fault indicators. When an S5720S-SI switch is faulty, you can run the command to turn on the fault indicators. Then the SYS indicator and mode indicators fast blink red to help field maintenance personnel quickly find the faulty switch.

Table 4-621 Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR	Power module indicator	-	Off	The switch is powered off.
			Green	Steady on	The system power supply is normal.
			Yellow	Steady on	The built-in power module has failed, and the switch is receiving power from a redundant power supply (RPS).
2	RPS	RPS indicator	-	Off	The switch is not connected to an RPS.
			Green	Steady on	The RPS is in cold standby state.
			Green	Blinking	The RPS is supplying power to another switch.
			Yellow	Blinking	The RPS is supplying power to the local switch, and the built-in power module of the switch has failed.
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Slow blinking	The system is running normally.
			Yellow	Blinking	The system is in the sleep state. NOTE The system can wake from the sleeping state if you press the MODE button.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or temperature alarm has been generated.
4	STAT	Status indicator	-	Off	The status mode is not selected.
			Green	Steady on	The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
5	SPED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady	The service port indicators show the port speeds. After 45 seconds, the service port

No.	Indicator	Name	Color	Status	Description
			en	on	indicators automatically restore to the status mode.
6	STCK	Stack indicator	-	Off	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is in stack standby or slave state or the stacking function is not enabled on the switch. If you are changing the indicator mode: The stack mode is not selected.
			Green	Steady on	The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is a stack master switch or a standalone switch with the stacking function enabled. If you are changing the indicator mode: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>
7	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> When you press this button once, the service port indicators change to the speed mode and show the speed of each service port. When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch. When you press this button a third time, the service port indicators restore to the default mode, and the STAT indicator turns green. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED indicator is off, and the STCK indicator is off or blinking green.</p>
8	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see Table 4-622.		
9	-	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.

No.	Indicator	Name	Color	Status	Description
			Green	Blinking	The ETH port is sending or receiving data.
10	-	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> No USB flash drive is connected to the switch. The USB port is damaged. The indicator is damaged. The USB flash drive does not have any configuration file and cannot be used for deployment. The switch has been upgraded using the USB flash drive and is restarting.
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from the USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

Table 4-622 Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
Stack	-	Off	Port indicators do not show the stack ID of the

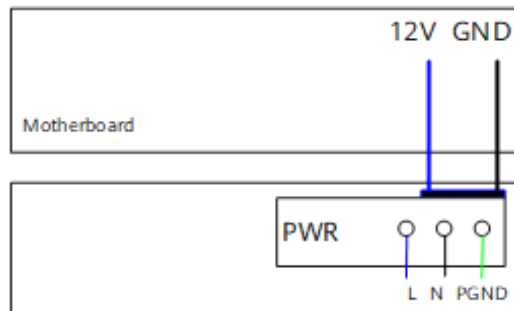
Display Mode	Color	Status	Description
			switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is blinking, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Power Supply Configuration

The S5720S-52X-SI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

Figure 4-240 shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 4-240 Power supply mode of a built-in AC power module



L: live wire

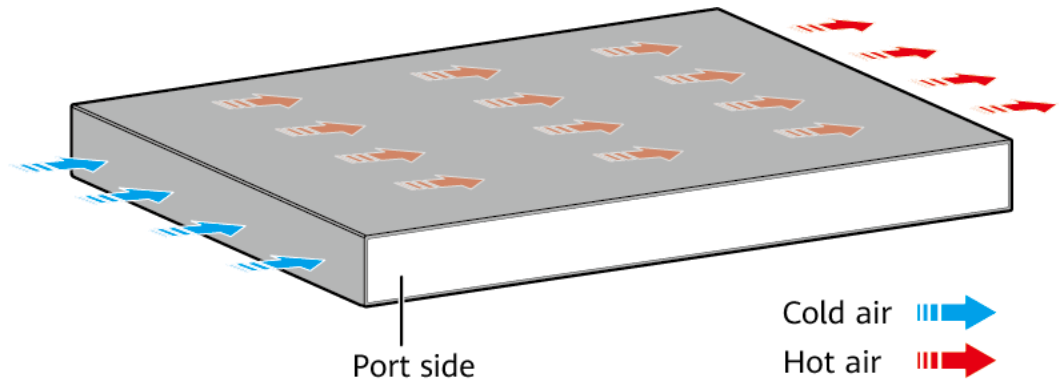
N: neutral wire

PGND: protection ground wire

GND: 12 V reference ground

Heat Dissipation

The S5720S-52X-SI-AC has a built-in fan for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-623 lists technical specifications of the S5720S-52X-SI-AC.

Table 4-623 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	86.64 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 224.9 mm (1.72 in. x 17.4 in. x 8.85 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 237.3 mm (1.72 in. x 17.4 in. x 9.34 in.)
Weight (with packaging)	5 kg (11.02 lb)
Stack ports	GE electrical ports and 10GE SFP+ optical ports on the front panel
RTC	Supported
RPS	Supported

Item	Description
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	54.7 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	34.4 W
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">• The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 50.2 dB(A)

Item	Description
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02350DLR

4.12.6 S5720S-52X-SI-DC

Version Mapping

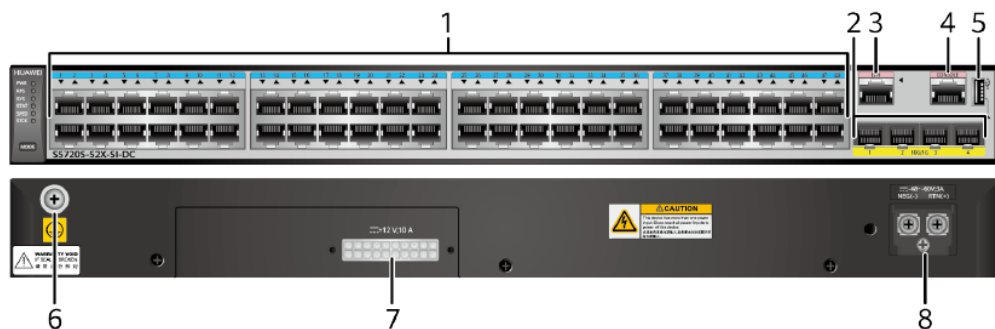
Table 4-624 lists the mapping between the S5720S-52X-SI-DC chassis and software versions.

Table 4-624 Version mapping

Series		Model	Software Version
S5720S-SI	S5720S-X-SI	S5720S-52X-SI-DC	V200R009C00 to V200R019C10 versions

Appearance and Structure

Figure 4-241 S5720S-52X-SI-DC appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical
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			<p>Modules</p> <ul style="list-style-type: none"> • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable • 10.19 GPON Optical Modules <p>NOTE If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>
3	One ETH management port	4	<p>One console port</p> <p>NOTE It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>
5	One USB port	6	<p>Ground screw</p> <p>NOTE It is used with a 9.1 Ground Cable.</p>
7	<p>RPS socket</p> <p>NOTE It is used with an 9.12 RPS Cable, which is not hot swappable.</p>	8	<p>DC power terminal</p> <p>NOTE It is used together with a 9.5 DC Power Cable (with OT and Cord End Terminals).</p>

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-625 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-625 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission	100 m

Attribute	Description
distance	

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-626 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-626 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-627.

Table 4-627 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-628 describes the attributes of an ETH management port.

Table 4-628 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

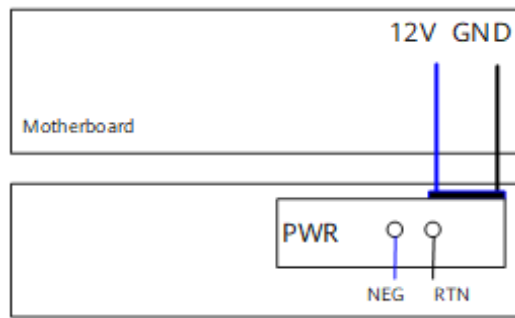
The S5720S-52X-SI-DC has the same types of indicators as the S5720S-52X-SI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720S-52X-SI-DC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

Figure 4-242 shows the power supply mode of a single DC power module. The built-in DC power module (PWR) receives DC power from an external power source and provides a 12 V output to the chassis.

Figure 4-242 Power supply by a single DC power module



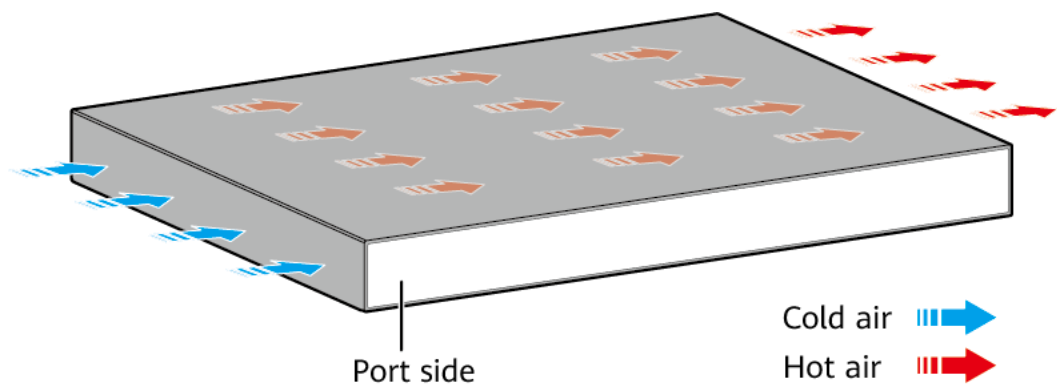
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

Heat Dissipation

The S5720S-52X-SI-DC has a built-in fan for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-629 lists technical specifications of the S5720S-52X-SI-DC.

Table 4-629 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	86.64 years
Mean time to repair (MTTR)	2 hours

Item	Description
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 224.9 mm (1.72 in. x 17.4 in. x 8.85 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 237.3 mm (1.72 in. x 17.4 in. x 9.34 in.)
Weight (with packaging)	5 kg (11.02 lb)
Stack ports	GE electrical ports and 10GE SFP+ optical ports on the front panel
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	-48 V DC to -60 V DC
Maximum voltage range	-36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	59.7 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">Tested according to ATIS standardEEE enabledNo PoE power consumption	35.5 W
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating

Item	Description
	<p>temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 50.2 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02350NHA

4.13 S5720I-SI

4.13.1 S5720I-6X-PWH-SI-AC

Version Mapping

Table 4-630 lists the mapping between the S5720I-6X-PWH-SI-AC chassis and software versions.

Table 4-630 Version mapping

Series	Model	Software Version
S5720I-SI	S5720I-6X-PWH-SI-AC	V200R013C00 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-243 S5720I-6X-PWH-SI-AC appearance

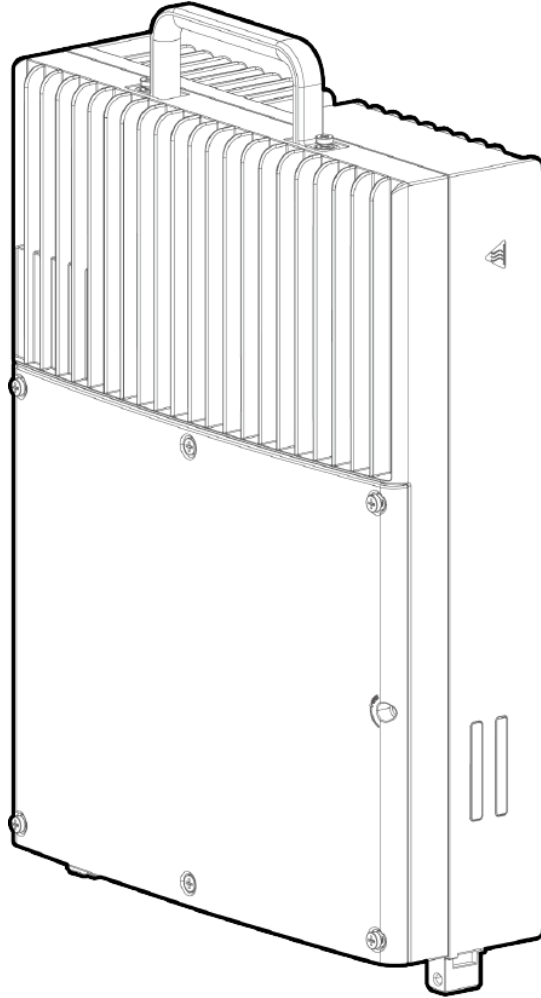
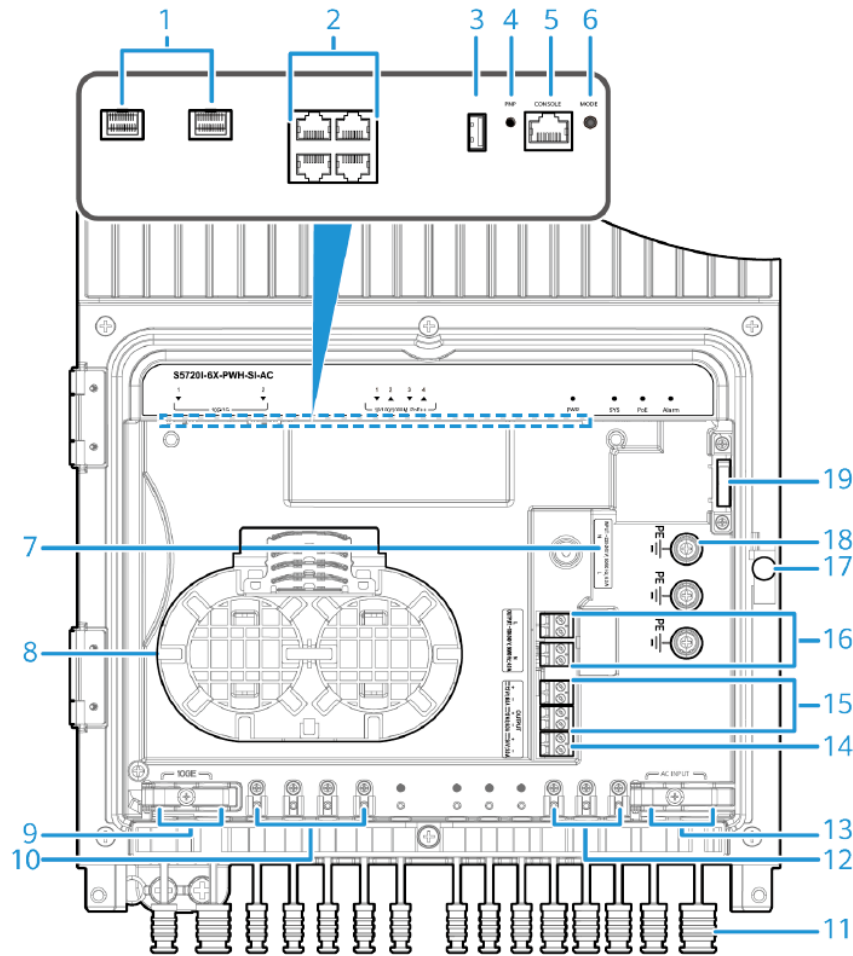


Figure 4-244 Interior of the S5720I-6X-PWH-SI-AC maintenance compartment

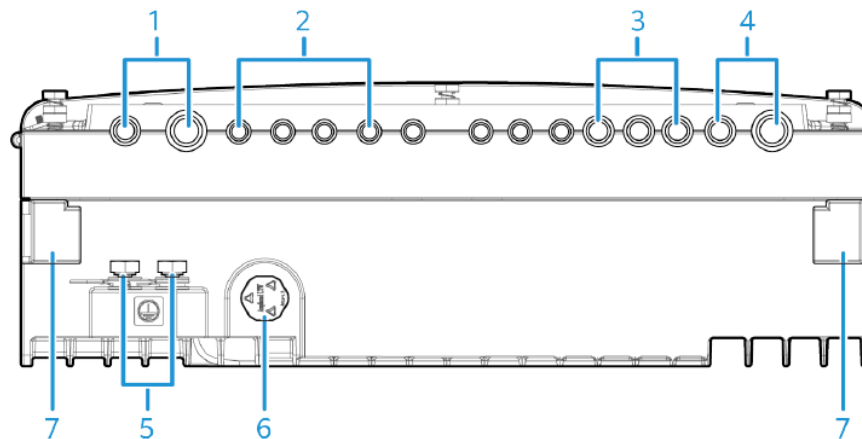


<p>1 Two 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • 10.17 Industrial Optical Modules • 10.19 GPON Optical Modules • Third-party GPON optical modules (Hisense LTE3415-SH+ and CIG G-97S) <p>NOTE</p> <p>If one port uses a GPON optical module, the other port cannot be used.</p> <p>The locking bar of an optical port is upward. If an optical module cannot be completely inserted into the optical port, do not force it into the port. Turn the optical module 180 degrees and try again.</p>	<p>2 Four PoE++ 10/100/1000BASE-T ports</p>
<p>3 One USB port</p>	<p>4 One PNP button</p> <p>NOTICE</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6</p>

			seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
5	One console port	6	<p>MODE button</p> <p>NOTE</p> <p>The switch supports two indicator modes: status (default mode) and PoE. To change the current indicator mode, press the MODE button.</p> <p>Hold down the MODE button for 6 seconds and release it to start the web initial login mode. Either of the following situations will occur:</p> <ul style="list-style-type: none"> • If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of the PoE indicator is as follows: • If the system enters the web initial login mode successfully, the PoE indicator turns green and stays on for a maximum of 10 minutes. • If the system fails to enter the initial login mode, the PoE indicator fast blinks for 10 seconds and then restores to the default status. • If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, the PoE indicator fast blinks for 10 seconds, and then returns to the default status.
7	<p>AC power input socket</p> <p>NOTICE</p> <p>The external power supply system must be connected to a circuit breaker (20 A is recommended). For safety purposes, do not use a switch without a circuit breaker.</p> <p>An AC power input socket is used with a power connector, which is included in the installation accessory package delivered with the switch. A power cable needs to be connected to the power connector onsite. If no power cable is available, you can purchase one (part number: 25030398) from Huawei.</p>	8	<p>Fiber management tray (FMT)</p> <p>NOTE</p> <p>The FMT is removable.</p> <p>A maximum of four fused fibers are supported.</p> <p>Maximum length of a fiber that can be coiled up in the FMT: 20 m (for a single bare fiber) or 1 m (for a single fiber pigtail). If two fibers are used, this length is halved.</p>
9	<p>Two optical fiber outlets</p> <p>NOTE</p> <p>The diameter of optical fibers supported: 8±0.5 mm to 9.6±0.5 mm (on the left outlet) and 13.3±0.5 mm (on the right outlet).</p>	10	<p>Four Ethernet cable outlets</p> <p>NOTE</p> <p>Cat5e and Cat6 Ethernet cables are supported.</p>
11	Rubber bungs for cable outlets	12	Three DC or AC output power cable

	<p>NOTE</p> <p>Rubber bungs must be inserted into the idle cable outlets.</p>		<p>outlets</p> <p>NOTE</p> <p>The diameter of power cables supported by an outlet is 9.3 ±0.5 mm.</p>
13	<p>Two AC input power cable outlets</p> <p>NOTE</p> <p>The diameter of power cables supported: 9.5 ±0.5 mm (on the left outlet) and 14 ±0.5 mm (on the right outlet).</p>	14	<p>AC power output socket 2</p> <p>NOTE</p> <p>The switch provides one 24 V AC output to external devices, such as strobe lights and non-PoE PTZ dome cameras.</p> <p>One 24 V AC output provides a maximum of 72 W power.</p>
15	<p>DC power output socket</p> <p>NOTE</p> <p>The switch provides two 12 V DC outputs to external devices, such as strobe lights and non-PoE PTZ dome cameras.</p> <p>Two 12 V DC outputs provide a total of 48 W power. The maximum power of a single output is 48 W.</p> <p>Two 12 V DC outputs and one 24 V AC output share power resources with PoE output. The total shared power is 150 W.</p>	16	<p>AC power output socket 1</p> <p>NOTICE</p> <p>Cables need to be connected to an AC power output socket onsite. Pay attention to the position of the L and N labels, ensuring that the cables are connected in the correct sockets.</p> <p>The switch provides 220 V AC power to external devices, such as strobe lights and non-PoE PTZ dome cameras. The maximum output current is 4 A.</p> <p>The internal 220 V AC power supply is used only for external power conversion. It has no circuit breaker, regulated voltage circuit, or surge protection.</p> <p>The connected devices must provide certain surge protection capabilities. Recommended values are 20 kA in differential mode and 20 kA in common mode.</p>
17	<p>Latch of the maintenance compartment</p> <p>NOTE</p> <ul style="list-style-type: none"> You need to use the key provided in the installation accessory package to open the door of the maintenance compartment. After the maintenance compartment door is closed, the latch is automatically locked. 	18	<p>PE cable ground terminal</p> <p>NOTE</p> <p>It is used to ground a PE power cable for 220 V AC input or output.</p>
19	<p>Door-opening alarm button</p> <p>NOTE</p> <p>When the door of the maintenance compartment is opened, a door-opening alarm is reported.</p>	-	-

Figure 4-245 Bottom of the S5720I-6X-PWH-SI-AC chassis



1	Two optical fiber outlets NOTE The diameter of optical fibers supported: 8±0.5 mm to 9.6±0.5 mm (on the left outlet) and 13.3±0.5 mm (on the right outlet).	2	Four Ethernet cable outlets NOTE Cat5e and Cat6 Ethernet cables are supported.
3	Three DC or AC output power cable outlets NOTE The diameter of power cables supported by an outlet is 9.3±0.5 mm.	4	Two AC input power cable outlets NOTE The diameter of power cables supported: 9.5±0.5 mm (on the left outlet) and 14±0.5 mm (on the right outlet).
5	Ground screw NOTE It is used to ground the switch. The ground cable needs to be purchased separately.	6	Atmospheric pressure valve NOTE It ensures that the atmospheric pressure inside and outside the switch are the same.
7	Mounting column for a cable cover NOTE It is used to mount an optional cable cover.	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-631 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-631 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab

Attribute	Description
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	<p>It supports long-distance interconnection with Huawei cameras. For example, it supports the distance of 200 m at 100 Mbit/s and supports the distance of 250 m at 10 Mbit/s.</p> <ul style="list-style-type: none"> The supported camera models are M2220-I, M2221-FL, M2221-VL, M2260-I, and M2220-I(8-32mm). If the transmission distance exceeds 100 m, Category 5E or higher Ethernet cables are required.

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-632 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-632 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-633.

Table 4-633 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

Figure 4-246 Indicators on the outside of the S5720I-6X-PWH-SI-AC

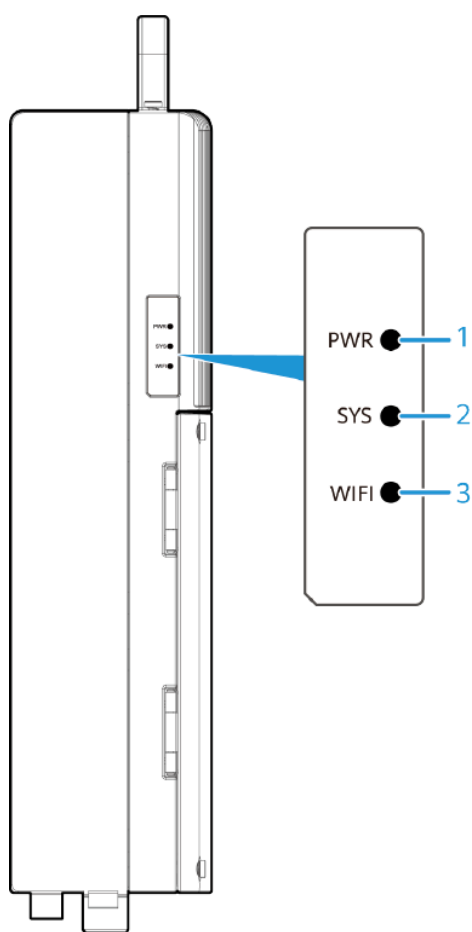


Figure 4-247 Indicators inside the maintenance compartment of the S5720I-6X-PWH-SI-AC

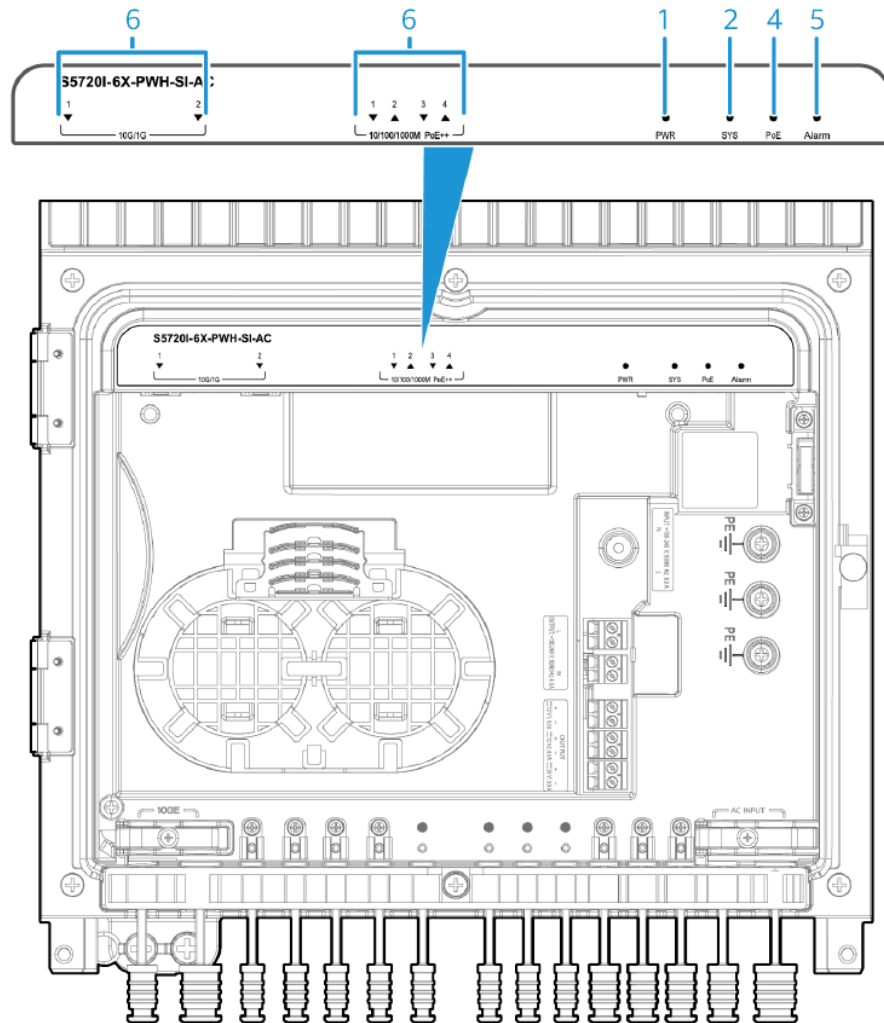


Table 4-634 Description of indicators

No.	Indicator	Name	Color	Status	Description
1	PWR	Built-in power supply indicator	-	Off	The switch is not powered on.
			Green	Steady on	The power module is supplying power normally.
			Yellow or red	Steady on	The built-in power module has failed.
2	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting or is copying the system software and configuration file from a USB flash drive during a USB-based upgrade.

No.	Indicator	Name	Color	Status	Description
			Green	Slow blinking	The system is operating properly.
			Red	Steady on	The system does not work normally after registration, or a temperature alarm has been generated.
			Red	Blinking	The system cannot be upgraded after a USB flash drive is inserted. The USB-based upgrade failed.
			Yellow	Blinking	The switch has restarted after a successful upgrade using a USB flash drive. You can remove the USB flash drive from the switch.
3	WIFI	Wi-Fi indicator	Red	Fast blinking	The Wi-Fi function is reserved for future use. You can configure the WIFI indicator on a switch to fast blink red, helping field maintenance personnel quickly find the switch.
4	PoE	PoE indicator	-	Off	The PoE mode is not selected.
			Green	Steady on	The PoE mode is selected. In this mode, the service port indicators show the PoE status. After 45 seconds, the service port indicators automatically restore to the status mode. This indicator is steady green after you successfully log in to the switch for the first time using the MODE button.
			Green	Blinking	If you fail to log in to the switch for the first time using the MODE button, this indicator fast blinks for 10 seconds, and then returns to the default status.
5	Alarm	12 V DC and 24 V AC output power indicator	-	Off	The 12 V DC or 24 V AC power supply is not in use or the output is normal.
			Red	Steady on	A short circuit has occurred for the 12 V DC or 24 V AC power supply. Check whether the external device is short-circuited.
6	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see Table 4-635.		

Table 4-635 Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
PoE	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.
	Yellow	Steady on	The PoE function is disabled on the port.
	Yellow	Blinking	The port stops providing PoE power because of an exception (for example, an incompatible PD is connected to the port).
	Green and yellow	Blinking green and yellow alternately	The port fails to supply power to a PD due to one of the following reasons: <ul style="list-style-type: none"> The power required by the connected PD exceeds the maximum power or the configured power threshold of the port. The total power consumption of PDs has reached the maximum power of the switch. The manual power management mode is used and the port is not enabled to provide power to the PD.

Power Supply Configuration

The S5720I-6X-PWH-SI-AC has a built-in power module and does not support pluggable power modules. The S5720I-6X-PWH-SI-AC can be connected to an external 220 V AC power supply. Table 4-636 lists power supply configurations.

Table 4-636 Power supply configurations

Power Supply Configuration	Available PoE Power	Maximum Number of Ports (Fully Loaded)
External 220 V AC power supply	150 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 4 802.3at (30 W per port): 4 802.3bt (60 W per port): 2

 **NOTE**

The PoE output shares power resources with two 12 V DC outputs and one 24 V AC output. The shared power is 150 W.

Heat Dissipation

The S5720I-6X-PWH-SI-AC has no fans and uses natural heat dissipation.

Technical Specifications

Table 4-637 lists technical specifications of the S5720I-6X-PWH-SI-AC.

Table 4-637 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	41.29 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	± 1.5 kV in differential mode, ± 6 kV in common mode
Power supply surge protection	Impulse current: <ul style="list-style-type: none">AC input: 20 kA Surge: <ul style="list-style-type: none">AC input: ± 6 kV in differential mode, ± 6 kV in common mode12 V DC output: ± 2 kV in differential mode, ± 4 kV in common mode24 V AC output: ± 2 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions: 390 mm x 300 mm x 110 mm (15.4 in. x 11.8 in. x 4.3 in.)Maximum dimensions: 474.75 mm x 303.3 mm x 110 mm (18.69 in. x 11.94 in. x 4.3 in.)
Weight (with packaging)	13.1 kg (28.88 lb)
Stack ports	Not supported
RTC	Not supported
RPS	Not supported

Item	Description
PoE	Supported
Rated voltage range	220 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	176 V AC to 264 V AC, 45 Hz to 66 Hz
Maximum power consumption (100% throughput)	<ul style="list-style-type: none">• Without PoE: 26 W• Total power consumption: 188 W (system power consumption: 38 W, total output power: 150 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	25 W
Operating temperature	-40 °C to +55 °C (-40 °F to +131 °F) NOTE When the altitude is 1800-4000 m (5906-13123 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The switch can start when the temperature is higher than -25 °C (-13 °F).
Storage temperature	-40 °C to +85 °C (-40 °F to +185 °F)
IP rating	IP66
Noise under normal temperature (27 °C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-4000 m (0-13123 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010835

4.13.2 S5720I-10X-PWH-SI-AC

Version Mapping

Table 4-638 lists the mapping between the S5720I-10X-PWH-SI-AC chassis and software versions.

Table 4-638 Version mapping

Series	Model	Software Version
S5720I-SI	S5720I-10X-PWH-SI-AC	V200R013C00 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-248 S5720I-10X-PWH-SI-AC appearance

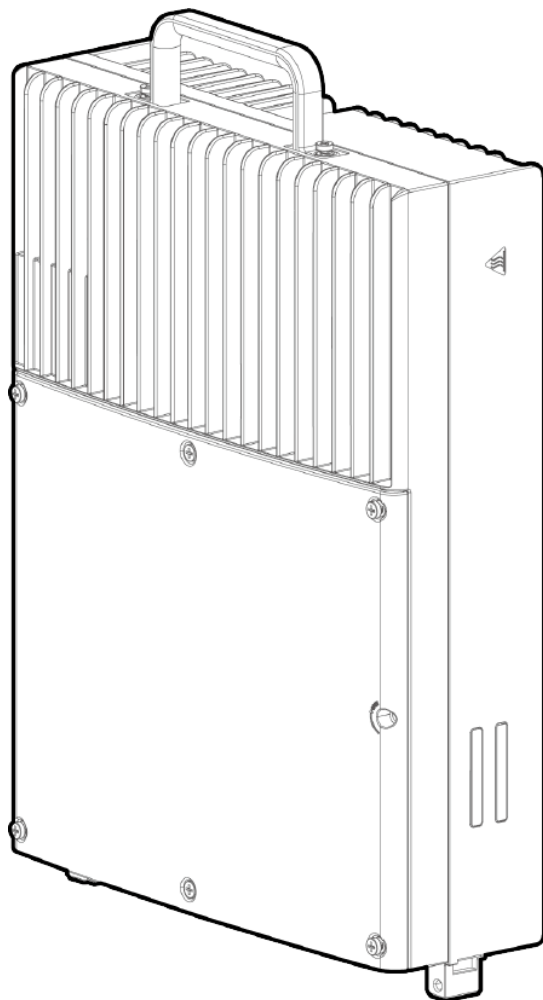
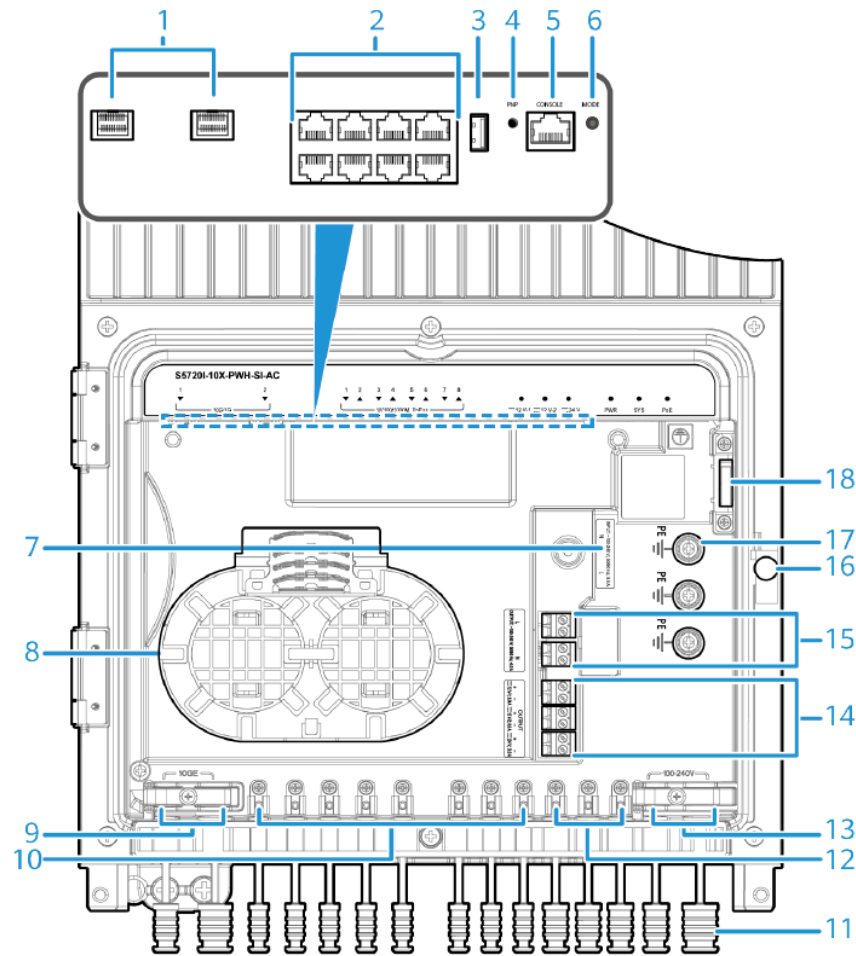


Figure 4-249 Interior of the S5720I-10X-PWH-SI-AC maintenance compartment

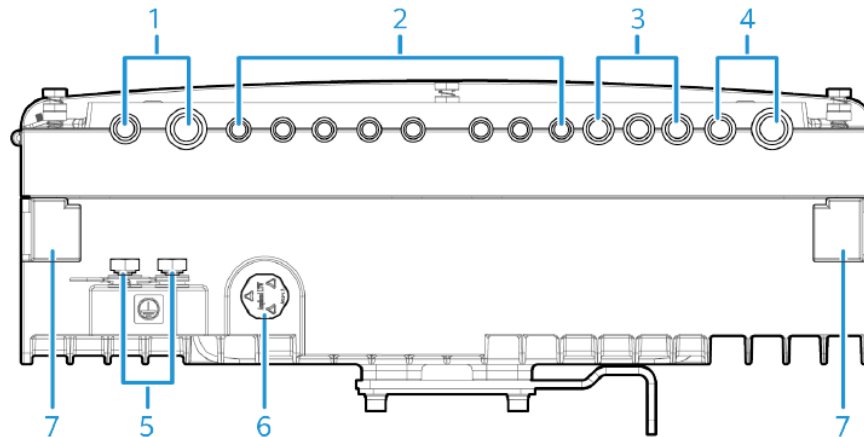


<p>1</p>	<p>Two 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • 10.17 Industrial Optical Modules • 10.19 GPON Optical Modules • Third-party GPON optical modules (Hisense LTE3415-SH+ and CIG G-97S) <p>NOTE</p> <p>If one port uses a GPON optical module, the other port cannot be used.</p> <p>The locking bar of an optical port is upward. If an optical module cannot be completely inserted into the optical port, do not force it into the port. Turn the optical module 180 degrees and try again.</p>	<p>2</p>	<p>Eight PoE++ 10/100/1000BASE-T ports</p>
<p>3</p>	<p>One USB port</p>	<p>4</p>	<p>One PNP button</p> <p>NOTICE</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6</p>

			seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
5	One console port	6	<p>MODE button</p> <p>NOTE</p> <p>The switch supports two indicator modes: status (default mode) and PoE. To change the current indicator mode, press the MODE button.</p> <p>Hold down the MODE button for 6 seconds and release it to start the web initial login mode. Either of the following situations will occur:</p> <ul style="list-style-type: none"> • If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of the PoE indicator is as follows: • If the system enters the web initial login mode successfully, the PoE indicator turns green and stays on for a maximum of 10 minutes. • If the system fails to enter the initial login mode, the PoE indicator fast blinks for 10 seconds and then restores to the default status. • If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, the PoE indicator fast blinks for 10 seconds, and then returns to the default status.
7	<p>AC power input socket</p> <p>NOTICE</p> <p>The external power supply system must be connected to a circuit breaker (20 A is recommended). For safety purposes, do not use a switch without a circuit breaker.</p> <p>An AC power input socket is used with a power connector, which is included in the installation accessory package delivered with the switch. A power cable needs to be connected to the power connector onsite. If no power cable is available, you can purchase one (part number: 25030398) from Huawei.</p>	8	<p>Fiber management tray (FMT)</p> <p>NOTE</p> <p>The FMT is removable.</p> <p>A maximum of four fused fibers are supported.</p> <p>Maximum length of a fiber that can be coiled up in the FMT: 20 m (for a single bare fiber) or 1 m (for a single fiber pigtail). If two fibers are used, this length is halved.</p>
9	<p>Two optical fiber outlets</p> <p>NOTE</p> <p>The diameter of optical fibers supported: 8±0.5 mm to 9.6±0.5 mm (on the left outlet) and 13.3±0.5 mm (on the right outlet).</p>	10	<p>Eight Ethernet cable outlets</p> <p>NOTE</p> <p>Cat5e and Cat6 Ethernet cables are supported.</p>
11	Rubber bungs for cable outlets	12	Three DC or AC output power cable

	<p>NOTE Rubber bungs must be inserted into the idle cable outlets.</p>		<p>outlets NOTE The diameter of power cables supported by an outlet is 9.3±0.5 mm.</p>
13	<p>Two AC input power cable outlets NOTE The diameter of power cables supported: 9.5±0.5 mm (on the left outlet) and 14±0.5 mm (on the right outlet).</p>	14	<p>DC power output socket NOTE The switch provides two 12 V DC outputs and one 24 V DC output to external devices, such as strobe lights and non-PoE PTZ dome cameras. Two 12 V DC outputs provide a total of 96 W power. The maximum power of a single output is 96 W. One 24 V DC output provides a maximum of 72 W power. Two 12 V DC outputs and one 24 V DC output share power resources with PoE output. The total shared power is 175 W (110 V input) or 200 W (220 V input).</p>
15	<p>AC power output socket 1 NOTICE Cables need to be connected to an AC power output socket onsite. Pay attention to the position of the L and N labels, ensuring that the cables are connected in the correct sockets. The switch provides 110 V or 220 V AC power to external devices, such as strobe lights and non-PoE PTZ dome cameras. The maximum output current is 4 A. The internal 110 V or 220 V AC power supply is used only for external power conversion. It has no circuit breaker, regulated voltage circuit, or surge protection. The connected devices must provide certain surge protection capabilities. Recommended values are 20 kA in differential mode and 20 kA in common mode.</p>	16	<p>Latch of the maintenance compartment NOTE</p> <ul style="list-style-type: none"> You need to use the key provided in the installation accessory package to open the door of the maintenance compartment. After the maintenance compartment door is closed, the latch is automatically locked.
17	<p>PE cable ground terminal NOTE It is used to ground a PE power cable for 220 V AC input or output.</p>	18	<p>Door-opening alarm button NOTE When the door of the maintenance compartment is opened, a door-opening alarm is reported.</p>

Figure 4-250 Bottom of the S5720I-10X-PWH-SI-AC chassis



1	Two optical fiber outlets NOTE The diameter of optical fibers supported: 8±0.5 mm to 9.6±0.5 mm (on the left outlet) and 13.3±0.5 mm (on the right outlet).	2	Eight Ethernet cable outlets NOTE Cat5e and Cat6 Ethernet cables are supported.
3	Three DC or AC output power cable outlets NOTE The diameter of power cables supported by an outlet is 9.3±0.5 mm.	4	Two AC input power cable outlets NOTE The diameter of power cables supported: 9.5±0.5 mm (on the left outlet) and 14±0.5 mm (on the right outlet).
5	Ground screw NOTE It is used to ground the switch. The ground cable needs to be purchased separately.	6	Atmospheric pressure valve NOTE It ensures that the atmospheric pressure inside and outside the switch are the same.
7	Mounting column for a cable cover NOTE It is used to mount an optional cable cover.	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-639 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-639 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab

Attribute	Description
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	<p>It supports long-distance interconnection with Huawei cameras. For example, it supports the distance of 200 m at 100 Mbit/s and supports the distance of 250 m at 10 Mbit/s.</p> <ul style="list-style-type: none">The supported camera models are M2220-I, M2221-FL, M2221-VL, M2260-I, and M2220-I(8-32mm).If the transmission distance exceeds 100 m, Category 5E or higher Ethernet cables are required.

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-640 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-640 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-641.

Table 4-641 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

Figure 4-251 Indicators on the outside of the S5720I-10X-PWH-SI-AC

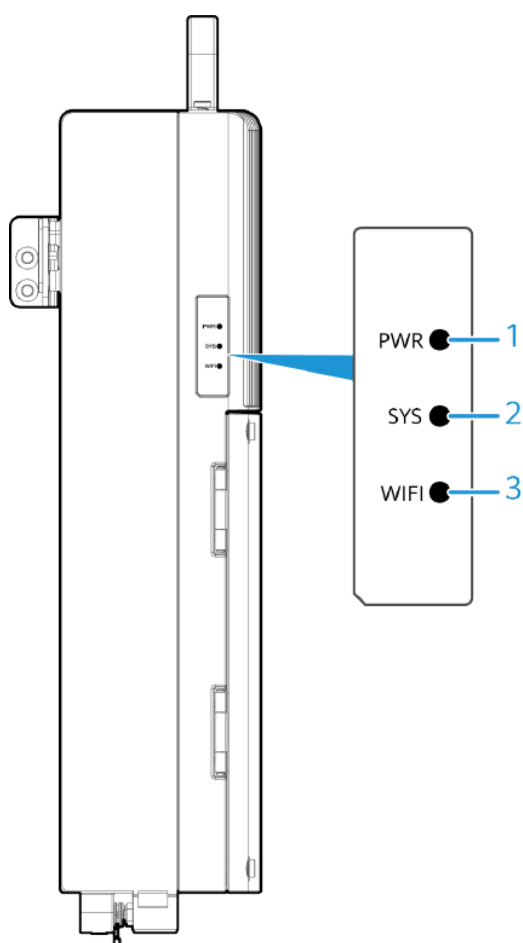


Figure 4-252 Indicators inside the maintenance compartment of the S5720I-10X-PWH-SI-AC

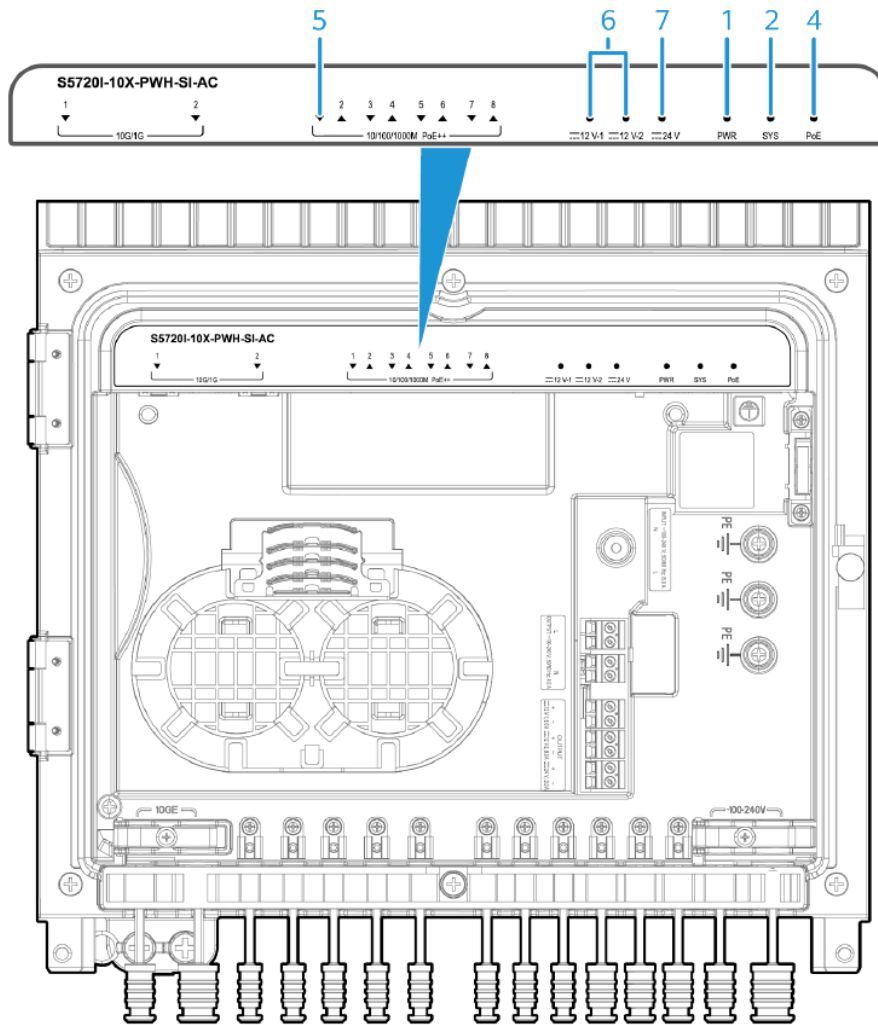


Table 4-642 Description of indicators

No.	Indicator	Name	Color	Status	Description
1	PWR	Built-in power supply indicator	-	Off	The switch is not powered on.
			Green	Steady on	The power module is supplying power normally.
			Yellow or red	Steady on	The built-in power module has failed.
2	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting or is copying the system software and configuration file from a USB flash drive during a USB-based upgrade.

No.	Indicator	Name	Color	Status	Description
			Green	Slow blinking	The system is operating properly.
			Red	Steady on	The system does not work normally after registration, or a temperature alarm has been generated.
			Red	Blinking	The system cannot be upgraded after a USB flash drive is inserted. The USB-based upgrade failed.
			Yellow	Blinking	The switch has restarted after a successful upgrade using a USB flash drive. You can remove the USB flash drive from the switch.
3	WIFI	Wi-Fi indicator	Red	Fast blinking	The Wi-Fi function is reserved for future use. You can configure the WIFI indicator on a switch to fast blink red, helping field maintenance personnel quickly find the switch.
4	PoE	PoE indicator	-	Off	The PoE mode is not selected.
			Green	Steady on	The PoE mode is selected. In this mode, the service port indicators show the PoE status. After 45 seconds, the service port indicators automatically restore to the status mode. This indicator is steady green after you successfully log in to the switch for the first time using the MODE button.
			Green	Blinking	If you fail to log in to the switch for the first time using the MODE button, this indicator fast blinks for 10 seconds, and then returns to the default status.
5	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see Table 4-643.		
6	12V-V1	12 V DC output indicator	-	Off	The 12 V DC power module is not supplying power.
	12V-V2		Green	Steady on	The 12 V DC power module is supplying power.
7	24V	24 V DC output indicator	-	Off	The 24 V DC power module is not supplying power.
			Green	Steady	The 24 V DC power module is supplying

No.	Indicator	Name	Color	Status	Description
				on	power.

Table 4-643 Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
PoE	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.
	Yellow	Steady on	The PoE function is disabled on the port.
	Yellow	Blinking	The port stops providing PoE power because of an exception (for example, an incompatible PD is connected to the port).
	Green and yellow	Blinking green and yellow alternately	<p>The port fails to supply power to a PD due to one of the following reasons:</p> <ul style="list-style-type: none"> The power required by the connected PD exceeds the maximum power or the configured power threshold of the port. The total power consumption of PDs has reached the maximum power of the switch. The manual power management mode is used and the port is not enabled to provide power to the PD.

Power Supply Configuration

The S5720I-10X-PWH-SI-AC has a built-in power module and does not support pluggable power modules. The S5720I-10X-PWH-SI-AC can be connected to an external 110 V or 220 V AC power supply. Table 4-644 lists power supply configurations.

Table 4-644 Power supply configurations

Power Supply Configuration	Available PoE Power	Maximum Number of Ports (Fully Loaded)

Power Supply Configuration	Available PoE Power	Maximum Number of Ports (Fully Loaded)
External 220 V AC power supply	200 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 8 802.3at (30 W per port): 6 802.3bt (60 W per port): 3
External 110 V AC power supply	175 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 8 802.3at (30 W per port): 5 802.3bt (60 W per port): 2

 **NOTE**

The PoE output shares power resources with two 12 V DC outputs and one 24 V DC output. The shared power is 175 W (110 V input) or 200 W (220 V input).

Heat Dissipation

The S5720I-10X-PWH-SI-AC has no fans and uses natural heat dissipation.

Technical Specifications

Table 4-645 lists technical specifications of the S5720I-10X-PWH-SI-AC.

Table 4-645 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	34.4 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	±1.5 kV in differential mode, ±6 kV in common mode
Power supply surge protection	AC input (impulse current): 20 kA DC output (surge): ±6 kV in differential mode, ±6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions: 390 mm x 300 mm x 100 mm (15.4 in. x 11.8 in. x 3.9 in.) Maximum dimensions: 474.75 mm x 303.3 mm x 124.77 mm

Item	Description
	(18.69 in. x 11.94 in. x 4.91 in.)
Weight (with packaging)	12.8 kg (28.22 lb)
Stack ports	Not supported
RTC	Not supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput)	<ul style="list-style-type: none">Without PoE: 33 W100% PoE loads: 263 W (system power consumption: 63 W, PoE: 200 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">Tested according to ATIS standardEEE enabledNo PoE power consumption	30 W
Operating temperature	-40 °C to +55 °C (-40 °F to +131 °F) NOTE When the altitude is 1800-4000 m (5906-13123 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The switch can start when the temperature is higher than -25 °C (-13 °F).
Storage temperature	-40 °C to +85 °C (-40 °F to +185 °F)
IP rating	IP66
Noise under normal temperature (27 °C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-4000 m (0-13123 ft.)
Certification	<ul style="list-style-type: none">EMC certificationSafety certificationManufacturing certification

Item	Description
Part number	98010832

4.13.3 S5720I-12X-SI-AC

Version Mapping

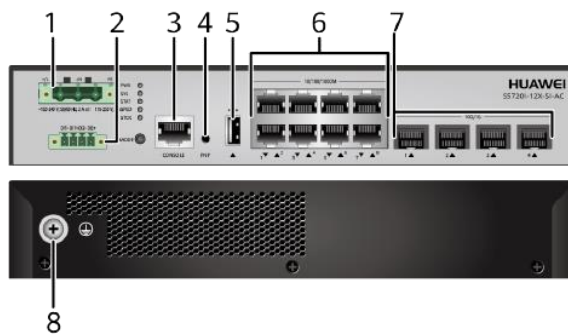
Table 4-646 lists the mapping between the S5720I-12X-SI-AC chassis and software versions.

Table 4-646 Version mapping

Series	Switch Model	Software Version
S5720I-SI	S5720I-12X-SI-AC	V200R012C00 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-253 S5720I-12X-SI-AC appearance



1	AC input power socket NOTE It must be used with the Phoenix connector, which is included in the installation accessory package.	2	Monitoring port NOTE It must be used with the Phoenix connector, which is included in the installation accessory package. The monitoring port detects the status of external devices, for example, monitoring the opening and closing of the cabinet door. For details about how to use a monitoring port, see "Monitoring Interface Configuration" in the CLI-based Configuration Guide - Device Management Configuration Guide.
3	One console port	4	One PNP button

			<p>NOTICE</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
5	One USB port	6	Eight 10/100/1000BASE-T ports
7	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • 10.17 Industrial Optical Modules • 9.15 Copper Cable • 9.14 Dedicated Stack Cable 	8	<p>Ground screw</p> <p>NOTE</p> <p>It is used with a 9.1 Ground Cable.</p>

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-647 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-647 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	<p>It supports long-distance interconnection with Huawei cameras. For example, it supports the distance of 200 m at 100 Mbit/s and supports the distance of 250 m at 10 Mbit/s.</p> <ul style="list-style-type: none"> • The supported camera models are M2220-I, M2221-FL, M2221-VL, M2260-I, and M2220-I(8-32mm). • If the transmission distance exceeds 100 m, Category 5E or higher Ethernet cables are required.

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-648 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-648 Attributes of a 10GE SFP+ port

Attribute	Description
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Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-649.

Table 4-649 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

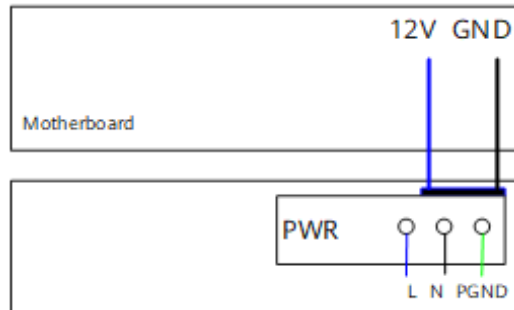
The S5720I-12X-SI-AC has similar indicators to those of the S5720I-12X-PWH-SI-DC except that the S5720I-12X-SI-AC does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720I-12X-SI-AC has a built-in power module and does not support pluggable power modules.

Figure 4-254 shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 4-254 Power supply mode of a built-in AC power module



L: live wire

N: neutral wire

PGND: protection ground wire

GND: 12 V reference ground

Heat Dissipation

The S5720I-12X-SI-AC has no fans and uses natural heat dissipation.

Technical Specifications

Table 4-650 lists technical specifications of the S5720I-12X-SI-AC.

Table 4-650 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	67.89 years
Mean time to repair (MTTR)	2
Availability	> 0.99999
Service port surge protection	± 1.5 kV in differential mode, ± 6 kV in common mode
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 250.0 mm x 180.0 mm (1.72 in. x 9.8 in. x 7.1 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm

Item	Description
	x 250.0 mm x 186.36 mm (1.72 in. x 9.8 in. x 7.34 in.)
Weight (with packaging)	2.65 kg (5.84 lb)
Stack ports	Eight 10/100/1000BASE-T ports and four 10G SFP+ ports
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz 110 V DC to 250 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz 110 V DC to 250 V DC
Maximum power consumption (100% throughput)	17 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	15.6 W
Operating temperature	<ul style="list-style-type: none">• -40 °C to +65 °C (-40 °F to +149 °F) (installed in the sealing cabinet)• -40 °C to +70 °C (-40 °F to +158 °F) (installed in the ventilation cabinet, with the wind speed of at least 40 LFM)• -40 °C to +75 °C (-40 °F to +167 °F) (installed in the ventilation cabinet shipped with fans with a fan speed of at least 200 LFM) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40 °C to +85 °C (-40 °F to +185 °F)
Protection rating	IP30
Noise under normal temperature (27 °C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing

Item	Description
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010794

4.13.4 S5720I-12X-PWH-SI-DC

Version Mapping

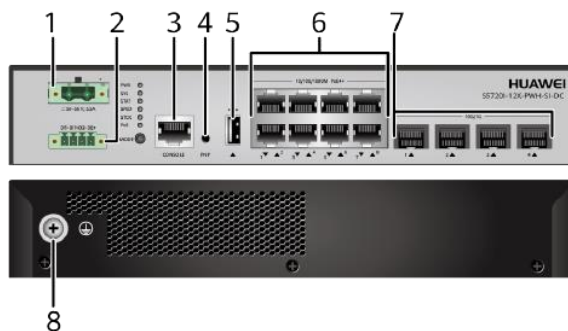
Table 4-651 lists the mapping between the S5720I-12X-PWH-SI-DC chassis and software versions.

Table 4-651 Version mapping

Series	Switch Model	Software Version
S5720I-SI	S5720I-12X-PWH-SI-DC	V200R012C00 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-255 S5720I-12X-PWH-SI-DC appearance



1	<p>DC input power socket</p> <p>NOTE</p> <p>It must be used with the Phoenix connector, which is included in the installation accessory package.</p>	2	<p>Monitoring port</p> <p>NOTE</p> <p>It must be used with the Phoenix connector, which is included in the installation accessory package.</p> <p>The monitoring port detects the status of external devices, for example, monitoring</p>
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			the opening and closing of the cabinet door. For details about how to use a monitoring port, see "Monitoring Interface Configuration" in the CLI-based Configuration Guide - Device Management Configuration Guide.
3	One console port	4	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
5	One USB port	6	Eight PoE++ 10/100/1000BASE-T ports
7	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.17 Industrial Optical Modules • 9.15 Copper Cable • 9.14 Dedicated Stack Cable 	8	Ground screw NOTE It is used with a 9.1 Ground Cable.

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-652 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-652 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	It supports long-distance interconnection with Huawei cameras. For example, it supports the distance of 200 m at 100 Mbit/s and supports the distance of 250 m at 10 Mbit/s. <ul style="list-style-type: none"> • The supported camera models are M2220-I, M2221-FL, M2221-VL, M2260-I, and M2220-I(8-32mm). • If the transmission distance exceeds 100 m, Category 5E or higher Ethernet cables are required.

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-653 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-653 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-654.

Table 4-654 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

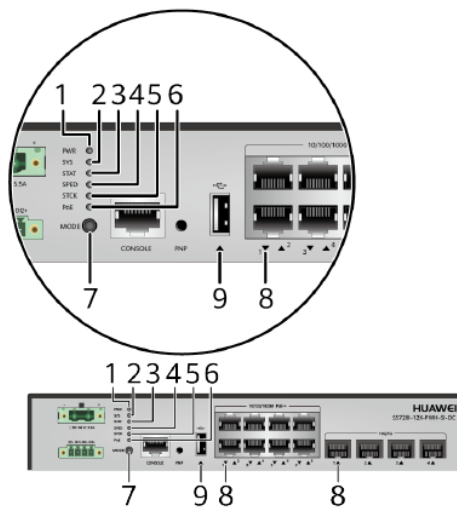
Indicator Description

NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
- If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
- If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 4-256 Indicators on the S5720I-12X-PWH-SI-DC



NOTE

The S5720I-SI series switches provide a command for setting fault indicators, which help field maintenance personnel find a faulty switch quickly.

The SYS indicator and mode indicators (STAT, SPED, STCK, and PoE) are used as fault indicators. When an S5720I-SI switch is faulty, you can run the command to turn on the fault indicators. Then the SYS indicator and mode indicators fast blink red to help field maintenance personnel quickly find the faulty switch.

Table 4-655 Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR	Power module indicator	-	Off	The switch is powered off.
			Green	Steady on	The system power supply is normal.
			Yellow or	Steady on	The built-in power module has failed.

No.	Indicator	Name	Color	Status	Description
			red		
2	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or temperature alarm has been generated.
3	STAT	Status indicator	-	Off	The status mode is not selected.
			Green	Steady on	The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
4	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The service port indicators show the port speeds. After 45 seconds, the service port indicators automatically restore to the status mode.
5	STACK	Stack indicator	-	Off	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is in stack standby or slave state or the stacking function is not enabled on the switch. If you are changing the indicator mode: The stack mode is not selected.
			Green	Steady on	The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is a stack master switch or a standalone switch with the stacking function enabled. If you are changing the indicator mode: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>
6	PoE	PoE indicator	-	Off	The PoE mode is not selected.
			Green	Steady	The service port indicators show the PoE

No.	Indicator	Name	Color	Status	Description
			en	on	status. After 45 seconds, the service port indicators automatically restore to the status mode.
7	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> When you press this button once, the service port indicators change to the speed mode and show the speed of each service port. When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch. When you press this button a third time, the service port indicators change to the PoE mode and show the PoE status of each service port. When you press this button a fourth time, the service port indicators restore to the default mode, and the STAT indicator turns green. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED and PoE indicators are off, and the STCK indicator is off or blinking green.</p>
8	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see Table 4-656.		
9	-	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> No USB flash drive is connected to the switch. The USB port is damaged. The indicator is damaged. The USB flash drive does not have any configuration file and cannot be used for deployment. The switch has been upgraded using the USB flash drive and is restarting.
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from the USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.

No.	Indicator	Name	Color	Status	Description
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

Table 4-656 Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
		Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
			10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
PoE	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.
	Yellow	Steady on	The PoE function is disabled on the port.
	Yellow	Blinking	The port stops providing PoE power because of an exception (for example, an incompatible PD is connected to the port).
	Green and yellow	Blinking green and yellow alternately	The port fails to supply power to a PD due to one of the following reasons: <ul style="list-style-type: none"> The power required by the connected PD exceeds the maximum power or the configured power threshold of the port. The total power consumption of PDs has reached the maximum power of the switch. The manual power management mode is used and the port is not enabled to provide power to the PD.
Stack	-	Off	Port indicators do not show the stack ID of the switch.

Display Mode	Color	Status	Description
	Green	Steady on	<p>The switch is not the master switch in a stack.</p> <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 8 are steady on, the stack ID of the switch is 0.
	Green	Blinking	<p>The switch is the master switch in a stack.</p> <ul style="list-style-type: none"> If the indicator of a port is blinking, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 8 are blinking, the stack ID of the switch is 0.

Power Supply Configuration

The S5720I-12X-PWH-SI-DC has a built-in power module and does not support pluggable power modules. It can directly connect to the external power module with 50 V DC to 56 V DC power or the PAC-260WA-E or PAC240S56-CN power module. Table 4-657 lists its power supply configurations.

Table 4-657 Power supply configurations

Power Supply Configuration	Available PoE Power	Maximum Number of Ports (Fully Loaded)
External power module with 50 V to 56 V DC power supply	220 W by default; 240 W at most	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 8 802.3at (30 W per port): 8 802.3bt (60 W per port): 4
260 W power module (PAC-260WA-E)	220 W by default; 240 W at most	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 8 802.3at (30 W per port): 8 802.3bt (60 W per port): 4
240 W power module (PAC240S56-CN)	220 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 8 802.3at (30 W per port): 7 802.3bt (60 W per port): 3

NOTE

The PoE power supply of S5720I-12X-PWH-SI-DC is in direct mode. The input voltage must meet the PoE standard. If the input voltage does not meet the PoE standard, the voltage on the PD side may be too low.

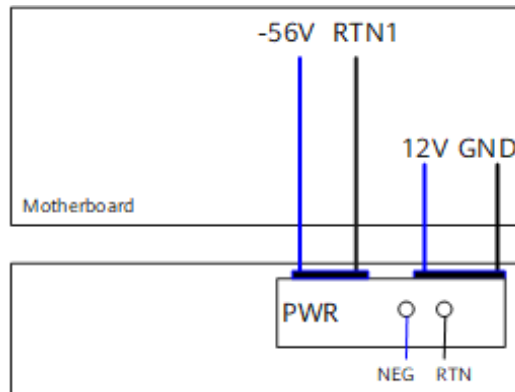
If the external DC power supply is in grounding design, the non-isolated AP and camera cannot be used. In this case, isolate the AP and camera.

If a non-Huawei external DC power supply is used, ensure that it meets the following requirement:

Maximum power consumption of the device (20 W) + Number of PoE ports in use x PoE consumption of each port

Figure 4-257 shows the power supply mode of a single DC power module. The built-in DC power module (PWR) receives DC power from an external power source and provides a 12 V output to the chassis and -56 V output to the PoE power supply.

Figure 4-257 Power supply connections of a single DC power module



NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

RTN1: -56 V reference ground

Heat Dissipation

The S5720I-12X-PWH-SI-DC has no fans and uses natural heat dissipation.

Technical Specifications

Table 4-658 lists technical specifications of the S5720I-12X-PWH-SI-DC.

Table 4-658 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	64.23 years
Mean time to repair (MTTR)	2
Availability	> 0.99999
Service port surge	±1.5 kV in differential mode, ±6 kV in common mode

Item	Description
protection	
Power supply surge protection	± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 250.0 mm x 180.0 mm (1.72 in. x 9.8 in. x 7.1 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 250.0 mm x 186.36 mm (1.72 in. x 9.8 in. x 7.34 in.)
Weight (with packaging)	2.5 kg (5.51 lb)
Stack ports	Eight 10/100/1000BASE-T ports and four 10G SFP+ ports
RTC	Not supported
RPS	Not supported
PoE	Supported
Rated voltage range	50 V DC to 56 V DC
Maximum voltage range	46 V DC to 57 V DC
Maximum power consumption (100% throughput)	<p>Using PAC-260WA-E power module:</p> <ul style="list-style-type: none"> Without PoE: 28.8 W 100% PoE loads: 288.4 W (system power consumption: 48.4 W, PoE: 240 W) <p>Using PAC240S56-CN power module:</p> <ul style="list-style-type: none"> Without PoE: 26.5 W 100% PoE loads: 270.1 W (system power consumption: 50.1 W, PoE: 220 W)
Typical power consumption (30% of traffic load)	<p>Using PAC-260WA-E power module: 27.6 W</p> <p>Using PAC240S56-CN power module: 25 W</p> <ul style="list-style-type: none"> Tested according to ATIS standard EEE enabled No PoE power consumption
Operating temperature	<ul style="list-style-type: none"> -40 °C to +65 °C (-40 °F to +149 °F) (installed in the sealing cabinet) -40 °C to +70 °C (-40 °F to +158 °F) (installed in the ventilation cabinet, with the wind speed of at least 40 LFM) -40 °C to +75 °C (-40 °F to +167 °F) (installed in the ventilation cabinet shipped with fans with a fan speed of at least 200 LFM)

Item	Description
	NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40 °C to +85 °C (-40 °F to +185 °F)
Protection rating	IP30
Noise under normal temperature (27 °C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010795

4.13.5 S5720I-28X-SI-AC

Version Mapping

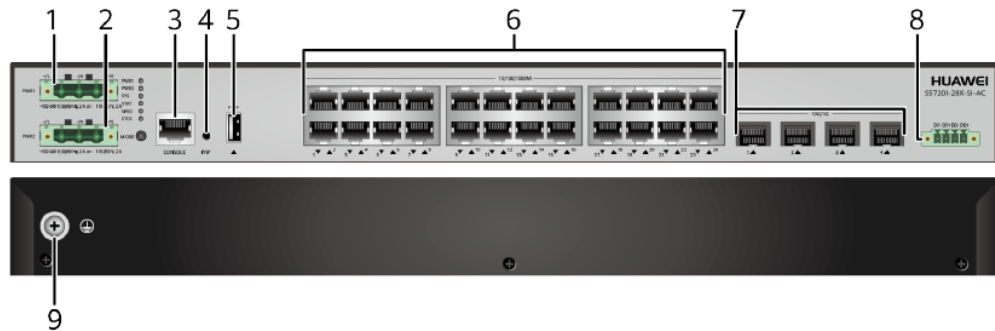
Table 4-659 lists the mapping between the S5720I-28X-SI-AC chassis and software versions.

Table 4-659 Version mapping

Series	Model	Software Version
S5720I-SI	S5720I-28X-SI-AC	V200R012C00 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-258 S5720I-28X-SI-AC appearance



1	AC power input port 1 NOTE It must be used with the Phoenix connector, which is included in the installation accessory package.	2	AC power input port 2 NOTE It must be used with the Phoenix connector, which is included in the installation accessory package.
3	One console port	4	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
5	One USB port	6	Twenty-four 10/100/1000BASE-T ports
7	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.17 Industrial Optical Modules • 9.15 Copper Cable • 9.14 Dedicated Stack Cable 	8	Monitoring port NOTE It must be used with the Phoenix connector, which is included in the installation accessory package. The monitoring port detects the status of external devices, for example, monitoring the opening and closing of the cabinet door. For details about how to use a monitoring port, see "Monitoring Interface Configuration" in the CLI-based Configuration Guide - Device Management Configuration Guide.
9	Ground screw NOTE It is used with a 9.1 Ground Cable.	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-660 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-660 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	<p>It supports long-distance interconnection with Huawei cameras. For example, it supports the distance of 200 m at 100 Mbit/s and supports the distance of 250 m at 10 Mbit/s.</p> <ul style="list-style-type: none">The supported camera models are M2220-I, M2221-FL, M2221-VL, M2260-I, and M2220-I(8-32mm).If the transmission distance exceeds 100 m, Category 5E or higher Ethernet cables are required.

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-661 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-661 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-662.

Table 4-662 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

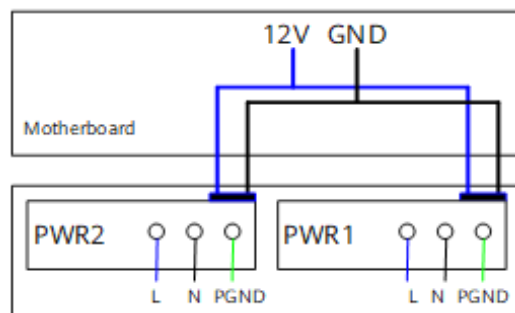
The S5720I-28X-SI-AC has similar indicators to those of the S5720I-28X-PWH-SI-AC except that the S5720I-28X-SI-AC does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720I-28X-SI-AC has two built-in power modules for 1+1 power redundancy and does not support pluggable power modules.

Figure 4-259 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 4-259 Power supply connections of dual AC power modules



L: Live wire

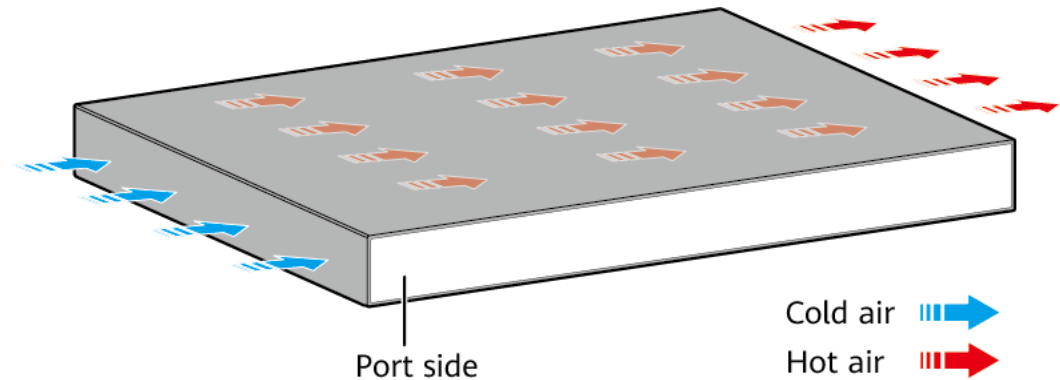
N: Neutral wire

PGND: Protection ground wire

GND: 12 V reference ground

Heat Dissipation

The S5720I-28X-SI-AC has two built-in fans for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-663 lists technical specifications of the S5720I-28X-SI-AC.

Table 4-663 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	72.32 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	± 1.5 kV in differential mode, ± 6 kV in common mode
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 226.26 mm (1.72 in. x 17.4 in. x 8.91 in.)
Weight (with	4.5 kg (9.92 lb)

Item	Description
packaging)	
Stack ports	Twenty-four 10/100/1000BASE-T ports and four 10G SFP+ ports
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz 110 V DC to 250 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz 110 V DC to 250 V DC
Maximum power consumption (100% throughput, full speed of fans)	29.3 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	24.8 W
Operating temperature	-40 °C to +65 °C (-40 °F to +149 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40 °C to +85 °C (-40 °F to +185 °F)
Protection rating	IP20
Noise under normal temperature (27 °C, sound power)	< 45 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification

Item	Description
Part number	98010796

4.13.6 S5720I-28X-PWH-SI-AC

Version Mapping

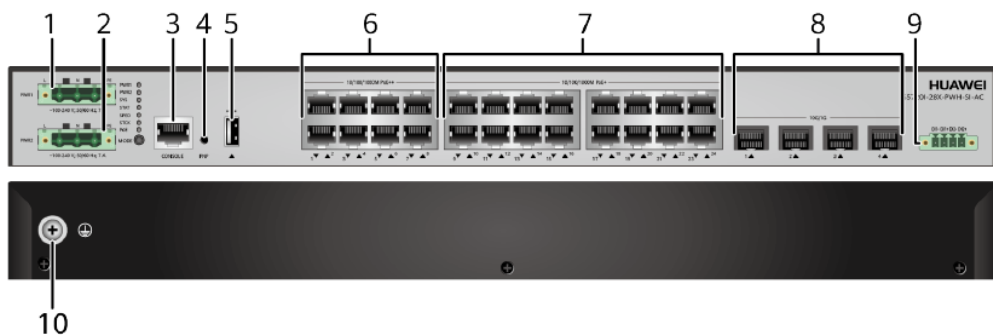
Table 4-664 lists the mapping between the S5720I-28X-PWH-SI-AC chassis and software versions.

Table 4-664 Version mapping

Series	Model	Software Version
S5720I-SI	S5720I-28X-PWH-SI-AC	V200R012C00 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-260 S5720I-28X-PWH-SI-AC appearance



1	AC power input port 1 NOTE It must be used with the Phoenix connector, which is included in the installation accessory package.	2	AC power input port 2 NOTE It must be used with the Phoenix connector, which is included in the installation accessory package.
3	One console port	4	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service

			interruption. Exercise caution when you press the PNP button.
5	One USB port	6	Eight PoE++ 10/100/1000BASE-T ports
7	Sixteen PoE+ 10/100/1000BASE-T ports	8	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.17 Industrial Optical Modules • 9.15 Copper Cable • 9.14 Dedicated Stack Cable
9	Monitoring port NOTE It must be used with the Phoenix connector, which is included in the installation accessory package. The monitoring port detects the status of external devices, for example, monitoring the opening and closing of the cabinet door. For details about how to use a monitoring port, see "Monitoring Interface Configuration" in the CLI-based Configuration Guide - Device Management Configuration Guide.	10	Ground screw NOTE It is used with a 9.1 Ground Cable.

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-665 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-665 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	It supports long-distance interconnection with Huawei cameras. For example, it supports the distance of 200 m at 100 Mbit/s and supports the distance of 250 m at 10 Mbit/s. <ul style="list-style-type: none"> • The supported camera models are M2220-I, M2221-FL, M2221-VL, M2260-I, and M2220-I(8-32mm). • If the transmission distance exceeds 100 m, Category 5E or higher Ethernet cables are required.

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-666 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-666 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-667.

Table 4-667 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

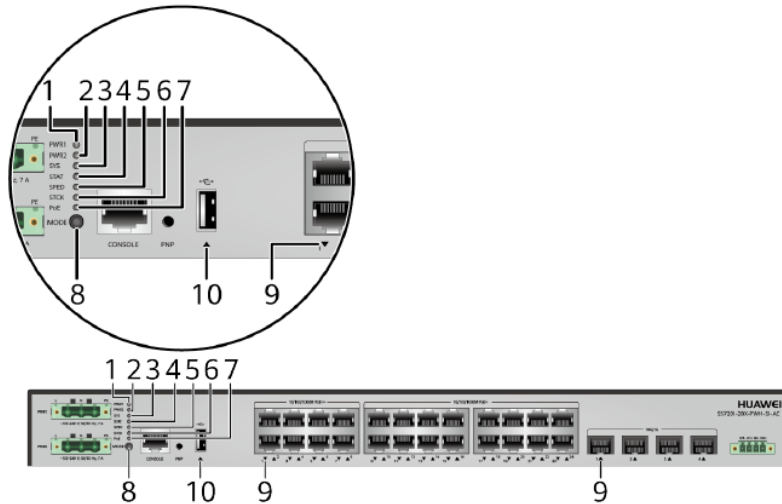
Indicator Description

NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
- If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
- If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 4-261 Indicators on the S5720I-28X-PWH-SI-AC



NOTE

The S5720I-SI series switches provide a command for setting fault indicators, which help field maintenance personnel find a faulty switch quickly.

The SYS indicator and mode indicators (STAT, SPED, STCK, and PoE) are used as fault indicators. When an S5720I-SI switch is faulty, you can run the command to turn on the fault indicators. Then the SYS indicator and mode indicators fast blink red to help field maintenance personnel quickly find the faulty switch.

Table 4-668 Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR1	Power module indicator	-	Off	No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 1 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none"> • A power module is available in this slot but its power switch is in the OFF position.

No.	Indicator	Name	Color	Status	Description
					<ul style="list-style-type: none"> A power module is available in this slot but it is not connected to a power source. The power module in this slot has failed.
2	PWR 2	Power module indicator	-	Off	No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 2 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 2: <ul style="list-style-type: none"> A power module is available in this slot but its power switch is in the OFF position. A power module is available in this slot but it is not connected to a power source. The power module in this slot has failed.
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or temperature alarm has been generated.
4	STAT	Status indicator	-	Off	The status mode is not selected.
			Green	Steady on	The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
5	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The service port indicators show the port speeds. After 45 seconds, the service port indicators automatically restore to the status mode.
6	STACK	Stack indicator	-	Off	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is in stack standby or slave state or the stacking function is not enabled on the switch. If you are changing the indicator mode: The stack mode is not selected.

No.	Indicator	Name	Color	Status	Description
			Green	Steady on	The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is a stack master switch or a standalone switch with the stacking function enabled. If you are changing the indicator mode: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>
7	PoE	PoE indicator	-	Off	The PoE mode is not selected.
			Green	Steady on	The service port indicators show the PoE status. After 45 seconds, the service port indicators automatically restore to the status mode.
8	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> When you press this button once, the service port indicators change to the speed mode and show the speed of each service port. When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch. When you press this button a third time, the service port indicators change to the PoE mode and show the PoE status of each service port. When you press this button a fourth time, the service port indicators restore to the default mode, and the STAT indicator turns green. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED and PoE indicators are off, and the STCK indicator is off or blinking green.</p>
9	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see Table 4-669.		
10	-	USB-bas	-	Off	<ul style="list-style-type: none"> No USB flash drive is connected to the

No.	Indicator	Name	Color	Status	Description
		ed deployment indicator			switch. <ul style="list-style-type: none"> The USB port is damaged. The indicator is damaged. The USB flash drive does not have any configuration file and cannot be used for deployment. The switch has been upgraded using the USB flash drive and is restarting.
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from the USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

Table 4-669 Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
PoE	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.

Display Mode	Color	Status	Description
	Yellow	Steady on	The PoE function is disabled on the port.
	Yellow	Blinking	The port stops providing PoE power because of an exception (for example, an incompatible PD is connected to the port).
	Green and yellow	Blinking green and yellow alternately	The port fails to supply power to a PD due to one of the following reasons: <ul style="list-style-type: none">• The power required by the connected PD exceeds the maximum power or the configured power threshold of the port.• The total power consumption of PDs has reached the maximum power of the switch.• The manual power management mode is used and the port is not enabled to provide power to the PD.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none">• If the indicator of a port is steady on, the number of this port is the stack ID of the switch.• If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none">• If the indicator of a port is blinking, the number of this port is the stack ID of the switch.• If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Power Supply Configuration

The S5720I-28X-PWH-SI-AC has two built-in power modules for 1+1 power redundancy and does not support pluggable power modules.

The following two PoE power supply modes are available:

- High-power mode (default): When double power modules are used, they provide 369.6 W PoE power for the eight PoE++ ports and 369.6 W PoE power for the sixteen PoE+ ports (total of 739.2 W PoE power). When either of the two power modules fails, the eight PoE++ ports can supply power for PDs normally; however, the PDs connected to the sixteen PoE+ ports are powered off, and the PoE function is unavailable. When a single power module is used, only the eight PoE++ ports can supply PoE power for PDs.
- PoE backup mode: You can run the **poe-power backup-mode** command to manually switch the PoE power supply mode to the backup mode. In backup mode, the entire system provides 369.6 W PoE power regardless of whether a single power module or

double power modules are used. That is, all 24 ports share the 369.6 W power. When double power modules are used, they work in 1+1 redundancy mode.

 **NOTE**

When the power supply mode is manually switched to the PoE backup mode, the PDs connected to all ports are powered off and then powered on again.

When the switch works in PoE backup mode, the PDs connected to all ports are powered off and then powered on again if the switch is restarted.

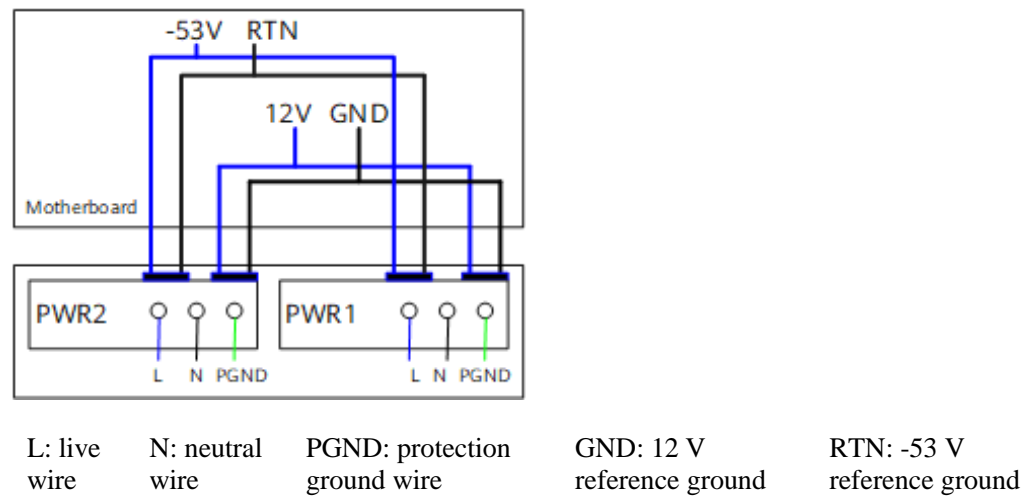
Table 4-670 lists its power supply configurations.

Table 4-670 Power supply configurations

Power Supply Mode	Power Supply Configuration	Available PoE Power	Maximum Number of Ports (Fully Loaded)
High-power mode	Single power module	369.6 W	Eight PoE++ ports: <ul style="list-style-type: none"> • 802.3af (15.4 W per port): 8 • 802.3at (30 W per port): 8 • 802.3bt (60 W per port): 6 Sixteen PoE+ ports: N/A
	Double power modules	739.2 W	Eight PoE++ ports: <ul style="list-style-type: none"> • 802.3af (15.4 W per port): 8 • 802.3at (30 W per port): 8 • 802.3bt (60 W per port): 6 Sixteen PoE+ ports: <ul style="list-style-type: none"> • 802.3af (15.4 W per port): 16 • 802.3at (30 W per port): 12
PoE backup mode	Single power module	369.6 W	Twenty-four ports: <ul style="list-style-type: none"> • 802.3af (15.4 W per port): 24 • 802.3at (30 W per port): 12 • 802.3bt (60 W per port): 6 (Only the eight PoE++ ports support this configuration.)
	Double power modules		

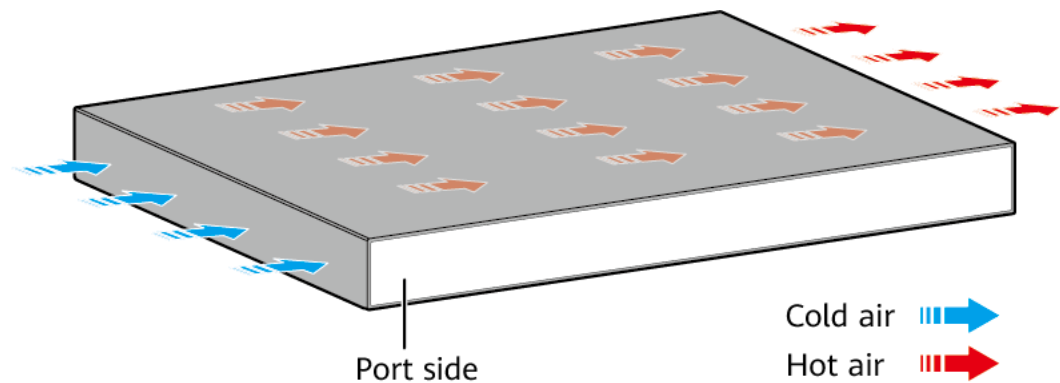
Figure 4-262 shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

Figure 4-262 Power supply by dual AC PoE power modules



Heat Dissipation

The S5720I-28X-PWH-SI-AC has four built-in fans for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-671 lists technical specifications of the S5720I-28X-PWH-SI-AC.

Table 4-671 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between	45.94 years

Item	Description
failures (MTBF)	
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	± 1.5 kV in differential mode, ± 6 kV in common mode
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 310.0 mm (1.72 in. x 17.4 in. x 12.2 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 316.46 mm (1.72 in. x 17.4 in. x 12.46 in.)
Weight (with packaging)	6.7 kg (14.77 lb)
Stack ports	Twenty-four 10/100/1000BASE-T ports and four 10G SFP+ ports
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none">Without PoE: 57.8 W100% PoE loads: 905 W (system power consumption: 165.8 W, PoE: 739.2 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">Tested according to ATIS standardEEE enabledNo PoE power consumption	34.6 W
Operating temperature	-40 °C to +65 °C (-40 °F to +149 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).

Item	Description
Storage temperature	-40 °C to +85 °C (-40 °F to +185 °F)
Protection rating	IP20
Noise under normal temperature (27 °C, sound power)	< 47 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010797

4.14 S5730-SI

4.14.1 S5730-48C-SI-AC

Version Mapping

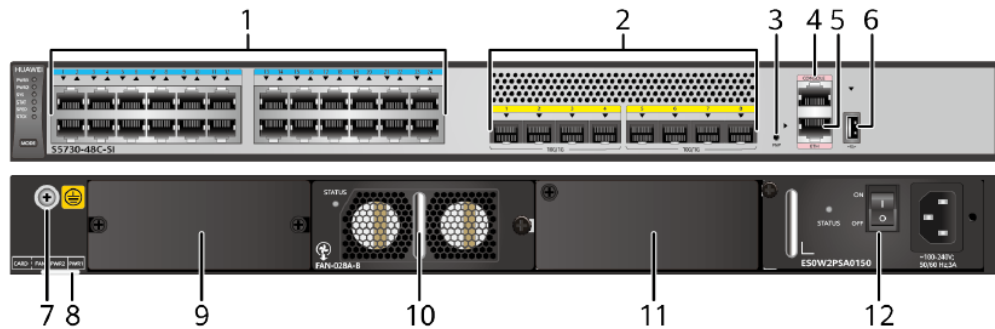
Table 4-672 lists the mapping between the S5730-48C-SI-AC chassis and software versions.

Table 4-672 Version mapping

Series	Model	Software Version
S5730-SI	S5730-48C-SI-AC	V200R011C10 to V200R019C10 versions

Appearance and Structure

Figure 4-263 S5730-48C-SI-AC appearance



1	Twenty-four 10/100/1000BASE-T ports	2 Eight 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	One PNP button NOTICE Applicable in V200R012C00 and later versions: To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.	4 One console port NOTE It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.
5	One ETH management port	6 One USB port
7	Ground screw NOTE It is used with a 9.1 Ground Cable.	8 ESN label NOTE You can draw it out to view the ESN and

			MAC address of the switch.
9	<p>Rear card slot</p> <p>NOTE Card supported:</p> <ul style="list-style-type: none"> 8.17 ES5D21Q04Q01 (4-Port 40 Gig QSFP+ Rear Interface Card) 8.27 ES5D21VST000 (Dedicated Stack Card with 2*QSFP+ Interface) (applicable in V200R012C00 and later versions) 	10	<p>Fan slot</p> <p>NOTE Applicable fan module: 7.3 FAN-028A-B Fan Module</p>
11	<p>Power module slot 2</p> <p>NOTE Applicable power modules:</p> <ul style="list-style-type: none"> 5.2 LS5M100PWA00/ES0W2PSA0150 (150 W AC Power Module) 5.3 LS5M100PWD00/ES0W2PSD0150 (150 W DC Power Module) 	12	<p>Power module slot 1</p> <p>NOTE Applicable power modules:</p> <ul style="list-style-type: none"> 5.2 LS5M100PWA00/ES0W2PSA0150 (150 W AC Power Module) 5.3 LS5M100PWD00/ES0W2PSD0150 (150 W DC Power Module)

Interface Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-673 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-673 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-674 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-674 Attributes of a 10GE SFP+ port

Attribute	Description
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Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-675.

Table 4-675 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-676 describes the attributes of an ETH management port.

Table 4-676 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission	100 m

Attribute	Description
distance	

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

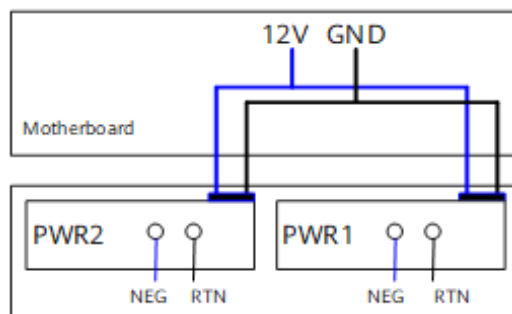
The S5730-48C-SI-AC has similar indicators to those of the S5730-68C-PWR-SI-AC except that the S5730-48C-SI-AC does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5730-48C-SI-AC uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

Figure 4-264 shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 4-264 Power supply connections of dual DC power modules



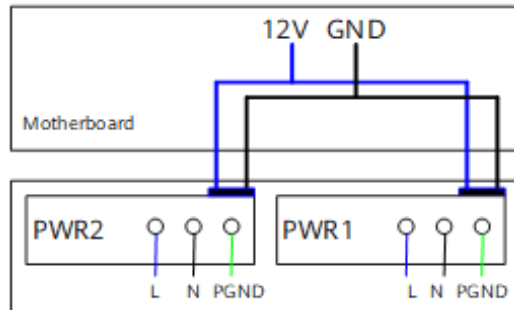
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

Figure 4-265 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 4-265 Power supply connections of dual AC power modules



L: Live wire

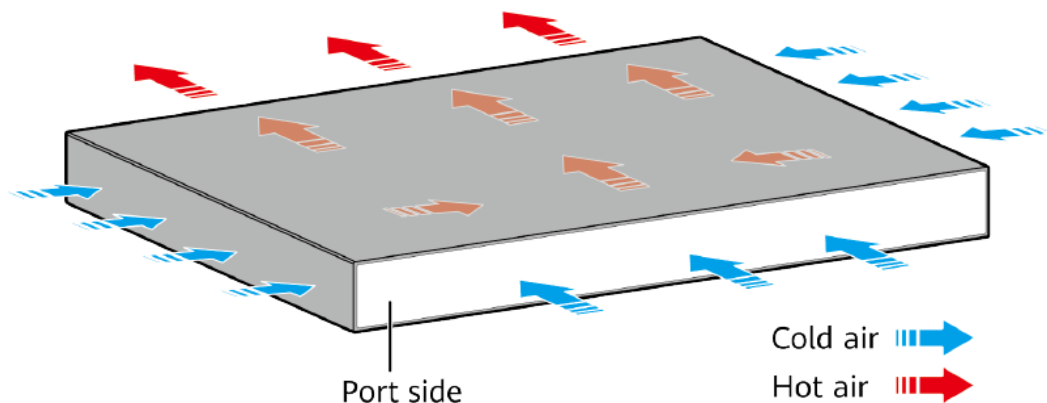
N: Neutral wire

PGND: Protection ground wire

GND: 12 V reference ground

Heat Dissipation

The S5730-48C-SI-AC uses pluggable fan modules for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-677 lists technical specifications of the S5730-48C-SI-AC.

Table 4-677 Technical specifications

Item	Parameter
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.

Item	Parameter
Mean time between failures (MTBF)	47.83 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	<ul style="list-style-type: none">Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common modeUsing DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 425.0 mm (1.75 in. x 17.4 in. x 16.73 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.3 mm (1.75 in. x 17.4 in. x 17.77 in.)
Weight (with packaging)	8.2 kg (18.08 lb)
Stack ports	Any 10GE SFP+ or 40GE QSFP+ ports Ports on the 2-port QSFP+ rear stack card
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	62.4 W (without card)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">Tested according to ATIS standardEEE enabledNo PoE power consumption	39.02 W (without card)

Item	Parameter
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The operating temperature of the switch is 0 °C to 40 °C (32 °F to 104 °F) when it uses QSFP+ optical modules with 10 km or longer transmission distances.
Short-term operating temperature	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">• The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 59.4 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none">• AC power modules configured: 0-5000 m (0-16404 ft.)• DC power modules configured: 0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010710

4.14.2 S5730-48C-PWR-SI-AC

Version Mapping

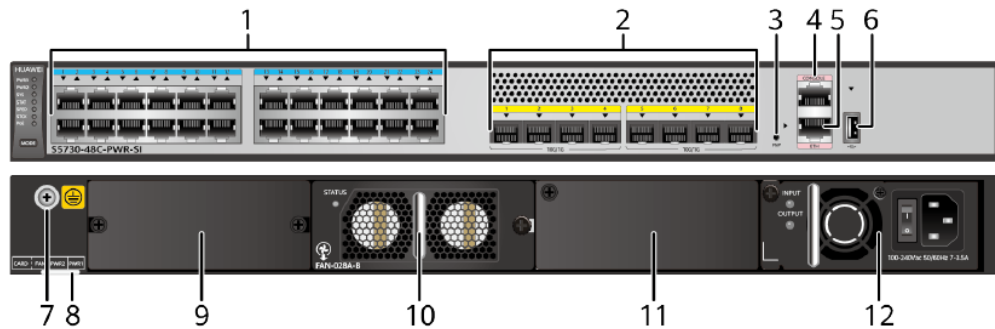
Table 4-678 lists the mapping between the S5730-48C-PWR-SI-AC chassis and software versions.

Table 4-678 Version mapping

Series	Model	Software Version
S5730-SI	S5730-48C-PWR-SI-AC	V200R011C10 to V200R019C10 versions

Appearance and Structure

Figure 4-266 S5730-48C-PWR-SI-AC appearance



1	Twenty-four PoE+ 10/100/1000BASE-T ports	2	Eight 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	One PNP button	4	One console port

	<p>NOTICE</p> <p>Applicable in V200R012C00 and later versions:</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>		<p>NOTE</p> <p>It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>
5	One ETH management port	6	One USB port
7	<p>Ground screw</p> <p>NOTE</p> <p>It is used with a 9.1 Ground Cable.</p>	8	<p>ESN label</p> <p>NOTE</p> <p>You can draw it out to view the ESN and MAC address of the switch.</p>
9	<p>Rear card slot</p> <p>NOTE</p> <p>Card supported:</p> <ul style="list-style-type: none"> 8.17 ES5D21Q04Q01 (4-Port 40 Gig QSFP+ Rear Interface Card) 8.27 ES5D21VST000 (Dedicated Stack Card with 2*QSFP+ Interface) (applicable in V200R012C00 and later versions) 	10	<p>Fan slot</p> <p>NOTE</p> <p>Applicable fan module: 7.3 FAN-028A-B Fan Module</p>
11	<p>Power module slot 2</p> <p>NOTE</p> <p>Applicable power modules:</p> <ul style="list-style-type: none"> 5.6 W0PSA5000/PAC-500WA-BE (500 W AC PoE Power Module) 5.8 PDC-650WA-BE (650 W DC PoE Power Module) 	12	<p>Power module slot 1</p> <p>NOTE</p> <p>Applicable power modules:</p> <ul style="list-style-type: none"> 5.6 W0PSA5000/PAC-500WA-BE (500 W AC PoE Power Module) 5.8 PDC-650WA-BE (650 W DC PoE Power Module)

Interface Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-679 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-679 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum	100 m

Attribute	Description
transmission distance	

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-680 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-680 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-681.

Table 4-681 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-682 describes the attributes of an ETH management port.

Table 4-682 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5730-48C-PWR-SI-AC has the same types of indicators as the S5730-68C-PWR-SI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5730-48C-PWR-SI-AC is a PoE switch. It has two power module slots, each of which can have a 500 W or 650 W power module installed. A power module can provide 369.6 W of PoE power for powered devices (PDs). A 500 W AC power module and a 650 W DC power module can be used together in the switch. Table 4-683 lists its power supply configurations.

Table 4-683 Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
500 W or 650 W	—	369.6 W	<ul style="list-style-type: none">802.3af (15.4 W per port): 24802.3at (30 W per port):

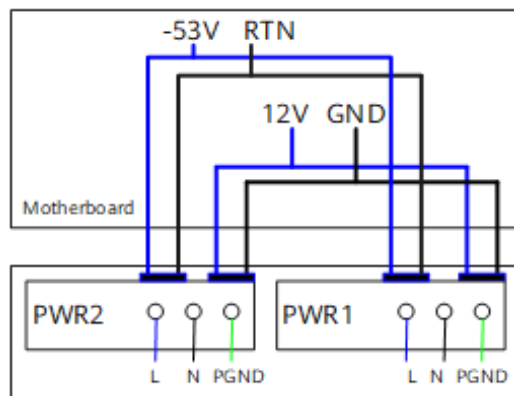
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
			12
500 W or 650 W	500 W or 650 W	739.2 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 24

NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

Figure 4-267 shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

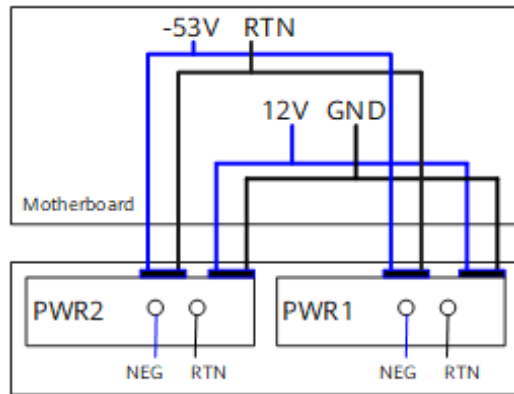
Figure 4-267 Power supply by dual AC PoE power modules



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground RTN: -53 V reference ground

Figure 4-268 shows the power supply connections of dual DC PoE power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V and -53 V output voltages, and the motherboard provides 12 V voltage for the entire device and -53 V voltage for the PDs.

Figure 4-268 Power supply connections of dual DC PoE power modules



NEG: negative wire

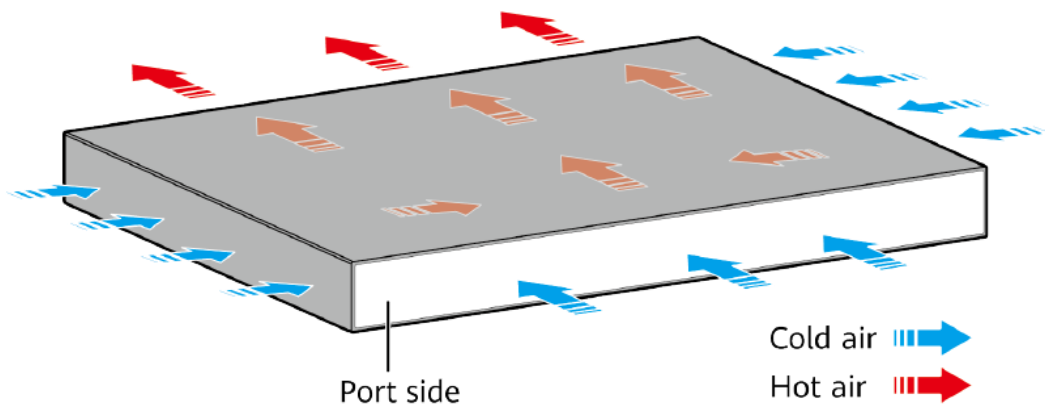
RTN: positive wire

GND: 12 V reference ground

RTN: -53 V reference ground

Heat Dissipation

The S5730-48C-PWR-SI-AC uses pluggable fan modules for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-684 lists technical specifications of the S5730-48C-PWR-SI-AC.

Table 4-684 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between	46.8 years

Item	Description
failures (MTBF)	
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	<ul style="list-style-type: none">Using 500 W AC power modules: ± 6 kV in differential mode, ± 6 kV in common modeUsing 650 W DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 425.0 mm (1.75 in. x 17.4 in. x 16.73 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.3 mm (1.75 in. x 17.4 in. x 17.77 in.)
Weight (with packaging)	8.3 kg (18.3 lb)
Stack ports	Any 10GE SFP+ or 40GE QSFP+ ports Ports on the 2-port QSFP+ rear stack card
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none">Not providing the PoE function: 83.2 W (without card)100% PoE loads: 967 W (system power consumption: 227.8 W, PoE: 739.2 W, without card)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">Tested according to ATIS standardEEE enabledNo PoE power consumption	44.2 W (without card)

Item	Description
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The operating temperature of the switch is 0 °C to 40 °C (32 °F to 104 °F) when it uses QSFP+ optical modules with 10 km or longer transmission distances.
Short-term operating temperature	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">• The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 57.4 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010712

4.14.3 S5730-68C-SI-AC

Version Mapping

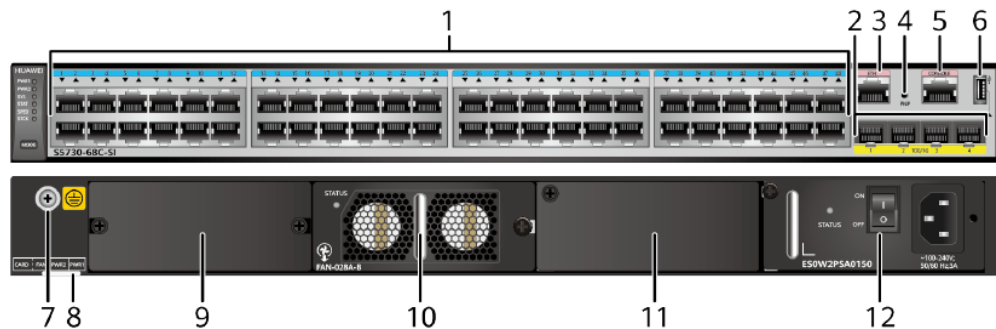
Table 4-685 lists the mapping between the S5730-68C-SI-AC chassis and software versions.

Table 4-685 Version mapping

Series	Model	Software Version
S5730-SI	S5730-68C-SI-AC	V200R011C10 to V200R019C10 versions

Appearance and Structure

Figure 4-269 S5730-68C-SI-AC appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	One ETH management port	4	One PNP button NOTICE Applicable in V200R012C00 and later versions: To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service

			interruption. Exercise caution when you press the PNP button.
5	One console port NOTE It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.	6	One USB port
7	Ground screw NOTE It is used with a 9.1 Ground Cable.	8	ESN label NOTE You can draw it out to view the ESN and MAC address of the switch.
9	Rear card slot NOTE Card supported: <ul style="list-style-type: none"> 8.17 ES5D21Q04Q01 (4-Port 40 Gig QSFP+ Rear Interface Card) 8.27 ES5D21VST000 (Dedicated Stack Card with 2*QSFP+ Interface) (applicable in V200R012C00 and later versions) 	10	Fan slot NOTE Applicable fan module: 7.3 FAN-028A-B Fan Module
11	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none"> 5.2 LS5M100PWA00/ES0W2PSA0150 (150 W AC Power Module) 5.3 LS5M100PWD00/ES0W2PSD0150 (150 W DC Power Module) 	12	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> 5.2 LS5M100PWA00/ES0W2PSA0150 (150 W AC Power Module) 5.3 LS5M100PWD00/ES0W2PSD0150 (150 W DC Power Module)

Interface Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-686 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-686 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-687 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-687 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-688.

Table 4-688 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-689 describes the attributes of an ETH management port.

Table 4-689 Attributes of an ETH management port

Attribute	Description
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Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

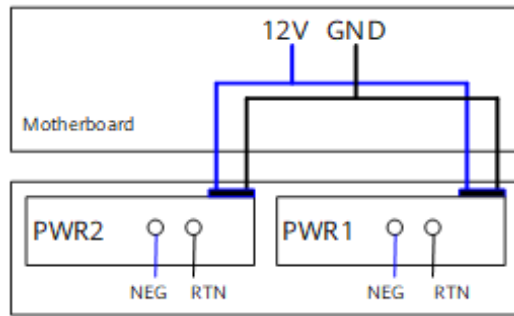
The S5730-68C-SI-AC has similar indicators to those of the S5730-68C-PWR-SI-AC except that the S5730-68C-SI-AC does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5730-68C-SI-AC uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

Figure 4-270 shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

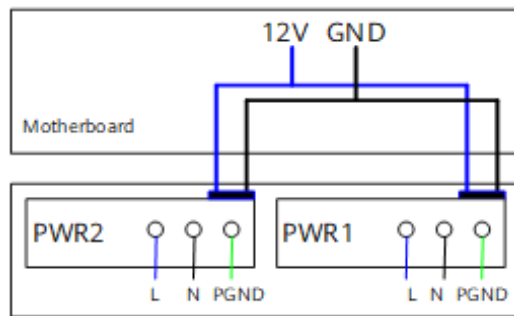
Figure 4-270 Power supply connections of dual DC power modules



NEG: negative wire RTN: positive wire GND: 12 V reference ground

Figure 4-271 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

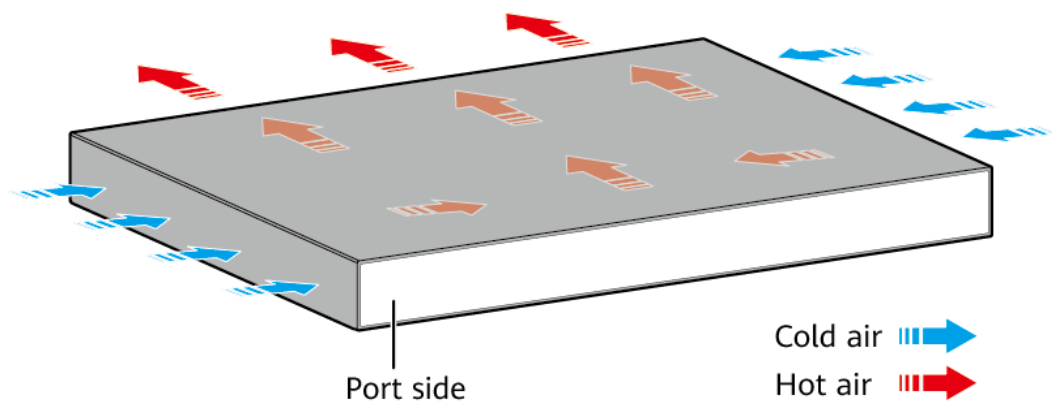
Figure 4-271 Power supply connections of dual AC power modules





L: Live wire N: Neutral wire PGND: Protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5730-68C-SI-AC uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



Cold air 
Hot air 

 NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-690 lists technical specifications of the S5730-68C-SI-AC.

Table 4-690 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	46.53 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	<ul style="list-style-type: none">Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common modeUsing DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 425.0 mm (1.75 in. x 17.4 in. x 16.73 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.3 mm (1.75 in. x 17.4 in. x 17.77 in.)
Weight (with packaging)	8.5 kg (18.74 lb)
Stack ports	Any 10GE SFP+ or 40GE QSFP+ ports Ports on the 2-port QSFP+ rear stack card
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power	65.4 W (without card)

Item	Description
consumption (100% throughput, full speed of fans)	
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	42.3 W (without card)
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The operating temperature of the switch is 0 °C to 40 °C (32 °F to 104 °F) when it uses QSFP+ optical modules with 10 km or longer transmission distances.
Short-term operating temperature	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 58.9 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none"> • AC power modules configured: 0-5000 m (0-16404 ft.) • DC power modules configured: 0-2000 m (0-6562 ft.)

Item	Description
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010713

4.14.4 S5730-68C-PWR-SI-AC

Version Mapping

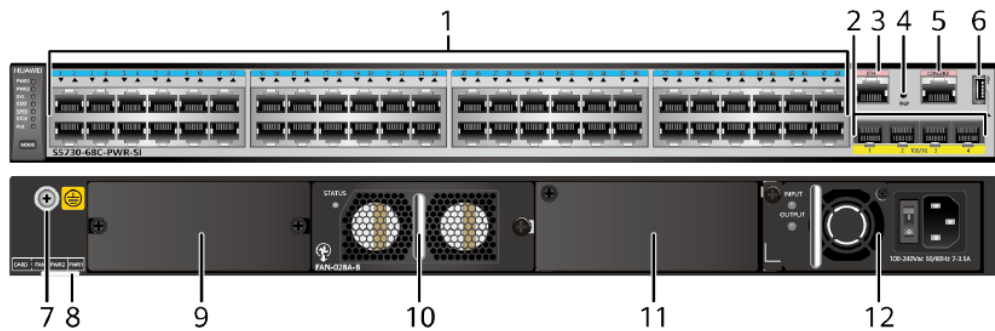
Table 4-691 lists the mapping between the S5730-68C-PWR-SI-AC chassis and software versions.

Table 4-691 Version mapping

Series	Model	Software Version
S5730-SI	S5730-68C-PWR-SI-AC	V200R011C10 to V200R019C10 versions

Appearance and Structure

Figure 4-272 S5730-68C-PWR-SI-AC appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules
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			<ul style="list-style-type: none"> • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	One ETH management port	4	<p>One PNP button</p> <p>NOTICE Applicable in V200R012C00 and later versions: To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
5	<p>One console port</p> <p>NOTE It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>	6	One USB port
7	<p>Ground screw</p> <p>NOTE It is used with a 9.1 Ground Cable.</p>	8	<p>ESN label</p> <p>NOTE You can draw it out to view the ESN and MAC address of the switch.</p>
9	<p>Rear card slot</p> <p>NOTE Card supported:</p> <ul style="list-style-type: none"> • 8.17 ES5D21Q04Q01 (4-Port 40 Gig QSFP+ Rear Interface Card) • 8.27 ES5D21VST000 (Dedicated Stack Card with 2*QSFP+ Interface) (applicable in V200R012C00 and later versions) 	10	<p>Fan slot</p> <p>NOTE Applicable fan module: 7.3 FAN-028A-B Fan Module</p>
11	<p>Power module slot 2</p> <p>NOTE Applicable power modules:</p> <ul style="list-style-type: none"> • 5.6 W0PSA5000/PAC-500WA-BE (500 W AC PoE Power Module) • 5.8 PDC-650WA-BE (650 W DC PoE Power Module) 	12	<p>Power module slot 1</p> <p>NOTE Applicable power modules:</p> <ul style="list-style-type: none"> • 5.6 W0PSA5000/PAC-500WA-BE (500 W AC PoE Power Module) • 5.8 PDC-650WA-BE (650 W DC PoE Power Module)

Interface Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-692 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-692 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-693 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-693 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-694.

Table 4-694 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)

Attribute	Description
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-695 describes the attributes of an ETH management port.

Table 4-695 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

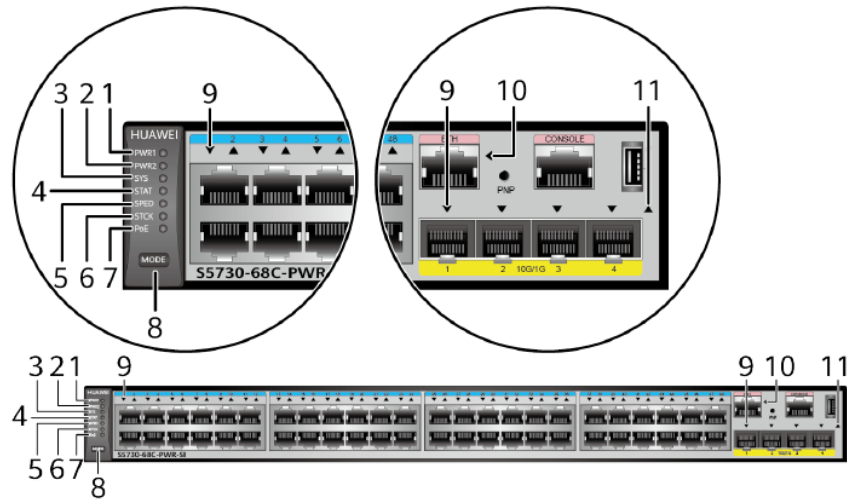
Indicator Description

NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
- If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
- If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 4-273 Indicators on the S5730-68C-PWR-SI-AC



NOTE

The S5730-SI series switches provide a command for setting fault indicators, which help field maintenance personnel find a faulty switch quickly.

The SYS indicator and mode indicators (STAT, SPED, STCK, and PoE) are used as fault indicators of a switch. If the switch fails, its SYS indicator and mode indicators can be configured to blink red fast so that field maintenance personnel can find this faulty switch.

Table 4-696 Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR 1	Power module indicator	-	Off	No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 1 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none"> • A power module is available in this slot but its power switch is in the OFF position.

No.	Indicator	Name	Color	Status	Description
					<ul style="list-style-type: none"> A power module is available in this slot but it is not connected to a power source. The power module in this slot has failed.
2	PWR 2	Power module indicator	-	Off	No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 2 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 2: <ul style="list-style-type: none"> A power module is available in this slot but its power switch is in the OFF position. A power module is available in this slot but it is not connected to a power source. The power module in this slot has failed.
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or temperature alarm has been generated.
4	STAT	Status indicator	-	Off	The status mode is not selected.
			Green	Steady on	The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
5	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The service port indicators show the port speeds. After 45 seconds, the service port indicators automatically restore to the status mode.
6	STACK	Stack indicator	-	Off	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is in stack standby or slave state or the stacking function is not enabled on the switch. If you are changing the indicator mode: The stack mode is not selected.

No.	Indicator	Name	Color	Status	Description
			Green	Steady on	The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is a stack master switch or a standalone switch with the stacking function enabled. If you are changing the indicator mode: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>
7	PoE	PoE indicator	-	Off	The PoE mode is not selected.
			Green	Steady on	The service port indicators show the PoE status. After 45 seconds, the service port indicators automatically restore to the status mode.
8	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> When you press this button once, the service port indicators change to the speed mode and show the speed of each service port. When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch. When you press this button a third time, the service port indicators change to the PoE mode and show the PoE status of each service port. When you press this button a fourth time, the service port indicators restore to the default mode, and the STAT indicator turns green. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED and PoE indicators are off, and the STCK indicator is off or blinking green.</p>
9	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see Table 4-697.		
10	-	ETH	-	Off	The ETH port is not connected.

No.	Indicator	Name	Color	Status	Description
		port indicator	Green	Steady on	The ETH port is connected.
			Green	Blinking	The ETH port is sending or receiving data.
11	-	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> No USB flash drive is connected to the switch. The USB port is damaged. The indicator is damaged. The USB flash drive does not have any configuration file and cannot be used for deployment. The switch has been upgraded using the USB flash drive and is restarting.
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from the USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

Table 4-697 Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10

Display Mode	Color	Status	Description
			Gbit/s.
PoE	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.
	Yellow	Steady on	The PoE function is disabled on the port.
	Yellow	Blinking	The port stops providing PoE power because of an exception (for example, an incompatible PD is connected to the port).
	Green and yellow	Blinking green and yellow alternately	The port fails to supply power to a PD due to one of the following reasons: <ul style="list-style-type: none"> The power required by the connected PD exceeds the maximum power or the configured power threshold of the port. The total power consumption of PDs has reached the maximum power of the switch. The manual power management mode is used and the port is not enabled to provide power to the PD.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is blinking, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Power Supply Configuration

The S5730-68C-PWR-SI-AC is a PoE switch. It has two power module slots, each of which can have a 500 W or 650 W power module installed. A power module can provide 369.6 W of PoE power for powered devices (PDs). A 500 W AC power module and a 650 W DC power module can be used together in the switch. Table 4-698 lists its power supply configurations.

Table 4-698 Power supply configurations

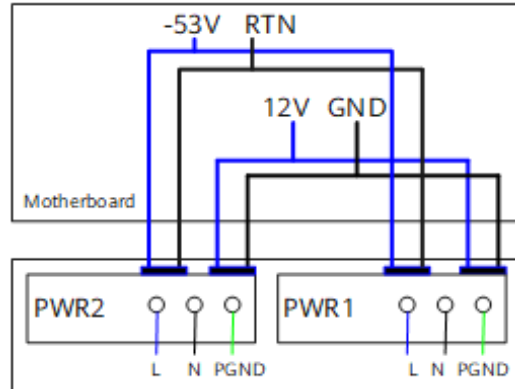
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
500 W or 650 W	–	369.6 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 12
500 W or 650 W	500 W or 650 W	739.2 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 24

NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

Figure 4-274 shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

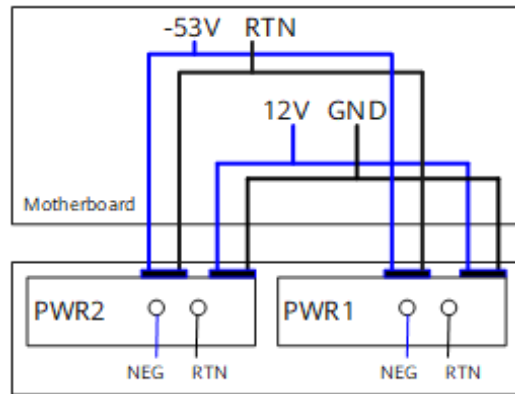
Figure 4-274 Power supply by dual AC PoE power modules



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground RTN: -53 V reference ground

Figure 4-275 shows the power supply connections of dual DC PoE power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V and -53 V output voltages, and the motherboard provides 12 V voltage for the entire device and -53 V voltage for the PDs.

Figure 4-275 Power supply connections of dual DC PoE power modules



NEG: negative wire

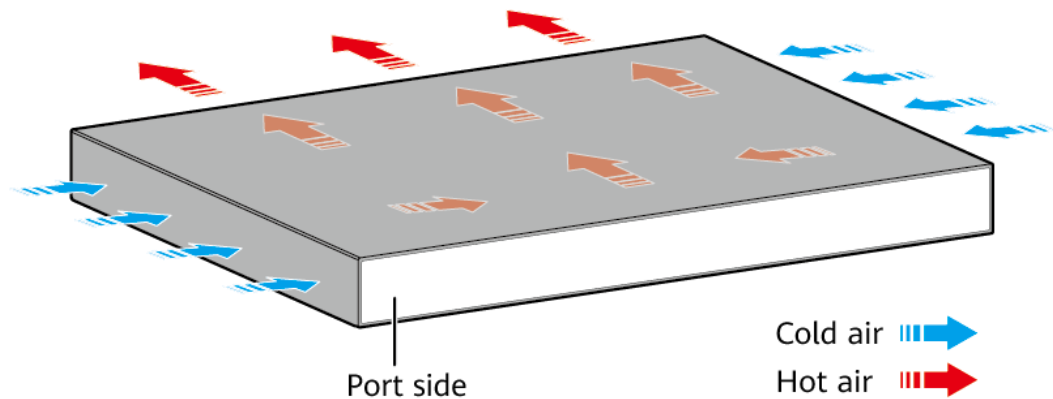
RTN: positive wire

GND: 12 V reference ground

RTN: -53 V reference ground

Heat Dissipation

The S5730-68C-PWR-SI-AC uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-699 lists technical specifications of the S5730-68C-PWR-SI-AC.

Table 4-699 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between	43.28 years

Item	Description
failures (MTBF)	
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	<ul style="list-style-type: none"> Using 500 W AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using 650 W DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 425.0 mm (1.75 in. x 17.4 in. x 16.73 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.3 mm (1.75 in. x 17.4 in. x 17.77 in.)
Weight (with packaging)	8.8 kg (19.4 lb)
Stack ports	Any 10GE SFP+ or 40GE QSFP+ ports Ports on the 2-port QSFP+ rear stack card
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> Not providing the PoE function: 68.3 W (without card) 100% PoE loads: 925 W (system power consumption: 185.8 W, PoE: 739.2 W, without card)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> Tested according to ATIS standard EEE enabled No PoE power consumption 	50.1 W (without card)

Item	Description
Operating temperature	<p>0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>The operating temperature of the switch is 0 °C to 40 °C (32 °F to 104 °F) when it uses QSFP+ optical modules with 10 km or longer transmission distances.</p>
Short-term operating temperature	<p>-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 57.5 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010714

4.14.5 S5730-68C-PWR-SI

Version Mapping

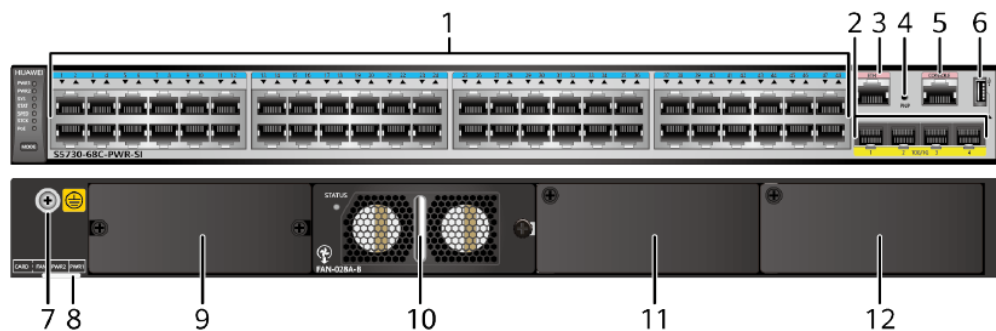
Table 4-700 lists the mapping between the S5730-68C-PWR-SI chassis and software versions.

Table 4-700 Version mapping

Series	Model	Software Version
S5730-SI	S5730-68C-PWR-SI	V200R011C10 to V200R019C10 versions

Appearance and Structure

Figure 4-276 S5730-68C-PWR-SI appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	One ETH management port	4	<p>One PNP button</p> <p>NOTICE</p> <p>Applicable in V200R012C00 and later versions:</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service</p>

			interruption. Exercise caution when you press the PNP button.
5	One console port NOTE It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.	6	One USB port
7	Ground screw NOTE It is used with a 9.1 Ground Cable.	8	ESN label NOTE You can draw it out to view the ESN and MAC address of the switch.
9	Rear card slot NOTE Card supported: <ul style="list-style-type: none"> 8.17 ES5D21Q04Q01 (4-Port 40 Gig QSFP+ Rear Interface Card) 8.27 ES5D21VST000 (Dedicated Stack Card with 2*QSFP+ Interface) (applicable in V200R012C00 and later versions) 	10	Fan slot NOTE Applicable fan module: 7.3 FAN-028A-B Fan Module
11	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none"> 5.6 W0PSA5000/PAC-500WA-BE (500 W AC PoE Power Module) 5.8 PDC-650WA-BE (650 W DC PoE Power Module) 5.10 W2PSA1150 (1150 W AC PoE Power Module) 5.9 PAC1000D5412 (1000 W AC PoE Power Module) (applicable in V200R013C00 and later versions) 	12	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> 5.6 W0PSA5000/PAC-500WA-BE (500 W AC PoE Power Module) 5.8 PDC-650WA-BE (650 W DC PoE Power Module) 5.10 W2PSA1150 (1150 W AC PoE Power Module) 5.9 PAC1000D5412 (1000 W AC PoE Power Module) (applicable in V200R013C00 and later versions)

Interface Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-701 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-701 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing

Attribute	Description
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-702 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-702 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-703.

Table 4-703 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management

port is faster than transfer through the console port. Table 4-704 describes the attributes of an ETH management port.

Table 4-704 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5730-68C-PWR-SI has the same types of indicators as the S5730-68C-PWR-SI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5730-68C-PWR-SI is a PoE switch. It has two power module slots, each of which can have a 500 W, 650 W, 1150 W, or 1000 W (applicable in V200R013C00 and later versions) power module installed. A 500 W AC power module and a 650 W DC power module can be used together in the switch. A 1150 W AC power module and a 1000 W AC power module can be used together in the switch. Table 4-705 lists its power supply configurations.

Table 4-705 Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
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Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
500 W or 650 W	–	369.6 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 24• 802.3at (30 W per port): 12
500 W or 650 W	500 W or 650 W	739.2 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 48• 802.3at (30 W per port): 24
1150 W (220 V)	–	785.4 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 48• 802.3at (30 W per port): 26
1150 W (220 V)	1150 W (220 V)	1440 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 48• 802.3at (30 W per port): 48
1150 W (110 V)	–	446.6 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 29• 802.3at (30 W per port): 14
1150 W (110 V)	1150 W (110 V)	893.2 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 48• 802.3at (30 W per port): 29
1000 W (220 V)	-	754.6 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 48• 802.3at (30 W per port): 25
1000 W (220 V)	1000 W (220 V)	1440 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 48• 802.3at (30 W per port): 48
1000 W (110 V)	-	754.6 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 48• 802.3at (30 W per port): 25
1000 W (110 V)	1000 W (110 V)	1440 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 48• 802.3at (30 W per port): 48
1000 W (220 V)	1150 W (220 V)	1440 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port):

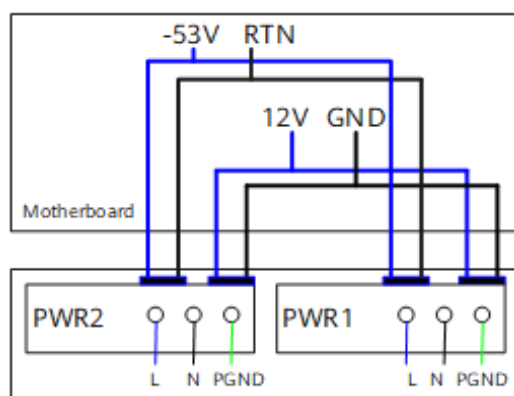
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
V)	V)		48 • 802.3at (30 W per port): 48
1150 W (220 V)	1000 W (220 V)	1440 W	• 802.3af (15.4 W per port): 48 • 802.3at (30 W per port): 48
1000 W (110 V)	1150 W (110 V)	893.2 W	• 802.3af (15.4 W per port): 48 • 802.3at (30 W per port): 29
1150 W (110 V)	1000 W (110 V)	893.2 W	• 802.3af (15.4 W per port): 48 • 802.3at (30 W per port): 29

NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

Figure 4-277 shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

Figure 4-277 Power supply by dual AC PoE power modules

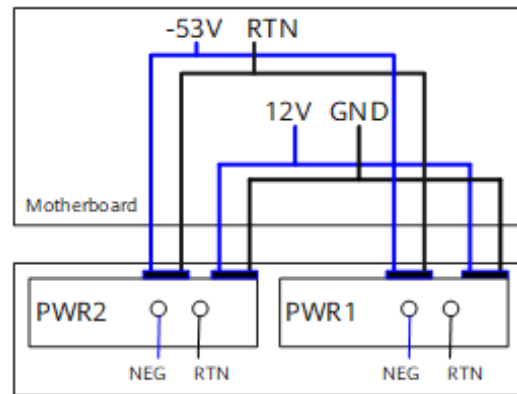


L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground RTN: -53 V reference ground

Figure 4-278 shows the power supply connections of dual DC PoE power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V and -53 V output

voltages, and the motherboard provides 12 V voltage for the entire device and -53 V voltage for the PDs.

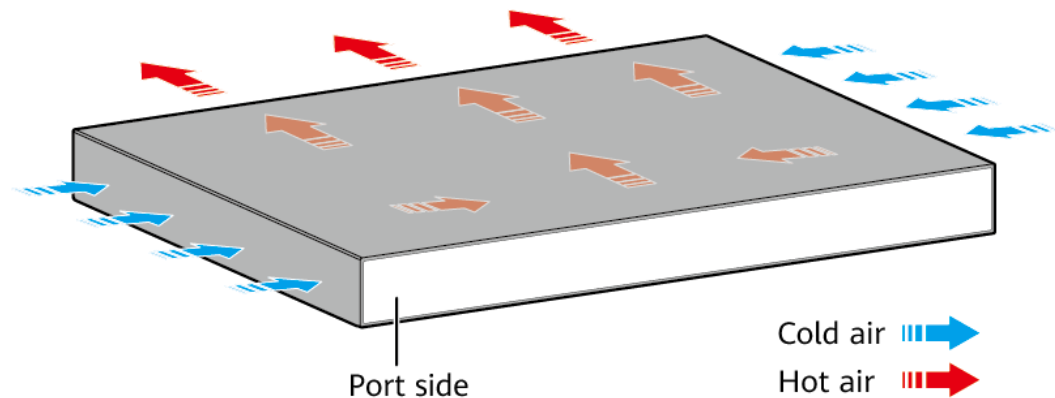
Figure 4-278 Power supply connections of dual DC PoE power modules



NEG: negative wire RTN: positive wire GND: 12 V reference ground RTN: -53 V reference ground

Heat Dissipation

The S5730-68C-PWR-SI uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-706 lists technical specifications of the S5730-68C-PWR-SI.

Table 4-706 Technical specifications

Item	Description
Memory (RAM)	1 GB

Item	Description
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	43.28 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	<ul style="list-style-type: none">Using 500 W AC or 1000 W AC power modules: ± 6 kV in differential mode, ± 6 kV in common modeUsing 650 W DC or 1150 W AC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 425.0 mm (1.75 in. x 17.4 in. x 16.73 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.3 mm (1.75 in. x 17.4 in. x 17.77 in.) <p>When 1150 W power modules are installed, they stretch out from the chassis. Therefore, the total depth of the switch changes to 541.1 mm (21.3 in.).</p>
Weight (with packaging)	8 kg (17.64 lb)
Stack ports	Any 10GE SFP+ or 40GE QSFP+ ports Ports on the 2-port QSFP+ rear stack card
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none">Using 650 W DC power modules or 500 W AC power modules<ul style="list-style-type: none">Not providing the PoE function: 68.3 W (without card)100% PoE loads: 925 W (system power consumption: 185.8 W, PoE: 739.2 W, without card)Using 1150 W AC power modules or 1000 W AC power modules<ul style="list-style-type: none">Not providing the PoE function: 68.3 W (without card)

Item	Description
	<ul style="list-style-type: none">– 100% PoE loads: 1733 W (system power consumption: 293 W, PoE: 1440 W, without card)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	50.1 W (without card)
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The operating temperature of the switch is 0 °C to 40 °C (32 °F to 104 °F) when it uses QSFP+ optical modules with 10 km or longer transmission distances.
Short-term operating temperature	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">• The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 64.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification

Item	Description
	<ul style="list-style-type: none"> Safety certification Manufacturing certification
Part number	98010779

4.15 S5700-EI

4.15.1 S5700-28C-EI

Version Mapping

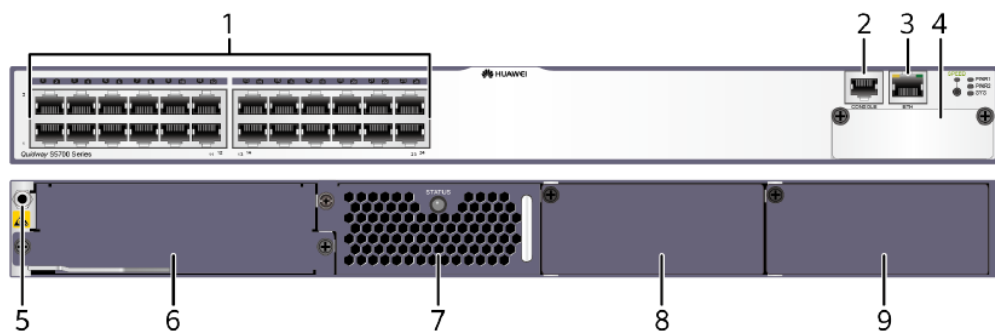
Table 4-707 lists the mapping between the S5700-28C-EI and software versions.

Table 4-707 Version mapping

Series	Model	Software Version
S5700-EI	S5700-28C-EI	V100R005C01 to V200R005C03 NOTE This model does not match V200R003C02 or V200R003C10.

Appearance and Structure

Figure 4-279 S5700-28C-EI appearance



1	Twenty-four 10/100/1000BASE-T ports	2	One console port
3	One ETH management port	4	Front card slot NOTE Card supported: <ul style="list-style-type: none"> 8.5 ES5D000G4S01 (4-Port GE SFP)

			<p>Front Optical Interface Card)</p> <ul style="list-style-type: none"> 8.3 ES5D000X2S00 (2-Port 10GE SFP+ Front Optical Interface Card) 8.4 ES5D000X4S01 (4-Port 10GE SFP+ Front Optical Interface Card)
5	<p>ESD jack</p> <p>NOTE Before installing or maintaining a switch, wear an ESD wrist strap and insert the other end of the ESD wrist strap into this ESD jack.</p>	6	<p>Rear card slot</p> <p>NOTE Card supported:</p> <ul style="list-style-type: none"> 8.28 ES5D00ETPC00 (Stack Rear Card) 8.29 ES5D00ETPB00 (Extended Rear Card)
7	<p>Fan slot</p> <p>NOTE Applicable fan module: 7.1 CX7E1FANA Fan Module</p>	8	<p>Power module slot 2</p> <p>NOTE Applicable power modules:</p> <ul style="list-style-type: none"> 5.2 LS5M100PWA00/ES0W2PSA0150 (150 W AC Power Module) 5.3 LS5M100PWD00/ES0W2PSD0150 (150 W DC Power Module)
9	<p>Power module slot 1</p> <p>NOTE Applicable power modules:</p> <ul style="list-style-type: none"> 5.2 LS5M100PWA00/ES0W2PSA0150 (150 W AC Power Module) 5.3 LS5M100PWD00/ES0W2PSD0150 (150 W DC Power Module) 	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-708 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-708 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-709.

Table 4-709 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the *Configuration Guide - Basic Configurations*. Table 4-710 describes the attributes of an ETH management port.

Table 4-710 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

Indicator Description

Figure 4-280 Indicators on the S5700-28C-EI

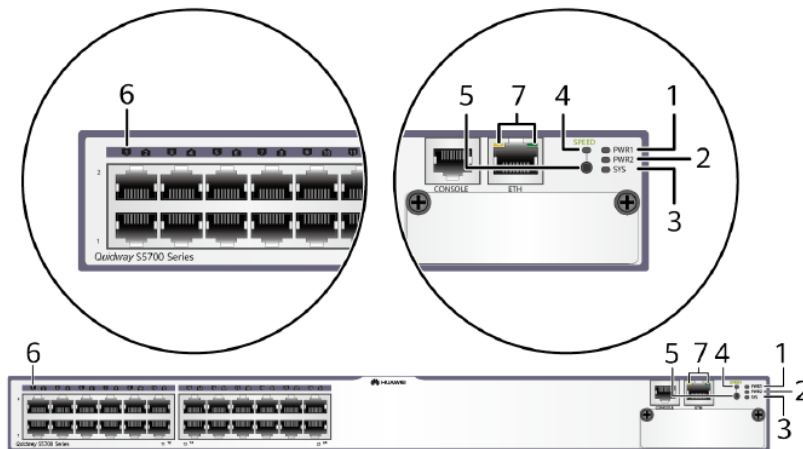


Table 4-711 Indicator Description

No.	Indicator/Button	Color	Description
1	PWR1: power module indicator	-	Off: No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.
		Green	Steady on: A power module is installed in power module slot 1 and is working normally.
		Red	Steady on: The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none"> A power module is available in this slot but its power switch is in the OFF position. A power module is available in this slot but it is not connected to a power source. The power module in this slot has failed.
2	PWR2: power module indicator	-	Off: No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
		Green	Steady on: A power module is installed in power module slot 2 and is working normally.

No.	Indicator/Butt on	Color	Description
		Red	<p>Steady on: The switch has two power modules installed. Any of the following situations occurs in power module slot 2:</p> <ul style="list-style-type: none"> • A power module is available in this slot but its power switch is in the OFF position. • A power module is available in this slot but it is not connected to a power source. • The power module in this slot has failed.
3	SYS: system status indicator	-	Off: The system is not running.
		Green	<ul style="list-style-type: none"> • Steady on: The system is not running normally or is starting. • Slow blinking: The system is running normally.
		Yellow	Steady on: The system is performing self-check during startup.
		Red	Steady on: The system does not work normally after registration, or a fan alarm or temperature alarm has been generated.
4	MODE: mode indicator	-	Off: The service port indicators are in the status mode (default). In the status mode, the service port indicator shows the port link or activity state.
		Green	Steady on: The service port indicators show the port speed. After 45 seconds, the service port indicators automatically restore to the status mode.
		Red	Steady on: The service port indicators show the stack ID of the switch. After 45 seconds, the service port indicators automatically restore to the status mode.
5	Mode switch button	-	<ul style="list-style-type: none"> • When you press this button once, the mode indicator turns green and the service port indicators show the speed of each service port. • When you press this button a second time, the mode indicator turns red and the service port indicators show the stack status. • When you press this button a third time, the mode indicator turns off. <p>If you do not press the button within 45</p>

No.	Indicator/Button	Color	Description
			seconds, the mode indicator restores to status mode.
6	Service port indicator		Meanings of service port indicators vary in different modes. For details, see Table 4-712.
7	ETH indicator	-	Off: No link is established on the port.
		Green	Steady on: The port is connected.
		Yellow	Blinking: The port is sending or receiving data.

Table 4-712 Description of service port indicators in different modes (one indicator for each port)

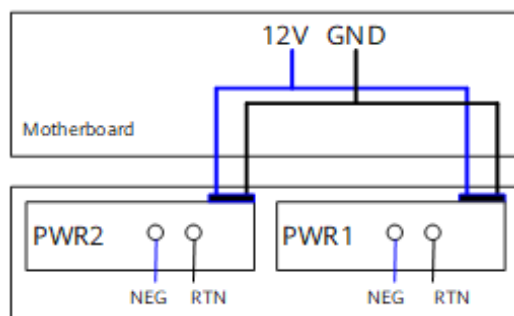
Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is blinking, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Power Supply Configuration

The S5700-28C-EI can use a single power module or double power modules for 1+1 power redundancy. In versions prior to V200R005C00, the AC and DC power modules cannot be configured on the same device, while in V200R005C00 and later versions, they can be configured on the same device.

Figure 4-281 shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

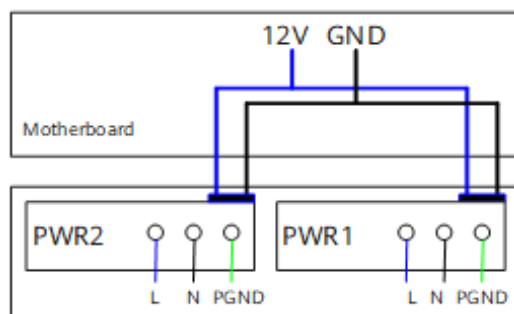
Figure 4-281 Power supply connections of dual DC power modules



NEG: negative wire RTN: positive wire GND: 12 V reference ground

Figure 4-282 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

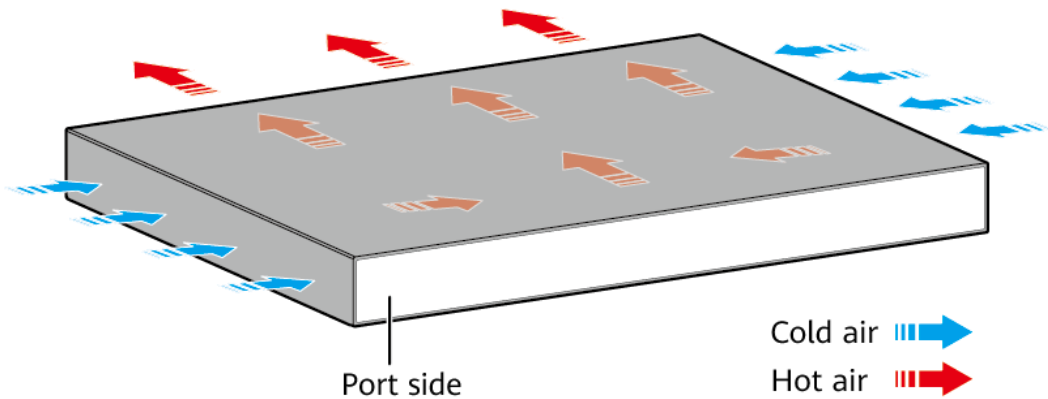
Figure 4-282 Power supply connections of dual AC power modules



L: Live wire N: Neutral wire PGND: Protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5700-28C-EI uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-713 lists technical specifications of the S5700-28C-EI.

Table 4-713 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	32 MB
Mean time between failures (MTBF)	53.11 years when a 2-port 10GE interface card is configured, 68.33 years when a 4-port GE front card is configured, 25.52 years when a 4-port 10GE front card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	±2 kV in common mode
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ±6 kV in differential mode, ±6 kV in common mode Using DC power modules: ±1 kV in differential mode, ±2 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)
Weight	<ul style="list-style-type: none"> Empty: ≤ 5 kg (11.02 lb) Fully configured: ≤ 8.5 kg (18.74 lb)
Stack ports	Two stack ports available on each stack card
RPS	Not supported
PoE	Not supported

Item	Description
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	60 W
Operating temperature	0 °C to 50 °C (32 °F to 122 °F)
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 41 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none">AC power modules configured: 0-5000 m (0-16404 ft.)DC power modules configured: 0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none">EMC certificationSafety certificationManufacturing certification
Part number	02352338

4.15.2 S5700-28C-EI-24S

Version Mapping

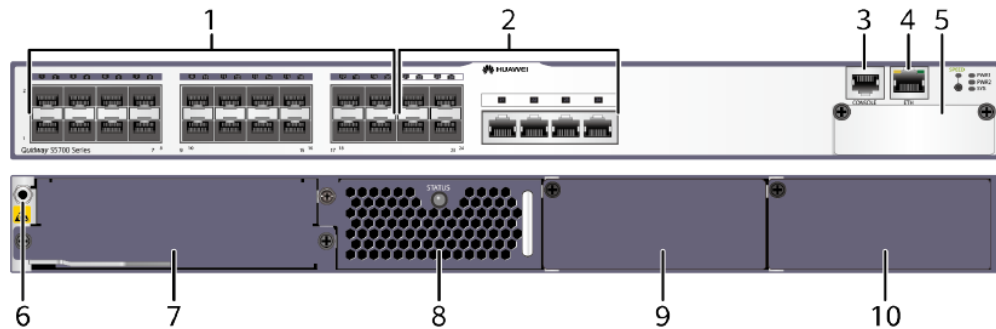
Table 4-714 lists the mapping between the S5700-28C-EI-24S and software versions.

Table 4-714 Version mapping

Series	Model	Software Version
S5700-EI	S5700-28C-EI-24S	V100R005C01 to V200R005C03 NOTE This model does not match V200R003C02 or V200R003C10.

Appearance and Structure

Figure 4-283 S5700-28C-EI-24S appearance



1	<p>Twenty 100/1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules 	2	<p>Four combo ports (10/100/1000BASE-T + 100/1000BASE-X)</p> <p>Modules applicable to combo optical ports:</p> <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules
3	One console port	4	One ETH management port
5	<p>Front card slot</p> <p>NOTE</p> <p>Card supported:</p> <ul style="list-style-type: none"> • 8.5 ES5D000G4S01 (4-Port GE SFP Front Optical Interface Card) • 8.3 ES5D000X2S00 (2-Port 10GE SFP+ Front Optical Interface Card) • 8.4 ES5D000X4S01 (4-Port 10GE SFP+ Front Optical Interface Card) 	6	<p>ESD jack</p> <p>NOTE</p> <p>Before installing or maintaining a switch, wear an ESD wrist strap and insert the other end of the ESD wrist strap into this ESD jack.</p>
7	<p>Rear card slot</p> <p>NOTE</p> <p>Card supported:</p> <ul style="list-style-type: none"> • 8.28 ES5D00ETPC00 (Stack Rear Card) • 8.29 ES5D00ETPB00 (Extended Rear Card) 	8	<p>Fan slot</p> <p>NOTE</p> <p>Applicable fan module:</p> <p>7.1 CX7E1FANA Fan Module</p>
9	<p>Power module slot 2</p> <p>NOTE</p> <p>Applicable power modules:</p> <ul style="list-style-type: none"> • 5.2 LS5M100PWA00/ES0W2PSA0150 (150 W AC Power Module) • 5.3 LS5M100PWD00/ES0W2PSD0150 	10	<p>Power module slot 1</p> <p>NOTE</p> <p>Applicable power modules:</p> <ul style="list-style-type: none"> • 5.2 LS5M100PWA00/ES0W2PSA0150 (150 W AC Power Module) • 5.3 LS5M100PWD00/ES0W2PSD0150

	(150 W DC Power Module)		(150 W DC Power Module)
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Port Description

100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. Table 4-715 describes the attributes of a 100/1000BASE-X port.

Table 4-715 Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-716.

Table 4-716 Attributes of a console port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the *Configuration Guide - Basic Configurations*. Table 4-717 describes the attributes of an ETH management port.

Table 4-717 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

Indicator Description

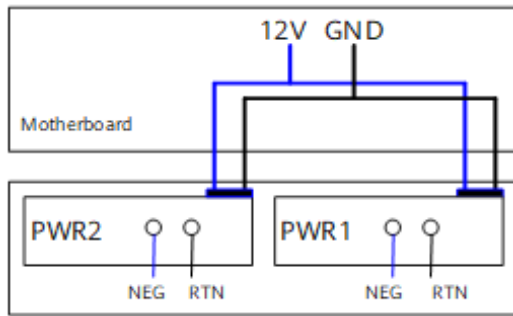
The S5700-28C-EI-24S has the same types of indicators as the S5700-28C-EI. For details, see [Indicator Description](#).

Power Supply Configuration

The S5700-28C-EI-24S can use a single power module or double power modules for 1+1 power redundancy. In versions prior to V200R005C00, the AC and DC power modules cannot be configured on the same device, while in V200R005C00 and later versions, they can be configured on the same device.

Figure 4-284 shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

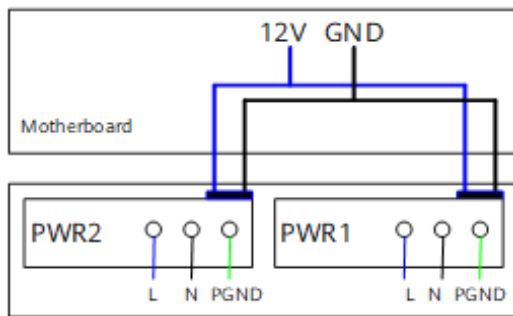
Figure 4-284 Power supply connections of dual DC power modules



NEG: negative wire RTN: positive wire GND: 12 V reference ground

Figure 4-285 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

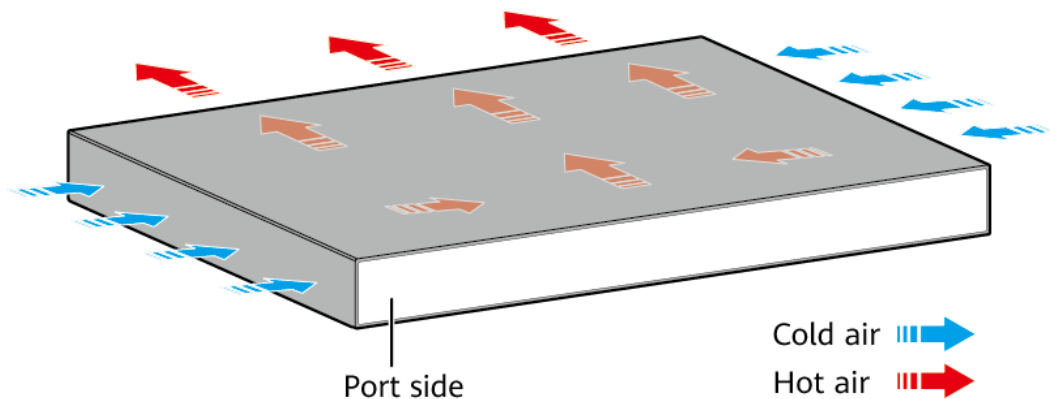
Figure 4-285 Power supply connections of dual AC power modules





L: Live wire N: Neutral wire PGND: Protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5700-28C-EI-24S uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



Cold air 
 Hot air 

 **NOTE**

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-718 lists technical specifications of the S5700-28C-EI-24S.

Table 4-718 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	32 MB
Mean time between failures (MTBF)	52.80 years when no interface card is configured, 41.33 years when a 2-port 10GE interface card is configured, 50.00 years when a 4-port GE front card is configured, 26.52 years when a 4-port 10GE front card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	± 2 kV in common mode
Power supply surge protection	<ul style="list-style-type: none">Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common modeUsing DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)
Weight	<ul style="list-style-type: none">Empty: ≤ 5 kg (11.02 lb)Fully configured: ≤ 8.5 kg (18.74 lb)
Stack ports	Two stack ports available on each stack card
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	63 W
Operating	0 °C to 50 °C (32 °F to 122 °F)

Item	Description
temperature	
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 41 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none">AC power modules configured: 0-5000 m (0-16404 ft.)DC power modules configured: 0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none">EMC certificationSafety certificationManufacturing certification
Part number	02352350

4.15.3 S5700-28C-PWR-EI

Version Mapping

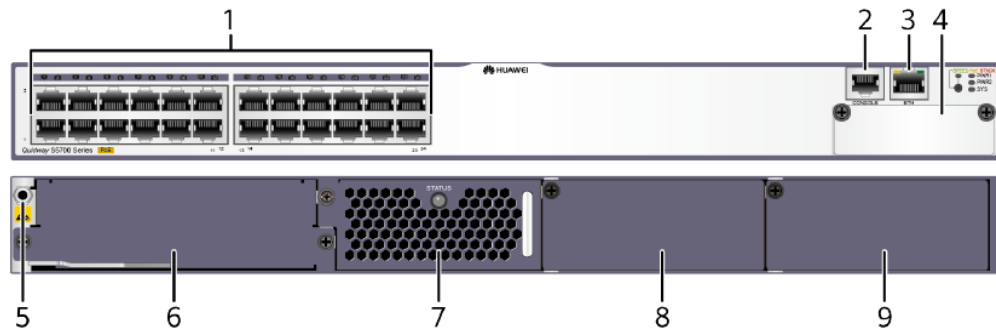
Table 4-719 lists the mapping between the S5700-28C-PWR-EI and software versions.

Table 4-719 Version mapping

Series	Model	Software Version
S5700-EI	S5700-28C-PWR-EI	V100R005C01 to V200R005C03 NOTE This model does not match V200R003C02 or V200R003C10.

Appearance and Structure

Figure 4-286 S5700-28C-PWR-EI appearance



1	Twenty-four PoE+ 10/100/1000BASE-T ports	2	One console port
3	One ETH management port	4	Front card slot NOTE Card supported: <ul style="list-style-type: none"> • 8.5 ES5D000G4S01 (4-Port GE SFP Front Optical Interface Card) • 8.3 ES5D000X2S00 (2-Port 10GE SFP+ Front Optical Interface Card) • 8.4 ES5D000X4S01 (4-Port 10GE SFP+ Front Optical Interface Card)
5	ESD jack NOTE Before installing or maintaining a switch, wear an ESD wrist strap and insert the other end of the ESD wrist strap into this ESD jack.	6	Rear card slot NOTE Card supported: <ul style="list-style-type: none"> • 8.28 ES5D000ETPC00 (Stack Rear Card) • 8.29 ES5D000ETPB00 (Extended Rear Card)
7	Fan slot NOTE Applicable fan module: 7.1 CX7E1FANA Fan Module	8	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none"> • 5.5 W0PSA2500 (250 W AC PoE Power Module) • 5.6 W0PSA5000/PAC-500WA-BE (500 W AC PoE Power Module)
9	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> • 5.5 W0PSA2500 (250 W AC PoE Power Module) • 5.6 W0PSA5000/PAC-500WA-BE (500 W AC PoE Power Module) 	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-720 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-720 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-721.

Table 4-721 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the *Configuration Guide - Basic Configurations*. Table 4-722 describes the attributes of an ETH management port.

Table 4-722 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

Indicator Description

Figure 4-287 Indicators on the S5700-28C-PWR-EI

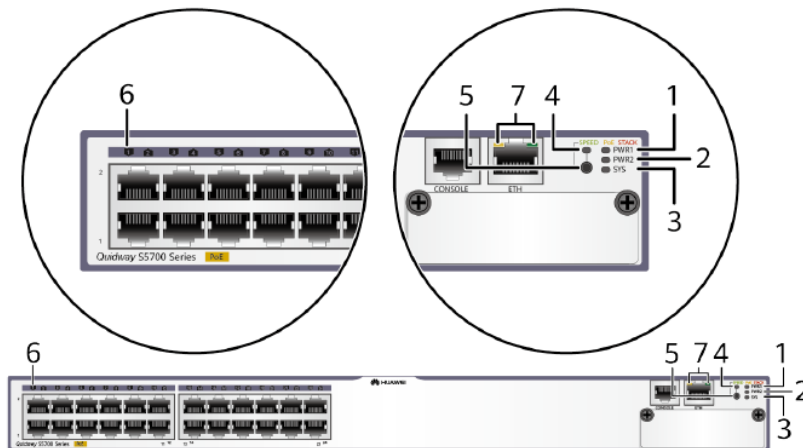


Table 4-723 Description of indicators on the switch

Number	Indicator/Button	Color	Description
1	PWR1: power supply indicator	-	Off: No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.
		Green	Steady on: A power module is installed in power module slot 1 and is working normally.
		Red	Steady on: The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none"> A power module is available in this

Number	Indicator/Button	Color	Description
			<p>slot but its power switch is in the OFF position.</p> <ul style="list-style-type: none"> A power module is available in this slot but it is not connected to a power source. The system power and PoE power are faulty.
		Yellow	Steady on: If a single power module is installed, the PoE power is out of range. If dual power modules are installed, the system power or PoE power is out of range.
2	PWR2: power supply indicator	-	Off: No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
		Green	Steady on: A power module is installed in power module slot 2 and is working normally.
		Red	<p>Steady on: The switch has two power modules installed. Any of the following situations occurs in power module slot 2:</p> <ul style="list-style-type: none"> A power module is available in this slot but its power switch is in the OFF position. A power module is available in this slot but it is not connected to a power source. The system power and PoE power are faulty.
		Yellow	Steady on: If a single power module is installed, the PoE power is out of range. If dual power modules are installed, the system power or PoE power is out of range.
3	SYS: system status indicator	-	Off: The system is not running.
		Green	<ul style="list-style-type: none"> Steady on: The system is not operating properly or is starting. Slow blinking: The system is running normally.
		Yellow	Steady on: The system is performing self-check during startup.
		Red	Steady on: The system does not work normally after registration, or a fan or

Number	Indicator/Button	Color	Description
			temperature alarm has been generated.
4	Mode indicator	-	Off: The service port indicators are in the status mode (default). In the status mode, the service port indicator shows the port link or activity state.
		Green	Steady on: The service port indicators show the port speed. After 45 seconds, the service port indicators automatically restore to the status mode.
		Red	Steady on: The service port indicators show the stack ID of the switch. After 45 seconds, the service port indicators automatically restore to the status mode.
		Yellow	Steady on: The service port indicators show the PoE status. After 45 seconds, the service port indicators automatically restore to the status mode.
5	Mode switch button	-	<ul style="list-style-type: none"> When you press this button once, the mode indicator turns green and the service port indicators show the speed of each service port. When you press this button a second time, the mode indicator turns red and the service port indicators show the stack status. When you press this button a third time, the mode indicator turns yellow and the service port indicators show the PoE status. When you press this button a fourth time, the mode indicator turns off. <p>If you do not press the button within 45 seconds, the mode indicator restores to status mode.</p>
6	Service port indicator	Meanings of service port indicators vary in different modes. For details, see Table 4-724.	
7	ETH indicator	-	Off: No link is established on the port.
		Green	Steady on: The port is connected.
		Yellow	Blinking: The port is sending or receiving data.

Table 4-724 Description of service port indicators in different modes

Display Mode	Color	Description
Status	Green	<ul style="list-style-type: none"> Off: The port is not connected or has been shut down. Steady on: The port is connected. Blinking: The port is sending or receiving data.
Speed	Green	<ul style="list-style-type: none"> Off: The port is not connected or has been shut down. Steady on: <ul style="list-style-type: none"> 10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s. Blinking: <ul style="list-style-type: none"> 10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
PoE	Green	<ul style="list-style-type: none"> Off: The port does not provide PoE power. Steady on: The port is providing PoE power. Blinking: The PD connected to the port is not a standard PD or its power exceeds the maximum power or power threshold of the port.
Stack	Green	<ul style="list-style-type: none"> Off: The STCK mode is not selected. If the indicator is steady on, the switch is not a master switch: <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0. If the indicator is blinking, the switch is a master switch: <ul style="list-style-type: none"> If the indicator of a port is blinking, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Power Supply Configuration

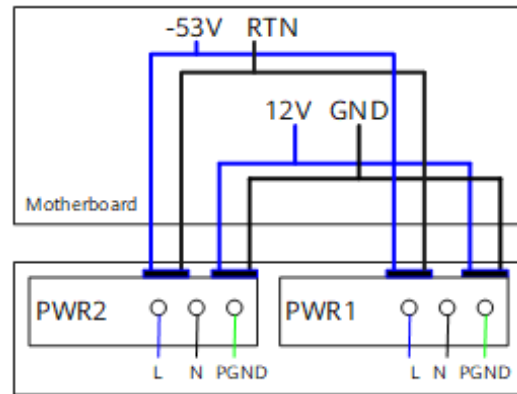
The S5700-28C-PWR-EI is a PoE switch. It has two power module slots, each of which can have a 500 W or 250 W power module installed. A power module can provide 369.6 W or 123.2 W of PoE power for powered devices (PDs). Table 4-725 lists its power supply configurations.

Table 4-725 Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
250 W	–	123.2 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 8 • 802.3at (30 W per port): 4
500 W	–	369.6 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 24 • 802.3at (30 W per port): 12
250 W	250 W	246.4 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 16 • 802.3at (30 W per port): 8
500 W	500 W	369.6 W (with PCB of version A for the S5700-28C-PWR-EI)	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 24 • 802.3at (30 W per port): 12
		739.2 W (with PCB of version B for the S5700-28C-PWR-EI)	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 24 • 802.3at (30 W per port): 24

Figure 4-288 shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

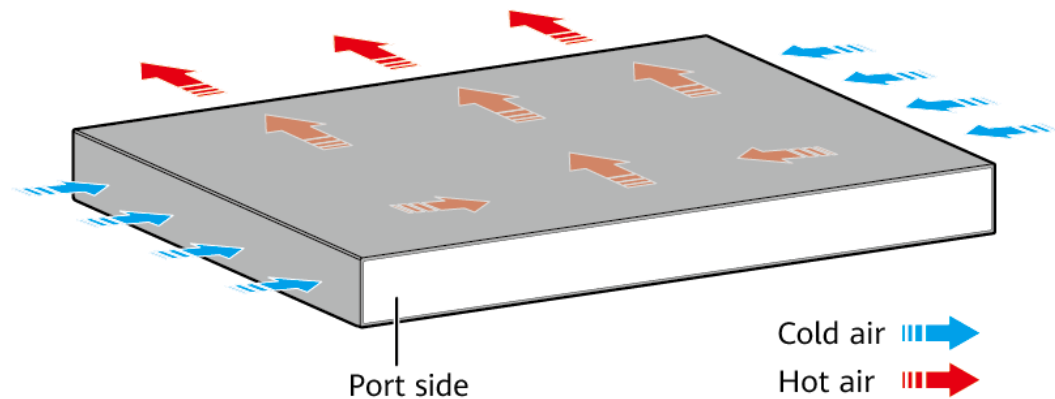
Figure 4-288 Power supply by dual AC PoE power modules



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground RTN: -53 V reference ground

Heat Dissipation

The S5700-28C-PWR-EI uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-726 lists technical specifications of the S5700-28C-PWR-EI.

Table 4-726 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	32 MB
Mean time between failures (MTBF)	52 years when a 2-port 10GE interface card is configured, 55.4 years when a 4-port GE front card is configured, 32.92 years when a 4-port

Item	Description
	10GE front card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	±1 kV in common mode
Power supply surge protection	±2 kV in differential mode, ±4 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)
Weight	<ul style="list-style-type: none">• Empty: ≤ 5 kg (11.02 lb)• Fully configured: ≤ 8.5 kg (18.74 lb)
Stack ports	Two stack ports available on each stack card
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, 100% PoE loads, full speed of fans)	842 W (system power consumption: 102 W, PoE: 740 W)
Operating temperature	0 °C to 50 °C (32 °F to 122 °F)
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 45 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02352361

4.15.4 S5700-52C-EI

Version Mapping

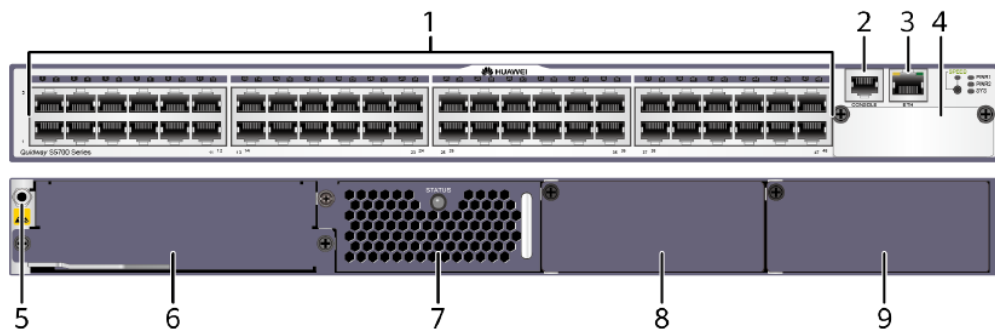
Table 4-727 lists the mapping between the S5700-52C-EI and software versions.

Table 4-727 Version mapping

Series	Model	Software Version
S5700-EI	S5700-52C-EI	V100R005C01 to V200R005C03 NOTE This model does not match V200R003C02 or V200R003C10.

Appearance and Structure

Figure 4-289 S5700-52C-EI appearance



1	Forty-eight 10/100/1000BASE-T ports	2	One console port
3	One ETH management port	4	Front card slot NOTE Card supported: <ul style="list-style-type: none"> 8.5 ES5D000G4S01 (4-Port GE SFP Front Optical Interface Card) 8.3 ES5D000X2S00 (2-Port 10GE SFP+ Front Optical Interface Card) 8.4 ES5D000X4S01 (4-Port 10GE SFP+ Front Optical Interface Card)
5	ESD jack NOTE Before installing or maintaining a switch, wear an ESD wrist strap and insert the other end of the ESD wrist strap into this ESD jack.	6	Rear card slot NOTE Card supported: <ul style="list-style-type: none"> 8.28 ES5D00ETPC00 (Stack Rear Card) 8.29 ES5D00ETPB00 (Extended Rear Card)

7	<p>Fan slot</p> <p>NOTE</p> <p>Applicable fan module:</p> <p>7.1 CX7E1FANA Fan Module</p>	8	<p>Power module slot 2</p> <p>NOTE</p> <p>Applicable power modules:</p> <ul style="list-style-type: none"> • 5.2 LS5M100PWA00/ES0W2PSA0150 (150 W AC Power Module) • 5.3 LS5M100PWD00/ES0W2PSD0150 (150 W DC Power Module)
9	<p>Power module slot 1</p> <p>NOTE</p> <p>Applicable power modules:</p> <ul style="list-style-type: none"> • 5.2 LS5M100PWA00/ES0W2PSA0150 (150 W AC Power Module) • 5.3 LS5M100PWD00/ES0W2PSD0150 (150 W DC Power Module) 	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-728 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-728 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-729.

Table 4-729 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232

Attribute	Description
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the *Configuration Guide - Basic Configurations*. Table 4-730 describes the attributes of an ETH management port.

Table 4-730 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

Indicator Description

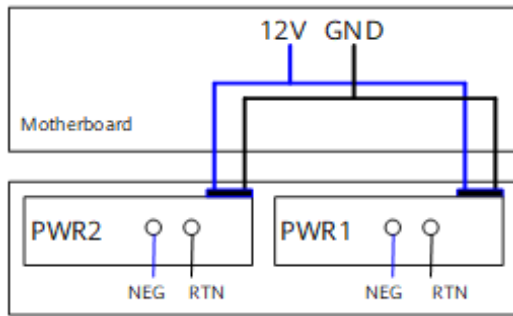
The S5700-52C-EI has the same types of indicators as the S5700-28C-EI. For details, see [Indicator Description](#).

Power Supply Configuration

The S5700-52C-EI can use a single power module or double power modules for 1+1 power redundancy. In versions prior to V200R005C00, the switch cannot use pluggable AC and DC power modules simultaneously. In V200R005C00 and later versions, the switch supports mixing of pluggable AC and DC power modules.

Figure 4-290 shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

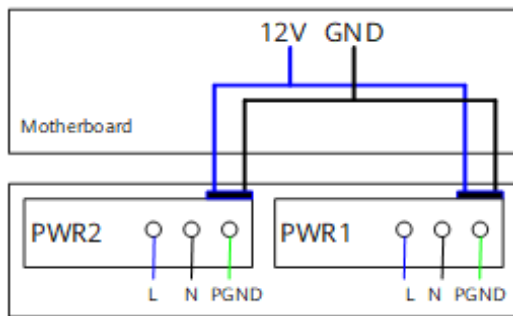
Figure 4-290 Power supply connections of dual DC power modules



NEG: negative wire RTN: positive wire GND: 12 V reference ground

Figure 4-291 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

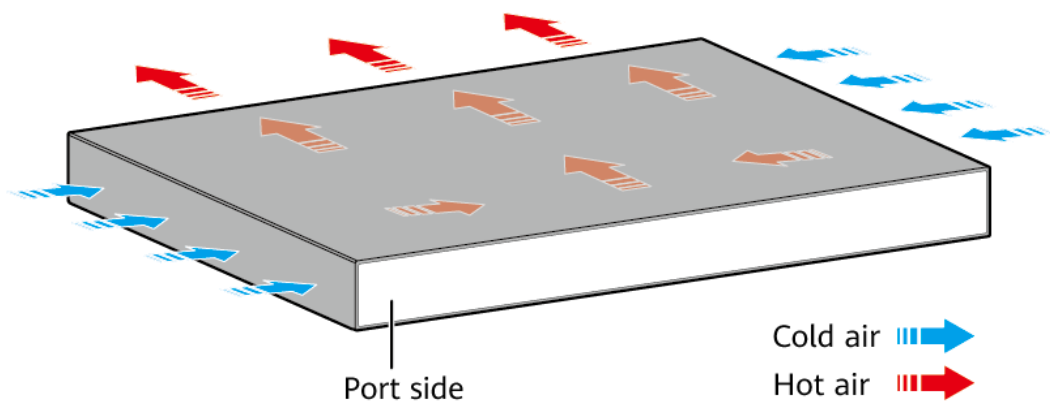
Figure 4-291 Power supply connections of dual AC power modules





L: Live wire N: Neutral wire PGND: Protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5700-52C-EI uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



Cold air 
Hot air 

 **NOTE**

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-731 lists technical specifications of the S5700-52C-EI.

Table 4-731 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	32 MB
Mean time between failures (MTBF)	46.05 years when a 2-port 10GE interface card is configured, 57.08 years when a 4-port GE front card is configured, 25.58 years when a 4x10GE front card is configured
Mean time to repair (MTTR)	2 years
Availability	> 0.99999
Service port surge protection	Common mode: ± 2 kV
Power supply surge protection	<ul style="list-style-type: none">Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common modeUsing DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)
Weight	<ul style="list-style-type: none">Empty: ≤ 5 kg (11.02 lb)Fully configured: ≤ 8.5 kg (18.74 lb)
Stack ports	Two stack ports available on each stack card
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	88 W
Operating temperature	0 °C to 50 °C (32 °F to 122 °F)

Item	Description
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 41 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none">AC power modules configured: 0-5000 m (0-16404 ft.)DC power modules configured: 0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none">EMC certificationSafety certificationManufacturing certification
Part number	02352354

4.15.5 S5700-52C-PWR-EI

Version Mapping

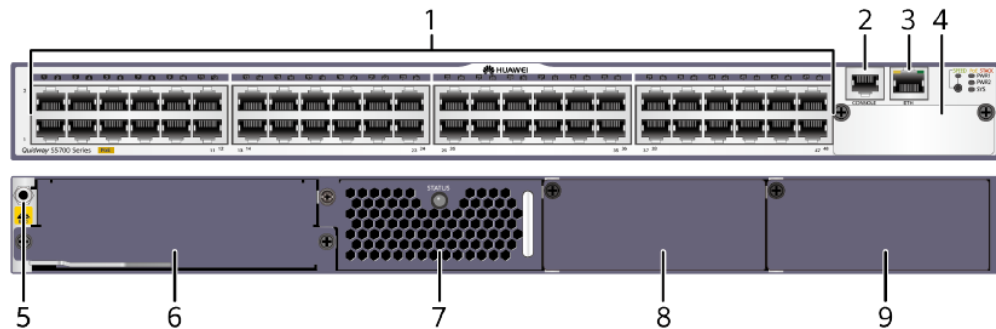
Table 4-732 lists the mapping between the S5700-52C-PWR-EI and software versions.

Table 4-732 Version mapping

Series	Model	Software Version
S5700-EI	S5700-52C-PWR-EI	V100R005C01 to V200R005C03 NOTE This model does not match V200R003C02 or V200R003C10.

Appearance and Structure

Figure 4-292 S5700-52C-PWR-EI appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	One console port
3	One ETH management port	4	Front card slot NOTE Card supported: <ul style="list-style-type: none"> • 8.5 ES5D000G4S01 (4-Port GE SFP Front Optical Interface Card) • 8.3 ES5D000X2S00 (2-Port 10GE SFP+ Front Optical Interface Card) • 8.4 ES5D000X4S01 (4-Port 10GE SFP+ Front Optical Interface Card)
5	ESD jack NOTE Before installing or maintaining a switch, wear an ESD wrist strap and insert the other end of the ESD wrist strap into this ESD jack.	6	Rear card slot NOTE Card supported: <ul style="list-style-type: none"> • 8.28 ES5D00ETPC00 (Stack Rear Card) • 8.29 ES5D00ETPB00 (Extended Rear Card)
7	Fan slot NOTE Applicable fan module: 7.1 CX7E1FANA Fan Module	8	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none"> • 5.5 W0PSA2500 (250 W AC PoE Power Module) • 5.6 W0PSA5000/PAC-500WA-BE (500 W AC PoE Power Module)
9	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> • 5.5 W0PSA2500 (250 W AC PoE Power Module) • 5.6 W0PSA5000/PAC-500WA-BE (500 W AC PoE Power Module) 	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-733 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-733 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-734.

Table 4-734 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the *Configuration Guide - Basic Configurations*. Table 4-735 describes the attributes of an ETH management port.

Table 4-735 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

Indicator Description

The S5700-52C-PWR-EI has the same types of indicators as the S5700-28C-PWR-EI. For details, see [Indicator Description](#).

Power Supply Configuration

The S5700-52C-PWR-EI is a PoE switch. It has two power module slots, each of which can have a 500 W or 250 W power module installed. A power module can provide 369.6 W or 123.2 W of PoE power for powered devices (PDs). Table 4-736 lists its power supply configurations.

Table 4-736 Power supply configurations

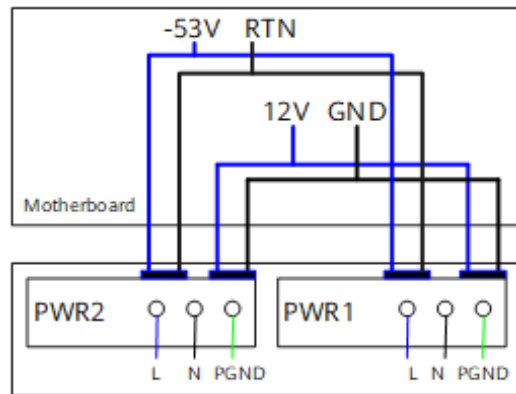
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
250 W	–	123.2 W	<ul style="list-style-type: none">802.3af (15.4 W per port): 8802.3at (30 W per port): 4
500 W	–	369.6 W	<ul style="list-style-type: none">802.3af (15.4 W per port): 24802.3at (30 W per port): 12
250 W	250 W	246.4 W	<ul style="list-style-type: none">802.3af (15.4 W per port): 16802.3at (30 W per port): 8
500 W	500 W	739.2 W	<ul style="list-style-type: none">802.3af (15.4 W per port): 48802.3at (30 W per port): 24

NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

Figure 4-293 shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

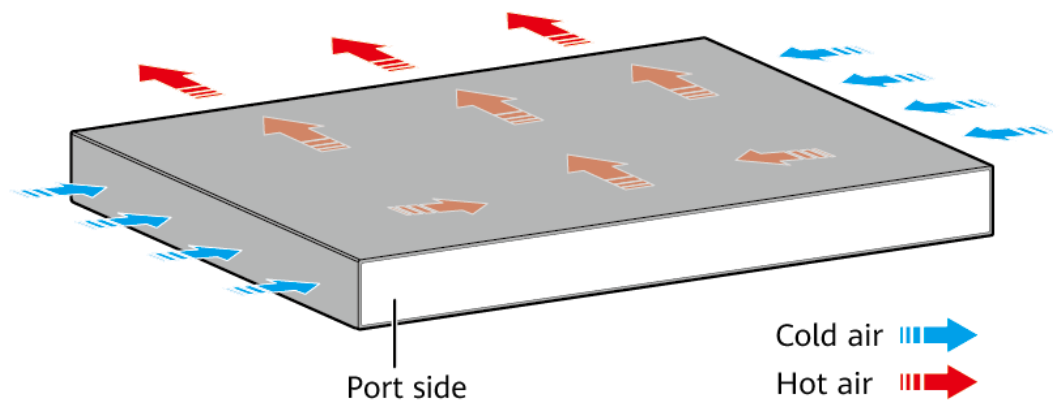
Figure 4-293 Power supply by dual AC PoE power modules



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground RTN: -53 V reference ground

Heat Dissipation

The S5700-52C-PWR-EI uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-737 lists technical specifications of the S5700-52C-PWR-EI.

Table 4-737 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	32 MB
Mean time between failures (MTBF)	44.8 years when a 2-port 10GE interface card is configured, 66.8 years when a 4-port GE front card is configured, 29.89 years when a 4x10GE front card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 1 kV
Power supply surge protection	± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)
Weight	<ul style="list-style-type: none">Empty: ≤ 5 kg (11.02 lb)Fully configured: ≤ 8.5 kg (18.74 lb)
Stack ports	Two stack ports available on each stack card
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, 100% PoE loads, full speed of fans)	930 W (system power consumption: 190 W, PoE: 740 W)
Operating temperature	0 °C to 50 °C (32 °F to 122 °F)
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 45 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)

Item	Description
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02352366

4.16 S5710-EI

4.16.1 S5710-28C-EI

Version Mapping

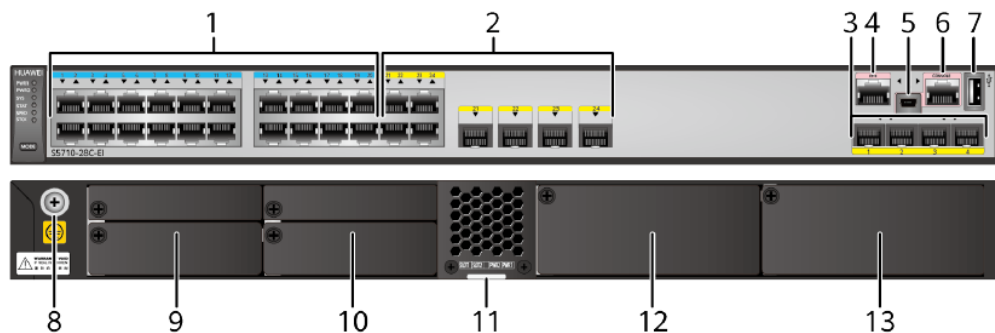
Table 4-738 lists the mapping between the S5710-28C-EI chassis and software versions.

Table 4-738 Version mapping

Series	Model	Software Version
S5710-EI	S5710-28C-EI	V200R001C00 to V200R005C02 NOTE This model does not match V200R001C01, V200R003C02, V200R003C10, or V200R005C01.

Appearance and Structure

Figure 4-294 S5710-28C-EI appearance



1	Twenty 10/100/1000BASE-T ports	2	Four combo ports (10/100/1000BASE-T + 100/1000BASE-X) Modules applicable to combo optical
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			ports: <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules
3	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber 	4	One ETH management port
5	One mini USB port	6	One console port
7	One USB port	8	Ground screw NOTE It is used with a 9.1 Ground Cable.
9	Rear card slot 1 NOTE Card supported: <ul style="list-style-type: none"> • 8.10 ES5D21G08S00 (8-Port GE SFP Rear Optical Interface Card) • 8.11 ES5D21G08T00 (8-Port GE Rear Electrical Interface Card) • 8.12 ES5D21X02S00 (2-Port GE SFP/10GE SFP+ Rear Optical Interface Card) 	10	Rear card slot 2 NOTE Card supported: <ul style="list-style-type: none"> • 8.10 ES5D21G08S00 (8-Port GE SFP Rear Optical Interface Card) • 8.11 ES5D21G08T00 (8-Port GE Rear Electrical Interface Card) • 8.12 ES5D21X02S00 (2-Port GE SFP/10GE SFP+ Rear Optical Interface Card)
11	ESN label NOTE You can draw it out to view the ESN and MAC address of the switch.	12	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none"> • 5.2 LS5M100PWA00/ES0W2PSA0150 (150 W AC Power Module) • 5.3 LS5M100PWD00/ES0W2PSD0150 (150 W DC Power Module)
13	Power module slot 1 NOTE Applicable power modules:	-	-

	<ul style="list-style-type: none">• 5.2 LS5M100PWA00/ES0W2PSA0150 (150 W AC Power Module)• 5.3 LS5M100PWD00/ES0W2PSD0150 (150 W DC Power Module)		
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Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-739 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-739 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-740 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-740 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-741.

Table 4-741 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the *Configuration Guide - Basic Configurations*. Table 4-742 describes the attributes of an ETH management port.

Table 4-742 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

Figure 4-295 Indicators on the S5710-28C-EI

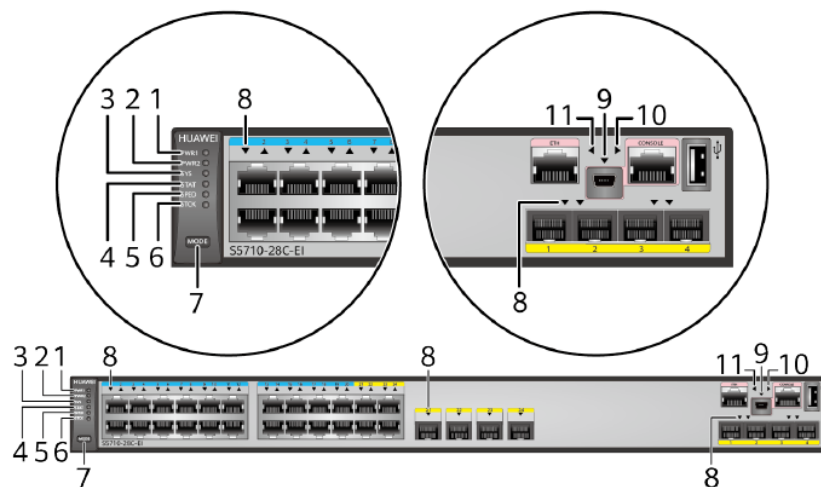


Table 4-743 Description of indicators on the switch

Number	Indicator	Color	Description
1	PWR1: power supply indicator	-	Off: No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.
		Green	Steady on: A power module is installed in

Number	Indicator	Color	Description
			power module slot 1 and is working normally.
		Yellow	Steady on: The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none"> A power module is available in this slot but its power switch is in the OFF position. A power module is available in this slot but it is not connected to a power source. The power module in power module slot 1 fails.
2	PWR2: power supply indicator	-	Off: No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
		Green	Steady on: A power module is installed in power module slot 2 and is working normally.
		Yellow	Steady on: The switch has two power modules installed. Any of the following situations occurs in power module slot 2: <ul style="list-style-type: none"> A power module is available in this slot but its power switch is in the OFF position. A power module is available in this slot but it is not connected to a power source. The power module in power module slot 2 fails.
3	SYS: system status indicator	-	Off: The system is not running.
		Green	<ul style="list-style-type: none"> Fast blinking: The system is starting or is copying the system software and configuration file from a USB flash drive. Slow blinking: The system is running properly.
		Yellow	Blinking: The system has been successfully upgraded using a USB flash drive and the switch has restarted. You can remove the USB flash drive from the switch.
		Red	<ul style="list-style-type: none"> Steady on: The system does not work normally after registration, or a fan or

Number	Indicator	Color	Description
			temperature alarm has been generated. <ul style="list-style-type: none"> Blinking: An error occurred during USB-based upgrade and the system failed to be upgraded after a USB flash drive is inserted.
4	STAT: status indicator	Green	<ul style="list-style-type: none"> Off: The status mode is not selected. Steady on: The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
5	SPED: speed indicator	Green	<ul style="list-style-type: none"> Off: The speed mode is not selected. Steady on: The speed mode is selected. If the speed mode is selected, the service port indicator shows the port speed state. After 45 seconds, the service port indicators automatically restore to the status mode.
6	STCK: stack indicator NOTE This indicator has different states and meanings in different versions. Here are the indicator states and meaning in versions earlier than V200R003C00.	Green	<ul style="list-style-type: none"> Off: The stack mode is not selected. Steady on: The service port indicators show the stack information. After 45 seconds, the service port indicators automatically restore to the status mode. Blinking: The switch is the master switch in a stack or a standalone switch.
	STCK: stack indicator NOTE This indicator has different states and meanings in different versions. Here are the indicator states and meaning in V200R003C00 and later versions.	Green	If you are not changing the indicator mode (default): <ul style="list-style-type: none"> Off: The switch is in stack standby or slave state or the stacking function is not enabled on the switch. Blinking: The switch is a stack master switch or a standalone switch with the stacking function enabled.
			If you are changing the indicator mode: <ul style="list-style-type: none"> Off: The stack mode is not selected. Steady on: The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch. Blinking: The switch is the master

Number	Indicator	Color	Description
			<p>switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch.</p> <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>
7	MODE: mode switch button	-	<ul style="list-style-type: none"> When you press this button once, the service port indicators change to the speed mode and show the speed of each service port. When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch. When you press this button a third time, the STAT indicator turns green and the service port indicators restore to the default mode. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED indicator is off, and the STCK indicator is off or blinking green.</p>
8	<p>Service port indicator</p> <ul style="list-style-type: none"> GE electrical ports: The ports are numbered from bottom to top and left to right, starting with 1. GE/10GE optical ports: Each port has an indicator above it. 	Meanings of service port indicators vary in different modes. For details, see Table 4-744.	
9	Mini USB indicator	Green	<ul style="list-style-type: none"> Off: The Mini USB port is not active, and the console port is active. Steady on: The Mini USB port is active. <p>When this indicator is on, the console indicator is off.</p>

Number	Indicator	Color	Description
10	Console indicator	Green	<ul style="list-style-type: none"> Off: The console port is not active, and the Mini USB port is active. Steady on (default): The console port is active. <p>When this LED is on, the Mini USB port indicator is off.</p>
11	ETH indicator	Green	<ul style="list-style-type: none"> Off: No link is established on the port. Steady on: The port is connected. Blinking: The port is sending or receiving data.

Table 4-744 Description of service port indicators in different modes (one indicator for each port)

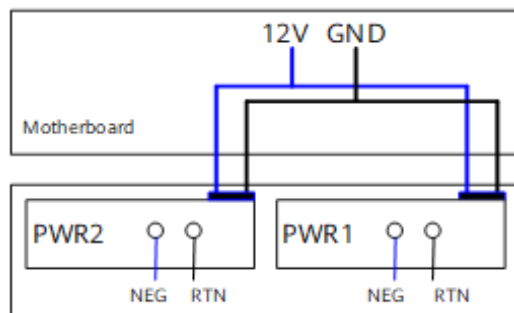
Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is blinking, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Power Supply Configuration

The S5710-28C-EI uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

Figure 4-296 shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 4-296 Power supply connections of dual DC power modules



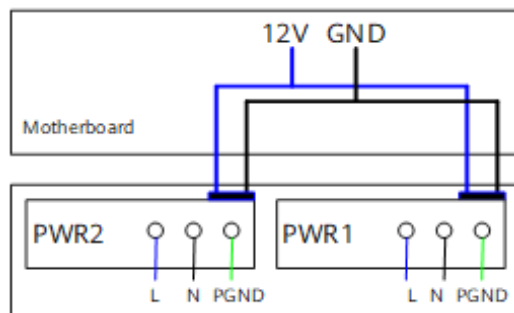
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

Figure 4-297 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 4-297 Power supply connections of dual AC power modules



L: Live wire

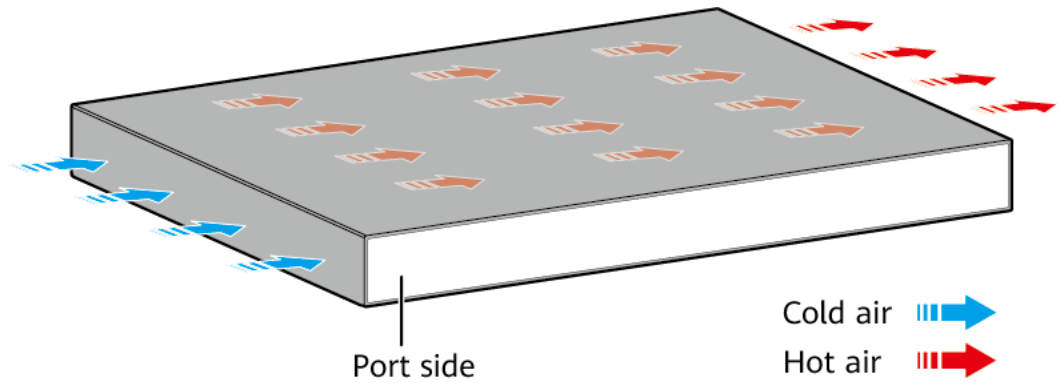
N: Neutral wire

PGND: Protection ground wire

GND: 12 V reference ground

Heat Dissipation

The S5710-28C-EI has five built-in fans for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-745 lists technical specifications of the S5710-28C-EI.

Table 4-745 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	<ul style="list-style-type: none"> V200R001: 64 MB V200R002 and later versions: 200 MB
Mean time between failures (MTBF)	55.98 years when an 8-port GE optical card is configured, 54.93 years when an 8-port GE electrical card is configured, 52.69 years when a 2-port 10GE interface card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 2 kV
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	44.4 mm x 442.0 mm x 420.0 mm (1.75 in. x 17.4 in. x 16.5 in.)
Weight	<ul style="list-style-type: none"> Empty: ≤ 6 kg (13.23 lb) Fully configured: ≤ 10 kg (22.05 lb)
Stack ports	Four fixed 10GE SFP+ ports on the front panel or ports on the 2-port 10GE rear card
RPS	Not supported

Item	Description
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	98 W
Operating temperature	0 °C to 50 °C (32 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 53.9 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none">AC power modules configured: 0-5000 m (0-16404 ft.)DC power modules configured: 0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none">EMC certificationSafety certificationManufacturing certification
Part number	02353170

4.16.2 S5710-28C-PWR-EI-AC

Version Mapping

Table 4-746 lists the mapping between the S5710-28C-PWR-EI-AC chassis and software versions.

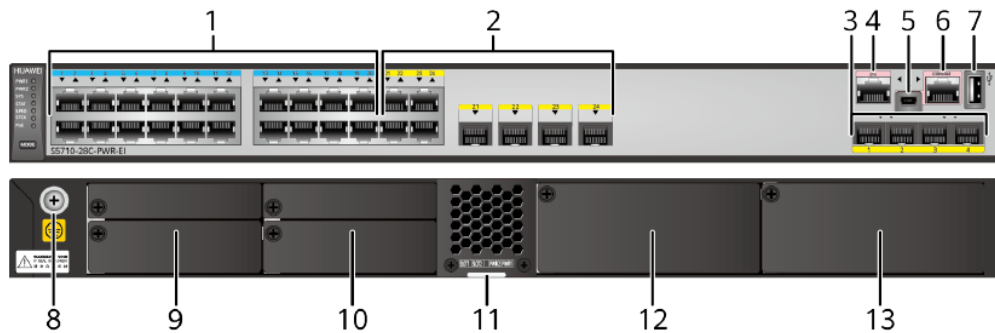
Table 4-746 Version mapping

Series	Model	Software Version
S5710-EI	S5710-28C-PWR-EI-AC	V200R002C00 to V200R005C02 NOTE This model does not match V200R003C02,

Series	Model	Software Version
		V200R003C10, or V200R005C01.

Appearance and Structure

Figure 4-298 S5710-28C-PWR-EI-AC appearance



1	Twenty PoE+ 10/100/1000BASE-T ports	2	Four combo ports (10/100/1000BASE-T (PoE+) + 100/1000BASE-X) Modules applicable to combo optical ports: <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules
3	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber 	4	One ETH management port
5	One mini USB port	6	One console port

7	One USB port	8	Ground screw NOTE It is used with a 9.1 Ground Cable.
9	Rear card slot 1 NOTE Card supported: <ul style="list-style-type: none"> 8.10 ES5D21G08S00 (8-Port GE SFP Rear Optical Interface Card) 8.11 ES5D21G08T00 (8-Port GE Rear Electrical Interface Card) 8.12 ES5D21X02S00 (2-Port GE SFP/10GE SFP+ Rear Optical Interface Card) 	10	Rear card slot 2 NOTE Card supported: <ul style="list-style-type: none"> 8.10 ES5D21G08S00 (8-Port GE SFP Rear Optical Interface Card) 8.11 ES5D21G08T00 (8-Port GE Rear Electrical Interface Card) 8.12 ES5D21X02S00 (2-Port GE SFP/10GE SFP+ Rear Optical Interface Card)
11	ESN label NOTE You can draw it out to view the ESN and MAC address of the switch.	12	Power module slot 2 NOTE Applicable power module: <ul style="list-style-type: none"> 5.7 W2PSA0580 (580 W AC PoE Power Module)
13	Power module slot 1 NOTE Applicable power module: <ul style="list-style-type: none"> 5.7 W2PSA0580 (580 W AC PoE Power Module) 	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-747 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-747 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-748 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-748 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-749.

Table 4-749 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)

Attribute	Description
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the *Configuration Guide - Basic Configurations*. Table 4-750 describes the attributes of an ETH management port.

Table 4-750 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

Figure 4-299 Indicators on the S5710-28C-PWR-EI-AC

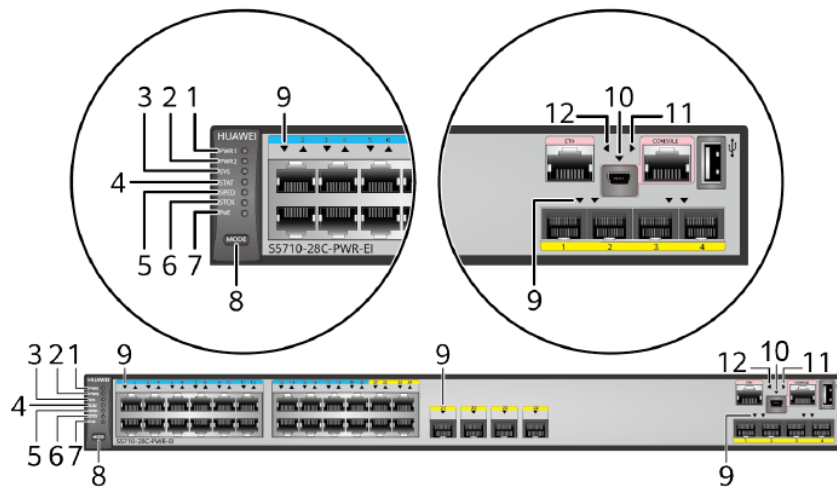


Table 4-751 Description of indicators on the switch

Number	Indicator	Color	Description
1	PWR1: power supply indicator	-	Off: No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.
		Green	Steady on: A power module is installed in power module slot 1 and is working normally.
		Yellow	Steady on: The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none"> A power module is available in this slot but its power switch is in the OFF position. A power module is available in this slot but it is not connected to a power source. The power module in power module slot 1 fails.
2	PWR2: power supply indicator	-	Off: No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
		Green	Steady on: A power module is installed in power module slot 2 and is working normally.

Number	Indicator	Color	Description
		Yellow	<p>Steady on: The switch has two power modules installed. Any of the following situations occurs in power module slot 2:</p> <ul style="list-style-type: none"> A power module is available in this slot but its power switch is in the OFF position. A power module is available in this slot but it is not connected to a power source. The power module in power module slot 2 fails.
3	SYS: system status indicator	-	Off: The system is not running.
		Green	<ul style="list-style-type: none"> Fast blinking: The system is starting or is copying the system software and configuration file from a USB flash drive. Slow blinking: The system is running properly.
		Yellow	Blinking: The system has been successfully upgraded using a USB flash drive and the switch has restarted. You can remove the USB flash drive from the switch.
		Red	<ul style="list-style-type: none"> Steady on: The system does not work normally after registration, or a fan or temperature alarm has been generated. Blinking: An error occurred during USB-based upgrade and the system failed to be upgraded after a USB flash drive is inserted.
4	STAT: status indicator	Green	<ul style="list-style-type: none"> Off: The status mode is not selected. Steady on: The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
5	SPED: speed indicator	Green	<ul style="list-style-type: none"> Off: The speed mode is not selected. Steady on: The speed mode is selected. If the speed mode is selected, the service port indicator shows the port speed state. After 45 seconds, the service port indicators automatically restore to the status mode.
6	STCK: stack indicator	Green	<ul style="list-style-type: none"> Off: The stack mode is not selected. Steady on: The service port indicators

Number	Indicator	Color	Description
	<p>NOTE</p> <p>This indicator has different states and meanings in different versions. Here are the indicator states and meaning in versions earlier than V200R003C00.</p>		<p>show the stack information. After 45 seconds, the service port indicators automatically restore to the status mode.</p> <ul style="list-style-type: none"> • Blinking: The switch is the master switch in a stack or a standalone switch.
	<p>STCK: stack indicator</p> <p>NOTE</p> <p>This indicator has different states and meanings in different versions. Here are the indicator states and meaning in V200R003C00 and later versions.</p>	Green	<p>If you are not changing the indicator mode (default):</p> <ul style="list-style-type: none"> • Off: The switch is in stack standby or slave state or the stacking function is not enabled on the switch. • Blinking: The switch is a stack master switch or a standalone switch with the stacking function enabled. <p>If you are changing the indicator mode:</p> <ul style="list-style-type: none"> • Off: The stack mode is not selected. • Steady on: The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch. • Blinking: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>
7	PoE: PoE indicator	Green	<ul style="list-style-type: none"> • Off: The PoE mode is not selected. • Steady on: The service port indicators show the PoE status. After 45 seconds, the service port indicators automatically restore to the status mode.
8	MODE: mode switch button	-	<ul style="list-style-type: none"> • When you press this button once, the service port indicators change to the speed mode and show the speed of each service port. • When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch.

Number	Indicator	Color	Description
			<ul style="list-style-type: none">When you press this button a third time, the service port indicators change to PoE mode and show the PoE status of ports.When you press this button a fourth time, the STAT indicator turns green and the service port indicators restore to the default mode. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED and PoE indicators are off, and the STCK indicator is off or blinking green.</p>
9	Service port indicator <ul style="list-style-type: none">GE electrical ports: The ports are numbered from bottom to top and left to right, starting with 1.GE/10GE optical ports: Each port has an indicator above it.		Meanings of service port indicators vary in different modes. For details, see Table 4-752.
10	Mini USB indicator	Green	<ul style="list-style-type: none">Off: The Mini USB port is not active, and the console port is active.Steady on: The Mini USB port is active. <p>When this indicator is on, the console indicator is off.</p>
11	Console indicator	Green	<ul style="list-style-type: none">Off: The console port is not active, and the Mini USB port is active.Steady on (default): The console port is active. <p>When this LED is on, the Mini USB port indicator is off.</p>
12	ETH indicator	Green	<ul style="list-style-type: none">Off: No link is established on the port.Steady on: The port is connected.Blinking: The port is sending or

Number	Indicator	Color	Description
			receiving data.

Table 4-752 Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
PoE	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.
	Yellow	Steady on	The PoE function is disabled on the port.
	Yellow	Blinking	The port stops providing PoE power because of an exception (for example, an incompatible PD is connected to the port).
	Green and yellow	Blinking green and yellow alternately	The port fails to supply power to a PD due to one of the following reasons: <ul style="list-style-type: none"> The power required by the connected PD exceeds the maximum power or the configured power threshold of the port. The total power consumption of PDs has reached the maximum power of the switch. The manual power management mode is used and the port is not enabled to provide power to the PD.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the

Display Mode	Color	Status	Description
			switch. <ul style="list-style-type: none"> If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is blinking, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Power Supply Configuration

The S5710-28C-PWR-EI-AC is a PoE switch and uses 580 W AC PoE power modules. It has two power module slots. Table 4-753 lists its power supply configurations.

Table 4-753 Power supply configurations

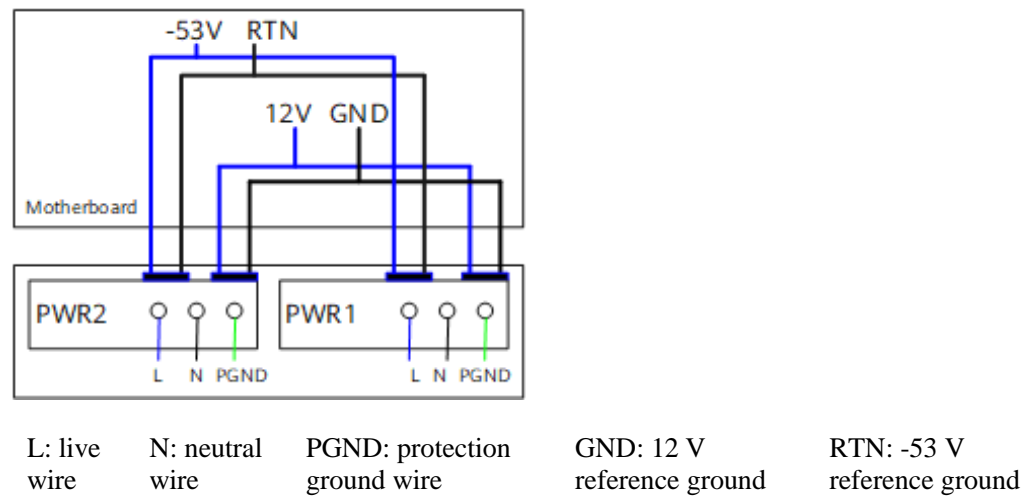
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
580 W	–	369.6 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 12
580 W	580 W	739.2 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 24

NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

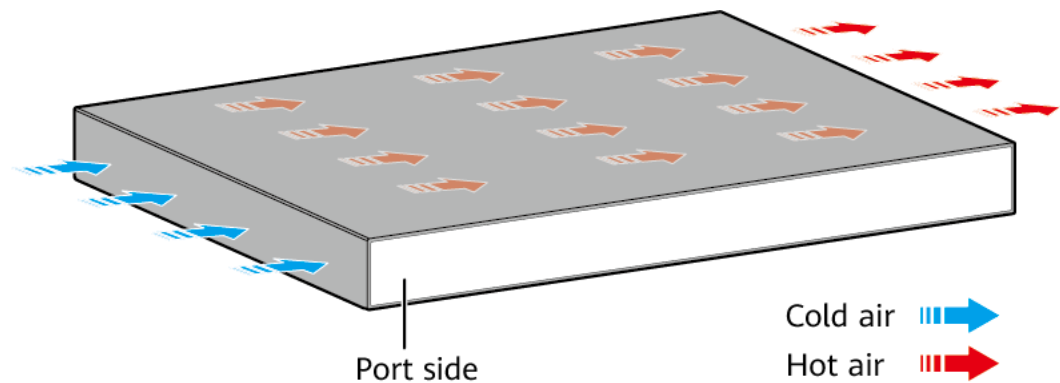
Figure 4-300 shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

Figure 4-300 Power supply by dual AC PoE power modules



Heat Dissipation

The S5710-28C-PWR-EI-AC has five built-in fans for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-754 lists technical specifications of the S5710-28C-PWR-EI-AC.

Table 4-754 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	200 MB
Mean time between failures (MTBF)	51.28 years when an 8-port GE optical card is configured, 50.31 years when an 8-port GE electrical card is configured, 48.25 years

Item	Description
	when a 2-port 10GE interface card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 1 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	44.4 mm x 442.0 mm x 420.0 mm (1.75 in. x 17.4 in. x 16.5 in.)
Weight	<ul style="list-style-type: none">• Empty: ≤ 6 kg (13.23 lb)• Fully configured: ≤ 10 kg (22.05 lb)
Stack ports	Four fixed 10GE SFP+ ports on the front panel or ports on the 2-port 10GE rear card
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, 100% PoE loads, full speed of fans)	<ul style="list-style-type: none">• No card: 920 W (system power consumption: 180 W, PoE: 740 W)• Two 8-port GE electrical card: 934 W (system power consumption: 194 W, PoE: 740 W)• Two 8-port GE optical card: 942 W (system power consumption: 202 W, PoE: 740 W)• Two 2-port 10GE optical card: 941 W (system power consumption: 201 W, PoE: 740 W)
Operating temperature	0 °C to 50 °C (32 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 59.7 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)

Item	Description
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02354038

4.16.3 S5710-52C-EI

Version Mapping

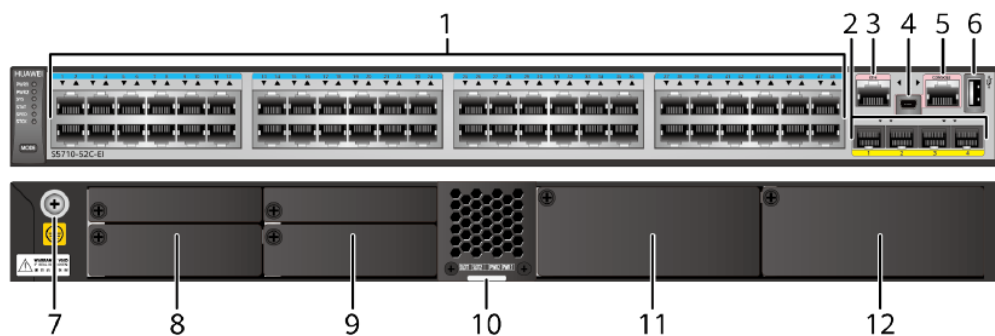
Table 4-755 lists the mapping between the S5710-52C-EI chassis and software versions.

Table 4-755 Version mapping

Series	Model	Software Version
S5710-EI	S5710-52C-EI	V200R001C00 to V200R005C02 NOTE This model does not match V200R001C01, V200R003C02, V200R003C10, or V200R005C01.

Appearance and Structure

Figure 4-301 S5710-52C-EI appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules
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			<ul style="list-style-type: none"> • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber
3	One ETH management port	4	One mini USB port
5	One console port	6	One USB port
7	Ground screw NOTE It is used with a 9.1 Ground Cable.	8	Rear card slot 1 NOTE Card supported: <ul style="list-style-type: none"> • 8.10 ES5D21G08S00 (8-Port GE SFP Rear Optical Interface Card) • 8.11 ES5D21G08T00 (8-Port GE Rear Electrical Interface Card) • 8.12 ES5D21X02S00 (2-Port GE SFP/10GE SFP+ Rear Optical Interface Card)
9	Rear card slot 2 NOTE Card supported: <ul style="list-style-type: none"> • 8.10 ES5D21G08S00 (8-Port GE SFP Rear Optical Interface Card) • 8.11 ES5D21G08T00 (8-Port GE Rear Electrical Interface Card) • 8.12 ES5D21X02S00 (2-Port GE SFP/10GE SFP+ Rear Optical Interface Card) 	10	ESN label NOTE You can draw it out to view the ESN and MAC address of the switch.
11	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none"> • 5.2 LS5M100PWA00/ES0W2PSA0150 (150 W AC Power Module) • 5.3 LS5M100PWD00/ES0W2PSD0150 (150 W DC Power Module) 	12	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> • 5.2 LS5M100PWA00/ES0W2PSA0150 (150 W AC Power Module) • 5.3 LS5M100PWD00/ES0W2PSD0150 (150 W DC Power Module)

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-756 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-756 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
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Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-757 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-757 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-758.

Table 4-758 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the *Configuration Guide - Basic Configurations*. Table 4-759 describes the attributes of an ETH management port.

Table 4-759 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

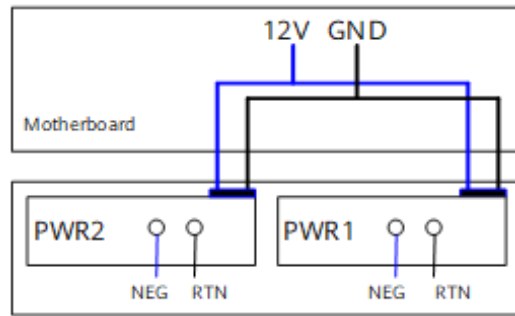
The S5710-52C-EI has the same types of indicators as the S5710-28C-EI. For details, see [Indicator Description](#).

Power Supply Configuration

The S5710-52C-EI uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

Figure 4-302 shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

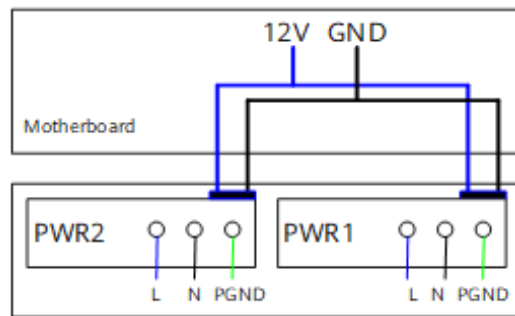
Figure 4-302 Power supply connections of dual DC power modules



NEG: negative wire RTN: positive wire GND: 12 V reference ground

Figure 4-303 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

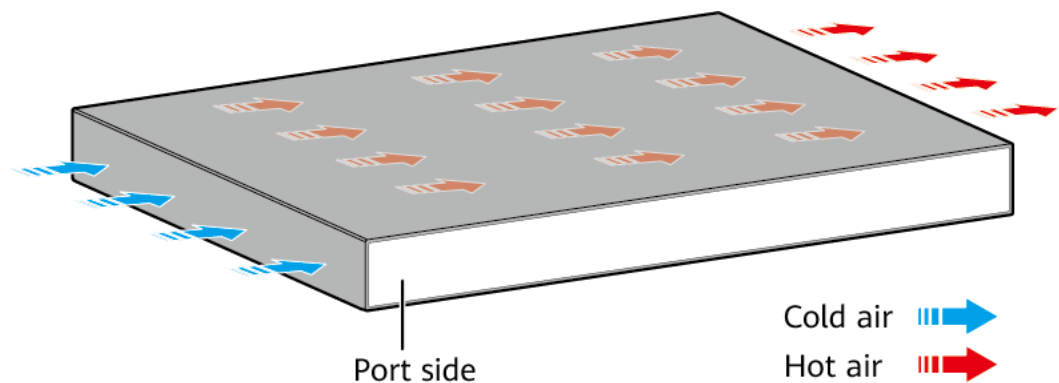
Figure 4-303 Power supply connections of dual AC power modules



L: Live wire N: Neutral wire PGND: Protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5710-52C-EI has five built-in fans for forced air cooling. The airflow direction is left-to-right.



 **NOTE**

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-760 lists technical specifications of the S5710-52C-EI.

Table 4-760 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	<ul style="list-style-type: none">V200R001: 64 MBV200R002 and later versions: 200 MB
Mean time between failures (MTBF)	45.57 years when an 8-port GE optical card is configured, 44.85 years when an 8-port GE electrical card is configured, 43.33 years when a 2-port 10GE interface card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 2 kV
Power supply surge protection	<ul style="list-style-type: none">Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common modeUsing DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	44.4 mm x 442.0 mm x 420.0 mm (1.75 in. x 17.4 in. x 16.5 in.)
Weight	<ul style="list-style-type: none">Empty: ≤ 6 kg (13.23 lb)Fully configured: ≤ 10 kg (22.05 lb)
Stack ports	Four fixed 10GE SFP+ ports on the front panel or ports on the 2-port 10GE rear card
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	146.9 W

Item	Description
Operating temperature	0 °C to 50 °C (32 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 53.9 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none">• AC power modules configured: 0-5000 m (0-16404 ft.)• DC power modules configured: 0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02353169

4.16.4 S5710-52C-PWR-EI

Version Mapping

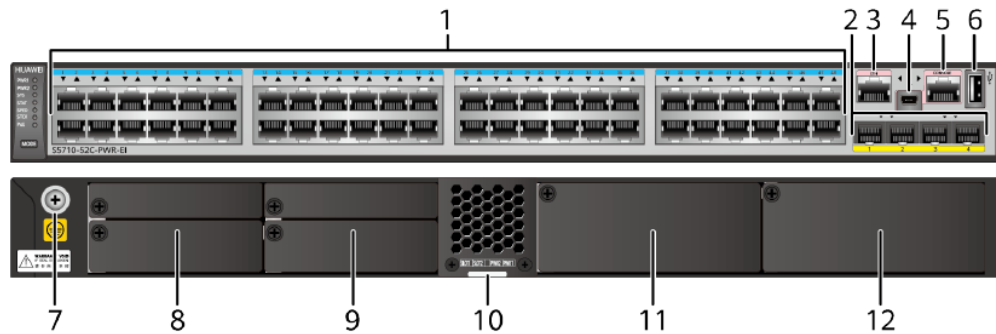
Table 4-761 lists the mapping between the S5710-52C-PWR-EI chassis and software versions.

Table 4-761 Version mapping

Series	Model	Software Version
S5710-EI	S5710-52C-PWR-EI	V200R002C00 to V200R005C02 NOTE This model does not match V200R003C02, V200R003C10, or V200R005C01.

Appearance and Structure

Figure 4-304 S5710-52C-PWR-EI appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber
	3	4	One ETH management port
	5	6	One mini USB port
7	Ground screw NOTE It is used with a 9.1 Ground Cable.	8	Rear card slot 1 NOTE Card supported: <ul style="list-style-type: none"> • 8.10 ES5D21G08S00 (8-Port GE SFP Rear Optical Interface Card) • 8.11 ES5D21G08T00 (8-Port GE Rear Electrical Interface Card) • 8.12 ES5D21X02S00 (2-Port GE SFP/10GE SFP+ Rear Optical Interface Card)
9	Rear card slot 2 NOTE Card supported: <ul style="list-style-type: none"> • 8.10 ES5D21G08S00 (8-Port GE SFP Rear Optical Interface Card) • 8.11 ES5D21G08T00 (8-Port GE Rear 	10	ESN label NOTE You can draw it out to view the ESN and MAC address of the switch.

	Electrical Interface Card) <ul style="list-style-type: none"> 8.12 ES5D21X02S00 (2-Port GE SFP/10GE SFP+ Rear Optical Interface Card) 		
11	Power module slot 2 NOTE Applicable power module: <ul style="list-style-type: none"> 5.7 W2PSA0580 (580 W AC PoE Power Module) 5.10 W2PSA1150 (1150 W AC PoE Power Module) 	12	Power module slot 1 NOTE Applicable power module: <ul style="list-style-type: none"> 5.7 W2PSA0580 (580 W AC PoE Power Module) 5.10 W2PSA1150 (1150 W AC PoE Power Module)

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-762 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-762 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-763 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-763 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-764.

Table 4-764 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the *Configuration Guide - Basic Configurations*. Table 4-765 describes the attributes of an ETH management port.

Table 4-765 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

 **NOTE**

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5710-52C-PWR-EI has the same types of indicators as the S5710-28C-PWR-EI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5710-52C-PWR-EI is a PoE switch and uses 580 W or 1150 W AC PoE power modules. It has two power module slots. Table 4-766 lists its power supply configurations.

Table 4-766 Power supply configurations

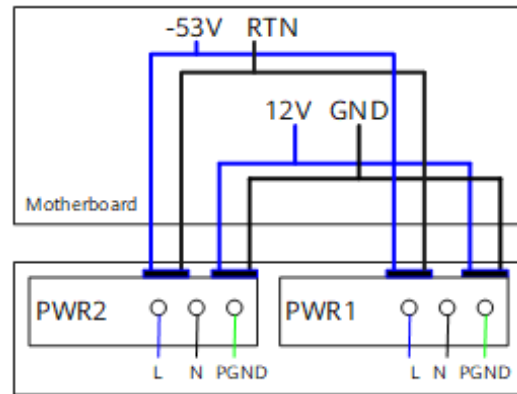
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
580 W	–	369.6 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 12
580 W	580 W	739.2 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 24
1150 W	–	785.4 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 26
1150 W	1150 W	1440 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 48

 **NOTE**

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

Figure 4-305 shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

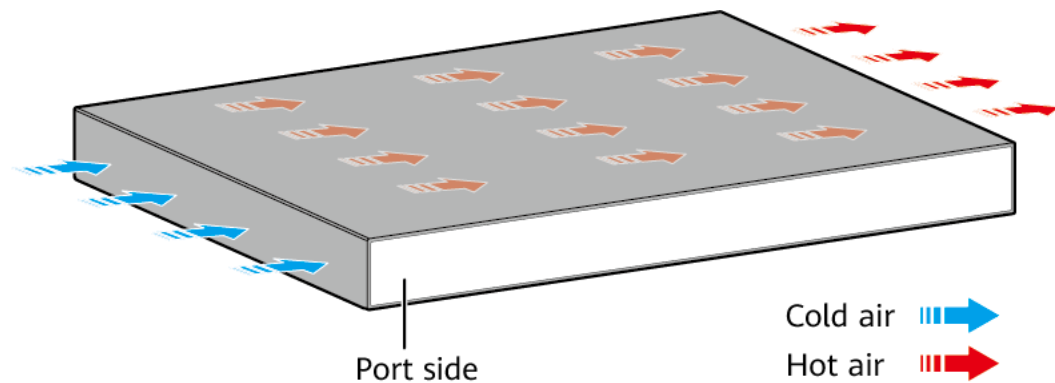
Figure 4-305 Power supply by dual AC PoE power modules



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground RTN: -53 V reference ground

Heat Dissipation

The S5710-52C-PWR-EI has five built-in fans for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-767 lists technical specifications of the S5710-52C-PWR-EI.

Table 4-767 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	200 MB
Mean time between failures (MTBF)	36.86 years when an 8-port GE optical card is configured, 36.35 years when an 8-port GE electrical card is configured, 35.27 years

Item	Description
	when a 2-port 10GE interface card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 1 kV
Power supply surge protection	<ul style="list-style-type: none"> Using 580 W AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using 1150 W AC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	44.4 mm x 442.0 mm x 420.0 mm (1.75 in. x 17.4 in. x 16.5 in.) When 1150 W power modules are installed, they stretch out from the chassis. Therefore, the total depth of the switch changes to 507.3 mm (19.97 in.).
Weight	<ul style="list-style-type: none"> Empty: ≤ 6 kg (13.23 lb) Fully configured: ≤ 10 kg (22.05 lb)
Stack ports	Four fixed 10GE SFP+ ports on the front panel or ports on the 2-port 10GE rear card
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, 100% PoE loads, full speed of fans)	<p>Using two 580 W power modules</p> <ul style="list-style-type: none"> No card: 1023 W (system power consumption: 283 W, PoE: 740 W) Two 8-port GE electrical card: 1035 W (system power consumption: 295 W, PoE: 740 W) Two 8-port GE optical card: 1043 W (system power consumption: 303 W, PoE: 740 W) Two 2-port 10GE optical card: 1040 W (system power consumption: 300 W, PoE: 740 W) <p>Using two 1150 W power modules</p> <ul style="list-style-type: none"> No card: 1605 W (system power consumption: 165 W, PoE: 1440 W) Two 8-port GE electrical card: 1625 W (system power consumption: 185 W, PoE: 1440 W) Two 8-port GE optical card: 1635 W (system power consumption: 195 W, PoE: 1440 W) Two 2-port 10GE optical card: 1633 W (system power consumption: 195 W, PoE: 1440 W)

Item	Description
	consumption: 193 W, PoE: 1440 W)
Operating temperature	0 °C to 50 °C (32 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 60 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02355886

4.16.5 S5710-52C-PWR-EI-AC

Version Mapping

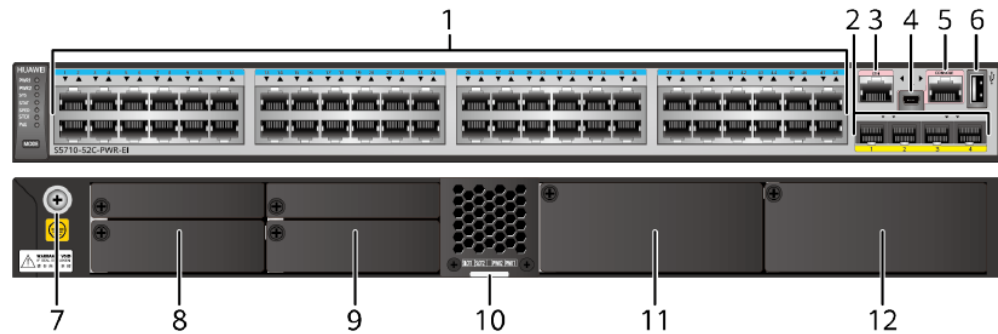
Table 4-768 lists the mapping between the S5710-52C-PWR-EI-AC chassis and software versions.

Table 4-768 Version mapping

Series	Model	Software Version
S5710-EI	S5710-52C-PWR-EI-AC	V200R002C00 to V200R005C02 NOTE This model does not match V200R003C02, V200R003C10, or V200R005C01.

Appearance and Structure

Figure 4-306 S5710-52C-PWR-EI-AC appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber
3	One ETH management port	4	One mini USB port
5	One console port	6	One USB port
7	Ground screw NOTE It is used with a 9.1 Ground Cable.	8	Rear card slot 1 NOTE Card supported: <ul style="list-style-type: none"> • 8.10 ES5D21G08S00 (8-Port GE SFP Rear Optical Interface Card) • 8.11 ES5D21G08T00 (8-Port GE Rear Electrical Interface Card) • 8.12 ES5D21X02S00 (2-Port GE SFP/10GE SFP+ Rear Optical Interface Card)
9	Rear card slot 2 NOTE Card supported: <ul style="list-style-type: none"> • 8.10 ES5D21G08S00 (8-Port GE SFP Rear Optical Interface Card) • 8.11 ES5D21G08T00 (8-Port GE Rear 	10	ESN label NOTE You can draw it out to view the ESN and MAC address of the switch.

	Electrical Interface Card) <ul style="list-style-type: none"> 8.12 ES5D21X02S00 (2-Port GE SFP/10GE SFP+ Rear Optical Interface Card) 		
11	Power module slot 2 NOTE Applicable power module: <ul style="list-style-type: none"> 5.7 W2PSA0580 (580 W AC PoE Power Module) 	12	Power module slot 1 NOTE Applicable power module: <ul style="list-style-type: none"> 5.7 W2PSA0580 (580 W AC PoE Power Module)

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-769 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-769 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-770 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-770 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-771.

Table 4-771 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the *Configuration Guide - Basic Configurations*. Table 4-772 describes the attributes of an ETH management port.

Table 4-772 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

 **NOTE**

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5710-52C-PWR-EI-AC has the same types of indicators as the S5710-28C-PWR-EI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5710-52C-PWR-EI-AC is a PoE switch and uses 580 W AC PoE power modules. It has two power module slots. Table 4-773 lists its power supply configurations.

Table 4-773 Power supply configurations

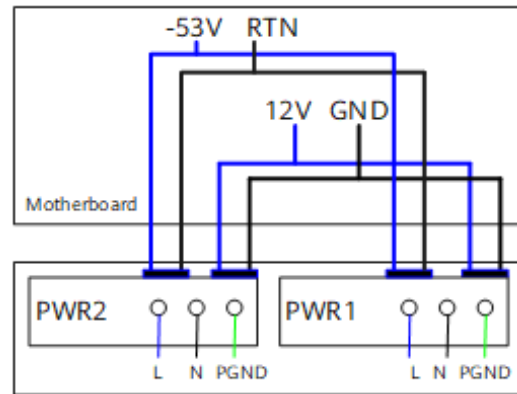
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
580 W	–	369.6 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 24 • 802.3at (30 W per port): 12
580 W	580 W	739.2 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 48 • 802.3at (30 W per port): 24

 **NOTE**

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

Figure 4-307 shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

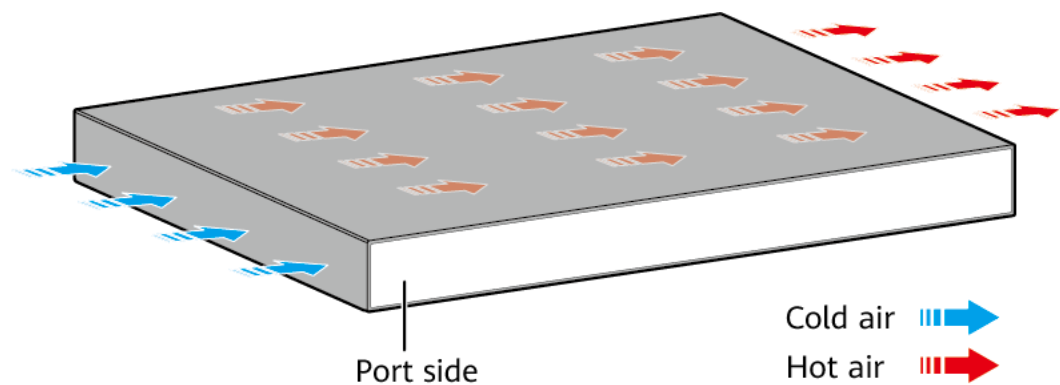
Figure 4-307 Power supply by dual AC PoE power modules



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground RTN: -53 V reference ground

Heat Dissipation

The S5710-52C-PWR-EI-AC has five built-in fans for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-774 lists technical specifications of the S5710-52C-PWR-EI-AC.

Table 4-774 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	200 MB
Mean time between failures (MTBF)	36.86 years when an 8-port GE optical card is configured, 36.35 years when an 8-port GE electrical card is configured, 35.27 years

Item	Description
	when a 2-port 10GE interface card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 1 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	44.4 mm x 442.0 mm x 420.0 mm (1.75 in. x 17.4 in. x 16.5 in.)
Weight	<ul style="list-style-type: none"> Empty: ≤ 6 kg (13.23 lb) Fully configured: ≤ 10 kg (22.05 lb)
Stack ports	Four fixed 10GE SFP+ ports on the front panel or ports on the 2-port 10GE rear card
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, 100% PoE loads, full speed of fans)	<ul style="list-style-type: none"> No card: 1023 W (system power consumption: 283 W, PoE: 740 W) Two 8-port GE electrical card: 1035 W (system power consumption: 295 W, PoE: 740 W) Two 8-port GE optical card: 1043 W (system power consumption: 303 W, PoE: 740 W) Two 2-port 10GE optical card: 1040 W (system power consumption: 300 W, PoE: 740 W)
Operating temperature	<p>0 °C to 50 °C (32 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p>
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 60 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)

Item	Description
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02354042

4.17 S5720-EI

4.17.1 S5720-36C-EI-AC

Version Mapping

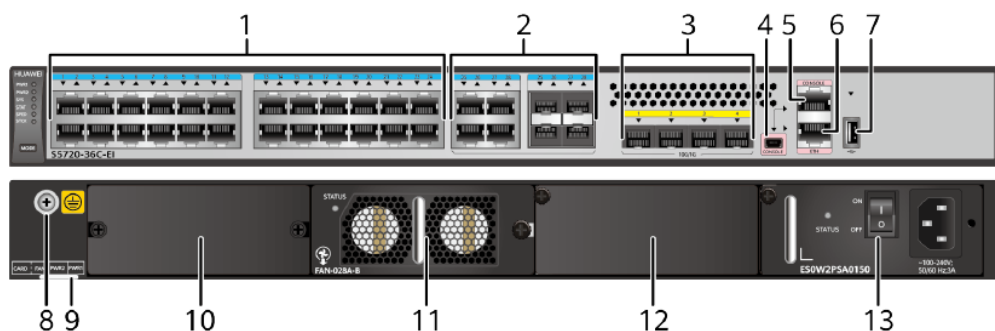
Table 4-775 lists the mapping between the S5720-36C-EI-AC chassis and software versions.

Table 4-775 Version mapping

Series		Model	Software Version
S5720-EI	S5720-C-EI	S5720-36C-EI-AC	V200R007C00 to V200R019C10 versions NOTE This model does not match V200R007C10.

Appearance and Structure

Figure 4-308 S5720-36C-EI-AC appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four combo ports (10/100/1000BASE-T + 100/1000BASE-X) Modules applicable to combo optical
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			ports: <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules
3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.15 Copper Cable • 9.3 Optical Fiber 	4	One mini USB port
5	<p>One console port</p> <p>NOTE It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>	6	One ETH management port
7	One USB port	8	<p>Ground screw</p> <p>NOTE It is used with a 9.1 Ground Cable.</p>
9	<p>ESN label</p> <p>NOTE You can draw it out to view the ESN and MAC address of the switch.</p>	10	<p>Rear card slot</p> <p>NOTE Card supported:</p> <ul style="list-style-type: none"> • 8.20 ES5D21X02S01 (2-Port 10 Gig SFP+ Rear Interface Card, Used in S5720-EI Series) • 8.21 ES5D21X02T01 (2-Port 10 Gig RJ45 Rear Interface Card, Used in S5720-EI Series) • 8.27 ES5D21VST000 (Dedicated Stack Card with 2*QSFP+ Interface)
11	<p>Fan slot</p> <p>NOTE Applicable fan module: 7.3 FAN-028A-B</p>	12	<p>Power module slot 2</p> <p>NOTE Applicable power modules:</p>

	Fan Module		<ul style="list-style-type: none"> 5.2 LS5M100PWA00/ES0W2PSA0150 (150 W AC Power Module) 5.3 LS5M100PWD00/ES0W2PSD0150 (150 W DC Power Module)
13	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> 5.2 LS5M100PWA00/ES0W2PSA0150 (150 W AC Power Module) 5.3 LS5M100PWD00/ES0W2PSD0150 (150 W DC Power Module) 	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-776 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-776 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.

- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-777 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-777 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-778.

Table 4-778 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management

port is faster than transfer through the console port. Table 4-779 describes the attributes of an ETH management port.

Table 4-779 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port of the S5720-EI does not support USB 1.1 and can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

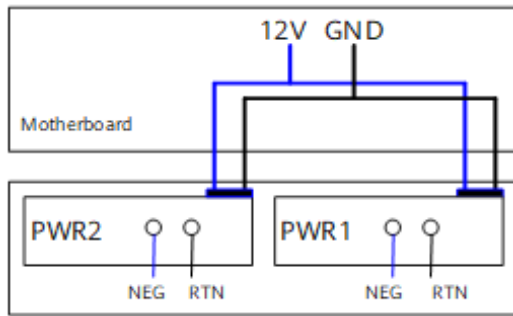
The S5720-36C-EI-AC has similar indicators to those on the S5720-36C-PWR-EI-AC, except that the S5720-36C-EI-AC does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-36C-EI-AC uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

Figure 4-309 shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

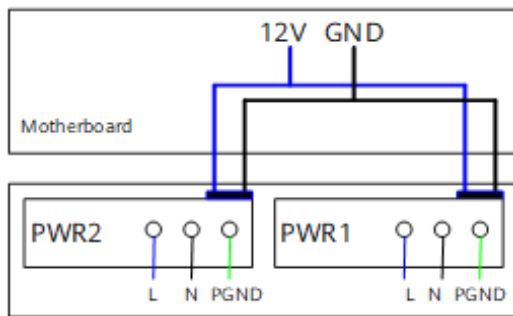
Figure 4-309 Power supply connections of dual DC power modules



NEG: negative wire RTN: positive wire GND: 12 V reference ground

Figure 4-310 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

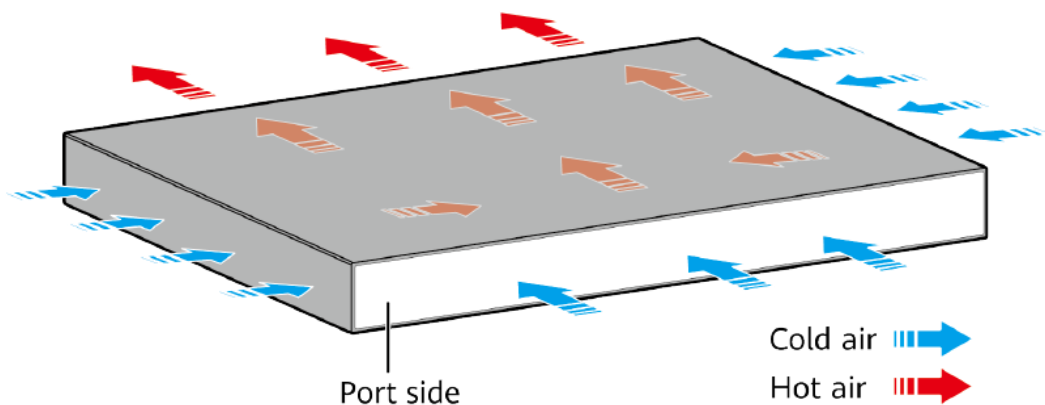
Figure 4-310 Power supply connections of dual AC power modules



L: Live wire N: Neutral wire PGND: Protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5720-36C-EI-AC uses pluggable fan modules for forced air cooling. Air flows in from the left side, right side, and front panel, and exhausts from the rear panel.



 **NOTE**

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-780 lists technical specifications of the S5720-36C-EI-AC.

Table 4-780 Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	80.05 years when no card is configured; 73.65 years when a 2-port 10GE SFP+ interface card is configured; 71.58 years when a 2-port 10GE RJ45 interface card is configured; 71.74 years when a stack card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	<ul style="list-style-type: none"> Service ports on front panel: ± 6 kV in common mode Ports on the 2-port 10GE RJ45 rear interface card: ± 2 kV in common mode
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.7 mm (1.75 in. x 17.4 in. x 16.72 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.8 mm (1.75 in. x 17.4 in. x 17.79 in.)
Weight (with packaging)	9.8 kg (21.61 lb)
Stack ports	<ul style="list-style-type: none"> Ports on the 2-port 10GE SFP+ rear interface card Ports on the 2-port 10GE RJ45 rear interface card Ports on the 2-port QSFP+ rear stack card
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC

Item	Description
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	75.8 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	<ul style="list-style-type: none">• 39.5 W (without subcard)• 47.28 W (with 2*10G optical subcards)• 52.17 W (2*QSFP+ stack cards)• 55.14 W (with 2*10G electrical subcards)
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">• The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 51.2 dB(A)
Relative humidity	5% to 95%, noncondensing

Item	Description
Operating altitude	<ul style="list-style-type: none"> AC power modules configured: 0-5000 m (0-16404 ft.) DC power modules configured: 0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none"> EMC certification Safety certification Manufacturing certification
Part number	02359562

4.17.2 S5720-36C-EI-DC

Version Mapping

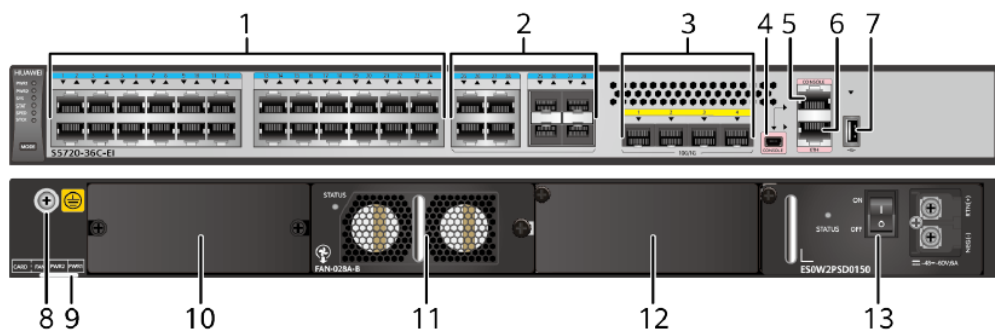
Table 4-781 lists the mapping between the S5720-36C-EI-DC chassis and software versions.

Table 4-781 Version mapping

Series		Model	Software Version
S5720-EI	S5720-C-E I	S5720-36C-EI-DC	V200R009C00 to V200R019C10 versions

Appearance and Structure

Figure 4-311 S5720-36C-EI-DC appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four combo ports (10/100/1000BASE-T + 100/1000BASE-X) Modules applicable to combo optical ports: <ul style="list-style-type: none"> 10.4 FE SFP/eSFP Optical Modules 10.5 GE eSFP Optical Modules
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			<ul style="list-style-type: none"> • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules
3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.15 Copper Cable • 9.3 Optical Fiber 	4	One mini USB port
5	<p>One console port</p> <p>NOTE It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>	6	One ETH management port
7	One USB port	8	<p>Ground screw</p> <p>NOTE It is used with a 9.1 Ground Cable.</p>
9	<p>ESN label</p> <p>NOTE You can draw it out to view the ESN and MAC address of the switch.</p>	10	<p>Rear card slot</p> <p>NOTE Card supported:</p> <ul style="list-style-type: none"> • 8.20 ES5D21X02S01 (2-Port 10 Gig SFP+ Rear Interface Card, Used in S5720-EI Series) • 8.21 ES5D21X02T01 (2-Port 10 Gig RJ45 Rear Interface Card, Used in S5720-EI Series) • 8.27 ES5D21VST000 (Dedicated Stack Card with 2*QSFP+ Interface)
11	<p>Fan slot</p> <p>NOTE Applicable fan module: 7.3 FAN-028A-B Fan Module</p>	12	<p>Power module slot 2</p> <p>NOTE Applicable power modules:</p> <ul style="list-style-type: none"> • 5.2 LS5M100PWA00/ES0W2PSA0150 (150 W AC Power Module) • 5.3 LS5M100PWD00/ES0W2PSD0150

			(150 W DC Power Module)
13	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> • 5.2 LS5M100PWA00/ES0W2PSA0150 (150 W AC Power Module) • 5.3 LS5M100PWD00/ES0W2PSD0150 (150 W DC Power Module) 	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-782 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-782 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-783 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-783 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-784.

Table 4-784 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-785 describes the attributes of an ETH management port.

Table 4-785 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port of the S5720-EI does not support USB 1.1 and can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

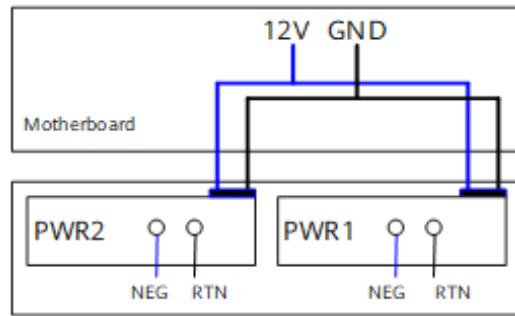
The S5720-36C-EI-DC has similar indicators to those on the S5720-36C-PWR-EI-AC, except that the S5720-56C-EI-DC does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-36C-EI-DC uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

Figure 4-312 shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

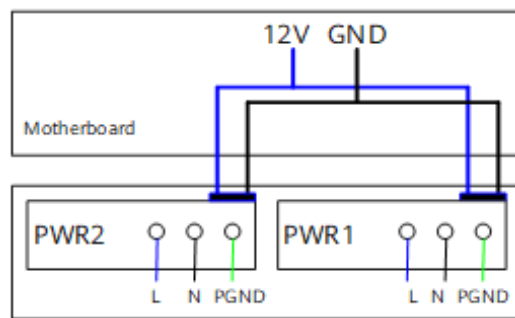
Figure 4-312 Power supply connections of dual DC power modules



NEG: negative wire RTN: positive wire GND: 12 V reference ground

Figure 4-313 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

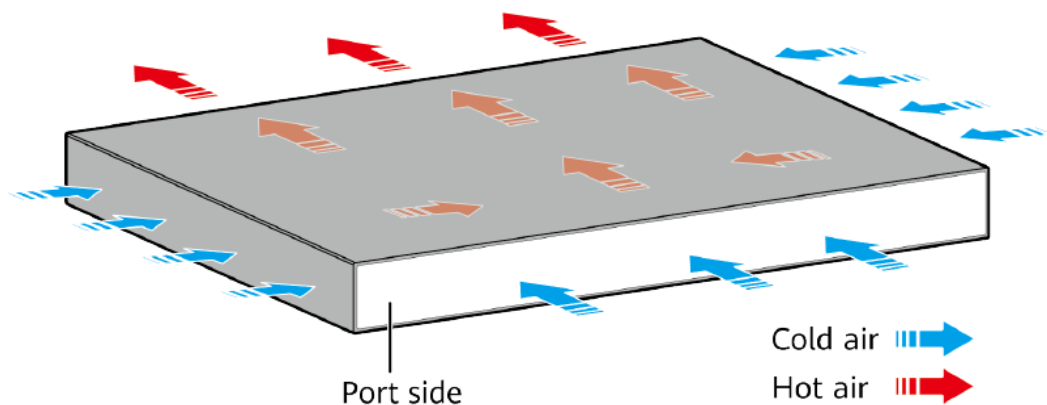
Figure 4-313 Power supply connections of dual AC power modules



L: Live wire N: Neutral wire PGND: Protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5720-36C-EI-DC uses pluggable fan modules for forced air cooling. Air flows in from the left side, right side, and front panel, and exhausts from the rear panel.



 **NOTE**

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-786 lists technical specifications of the S5720-36C-EI-DC.

Table 4-786 Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	80.05 years when no card is configured; 73.65 years when a 2-port 10GE SFP+ interface card is configured; 71.58 years when a 2-port 10GE RJ45 interface card is configured; 71.74 years when a stack card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	<ul style="list-style-type: none">• Service ports on front panel: ± 6 kV in common mode• Ports on the 2-port 10GE RJ45 rear interface card: ± 2 kV in common mode
Power supply surge protection	<ul style="list-style-type: none">• Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode• Using DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">• Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.7 mm (1.75 in. x 17.4 in. x 16.72 in.)• Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.8 mm (1.75 in. x 17.4 in. x 17.79 in.)
Weight (with packaging)	9.6 kg (21.17 lb)
Stack ports	<ul style="list-style-type: none">• Ports on the 2-port 10GE SFP+ rear interface card• Ports on the 2-port 10GE RJ45 rear interface card• Ports on the 2-port QSFP+ rear stack card
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC

Item	Description
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	75.8 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	<ul style="list-style-type: none">• 39.5 W (without card)• 47.28 W (with 2*10GE optical card)• 52.17 W (with 2*QSFP+ stack card)• 55.14 W (with 2*10GE electrical card)
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">• The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 51.2 dB(A)
Relative humidity	5% to 95%, noncondensing

Item	Description
Operating altitude	<ul style="list-style-type: none"> AC power modules configured: 0-5000 m (0-16404 ft.) DC power modules configured: 0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none"> EMC certification Safety certification Manufacturing certification
Part number	02350NHJ

4.17.3 S5720-36C-EI-28S-AC

Version Mapping

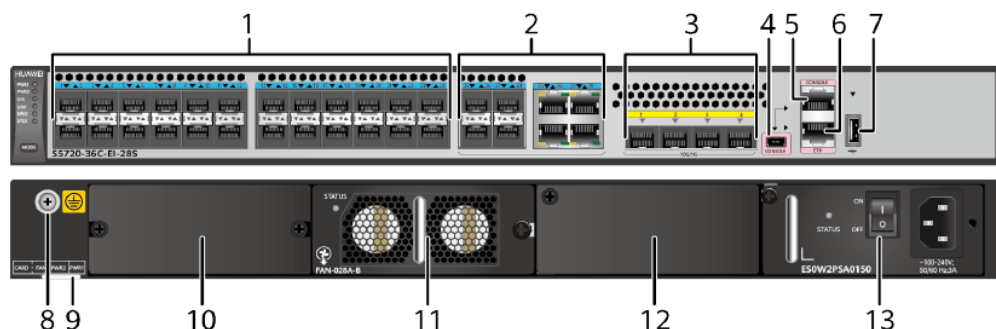
Table 4-787 lists the mapping between the S5720-36C-EI-28S-AC chassis and software versions.

Table 4-787 Version mapping

Series		Model	Software Version
S5720-EI	S5720-C-EI	S5720-36C-EI-28S-AC	V200R007C00 to V200R019C10 versions NOTE This model does not match V200R007C10.

Appearance and Structure

Figure 4-314 S5720-36C-EI-28S-AC appearance



1	Twenty-four 100/1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> 10.4 FE SFP/eSFP Optical Modules 	2	Four combo ports (10/100/1000BASE-T + 100/1000BASE-X) Modules applicable to combo optical
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	<ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules 		<p>ports:</p> <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules
3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.15 Copper Cable • 9.3 Optical Fiber 	4	One mini USB port
5	<p>One console port</p> <p>NOTE It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>	6	One ETH management port
7	One USB port	8	<p>Ground screw</p> <p>NOTE It is used with a 9.1 Ground Cable.</p>
9	<p>ESN label</p> <p>NOTE You can draw it out to view the ESN and MAC address of the switch.</p>	10	<p>Rear card slot</p> <p>NOTE Card supported:</p> <ul style="list-style-type: none"> • 8.20 ES5D21X02S01 (2-Port 10 Gig SFP+ Rear Interface Card, Used in S5720-EI Series) • 8.21 ES5D21X02T01 (2-Port 10 Gig RJ45 Rear Interface Card, Used in S5720-EI Series) • 8.27 ES5D21VST000 (Dedicated Stack Card with 2*QSFP+ Interface)
11	<p>Fan slot</p> <p>NOTE Applicable fan module: 7.3 FAN-028A-B Fan Module</p>	12	<p>Power module slot 2</p> <p>NOTE Applicable power modules:</p> <ul style="list-style-type: none"> • 5.2 LS5M100PWA00/ES0W2PSA0150 (150 W AC Power Module) • 5.3

			LS5M100PWD00/ES0W2PSD0150 (150 W DC Power Module)
13	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> • 5.2 LS5M100PWA00/ES0W2PSA0150 (150 W AC Power Module) • 5.3 LS5M100PWD00/ES0W2PSD0150 (150 W DC Power Module) 	-	-

Port Description

100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. Table 4-788 describes the attributes of a 100/1000BASE-X port.

Table 4-788 Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

Combo port

A combo port consists of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. The electrical and optical ports of a combo port are multiplexed, and only one of them can work at a time. When one of the Ethernet ports is working, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-789 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-789 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-790.

Table 4-790 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-791 describes the attributes of an ETH management port.

Table 4-791 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port of the S5720-EI does not support USB 1.1 and can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

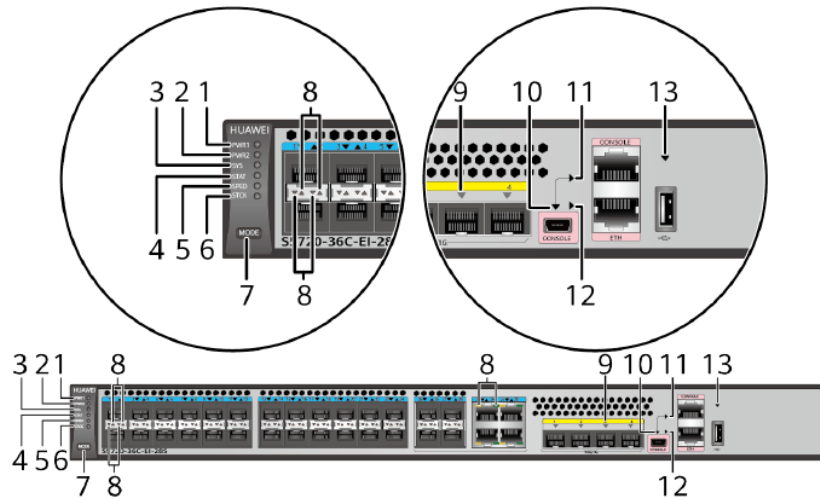
Indicator Description

NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
- If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
- If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 4-315 Indicators on the S5720-36C-EI-28S-AC



NOTE

The S5720-EI series switches provide a command for setting fault indicators, which help field maintenance personnel find a faulty switch quickly.

The SYS indicator and mode indicators (STAT, SPED, STCK, and PoE) are used as fault indicators. When an S5720-EI switch is faulty, you can run the command to turn on the fault indicators. Then the SYS indicator and mode indicators fast blink red to help field maintenance personnel quickly find the faulty switch.

Table 4-792 Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR 1	Power module indicator	-	Off	No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 1 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none"> A power module is available in this slot but its power switch is in the OFF position. A power module is available in this slot but it is not connected to a power source. The power module in this slot has failed.
2	PWR 2	Power module indicator	-	Off	No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.

No.	Indicator	Name	Color	Status	Description
			Green	Steady on	A power module is installed in power module slot 2 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 2: <ul style="list-style-type: none"> A power module is available in this slot but its power switch is in the OFF position. A power module is available in this slot but it is not connected to a power source. The power module in this slot has failed.
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or temperature alarm has been generated.
4	STAT	Status indicator	-	Off	The status mode is not selected.
			Green	Steady on	The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
5	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The service port indicators show the port speeds. After 45 seconds, the service port indicators automatically restore to the status mode.
6	STACK	Stack indicator	-	Off	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is in stack standby or slave state or the stacking function is not enabled on the switch. If you are changing the indicator mode: The stack mode is not selected.
			Green	Steady on	The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is a stack master switch or a standalone switch with the stacking function enabled.

No.	Indicator	Name	Color	Status	Description
					<ul style="list-style-type: none"> If you are changing the indicator mode: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>
7	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> When you press this button once, the service port indicators change to the speed mode and show the speed of each service port. When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch. When you press this button a third time, the service port indicators restore to the default mode, and the STAT indicator turns green. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED indicator is off, and the STCK indicator is off or blinking green.</p>
8	-	Service port indicator (two indicators for each port)	Meanings of service port indicators vary in different modes. For details, see Table 4-793.		
9	-	Service port indicator (one indicator for each port)	Meanings of service port indicators vary in different modes. For details, see Table 4-794.		
10	-	Mini USB indicator	-	Off	The Mini USB port is disabled, and the console port is enabled.
			Green	Steady on	The Mini USB port is enabled. When the Mini USB indicator is steady green, the console indicator is off.
11	-	Console indicator	-	Off	The console port is disabled, and the Mini USB port is enabled.

No.	Indicator	Name	Color	Status	Description
			Green	Steady on	The console port is enabled (default state). When the console indicator is steady green, the Mini USB indicator is off.
12	-	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The ETH port is sending or receiving data.
13	-	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> No USB flash drive is connected to the switch. The USB port is damaged. The indicator is damaged. The USB flash drive does not have any configuration file and cannot be used for deployment. The switch has been upgraded using the USB flash drive and is restarting.
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from the USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

Table 4-793 Description of service port indicators in different modes (two indicators for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Yellow	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green and	Steady on	10M/100M/1000M port: The port is operating at

Display Mode	Color	Status	Description
	yellow		10/100 Mbit/s. 100M/1000M port: The port is operating at 100 Mbit/s.
	Green and yellow	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 100M/1000M port: The port is operating at 1000 Mbit/s.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green and yellow	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
	Green and yellow	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is blinking, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Table 4-794 Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
Stack	-	Off	Port indicators do not show the stack ID of the switch.

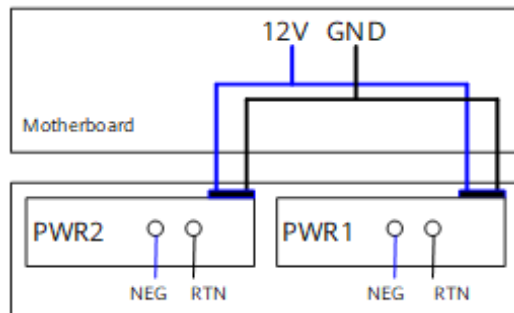
Display Mode	Color	Status	Description
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is blinking, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Power Supply Configuration

The S5720-36C-EI-28S-AC uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

Figure 4-316 shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 4-316 Power supply connections of dual DC power modules



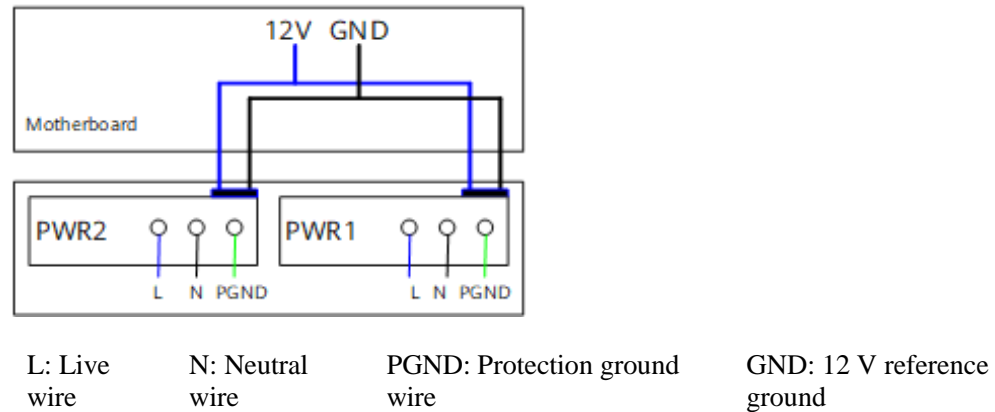
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

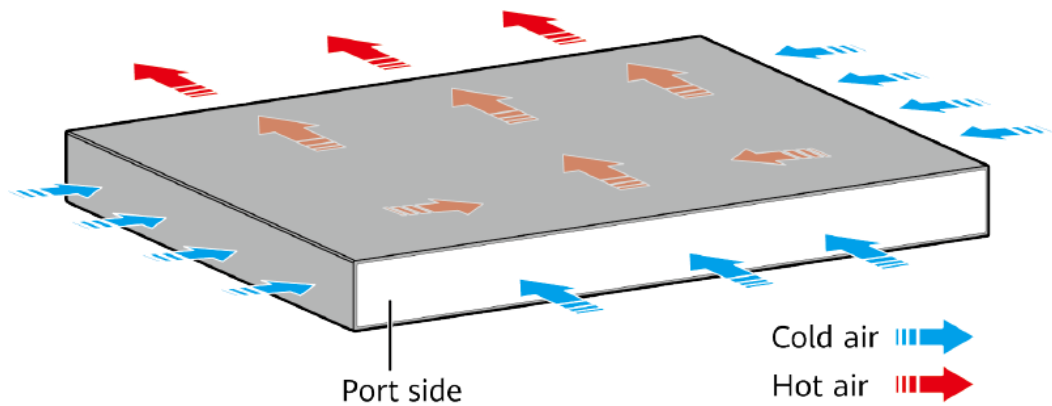
Figure 4-317 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 4-317 Power supply connections of dual AC power modules



Heat Dissipation

The S5720-36C-EI-28S-AC uses pluggable fan modules for forced air cooling. Air flows in from the left side, right side, and front panel, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-795 lists technical specifications of the S5720-36C-EI-28S-AC.

Table 4-795 Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	85.45 years when no card is configured; 78.2 years when a 2-port 10GE SFP+ interface card is configured; 75.87 years when a 2-port 10GE RJ45 interface card is configured; 76.05 years when a stack

Item	Description
	card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	<ul style="list-style-type: none"> Service ports on front panel: ± 6 kV in common mode Ports on the 2-port 10GE RJ45 rear interface card: ± 2 kV in common mode
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.7 mm (1.75 in. x 17.4 in. x 16.72 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.8 mm (1.75 in. x 17.4 in. x 17.79 in.)
Weight (with packaging)	9.9 kg (21.83 lb)
Stack ports	<ul style="list-style-type: none"> Ports on the 2-port 10GE SFP+ rear interface card Ports on the 2-port 10GE RJ45 rear interface card Ports on the 2-port QSFP+ rear stack card
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	83.9 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> Tested according to ATIS standard EEE enabled No PoE power 	<ul style="list-style-type: none"> 47.86 W (without card) 55.35 W (with 2*10GE optical card) 60.25 W (with 2*QSFP+ stack card) 63.5 W (with 2*10GE electrical card)

Item	Description
consumption	
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">• The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 51.2 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none">• AC power modules configured: 0-5000 m (0-16404 ft.)• DC power modules configured: 0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02359503

4.17.4 S5720-36C-EI-28S-DC

Version Mapping

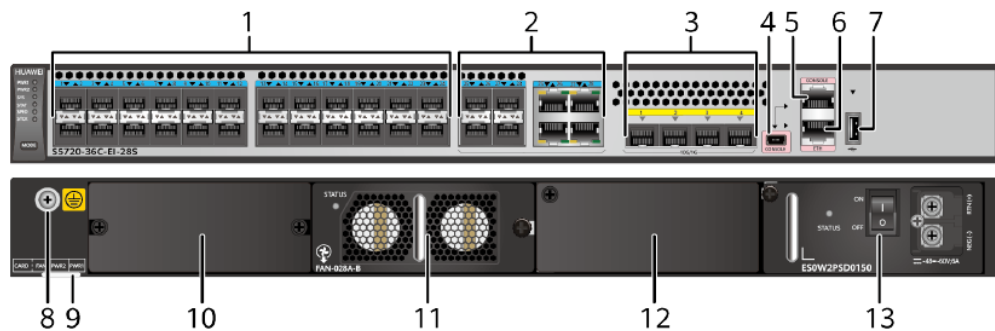
Table 4-796 lists the mapping between the S5720-36C-EI-28S-DC chassis and software versions.

Table 4-796 Version mapping

Series		Model	Software Version
S5720-EI	S5720-C-EI	S5720-36C-EI-28S-DC	V200R009C00 to V200R019C10 versions

Appearance and Structure

Figure 4-318 S5720-36C-EI-28S-DC appearance



1	<p>Twenty-four 100/1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules 	2	<p>Four combo ports (10/100/1000BASE-T + 100/1000BASE-X)</p> <p>Modules applicable to combo optical ports:</p> <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules
3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable 	4	<p>One mini USB port</p>

	<ul style="list-style-type: none"> 9.15 Copper Cable 9.3 Optical Fiber 		
5	<p>One console port</p> <p>NOTE It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>	6	One ETH management port
7	One USB port	8	<p>Ground screw</p> <p>NOTE It is used with a 9.1 Ground Cable.</p>
9	<p>ESN label</p> <p>NOTE You can draw it out to view the ESN and MAC address of the switch.</p>	10	<p>Rear card slot</p> <p>NOTE Card supported:</p> <ul style="list-style-type: none"> 8.20 ES5D21X02S01 (2-Port 10 Gig SFP+ Rear Interface Card, Used in S5720-EI Series) 8.21 ES5D21X02T01 (2-Port 10 Gig RJ45 Rear Interface Card, Used in S5720-EI Series) 8.27 ES5D21VST000 (Dedicated Stack Card with 2*QSFP+ Interface)
11	<p>Fan slot</p> <p>NOTE Applicable fan module: 7.3 FAN-028A-B Fan Module</p>	12	<p>Power module slot 2</p> <p>NOTE Applicable power modules:</p> <ul style="list-style-type: none"> 5.2 LS5M100PWA00/ES0W2PSA0150 (150 W AC Power Module) 5.3 LS5M100PWD00/ES0W2PSD0150 (150 W DC Power Module)
13	<p>Power module slot 1</p> <p>NOTE Applicable power modules:</p> <ul style="list-style-type: none"> 5.2 LS5M100PWA00/ES0W2PSA0150 (150 W AC Power Module) 5.3 LS5M100PWD00/ES0W2PSD0150 (150 W DC Power Module) 	-	-

Port Description

100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. Table 4-797 describes the attributes of a 100/1000BASE-X port.

Table 4-797 Attributes of a 100/1000BASE-X port

Attribute	Description
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Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

Combo port

A combo port consists of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. The electrical and optical ports of a combo port are multiplexed, and only one of them can work at a time. When one of the Ethernet ports is working, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-798 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-798 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-799.

Table 4-799 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-800 describes the attributes of an ETH management port.

Table 4-800 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port of the S5720-EI does not support USB 1.1 and can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

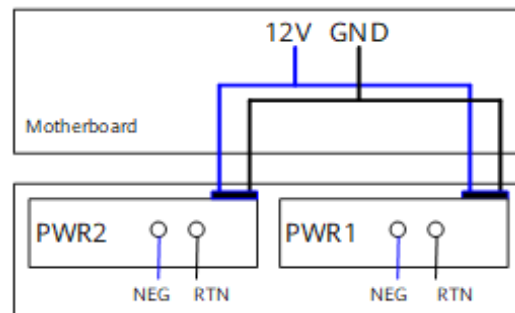
The S5720-36C-EI-28S-DC has the same types of indicators as the S5720-36C-EI-28S-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-36C-EI-28S-DC uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

Figure 4-319 shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 4-319 Power supply connections of dual DC power modules



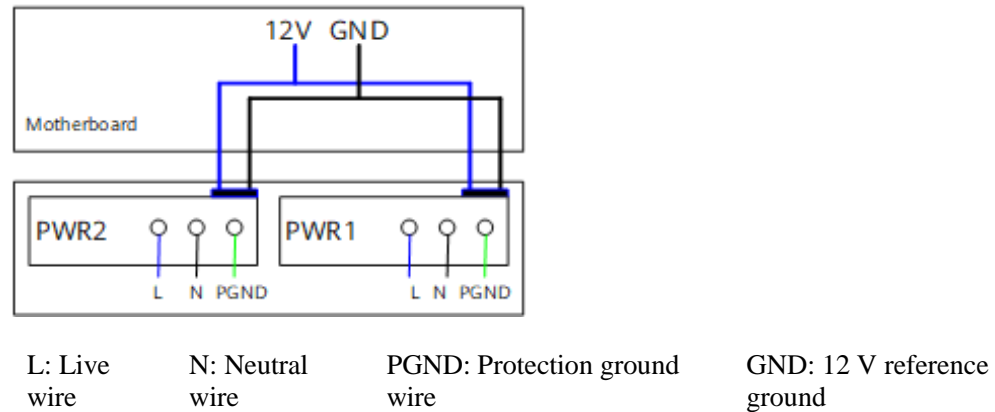
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

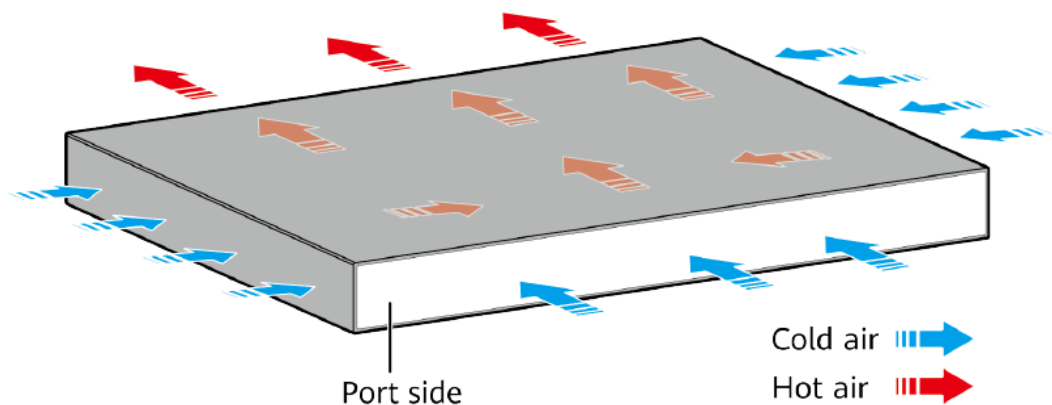
Figure 4-320 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 4-320 Power supply connections of dual AC power modules



Heat Dissipation

The S5720-36C-EI-28S-DC uses pluggable fan modules for forced air cooling. Air flows in from the left side, right side, and front panel, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-801 lists technical specifications of the S5720-36C-EI-28S-DC.

Table 4-801 Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	85.45 years when no card is configured; 78.2 years when a 2-port 10GE SFP+ interface card is configured; 75.87 years when a 2-port 10GE RJ45 interface card is configured; 76.05 years when a stack

Item	Description
	card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	<ul style="list-style-type: none">• Service ports on front panel: ± 6 kV in common mode• Ports on the 2-port 10GE RJ45 rear interface card: ± 2 kV in common mode
Power supply surge protection	<ul style="list-style-type: none">• Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode• Using DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">• Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.7 mm (1.75 in. x 17.4 in. x 16.72 in.)• Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.8 mm (1.75 in. x 17.4 in. x 17.79 in.)
Weight (with packaging)	9.7 kg (21.39 lb)
Stack ports	<ul style="list-style-type: none">• Ports on the 2-port 10GE SFP+ rear interface card• Ports on the 2-port 10GE RJ45 rear interface card• Ports on the 2-port QSFP+ rear stack card
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	83.9 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power	<ul style="list-style-type: none">• 47.86 W (without card)• 55.35 W (with 2*10GE optical card)• 60.25 W (with 2*QSFP+ stack card)• 63.5 W (with 2*10GE electrical card)

Item	Description
consumption	
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">• The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 51.2 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none">• AC power modules configured: 0-5000 m (0-16404 ft.)• DC power modules configured: 0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02350NHN

4.17.5 S5720-36C-PWR-EI-AC

Version Mapping

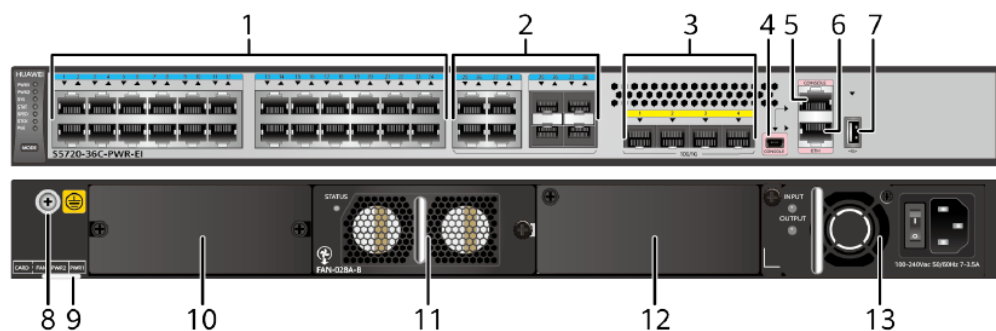
Table 4-802 lists the mapping between the S5720-36C-PWR-EI-AC chassis and software versions.

Table 4-802 Version mapping

Series		Model	Software Version
S5720-EI	S5720-C-EI	S5720-36C-PWR-EI-AC	V200R007C00 to V200R019C10 versions NOTE This model does not match V200R007C10.

Appearance and Structure

Figure 4-321 S5720-36C-PWR-EI-AC appearance



1	Twenty-four PoE+ 10/100/1000BASE-T ports	2	Four combo ports (10/100/1000BASE-T (PoE+) + 100/1000BASE-X) Modules applicable to combo optical ports: <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules
3	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical 	4	One mini USB port

	<p>Modules</p> <ul style="list-style-type: none"> • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.15 Copper Cable • 9.3 Optical Fiber 		
5	<p>One console port</p> <p>NOTE It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>	6	One ETH management port
7	One USB port	8	<p>Ground screw</p> <p>NOTE It is used with a 9.1 Ground Cable.</p>
9	<p>ESN label</p> <p>NOTE You can draw it out to view the ESN and MAC address of the switch.</p>	10	<p>Rear card slot</p> <p>NOTE Card supported:</p> <ul style="list-style-type: none"> • 8.20 ES5D21X02S01 (2-Port 10 Gig SFP+ Rear Interface Card, Used in S5720-EI Series) • 8.21 ES5D21X02T01 (2-Port 10 Gig RJ45 Rear Interface Card, Used in S5720-EI Series) • 8.27 ES5D21VST000 (Dedicated Stack Card with 2*QSFP+ Interface)
11	<p>Fan slot</p> <p>NOTE Applicable fan module: 7.3 FAN-028A-B Fan Module</p>	12	<p>Power module slot 2</p> <p>NOTE Applicable power modules:</p> <ul style="list-style-type: none"> • 5.6 W0PSA5000/PAC-500WA-BE (500 W AC PoE Power Module) • 5.8 PDC-650WA-BE (650 W DC PoE Power Module)
13	<p>Power module slot 1</p> <p>NOTE Applicable power modules:</p> <ul style="list-style-type: none"> • 5.6 W0PSA5000/PAC-500WA-BE (500 W AC PoE Power Module) • 5.8 PDC-650WA-BE (650 W DC PoE Power Module) 	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-803 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-803 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-804 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-804 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-805.

Table 4-805 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-806 describes the attributes of an ETH management port.

Table 4-806 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved

the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port of the S5720-EI does not support USB 1.1 and can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

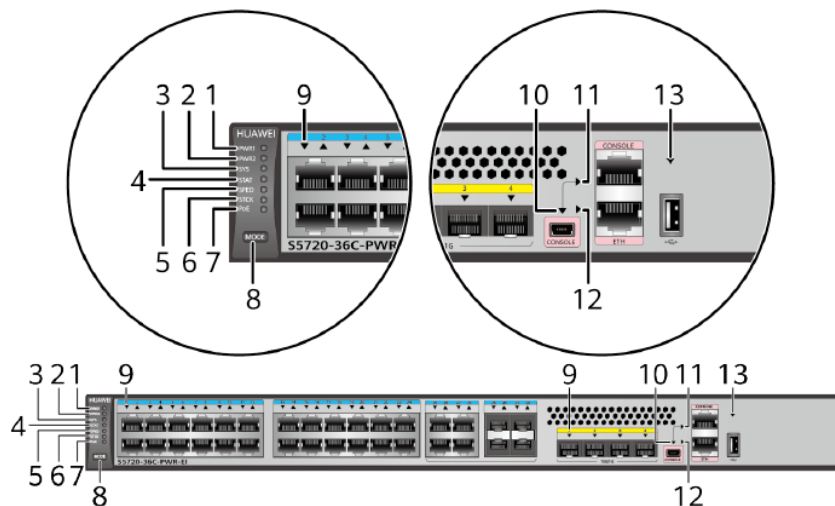
Indicator Description

NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
- If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
- If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 4-322 Indicators on the S5720-36C-PWR-EI-AC



NOTE

The S5720-EI series switches provide a command for setting fault indicators, which help field maintenance personnel find a faulty switch quickly.

The SYS indicator and mode indicators (STAT, SPED, STCK, and PoE) are used as fault indicators. When an S5720-EI switch is faulty, you can run the command to turn on the fault indicators. Then the SYS indicator and mode indicators fast blink red to help field maintenance personnel quickly find the faulty switch.

Table 4-807 Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR 1	Power module indicator	-	Off	No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 1 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none"> A power module is available in this slot but its power switch is in the OFF position. A power module is available in this slot but it is not connected to a power source. The power module in this slot has failed.
2	PWR 2	Power module indicator	-	Off	No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 2 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 2: <ul style="list-style-type: none"> A power module is available in this slot but its power switch is in the OFF position. A power module is available in this slot but it is not connected to a power source. The power module in this slot has failed.
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or temperature

No.	Indicator	Name	Color	Status	Description
					alarm has been generated.
4	STAT	Status indicator	-	Off	The status mode is not selected.
			Green	Steady on	The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
5	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The service port indicators show the port speeds. After 45 seconds, the service port indicators automatically restore to the status mode.
6	STACK	Stack indicator	-	Off	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is in stack standby or slave state or the stacking function is not enabled on the switch. If you are changing the indicator mode: The stack mode is not selected.
			Green	Steady on	The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is a stack master switch or a standalone switch with the stacking function enabled. If you are changing the indicator mode: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>
7	PoE	PoE indicator	-	Off	The PoE mode is not selected.
			Green	Steady on	The service port indicators show the PoE status. After 45 seconds, the service port indicators automatically restore to the status mode.
8	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> When you press this button once, the service port indicators change to the speed mode and show the speed of each service port. When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch.

No.	Indicator	Name	Color	Status	Description
					<ul style="list-style-type: none"> When you press this button a third time, the service port indicators change to the PoE mode and show the PoE status of each service port. When you press this button a fourth time, the service port indicators restore to the default mode, and the STAT indicator turns green. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED and PoE indicators are off, and the STCK indicator is off or blinking green.</p>
9	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see Table 4-808.		
10	-	Mini USB indicator	-	Off	The Mini USB port is disabled, and the console port is enabled.
			Green	Steady on	The Mini USB port is enabled. When the Mini USB indicator is steady green, the console indicator is off.
11	-	Console indicator	-	Off	The console port is disabled, and the Mini USB port is enabled.
			Green	Steady on	The console port is enabled (default state). When the console indicator is steady green, the Mini USB indicator is off.
12	-	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The ETH port is sending or receiving data.
13	-	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> No USB flash drive is connected to the switch. The USB port is damaged. The indicator is damaged. The USB flash drive does not have any configuration file and cannot be used for deployment. The switch has been upgraded using the USB flash drive and is restarting.
			Green	Steady	A USB-based deployment has been completed.

No.	Indicator	Name	Color	Status	Description
			Green	on	
			Green	Blinking	The system is reading data from the USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

Table 4-808 Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
PoE	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.
	Yellow	Steady on	The PoE function is disabled on the port.
	Yellow	Blinking	The port stops providing PoE power because of an exception (for example, an incompatible PD is connected to the port).
	Green and yellow	Blinking green and yellow alternately	The port fails to supply power to a PD due to one of the following reasons: <ul style="list-style-type: none"> The power required by the connected PD exceeds the maximum power or the configured power threshold of the port. The total power consumption of PDs has

Display Mode	Color	Status	Description
			reached the maximum power of the switch. <ul style="list-style-type: none"> The manual power management mode is used and the port is not enabled to provide power to the PD.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is blinking, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Power Supply Configuration

The S5720-36C-PWR-EI-AC is a PoE switch. It has two power module slots, each of which can have a 500 W or 650 W power module installed. A power module can provide 369.6 W of PoE power for powered devices (PDs). A 500 W AC power module and a 650 W DC power module can be used together in the switch. Table 4-809 lists its power supply configurations.

Table 4-809 Power supply configurations

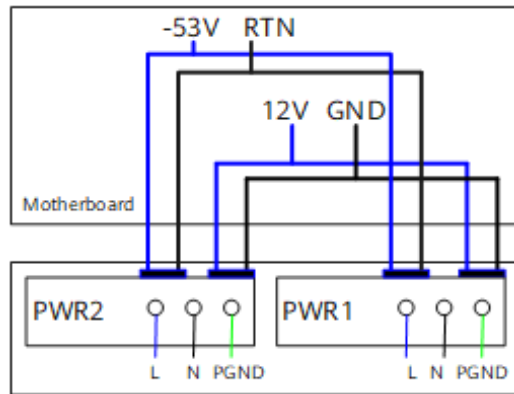
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
500 W or 650 W	-	369.6 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 12
500 W or 650 W	500 W or 650 W	739.2 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 28 802.3at (30 W per port): 24

NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

Figure 4-323 shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

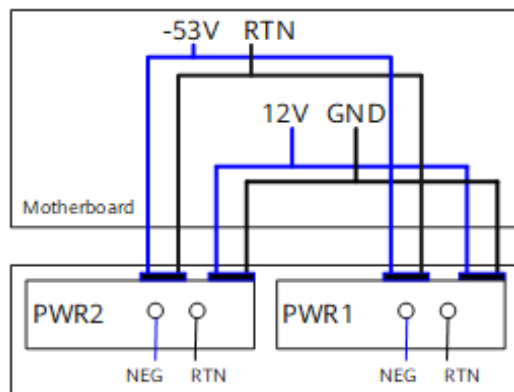
Figure 4-323 Power supply by dual AC PoE power modules



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground RTN: -53 V reference ground

Figure 4-324 shows the power supply connections of dual DC PoE power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V and -53 V output voltages, and the motherboard provides 12 V voltage for the entire device and -53 V voltage for the PDs.

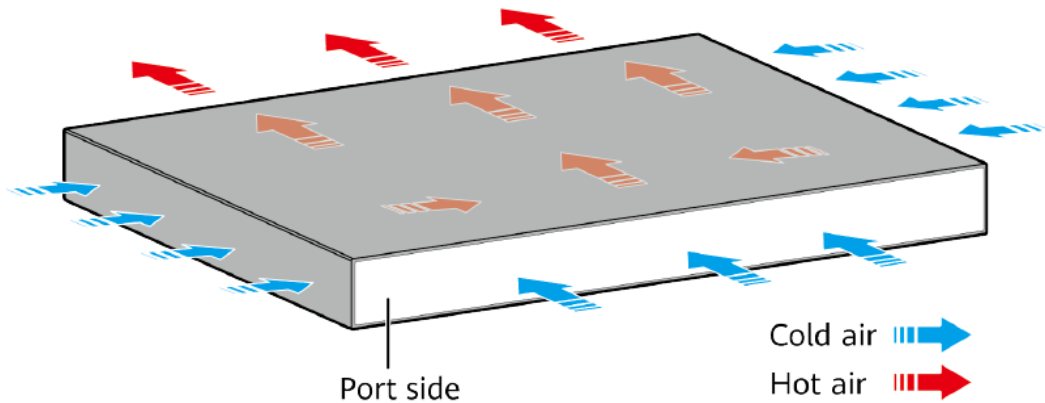
Figure 4-324 Power supply connections of dual DC PoE power modules



NEG: negative wire RTN: positive wire GND: 12 V reference ground RTN: -53 V reference ground

Heat Dissipation

The S5720-36C-PWR-EI-AC uses pluggable fan modules for forced air cooling. Air flows in from the left side, right side, and front panel, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-810 lists technical specifications of the S5720-36C-PWR-EI-AC.

Table 4-810 Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	60.72 years when no card is configured; 56.97 years when a 2-port 10GE SFP+ interface card is configured; 55.72 years when a 2-port 10GE RJ45 interface card is configured; 55.82 years when a stack card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	<ul style="list-style-type: none"> Service ports on front panel: ± 6 kV in common mode Ports on the 2-port 10GE RJ45 rear interface card: ± 2 kV in common mode
Power supply surge protection	<ul style="list-style-type: none"> Using 500 W AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using 650 W DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.7 mm (1.75 in. x 17.4 in. x 16.72 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.8 mm (1.75 in. x 17.4 in. x 17.79 in.)
Weight (with	9.9 kg (21.83 lb)

Item	Description
packaging)	
Stack ports	<ul style="list-style-type: none">Ports on the 2-port 10GE SFP+ rear interface cardPorts on the 2-port 10GE RJ45 rear interface cardPorts on the 2-port QSFP+ rear stack card
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none">Not providing the PoE function: 78 W100% PoE loads: 864.3 W (system power consumption: 124.3 W, PoE: 740 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">Tested according to ATIS standardEEE enabledNo PoE power consumption	<ul style="list-style-type: none">48.45 W (without card)56.14 W (with 2*10GE optical card)60.76 W (with 2*QSFP+ stack card)64.8 W (with 2*10GE electrical card)
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year.The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year.The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year.

Item	Description
	<p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 53.7 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02359573

4.17.6 S5720-36C-PWR-EI-DC

Version Mapping

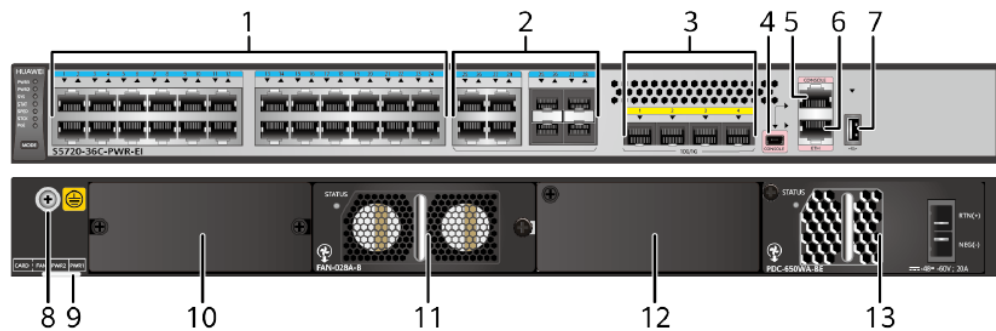
Table 4-811 lists the mapping between the S5720-36C-PWR-EI-DC chassis and software versions.

Table 4-811 Version mapping

Series		Model	Software Version
S5720-EI	S5720-C-EI	S5720-36C-PWR-EI-DC	V200R009C00 to V200R019C10 versions

Appearance and Structure

Figure 4-325 S5720-36C-PWR-EI-DC appearance



1	Twenty-four PoE+ 10/100/1000BASE-T ports	2 Four combo ports (10/100/1000BASE-T (PoE+) + 100/1000BASE-X) Modules applicable to combo optical ports: <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules
3	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.15 Copper Cable • 9.3 Optical Fiber 	4 One mini USB port
5	One console port NOTE It is used with a console cable. The console cable is not delivered with the switch and	6 One ETH management port

	needs to be separately purchased if needed.		
7	One USB port	8	Ground screw NOTE It is used with a 9.1 Ground Cable.
9	ESN label NOTE You can draw it out to view the ESN and MAC address of the switch.	10	Rear card slot NOTE Card supported: <ul style="list-style-type: none"> 8.20 ES5D21X02S01 (2-Port 10 Gig SFP+ Rear Interface Card, Used in S5720-EI Series) 8.21 ES5D21X02T01 (2-Port 10 Gig RJ45 Rear Interface Card, Used in S5720-EI Series) 8.27 ES5D21VST000 (Dedicated Stack Card with 2*QSFP+ Interface)
11	Fan slot NOTE Applicable fan module: 7.3 FAN-028A-B Fan Module	12	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none"> 5.6 W0PSA5000/PAC-500WA-BE (500 W AC PoE Power Module) 5.8 PDC-650WA-BE (650 W DC PoE Power Module)
13	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> 5.6 W0PSA5000/PAC-500WA-BE (500 W AC PoE Power Module) 5.8 PDC-650WA-BE (650 W DC PoE Power Module) 	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-812 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-812 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission	100 m

Attribute	Description
distance	

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-813 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-813 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-814.

Table 4-814 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-815 describes the attributes of an ETH management port.

Table 4-815 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port of the S5720-EI does not support USB 1.1 and can only connect to a USB flash drive that complies with USB 2.0.

 **NOTE**

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5720-36C-PWR-EI-DC has the same types of indicators as the S5720-36C-PWR-EI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-36C-PWR-EI-DC is a PoE switch. It has two power module slots, each of which can have a 500 W or 650 W power module installed. A power module can provide 369.6 W of PoE power for powered devices (PDs). A 500 W AC power module and a 650 W DC power module can be used together in the switch. Table 4-816 lists its power supply configurations.

Table 4-816 Power supply configurations

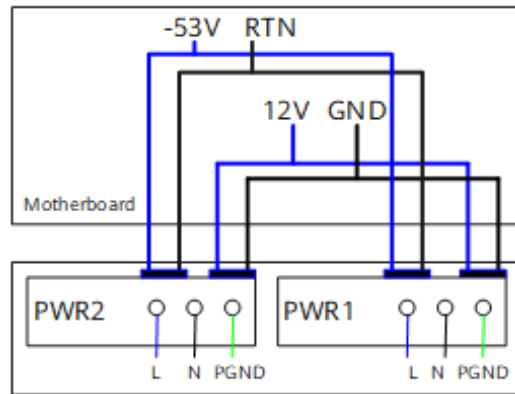
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
500 W or 650 W	-	369.6 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 12
500 W or 650 W	500 W or 650 W	739.2 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 28 802.3at (30 W per port): 24

 **NOTE**

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

Figure 4-326 shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

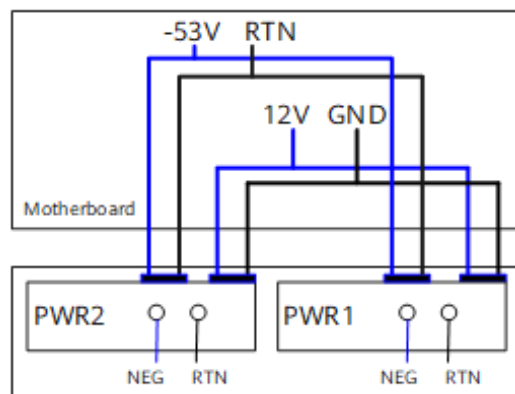
Figure 4-326 Power supply by dual AC PoE power modules



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground RTN: -53 V reference ground

Figure 4-327 shows the power supply connections of dual DC PoE power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V and -53 V output voltages, and the motherboard provides 12 V voltage for the entire device and -53 V voltage for the PDs.

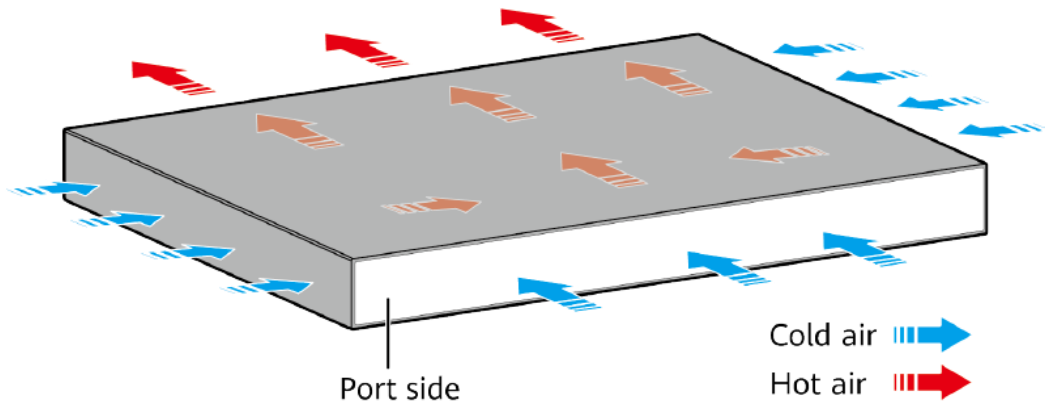
Figure 4-327 Power supply connections of dual DC PoE power modules



NEG: negative wire RTN: positive wire GND: 12 V reference ground RTN: -53 V reference ground

Heat Dissipation

The S5720-36C-PWR-EI-DC uses pluggable fan modules for forced air cooling. Air flows in from the left side, right side, and front panel, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-817 lists technical specifications of the S5720-36C-PWR-EI-DC.

Table 4-817 Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	60.72 years when no card is configured; 56.97 years when a 2-port 10GE SFP+ interface card is configured; 55.72 years when a 2-port 10GE RJ45 interface card is configured; 55.82 years when a stack card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	<ul style="list-style-type: none"> Service ports on front panel: ± 6 kV in common mode Ports on the 2-port 10GE RJ45 rear interface card: ± 2 kV in common mode
Power supply surge protection	<ul style="list-style-type: none"> Using 500 W AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using 650 W DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.7 mm (1.75 in. x 17.4 in. x 16.72 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.8 mm (1.75 in. x 17.4 in. x 17.79 in.)
Weight (with	9.9 kg (21.83 lb)

Item	Description
packaging)	
Stack ports	<ul style="list-style-type: none">• Ports on the 2-port 10GE SFP+ rear interface card• Ports on the 2-port 10GE RJ45 rear interface card• Ports on the 2-port QSFP+ rear stack card
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none">• Not providing the PoE function: 78 W• 100% PoE loads: 864.3 W (system power consumption: 124.3 W, PoE: 740 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	<ul style="list-style-type: none">• 48.45 W (without card)• 56.14 W (with 2*10GE optical card)• 60.76 W (with 2*QSFP+ stack card)• 64.8 W (with 2*10GE electrical card)
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">• The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year.

Item	Description
	<p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 53.7 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02350NHL

4.17.7 S5720-56C-EI-AC

Version Mapping

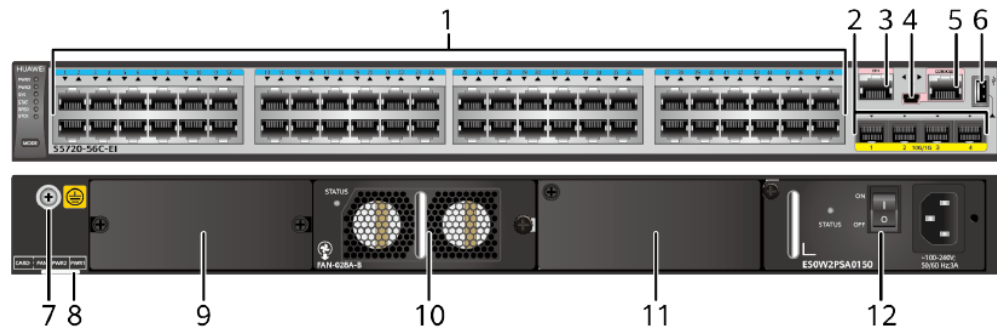
Table 4-818 lists the mapping between the S5720-56C-EI-AC chassis and software versions.

Table 4-818 Version mapping

Series		Model	Software Version
S5720-EI	S5720-C-EI	S5720-56C-EI-AC	V200R007C00 to V200R019C10 versions NOTE This model does not match V200R007C10.

Appearance and Structure

Figure 4-328 S5720-56C-EI-AC appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.15 Copper Cable • 9.3 Optical Fiber
3	One ETH management port	4	One mini USB port
5	One console port NOTE It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.	6	One USB port
7	Ground screw NOTE It is used with a 9.1 Ground Cable.	8	ESN label NOTE You can draw it out to view the ESN and MAC address of the switch.
9	Rear card slot NOTE Card supported: <ul style="list-style-type: none"> • 8.20 ES5D21X02S01 (2-Port 10 Gig SFP+ Rear Interface Card, Used in 	10	Fan slot NOTE Applicable fan module: 7.3 FAN-028A-B Fan Module

	<p>S5720-EI Series)</p> <ul style="list-style-type: none"> 8.21 ES5D21X02T01 (2-Port 10 Gig RJ45 Rear Interface Card, Used in S5720-EI Series) 8.27 ES5D21VST000 (Dedicated Stack Card with 2*QSFP+ Interface) 		
11	<p>Power module slot 2</p> <p>NOTE Applicable power modules:</p> <ul style="list-style-type: none"> 5.2 LS5M100PWA00/ES0W2PSA0150 (150 W AC Power Module) 5.3 LS5M100PWD00/ES0W2PSD0150 (150 W DC Power Module) 	12	<p>Power module slot 1</p> <p>NOTE Applicable power modules:</p> <ul style="list-style-type: none"> 5.2 LS5M100PWA00/ES0W2PSA0150 (150 W AC Power Module) 5.3 LS5M100PWD00/ES0W2PSD0150 (150 W DC Power Module)

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-819 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-819 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-820 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-820 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards	IEEE802.3ae

Attribute	Description
compliance	
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-821.

Table 4-821 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-822 describes the attributes of an ETH management port.

Table 4-822 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port of the S5720-EI does not support USB 1.1 and can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

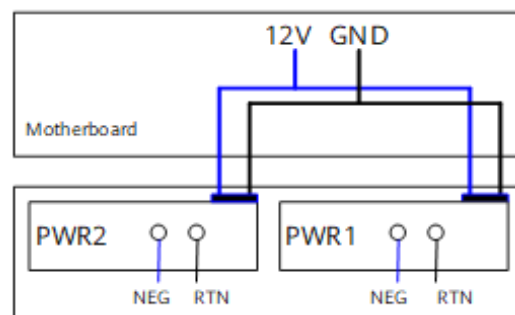
The S5720-56C-EI-AC has similar indicators to those on the S5720-36C-PWR-EI-AC, except that the S5720-56C-EI-AC does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-56C-EI-AC uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

Figure 4-329 shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 4-329 Power supply connections of dual DC power modules



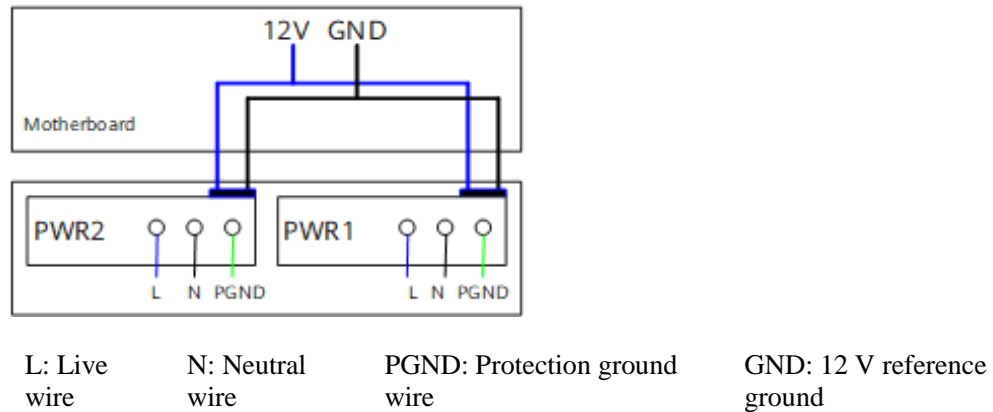
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

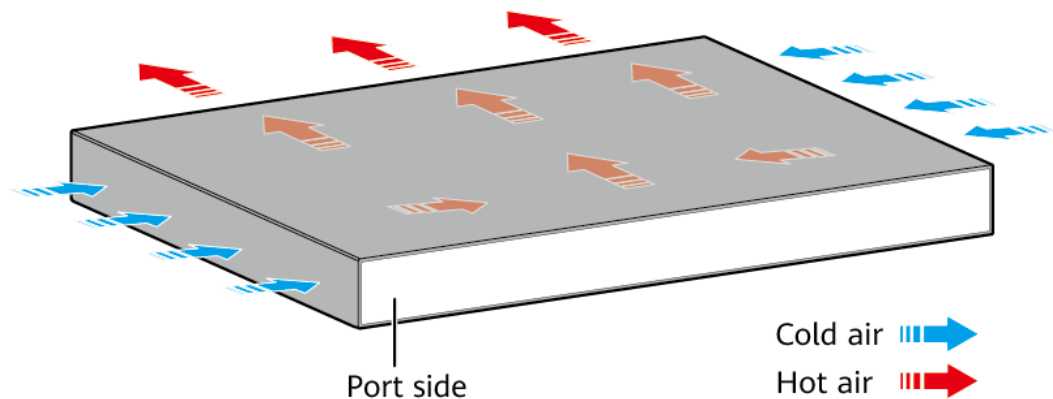
Figure 4-330 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 4-330 Power supply connections of dual AC power modules



Heat Dissipation

The S5720-56C-EI-AC uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-823 lists technical specifications of the S5720-56C-EI-AC.

Table 4-823 Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	71.18 years when no card is configured; 66.07 years when a 2-port 10GE SFP+ interface card is configured; 66.40 years when a 2-port 10GE RJ45 interface card is configured; 64.53 years when a stack

Item	Description
	card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	<ul style="list-style-type: none">• Service ports on front panel: ± 6 kV in common mode• Ports on the 2-port 10GE RJ45 rear interface card: ± 2 kV in common mode
Power supply surge protection	<ul style="list-style-type: none">• Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode• Using DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">• Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.7 mm (1.75 in. x 17.4 in. x 16.72 in.)• Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.8 mm (1.75 in. x 17.4 in. x 17.79 in.)
Weight (with packaging)	10 kg (22.05 lb)
Stack ports	<ul style="list-style-type: none">• Ports on the 2-port 10GE SFP+ rear interface card• Ports on the 2-port 10GE RJ45 rear interface card• Ports on the 2-port QSFP+ rear stack card
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	86.9 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power	<ul style="list-style-type: none">• 40.45 W (without card)• 47.78 W (with 2*10GE optical card)• 52.87 W (with 2*QSFP+ stack card)• 55.85 W (with 2*10GE electrical card)

Item	Description
consumption	
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">• The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 51.2 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none">• AC power modules configured: 0-5000 m (0-16404 ft.)• DC power modules configured: 0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02359504

4.17.8 S5720-56C-EI-DC

Version Mapping

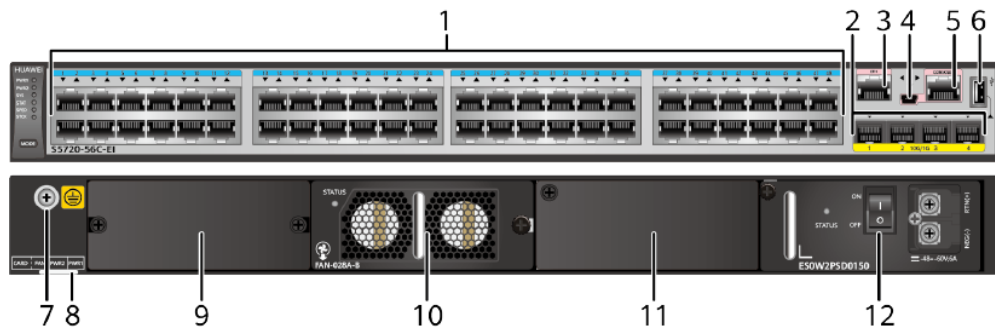
Table 4-824 lists the mapping between the S5720-56C-EI-DC chassis and software versions.

Table 4-824 Version mapping

Series		Model	Software Version
S5720-EI	S5720-C-EI	S5720-56C-EI-DC	V200R009C00 to V200R019C10 versions

Appearance and Structure

Figure 4-331 S5720-56C-EI-DC appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.15 Copper Cable • 9.3 Optical Fiber
3	One ETH management port	4	One mini USB port
5	One console port NOTE It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.	6	One USB port
7	Ground screw	8	ESN label

	<p>NOTE It is used with a 9.1 Ground Cable.</p>		<p>NOTE You can draw it out to view the ESN and MAC address of the switch.</p>
9	<p>Rear card slot</p> <p>NOTE Card supported:</p> <ul style="list-style-type: none"> 8.20 ES5D21X02S01 (2-Port 10 Gig SFP+ Rear Interface Card, Used in S5720-EI Series) 8.21 ES5D21X02T01 (2-Port 10 Gig RJ45 Rear Interface Card, Used in S5720-EI Series) 8.27 ES5D21VST000 (Dedicated Stack Card with 2*QSFP+ Interface) 	10	<p>Fan slot</p> <p>NOTE Applicable fan module: 7.3 FAN-028A-B Fan Module</p>
11	<p>Power module slot 2</p> <p>NOTE Applicable power modules:</p> <ul style="list-style-type: none"> 5.2 LS5M100PWA00/ES0W2PSA0150 (150 W AC Power Module) 5.3 LS5M100PWD00/ES0W2PSD0150 (150 W DC Power Module) 	12	<p>Power module slot 1</p> <p>NOTE Applicable power modules:</p> <ul style="list-style-type: none"> 5.2 LS5M100PWA00/ES0W2PSA0150 (150 W AC Power Module) 5.3 LS5M100PWD00/ES0W2PSD0150 (150 W DC Power Module)

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-825 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-825 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-826 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-826 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-827.

Table 4-827 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-828 describes the attributes of an ETH management port.

Table 4-828 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards	IEEE802.3

Attribute	Description
compliance	
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port of the S5720-EI does not support USB 1.1 and can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

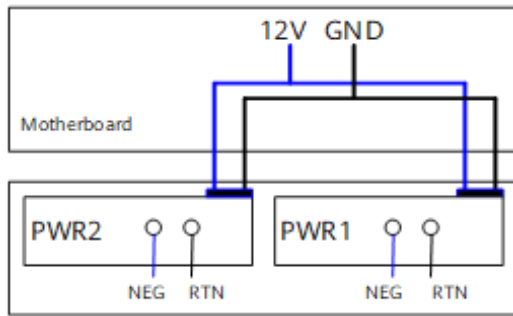
The S5720-56C-EI-DC has similar indicators to those on the S5720-36C-PWR-EI-AC, except that the S5720-56C-EI-DC does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-56C-EI-DC uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

Figure 4-332 shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

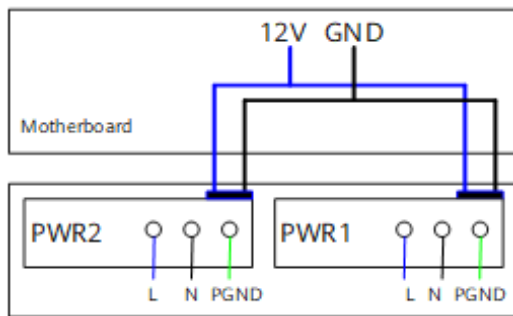
Figure 4-332 Power supply connections of dual DC power modules



NEG: negative wire RTN: positive wire GND: 12 V reference ground

Figure 4-333 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

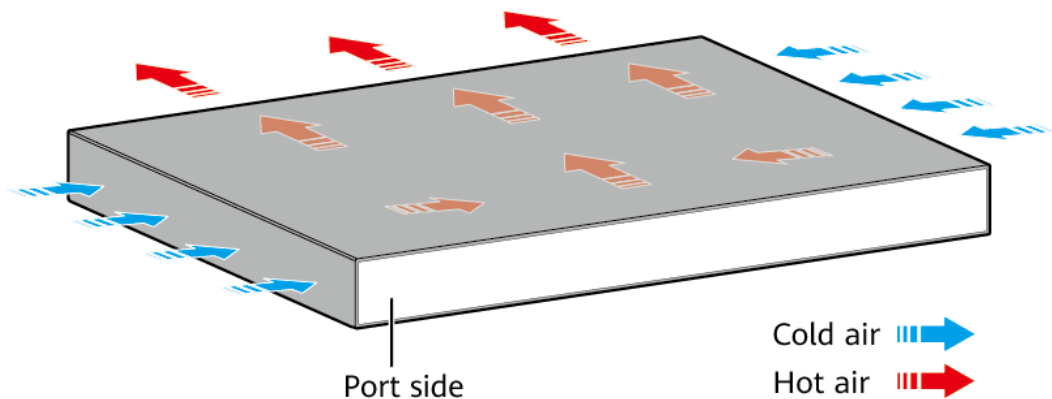
Figure 4-333 Power supply connections of dual AC power modules





L: Live wire N: Neutral wire PGND: Protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5720-56C-EI-DC has pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



Cold air 
 Hot air 

 **NOTE**

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-829 lists technical specifications of the S5720-56C-EI-DC.

Table 4-829 Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	71.18 years when no card is configured; 66.07 years when a 2-port 10GE SFP+ interface card is configured; 66.40 years when a 2-port 10GE RJ45 interface card is configured; 64.53 years when a stack card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	<ul style="list-style-type: none">• Service ports on front panel: ± 6 kV in common mode• Ports on the 2-port 10GE RJ45 rear interface card: ± 2 kV in common mode
Power supply surge protection	<ul style="list-style-type: none">• Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode• Using DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">• Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.7 mm (1.75 in. x 17.4 in. x 16.72 in.)• Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.8 mm (1.75 in. x 17.4 in. x 17.79 in.)
Weight (with packaging)	9.8 kg (21.61 lb)
Stack ports	<ul style="list-style-type: none">• Ports on the 2-port 10GE SFP+ rear interface card• Ports on the 2-port 10GE RJ45 rear interface card• Ports on the 2-port QSFP+ rear stack card
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC

Item	Description
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	86.9 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	<ul style="list-style-type: none">• 40.45 W (without card)• 47.78 W (with 2*10GE optical card)• 52.87 W (with 2*QSFP+ stack card)• 55.85 W (with 2*10GE electrical card)
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">• The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 51.2 dB(A)
Relative humidity	5% to 95%, noncondensing

Item	Description
Operating altitude	<ul style="list-style-type: none"> AC power modules configured: 0-5000 m (0-16404 ft.) DC power modules configured: 0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none"> EMC certification Safety certification Manufacturing certification
Part number	02350NHK

4.17.9 S5720-56C-EI-48S-AC

Version Mapping

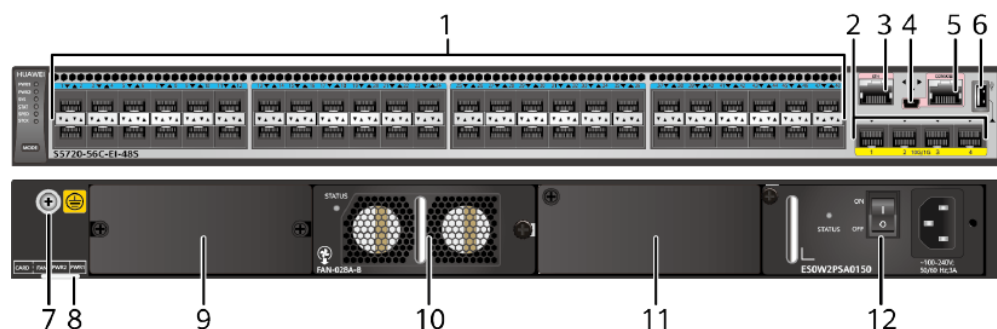
Table 4-830 lists the mapping between the S5720-56C-EI-48S-AC chassis and software versions.

Table 4-830 Version mapping

Series		Model	Software Version
S5720-EI	S5720-C-EI	S5720-56C-EI-48S-AC	V200R007C00 to V200R019C10 versions NOTE This model does not match V200R007C10.

Appearance and Structure

Figure 4-334 S5720-56C-EI-48S-AC appearance



1	Forty-eight 100/1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> 10.4 FE SFP/eSFP Optical Modules 	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> 10.5 GE eSFP Optical Modules
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	<ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules 		<ul style="list-style-type: none"> • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.15 Copper Cable • 9.3 Optical Fiber
3	One ETH management port	4	One mini USB port
5	One console port NOTE It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.	6	One USB port
7	Ground screw NOTE It is used with a 9.1 Ground Cable.	8	ESN label NOTE You can draw it out to view the ESN and MAC address of the switch.
9	Rear card slot NOTE Card supported: <ul style="list-style-type: none"> • 8.20 ES5D21X02S01 (2-Port 10 Gig SFP+ Rear Interface Card, Used in S5720-EI Series) • 8.21 ES5D21X02T01 (2-Port 10 Gig RJ45 Rear Interface Card, Used in S5720-EI Series) • 8.27 ES5D21VST000 (Dedicated Stack Card with 2*QSFP+ Interface) 	10	Fan slot NOTE Applicable fan module: 7.3 FAN-028A-B Fan Module
11	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none"> • 5.2 LS5M100PWA00/ES0W2PSA0150 (150 W AC Power Module) • 5.3 LS5M100PWD00/ES0W2PSD0150 (150 W DC Power Module) 	12	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> • 5.2 LS5M100PWA00/ES0W2PSA0150 (150 W AC Power Module) • 5.3 LS5M100PWD00/ES0W2PSD0150 (150 W DC Power Module)

Port Description

100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. Table 4-831 describes the attributes of a 100/1000BASE-X port.

Table 4-831 Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-832 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-832 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-833.

Table 4-833 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s

Attribute	Description
	Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-834 describes the attributes of an ETH management port.

Table 4-834 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port of the S5720-EI does not support USB 1.1 and can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

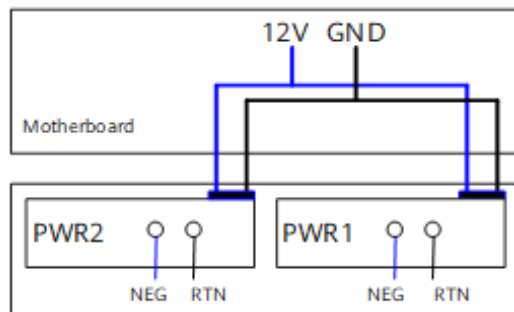
The S5720-56C-EI-48S-AC has the same types of indicators as the S5720-36C-EI-28S-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-56C-EI-48S-AC uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

Figure 4-335 shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

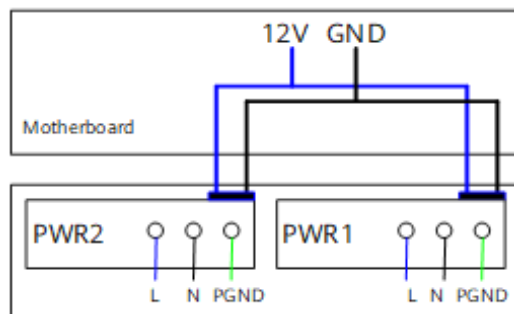
Figure 4-335 Power supply connections of dual DC power modules



NEG: negative wire RTN: positive wire GND: 12 V reference ground

Figure 4-336 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

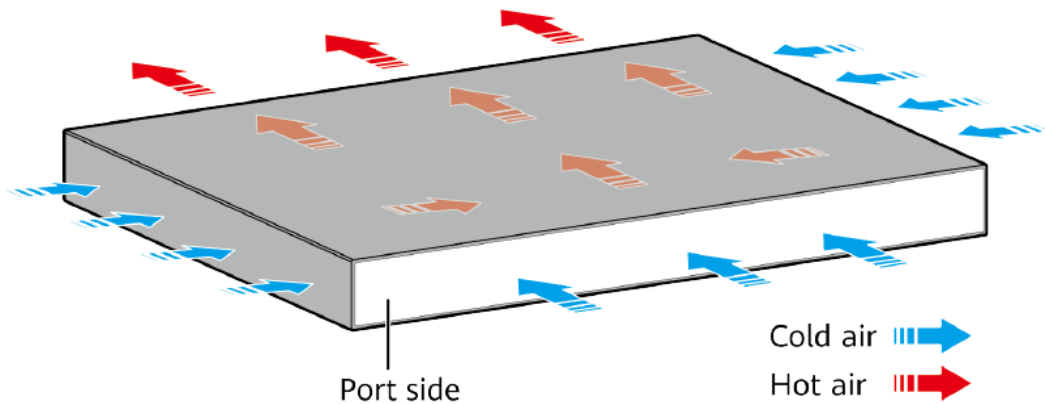
Figure 4-336 Power supply connections of dual AC power modules



L: Live wire N: Neutral wire PGND: Protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5720-56C-EI-48S-AC uses pluggable fan modules for forced air cooling. Air flows in from the left side, right side, and front panel, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-835 lists technical specifications of the S5720-56C-EI-48S-AC.

Table 4-835 Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	73.91 years when no card is configured; 68.42 years when a 2-port 10GE SFP+ interface card is configured; 66.63 years when a 2-port 10GE RJ45 interface card is configured; 66.77 years when a stack card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Ports on the 2-port 10GE RJ45 rear interface card: ± 2 kV in common mode
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.7 mm (1.75 in. x 17.4 in. x 16.72 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm

Item	Description
	x 451.8 mm (1.75 in. x 17.4 in. x 17.79 in.)
Weight (with packaging)	10.1 kg (22.27 lb)
Stack ports	<ul style="list-style-type: none">Ports on the 2-port 10GE SFP+ rear interface cardPorts on the 2-port 10GE RJ45 rear interface cardPorts on the 2-port QSFP+ rear stack card
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	104 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">Tested according to ATIS standardEEE enabledNo PoE power consumption	<ul style="list-style-type: none">68.82 W (without card)76.55 W (with 2*10GE optical card)81.23 W (with 2*QSFP+ stack card)83.78 W (with 2*10GE electrical card)
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year.The equipment operates at a temperature of over 45 °C (113 °F) for a total

Item	Description
	<p>of no more than 360 hours in one year.</p> <ul style="list-style-type: none">The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 51.2 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none">AC power modules configured: 0-5000 m (0-16404 ft.)DC power modules configured: 0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none">EMC certificationSafety certificationManufacturing certification
Part number	02359558

4.17.10 S5720-56C-EI-48S-DC

Version Mapping

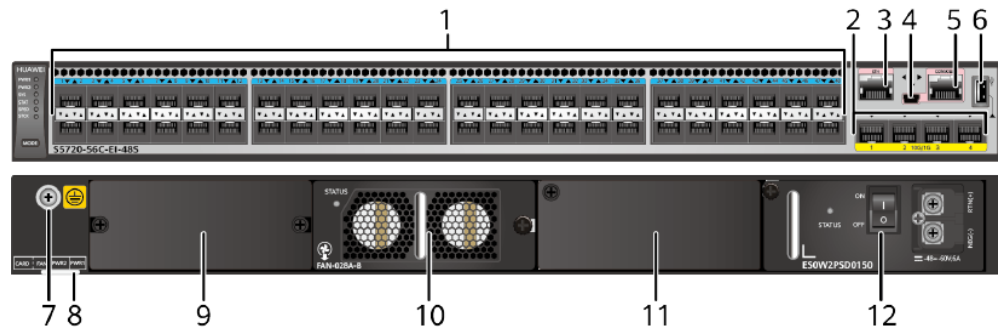
Table 4-836 lists the mapping between the S5720-56C-EI-48S-DC chassis and software versions.

Table 4-836 Version mapping

Series		Model	Software Version
S5720-EI	S5720-C-EI	S5720-56C-EI-48S-DC	V200R009C00 to V200R019C10 versions

Appearance and Structure

Figure 4-337 S5720-56C-EI-48S-DC appearance



1	<p>Forty-eight 100/1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules 	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.15 Copper Cable • 9.3 Optical Fiber
3	<p>One ETH management port</p>	4	<p>One mini USB port</p>
5	<p>One console port</p> <p>NOTE</p> <p>It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>	6	<p>One USB port</p>
7	<p>Ground screw</p> <p>NOTE</p> <p>It is used with a 9.1 Ground Cable.</p>	8	<p>ESN label</p> <p>NOTE</p> <p>You can draw it out to view the ESN and MAC address of the switch.</p>
9	<p>Rear card slot</p> <p>NOTE</p> <p>Card supported:</p> <ul style="list-style-type: none"> • 8.20 ES5D21X02S01 (2-Port 10 Gig SFP+ Rear Interface Card, Used in 	10	<p>Fan slot</p> <p>NOTE</p> <p>Applicable fan module: 7.3 FAN-028A-B Fan Module</p>

	<p>S5720-EI Series)</p> <ul style="list-style-type: none"> 8.21 ES5D21X02T01 (2-Port 10 Gig RJ45 Rear Interface Card, Used in S5720-EI Series) 8.27 ES5D21VST000 (Dedicated Stack Card with 2*QSFP+ Interface) 		
11	<p>Power module slot 2</p> <p>NOTE Applicable power modules:</p> <ul style="list-style-type: none"> 5.2 LS5M100PWA00/ES0W2PSA0150 (150 W AC Power Module) 5.3 LS5M100PWD00/ES0W2PSD0150 (150 W DC Power Module) 	12	<p>Power module slot 1</p> <p>NOTE Applicable power modules:</p> <ul style="list-style-type: none"> 5.2 LS5M100PWA00/ES0W2PSA0150 (150 W AC Power Module) 5.3 LS5M100PWD00/ES0W2PSD0150 (150 W DC Power Module)

Port Description

100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. Table 4-837 describes the attributes of a 100/1000BASE-X port.

Table 4-837 Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-838 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-838 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae

Attribute	Description
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-839.

Table 4-839 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-840 describes the attributes of an ETH management port.

Table 4-840 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port of the S5720-EI does not support USB 1.1 and can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

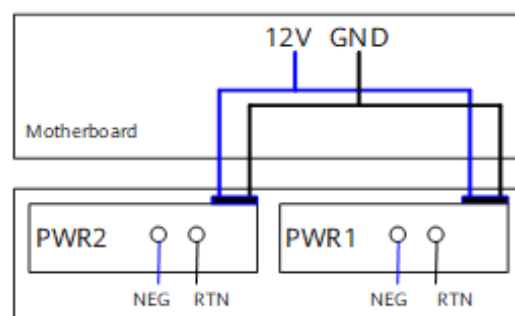
The S5720-56C-EI-48S-DC has the same types of indicators as the S5720-36C-EI-28S-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-56C-EI-48S-DC uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

Figure 4-338 shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 4-338 Power supply connections of dual DC power modules



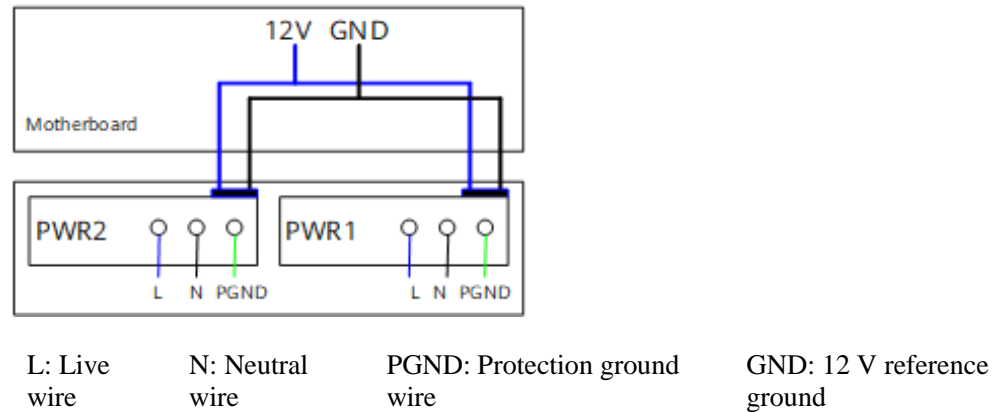
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

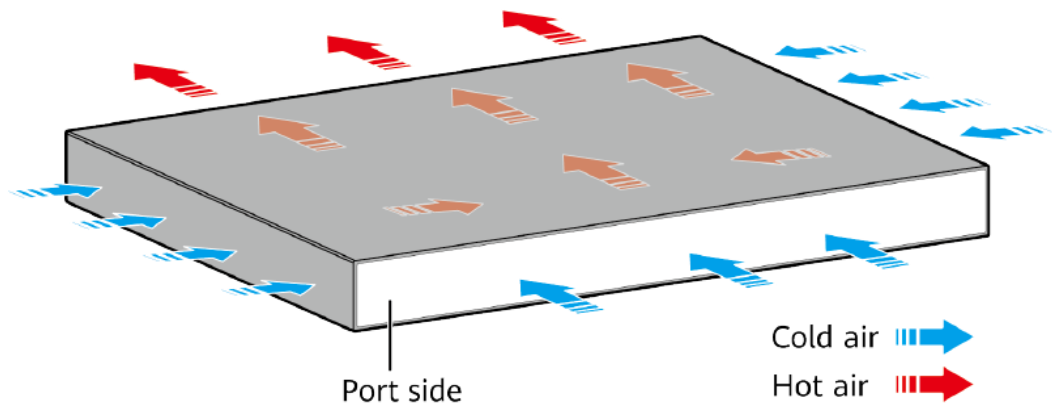
Figure 4-339 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 4-339 Power supply connections of dual AC power modules



Heat Dissipation

The S5720-56C-EI-48S-DC uses pluggable fan modules for forced air cooling. Air flows in from the left side, right side, and front panel, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-841 lists technical specifications of the S5720-56C-EI-48S-DC.

Table 4-841 Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	73.91 years when no card is configured; 68.42 years when a 2-port 10GE SFP+ interface card is configured; 66.63 years when a 2-port 10GE RJ45 interface card is configured; 66.77 years when a stack

Item	Description
	card is configured
Mean time to repair (MTTR)	2
Availability	> 0.99999
Service port surge protection	Ports on the 2-port 10GE RJ45 rear interface card: ± 2 kV in common mode
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.7 mm (1.75 in. x 17.4 in. x 16.72 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.8 mm (1.75 in. x 17.4 in. x 17.79 in.)
Weight (with packaging)	9.9 kg (21.83 lb)
Stack ports	<ul style="list-style-type: none"> Ports on the 2-port 10GE SFP+ rear interface card Ports on the 2-port 10GE RJ45 rear interface card Ports on the 2-port QSFP+ rear stack card
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	104 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> Tested according to ATIS standard EEE enabled No PoE power consumption 	<ul style="list-style-type: none"> 68.82 W (without card) 76.55 W (with 2*10GE optical card) 81.23 W (with 2*QSFP+ stack card) 83.78 W (with 2*10GE electrical card)

Item	Description
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">• The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 51.2 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none">• AC power modules configured: 0-5000 m (0-16404 ft.)• DC power modules configured: 0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02350NHP

4.17.11 S5720-56C-PWR-EI-AC

Version Mapping

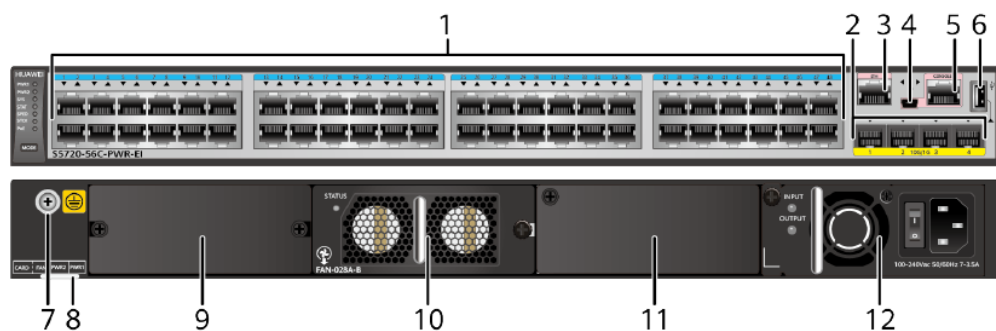
Table 4-842 lists the mapping between the S5720-56C-PWR-EI-AC chassis and software versions.

Table 4-842 Version mapping

Series		Model	Software Version
S5720-EI	S5720-C-EI	S5720-56C-PWR-EI-AC	V200R007C00 to V200R019C10 versions NOTE This model does not match V200R007C10.

Appearance and Structure

Figure 4-340 S5720-56C-PWR-EI-AC appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.15 Copper Cable • 9.3 Optical Fiber
3	One ETH management port	4	One mini USB port
5	One console port NOTE It is used with a console cable. The console cable is not delivered with the switch and	6	One USB port

	needs to be separately purchased if needed.		
7	<p>Ground screw</p> <p>NOTE It is used with a 9.1 Ground Cable.</p>	8	<p>ESN label</p> <p>NOTE You can draw it out to view the ESN and MAC address of the switch.</p>
9	<p>Rear card slot</p> <p>NOTE Card supported:</p> <ul style="list-style-type: none"> 8.20 ES5D21X02S01 (2-Port 10 Gig SFP+ Rear Interface Card, Used in S5720-EI Series) 8.21 ES5D21X02T01 (2-Port 10 Gig RJ45 Rear Interface Card, Used in S5720-EI Series) 8.27 ES5D21VST000 (Dedicated Stack Card with 2*QSFP+ Interface) 	10	<p>Fan slot</p> <p>NOTE Applicable fan module: 7.3 FAN-028A-B Fan Module</p>
11	<p>Power module slot 2</p> <p>NOTE Applicable power modules:</p> <ul style="list-style-type: none"> 5.6 W0PSA5000/PAC-500WA-BE (500 W AC PoE Power Module) 5.8 PDC-650WA-BE (650 W DC PoE Power Module) 	12	<p>Power module slot 1</p> <p>NOTE Applicable power modules:</p> <ul style="list-style-type: none"> 5.6 W0PSA5000/PAC-500WA-BE (500 W AC PoE Power Module) 5.8 PDC-650WA-BE (650 W DC PoE Power Module)

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-843 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-843 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-844 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-844 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-845.

Table 4-845 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-846 describes the attributes of an ETH management port.

Table 4-846 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards	IEEE802.3

Attribute	Description
compliance	
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port of the S5720-EI does not support USB 1.1 and can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5720-56C-PWR-EI-AC has the same types of indicators as the S5720-36C-PWR-EI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-56C-PWR-EI-AC is a PoE switch. It has two power module slots, each of which can have a 500 W or 650 W power module installed. A power module can provide 369.6 W of PoE power for powered devices (PDs). A 500 W AC power module and a 650 W DC power module can be used together in the switch. Table 4-847 lists its power supply configurations.

Table 4-847 Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
500 W or 650 W	-	369.6 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 12
500 W or 650 W	500 W or 650 W	739.2 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port):

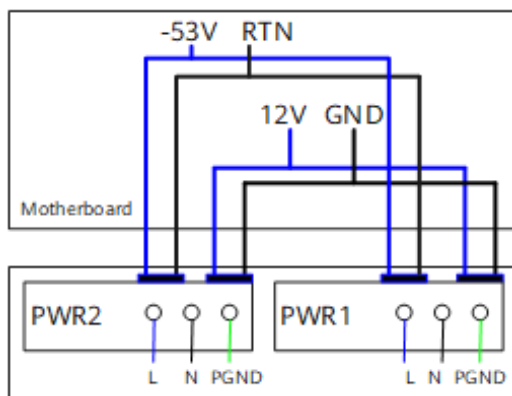
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
			24

NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

Figure 4-341 shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

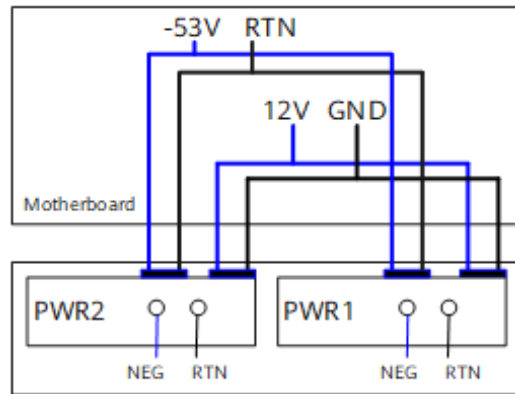
Figure 4-341 Power supply by dual AC PoE power modules



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground RTN: -53 V reference ground

Figure 4-342 shows the power supply connections of dual DC PoE power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V and -53 V output voltages, and the motherboard provides 12 V voltage for the entire device and -53 V voltage for the PDs.

Figure 4-342 Power supply connections of dual DC PoE power modules



NEG: negative wire

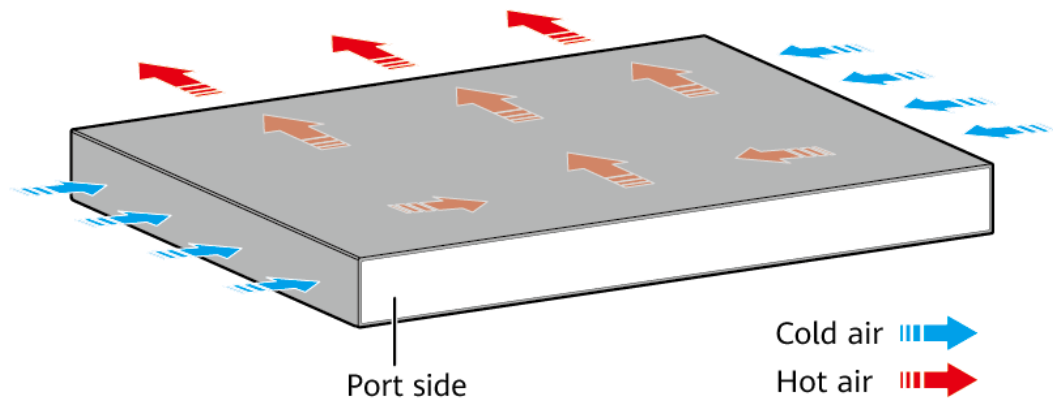
RTN: positive wire

GND: 12 V reference ground

RTN: -53 V reference ground

Heat Dissipation

The S5720-56C-PWR-EI-AC uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-848 lists technical specifications of the S5720-56C-PWR-EI-AC.

Table 4-848 Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between	51.34 years when no card is configured; 48.63 years when a 2-port

Item	Description
failures (MTBF)	10GE SFP+ interface card is configured; 47.71 years when a 2-port 10GE RJ45 interface card is configured; 47.79 years when a stack card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	<ul style="list-style-type: none">• Service ports on front panel: ± 6 kV in common mode• Ports on the 2-port 10GE RJ45 rear interface card: ± 2 kV in common mode
Power supply surge protection	<ul style="list-style-type: none">• Using 500 W AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode• Using 650 W DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">• Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.7 mm (1.75 in. x 17.4 in. x 16.72 in.)• Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.8 mm (1.75 in. x 17.4 in. x 17.79 in.)
Weight (with packaging)	10.4 kg (22.93 lb)
Stack ports	<ul style="list-style-type: none">• Ports on the 2-port 10GE SFP+ rear interface card• Ports on the 2-port 10GE RJ45 rear interface card• Ports on the 2-port QSFP+ rear stack card
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none">• Not providing the PoE function: 91.6 W• 100% PoE loads: 889.4 W (system power consumption: 149.4 W, PoE: 740 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard	<ul style="list-style-type: none">• 53.5 W (without card)• 61.12 W (with 2*10GE optical card)• 65.85 W (with 2*QSFP+ stack card)• 69.3 W (with 2*10GE electrical card)

Item	Description
<ul style="list-style-type: none">• EEE enabled• No PoE power consumption	
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">• The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 53.7 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02359576

4.17.12 S5720-56C-PWR-EI-DC

Version Mapping

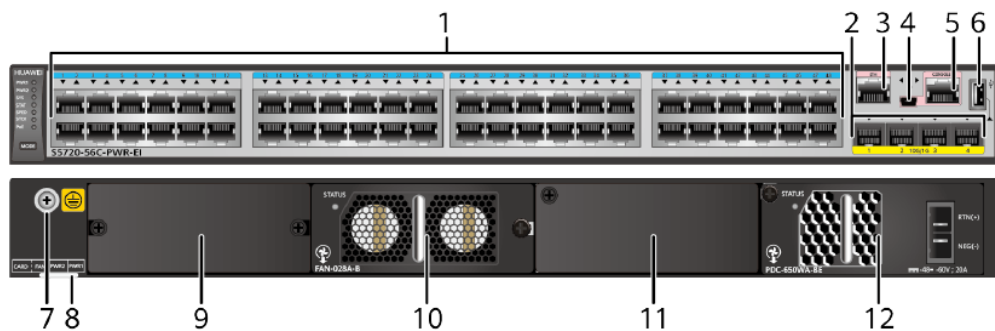
Table 4-849 lists the mapping between the S5720-56C-PWR-EI-DC chassis and software versions.

Table 4-849 Version mapping

Series		Model	Software Version
S5720-EI	S5720-C-EI	S5720-56C-PWR-EI-DC	V200R009C00 to V200R019C10 versions

Appearance and Structure

Figure 4-343 S5720-56C-PWR-EI-DC appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.15 Copper Cable • 9.3 Optical Fiber
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3	One ETH management port	4	One mini USB port
5	One console port NOTE It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.	6	One USB port
7	Ground screw NOTE It is used with a 9.1 Ground Cable.	8	ESN label NOTE You can draw it out to view the ESN and MAC address of the switch.
9	Rear card slot NOTE Card supported: <ul style="list-style-type: none"> 8.20 ES5D21X02S01 (2-Port 10 Gig SFP+ Rear Interface Card, Used in S5720-EI Series) 8.21 ES5D21X02T01 (2-Port 10 Gig RJ45 Rear Interface Card, Used in S5720-EI Series) 8.27 ES5D21VST000 (Dedicated Stack Card with 2*QSFP+ Interface) 	10	Fan slot NOTE Applicable fan module: 7.3 FAN-028A-B Fan Module
11	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none"> 5.6 W0PSA5000/PAC-500WA-BE (500 W AC PoE Power Module) 5.8 PDC-650WA-BE (650 W DC PoE Power Module) 	12	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> 5.6 W0PSA5000/PAC-500WA-BE (500 W AC PoE Power Module) 5.8 PDC-650WA-BE (650 W DC PoE Power Module)

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-850 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-850 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-851 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-851 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-852.

Table 4-852 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-853 describes the attributes of an ETH management port.

Table 4-853 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port of the S5720-EI does not support USB 1.1 and can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5720-56C-PWR-EI-DC has the same types of indicators as the S5720-36C-PWR-EI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-56C-PWR-EI-DC is a PoE switch. It has two power module slots, each of which can have a 500 W or 650 W power module installed. A power module can provide 369.6 W of PoE power for powered devices (PDs). A 500 W AC power module and a 650 W DC power module can be used together in the switch. Table 4-854 lists its power supply configurations.

Table 4-854 Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
500 W or 650 W	-	369.6 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port):

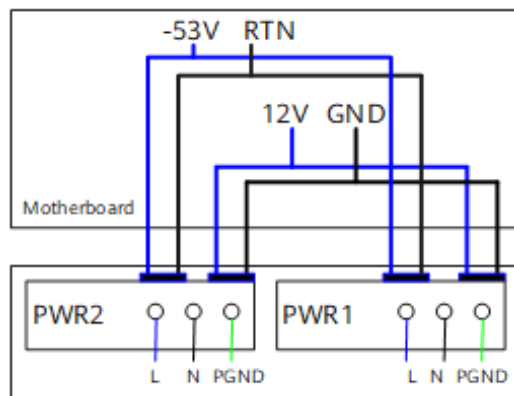
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
			12
500 W or 650 W	500 W or 650 W	739.2 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 24

NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

Figure 4-344 shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

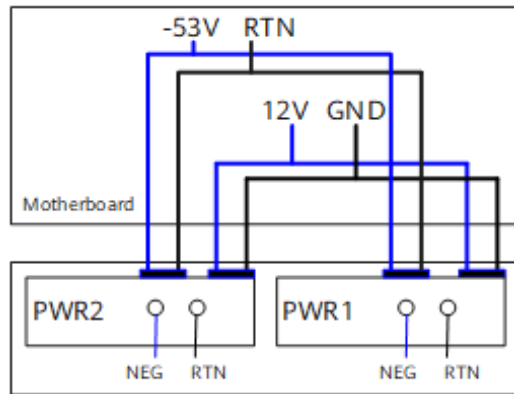
Figure 4-344 Power supply by dual AC PoE power modules



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground RTN: -53 V reference ground

Figure 4-345 shows the power supply connections of dual DC PoE power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V and -53 V output voltages, and the motherboard provides 12 V voltage for the entire device and -53 V voltage for the PDs.

Figure 4-345 Power supply connections of dual DC PoE power modules



NEG: negative wire

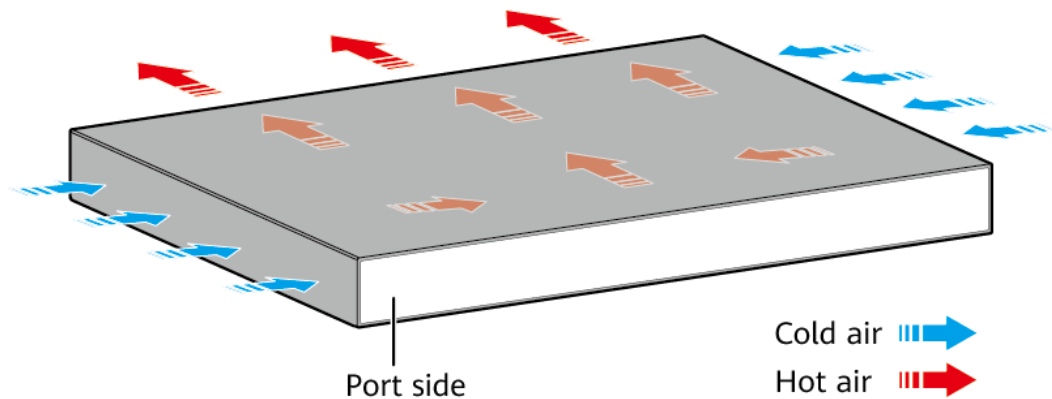
RTN: positive wire

GND: 12 V reference ground

RTN: -53 V reference ground

Heat Dissipation

The S5720-56C-PWR-EI-DC uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-855 lists technical specifications of the S5720-56C-PWR-EI-DC.

Table 4-855 Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between	51.34 years when no card is configured; 48.63 years when a 2-port

Item	Description
failures (MTBF)	10GE SFP+ interface card is configured; 47.71 years when a 2-port 10GE RJ45 interface card is configured; 47.79 years when a stack card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	<ul style="list-style-type: none">• Service ports on front panel: ± 6 kV in common mode• Ports on the 2-port 10GE RJ45 rear interface card: ± 2 kV in common mode
Power supply surge protection	<ul style="list-style-type: none">• Using 500 W AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode• Using 650 W DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">• Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.7 mm (1.75 in. x 17.4 in. x 16.72 in.)• Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.8 mm (1.75 in. x 17.4 in. x 17.79 in.)
Weight (with packaging)	10.3 kg (22.71 lb)
Stack ports	<ul style="list-style-type: none">• Ports on the 2-port 10GE SFP+ rear interface card• Ports on the 2-port 10GE RJ45 rear interface card• Ports on the 2-port QSFP+ rear stack card
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none">• Not providing the PoE function: 98 W• 100% PoE loads: 913 W (system power consumption: 173 W, PoE: 740 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard	<ul style="list-style-type: none">• 56.68 W (without card)• 63.63 W (with 2*10GE optical card)• 68.56 W (with 2*QSFP+ stack card)• 72.61 W (with 2*10GE electrical card)

Item	Description
<ul style="list-style-type: none">• EEE enabled• No PoE power consumption	
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">• The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 53.7 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02350NHM

4.17.13 S5720-56C-PWR-EI-AC1

Version Mapping

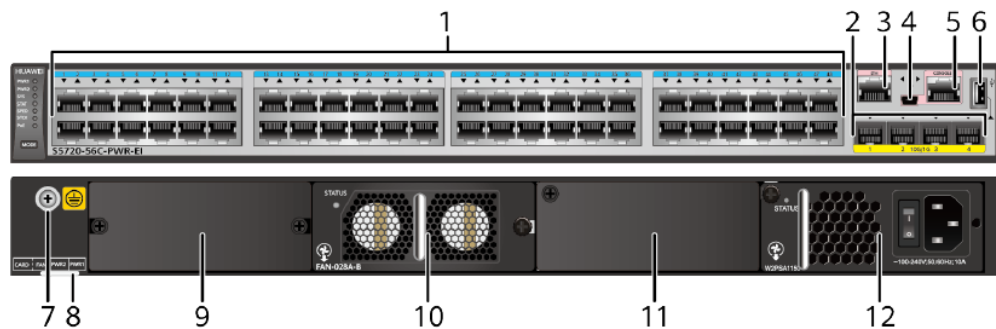
Table 4-856 lists the mapping between the S5720-56C-PWR-EI-AC1 chassis and software versions.

Table 4-856 Version mapping

Series		Model	Software Version
S5720-EI	S5720-C-EI	S5720-56C-PWR-EI-AC1	V200R007C00 to V200R019C10 versions NOTE This model does not match V200R007C10.

Appearance and Structure

Figure 4-346 S5720-56C-PWR-EI-AC1 appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable
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			<ul style="list-style-type: none"> 9.15 Copper Cable 9.3 Optical Fiber
3	One ETH management port	4	One mini USB port
5	One console port NOTE It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.	6	One USB port
7	Ground screw NOTE It is used with a 9.1 Ground Cable.	8	ESN label NOTE You can draw it out to view the ESN and MAC address of the switch.
9	Rear card slot NOTE Card supported: <ul style="list-style-type: none"> 8.20 ES5D21X02S01 (2-Port 10 Gig SFP+ Rear Interface Card, Used in S5720-EI Series) 8.21 ES5D21X02T01 (2-Port 10 Gig RJ45 Rear Interface Card, Used in S5720-EI Series) 8.27 ES5D21VST000 (Dedicated Stack Card with 2*QSFP+ Interface) 	10	Fan slot NOTE Applicable fan module: 7.3 FAN-028A-B Fan Module
11	Power module slot 2 NOTE Applicable power module: <ul style="list-style-type: none"> 5.10 W2PSA1150 (1150 W AC PoE Power Module) 5.9 PAC1000D5412 (1000 W AC PoE Power Module) (applicable in V200R013C00 and later versions) 	12	Power module slot 1 NOTE Applicable power module: <ul style="list-style-type: none"> 5.10 W2PSA1150 (1150 W AC PoE Power Module) 5.9 PAC1000D5412 (1000 W AC PoE Power Module) (applicable in V200R013C00 and later versions)

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-857 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-857 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing

Attribute	Description
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-858 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-858 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-859.

Table 4-859 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-860 describes the attributes of an ETH management port.

Table 4-860 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port of the S5720-EI does not support USB 1.1 and can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5720-56C-PWR-EI-AC1 has the same types of indicators as the S5720-36C-PWR-EI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-56C-PWR-EI-AC1 is a PoE switch. It has two power module slots and uses 1150 W AC PoE power modules or 1000 W AC PoE power modules (applicable in V200R013C00 and later versions). A 1150 W AC PoE power module and a 1000 W AC PoE power module can be used together. Table 4-861 lists its power supply configurations.

Table 4-861 Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1150 W (220 V)	-	785.4 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 26
1150 W (220 V)	1150 W (220 V)	1440 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 48
1150 W (110 V)	-	446.6 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 29 802.3at (30 W per port): 14
1150 W (110 V)	1150 W (110 V)	893.2 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 29
1000 W (220 V)	-	754.6 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 25
1000 W (220 V)	1000 W (220 V)	1440 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 48
1000 W (110 V)	-	754.6 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 25
1000 W (110 V)	1000 W (110 V)	1440 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 48
1000 W (220 V)	1150 W (220 V)	1440 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 48
1150 W (220 V)	1000 W (220 V)	1440 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 48

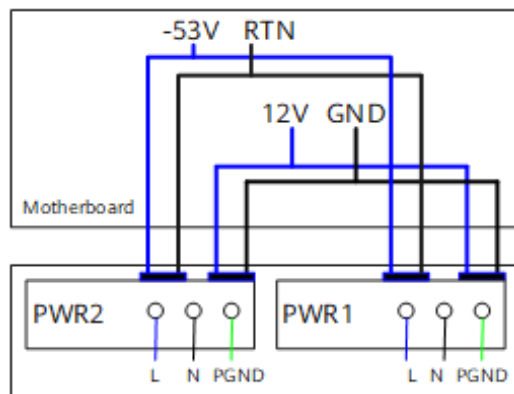
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W (110 V)	1150 W (110 V)	893.2 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 29
1150 W (110 V)	1000 W (110 V)	893.2 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 29

NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

Figure 4-347 shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

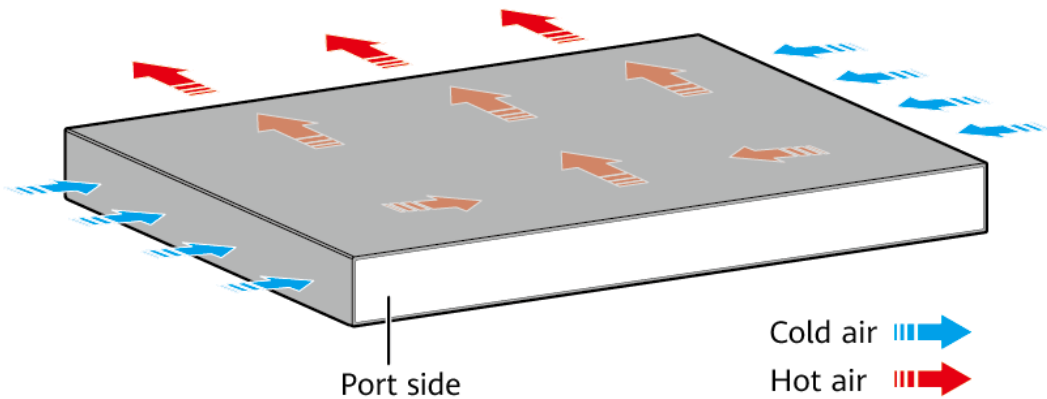
Figure 4-347 Power supply by dual AC PoE power modules



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground RTN: -53 V reference ground

Heat Dissipation

The S5720-56C-PWR-EI-AC1 uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-862 lists technical specifications of the S5720-56C-PWR-EI-AC1.

Table 4-862 Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	51.34 years when no card is configured; 48.63 years when a 2-port 10GE SFP+ interface card is configured; 47.71 years when a 2-port 10GE RJ45 interface card is configured; 47.79 years when a stack card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	<ul style="list-style-type: none"> Service ports on front panel: ± 6 kV in common mode Ports on the 2-port 10GE RJ45 rear interface card: ± 2 kV in common mode
Power supply surge protection	<ul style="list-style-type: none"> Using 1000 W AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using 1150 W AC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 510.5 mm (1.75 in. x 17.4 in. x 20.1 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 541.1 mm (1.75 in. x 17.4 in. x 21.3 in.)
Weight (with	10.9 kg (24.03 lb)

Item	Description
packaging)	
Stack ports	<ul style="list-style-type: none">• Ports on the 2-port 10GE SFP+ rear interface card• Ports on the 2-port 10GE RJ45 rear interface card• Ports on the 2-port QSFP+ rear stack card
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none">• Not providing the PoE function: 91.6 W• 100% PoE loads: 1564.8 W (system power consumption: 124.8 W, PoE: 1440 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	<ul style="list-style-type: none">• 53.5 W (without subcard)• 61.12 W (with 2*10G optical subcards)• 65.85 W (2*QSFP+ stack cards)• 69.3 W (with 2*10G electrical subcards)
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">• The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.

Item	Description
	The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 61.7 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02359578

4.17.14 S5720-36PC-EI-AC

Version Mapping

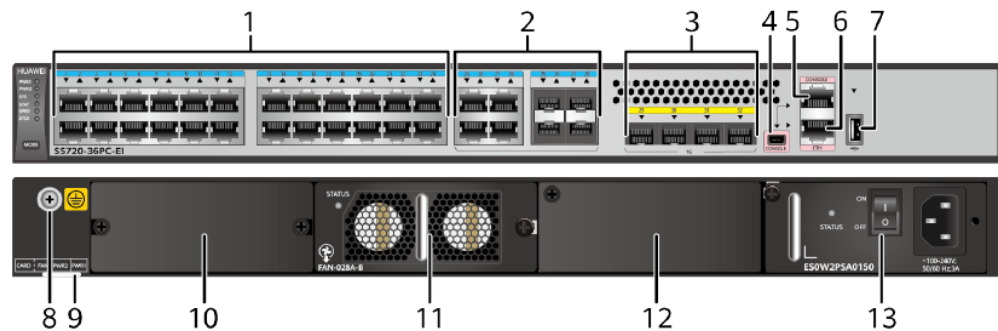
Table 4-863 lists the mapping between the S5720-36PC-EI-AC chassis and software versions.

Table 4-863 Version mapping

Series		Model	Software Version
S5720-EI	S5720-PC-EI	S5720-36PC-EI-AC	V200R007C00 to V200R019C10 versions NOTE This model does not match V200R007C10.

Appearance and Structure

Figure 4-348 S5720-36PC-EI-AC appearance



1	Twenty-four 10/100/1000BASE-T ports	2 Four combo ports (10/100/1000BASE-T + 100/1000BASE-X) Modules applicable to combo optical ports: <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules
3	Four 1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules 	4 One mini USB port
5	One console port NOTE It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.	6 One ETH management port
7	One USB port	8 Ground screw NOTE It is used with a 9.1 Ground Cable.
9	ESN label NOTE You can draw it out to view the ESN and MAC address of the switch.	10 Rear card slot NOTE Card supported: <ul style="list-style-type: none"> • 8.20 ES5D21X02S01 (2-Port 10 Gig)

			<p>SFP+ Rear Interface Card, Used in S5720-EI Series)</p> <ul style="list-style-type: none"> • 8.21 ES5D21X02T01 (2-Port 10 Gig RJ45 Rear Interface Card, Used in S5720-EI Series) • 8.27 ES5D21VST000 (Dedicated Stack Card with 2*QSFP+ Interface)
11	<p>Fan slot</p> <p>NOTE Applicable fan module: 7.3 FAN-028A-B Fan Module</p>	12	<p>Power module slot 2</p> <p>NOTE Applicable power modules:</p> <ul style="list-style-type: none"> • 5.2 LS5M100PWA00/ES0W2PSA0150 (150 W AC Power Module) • 5.3 LS5M100PWD00/ES0W2PSD0150 (150 W DC Power Module)
13	<p>Power module slot 1</p> <p>NOTE Applicable power modules:</p> <ul style="list-style-type: none"> • 5.2 LS5M100PWA00/ES0W2PSA0150 (150 W AC Power Module) • 5.3 LS5M100PWD00/ES0W2PSD0150 (150 W DC Power Module) 	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-864 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-864 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

 **NOTE**

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

1000BASE-X port

A 1000BASE-X Ethernet optical port sends and receives service data at 1000 Mbit/s. Table 4-865 describes the attributes of a 1000BASE-X Ethernet optical port.

Table 4-865 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	1000 Mbit/s

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-866.

Table 4-866 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-867 describes the attributes of an ETH management port.

Table 4-867 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port of the S5720-EI does not support USB 1.1 and can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

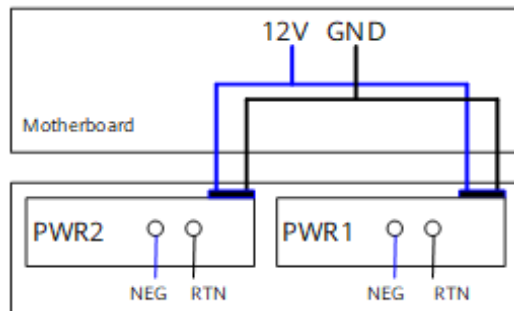
The S5720-36PC-EI-AC has similar indicators to those on the S5720-36C-PWR-EI-AC, except that the S5720-36PC-EI-AC does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-36PC-EI-AC uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

Figure 4-349 shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

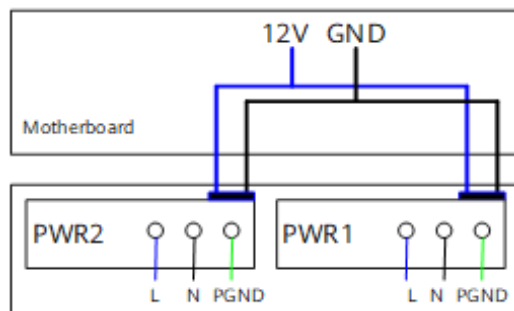
Figure 4-349 Power supply connections of dual DC power modules



NEG: negative wire RTN: positive wire GND: 12 V reference ground

Figure 4-350 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

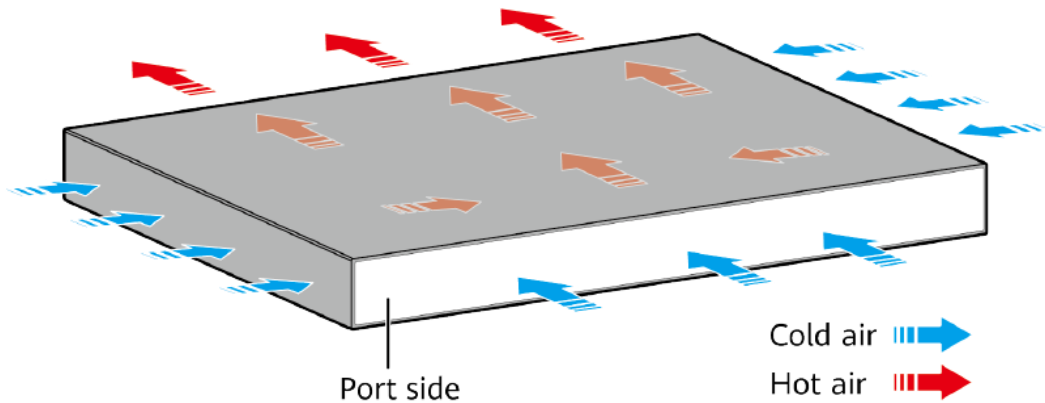
Figure 4-350 Power supply connections of dual AC power modules



L: Live wire N: Neutral wire PGND: Protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5720-36PC-EI-AC uses pluggable fan modules for forced air cooling. Air flows in from the left side, right side, and front panel, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-868 lists technical specifications of the S5720-36PC-EI-AC.

Table 4-868 Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	80.05 years when no card is configured; 73.65 years when a 2-port 10GE SFP+ interface card is configured; 71.58 years when a 2-port 10GE RJ45 interface card is configured; 71.74 years when a stack card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	<ul style="list-style-type: none"> Service ports on front panel: ± 6 kV in common mode Ports on the 2-port 10GE RJ45 rear interface card: ± 2 kV in common mode
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.7 mm (1.75 in. x 17.4 in. x 16.72 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.8 mm (1.75 in. x 17.4 in. x 17.79 in.)
Weight (with	9.8 kg (21.61 lb)

Item	Description
packaging)	
Stack ports	<ul style="list-style-type: none"> Ports on the 2-port 10GE SFP+ rear interface card Ports on the 2-port 10GE RJ45 rear interface card Ports on the 2-port QSFP+ rear stack card
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	74.6 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> Tested according to ATIS standard EEE enabled No PoE power consumption 	<ul style="list-style-type: none"> 39.5 W (without card) 47.28 W (with 2*10GE optical card) 52.17 W (with 2*QSFP+ stack card) 55.14 W (with 2*10GE electrical card)
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year. The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year. The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year.

Item	Description
	<p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 51.2 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none">AC power modules configured: 0-5000 m (0-16404 ft.)DC power modules configured: 0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none">EMC certificationSafety certificationManufacturing certification
Part number	02350BDQ

4.17.15 S5720-56PC-EI-AC

Version Mapping

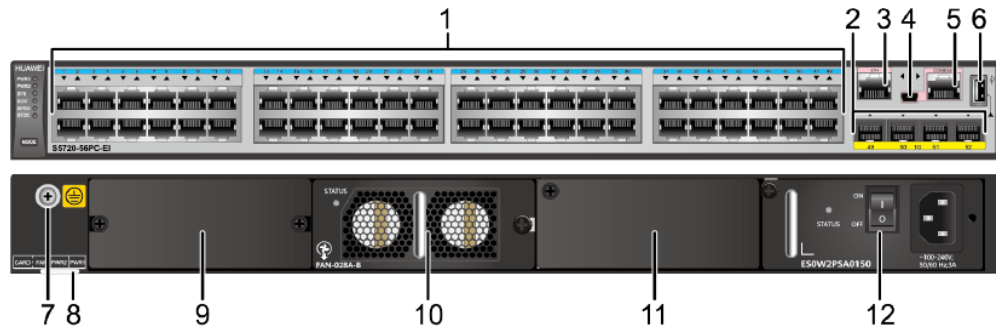
Table 4-869 lists the mapping between the S5720-56PC-EI-AC chassis and software versions.

Table 4-869 Version mapping

Series		Model	Software Version
S5720-EI	S5720-PC-EI	S5720-56PC-EI-AC	V200R007C00 to V200R019C10 versions NOTE This model does not match V200R007C10.

Appearance and Structure

Figure 4-351 S5720-56PC-EI-AC appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules
3	One ETH management port	4	One mini USB port
5	One console port NOTE It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.	6	One USB port
7	Ground screw NOTE It is used with a 9.1 Ground Cable.	8	ESN label NOTE You can draw it out to view the ESN and MAC address of the switch.
9	Rear card slot NOTE Card supported: <ul style="list-style-type: none"> • 8.20 ES5D21X02S01 (2-Port 10 Gig SFP+ Rear Interface Card, Used in S5720-EI Series) • 8.21 ES5D21X02T01 (2-Port 10 Gig RJ45 Rear Interface Card, Used in S5720-EI Series) • 8.27 ES5D21VST000 (Dedicated Stack Card with 2*QSFP+ Interface) 	10	Fan slot NOTE Applicable fan module: 7.3 FAN-028A-B Fan Module
11	Power module slot 2 NOTE Applicable power modules:	12	Power module slot 1 NOTE Applicable power modules:

<ul style="list-style-type: none">• 5.2 LS5M100PWA00/ES0W2PSA0150 (150 W AC Power Module)• 5.3 LS5M100PWD00/ES0W2PSD0150 (150 W DC Power Module)	<ul style="list-style-type: none">• 5.2 LS5M100PWA00/ES0W2PSA0150 (150 W AC Power Module)• 5.3 LS5M100PWD00/ES0W2PSD0150 (150 W DC Power Module)
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Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-870 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-870 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

A 1000BASE-X Ethernet optical port sends and receives service data at 1000 Mbit/s. Table 4-871 describes the attributes of a 1000BASE-X Ethernet optical port.

Table 4-871 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	1000 Mbit/s

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-872.

Table 4-872 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-873 describes the attributes of an ETH management port.

Table 4-873 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port of the S5720-EI does not support USB 1.1 and can only connect to a USB flash drive that complies with USB 2.0.

 **NOTE**

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

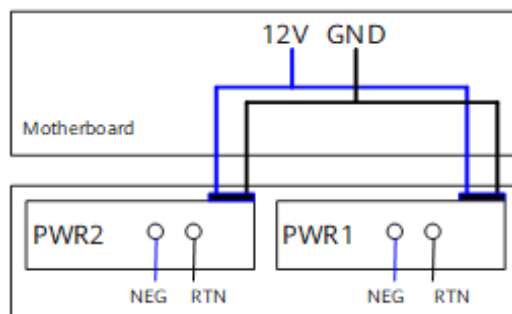
The S5720-56PC-EI-AC has similar indicators to those on the S5720-36C-PWR-EI-AC, except that the S5720-56PC-EI-AC does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-56PC-EI-AC uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

Figure 4-352 shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 4-352 Power supply connections of dual DC power modules



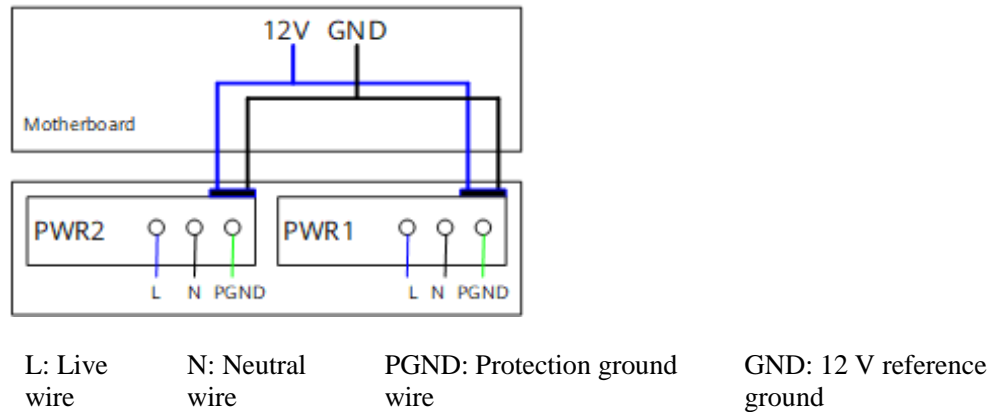
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

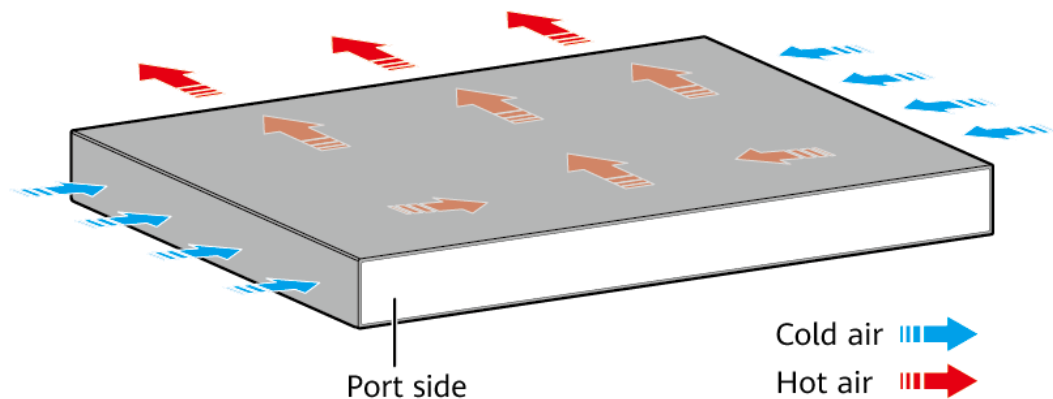
Figure 4-353 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 4-353 Power supply connections of dual AC power modules



Heat Dissipation

The S5720-56PC-EI-AC uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-874 lists technical specifications of the S5720-56PC-EI-AC.

Table 4-874 Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	71.18 years when no card is configured; 66.07 years when a 2-port 10GE SFP+ interface card is configured; 66.40 years when a 2-port 10GE RJ45 interface card is configured; 64.53 years when a stack

Item	Description
	card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	<ul style="list-style-type: none"> Service ports on front panel: ± 6 kV in common mode Ports on the 2-port 10GE RJ45 rear interface card: ± 2 kV in common mode
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.7 mm (1.75 in. x 17.4 in. x 16.72 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.8 mm (1.75 in. x 17.4 in. x 17.79 in.)
Weight (with packaging)	10 kg (22.05 lb)
Stack ports	<ul style="list-style-type: none"> Ports on the 2-port 10GE SFP+ rear interface card Ports on the 2-port 10GE RJ45 rear interface card Ports on the 2-port QSFP+ rear stack card
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	85.7 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> Tested according to ATIS standard EEE enabled No PoE power 	<ul style="list-style-type: none"> 40.45 W (without card) 47.78 W (with 2*10GE optical card) 52.87 W (with 2*QSFP+ stack card) 55.85 W (with 2*10GE electrical card)

Item	Description
consumption	
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">• The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 51.2 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none">• AC power modules configured: 0-5000 m (0-16404 ft.)• DC power modules configured: 0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02350BDV

4.17.16 S5720-32X-EI-AC

Version Mapping

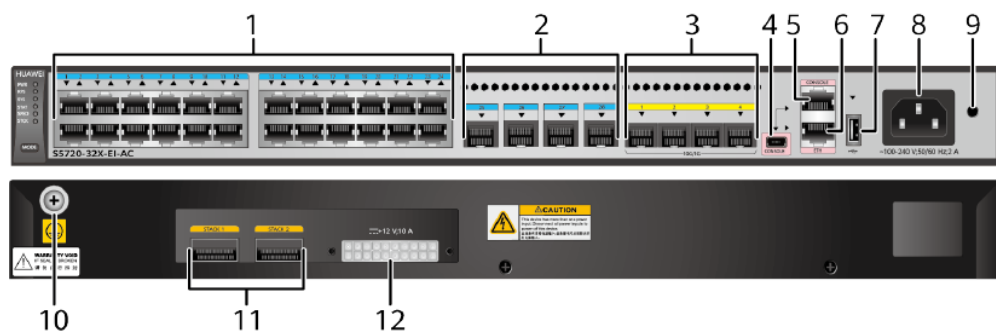
Table 4-875 lists the mapping between the S5720-32X-EI-AC chassis and software versions.

Table 4-875 Version mapping

Series		Model	Software Version
S5720-EI	S5720-X-E I	S5720-32X-EI-AC	V200R007C00 to V200R019C10 versions NOTE This model does not match V200R007C10.

Appearance and Structure

Figure 4-354 S5720-32X-EI-AC appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 100/1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules
3	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical 	4	One mini USB port

	Modules <ul style="list-style-type: none"> • 9.15 Copper Cable • 9.15 Copper Cable • 9.3 Optical Fiber 		
5	One console port NOTE It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.	6	One ETH management port
7	One USB port	8	AC socket NOTE It is used with an 9.8 AC Power Cable.
9	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.	10	Ground screw NOTE It is used with a 9.1 Ground Cable.
11	Two QSFP+ stack optical ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.16 40GE QSFP+ Optical Modules (only QSFP-40G-SR4 and QSFP-40G-iSR supported) • 9.15 Copper Cable 	12	RPS socket NOTE It is used with an 9.12 RPS Cable, which is not hot swappable.

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-876 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-876 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. Table 4-877 describes the attributes of a 100/1000BASE-X port.

Table 4-877 Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-878 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-878 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

QSFP+ stack optical port

QSFP+ stack optical ports can only be used for stack connection. Table 4-879 describes the attributes of a QSFP+ stack optical port.

Table 4-879 Attributes of a QSFP+ stack optical port

Attribute	Description
Connector type	MPO
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-880.

Table 4-880 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-881 describes the attributes of an ETH management port.

Table 4-881 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you

cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port of the S5720-EI does not support USB 1.1 and can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

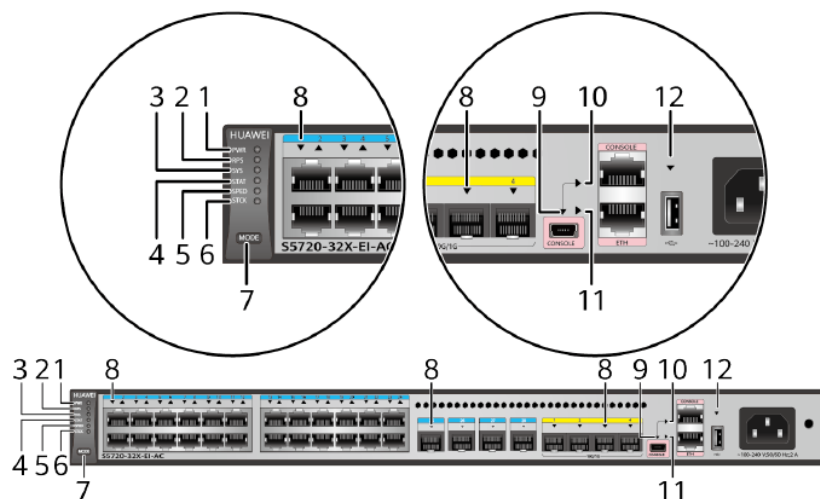
Indicator Description

NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
- If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
- If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 4-355 Indicators on the S5720-32X-EI-AC



NOTE

The S5720-EI series switches provide a command for setting fault indicators, which help field maintenance personnel find a faulty switch quickly.

The SYS indicator and mode indicators (STAT, SPED, STCK, and PoE) are used as fault indicators. When an S5720-EI switch is faulty, you can run the command to turn on the fault indicators. Then the SYS indicator and mode indicators fast blink red to help field maintenance personnel quickly find the faulty switch.

Table 4-882 Description of indicators on the switch

No.	Indicator/Button	Name	Color	Status	Description
1	PWR	Power module indicator	-	Off	The switch is powered off.
			Green	Steady on	The system power supply is normal.
			Yellow	Steady on	The built-in power module has failed, and the switch is receiving power from a redundant power supply (RPS).
2	RPS	RPS indicator	-	Off	The switch is not connected to an RPS.
			Green	Steady on	The RPS is in cold standby state.
			Green	Blinking	The RPS is supplying power to another switch.
			Yellow	Blinking	The RPS is supplying power to the local switch, and the built-in power module of the switch has failed.
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or temperature alarm has been generated.
4	STAT	Status indicator	-	Off	The status mode is not selected.
			Green	Steady on	The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
5	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The service port indicators show the port speeds. After 45 seconds, the service port indicators automatically restore to the status mode.
6	STACK	Stack indicator	-	Off	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is in stack standby or slave state or the stacking function is not enabled on the switch.

No.	Indicator/Button	Name	Color	Status	Description
					<ul style="list-style-type: none"> If you are changing the indicator mode: The stack mode is not selected.
			Green	Steady on	The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is a stack master switch or a standalone switch with the stacking function enabled. If you are changing the indicator mode: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>
7	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> When you press this button once, the service port indicators change to the speed mode and show the speed of each service port. When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch. When you press this button a third time, the service port indicators restore to the default mode, and the STAT indicator turns green. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED indicator is off, and the STCK indicator is off or blinking green.</p>
8	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see Table 4-883 and Table 4-884.		
9	-	Mini USB indicator	-	Off	The Mini USB port is disabled, and the console port is enabled.
			Green	Steady on	The Mini USB port is enabled. When the Mini USB indicator is steady green, the console indicator is off.
10	-	Console indicator	-	Off	The console port is disabled, and the Mini USB port is enabled.

No.	Indicator/Button	Name	Color	Status	Description
			Green	Steady on	The console port is enabled (default state). When the console indicator is steady green, the Mini USB indicator is off.
11	-	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The ETH port is sending or receiving data.
12	-	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> No USB flash drive is connected to the switch. The USB port is damaged. The indicator is damaged. The USB flash drive does not have any configuration file and cannot be used for deployment. The switch has been upgraded using the USB flash drive and is restarting.
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from the USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

Table 4-883 Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.

Display Mode	Color	Status	Description
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is blinking, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Table 4-884 Description of service port indicators in different modes (two indicators for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Yellow	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green and yellow	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 100M/1000M port: The port is operating at 100 Mbit/s.
	Green and yellow	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 100M/1000M port: The port is operating at 1000 Mbit/s.

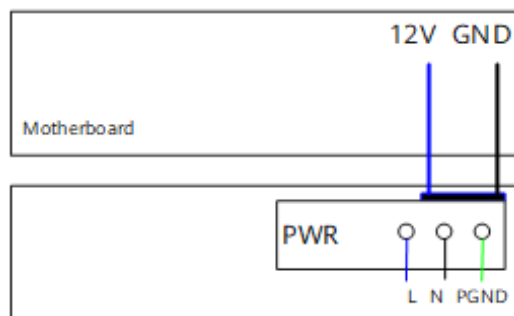
Display Mode	Color	Status	Description
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green and yellow	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
	Green and yellow	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is blinking, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Power Supply Configuration

The S5720-32X-EI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

Figure 4-356 shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 4-356 Power supply mode of a built-in AC power module



L: live wire

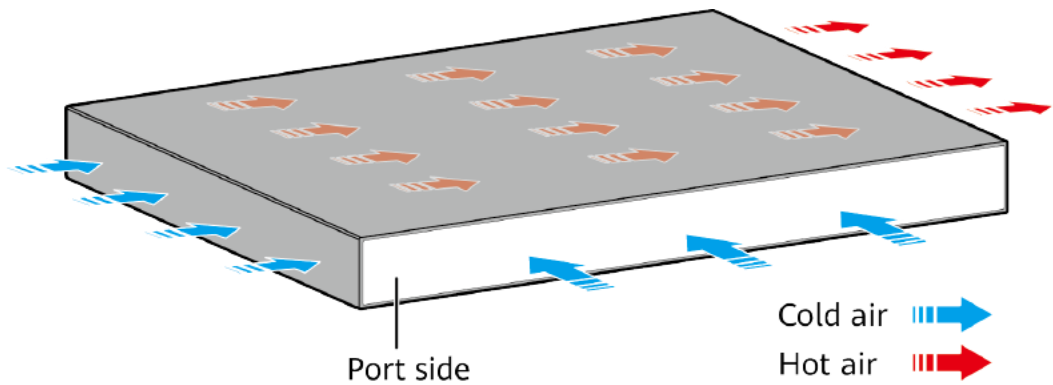
N: neutral wire

PGND: protection ground wire

GND: 12 V reference ground

Heat Dissipation

The S5720-32X-EI-AC has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-885 lists technical specifications of the S5720-32X-EI-AC.

Table 4-885 Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	80.32 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 224.9 mm (1.72 in. x 17.4 in. x 8.85 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 237.3 mm (1.72 in. x 17.4 in. x 9.34 in.)
Weight (with packaging)	4.5 kg (9.92 lb)
Stack ports	<ul style="list-style-type: none"> Two fixed QSFP+ stack ports on the rear card
RTC	Supported
RPS	Supported

Item	Description
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	51.9 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	40.85 W
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 49.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02359586

4.17.17 S5720-32X-EI-DC

Version Mapping

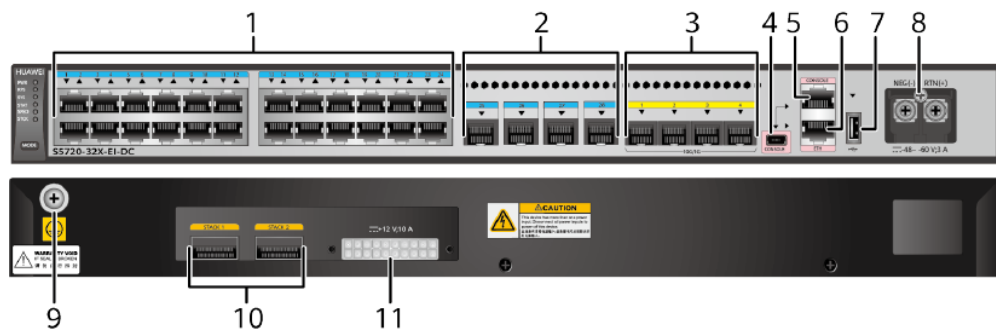
Table 4-886 lists the mapping between the S5720-32X-EI-DC chassis and software versions.

Table 4-886 Version mapping

Series		Model	Software Version
S5720-EI	S5720-X-EI	S5720-32X-EI-DC	V200R009C00 to V200R019C10 versions

Appearance and Structure

Figure 4-357 S5720-32X-EI-DC appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 100/1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules
3	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable 	4	One mini USB port

	<ul style="list-style-type: none"> 9.15 Copper Cable 9.3 Optical Fiber 		
5	<p>One console port</p> <p>NOTE It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>	6	One ETH management port
7	One USB port	8	<p>DC power terminal</p> <p>NOTE It is used together with a 9.5 DC Power Cable (with OT and Cord End Terminals).</p>
9	<p>Ground screw</p> <p>NOTE It is used with a 9.1 Ground Cable.</p>	10	<p>Two QSFP+ stack optical ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> 10.16 40GE QSFP+ Optical Modules (only QSFP-40G-SR4 and QSFP-40G-iSR supported) 9.15 Copper Cable
11	<p>RPS socket</p> <p>NOTE It is used with an 9.12 RPS Cable, which is not hot swappable.</p>	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-887 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-887 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. Table 4-888 describes the attributes of a 100/1000BASE-X port.

Table 4-888 Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-889 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-889 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

QSFP+ stack optical port

QSFP+ stack optical ports can only be used for stack connection. Table 4-890 describes the attributes of a QSFP+ stack optical port.

Table 4-890 Attributes of a QSFP+ stack optical port

Attribute	Description
Connector type	MPO
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-891.

Table 4-891 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-892 describes the attributes of an ETH management port.

Table 4-892 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port of the S5720-EI does not support USB 1.1 and can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

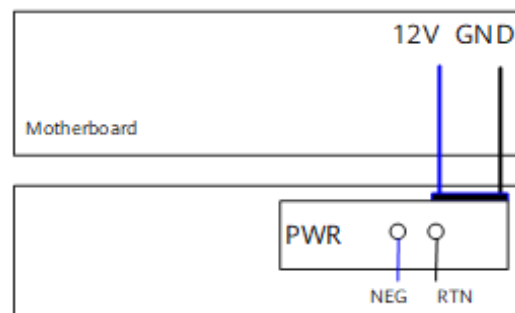
The S5720-32X-EI-DC has the same types of indicators as the S5720-32X-EI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-32X-EI-DC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

Figure 4-358 shows the power supply mode of a single DC power module. The built-in DC power module (PWR) receives DC power from an external power source and provides a 12 V output to the chassis.

Figure 4-358 Power supply by a single DC power module



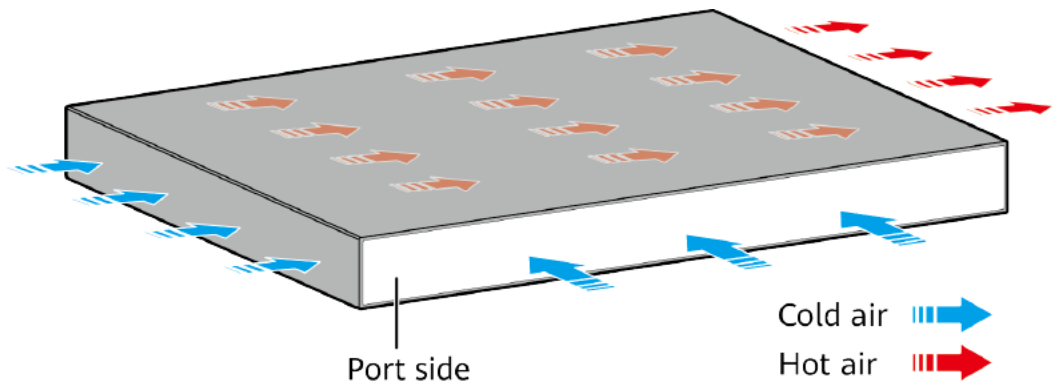
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

Heat Dissipation

The S5720-32X-EI-DC has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-893 lists technical specifications of the S5720-32X-EI-DC.

Table 4-893 Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	80.32 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 224.9 mm (1.72 in. x 17.4 in. x 8.85 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 237.3 mm (1.72 in. x 17.4 in. x 9.34 in.)
Weight (with packaging)	4.3 kg (9.48 lb)
Stack ports	<ul style="list-style-type: none"> Two fixed QSFP+ stack ports on the rear card
RTC	Supported
RPS	Supported

Item	Description
PoE	Not supported
Rated voltage range	-48 V DC to -60 V DC
Maximum voltage range	-36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	51.9 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	40.85 W
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 49.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02350NHC

4.17.18 S5720-32X-EI-24S-AC

Version Mapping

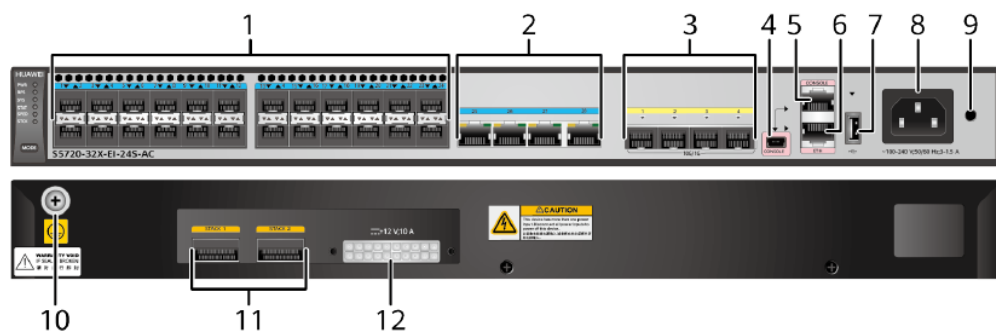
Table 4-894 lists the mapping between the S5720-32X-EI-24S-AC chassis and software versions.

Table 4-894 Version mapping

Series		Model	Software Version
S5720-EI	S5720-X-EI	S5720-32X-EI-24S-AC	V200R007C00 to V200R019C10 versions NOTE This model does not match V200R007C10.

Appearance and Structure

Figure 4-359 S5720-32X-EI-24S-AC appearance



1	<p>Twenty-four 100/1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules 	2	<p>Four 10/100/1000BASE-T ports</p>
3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules 	4	<p>One mini USB port</p>

	<ul style="list-style-type: none"> • 9.15 Copper Cable • 9.15 Copper Cable • 9.3 Optical Fiber 		
5	<p>One console port</p> <p>NOTE It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>	6	One ETH management port
7	One USB port	8	<p>AC socket</p> <p>NOTE It is used with an 9.8 AC Power Cable.</p>
9	<p>Jack for AC power cable locking strap</p> <p>NOTE The AC power cable locking strap is not delivered with the switch.</p>	10	<p>Ground screw</p> <p>NOTE It is used with a 9.1 Ground Cable.</p>
11	<p>Two QSFP+ stack optical ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • 10.16 40GE QSFP+ Optical Modules (only QSFP-40G-SR4 and QSFP-40G-iSR supported) • 9.15 Copper Cable 	12	<p>RPS socket</p> <p>NOTE It is used with an 9.12 RPS Cable, which is not hot swappable.</p>

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-895 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-895 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. Table 4-896 describes the attributes of a 100/1000BASE-X port.

Table 4-896 Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-897 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-897 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

QSFP+ stack optical port

QSFP+ stack optical ports can only be used for stack connection. Table 4-898 describes the attributes of a QSFP+ stack optical port.

Table 4-898 Attributes of a QSFP+ stack optical port

Attribute	Description
Connector type	MPO
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-899.

Table 4-899 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-900 describes the attributes of an ETH management port.

Table 4-900 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port of the S5720-EI does not support USB 1.1 and can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

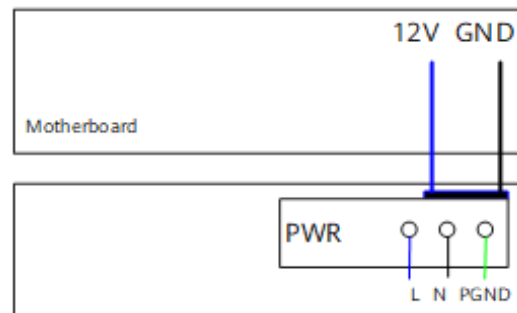
The S5720-32X-EI-24S-AC has 24 downlink optical port indicators, whereas the S5720-32X-EI-AC has 24 downlink electrical port indicators. Symbols and meanings of other indicators on the two switch models are the same. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-32X-EI-24S-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

Figure 4-360 shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 4-360 Power supply mode of a built-in AC power module



L: live
wire

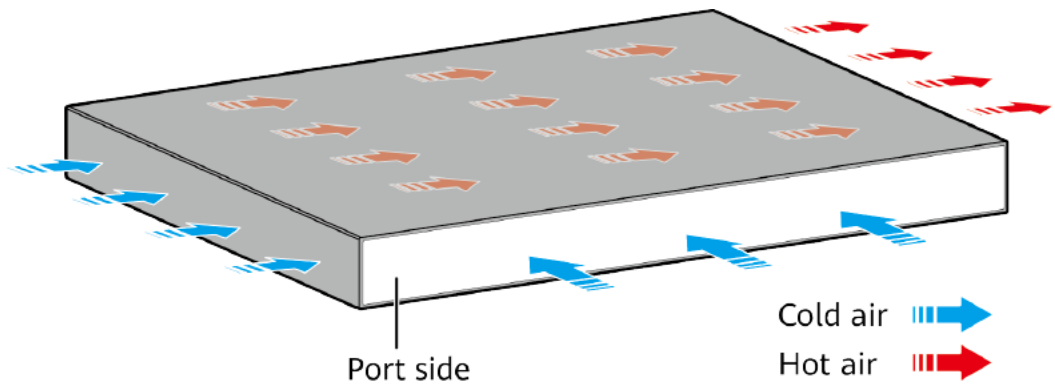
N: neutral
wire

PGND: protection
ground wire

GND: 12 V reference
ground

Heat Dissipation

The S5720-32X-EI-24S-AC has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-901 lists technical specifications of the S5720-32X-EI-24S-AC.

Table 4-901 Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	82.54 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 224.9 mm (1.72 in. x 17.4 in. x 8.85 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 237.3 mm (1.72 in. x 17.4 in. x 9.34 in.)
Weight (with packaging)	4.5 kg (9.92 lb)
Stack ports	<ul style="list-style-type: none"> Two fixed QSFP+ stack ports on the rear card
RTC	Supported
RPS	Supported

Item	Description
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	58.9 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	55.46 W
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 49.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02359579

4.17.19 S5720-32X-EI-24S-DC

Version Mapping

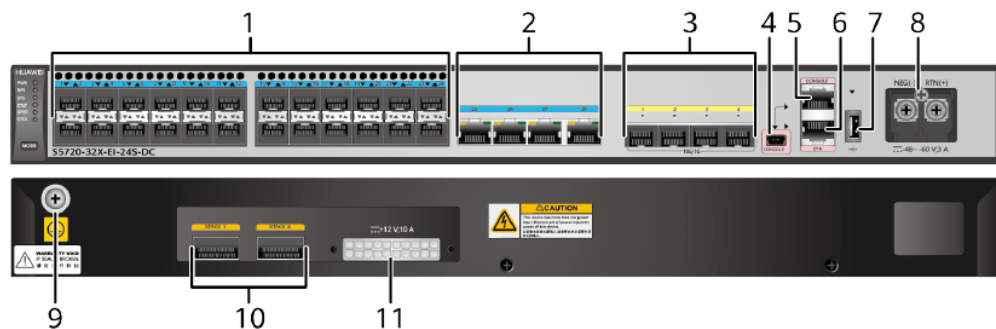
Table 4-902 lists the mapping between the S5720-32X-EI-24S-DC chassis and software versions.

Table 4-902 Version mapping

Series		Model	Software Version
S5720-EI	S5720-X-EI	S5720-32X-EI-24S-DC	V200R009C00 to V200R019C10 versions

Appearance and Structure

Figure 4-361 S5720-32X-EI-24S-DC appearance



1	<p>Twenty-four 100/1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules 	2	<p>Four 10/100/1000BASE-T ports</p>
3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.15 Copper Cable • 9.3 Optical Fiber 	4	<p>One mini USB port</p>

5	One console port NOTE It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.	6	One ETH management port
7	One USB port	8	DC power terminal NOTE It is used together with a 9.5 DC Power Cable (with OT and Cord End Terminals).
9	Ground screw NOTE It is used with a 9.1 Ground Cable.	10	Two QSFP+ stack optical ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.16 40GE QSFP+ Optical Modules (only QSFP-40G-SR4 and QSFP-40G-iSR supported) • 9.15 Copper Cable
11	RPS socket NOTE It is used with an 9.12 RPS Cable, which is not hot swappable.	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-903 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-903 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. Table 4-904 describes the attributes of a 100/1000BASE-X port.

Table 4-904 Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-905 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-905 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

QSFP+ stack optical port

QSFP+ stack optical ports can only be used for stack connection. Table 4-906 describes the attributes of a QSFP+ stack optical port.

Table 4-906 Attributes of a QSFP+ stack optical port

Attribute	Description
Connector type	MPO
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-907.

Table 4-907 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-908 describes the attributes of an ETH management port.

Table 4-908 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port of the S5720-EI does not support USB 1.1 and can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

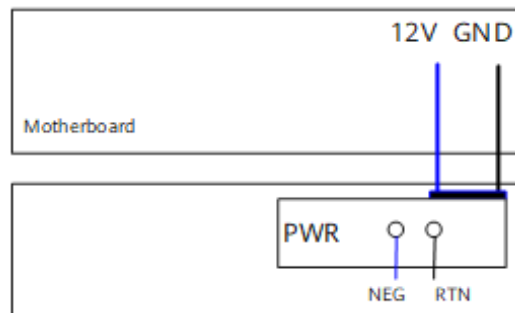
The S5720-32X-EI-24S-DC has 24 downlink optical port indicators, whereas the S5720-32X-EI-AC has 24 downlink electrical port indicators. Symbols and meanings of other indicators on the two switch models are the same. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-32X-EI-24S-DC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

Figure 4-362 shows the power supply mode of a single DC power module. The built-in DC power module (PWR) receives DC power from an external power source and provides a 12 V output to the chassis.

Figure 4-362 Power supply by a single DC power module



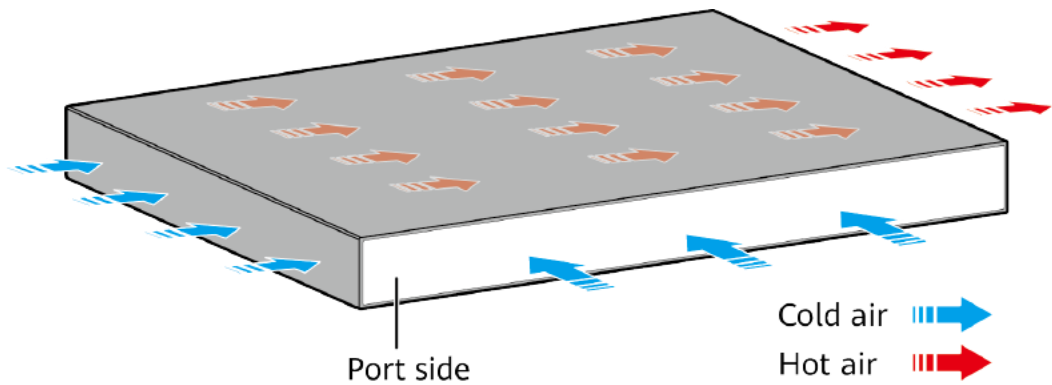
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

Heat Dissipation

The S5720-32X-EI-24S-DC has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-909 lists technical specifications of the S5720-32X-EI-24S-DC.

Table 4-909 Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	82.54 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 224.9 mm (1.72 in. x 17.4 in. x 8.85 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 237.3 mm (1.72 in. x 17.4 in. x 9.34 in.)
Weight (with packaging)	4.2 kg (9.26 lb)
Stack ports	<ul style="list-style-type: none"> Two fixed QSFP+ stack ports on the rear card
RTC	Supported
RPS	Supported

Item	Description
PoE	Not supported
Rated voltage range	-48 V DC to -60 V DC
Maximum voltage range	-36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	58.9 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	55.46 W
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 49.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02350NHE

4.17.20 S5720-50X-EI-AC

Version Mapping

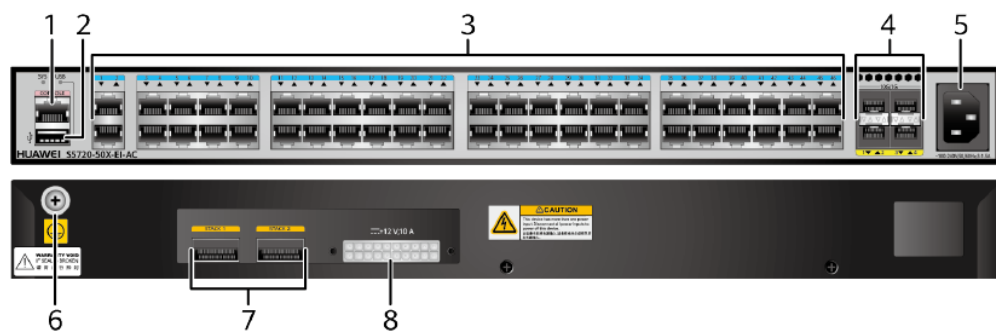
Table 4-910 lists the mapping between the S5720-50X-EI-AC chassis and software versions.

Table 4-910 Version mapping

Series		Model	Software Version
S5720-EI	S5720-X-EI	S5720-50X-EI-AC	V200R007C00 to V200R019C10 versions NOTE This model does not match V200R007C10.

Appearance and Structure

Figure 4-363 S5720-50X-EI-AC appearance



1	One console port NOTE It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.	2	One USB port
3	Forty-six 10/100/1000BASE-T ports	4	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.15 Copper Cable • 9.3 Optical Fiber

5	AC socket NOTE It is used with an 9.8 AC Power Cable.	6	Ground screw NOTE It is used with a 9.1 Ground Cable.
7	Two QSFP+ stack optical ports Applicable modules and cables: <ul style="list-style-type: none"> 10.16 40GE QSFP+ Optical Modules (only QSFP-40G-SR4 and QSFP-40G-iSR supported) 9.15 Copper Cable 	8	RPS socket NOTE It is used with an 9.12 RPS Cable, which is not hot swappable.

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-911 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-911 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-912 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-912 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

QSFP+ stack optical port

QSFP+ stack optical ports can only be used for stack connection. Table 4-913 describes the attributes of a QSFP+ stack optical port.

Table 4-913 Attributes of a QSFP+ stack optical port

Attribute	Description
Connector type	MPO
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-914.

Table 4-914 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port of the S5720-EI does not support USB 1.1 and can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

Figure 4-364 Indicators on the S5720-50X-EI-AC

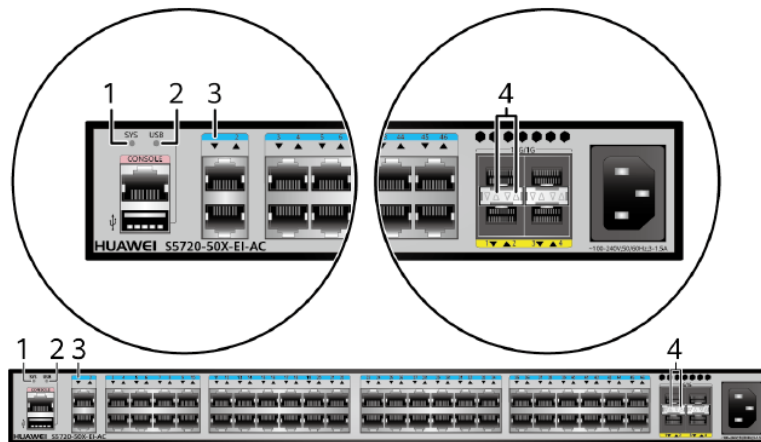


Table 4-915 Description of indicators on the switch

No.	Indicator/Butt on	Name	Col or	Status	Description
1	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or temperature alarm has been generated.
2	-	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> No USB flash drive is connected to the switch. The USB port is damaged. The indicator is damaged. The USB flash drive does not have any configuration file and cannot be used for deployment. The switch has been upgraded using the USB flash drive and is restarting.
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from the USB flash

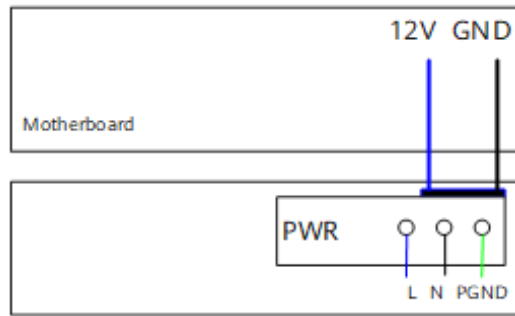
No.	Indicator/Button	Name	Color	Status	Description
			en	ng	drive.
			Yell ow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinki ng	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.
3	-	Service port indicator (one indicator for each port)	-	Off	The port is not connected or has been shut down.
			Gre en	Steady on	The port is connected.
			Gre en	Blinki ng	The port is sending or receiving data.
4	-	Service port indicator (two indicators for each port)	-	Off	The port is not connected or has been shut down.
			Gre en	Steady on	The port is connected.
			Yell ow	Blinki ng	The port is sending or receiving data.

Power Supply Configuration

The S5720-50X-EI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

Figure 4-365 shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 4-365 Power supply mode of a built-in AC power module



L: live wire

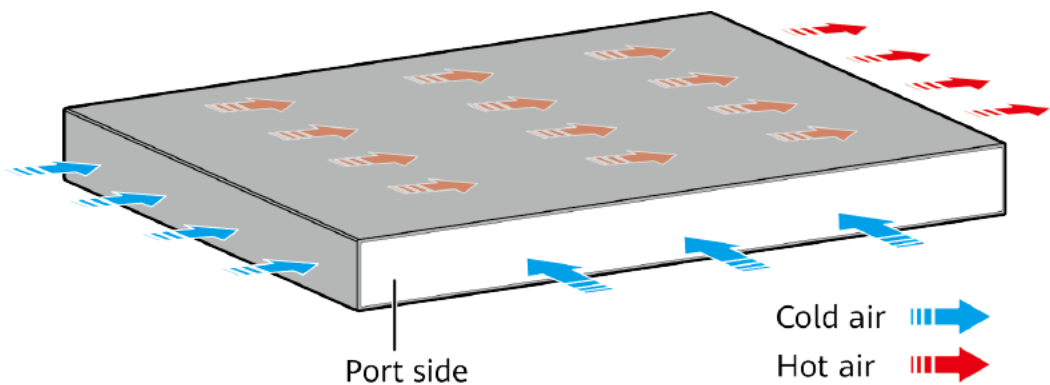
N: neutral wire

PGND: protection ground

GND: 12 V reference ground

Heat Dissipation

The S5720-50X-EI-AC has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-916 lists technical specifications of the S5720-50X-EI-AC.

Table 4-916 Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	74.31 years
Mean time to repair	2 hours

Item	Description
(MTTR)	
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 224.9 mm (1.72 in. x 17.4 in. x 8.85 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 229.9 mm (1.72 in. x 17.4 in. x 9.05 in.)
Weight (with packaging)	4.9 kg (10.81 lb)
Stack ports	<ul style="list-style-type: none">Two fixed QSFP+ stack ports on the rear card
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	55.3 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">Tested according to ATIS standardEEE enabledNo PoE power consumption	47.45 W
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)

Item	Description
Noise under normal temperature (27 °C, sound power)	< 49.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02359592

4.17.21 S5720-50X-EI-DC

Version Mapping

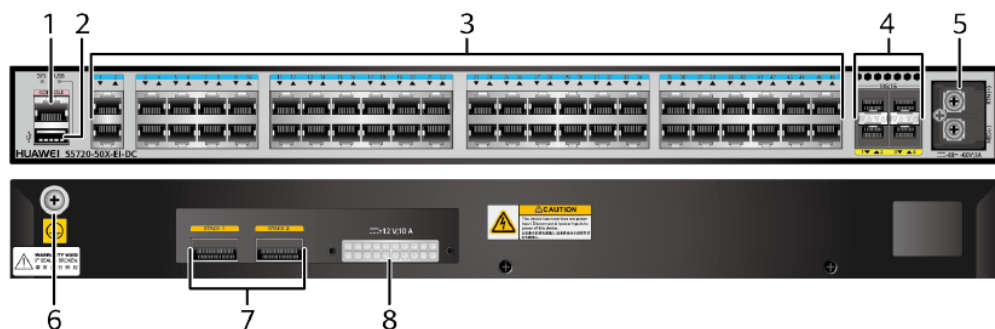
Table 4-917 lists the mapping between the S5720-50X-EI-DC chassis and software versions.

Table 4-917 Version mapping

Series		Model	Software Version
S5720-EI	S5720-X-E I	S5720-50X-EI-DC	V200R009C00 to V200R019C10 versions

Appearance and Structure

Figure 4-366 S5720-50X-EI-DC appearance



1	One console port NOTE It is used with a console cable. The console cable is not delivered with the switch and	2	One USB port
---	--	---	--------------

	needs to be separately purchased if needed.		
3	Forty-six 10/100/1000BASE-T ports	4	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.15 Copper Cable • 9.3 Optical Fiber
5	<p>DC power terminal</p> <p>NOTE It is used together with a 9.5 DC Power Cable (with OT and Cord End Terminals).</p>	6	<p>Ground screw</p> <p>NOTE It is used with a 9.1 Ground Cable.</p>
7	<p>Two QSFP+ stack optical ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • 10.16 40GE QSFP+ Optical Modules (only QSFP-40G-SR4 and QSFP-40G-iSR supported) • 9.15 Copper Cable 	8	<p>RPS socket</p> <p>NOTE It is used with an 9.12 RPS Cable, which is not hot swappable.</p>

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-918 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-918 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission	100 m

Attribute	Description
distance	

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-919 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-919 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

QSFP+ stack optical port

QSFP+ stack optical ports can only be used for stack connection. Table 4-920 describes the attributes of a QSFP+ stack optical port.

Table 4-920 Attributes of a QSFP+ stack optical port

Attribute	Description
Connector type	MPO
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-921.

Table 4-921 Attributes of a console port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port of the S5720-EI does not support USB 1.1 and can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

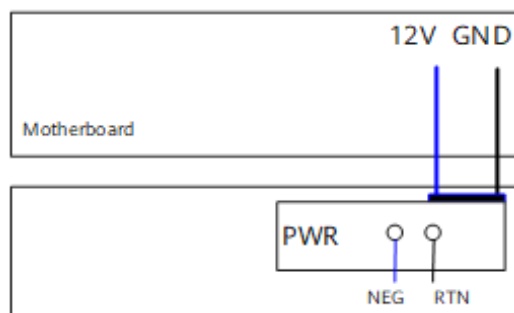
The S5720-50X-EI-DC has the same types of indicators as the S5720-50X-EI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-50X-EI-DC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

Figure 4-367 shows the power supply mode of a single DC power module. The built-in DC power module (PWR) receives DC power from an external power source and provides a 12 V output to the chassis.

Figure 4-367 Power supply by a single DC power module



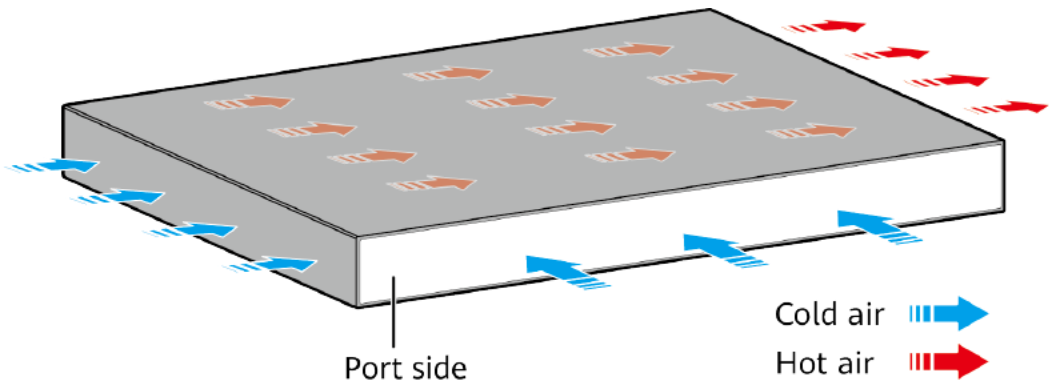
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

Heat Dissipation

The S5720-50X-EI-DC has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-922 lists technical specifications of the S5720-50X-EI-DC.

Table 4-922 Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	74.31 years
Mean time to repair (MTTR)	2
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 224.9 mm (1.72 in. x 17.4 in. x 8.85 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 229.9 mm (1.72 in. x 17.4 in. x 9.05 in.)
Weight (with packaging)	4.7 kg (10.36 lb)

Item	Description
Stack ports	<ul style="list-style-type: none"> Two fixed QSFP+ stack ports on the rear card
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	-48 V DC to -60 V DC
Maximum voltage range	-36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	55.3 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> Tested according to ATIS standard EEE enabled No PoE power consumption 	47.45 W
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 49.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none"> EMC certification Safety certification Manufacturing certification
Part number	02350NHD

4.17.22 S5720-50X-EI-46S-AC

Version Mapping

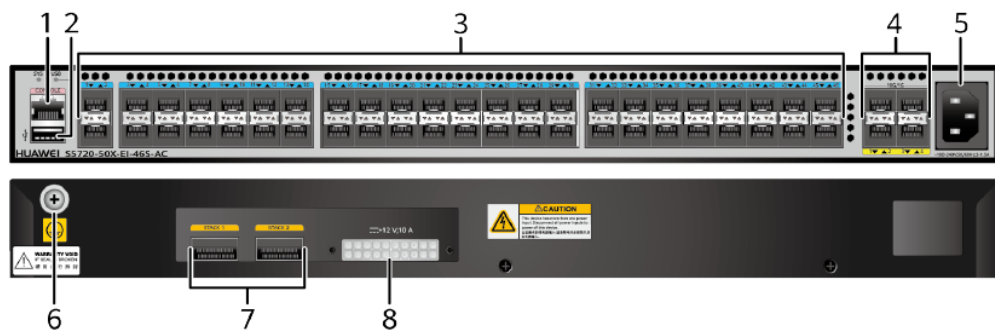
Table 4-923 lists the mapping between the S5720-50X-EI-46S-AC chassis and software versions.

Table 4-923 Version mapping

Series		Model	Software Version
S5720-EI	S5720-X-EI	S5720-50X-EI-46S-AC	V200R007C00 to V200R019C10 versions NOTE This model does not match V200R007C10.

Appearance and Structure

Figure 4-368 S5720-50X-EI-46S-AC appearance



1	One console port NOTE It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.	2	One USB port
3	Forty-six 100/1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules 	4	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical

			<p>Modules</p> <ul style="list-style-type: none"> • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.15 Copper Cable • 9.3 Optical Fiber
5	<p>AC socket</p> <p>NOTE It is used with an 9.8 AC Power Cable.</p>	6	<p>Ground screw</p> <p>NOTE It is used with a 9.1 Ground Cable.</p>
7	<p>Two QSFP+ stack optical ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • 10.16 40GE QSFP+ Optical Modules (only QSFP-40G-SR4 and QSFP-40G-iSR supported) • 9.15 Copper Cable 	8	<p>RPS socket</p> <p>NOTE It is used with an 9.12 RPS Cable, which is not hot swappable.</p>

Port Description

100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. Table 4-924 describes the attributes of a 100/1000BASE-X port.

Table 4-924 Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-925 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-925 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port	Depend on the optical module used

Attribute	Description
attributes	
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

QSFP+ stack optical port

QSFP+ stack optical ports can only be used for stack connection. Table 4-926 describes the attributes of a QSFP+ stack optical port.

Table 4-926 Attributes of a QSFP+ stack optical port

Attribute	Description
Connector type	MPO
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-927.

Table 4-927 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port of the S5720-EI does not support USB 1.1 and can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

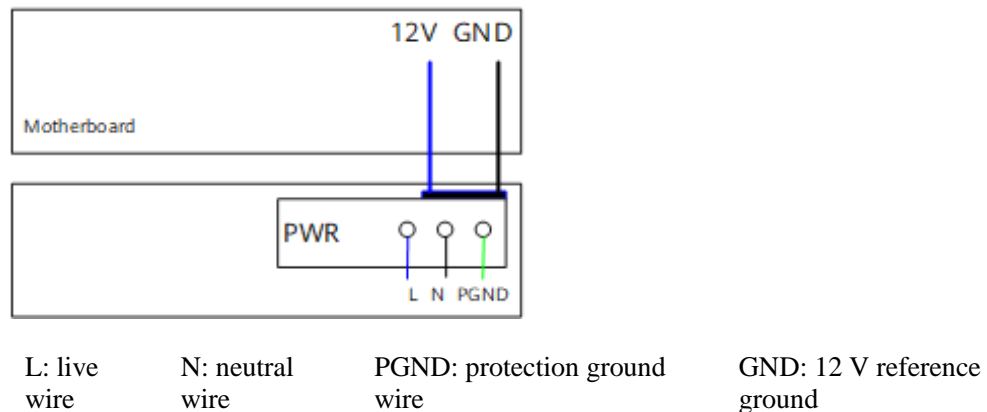
The S5720-50X-EI-46S-AC has 46 downlink optical port indicators, whereas the S5720-50X-EI-AC has 46 downlink electrical port indicators. Symbols and meanings of other indicators on the two switch models are the same. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-50X-EI-46S-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

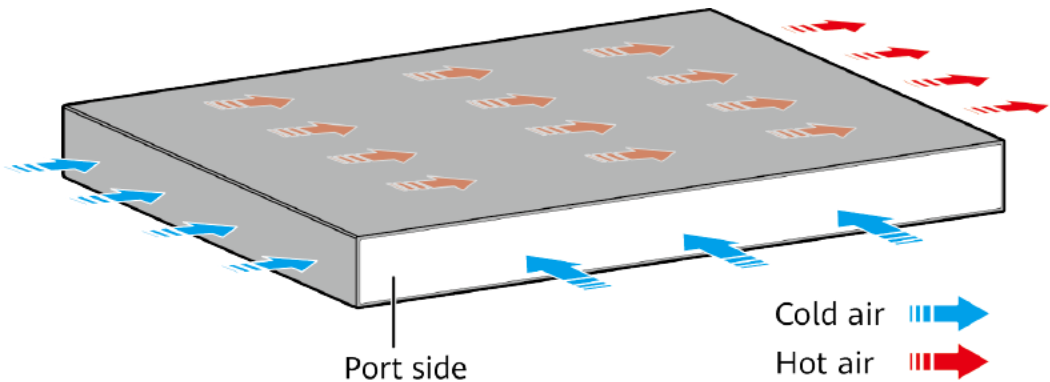
Figure 4-369 shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 4-369 Power supply mode of a built-in AC power module



Heat Dissipation

The S5720-50X-EI-46S-AC has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



 **NOTE**

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-928 lists technical specifications of the S5720-50X-EI-46S-AC.

Table 4-928 Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	67.59 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	NA
Power supply surge protection	±6 kV in differential mode, ±6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">• Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 224.9 mm (1.72 in. x 17.4 in. x 8.85 in.)• Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 229.9 mm (1.72 in. x 17.4 in. x 9.05 in.)
Weight (with packaging)	5 kg (11.03 lb)
Stack ports	<ul style="list-style-type: none">• Two fixed QSFP+ stack ports on the rear card
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	81.5 W
Typical power consumption (30%)	73.75 W

Item	Description
of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 51.1 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02359583

4.17.23 S5720-50X-EI-46S-DC

Version Mapping

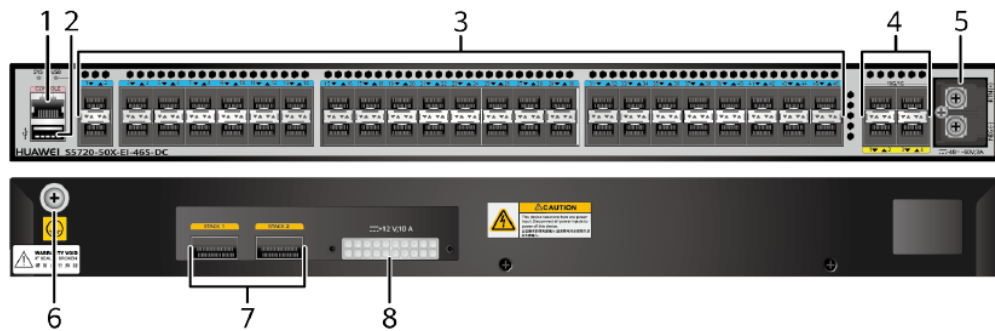
Table 4-929 lists the mapping between the S5720-50X-EI-46S-DC chassis and software versions.

Table 4-929 Version mapping

Series		Model	Software Version
S5720-EI	S5720-X-EI	S5720-50X-EI-46S-DC	V200R009C00 to V200R019C10 versions

Appearance and Structure

Figure 4-370 S5720-50X-EI-46S-DC appearance



1	<p>One console port</p> <p>NOTE It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>	2	<p>One USB port</p>
3	<p>Forty-six 100/1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules 	4	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.15 Copper Cable • 9.3 Optical Fiber
5	<p>DC power terminal</p> <p>NOTE It is used together with a 9.5 DC Power Cable (with OT and Cord End Terminals).</p>	6	<p>Ground screw</p> <p>NOTE It is used with a 9.1 Ground Cable.</p>
7	<p>Two QSFP+ stack optical ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • 10.16 40GE QSFP+ Optical Modules (only QSFP-40G-SR4 and QSFP-40G-iSR supported) 	8	<p>RPS socket</p> <p>NOTE It is used with an 9.12 RPS Cable, which is not hot swappable.</p>

	<ul style="list-style-type: none">9.15 Copper Cable		
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Port Description

100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. Table 4-930 describes the attributes of a 100/1000BASE-X port.

Table 4-930 Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-931 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-931 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

QSFP+ stack optical port

QSFP+ stack optical ports can only be used for stack connection. Table 4-932 describes the attributes of a QSFP+ stack optical port.

Table 4-932 Attributes of a QSFP+ stack optical port

Attribute	Description
Connector type	MPO

Attribute	Description
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-933.

Table 4-933 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port of the S5720-EI does not support USB 1.1 and can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

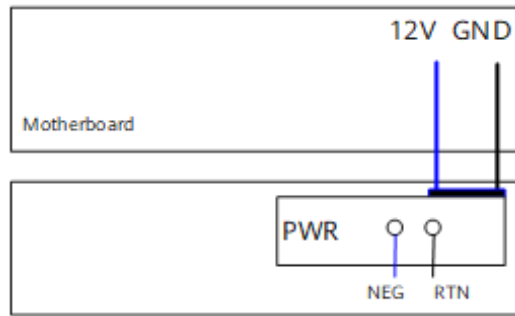
The S5720-50X-EI-46S-DC has 46 downlink optical port indicators, whereas the S5720-50X-EI-AC has 46 downlink electrical port indicators. Symbols and meanings of other indicators on the two switch models are the same. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-50X-EI-46S-DC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

Figure 4-371 shows the power supply mode of a single DC power module. The built-in DC power module (PWR) receives DC power from an external power source and provides a 12 V output to the chassis.

Figure 4-371 Power supply by a single DC power module



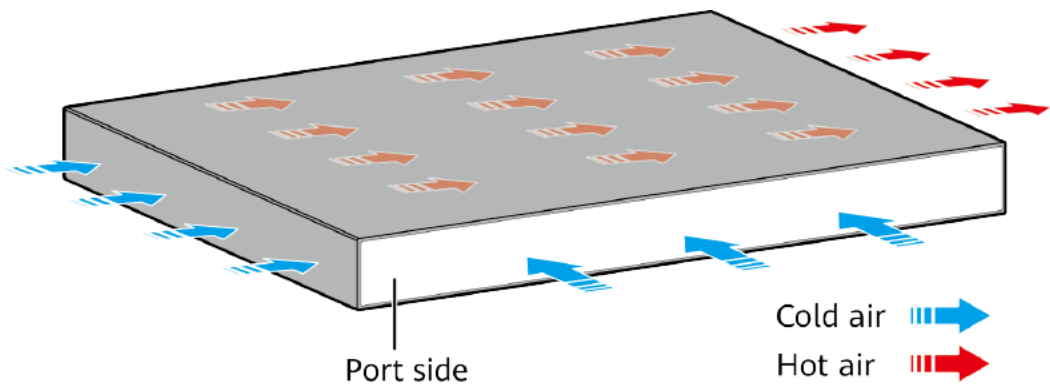
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

Heat Dissipation

The S5720-50X-EI-46S-DC has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-934 lists technical specifications of the S5720-50X-EI-46S-DC.

Table 4-934 Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	67.59 years
Mean time to repair (MTTR)	2 hours

Item	Description
Availability	> 0.99999
Service port surge protection	NA
Power supply surge protection	±1 kV in differential mode, ±2 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 224.9 mm (1.72 in. x 17.4 in. x 8.85 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 237.3 mm (1.72 in. x 17.4 in. x 9.34 in.)
Weight (with packaging)	4.8 kg (10.59 lb)
Stack ports	<ul style="list-style-type: none">Two fixed QSFP+ stack ports on the rear card
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	-48 V DC to -60 V DC
Maximum voltage range	-36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	81.5 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">Tested according to ATIS standardEEE enabledNo PoE power consumption	73.75 W
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C,	< 51.1 dB(A)

Item	Description
sound power)	
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02350NHF

4.17.24 S5720-52X-EI-AC

Version Mapping

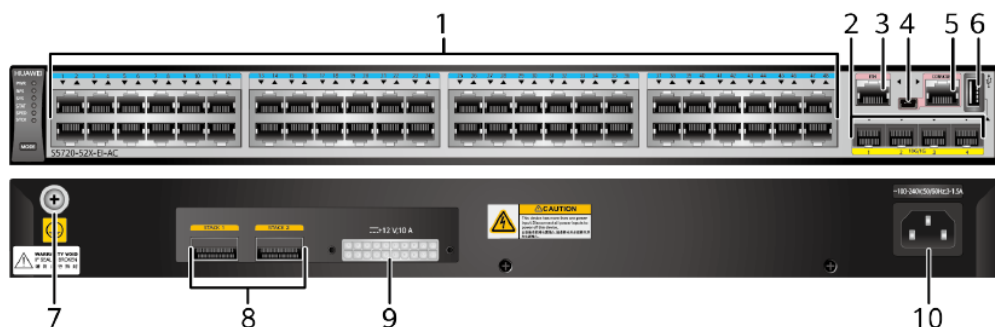
Table 4-935 lists the mapping between the S5720-52X-EI-AC chassis and software versions.

Table 4-935 Version mapping

Series		Model	Software Version
S5720-EI	S5720-X-EI	S5720-52X-EI-AC	V200R007C00 to V200R019C10 versions NOTE This model does not match V200R007C10.

Appearance and Structure

Figure 4-372 S5720-52X-EI-AC appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables:
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			<ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.15 Copper Cable • 9.3 Optical Fiber
3	One ETH management port	4	One mini USB port
5	One console port NOTE It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.	6	One USB port
7	Ground screw NOTE It is used with a 9.1 Ground Cable.	8	Two QSFP+ stack optical ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.16 40GE QSFP+ Optical Modules (only QSFP-40G-SR4 and QSFP-40G-iSR supported) • 9.15 Copper Cable
9	RPS socket NOTE It is used with an 9.12 RPS Cable, which is not hot swappable.	10	AC socket NOTE It is used with an 9.8 AC Power Cable.

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-936 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-936 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab

Attribute	Description
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-937 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-937 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

QSFP+ stack optical port

QSFP+ stack optical ports can only be used for stack connection. Table 4-938 describes the attributes of a QSFP+ stack optical port.

Table 4-938 Attributes of a QSFP+ stack optical port

Attribute	Description
Connector type	MPO
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-939.

Table 4-939 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-940 describes the attributes of an ETH management port.

Table 4-940 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port of the S5720-EI does not support USB 1.1 and can only connect to a USB flash drive that complies with USB 2.0.

 **NOTE**

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

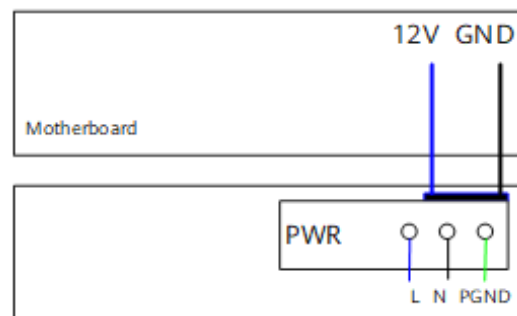
The S5720-52X-EI-AC has the same types of indicators as the S5720-32X-EI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-52X-EI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

Figure 4-373 shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 4-373 Power supply mode of a built-in AC power module



L: live wire

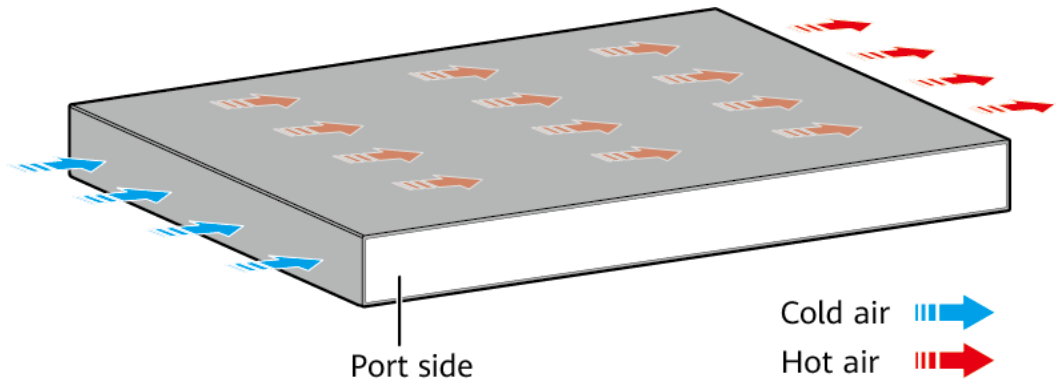
N: neutral wire

PGND: protection ground wire

GND: 12 V reference ground

Heat Dissipation

The S5720-52X-EI-AC has a built-in fan for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-941 lists technical specifications of the S5720-52X-EI-AC.

Table 4-941 Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	73.12 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 224.9 mm (1.72 in. x 17.4 in. x 8.85 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 237.3 mm (1.72 in. x 17.4 in. x 9.34 in.)
Weight (with packaging)	4.7 kg (10.36 lb)
Stack ports	<ul style="list-style-type: none"> Two fixed QSFP+ stack ports on the rear card
RTC	Supported
RPS	Supported

Item	Description
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	61.5 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	52.25 W
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 49.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02359589

4.17.25 S5720-32P-EI-AC

Version Mapping

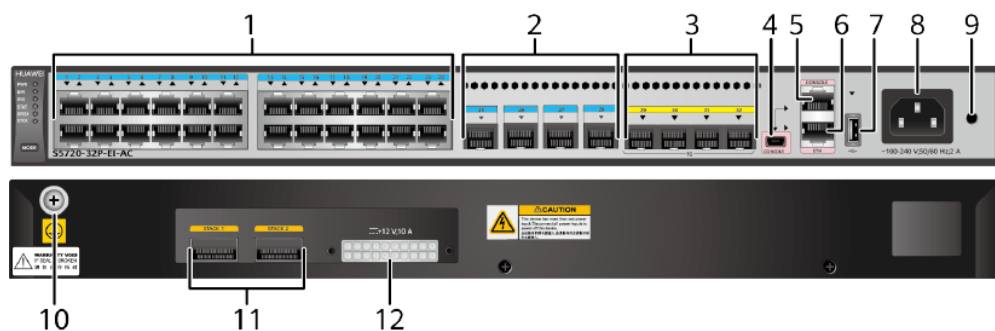
Table 4-942 lists the mapping between the S5720-32P-EI-AC chassis and software versions.

Table 4-942 Version mapping

Series		Model	Software Version
S5720-EI	S5720-P-E I	S5720-32P-EI-AC	V200R007C00 to V200R019C10 versions NOTE This model does not match V200R007C10.

Appearance and Structure

Figure 4-374 S5720-32P-EI-AC appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 100/1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules
3	Four 1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules 	4	One mini USB port
5	One console port NOTE It is used with a console cable. The console cable is not delivered with the switch and	6	One ETH management port

	needs to be separately purchased if needed.		
7	One USB port	8	AC socket NOTE It is used with an 9.8 AC Power Cable.
9	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.	10	Ground screw NOTE It is used with a 9.1 Ground Cable.
11	Two QSFP+ stack optical ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.16 40GE QSFP+ Optical Modules (only QSFP-40G-SR4 and QSFP-40G-iSR supported) • 9.15 Copper Cable 	12	RPS socket NOTE It is used with an 9.12 RPS Cable, which is not hot swappable.

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-943 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-943 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. Table 4-944 describes the attributes of a 100/1000BASE-X port.

Table 4-944 Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used

Attribute	Description
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

1000BASE-X port

A 1000BASE-X Ethernet optical port sends and receives service data at 1000 Mbit/s. Table 4-945 describes the attributes of a 1000BASE-X Ethernet optical port.

Table 4-945 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	1000 Mbit/s

QSFP+ stack optical port

QSFP+ stack optical ports can only be used for stack connection. Table 4-946 describes the attributes of a QSFP+ stack optical port.

Table 4-946 Attributes of a QSFP+ stack optical port

Attribute	Description
Connector type	MPO
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-947.

Table 4-947 Attributes of a console port

Attribute	Description
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Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-948 describes the attributes of an ETH management port.

Table 4-948 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port of the S5720-EI does not support USB 1.1 and can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

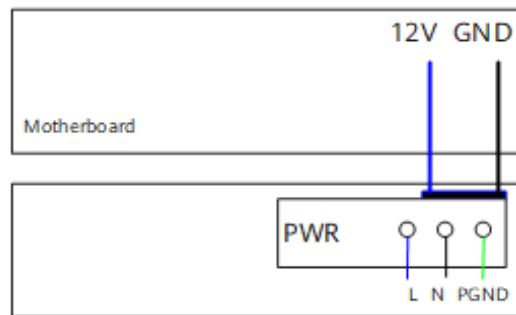
The S5720-32P-EI-AC has the same types of indicators as the S5720-32X-EI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-32P-EI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

Figure 4-375 shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 4-375 Power supply mode of a built-in AC power module



L: live wire

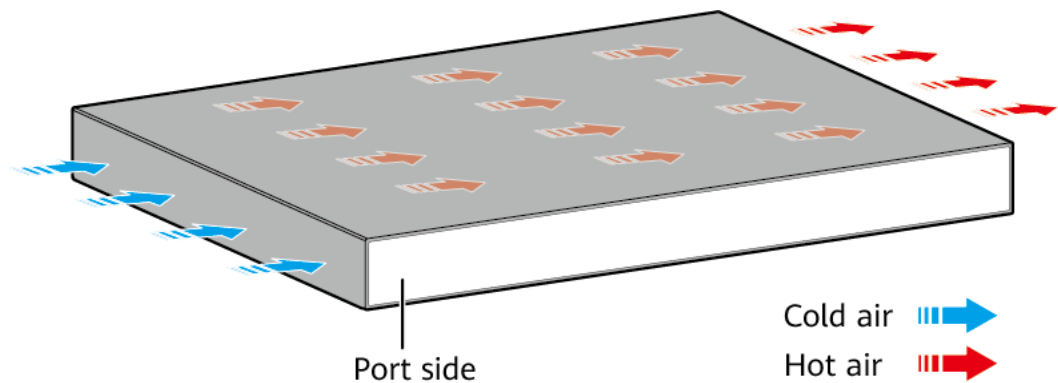
N: neutral wire

PGND: protection ground wire

GND: 12 V reference ground

Heat Dissipation

The S5720-32P-EI-AC has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



 **NOTE**

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-949 lists technical specifications of the S5720-32P-EI-AC.

Table 4-949 Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	80.32 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 224.9 mm (1.72 in. x 17.4 in. x 8.85 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 237.3 mm (1.72 in. x 17.4 in. x 9.34 in.)
Weight (with packaging)	4.5 kg (9.92 lb)
Stack ports	<ul style="list-style-type: none">Two fixed QSFP+ stack ports on the rear card
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	50.7 W
Typical power consumption (30%)	39.75 W

Item	Description
of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 49.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02350BDY

4.17.26 S5720-52P-EI-AC

Version Mapping

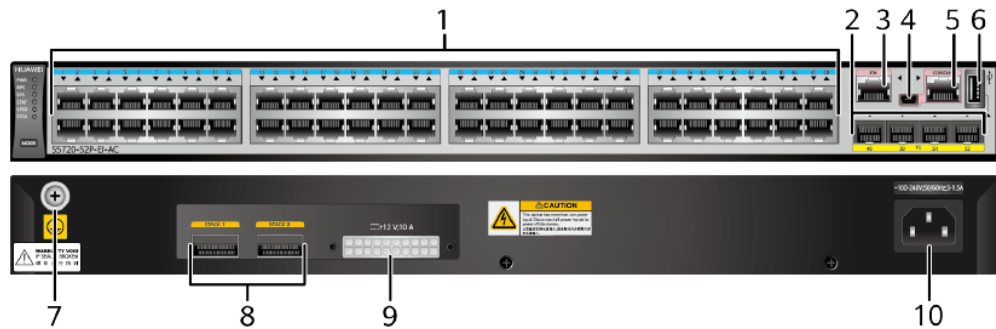
Table 4-950 lists the mapping between the S5720-52P-EI-AC chassis and software versions.

Table 4-950 Version mapping

Series		Model	Software Version
S5720-EI	S5720-P-EI	S5720-52P-EI-AC	V200R007C00 to V200R019C10 versions NOTE This model does not match V200R007C10.

Appearance and Structure

Figure 4-376 S5720-52P-EI-AC appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules
3	One ETH management port	4	One mini USB port
5	One console port NOTE It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.	6	One USB port
7	Ground screw NOTE It is used with a 9.1 Ground Cable.	8	Two QSFP+ stack optical ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.16 40GE QSFP+ Optical Modules (only QSFP-40G-SR4 and QSFP-40G-iSR supported) • 9.15 Copper Cable
9	RPS socket NOTE It is used with an 9.12 RPS Cable, which is not hot swappable.	10	AC socket NOTE It is used with an 9.8 AC Power Cable.

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-951 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-951 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

A 1000BASE-X Ethernet optical port sends and receives service data at 1000 Mbit/s. Table 4-952 describes the attributes of a 1000BASE-X Ethernet optical port.

Table 4-952 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	1000 Mbit/s

QSFP+ stack optical port

QSFP+ stack optical ports can only be used for stack connection. Table 4-953 describes the attributes of a QSFP+ stack optical port.

Table 4-953 Attributes of a QSFP+ stack optical port

Attribute	Description
Connector type	MPO
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-954.

Table 4-954 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-955 describes the attributes of an ETH management port.

Table 4-955 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port of the S5720-EI does not support USB 1.1 and can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

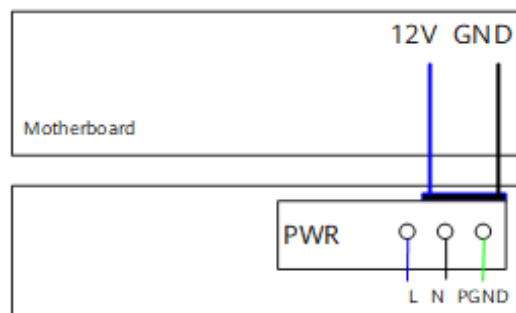
The S5720-52P-EI-AC has the same types of indicators as the S5720-32X-EI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-52P-EI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

Figure 4-377 shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 4-377 Power supply mode of a built-in AC power module



L: live wire

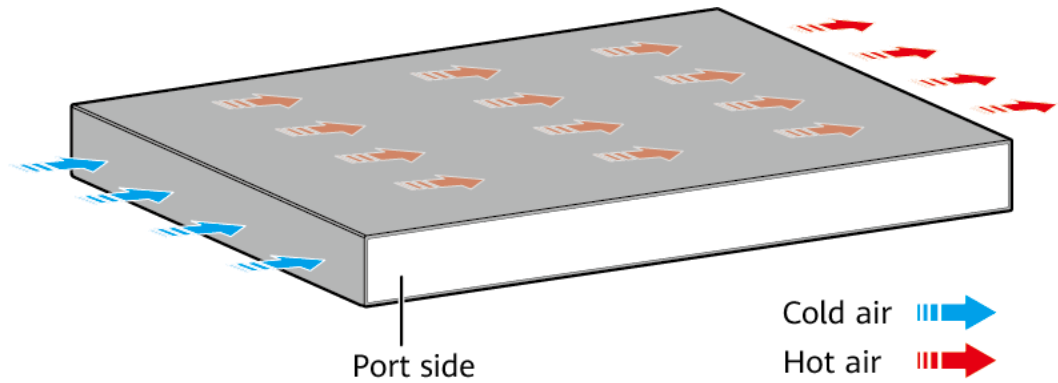
N: neutral wire

PGND: protection ground wire

GND: 12 V reference ground

Heat Dissipation

The S5720-52P-EI-AC has a built-in fan for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-956 lists technical specifications of the S5720-52P-EI-AC.

Table 4-956 Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	73.12 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 224.9 mm (1.72 in. x 17.4 in. x 8.85 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 237.3 mm (1.72 in. x 17.4 in. x 9.34 in.)
Weight (with packaging)	4.7 kg (10.36 lb)
Stack ports	<ul style="list-style-type: none"> Two fixed QSFP+ stack ports on the rear card
RTC	Supported
RPS	Supported

Item	Description
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	60.3 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	51.14 W
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 49.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02350BEC

4.18 S5730S-EI

4.18.1 S5730S-48C-EI-AC

Version Mapping

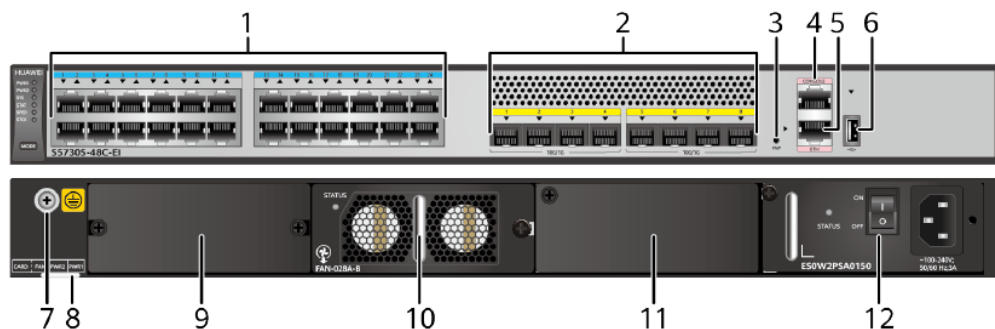
Table 4-957 lists the mapping between the S5730S-48C-EI-AC chassis and software versions.

Table 4-957 Version mapping

Series	Model	Software Version
S5730S-EI	S5730S-48C-EI-AC	V200R011C10 to V200R019C10 versions

Appearance and Structure

Figure 4-378 S5730S-48C-EI-AC appearance



1	Twenty-four 10/100/1000BASE-T ports	2	<p>Eight 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
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3	<p>One PNP button</p> <p>NOTICE</p> <p>Applicable in V200R012C00 and later versions:</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	4	<p>One console port</p> <p>NOTE</p> <p>It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>
5	<p>One ETH management port</p>	6	<p>One USB port</p>
7	<p>Ground screw</p> <p>NOTE</p> <p>It is used with a 9.1 Ground Cable.</p>	8	<p>ESN label</p> <p>NOTE</p> <p>You can draw it out to view the ESN and MAC address of the switch.</p>
9	<p>Rear card slot</p> <p>NOTE</p> <p>Card supported:</p> <ul style="list-style-type: none"> 8.17 ES5D21Q04Q01 (4-Port 40 Gig QSFP+ Rear Interface Card) 8.27 ES5D21VST000 (Dedicated Stack Card with 2*QSFP+ Interface) (applicable in V200R012C00 and later versions) 	10	<p>Fan slot</p> <p>NOTE</p> <p>Applicable fan module: 7.3 FAN-028A-B Fan Module</p>
11	<p>Power module slot 2</p> <p>NOTE</p> <p>Applicable power modules:</p> <ul style="list-style-type: none"> 5.2 LS5M100PWA00/ES0W2PSA0150 (150 W AC Power Module) 5.3 LS5M100PWD00/ES0W2PSD0150 (150 W DC Power Module) 	12	<p>Power module slot 1</p> <p>NOTE</p> <p>Applicable power modules:</p> <ul style="list-style-type: none"> 5.2 LS5M100PWA00/ES0W2PSA0150 (150 W AC Power Module) 5.3 LS5M100PWD00/ES0W2PSD0150 (150 W DC Power Module)

Interface Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-958 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-958 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab

Attribute	Description
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-959 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-959 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-960.

Table 4-960 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the

ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-961 describes the attributes of an ETH management port.

Table 4-961 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

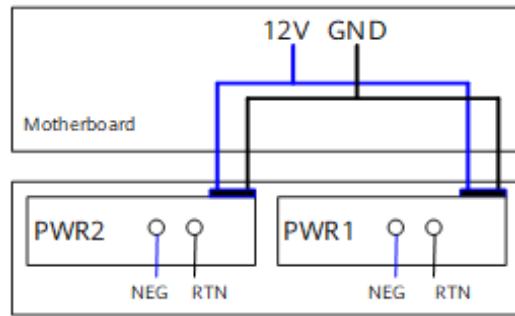
The S5730S-48C-EI-AC has similar indicators to those of the S5730S-68C-PWR-EI except that the S5730S-48C-EI-AC does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5730S-48C-EI-AC uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

Figure 4-379 shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

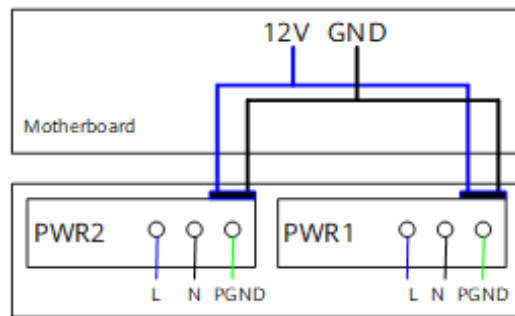
Figure 4-379 Power supply connections of dual DC power modules



NEG: negative wire RTN: positive wire GND: 12 V reference ground

Figure 4-380 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

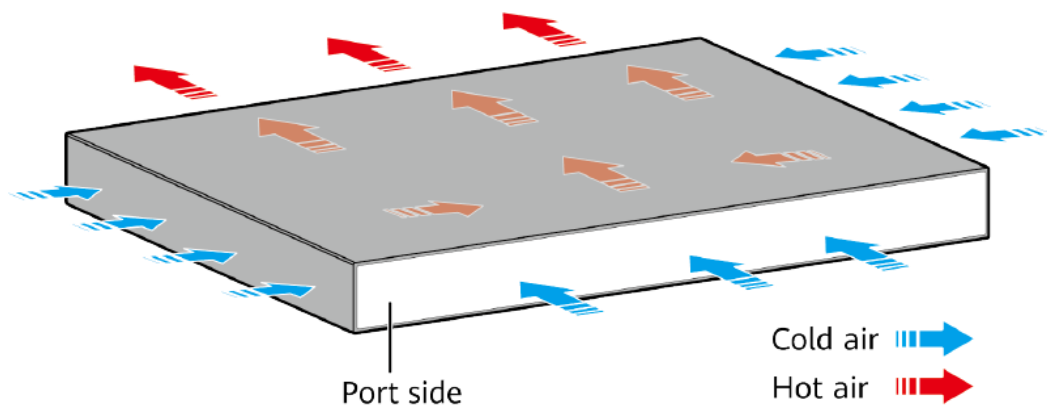
Figure 4-380 Power supply connections of dual AC power modules



L: Live wire N: Neutral wire PGND: Protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5730S-48C-EI-AC uses pluggable fan modules for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



 NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-962 lists technical specifications of the S5730S-48C-EI-AC.

Table 4-962 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	47.83 years
Mean time to repair (MTTR)	2 years
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	<ul style="list-style-type: none">Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common modeUsing DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 425.0 mm (1.75 in. x 17.4 in. x 16.73 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.3 mm (1.75 in. x 17.4 in. x 17.77 in.)
Weight (with packaging)	8.2 kg (18.08 lb)
Stack ports	Any 10GE SFP+ or 40GE QSFP+ ports Ports on the 2-port QSFP+ rear stack card
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power	62.4 W (without card)

Item	Description
consumption (100% throughput, full speed of fans)	
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	39.02 W (without card)
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The operating temperature of the switch is 0 °C to 40 °C (32 °F to 104 °F) when it uses QSFP+ optical modules with 10 km or longer transmission distances.
Short-term operating temperature	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 59.4 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none"> • AC power modules configured: 0-5000 m (0-16404 ft.) • DC power modules configured: 0-2000 m (0-6562 ft.)

Item	Description
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010790

4.18.2 S5730S-48C-PWR-EI

Version Mapping

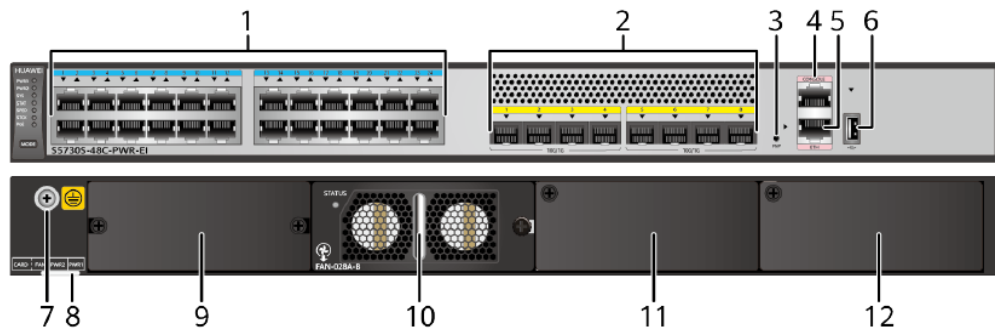
Table 4-963 lists the mapping between the S5730S-48C-PWR-EI chassis and software versions.

Table 4-963 Version mapping

Series	Model	Software Version
S5730S-EI	S5730S-48C-PWR-EI	V200R011C10 to V200R019C10 versions

Appearance and Structure

Figure 4-381 S5730S-48C-PWR-EI appearance



1	Twenty-four PoE+ 10/100/1000BASE-T ports	2	Eight 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules
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			<ul style="list-style-type: none"> • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	<p>One PNP button</p> <p>NOTICE Applicable in V200R012C00 and later versions: To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	4	<p>One console port</p> <p>NOTE It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>
5	One ETH management port	6	One USB port
7	<p>Ground screw</p> <p>NOTE It is used with a 9.1 Ground Cable.</p>	8	<p>ESN label</p> <p>NOTE You can draw it out to view the ESN and MAC address of the switch.</p>
9	<p>Rear card slot</p> <p>NOTE Card supported:</p> <ul style="list-style-type: none"> • 8.17 ES5D21Q04Q01 (4-Port 40 Gig QSFP+ Rear Interface Card) • 8.27 ES5D21VST000 (Dedicated Stack Card with 2*QSFP+ Interface) (applicable in V200R012C00 and later versions) 	10	<p>Fan slot</p> <p>NOTE Applicable fan module: 7.3 FAN-028A-B Fan Module</p>
11	<p>Power module slot 2</p> <p>NOTE Applicable power modules:</p> <ul style="list-style-type: none"> • 5.6 W0PSA5000/PAC-500WA-BE (500 W AC PoE Power Module) • 5.8 PDC-650WA-BE (650 W DC PoE Power Module) 	12	<p>Power module slot 1</p> <p>NOTE Applicable power modules:</p> <ul style="list-style-type: none"> • 5.6 W0PSA5000/PAC-500WA-BE (500 W AC PoE Power Module) • 5.8 PDC-650WA-BE (650 W DC PoE Power Module)

Interface Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-964 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-964 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-965 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-965 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-966.

Table 4-966 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-967 describes the attributes of an ETH management port.

Table 4-967 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5730S-48C-PWR-EI has the same types of indicators as the S5730S-68C-PWR-EI. For details, see [Indicator Description](#).

Power Supply Configuration

The S5730S-48C-PWR-EI is a PoE switch. It has two power module slots, each of which can have a 500 W or 650 W power module installed. A power module can provide 369.6 W of

PoE power for powered devices (PDs). A 500 W AC power module and a 650 W DC power module can be used together in the switch. Table 4-968 lists its power supply configurations.

Table 4-968 Power supply configurations

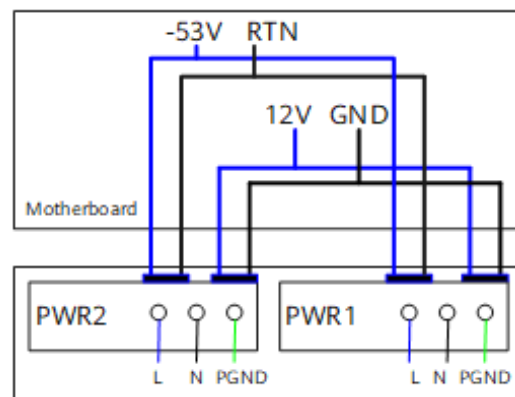
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
500 W or 650 W	–	369.6 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 12
500 W or 650 W	500 W or 650 W	739.2 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 24

NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

Figure 4-382 shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

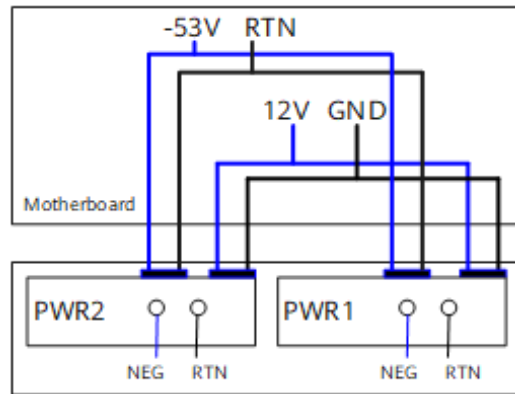
Figure 4-382 Power supply by dual AC PoE power modules



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground RTN: -53 V reference ground

Figure 4-383 shows the power supply connections of dual DC PoE power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V and -53 V output voltages, and the motherboard provides 12 V voltage for the entire device and -53 V voltage for the PDs.

Figure 4-383 Power supply connections of dual DC PoE power modules



NEG: negative wire

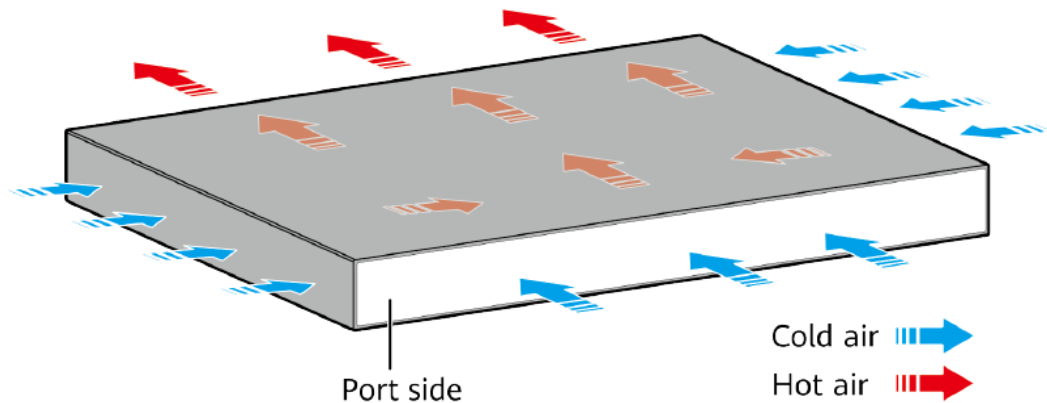
RTN: positive wire

GND: 12 V reference ground

RTN: -53 V reference ground

Heat Dissipation

The S5730S-48C-PWR-EI uses pluggable fan modules for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-969 lists technical specifications of the S5730S-48C-PWR-EI.

Table 4-969 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between	46.8 years

Item	Description
failures (MTBF)	
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	<ul style="list-style-type: none"> Using 500 W AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using 650 W DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 425.0 mm (1.75 in. x 17.4 in. x 16.73 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.3 mm (1.75 in. x 17.4 in. x 17.77 in.)
Weight (with packaging)	7.5 kg (16.53 lb)
Stack ports	Any 10GE SFP+ or 40GE QSFP+ ports Ports on the 2-port QSFP+ rear stack card
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> Not providing the PoE function: 83.2 W (without card) 100% PoE loads: 967 W (system power consumption: 227.8 W, PoE: 739.2 W, without card)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> Tested according to ATIS standard EEE enabled No PoE power consumption 	44.2 W (without card)

Item	Description
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The operating temperature of the switch is 0 °C to 40 °C (32 °F to 104 °F) when it uses QSFP+ optical modules with 10 km or longer transmission distances.
Short-term operating temperature	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">• The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 57.4 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010791

4.18.3 S5730S-68C-EI-AC

Version Mapping

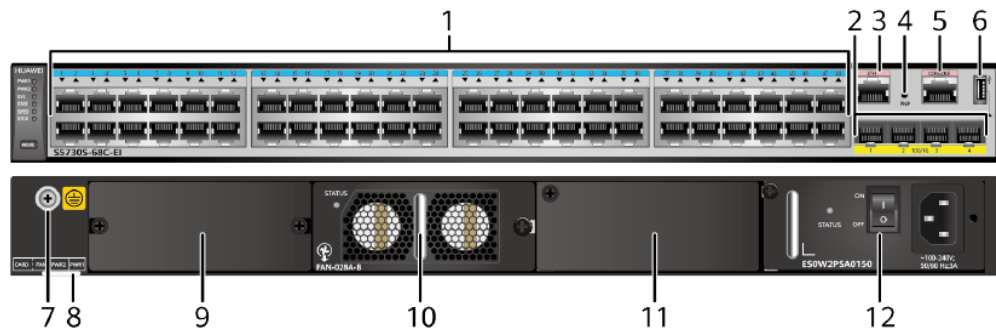
Table 4-970 lists the mapping between the S5730S-68C-EI-AC chassis and software versions.

Table 4-970 Version mapping

Series	Model	Software Version
S5730S-EI	S5730S-68C-EI-AC	V200R011C10 to V200R019C10 versions

Appearance and Structure

Figure 4-384 S5730S-68C-EI-AC appearance



1	Forty-eight 10/100/1000BASE-T ports	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	One ETH management port	4	<p>One PNP button</p> <p>NOTICE</p> <p>Applicable in V200R012C00 and later versions:</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service</p>

			interruption. Exercise caution when you press the PNP button.
5	One console port NOTE It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.	6	One USB port
7	Ground screw NOTE It is used with a 9.1 Ground Cable.	8	ESN label NOTE You can draw it out to view the ESN and MAC address of the switch.
9	Rear card slot NOTE Card supported: <ul style="list-style-type: none"> 8.17 ES5D21Q04Q01 (4-Port 40 Gig QSFP+ Rear Interface Card) 8.27 ES5D21VST000 (Dedicated Stack Card with 2*QSFP+ Interface) (applicable in V200R012C00 and later versions) 	10	Fan slot NOTE Applicable fan module: 7.3 FAN-028A-B Fan Module
11	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none"> 5.2 LS5M100PWA00/ES0W2PSA0150 (150 W AC Power Module) 5.3 LS5M100PWD00/ES0W2PSD0150 (150 W DC Power Module) 	12	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> 5.2 LS5M100PWA00/ES0W2PSA0150 (150 W AC Power Module) 5.3 LS5M100PWD00/ES0W2PSD0150 (150 W DC Power Module)

Interface Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-971 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-971 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-972 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-972 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-973.

Table 4-973 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-974 describes the attributes of an ETH management port.

Table 4-974 Attributes of an ETH management port

Attribute	Description
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Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

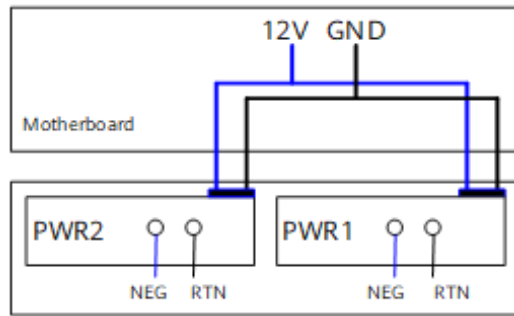
The S5730S-68C-EI-AC has similar indicators to those of the S5730S-68C-PWR-EI except that the S5730S-68C-EI-AC does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5730S-68C-EI-AC uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

Figure 4-385 shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

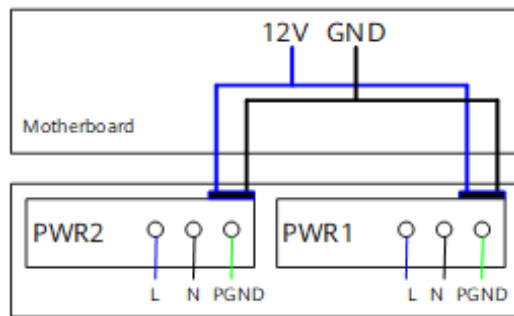
Figure 4-385 Power supply connections of dual DC power modules



NEG: negative wire RTN: positive wire GND: 12 V reference ground

Figure 4-386 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

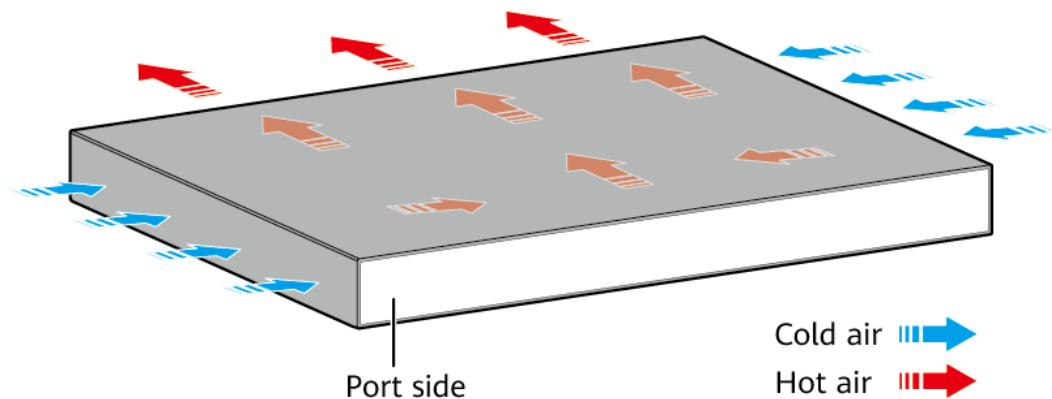
Figure 4-386 Power supply connections of dual AC power modules





L: Live wire N: Neutral wire PGND: Protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5730S-68C-EI-AC uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



Cold air 
Hot air 

 NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-975 lists technical specifications of the S5730S-68C-EI-AC.

Table 4-975 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	46.53 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	<ul style="list-style-type: none">Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common modeUsing DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 425.0 mm (1.75 in. x 17.4 in. x 16.73 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.3 mm (1.75 in. x 17.4 in. x 17.77 in.)
Weight (with packaging)	8.5 kg (18.74 lb)
Stack ports	Any 10GE SFP+ or 40GE QSFP+ ports Ports on the 2-port QSFP+ rear stack card
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power	65.4 W (without card)

Item	Description
consumption (100% throughput, full speed of fans)	
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	42.3 W (without card)
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The operating temperature of the switch is 0 °C to 40 °C (32 °F to 104 °F) when it uses QSFP+ optical modules with 10 km or longer transmission distances.
Short-term operating temperature	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 58.9 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none"> • AC power modules configured: 0-5000 m (0-16404 ft.) • DC power modules configured: 0-2000 m (0-6562 ft.)

Item	Description
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010792

4.18.4 S5730S-68C-PWR-EI

Version Mapping

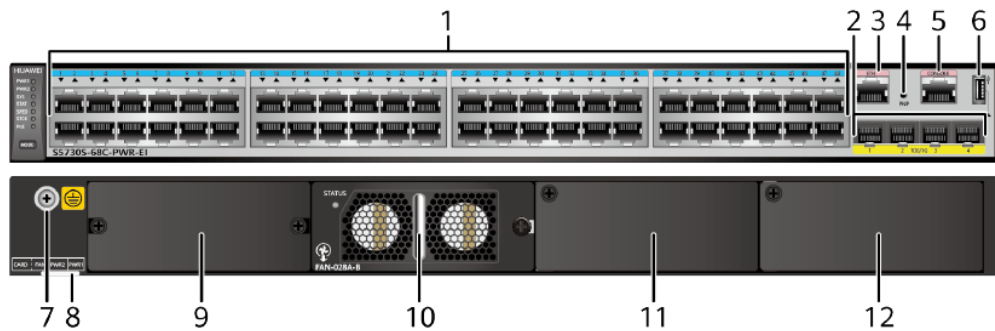
Table 4-976 lists the mapping between the S5730S-68C-PWR-EI chassis and software versions.

Table 4-976 Version mapping

Series	Model	Software Version
S5730S-EI	S5730S-68C-PWR-EI	V200R011C10 to V200R019C10 versions

Appearance and Structure

Figure 4-387 S5730S-68C-PWR-EI appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules
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			<ul style="list-style-type: none"> • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	One ETH management port	4	<p>One PNP button</p> <p>NOTICE Applicable in V200R012C00 and later versions: To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
5	<p>One console port</p> <p>NOTE It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>	6	One USB port
7	<p>Ground screw</p> <p>NOTE It is used with a 9.1 Ground Cable.</p>	8	<p>ESN label</p> <p>NOTE You can draw it out to view the ESN and MAC address of the switch.</p>
9	<p>Rear card slot</p> <p>NOTE Card supported:</p> <ul style="list-style-type: none"> • 8.17 ES5D21Q04Q01 (4-Port 40 Gig QSFP+ Rear Interface Card) • 8.27 ES5D21VST000 (Dedicated Stack Card with 2*QSFP+ Interface) (applicable in V200R012C00 and later versions) 	10	<p>Fan slot</p> <p>NOTE Applicable fan module: 7.3 FAN-028A-B Fan Module</p>
11	<p>Power module slot 2</p> <p>NOTE Applicable power modules:</p> <ul style="list-style-type: none"> • 5.6 W0PSA5000/PAC-500WA-BE (500 W AC PoE Power Module) • 5.8 PDC-650WA-BE (650 W DC PoE Power Module) • 5.10 W2PSA1150 (1150 W AC PoE Power Module) • 5.9 PAC1000D5412 (1000 W AC PoE Power Module) (applicable in V200R013C00 and later versions) 	12	<p>Power module slot 1</p> <p>NOTE Applicable power modules:</p> <ul style="list-style-type: none"> • 5.6 W0PSA5000/PAC-500WA-BE (500 W AC PoE Power Module) • 5.8 PDC-650WA-BE (650 W DC PoE Power Module) • 5.10 W2PSA1150 (1150 W AC PoE Power Module) • 5.9 PAC1000D5412 (1000 W AC PoE Power Module) (applicable in V200R013C00 and later versions)

Interface Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-977 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-977 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-978 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-978 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-979.

Table 4-979 Attributes of a console port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-980 describes the attributes of an ETH management port.

Table 4-980 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

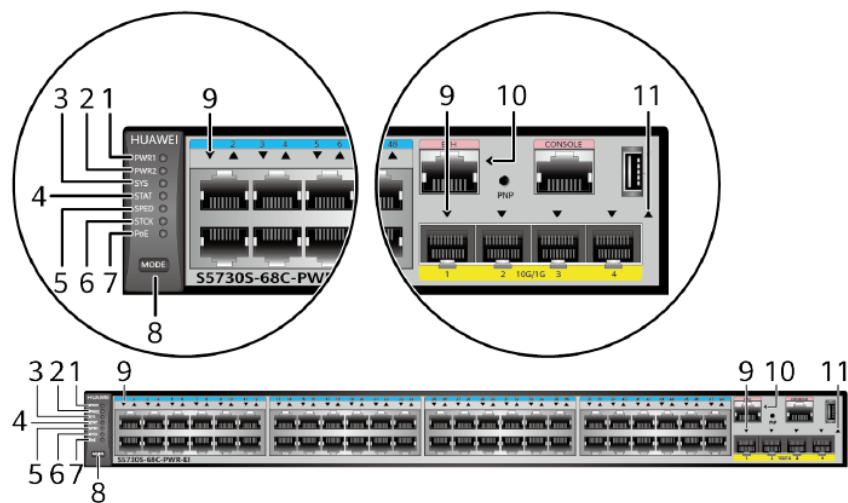
Indicator Description

NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
- If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
- If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 4-388 Indicators on the S5730S-68C-PWR-EI



NOTE

The S5730S-EI series switches provide a command for setting fault indicators, which help field maintenance personnel find a faulty switch quickly.

The SYS indicator and mode indicators (STAT, SPED, STCK, and PoE) are used as fault indicators of a switch. If the switch fails, its SYS indicator and mode indicators can be configured to blink red fast so that field maintenance personnel can find this faulty switch.

Table 4-981 Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR1	Power module indicator	-	Off	No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 1 and is working normally.
			Yellow	Steady	The switch has two power modules installed.

No.	Indicator	Name	Color	Status	Description
			ow	on	Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none"> A power module is available in this slot but its power switch is in the OFF position. A power module is available in this slot but it is not connected to a power source. The power module in this slot has failed.
2	PWR 2	Power module indicator	-	Off	No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 2 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 2: <ul style="list-style-type: none"> A power module is available in this slot but its power switch is in the OFF position. A power module is available in this slot but it is not connected to a power source. The power module in this slot has failed.
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or temperature alarm has been generated.
4	STAT	Status indicator	-	Off	The status mode is not selected.
			Green	Steady on	The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
5	SPED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The service port indicators show the port speeds. After 45 seconds, the service port indicators automatically restore to the status mode.
6	STC	Stack	-	Off	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is in stack standby or

No.	Indicator	Name	Color	Status	Description
	K	indicator			<p>slave state or the stacking function is not enabled on the switch.</p> <ul style="list-style-type: none"> If you are changing the indicator mode: The stack mode is not selected.
			Green	Steady on	The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is a stack master switch or a standalone switch with the stacking function enabled. If you are changing the indicator mode: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>
7	PoE	PoE indicator	-	Off	The PoE mode is not selected.
			Green	Steady on	The service port indicators show the PoE status. After 45 seconds, the service port indicators automatically restore to the status mode.
8	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> When you press this button once, the service port indicators change to the speed mode and show the speed of each service port. When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch. When you press this button a third time, the service port indicators change to the PoE mode and show the PoE status of each service port. When you press this button a fourth time, the service port indicators restore to the default mode, and the STAT indicator turns green. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED and PoE indicators are off, and the STCK indicator is off or blinking green.</p>

No.	Indicator	Name	Color	Status	Description
9	-	Service port indicator			Meanings of service port indicators vary in different modes. For details, see Table 4-982.
10	-	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The ETH port is sending or receiving data.
11	-	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> No USB flash drive is connected to the switch. The USB port is damaged. The indicator is damaged. The USB flash drive does not have any configuration file and cannot be used for deployment. The switch has been upgraded using the USB flash drive and is restarting.
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from the USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

Table 4-982 Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000

Display Mode	Color	Status	Description
			Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
PoE	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.
	Yellow	Steady on	The PoE function is disabled on the port.
	Yellow	Blinking	The port stops providing PoE power because of an exception (for example, an incompatible PD is connected to the port).
	Green and yellow	Blinking green and yellow alternately	The port fails to supply power to a PD due to one of the following reasons: <ul style="list-style-type: none">• The power required by the connected PD exceeds the maximum power or the configured power threshold of the port.• The total power consumption of PDs has reached the maximum power of the switch.• The manual power management mode is used and the port is not enabled to provide power to the PD.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none">• If the indicator of a port is steady on, the number of this port is the stack ID of the switch.• If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none">• If the indicator of a port is blinking, the number of this port is the stack ID of the switch.• If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Power Supply Configuration

The S5730S-68C-PWR-EI is a PoE switch. It has two power module slots, each of which can have a 500 W, 650 W, 1150 W, or 1000 W (applicable in V200R013C00 and later versions) power module installed. A 500 W AC power module and a 650 W DC power module can be

used together in the switch. A 1150 W AC power module and a 1000 W AC power module can be used together in the switch. Table 4-983 lists its power supply configurations.

Table 4-983 Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
500 W or 650 W	–	369.6 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 24 • 802.3at (30 W per port): 12
500 W or 650 W	500 W or 650 W	739.2 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 48 • 802.3at (30 W per port): 24
1150 W (220 V)	–	785.4 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 48 • 802.3at (30 W per port): 26
1150 W (220 V)	1150 W (220 V)	1440 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 48 • 802.3at (30 W per port): 48
1150 W (110 V)	–	446.6 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 29 • 802.3at (30 W per port): 14
1150 W (110 V)	1150 W (110 V)	893.2 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 48 • 802.3at (30 W per port): 29
1000 W (220 V)	-	754.6 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 48 • 802.3at (30 W per port): 25
1000 W (220 V)	1000 W (220 V)	1440 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 48 • 802.3at (30 W per port): 48
1000 W (110 V)	-	754.6 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 48 • 802.3at (30 W per port): 25
1000 W (110 V)	1000 W (110 V)	1440 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port):

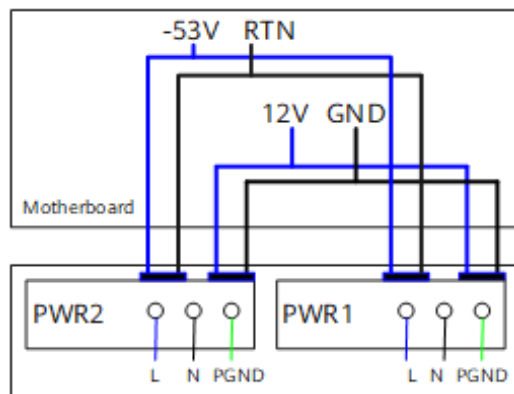
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
V)	V)		48 <ul style="list-style-type: none"> 802.3at (30 W per port): 48
1000 W (220 V)	1150 W (220 V)	1440 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 48
1150 W (220 V)	1000 W (220 V)	1440 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 48
1000 W (110 V)	1150 W (110 V)	893.2 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 29
1150 W (110 V)	1000 W (110 V)	893.2 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 29

NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

Figure 4-389 shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

Figure 4-389 Power supply by dual AC PoE power modules

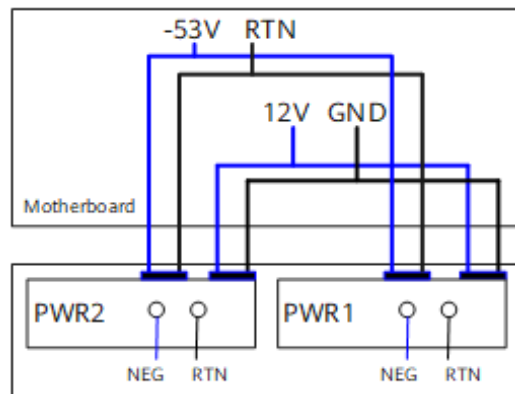


L: live N: neutral PGND: protection GND: 12 V RTN: -53 V

wire wire ground wire reference ground reference ground

Figure 4-390 shows the power supply connections of dual DC PoE power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V and -53 V output voltages, and the motherboard provides 12 V voltage for the entire device and -53 V voltage for the PDs.

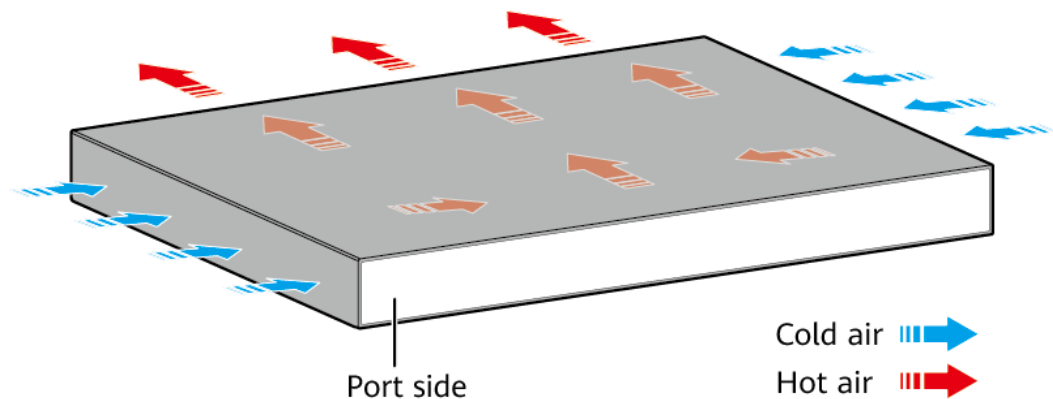
Figure 4-390 Power supply connections of dual DC PoE power modules



NEG: negative wire RTN: positive wire GND: 12 V reference ground RTN: -53 V reference ground

Heat Dissipation

The S5730S-68C-PWR-EI uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-984 lists technical specifications of the S5730S-68C-PWR-EI.

Table 4-984 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	43.28 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	<ul style="list-style-type: none">Using 500 W AC or 1000 W AC power modules: ± 6 kV in differential mode, ± 6 kV in common modeUsing 650 W DC or 1150 W AC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 425.0 mm (1.75 in. x 17.4 in. x 16.73 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.3 mm (1.75 in. x 17.4 in. x 17.77 in.) <p>When 1150 W power modules are installed, they stretch out from the chassis. Therefore, the total depth of the switch changes to 541.1 mm (21.3 in.).</p>
Weight (with packaging)	8 kg (17.64 lb)
Stack ports	Any 10GE SFP+ or 40GE QSFP+ ports Ports on the 2-port QSFP+ rear stack card
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none">Using 650 W DC or 500 W AC power modules<ul style="list-style-type: none">Not providing the PoE function: 68.3 W (without card)100% PoE loads: 925 W (system power consumption: 185.8 W, PoE: 739.2 W, without card)

Item	Description
	<ul style="list-style-type: none"> • Using 1150 W AC or 1000 W AC power modules <ul style="list-style-type: none"> – Not providing the PoE function: 68.3 W (without card) – 100% PoE loads: 1733 W (system power consumption: 293 W, PoE: 1440 W, without card)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	50.1 W (without card)
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The operating temperature of the switch is 0 °C to 40 °C (32 °F to 104 °F) when it uses QSFP+ optical modules with 10 km or longer transmission distances.
Short-term operating temperature	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 64.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)

Item	Description
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010793

4.19 S5700-HI

4.19.1 S5700-28C-HI

Version Mapping

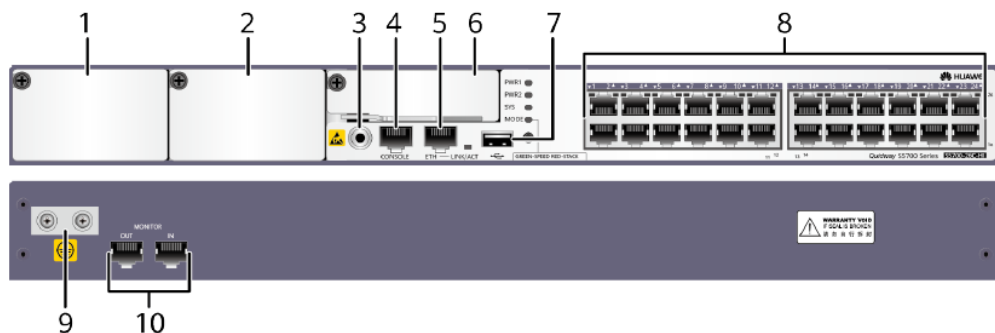
Table 4-985 lists the mapping between the S5700-28C-HI and software versions.

Table 4-985 Version mapping

Series	Model	Software Version
S5700-HI	S5700-28C-HI	V100R006C01 to V200R005C02 NOTE This model does not match V200R003C02 or V200R003C10.

Appearance and Structure

Figure 4-391 S5700-28C-HI appearance



1	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> • 5.13 W0PSA1701 (170 W AC Power) 	2	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none"> • 5.13 W0PSA1701 (170 W AC Power)
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	Module) • 5.14 ES5M0PSD1700 (170 W DC Power Module)		Module) • 5.14 ES5M0PSD1700 (170 W DC Power Module)
3	ESD jack NOTE Before installing or maintaining a switch, wear an ESD wrist strap and insert the other end of the ESD wrist strap into this ESD jack.	4	One console port
5	One ETH management port	6	Front card slot NOTE Card supported: <ul style="list-style-type: none"> • 8.7 ES5D00X2SA00 (2-Port GE SFP/10GE SFP+ Front Optical Interface Card) • 8.8 ES5D00X4SA00 (4-Port GE SFP/10GE SFP+ Front Optical Interface Card) • 8.9 ES5D00G4SC00 (4-Port GE SFP Front Optical Interface Card)
7	One USB port	8	Twenty-four 10/100/1000BASE-T ports
9	Ground screw NOTE It is used with a 9.1 Ground Cable. The switch has two ground screws, any of which can be used to install a ground cable.	10	Monitoring port NOTE The monitoring port monitors the cabinet door, power module, battery power, and power supply of the air conditioner.

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-986 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-986 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-987.

Table 4-987 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the *Configuration Guide - Basic Configurations*. Table 4-988 describes the attributes of an ETH management port.

Table 4-988 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

Figure 4-392 Indicators on the S5700-28C-HI

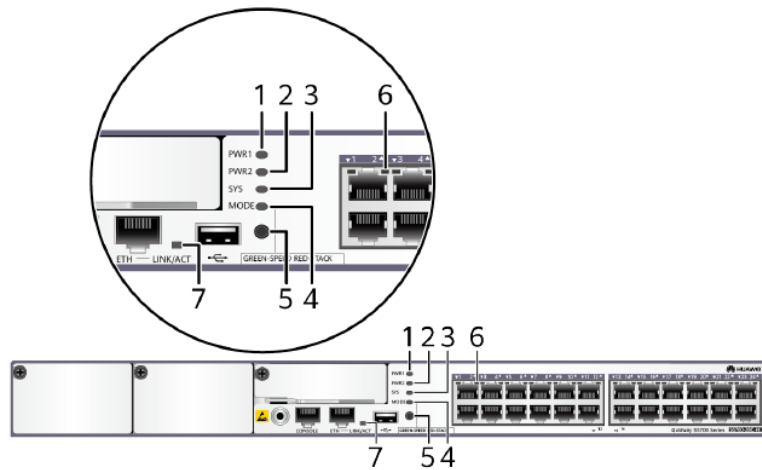


Table 4-989 Description of indicators on the switch

Number	Indicator/Button	Color	Description
1	PWR1: power supply indicator	-	Off: No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.
		Green	Steady on: A power module is installed in power module slot 1 and is working normally.
		Red	Steady on: The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none"> A power module is available in this slot but its power switch is in the OFF position. A power module is available in this slot but it is not connected to a power source. The power module in power module slot 1 fails.
2	PWR2: power	-	Off: No power module is available in power module slot 2, or the switch has

Number	Indicator/Button	Color	Description
	supply indicator		only one power module but the power module does not work normally.
		Green	Steady on: A power module is installed in power module slot 2 and is working normally.
		Red	Steady on: The switch has two power modules installed. Any of the following situations occurs in power module slot 2: <ul style="list-style-type: none"> A power module is available in this slot but its power switch is in the OFF position. A power module is available in this slot but it is not connected to a power source. The power module in power module slot 2 fails.
3	SYS: system status indicator	-	Off: The system is not running.
		Green	Indicator states and meaning in V100R006 version: <ul style="list-style-type: none"> Steady on: The system is not operating properly or is starting. Slow blinking: The system is running normally. Fast blinking: The system is copying the system software and configuration file from a USB flash drive during a USB-based upgrade. Indicator states and meaning in V200R001 and later versions: <ul style="list-style-type: none"> Fast blinking: The system is starting or is copying the system software and configuration file from a USB flash drive during a USB-based upgrade. Slow blinking: The system is running normally.
		Yellow	<ul style="list-style-type: none"> Steady on: The system is performing self-check during startup (only applicable to V100R006). Blinking: The system has been successfully upgraded using a USB flash drive and the switch has restarted. You can remove the USB flash drive from the switch.
		Red	<ul style="list-style-type: none"> Steady on: The system does not work normally after registration, or a fan or

Number	Indicator/Button	Color	Description
			<p>temperature alarm has been generated.</p> <ul style="list-style-type: none"> Blinking: An error occurred during USB-based upgrade and the system failed to be upgraded after a USB flash drive is inserted.
4	MODE: mode indicator	-	Off: The service port indicators are in the status mode (default). In the status mode, the service port indicator shows the port link or activity state.
		Green	Steady on: The service port indicators show the port speed. After 45 seconds, the service port indicators automatically restore to the status mode.
		Red	Steady on: The service port indicators show the stack ID of the switch. After 45 seconds, the service port indicators automatically restore to the status mode.
5	Mode switch button	-	<p>In versions earlier than V200R003C00:</p> <ul style="list-style-type: none"> When you press this button once, the mode indicator turns green and the service port indicators show the speed of each service port. When you press this button a second time, the mode indicator turns off. <p>In V200R003C00 and later versions:</p> <ul style="list-style-type: none"> When you press this button once, the mode indicator turns green and the service port indicators show the speed of ports. When you press this button a second time, the mode indicator turns red and the service port indicators show stack information. When you press this button a third time, the mode indicator turns off and the service port indicators restore to the status mode. <p>If you do not press the button within 45 seconds, the mode indicator restores to the default mode.</p>
6	Service port indicator	Meanings of service port indicators vary in different modes. For details, see Table 4-990 and Table 4-991.	
7	ETH indicator	Green	<ul style="list-style-type: none"> Off: No link is established on the port. Steady on: The port is connected. Blinking: The port is sending or

Number	Indicator/Button	Color	Description
			receiving data.

Table 4-990 Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is blinking, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Table 4-991 Description of service port indicators in different modes (two indicators for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.

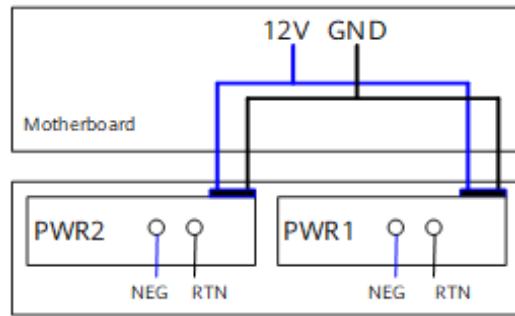
Display Mode	Color	Status	Description
	Green	Steady on	A link has been established on the port.
	Yellow	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green and yellow	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 100M/1000M port: The port is operating at 100 Mbit/s.
	Green and yellow	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 100M/1000M port: The port is operating at 1000 Mbit/s.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green and yellow	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
	Green and yellow	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is blinking, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Power Supply Configuration

The S5700-28C-HI uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

Figure 4-393 shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

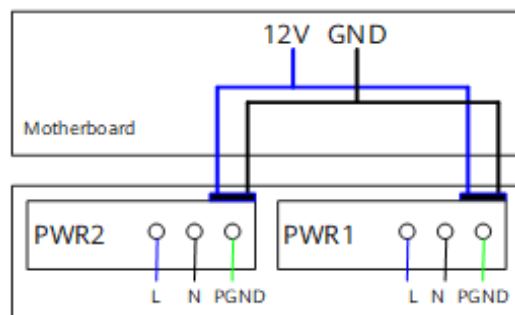
Figure 4-393 Power supply connections of dual DC power modules



NEG: negative wire RTN: positive wire GND: 12 V reference ground

Figure 4-394 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

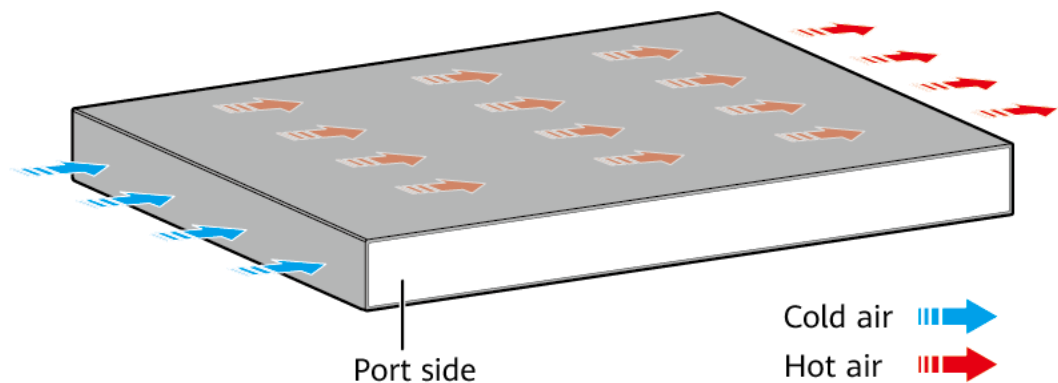
Figure 4-394 Power supply connections of dual AC power modules



L: Live wire N: Neutral wire PGND: Protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5700-28C-HI has three built-in fans for forced air cooling. The airflow direction is left-to-right.



 **NOTE**

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-992 lists technical specifications of the S5700-28C-HI.

Table 4-992 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	64 MB
Mean time between failures (MTBF)	28.7 years when a 4-port 10GE interface card is configured, 41.1 years when a 2-port 10GE interface card is configured, 42.9 years when a 4-port GE interface card is configured
Mean time to repair (MTTR)	2 years
Availability	> 0.99999
Service port surge protection	± 2 kV in common mode
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	44.4 mm x 442.0 mm x 220.0 mm (1.75 in. x 17.4 in. x 8.7 in.)
Weight	<ul style="list-style-type: none"> Empty: ≤ 5 kg (11.02 lb) Fully configured: ≤ 6.5 kg (14.33 lb)
Stack ports	<ul style="list-style-type: none"> Versions earlier than V200R003C00 do not support stack ports. Since V200R003C00, 10GE ports on the front card can be used as stack ports.
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	76.6 W

Item	Description
Operating temperature	-5 °C to +55 °C (23 °F to 131 °F) NOTE The operating temperature of the switch is -5 °C to +50 °C (23 °F to 122 °F) when it uses SFP+ optical modules with 40 km or longer transmission distances.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 60 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none">• AC power modules configured: 0-5000 m (0-16404 ft.)• DC power modules configured: 0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02353630

4.19.2 S5700-28C-HI-24S

Version Mapping

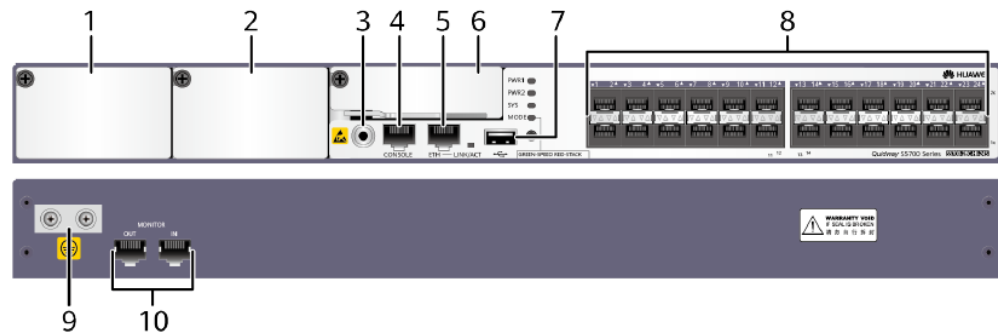
Table 4-993 lists the mapping between the S5700-28C-HI-24S and software versions.

Table 4-993 Version mapping

Series	Model	Software Version
S5700-HI	S5700-28C-HI-24S	V100R006C01 to V200R005C02 NOTE This model does not match V200R003C02 or V200R003C10.

Appearance and Structure

Figure 4-395 S5700-28C-HI-24S appearance



1	<p>Power module slot 1</p> <p>NOTE</p> <p>Applicable power modules:</p> <ul style="list-style-type: none"> 5.13 W0PSA1701 (170 W AC Power Module) 5.14 ES5M0PSD1700 (170 W DC Power Module) 	2	<p>Power module slot 2</p> <p>NOTE</p> <p>Applicable power modules:</p> <ul style="list-style-type: none"> 5.13 W0PSA1701 (170 W AC Power Module) 5.14 ES5M0PSD1700 (170 W DC Power Module)
3	<p>ESD jack</p> <p>NOTE</p> <p>Before installing or maintaining a switch, wear an ESD wrist strap and insert the other end of the ESD wrist strap into this ESD jack.</p>	4	<p>One console port</p>
5	<p>One ETH management port</p>	6	<p>Front card slot</p> <p>NOTE</p> <p>Card supported:</p> <ul style="list-style-type: none"> 8.7 ES5D00X2SA00 (2-Port GE SFP/10GE SFP+ Front Optical Interface Card) 8.8 ES5D00X4SA00 (4-Port GE SFP/10GE SFP+ Front Optical Interface Card) 8.9 ES5D00G4SC00 (4-Port GE SFP Front Optical Interface Card)
7	<p>One USB port</p>	8	<p>Twenty-four 100/1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> 10.4 FE SFP/eSFP Optical Modules 10.5 GE eSFP Optical Modules 10.7 GE-CWDM eSFP Optical Modules 10.10 GE SFP Copper Modules
9	<p>Ground screw</p>	10	<p>Monitoring port</p>

<p>NOTE</p> <p>It is used with a 9.1 Ground Cable. The switch has two ground screws, any of which can be used to install a ground cable.</p>	<p>NOTE</p> <p>The monitoring port monitors the cabinet door, power module, battery power, and power supply of the air conditioner.</p>
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Port Description

100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. Table 4-994 describes the attributes of a 100/1000BASE-X port.

Table 4-994 Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-995.

Table 4-995 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH

management port, see the *Configuration Guide - Basic Configurations*. Table 4-996 describes the attributes of an ETH management port.

Table 4-996 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

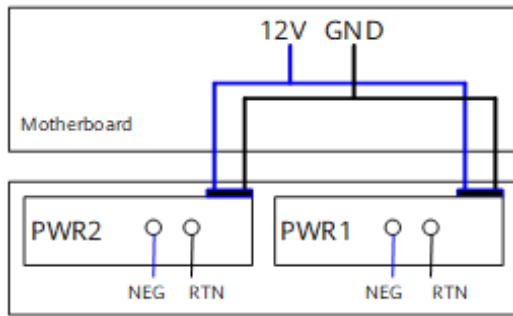
The S5700-28C-HI-24S has similar indicators (except service port indicators) to those on the S5700-28C-HI. For details, see [Indicator Description](#).

Power Supply Configuration

The S5700-28C-HI-24S uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

Figure 4-396 shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

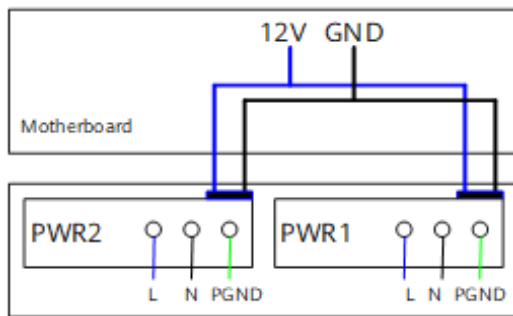
Figure 4-396 Power supply connections of dual DC power modules



NEG: negative wire RTN: positive wire GND: 12 V reference ground

Figure 4-397 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

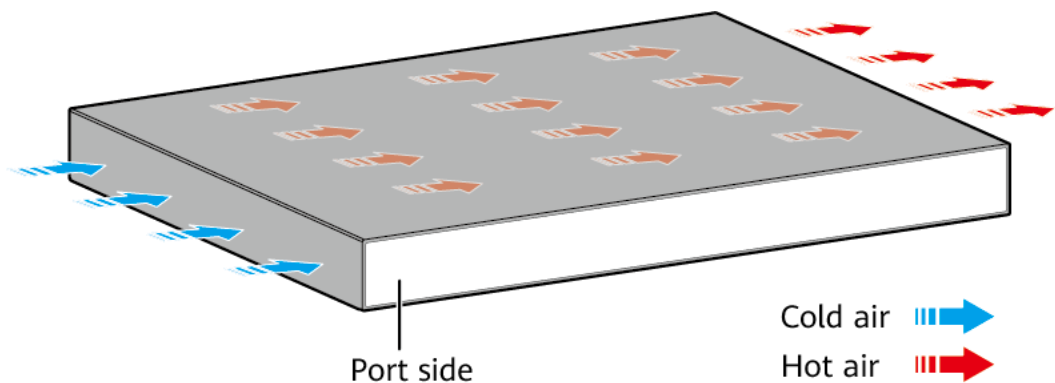
Figure 4-397 Power supply connections of dual AC power modules





L: Live wire N: Neutral wire PGND: Protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5700-28C-HI-24S has three built-in fans for forced air cooling. The airflow direction is left-to-right.



Cold air 
 Hot air 

 **NOTE**

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-997 lists technical specifications of the S5700-28C-HI-24S.

Table 4-997 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	64 MB
Mean time between failures (MTBF)	25.5 years when a 4-port 10GE interface card is configured, 34.8 years when a 2-port 10GE interface card is configured, 36.1 years when a 4-port GE interface card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	NA
Power supply surge protection	<ul style="list-style-type: none">Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common modeUsing DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	44.4 mm x 442.0 mm x 220.0 mm (1.75 in. x 17.4 in. x 8.7 in.)
Weight	<ul style="list-style-type: none">Empty: ≤ 5 kg (11.02 lb)Fully configured: ≤ 6.5 kg (14.33 lb)
Stack ports	<ul style="list-style-type: none">Versions earlier than V200R003C00 do not support stack ports.Since V200R003C00, 10GE ports on the front card can be used as stack ports.
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	80.7 W

Item	Description
Operating temperature	-5 °C to +55 °C (23 °F to 131 °F) NOTE The operating temperature of the switch is -5 °C to +50 °C (23 °F to 122 °F) when it uses SFP+ optical modules with 40 km or longer transmission distances.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 60 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none"> AC power modules configured: 0-5000 m (0-16404 ft.) DC power modules configured: 0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none"> EMC certification Safety certification Manufacturing certification
Part number	02353631

4.20 S5710-HI

4.20.1 S5710-108C-PWR-HI

Version Mapping

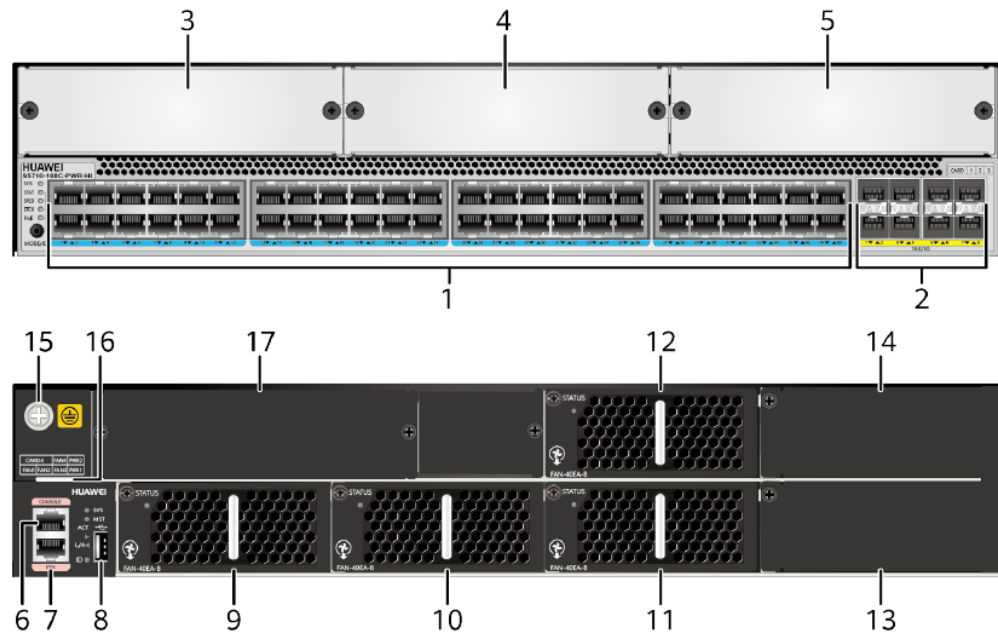
Table 4-998 lists the mapping between the S5710-108C-PWR-HI chassis and software versions.

Table 4-998 Version mapping

Series	Model	Software Version
S5710-HI	S5710-108C-PWR-HI	V200R003C00 to V200R005C03 NOTE This model does not match V200R003C02, V200R003C10, or V200R005C01.

Appearance and Structure

Figure 4-398 S5710-108C-PWR-HI appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	Eight 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber
3	Front card slot 1 NOTE Card supported: <ul style="list-style-type: none"> • 8.13 ES5D21G16S00 (16-Port GE SFP Front Optical Interface Card) • 8.14 ES5D21G16T00 (16-Port GE Front Electrical Interface Card) 	4	Front card slot 2 NOTE Card supported: <ul style="list-style-type: none"> • 8.13 ES5D21G16S00 (16-Port GE SFP Front Optical Interface Card) • 8.14 ES5D21G16T00 (16-Port GE Front Electrical Interface Card)
5	Front card slot 3 NOTE Card supported:	6	One console port

	<ul style="list-style-type: none"> 8.13 ES5D21G16S00 (16-Port GE SFP Front Optical Interface Card) 8.14 ES5D21G16T00 (16-Port GE Front Electrical Interface Card) 		
7	One ETH management port	8	One USB port
9	Fan slot 1 NOTE Applicable fan module: 7.2 FAN-40EA-B Fan Module	10	Fan slot 2 NOTE Applicable fan module: 7.2 FAN-40EA-B Fan Module
11	Fan slot 3 NOTE Applicable fan module: 7.2 FAN-40EA-B Fan Module	12	Fan slot 4 NOTE Applicable fan module: 7.2 FAN-40EA-B Fan Module
13	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> 5.4 PAC-350WA-B (350 W AC Power Module) 5.10 W2PSA1150 (1150 W AC PoE Power Module) 	14	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none"> 5.4 PAC-350WA-B (350 W AC Power Module) 5.10 W2PSA1150 (1150 W AC PoE Power Module)
15	Ground screw NOTE It is used with a 9.1 Ground Cable.	16	ESN label NOTE You can draw it out to view the ESN and MAC address of the switch.
17	Rear card slot NOTE Card supported: <ul style="list-style-type: none"> 8.18 ES5D21X04S00 (4-Port 10GE SFP+ Rear Optical Interface Card) 8.16 ES5D21L04Q00 (4-Port 40GE QSFP+ Optical Interface Card) 	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-999 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-999 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing

Attribute	Description
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-1000 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-1000 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1001.

Table 4-1001 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH

management port, see the *Configuration Guide - Basic Configurations*. Table 4-1002 describes the attributes of an ETH management port.

Table 4-1002 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

Figure 4-399 Indicators on the S5710-108C-PWR-HI front panel

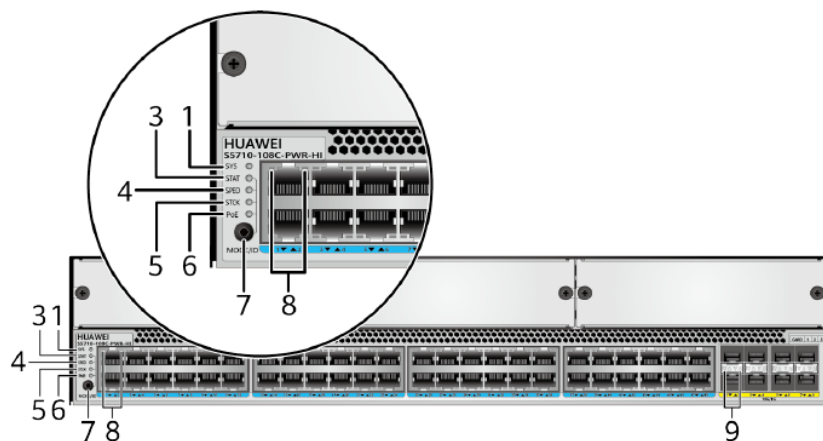


Figure 4-400 Indicators on the S5710-108C-PWR-HI rear panel

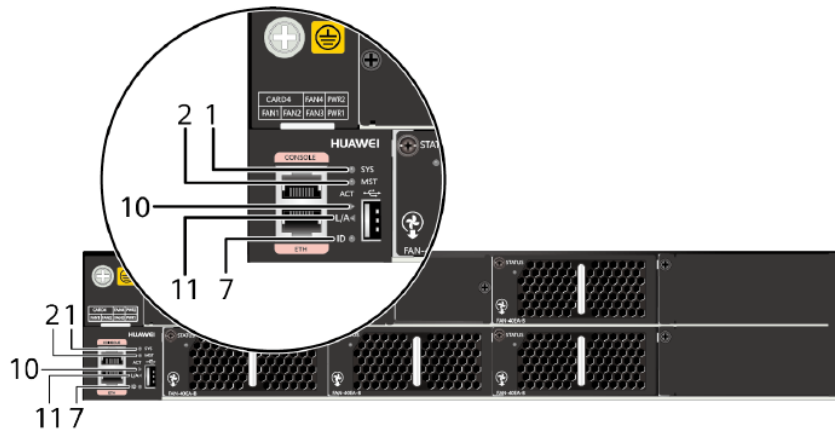


Table 4-1003 Description of indicators on the switch

Number	Indicator	Color	Description
1	SYS: system status indicator	-	Off: The system is not running.
		Green	<ul style="list-style-type: none"> Fast blinking: The system is starting. Slow blinking: The system is running properly.
		Red	Steady on: The system does not work normally after registration, or a fan or temperature alarm has been generated.
2	MST: stack master/slave indicator NOTE Versions prior to V200R005C03 do not support the stacking function.	-	Off: The switch is the standby or slave switch in a stack or a standalone switch with the stacking function disabled.
		Green	Steady on: The switch is the master switch in a stack or a standalone switch with the stacking function enabled.
3	STAT: status indicator	Green	<ul style="list-style-type: none"> Off: The status mode is not selected. Steady on: The service port indicators are in the status mode (default).
4	SPED: speed indicator	Green	<ul style="list-style-type: none"> Off: The speed mode is not selected. Steady on: The service port indicators show the port speed. After 45 seconds, the service port indicators automatically restore to the status mode.
5	STCK: stack indicator NOTE	Green	If you are not changing the indicator mode (default state): <ul style="list-style-type: none"> Off: The switch is the standby or slave switch in a stack or a standalone switch

Number	Indicator	Color	Description
	Versions prior to V200R005C03 do not support the stacking function.		<p>with the stacking function disabled.</p> <ul style="list-style-type: none"> Blinking: The switch is the master switch in a stack or a standalone switch with the stacking function enabled. <p>If you are changing the indicator mode:</p> <ul style="list-style-type: none"> Off: The stack mode is not selected. Steady on: The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch. Blinking: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>
6	PoE: PoE indicator	Green	<ul style="list-style-type: none"> Off: The PoE mode is not selected. Steady on: The service port indicators show the PoE status. After 45 seconds, the service port indicators automatically restore to the status mode.
7	MODE: mode switch button	-	<ul style="list-style-type: none"> When you press this button once, the service port indicators change to the speed mode and show the speed of each service port. When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch. When you press this button a third time, the service port indicators change to PoE mode and show the PoE status of ports. When you press this button a fourth time, the service port indicators restore to the default mode, and the STAT indicator turns green. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED and PoE indicators are off, and the STCK indicator is off or blinking green.</p>
	ID: ID indicator NOTE	Blue	<ul style="list-style-type: none"> Off: The ID indicator is not used (default state).

Number	Indicator	Color	Description
	The S5710-108C-PWR-HI of V200R003 does not support the ID indicator.		<ul style="list-style-type: none"> Steady on: The indicator identifies the device for maintenance. The ID indicator can be turned on or off remotely to help onsite engineers find the device to maintain.
8	Service port indicator (GE electrical port)	Meanings of service port indicators vary in different modes. For details, see Table 4-1004.	
9	Service port indicator (10GE optical port)		
10	USB-based deployment indicator: ACT	-	Off: <ul style="list-style-type: none"> No USB flash drive is connected to the switch. The USB port is damaged. The ACT indicator is damaged. The USB flash drive connected to the switch does not contain any configuration file. The switch is restarting after a USB-based upgrade.
		Green	<ul style="list-style-type: none"> Steady on: A USB-based deployment has been completed. Blinking: The system is reading data from the USB flash drive.
		Yellow	Steady on: The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
		Red	Blinking: An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.
11	Management port indicator: L/A	Green	<ul style="list-style-type: none"> Off: No link is established on the management port. Steady on: A link is established on the management port. Blinking: The management port is sending or receiving data.

Table 4-1004 Description of service port indicators in different modes

Display Mode	Color	Description
Status	-	Off: No link is established on the port or the port has been shut down.
	Green (electrical port)	<ul style="list-style-type: none"> Steady on: A link is established on the port. Blinking: The port is sending or receiving data.
	Green (optical port)	Steady on: A link is established on the port.
	Yellow (optical port)	Blinking: The port is sending or receiving data.
Speed	Green	<ul style="list-style-type: none"> Off: No link is established on the port or the port has been shut down. Steady on: <ul style="list-style-type: none"> 10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s. Blinking: <ul style="list-style-type: none"> 10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
PoE	Green	<ul style="list-style-type: none"> Off: The port is not providing power to a powered device (PD). Steady on: The port is providing PoE power. Blinking: The PD connected to the port is not a standard PD or its power exceeds the maximum power or power threshold of the port.
Stack	Green	<ul style="list-style-type: none"> Off: Port indicators do not show the stack ID of the switch. If the indicator is steady on, the switch is not a master switch: <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0. If the indicator is blinking, the switch is a master switch: <ul style="list-style-type: none"> If the indicator of a port is

Display Mode	Color	Description
		blinking, the number of this port is the stack ID of the switch. – If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Power Supply Configuration

The S5710-108C-PWR-HI is a PoE switch and uses 1150 W AC PoE power modules. It has two power module slots. Table 4-1005 lists its power supply configurations.

Table 4-1005 Power supply configurations

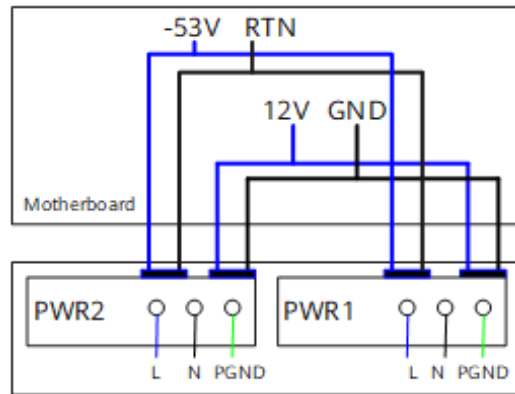
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1150 W (220 V)	–	785.4 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 26
1150 W (220 V)	1150 W (220 V)	1440 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 48
1150 W (110 V)	–	446.6 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 29 802.3at (30 W per port): 14
1150 W (110 V)	1150 W (110 V)	893.2 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 29

NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

Figure 4-401 shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

Figure 4-401 Power supply by dual AC PoE power modules

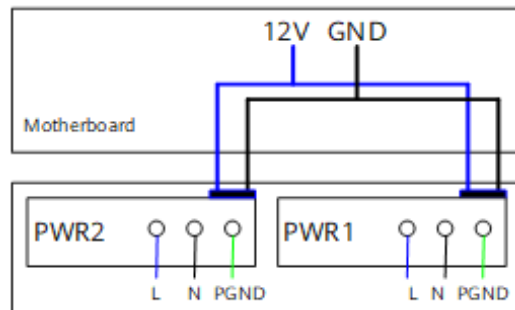


L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground RTN: -53 V reference ground

When using non-PoE power modules, the S5710-108C-PWR-HI can be configured with a single power module or double power modules for 1+1 power redundancy. Currently, only one non-PoE power module model, a 350 W AC power module, is supported.

Figure 4-402 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

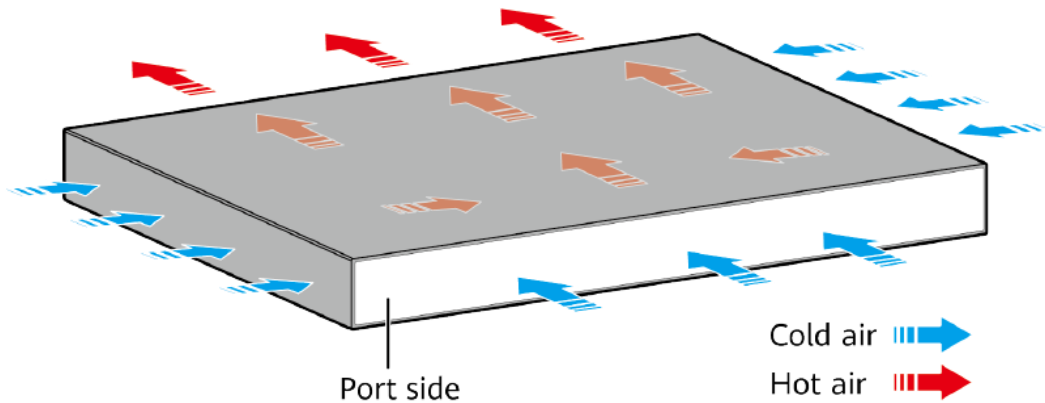
Figure 4-402 Power supply connections of dual AC power modules



L: Live wire N: Neutral wire PGND: Protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5710-108C-PWR-HI uses pluggable fan modules for forced air cooling. The airflow direction is front-to-rear.



NOTE

A little air also enters the chassis from both sides of the chassis.

Technical Specifications

Table 4-1006 lists technical specifications of the S5710-108C-PWR-HI.

Table 4-1006 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	200 MB
Mean time between failures (MTBF)	28.16 years when no interface card is configured, 27 years when a 16-port GE optical card is configured, 25.98 years when a 16-port GE electrical card is configured, 26.95 years when a 4-port 10GE card is configured, 26.69 years when a 4-port 40GE card is configured.
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 1 kV
Power supply surge protection	± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	86.1 mm x 442.0 mm x 470.0 mm (3.4 in. x 17.4 in. x 18.5 in.) When 1150 W power modules are installed, they stretch out from the chassis. Therefore, the total depth of the switch changes to 557.3 mm (21.94 in.).
Weight	<ul style="list-style-type: none"> Empty: ≤ 12 kg (26.46 lb) Fully configured: ≤ 18 kg (39.68 lb)
Stack ports	<ul style="list-style-type: none"> V200R005C03 and earlier version: not supported V200R005C03: 8-port 10GE SFP+ ports on the front panel

Item	Description
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, 100% PoE loads, full speed of fans)	<ul style="list-style-type: none">Using 350 W power modules: 240 WUsing two 1150 W power modules: 1680 W (system power consumption: 240 W, PoE: 1440 W)
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 67.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">EMC certificationSafety certificationManufacturing certification
Part number	02354043

4.21 S5720-HI

NOTE

The S5720-HI switches manufactured after August 31, 2016 cannot be downgraded to V200R007. Use either of the following methods to check the manufacturing date of a switch:

- Run the **display elabel** command in the system view and check the **Manufactured** field.
- Check the manufacturing date on the certificate label attached at the bottom of the switch.

4.21.1 S5720-32C-HI-24S-AC

Version Mapping

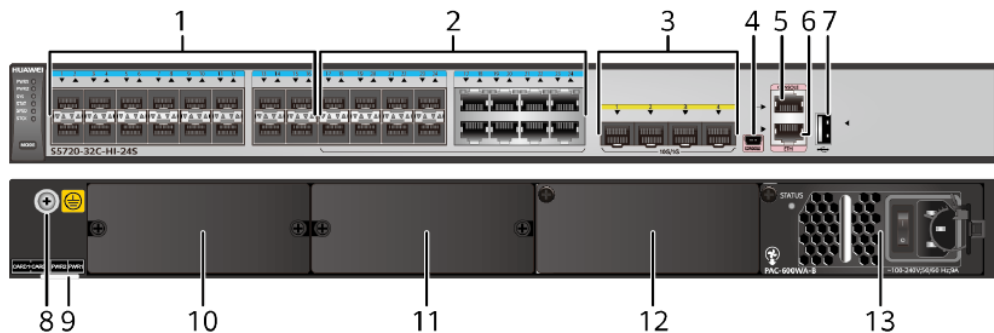
Table 4-1007 lists the mapping between the S5720-32C-HI-24S-AC chassis and software versions.

Table 4-1007 Version mapping

Series	Model	Software Version
S5720-HI	S5720-32C-HI-24S-AC	V200R006C00 to V200R019C10 versions

Appearance and Structure

Figure 4-403 S5720-32C-HI-24S-AC appearance



1	<p>Sixteen 100/1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.8 GE-CWDM eSFP Optical Modules (Used Only in the OADM scenario) • 10.10 GE SFP Copper Modules 	2	<p>Eight combo ports (10/100/1000BASE-T + 100/1000BASE-X)</p> <p>Modules applicable to combo optical ports:</p> <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.8 GE-CWDM eSFP Optical Modules (Used Only in the OADM scenario)
3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical 	4	<p>One mini USB port</p>

	<p>Modules</p> <ul style="list-style-type: none"> • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable 		
5	One console port	6	One ETH management port
7	One USB port	8	Ground screw NOTE It is used with a 9.1 Ground Cable.
9	ESN label NOTE You can draw it out to view the ESN and MAC address of the switch.	10	Rear card slot 1 NOTE This slot is reserved for future use.
11	Rear card slot 2 NOTE Card supported: 8.19 ES5D21X04S01 (4-Port 10 GE SFP+ Rear Interface Card)	12	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none"> • 5.18 PDC-350WA-B (350 W DC Power Module) • 5.19 PAC-600WA-B (600 W AC Power Module)
13	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> • 5.18 PDC-350WA-B (350 W DC Power Module) • 5.19 PAC-600WA-B (600 W AC Power Module) 	-	-

Port Description

100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. Table 4-1008 describes the attributes of a 100/1000BASE-X port.

Table 4-1008 Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC

Attribute	Description
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

Combo port

A combo port consists of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. The electrical and optical ports of a combo port are multiplexed, and only one of them can work at a time. When one of the Ethernet ports is working, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-1009 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-1009 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1010.

Table 4-1010 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1011 describes the attributes of an ETH management port.

Table 4-1011 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

NOTE

In V200R007 and later versions, you can hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
- If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
- If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore to the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 4-404 Indicators on the S5720-32C-HI-24S-AC

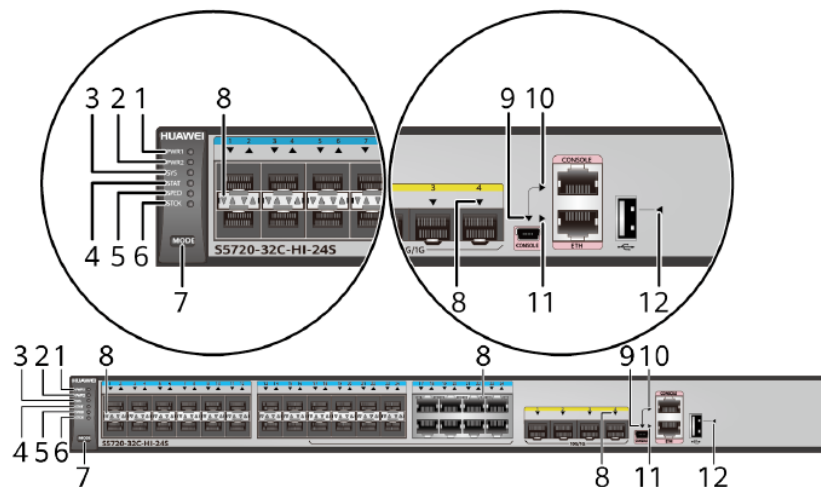


Table 4-1012 Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR 1	Power module indicator	-	Off	No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.

No.	Indicator	Name	Color	Status	Description
			Green	Steady on	A power module is installed in power module slot 1 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none"> A power module is available in this slot but its power switch is in the OFF position. A power module is available in this slot but it is not connected to a power source. The power module in this slot has failed.
2	PWR 2	Power module indicator	-	Off	No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 2 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 2: <ul style="list-style-type: none"> A power module is available in this slot but its power switch is in the OFF position. A power module is available in this slot but it is not connected to a power source. The power module in this slot has failed.
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or temperature alarm has been generated.
4	STAT	Status indicator	-	Off	The status mode is not selected.
			Green	Steady on	The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
5	SPED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The service port indicators show the port speeds. After 45 seconds, the service port

No.	Indicator	Name	Color	Status	Description
					indicators automatically restore to the status mode.
6	STCK	Stack indicator	-	Off	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is in stack standby or slave state or the stacking function is not enabled on the switch. If you are changing the indicator mode: The stack mode is not selected.
			Green	Steady on	The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is a stack master switch or a standalone switch with the stacking function enabled. If you are changing the indicator mode: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>
7	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> When you press this button once, the service port indicators change to the speed mode and show the speed of each service port. When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch. When you press this button a third time, the service port indicators restore to the default mode, and the STAT indicator turns green. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED indicator is off, and the STCK indicator is off or blinking green.</p>
8	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see Table 4-1013 and Table 4-1014.		
9	-	Mini USB indicator	-	Off	The Mini USB port is disabled, and the console port is enabled.
			Green	Steady	The Mini USB port is enabled.

No.	Indicator	Name	Color	Status	Description
			en	on	When the Mini USB indicator is steady green, the console indicator is off.
10	-	Console indicator	-	Off	The console port is disabled, and the Mini USB port is enabled.
			Green	Steady on	The console port is enabled (default state). When the console indicator is steady green, the Mini USB indicator is off.
11	-	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The ETH port is sending or receiving data.
12	-	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> No USB flash drive is connected to the switch. The USB port is damaged. The indicator is damaged. The USB flash drive does not have any configuration file and cannot be used for deployment. The switch has been upgraded using the USB flash drive and is restarting.
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from the USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

Table 4-1013 Description of service port indicators in different modes (two indicators for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.

Display Mode	Color	Status	Description
	Yellow	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green and yellow	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 100M/1000M port: The port is operating at 100 Mbit/s.
	Green and yellow	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 100M/1000M port: The port is operating at 1000 Mbit/s.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green and yellow	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
	Green and yellow	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is blinking, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Table 4-1014 Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at

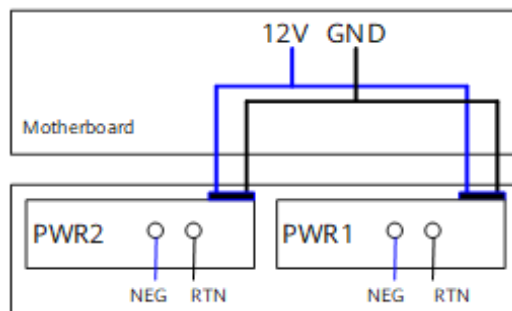
Display Mode	Color	Status	Description
			1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is blinking, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Power Supply Configuration

The S5720-32C-HI-24S-AC uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

Figure 4-405 shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 4-405 Power supply connections of dual DC power modules



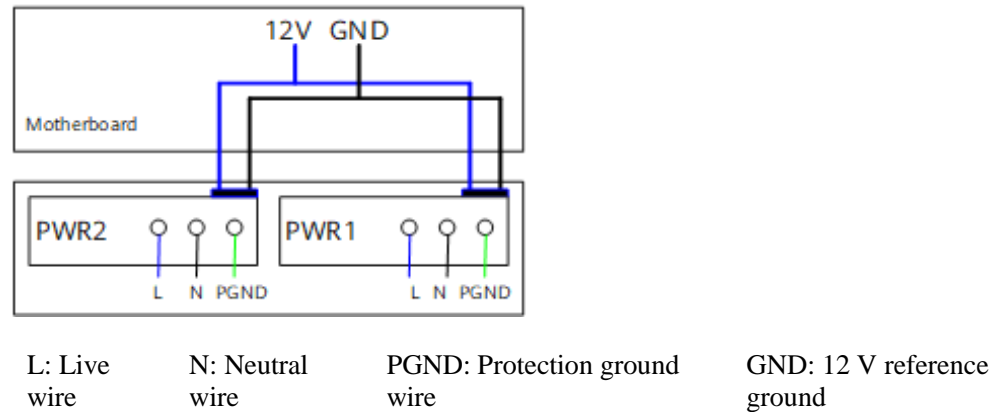
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

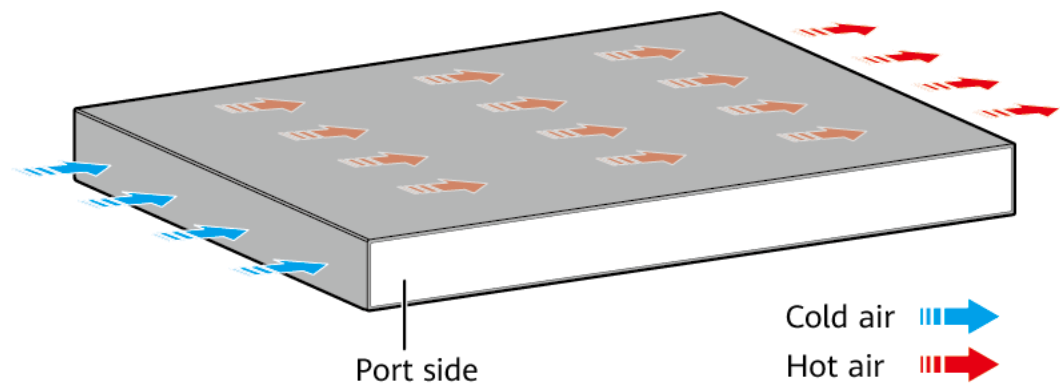
Figure 4-406 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 4-406 Power supply connections of dual AC power modules



Heat Dissipation

The S5720-32C-HI-24S-AC has five built-in fans for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1015 lists technical specifications of the S5720-32C-HI-24S-AC.

Table 4-1015 Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	56.21 years when no interface card is configured, 52.63 years when a 4-port 10GE interface card is configured
Mean time to repair	2 hours

Item	Description
(MTTR)	
Availability	> 0.99999
Service port surge protection	Common mode: ± 2 kV
Power supply surge protection	<ul style="list-style-type: none">Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common modeUsing DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.7 mm (1.75 in. x 17.4 in. x 16.72 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.8 mm (1.75 in. x 17.4 in. x 17.79 in.)
Weight (with packaging)	10.4 kg (22.93 lb)
Stack ports	Four fixed 10GE SFP+ ports on the front panel or ports on the 4-port 10GE SFP+ rear interface card NOTE The switch supports service port stacking since V200R009C00.
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	172.7 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">Tested according to ATIS standardEEE enabledNo PoE power consumption	122.12 W
Operating	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.)

Item	Description
temperature	NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 60 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02358600

4.21.2 S5720-56C-HI-AC

Version Mapping

Table 4-1016 lists the mapping between the S5720-56C-HI-AC chassis and software versions.

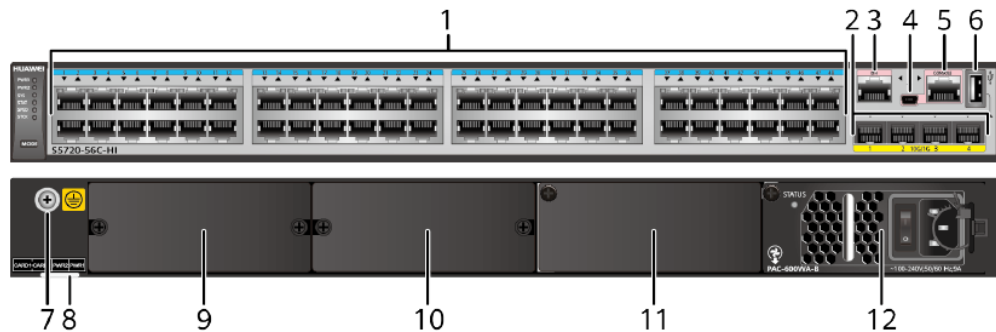
Table 4-1016 Version mapping

Series	Model	Software Version
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Series	Model	Software Version
S5720-HI	S5720-56C-HI-AC	V200R006C00 to V200R019C10 versions

Appearance and Structure

Figure 4-407 S5720-56C-HI-AC appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	One ETH management port	4	One mini USB port
5	One console port	6	One USB port
7	Ground screw NOTE It is used with a 9.1 Ground Cable.	8	ESN label NOTE You can draw it out to view the ESN and MAC address of the switch.
9	Rear card slot 1	10	Rear card slot 2

	<p>NOTE This slot is reserved for future use.</p>		<p>NOTE Card supported: 8.19 ES5D21X04S01 (4-Port 10 GE SFP+ Rear Interface Card)</p>
11	<p>Power module slot 2</p> <p>NOTE Applicable power modules:</p> <ul style="list-style-type: none"> • 5.18 PDC-350WA-B (350 W DC Power Module) • 5.19 PAC-600WA-B (600 W AC Power Module) 	12	<p>Power module slot 1</p> <p>NOTE Applicable power modules:</p> <ul style="list-style-type: none"> • 5.18 PDC-350WA-B (350 W DC Power Module) • 5.19 PAC-600WA-B (600 W AC Power Module)

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-1017 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-1017 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-1018 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-1018 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1019.

Table 4-1019 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1020 describes the attributes of an ETH management port.

Table 4-1020 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved

the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

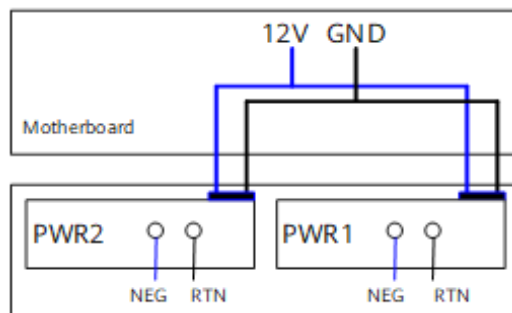
The S5720-56C-HI-AC has similar indicators to S5720-56C-PWR-HI-AC except that the S5720-56C-HI-AC does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-56C-HI-AC uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

Figure 4-408 shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 4-408 Power supply connections of dual DC power modules



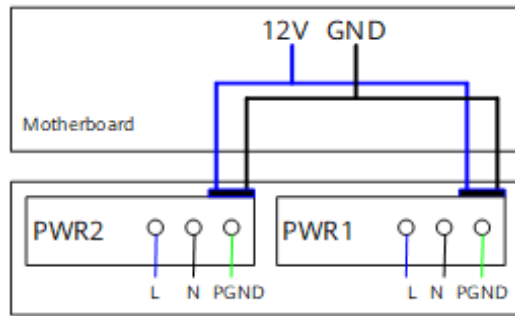
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

Figure 4-409 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 4-409 Power supply connections of dual AC power modules



L: Live wire

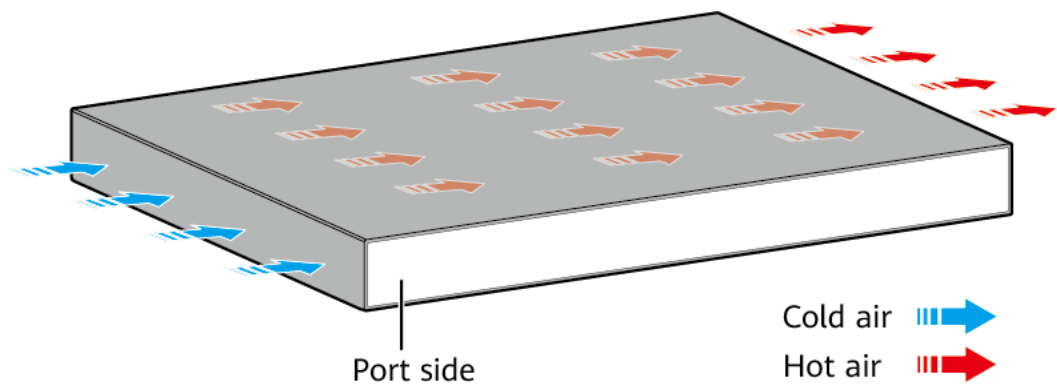
N: Neutral wire

PGND: Protection ground wire

GND: 12 V reference ground

Heat Dissipation

The S5720-56C-HI-AC has five built-in fans for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1021 lists technical specifications of the S5720-56C-HI-AC.

Table 4-1021 Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	53.05 years when no interface card is configured, 49.85 years when a 4-port 10GE interface card is configured
Mean time to repair	2 hours

Item	Description
(MTTR)	
Availability	> 0.99999
Service port surge protection	Common mode: ± 2 kV
Power supply surge protection	<ul style="list-style-type: none">Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common modeUsing DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.7 mm (1.75 in. x 17.4 in. x 16.72 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.8 mm (1.75 in. x 17.4 in. x 17.79 in.)
Weight (with packaging)	10 kg (22.05 lb)
Stack ports	Four fixed 10GE SFP+ ports on the front panel or ports on the 4-port 10GE SFP+ rear interface card NOTE The switch supports service port stacking since V200R009C00.
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	183.3 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">Tested according to ATIS standardEEE enabledNo PoE power consumption	128.93 W
Operating	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.)

Item	Description
temperature	NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">• The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 60.1 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02358598

4.21.3 S5720-56C-PWR-HI-AC

Version Mapping

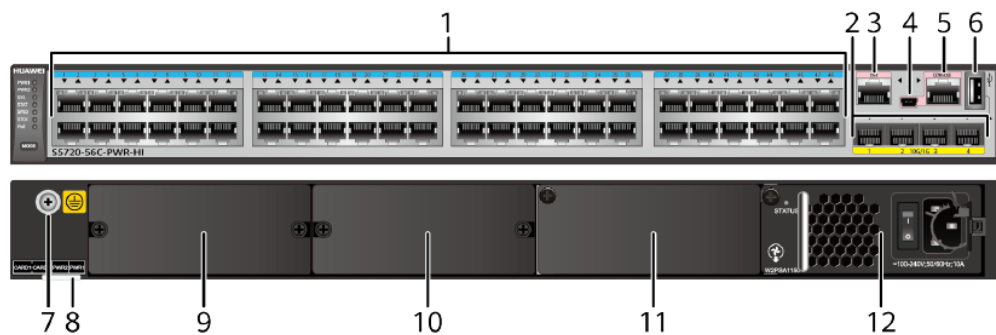
Table 4-1022 lists the mapping between the S5720-56C-PWR-HI-AC chassis and software versions.

Table 4-1022 Version mapping

Series	Model	Software Version
S5720-HI	S5720-56C-PWR-HI-AC	V200R006C00 to V200R019C10 versions

Appearance and Structure

Figure 4-410 S5720-56C-PWR-HI-AC appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	One ETH management port	4	One mini USB port
5	One console port	6	One USB port
7	Ground screw NOTE It is used with a 9.1 Ground Cable.	8	ESN label NOTE You can draw it out to view the ESN and MAC address of the switch.

9	Rear card slot 1 NOTE This slot is reserved for future use.	10	Rear card slot 2 NOTE Card supported: 8.19 ES5D21X04S01 (4-Port 10 GE SFP+ Rear Interface Card)
11	Power module slot 2 NOTE Applicable power module: 5.10 W2PSA1150 (1150 W AC PoE Power Module)	12	Power module slot 1 NOTE Applicable power module: 5.10 W2PSA1150 (1150 W AC PoE Power Module)

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-1023 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-1023 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-1024 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-1024 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1025.

Table 4-1025 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1026 describes the attributes of an ETH management port.

Table 4-1026 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you

cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

NOTE

In V200R007 and later versions, you can hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
- If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
- If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore to the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 4-411 Indicators on the S5720-56C-PWR-HI-AC

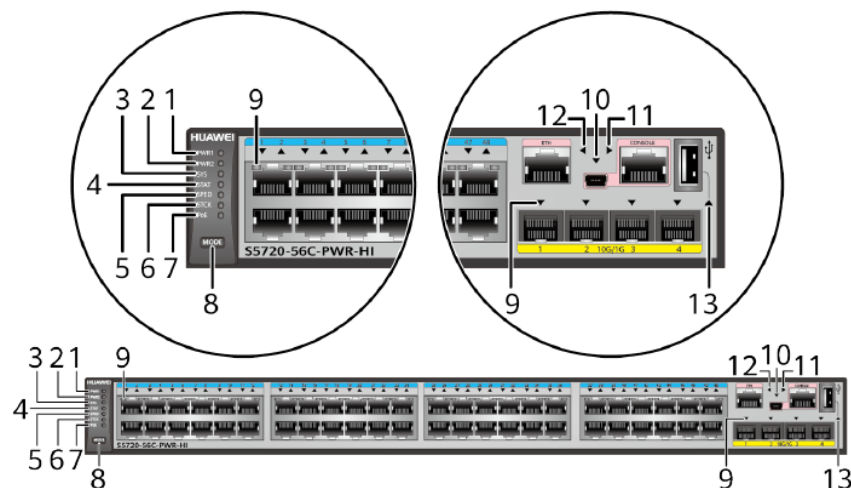


Table 4-1027 Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR	Power module	-	Off	No power module is available in power module slot 1, or the switch has only one power

No.	Indicator	Name	Color	Status	Description
	1	indicator			module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 1 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none"> A power module is available in this slot but its power switch is in the OFF position. A power module is available in this slot but it is not connected to a power source. The power module in this slot has failed.
2	PWR 2	Power module indicator	-	Off	No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 2 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 2: <ul style="list-style-type: none"> A power module is available in this slot but its power switch is in the OFF position. A power module is available in this slot but it is not connected to a power source. The power module in this slot has failed.
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or temperature alarm has been generated.
4	STAT	Status indicator	-	Off	The status mode is not selected.
			Green	Steady on	The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
5	SPE	Speed	-	Off	The speed mode is not selected.

No.	Indicator	Name	Color	Status	Description
	D	indicator	Green	Steady on	The service port indicators show the port speeds. After 45 seconds, the service port indicators automatically restore to the status mode.
6	STCK	Stack indicator	-	Off	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is in stack standby or slave state or the stacking function is not enabled on the switch. If you are changing the indicator mode: The stack mode is not selected.
			Green	Steady on	The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is a stack master switch or a standalone switch with the stacking function enabled. If you are changing the indicator mode: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>
7	PoE	PoE indicator	-	Off	The PoE mode is not selected.
			Green	Steady on	The service port indicators show the PoE status. After 45 seconds, the service port indicators automatically restore to the status mode.
8	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> When you press this button once, the service port indicators change to the speed mode and show the speed of each service port. When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch. When you press this button a third time, the service port indicators change to the PoE mode and show the PoE status of each service port. When you press this button a fourth time, the service port indicators restore to the default mode, and the STAT indicator turns green.

No.	Indicator	Name	Color	Status	Description
					If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED and PoE indicators are off, and the STCK indicator is off or blinking green.
9	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see Table 4-1028.		
10	-	Mini USB indicator	-	Off	The Mini USB port is disabled, and the console port is enabled.
			Green	Steady on	The Mini USB port is enabled. When the Mini USB indicator is steady green, the console indicator is off.
11	-	Console indicator	-	Off	The console port is disabled, and the Mini USB port is enabled.
			Green	Steady on	The console port is enabled (default state). When the console indicator is steady green, the Mini USB indicator is off.
12	-	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The ETH port is sending or receiving data.
13	-	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> No USB flash drive is connected to the switch. The USB port is damaged. The indicator is damaged. The USB flash drive does not have any configuration file and cannot be used for deployment. The switch has been upgraded using the USB flash drive and is restarting.
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from the USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.

No.	Indicator	Name	Color	Status	Description
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

Table 4-1028 Description of service port indicators in different modes

Display Mode	Color	Description
Status	Green	<ul style="list-style-type: none"> Off: The port is not connected or has been shut down. Steady on: The port is connected. Blinking: The port is sending or receiving data.
Speed	Green	<ul style="list-style-type: none"> Off: The port is not connected or has been shut down. Steady on: <ul style="list-style-type: none"> 10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s. Blinking: <ul style="list-style-type: none"> 10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
PoE	Green	<ul style="list-style-type: none"> Off: The port does not provide PoE power. Steady on: The port is providing PoE power. Blinking: The PD connected to the port is not a standard PD or its power exceeds the maximum power or power threshold of the port.
Stack	Green	<ul style="list-style-type: none"> Off: The STCK mode is not selected. If the indicator is steady on, the switch is not a master switch: <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0. If the indicator is blinking, the switch

Display Mode	Color	Description
		<p>is a master switch:</p> <ul style="list-style-type: none"> - If the indicator of a port is blinking, the number of this port is the stack ID of the switch. - If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Power Supply Configuration

The S5720-56C-PWR-HI-AC is a PoE switch and uses 1150 W AC PoE power modules. It has two power module slots. Table 4-1029 lists its power supply configurations.

Table 4-1029 Power supply configurations

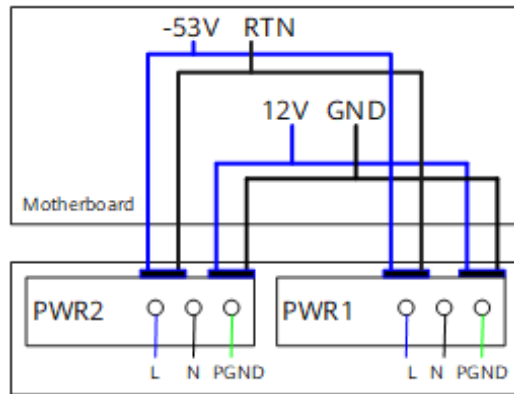
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1150 W (220 V)	-	785.4 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 48 • 802.3at (30 W per port): 26
1150 W (220 V)	1150 W (220 V)	1440 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 48 • 802.3at (30 W per port): 48
1150 W (110 V)	-	446.6 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 29 • 802.3at (30 W per port): 14
1150 W (110 V)	1150 W (110 V)	893.2 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 48 • 802.3at (30 W per port): 29

NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

Figure 4-412 shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

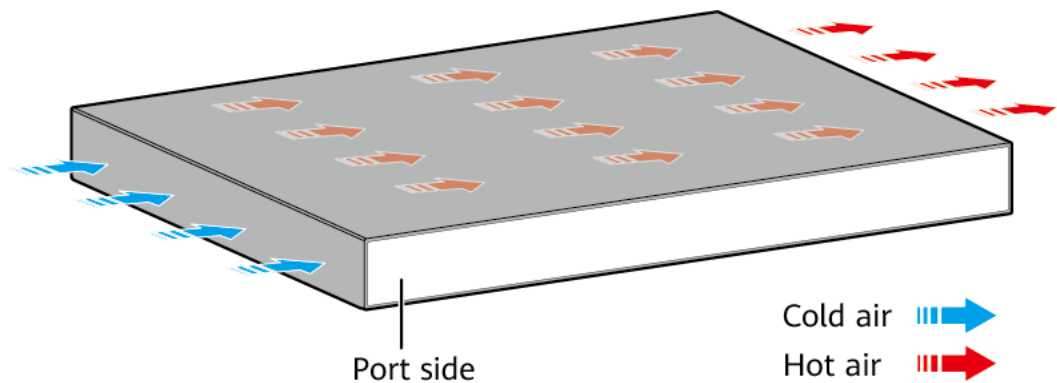
Figure 4-412 Power supply by dual AC PoE power modules



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground RTN: -53 V reference ground

Heat Dissipation

The S5720-56C-PWR-HI-AC has five built-in fans for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1030 lists technical specifications of the S5720-56C-PWR-HI-AC.

Table 4-1030 Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between	39.31 years when no interface card is configured; 37.53 years when

Item	Description
failures (MTBF)	a 4-port 10GE interface card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 1 kV
Power supply surge protection	± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 510.5 mm (1.75 in. x 17.4 in. x 20.1 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 541.1 mm (1.75 in. x 17.4 in. x 21.3 in.)
Weight (with packaging)	10.9 kg (24.03 lb)
Stack ports	Four fixed 10GE SFP+ ports on the front panel or ports on the 4-port 10GE SFP+ rear interface card NOTE The switch supports service port stacking since V200R009C00.
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, 100% PoE loads, full speed of fans)	1739 W (system power consumption: 299 W, PoE: 1440 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">Tested according to ATIS standardEEE enabledNo PoE power consumption	132.35 W
Operating	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.)

Item	Description
temperature	NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">• The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 69.8 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02358599

4.21.4 S5720-56C-PWR-HI-AC1

Version Mapping

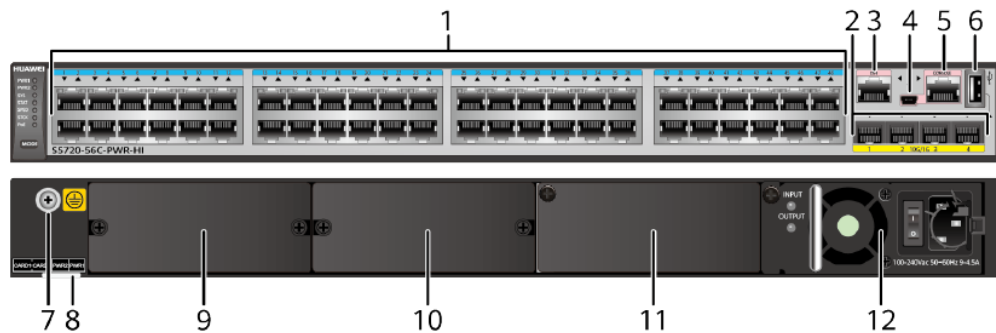
Table 4-1031 lists the mapping between the S5720-56C-PWR-HI-AC1 chassis and software versions.

Table 4-1031 Version mapping

Series	Model	Software Version
S5720-HI	S5720-56C-PWR-HI-AC1	V200R009C00 to V200R019C10 versions

Appearance and Structure

Figure 4-413 S5720-56C-PWR-HI-AC1 appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	One ETH management port	4	One mini USB port
5	One console port	6	One USB port
7	Ground screw NOTE It is used with a 9.1 Ground Cable.	8	ESN label NOTE You can draw it out to view the ESN and MAC address of the switch.

9	Rear card slot 1 NOTE This slot is reserved for future use.	10	Rear card slot 2 NOTE Card supported: 8.19 ES5D21X04S01 (4-Port 10 GE SFP+ Rear Interface Card)
11	Power module slot 2 NOTE Applicable power module: 5.7 W2PSA0580 (580 W AC PoE Power Module)	12	Power module slot 1 NOTE Applicable power module: 5.7 W2PSA0580 (580 W AC PoE Power Module)

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-1032 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-1032 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-1033 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-1033 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1034.

Table 4-1034 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1035 describes the attributes of an ETH management port.

Table 4-1035 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you

cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5720-56C-PWR-HI-AC1 has the same types of indicators as the S5720-56C-PWR-HI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-56C-PWR-HI-AC1 is a PoE switch and uses 580 W AC PoE power modules. It has two power module slots. Table 4-1036 lists its power supply configurations.

Table 4-1036 Power supply configurations

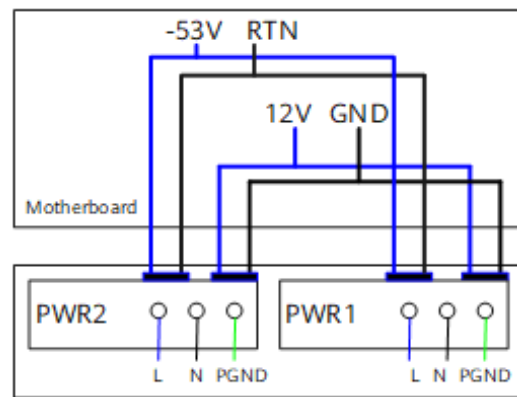
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
580 W	-	369.6 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 24 • 802.3at (30 W per port): 12
580 W	580 W	739.2 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 48 • 802.3at (30 W per port): 24

NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

Figure 4-414 shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

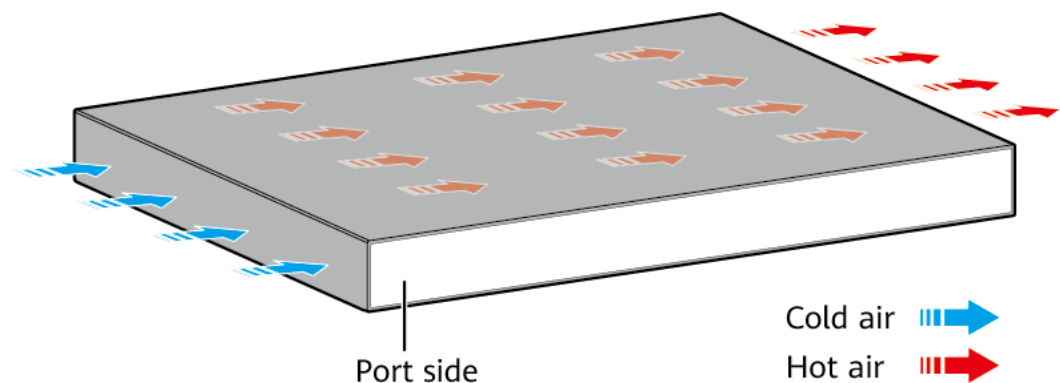
Figure 4-414 Power supply by dual AC PoE power modules



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground RTN: -53 V reference ground

Heat Dissipation

The S5720-56C-PWR-HI-AC1 has five built-in fans for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1037 lists technical specifications of the S5720-56C-PWR-HI-AC1.

Table 4-1037 Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between	39.31 years when no interface card is configured; 37.53 years when

Item	Description
failures (MTBF)	a 4-port 10GE interface card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 1 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.7 mm (1.75 in. x 17.4 in. x 16.72 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.8 mm (1.75 in. x 17.4 in. x 17.79 in.)
Weight (with packaging)	10.6 kg (23.37 lb)
Stack ports	Four fixed 10GE SFP+ ports on the front panel or ports on the 4-port 10GE SFP+ rear interface card
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, 100% PoE loads, full speed of fans)	Not providing the PoE function: 188.74 W 100% PoE loads: 1036 W (system power consumption: 296 W, PoE: 740 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">Tested according to ATIS standardEEE enabledNo PoE power consumption	137.8 W
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220

Item	Description
	m (722 ft.).
Short-term operating temperature	<p>-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none">• The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 64.6 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02350MTQ

4.22 S5730-HI

4.22.1 S5730-36C-HI

Version Mapping

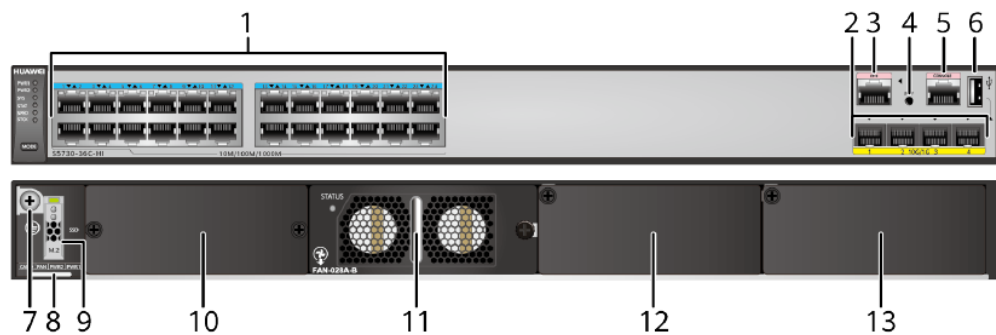
Table 4-1038 lists the mapping between the S5730-36C-HI chassis and software versions.

Table 4-1038 Version mapping

Series	Model	Software Version
S5730-HI	S5730-36C-HI	V200R012C00 to V200R019C10 versions

Appearance and Structure

Figure 4-415 S5730-36C-HI appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	One ETH management port	4	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.

5	One console port	6	One USB port
7	Ground screw NOTE It is used with a 9.1 Ground Cable.	8	ESN label NOTE You can draw it out to view the ESN and MAC address of the switch.
9	SSD card slot NOTE Pluggable SSD card supported: 11.1 SSD-240GB (240 GB SSD Card)	10	Rear card slot NOTE Cards supported: <ul style="list-style-type: none"> 8.15 ES5D21Q02Q00 (2-Port 40 Gig QSFP+ Rear Interface Card) 8.23 ES5D21X08T00 (8-Port 10GBASE-T RJ45 Rear Interface Card) 8.22 ES5D21X08S00 (8-Port 10GE SFP+ Rear Optical Interface Card)
11	Fan slot NOTE Applicable fan module: 7.3 FAN-028A-B Fan Module	12	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none"> 5.2 LS5M100PWA00/ES0W2PSA0150 (150 W AC Power Module) 5.3 LS5M100PWD00/ES0W2PSD0150 (150 W DC Power Module)
13	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> 5.2 LS5M100PWA00/ES0W2PSA0150 (150 W AC Power Module) 5.3 LS5M100PWD00/ES0W2PSD0150 (150 W DC Power Module) 	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-1039 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-1039 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing

Attribute	Description
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-1040 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-1040 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1041.

Table 4-1041 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management

port is faster than transfer through the console port. Table 4-1042 describes the attributes of an ETH management port.

Table 4-1042 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

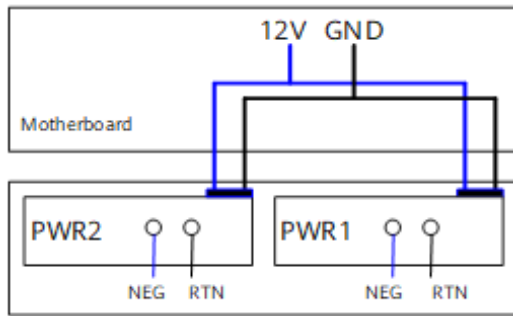
The S5730-36C-HI has similar indicators to those of the S5730-44C-PWH-HI except that the S5730-36C-HI does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5730-36C-HI uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

Figure 4-416 shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

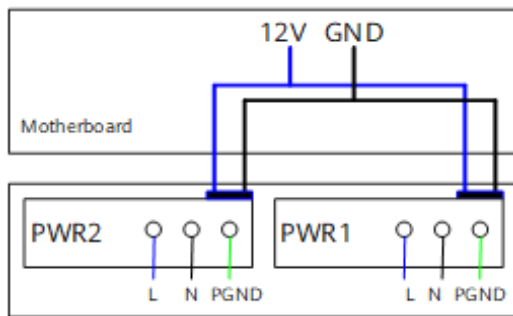
Figure 4-416 Power supply connections of dual DC power modules



NEG: negative wire RTN: positive wire GND: 12 V reference ground

Figure 4-417 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

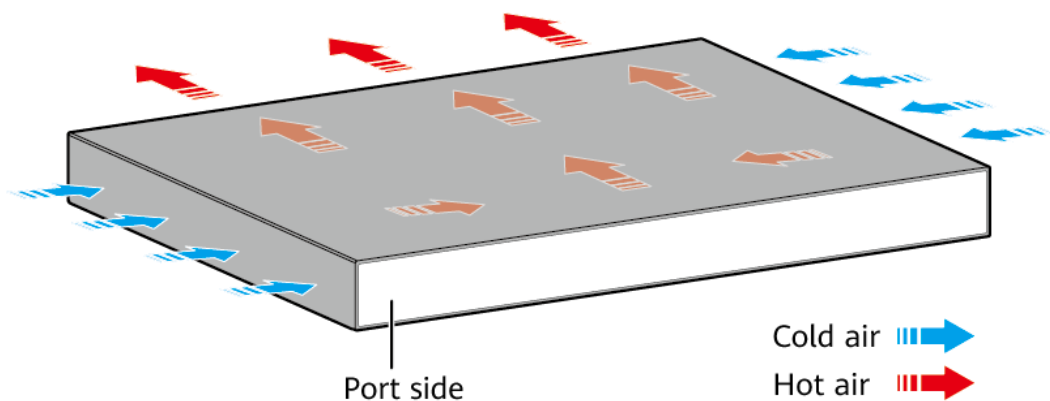
Figure 4-417 Power supply connections of dual AC power modules



L: Live wire N: Neutral wire PGND: Protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5730-36C-HI uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



 NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1043 lists technical specifications of the S5730-36C-HI.

Table 4-1043 Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	1 GB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	47.53 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	<ul style="list-style-type: none">Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common modeUsing DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.7 mm (1.75 in. x 17.4 in. x 16.72 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.8 mm (1.75 in. x 17.4 in. x 17.79 in.)
Weight (with packaging)	8.6 kg (18.96 lb)
Stack ports	10GE SFP+ ports on the front panel, or 10GE ports or 40GE QSFP+ ports on the rear card
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power	74 W (without card)

Item	Description
consumption (100% throughput, full speed of fans)	
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	58 W (without card)
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 52.9 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none">• AC power modules configured: 0-5000 m (0-16404 ft.)• DC power modules configured: 0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02351MQJ

4.22.2 S5730-36C-PWH-HI

Version Mapping

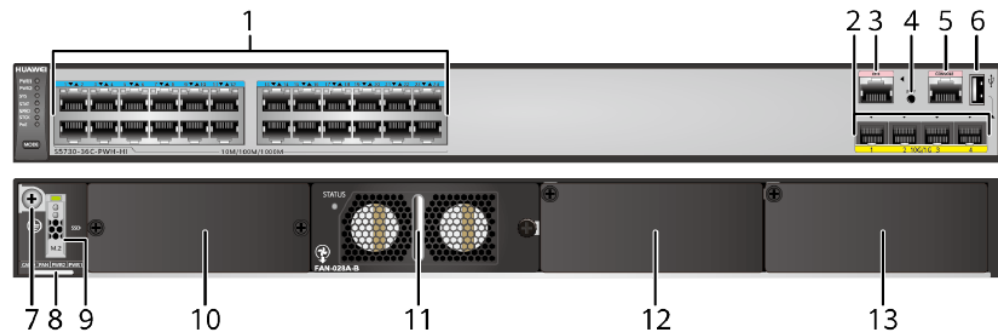
Table 4-1044 lists the mapping between the S5730-36C-PWH-HI chassis and software versions.

Table 4-1044 Version mapping

Series	Model	Software Version
S5730-HI	S5730-36C-PWH-HI	V200R012C00 to V200R019C10 versions

Appearance and Structure

Figure 4-418 S5730-36C-PWH-HI appearance



1	Twenty-four PoE++ 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	One ETH management port	4	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
5	One console port	6	One USB port
7	Ground screw NOTE It is used with a 9.1 Ground Cable.	8	ESN label NOTE You can draw it out to view the ESN and

			MAC address of the switch.
9	<p>SSD card slot</p> <p>NOTE Pluggable SSD card supported: 11.1 SSD-240GB (240 GB SSD Card)</p>	10	<p>Rear card slot</p> <p>NOTE Cards supported:</p> <ul style="list-style-type: none"> • 8.15 ES5D21Q02Q00 (2-Port 40 Gig QSFP+ Rear Interface Card) • 8.23 ES5D21X08T00 (8-Port 10GBASE-T RJ45 Rear Interface Card) • 8.22 ES5D21X08S00 (8-Port 10GE SFP+ Rear Optical Interface Card)
11	<p>Fan slot</p> <p>NOTE Applicable fan module: 7.3 FAN-028A-B Fan Module</p>	12	<p>Power module slot 2</p> <p>NOTE Applicable power modules:</p> <ul style="list-style-type: none"> • 5.6 W0PSA5000/PAC-500WA-BE (500 W AC PoE Power Module) • 5.8 PDC-650WA-BE (650 W DC PoE Power Module) • 5.10 W2PSA1150 (1150 W AC PoE Power Module) • 5.9 PAC1000D5412 (1000 W AC PoE Power Module) (applicable in V200R013C00 and later versions)
13	<p>Power module slot 1</p> <p>NOTE Applicable power modules:</p> <ul style="list-style-type: none"> • 5.6 W0PSA5000/PAC-500WA-BE (500 W AC PoE Power Module) • 5.8 PDC-650WA-BE (650 W DC PoE Power Module) • 5.10 W2PSA1150 (1150 W AC PoE Power Module) • 5.9 PAC1000D5412 (1000 W AC PoE Power Module) (applicable in V200R013C00 and later versions) 	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-1045 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-1045 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab

Attribute	Description
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-1046 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-1046 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1047.

Table 4-1047 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the

ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1048 describes the attributes of an ETH management port.

Table 4-1048 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5730-36C-PWH-HI has the same types of indicators as the S5730-44C-PWH-HI. For details, see [Indicator Description](#).

Power Supply Configuration

The S5730-36C-PWH-HI is a PoE switch. It has two power module slots, each of which can have a 500 W, 650 W, 1150 W, or 1000 W (applicable in V200R013C00 and later versions) power module installed. A 500 W AC power module and a 650 W DC power module can be used together in the switch. A 1150 W AC power module and a 1000 W AC power module can be used together in the switch. Table 4-1049 lists its power supply configurations.

Table 4-1049 Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
500 W or 650 W	-	369.6 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 24 • 802.3at (30 W per port): 12 • 802.3bt (60 W per port): 6
500 W or 650 W	500 W or 650 W	739.2 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 24 • 802.3at (30 W per port): 24 • 802.3bt (60 W per port): 12
1150 W (220 V)	-	785.4 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 24 • 802.3at (30 W per port): 24 • 802.3bt (60 W per port): 13
1150 W (220 V)	1150 W (220 V)	1440 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 24 • 802.3at (30 W per port): 24 • 802.3bt (60 W per port): 24
1150 W (110 V)	-	446.6 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 24 • 802.3at (30 W per port): 14 • 802.3bt (60 W per port): 7
1150 W (110 V)	1150 W (110 V)	893.2 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 24 • 802.3at (30 W per port): 24 • 802.3bt (60 W per port): 14
1000 W (220 V)	-	754.6 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 24 • 802.3at (30 W per port): 24 • 802.3bt (60 W per port): 12

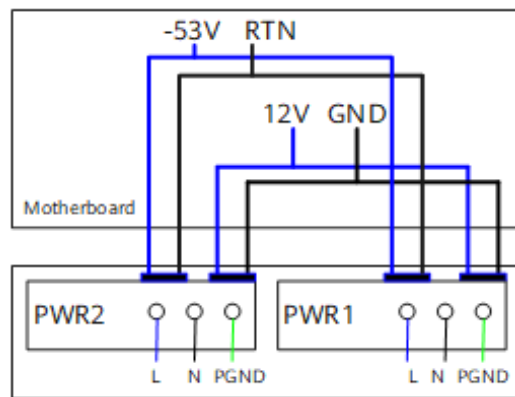
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W (220 V)	1000 W (220 V)	1440 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 24• 802.3at (30 W per port): 24• 802.3bt (60 W per port): 24
1000 W (110 V)	-	754.6 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 24• 802.3at (30 W per port): 24• 802.3bt (60 W per port): 12
1000 W (110 V)	1000 W (110 V)	1440 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 24• 802.3at (30 W per port): 24• 802.3bt (60 W per port): 24
1000 W (220 V)	1150 W (220 V)	1440 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 24• 802.3at (30 W per port): 24• 802.3bt (60 W per port): 24
1150 W (220 V)	1000 W (220 V)	1440 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 24• 802.3at (30 W per port): 24• 802.3bt (60 W per port): 24
1000 W (110 V)	1150 W (110 V)	893.2 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 24• 802.3at (30 W per port): 24• 802.3bt (60 W per port): 14
1150 W (110 V)	1000 W (110 V)	893.2 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 24• 802.3at (30 W per port): 24• 802.3bt (60 W per port): 14

NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

Figure 4-419 shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

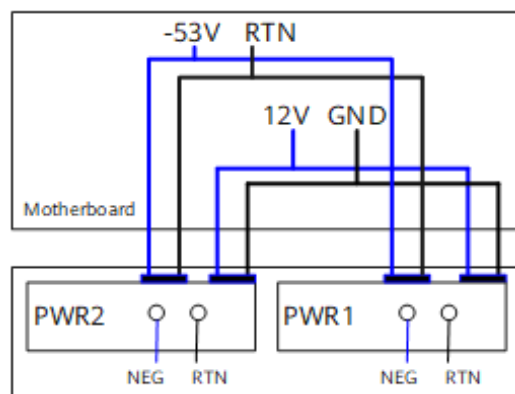
Figure 4-419 Power supply by dual AC PoE power modules



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground RTN: -53 V reference ground

Figure 4-420 shows the power supply connections of dual DC PoE power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V and -53 V output voltages, and the motherboard provides 12 V voltage for the entire device and -53 V voltage for the PDs.

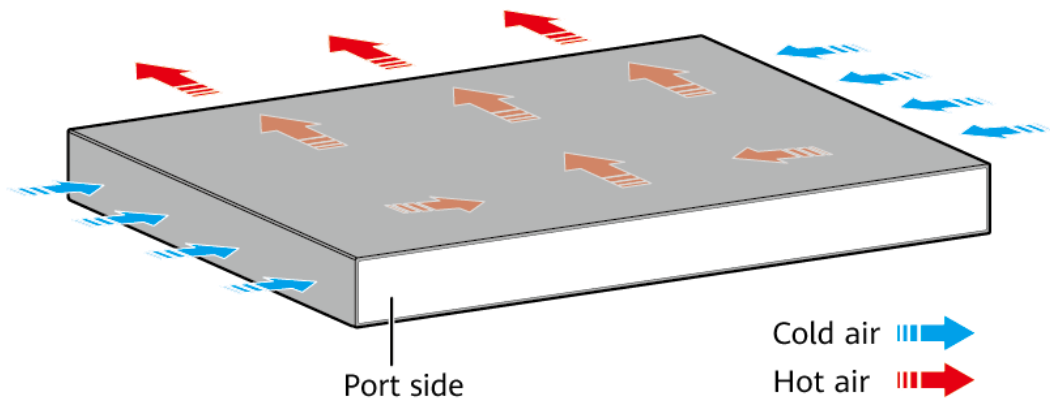
Figure 4-420 Power supply connections of dual DC PoE power modules



NEG: negative wire RTN: positive wire GND: 12 V reference ground RTN: -53 V reference ground

Heat Dissipation

The S5730-36C-PWH-HI uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1050 lists technical specifications of the S5730-36C-PWH-HI.

Table 4-1050 Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	1 GB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	53.93 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	<ul style="list-style-type: none"> Using 500 W AC or 1000 W AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using 650 W DC or 1150 W AC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.7 mm (1.75 in. x 17.4 in. x 16.72 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.8 mm (1.75 in. x 17.4 in. x 17.79 in.) <p>When 1150 W power modules are installed, they stretch out from the</p>

Item	Description
	chassis. Therefore, the total depth of the switch changes to 541.1 mm (21.3 in.).
Weight (with packaging)	8.8 kg (19.40 lb)
Stack ports	10GE SFP+ ports on the front panel, or 10GE ports or 40GE QSFP+ ports on the rear card
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> • Using 650 W DC or 500 W AC power modules: <ul style="list-style-type: none"> – Not providing the PoE function: 90 W (without card) – 100% PoE loads: 815 W (system power consumption: 75.8 W, PoE: 739.2 W, without card) • Using 1150 W AC or 1000 W AC power modules: <ul style="list-style-type: none"> – Not providing the PoE function: 105.9 W (without card) – 100% PoE loads: 1595 W (system power consumption: 155 W, PoE: 1440 W, without card)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	Using 650 W DC or 500 W AC power modules: 66 W (without card) Using 1150 W AC or 1000 W AC power modules: 73 W (without card)
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 69 dB(A)

Item	Description
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02351MQN

4.22.3 S5730-36C-HI-24S

Version Mapping

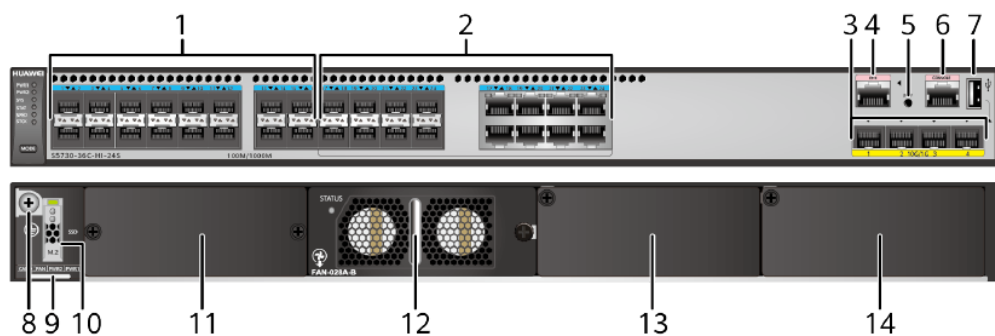
Table 4-1051 lists the mapping between the S5730-36C-HI-24S chassis and software versions.

Table 4-1051 Version mapping

Series	Model	Software Version
S5730-HI	S5730-36C-HI-24S	V200R013C00 to V200R019C10 versions

Appearance and Structure

Figure 4-421 S5730-36C-HI-24S appearance



1	<p>Sixteen 100/1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules 	2	<p>Eight combo ports (10/100/1000BASE-T + 100/1000BASE-X)</p> <p>Modules applicable to combo optical ports:</p> <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules
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	<ul style="list-style-type: none"> • 10.10 GE SFP Copper Modules • 10.8 GE-CWDM eSFP Optical Modules (Used Only in the OADM scenario) 		<ul style="list-style-type: none"> • 10.7 GE-CWDM eSFP Optical Modules • 10.8 GE-CWDM eSFP Optical Modules (Used Only in the OADM scenario)
3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable 	4	One ETH management port
5	<p>One PNP button</p> <p>NOTICE</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	6	One console port
7	One USB port	8	<p>Ground screw</p> <p>NOTE</p> <p>It is used with a 9.1 Ground Cable.</p>
9	<p>ESN label</p> <p>NOTE</p> <p>You can draw it out to view the ESN and MAC address of the switch.</p>	10	<p>SSD card slot</p> <p>NOTE</p> <p>Pluggable SSD card supported: 11.1 SSD-240GB (240 GB SSD Card)</p>
11	<p>Rear card slot</p> <p>NOTE</p> <p>Cards supported:</p> <ul style="list-style-type: none"> • 8.15 ES5D21Q02Q00 (2-Port 40 Gig QSFP+ Rear Interface Card) • 8.23 ES5D21X08T00 (8-Port 10GBASE-T RJ45 Rear Interface Card) • 8.22 ES5D21X08S00 (8-Port 10GE 	12	<p>Fan slot</p> <p>NOTE</p> <p>Applicable fan module: 7.3 FAN-028A-B Fan Module</p>

SFP+ Rear Optical Interface Card)			
13	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none"> 5.2 LS5M100PWA00/ES0W2PSA0150 (150 W AC Power Module) 5.3 LS5M100PWD00/ES0W2PSD0150 (150 W DC Power Module) 	14	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> 5.2 LS5M100PWA00/ES0W2PSA0150 (150 W AC Power Module) 5.3 LS5M100PWD00/ES0W2PSD0150 (150 W DC Power Module)

Port Description

100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. Table 4-1052 describes the attributes of a 100/1000BASE-X port.

Table 4-1052 Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

Combo port

A combo port consists of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. The electrical and optical ports of a combo port are multiplexed, and only one of them can work at a time. When one of the Ethernet ports is working, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-1053 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-1053 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1054.

Table 4-1054 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1055 describes the attributes of an ETH management port.

Table 4-1055 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards	IEEE802.3

Attribute	Description
compliance	
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

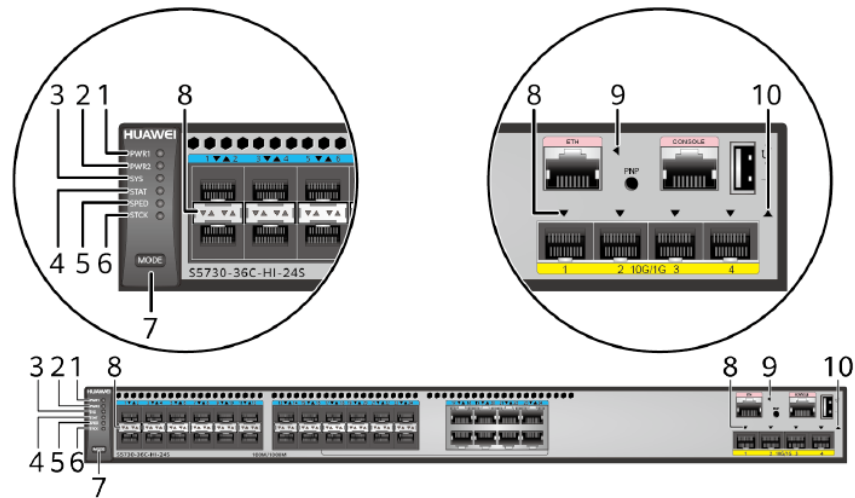
Indicator Description

NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
- If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
- If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 4-422 Indicators on the S5730-36C-HI-24S



NOTE

The S5730-HI series switches provide a command for setting fault indicators, which help field maintenance personnel find a faulty switch quickly.

The SYS indicator and mode indicators (STAT, SPED, and STCK) are used as fault indicators. When an S5730-HI switch is faulty, you can run the command to turn on the fault indicators. Then the SYS indicator and mode indicators fast blink red to help field maintenance personnel quickly find the faulty switch.

Table 4-1056 Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR 1	Power module indicator	-	Off	No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 1 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none"> A power module is available in this slot but its power switch is in the OFF position. A power module is available in this slot but it is not connected to a power source. The power module in this slot has failed.
2	PWR 2	Power module indicator	-	Off	No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.

No.	Indicator	Name	Color	Status	Description
			Green	Steady on	A power module is installed in power module slot 2 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 2: <ul style="list-style-type: none"> A power module is available in this slot but its power switch is in the OFF position. A power module is available in this slot but it is not connected to a power source. The power module in this slot has failed.
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Steady on	In the system startup preparation phase, the SYS indicator is steady green for no more than 15 seconds.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or temperature alarm has been generated.
4	STAT	Status indicator	-	Off	The status mode is not selected.
			Green	Steady on	The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
5	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The service port indicators show the port speeds. After 45 seconds, the service port indicators automatically restore to the status mode.
6	STCK	Stack indicator	-	Off	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is in stack standby or slave state or the stacking function is not enabled on the switch. If you are changing the indicator mode: The stack mode is not selected.
			Green	Steady on	The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.

No.	Indicator	Name	Color	Status	Description
			Green	Blinking	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is a stack master switch or a standalone switch with the stacking function enabled. If you are changing the indicator mode: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>
7	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> When you press this button once, the service port indicators change to the speed mode and show the speed of each service port. When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch. When you press this button a third time, the service port indicators restore to the default mode, and the STAT indicator turns green. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED indicator is off, and the STCK indicator is off or blinking green.</p>
8	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see Table 4-1057 and Table 4-1058.		
9	-	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The ETH port is sending or receiving data.
10	-	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> No USB flash drive is connected to the switch. The USB port is damaged. The indicator is damaged. The USB flash drive does not have any configuration file and cannot be used for deployment. The switch has been upgraded using the

No.	Indicator	Name	Color	Status	Description
					USB flash drive and is restarting.
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from the USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

Table 4-1057 Description of service port indicators in different modes (two indicators for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Yellow	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green and yellow	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 100M/1000M port: The port is operating at 100 Mbit/s.
	Green and yellow	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 100M/1000M port: The port is operating at 1000 Mbit/s.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green and yellow	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
	Green and	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is blinking, the number

Display Mode	Color	Status	Description
	yellow		<p>of this port is the stack ID of the switch.</p> <ul style="list-style-type: none"> If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Table 4-1058 Description of service port indicators in different modes (one indicator for each port)

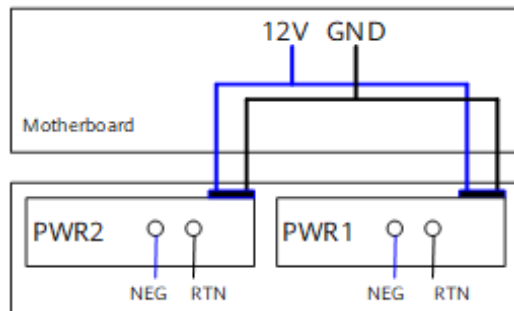
Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	<p>10M/100M/1000M port: The port is operating at 10/100 Mbit/s.</p> <p>1000M/10GE port: The port is operating at 1000 Mbit/s.</p>
	Green	Blinking	<p>10M/100M/1000M port: The port is operating at 1000 Mbit/s.</p> <p>1000M/10GE port: The port is operating at 10 Gbit/s.</p>
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	<p>The switch is not the master switch in a stack.</p> <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
	Green	Blinking	<p>The switch is the master switch in a stack.</p> <ul style="list-style-type: none"> If the indicator of a port is blinking, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Power Supply Configuration

The S5730-36C-HI-24S uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

Figure 4-423 shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

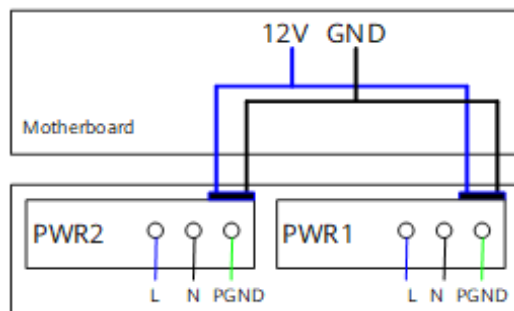
Figure 4-423 Power supply connections of dual DC power modules



NEG: negative wire RTN: positive wire GND: 12 V reference ground

Figure 4-424 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

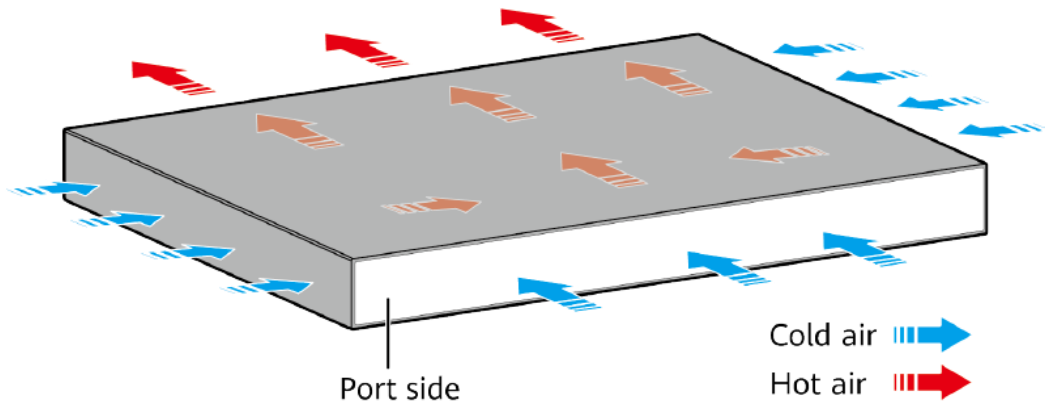
Figure 4-424 Power supply connections of dual AC power modules



L: Live wire N: Neutral wire PGND: Protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5730-36C-HI-24S uses pluggable fan modules for forced air cooling. Air flows in from the left side, right side, and front panel, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1059 lists specifications of the S5730-36C-HI-24S.

Table 4-1059 Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	1 GB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	48.12 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.7 mm (1.75 in. x 17.4 in. x 16.72 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.8 mm (1.75 in. x 17.4 in. x 17.79 in.)
Weight (with packaging)	9.49 kg (20.92 lb)
Stack ports	10GE SFP+ ports on the front panel, or 10GE ports or 40GE QSFP+ ports on the rear card

Item	Description
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	79 W (without card)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	66 W (without card)
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">• The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.

Item	Description
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 62 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none"> AC power modules configured: 0-5000 m (0-16404 ft.) DC power modules configured: 0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none"> EMC certification Safety certification Manufacturing certification
Part number	02351XFQ

4.22.4 S5730-44C-HI

Version Mapping

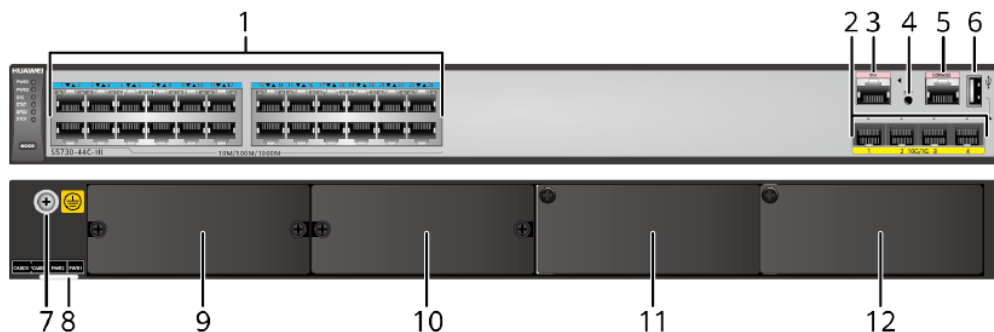
Table 4-1060 lists the mapping between the S5730-44C-HI chassis and software versions.

Table 4-1060 Version mapping

Series	Model	Software Version
S5730-HI	S5730-44C-HI	V200R012C00 to V200R019C10 versions

Appearance and Structure

Figure 4-425 S5730-44C-HI appearance



1	Twenty-four 10/100/1000BASE-T	2	Four 10GE SFP+ ports
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	ports		<p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	One ETH management port	4	<p>One PNP button</p> <p>NOTICE</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
5	One console port	6	One USB port
7	<p>Ground screw</p> <p>NOTE</p> <p>It is used with a 9.1 Ground Cable.</p>	8	<p>ESN label</p> <p>NOTE</p> <p>You can draw it out to view the ESN and MAC address of the switch.</p>
9	<p>Rear card slot 1</p> <p>NOTE</p> <p>Cards supported:</p> <ul style="list-style-type: none"> • 8.15 ES5D21Q02Q00 (2-Port 40 Gig QSFP+ Rear Interface Card) • 8.23 ES5D21X08T00 (8-Port 10GBASE-T RJ45 Rear Interface Card) • 8.22 ES5D21X08S00 (8-Port 10GE SFP+ Rear Optical Interface Card) 	10	<p>Rear card slot 2</p> <p>NOTE</p> <p>This slot is reserved for future use.</p>
11	<p>Power module slot 2</p> <p>NOTE</p> <p>Applicable power modules:</p> <ul style="list-style-type: none"> • 5.2 LS5M100PWA00/ES0W2PSA0150 (150 W AC Power Module) • 5.3 LS5M100PWD00/ES0W2PSD0150 (150 W DC Power Module) 	12	<p>Power module slot 1</p> <p>NOTE</p> <p>Applicable power modules:</p> <ul style="list-style-type: none"> • 5.2 LS5M100PWA00/ES0W2PSA0150 (150 W AC Power Module) • 5.3 LS5M100PWD00/ES0W2PSD0150 (150 W DC Power Module)

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-1061 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-1061 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-1062 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-1062 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1063.

Table 4-1063 Attributes of a console port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1064 describes the attributes of an ETH management port.

Table 4-1064 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

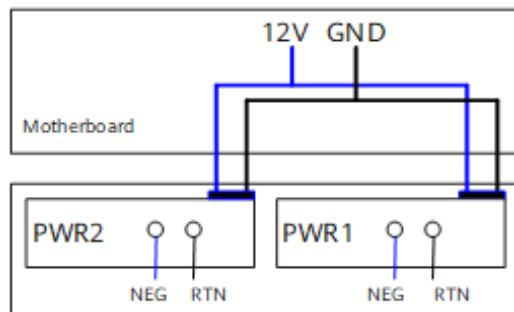
The S5730-44C-HI has similar indicators to those of the S5730-44C-PWH-HI except that the S5730-44C-HI does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5730-44C-HI uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

Figure 4-426 shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

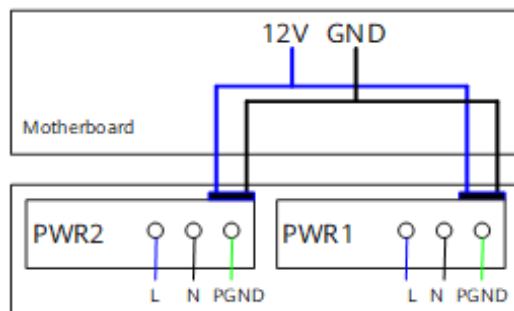
Figure 4-426 Power supply connections of dual DC power modules



NEG: negative wire RTN: positive wire GND: 12 V reference ground

Figure 4-427 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

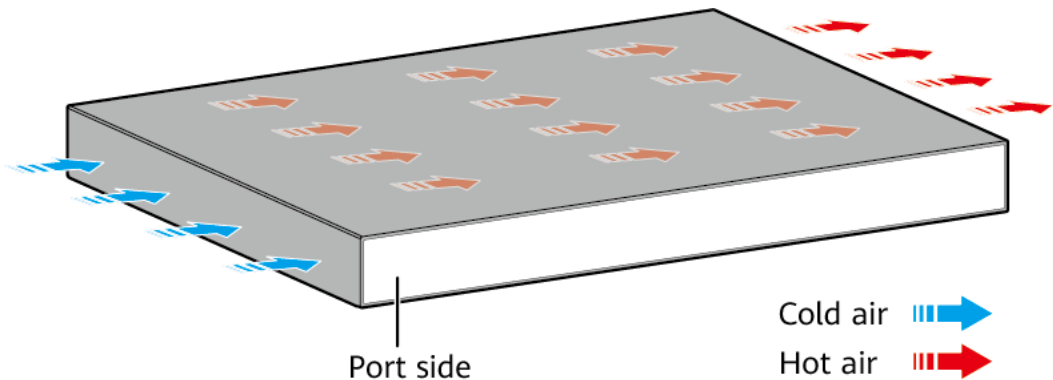
Figure 4-427 Power supply connections of dual AC power modules



L: Live wire N: Neutral wire PGND: Protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5730-44C-HI has three built-in fans for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1065 lists technical specifications of the S5730-44C-HI.

Table 4-1065 Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	1 GB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	50.95 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.7 mm (1.75 in. x 17.4 in. x 16.72 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.8 mm (1.75 in. x 17.4 in. x 17.79 in.)
Weight (with	8.5 kg (18.74 lb)

Item	Description
packaging)	
Stack ports	10GE SFP+ ports on the front panel, or 10GE ports or 40GE QSFP+ ports on the rear card
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	76.5 W (without card)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	54 W (without card)
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 55.6 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none">• AC power modules configured: 0-5000 m (0-16404 ft.)• DC power modules configured: 0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification

Item	Description
Part number	02351MQG

4.22.5 S5730-44C-PWH-HI

Version Mapping

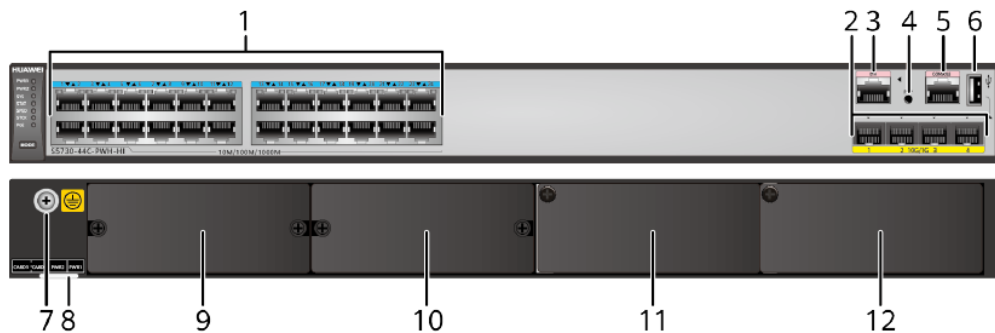
Table 4-1066 lists the mapping between the S5730-44C-PWH-HI chassis and software versions.

Table 4-1066 Version mapping

Series	Model	Software Version
S5730-HI	S5730-44C-PWH-HI	V200R012C00 to V200R019C10 versions

Appearance and Structure

Figure 4-428 S5730-44C-PWH-HI appearance



1	Twenty-four PoE++ 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules
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			<ul style="list-style-type: none"> 9.15 Copper Cable 9.3 Optical Fiber 9.14 Dedicated Stack Cable
3	One ETH management port	4	<p>One PNP button</p> <p>NOTICE</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
5	One console port	6	One USB port
7	<p>Ground screw</p> <p>NOTE</p> <p>It is used with a 9.1 Ground Cable.</p>	8	<p>ESN label</p> <p>NOTE</p> <p>You can draw it out to view the ESN and MAC address of the switch.</p>
9	<p>Rear card slot 1</p> <p>NOTE</p> <p>Cards supported:</p> <ul style="list-style-type: none"> 8.15 ES5D21Q02Q00 (2-Port 40 Gig QSFP+ Rear Interface Card) 8.23 ES5D21X08T00 (8-Port 10GBASE-T RJ45 Rear Interface Card) 8.22 ES5D21X08S00 (8-Port 10GE SFP+ Rear Optical Interface Card) 	10	<p>Rear card slot 2</p> <p>NOTE</p> <p>This slot is reserved for future use.</p>
11	<p>Power module slot 2</p> <p>NOTE</p> <p>Applicable power modules:</p> <ul style="list-style-type: none"> 5.6 W0PSA5000/PAC-500WA-BE (500 W AC PoE Power Module) 5.8 PDC-650WA-BE (650 W DC PoE Power Module) 5.10 W2PSA1150 (1150 W AC PoE Power Module) 5.9 PAC1000D5412 (1000 W AC PoE Power Module) (applicable in V200R013C00 and later versions) 	12	<p>Power module slot 1</p> <p>NOTE</p> <p>Applicable power modules:</p> <ul style="list-style-type: none"> 5.6 W0PSA5000/PAC-500WA-BE (500 W AC PoE Power Module) 5.8 PDC-650WA-BE (650 W DC PoE Power Module) 5.10 W2PSA1150 (1150 W AC PoE Power Module) 5.9 PAC1000D5412 (1000 W AC PoE Power Module) (applicable in V200R013C00 and later versions)

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-1067 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-1067 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-1068 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-1068 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1069.

Table 4-1069 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1070 describes the attributes of an ETH management port.

Table 4-1070 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

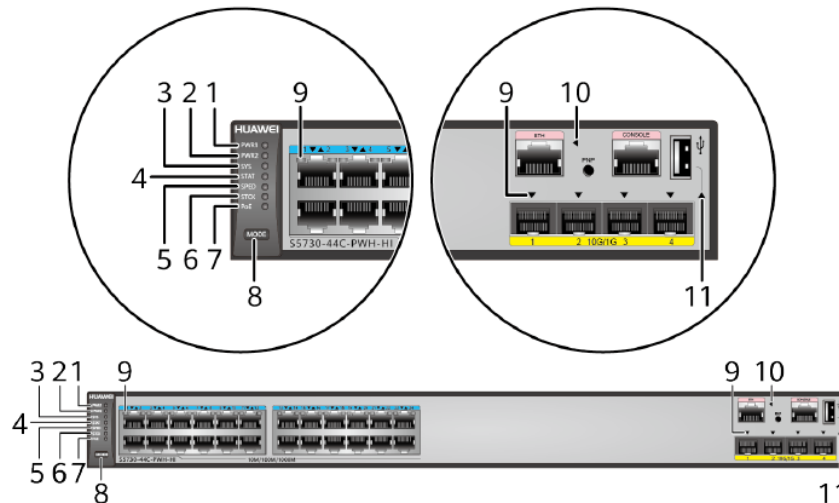
NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
- If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.

- If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 4-429 Indicators on the S5730-44C-PWH-HI



NOTE

The S5730-HI series switches provide a command for setting fault indicators, which help field maintenance personnel find a faulty switch quickly.

The SYS indicator and mode indicators (STAT, SPED, STCK, and PoE) are used as fault indicators. When an S5730-HI switch is faulty, you can run the command to turn on the fault indicators. Then the SYS indicator and mode indicators fast blink red to help field maintenance personnel quickly find the faulty switch.

Table 4-1071 Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR 1	Power module indicator	-	Off	No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 1 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none"> • A power module is available in this slot but its power switch is in the OFF position. • A power module is available in this slot but it is not connected to a power source. • The power module in this slot has failed.

No.	Indicator	Name	Color	Status	Description
2	PWR 2	Power module indicator	-	Off	No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 2 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 2: <ul style="list-style-type: none"> A power module is available in this slot but its power switch is in the OFF position. A power module is available in this slot but it is not connected to a power source. The power module in this slot has failed.
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Steady on	In the system startup preparation phase, the SYS indicator is steady green for no more than 15 seconds.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or temperature alarm has been generated.
4	STAT	Status indicator	-	Off	The status mode is not selected.
			Green	Steady on	The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
5	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The service port indicators show the port speeds. After 45 seconds, the service port indicators automatically restore to the status mode.
6	STCK	Stack indicator	-	Off	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is in stack standby or slave state or the stacking function is not enabled on the switch. If you are changing the indicator mode: The stack mode is not selected.

No.	Indicator	Name	Color	Status	Description
			Green	Steady on	The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is a stack master switch or a standalone switch with the stacking function enabled. If you are changing the indicator mode: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>
7	PoE	PoE indicator	-	Off	The PoE mode is not selected.
			Green	Steady on	The service port indicators show the PoE status. After 45 seconds, the service port indicators automatically restore to the status mode.
8	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> When you press this button once, the service port indicators change to the speed mode and show the speed of each service port. When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch. When you press this button a third time, the service port indicators change to the PoE mode and show the PoE status of each service port. When you press this button a fourth time, the service port indicators restore to the default mode, and the STAT indicator turns green. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED and PoE indicators are off, and the STCK indicator is off or blinking green.</p>
9	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see Table 4-1072.		
10	-	ETH	-	Off	The ETH port is not connected.

No.	Indicator	Name	Color	Status	Description
		port indicator	Green	Steady on	The ETH port is connected.
			Green	Blinking	The ETH port is sending or receiving data.
11	-	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> No USB flash drive is connected to the switch. The USB port is damaged. The indicator is damaged. The USB flash drive does not have any configuration file and cannot be used for deployment. The switch has been upgraded using the USB flash drive and is restarting.
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from the USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

Table 4-1072 Description of service port indicators in different modes

Display Mode	Color	Description
Status	Green	<ul style="list-style-type: none"> Off: The port is not connected or has been shut down. Steady on: The port is connected. Blinking: The port is sending or receiving data.
Speed	Green	<ul style="list-style-type: none"> Off: The port is not connected or has been shut down. Steady on: <ul style="list-style-type: none"> 10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s. Blinking:

Display Mode	Color	Description
		<p>10M/100M/1000M port: The port is operating at 1000 Mbit/s.</p> <p>1000M/10GE port: The port is operating at 10 Gbit/s.</p>
PoE	Green	<ul style="list-style-type: none"> Off: The port does not provide PoE power. Steady on: The port is providing PoE power. Blinking: The PD connected to the port is not a standard PD or its power exceeds the maximum power or power threshold of the port.
Stack	Green	<ul style="list-style-type: none"> Off: The STCK mode is not selected. If the indicator is steady on, the switch is not a master switch: <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0. If the indicator is blinking, the switch is a master switch: <ul style="list-style-type: none"> If the indicator of a port is blinking, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Power Supply Configuration

The S5730-44C-PWH-HI is a PoE switch. It has two power module slots, each of which can have a 500 W, 650 W, 1150 W, or 1000 W (applicable in V200R013C00 and later versions) power module installed. A 500 W AC power module and a 650 W DC power module can be used together in the switch. A 1150 W AC power module and a 1000 W AC power module can be used together in the switch. Table 4-1073 lists its power supply configurations.

Table 4-1073 Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
500 W	-	369.6 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port):

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
			12 • 802.3bt (60 W per port): 6
500 W	500 W	739.2 W	• 802.3af (15.4 W per port): 24 • 802.3at (30 W per port): 24 • 802.3bt (60 W per port): 12
650 W	-	350 W	• 802.3af (15.4 W per port): 22 • 802.3at (30 W per port): 11 • 802.3bt (60 W per port): 5
650 W	500 W or 650 W	700 W	• 802.3af (15.4 W per port): 24 • 802.3at (30 W per port): 23 • 802.3bt (60 W per port): 11
500 W or 650 W	650 W		
1150 W (220 V)	-	785.4 W	• 802.3af (15.4 W per port): 24 • 802.3at (30 W per port): 24 • 802.3bt (60 W per port): 13
1150 W (220 V)	1150 W (220 V)	1440 W	• 802.3af (15.4 W per port): 24 • 802.3at (30 W per port): 24 • 802.3bt (60 W per port): 24
1150 W (110 V)	-	446.6 W	• 802.3af (15.4 W per port): 24 • 802.3at (30 W per port): 14 • 802.3bt (60 W per port): 7
1150 W (110 V)	1150 W (110 V)	893.2 W	• 802.3af (15.4 W per port): 24 • 802.3at (30 W per port): 24 • 802.3bt (60 W per port): 14

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W (220 V)	-	754.6 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 24• 802.3at (30 W per port): 24• 802.3bt (60 W per port): 12
1000 W (220 V)	1000 W (220 V)	1440 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 24• 802.3at (30 W per port): 24• 802.3bt (60 W per port): 24
1000 W (110 V)	-	754.6 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 24• 802.3at (30 W per port): 24• 802.3bt (60 W per port): 12
1000 W (110 V)	1000 W (110 V)	1440 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 24• 802.3at (30 W per port): 24• 802.3bt (60 W per port): 24
1000 W (220 V)	1150 W (220 V)	1440 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 24• 802.3at (30 W per port): 24• 802.3bt (60 W per port): 24
1150 W (220 V)	1000 W (220 V)	1440 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 24• 802.3at (30 W per port): 24• 802.3bt (60 W per port): 24
1000 W (110 V)	1150 W (110 V)	893.2 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 24• 802.3at (30 W per port): 24• 802.3bt (60 W per port): 14

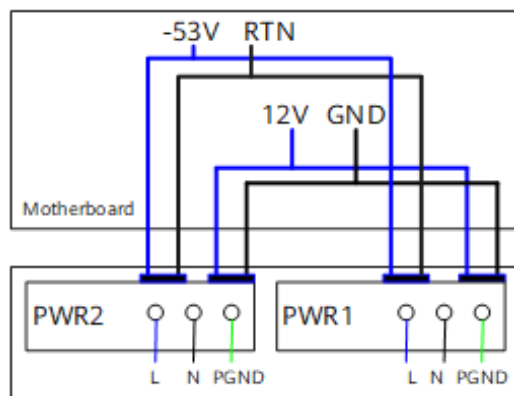
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1150 W (110 V)	1000 W (110 V)	893.2 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 24 802.3bt (60 W per port): 14

NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

Figure 4-430 shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

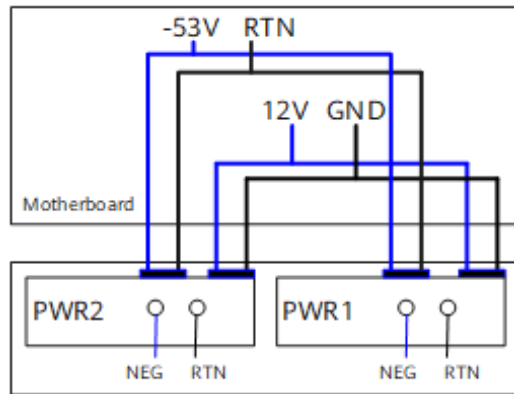
Figure 4-430 Power supply by dual AC PoE power modules



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground RTN: -53 V reference ground

Figure 4-431 shows the power supply connections of dual DC PoE power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V and -53 V output voltages, and the motherboard provides 12 V voltage for the entire device and -53 V voltage for the PDs.

Figure 4-431 Power supply connections of dual DC PoE power modules



NEG: negative wire

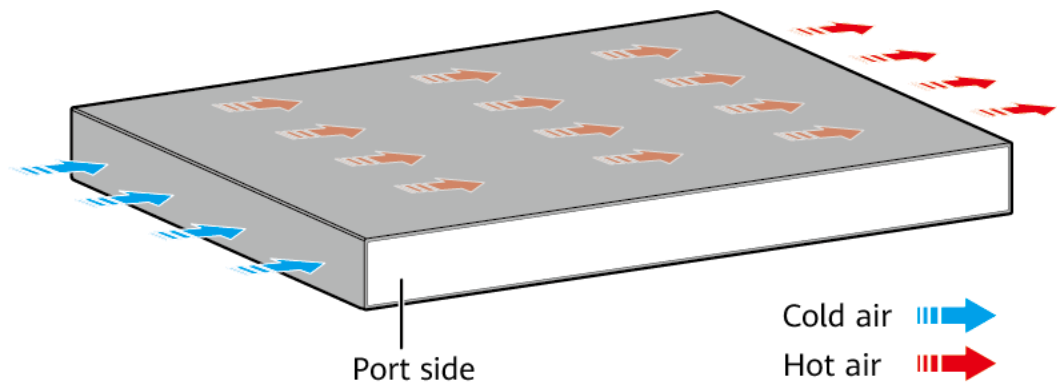
RTN: positive wire

GND: 12 V reference ground

RTN: -53 V reference ground

Heat Dissipation

The S5730-44C-PWH-HI has three built-in fans for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1074 lists technical specifications of the S5730-44C-PWH-HI.

Table 4-1074 Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	1 GB in total. To view the available flash memory size, run the display version command.
Mean time between	49.48 years

Item	Description
failures (MTBF)	
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	<ul style="list-style-type: none"> Using 500 W AC or 1000 W AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using 650 W DC or 1150 W AC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.7 mm (1.75 in. x 17.4 in. x 16.72 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.8 mm (1.75 in. x 17.4 in. x 17.79 in.) <p>When 1150 W power modules are installed, they stretch out from the chassis. Therefore, the total depth of the switch changes to 541.1 mm (21.3 in.).</p>
Weight (with packaging)	8.5 kg (18.74 lb)
Stack ports	10GE SFP+ ports on the front panel, or 10GE ports or 40GE QSFP+ ports on the rear card
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> Using 650 W DC power modules: <ul style="list-style-type: none"> Not providing the PoE function: 94 W (without card) 100% PoE loads: 830 W (system power consumption: 130 W, PoE: 700 W, without card) Using 500 W AC power modules: <ul style="list-style-type: none"> Not providing the PoE function: 94 W (without card) 100% PoE loads: 830 W (system power consumption: 90.8 W, PoE: 739.2 W, without card) Using 1150 W AC power modules or 1000 W AC power modules: <ul style="list-style-type: none"> Not providing the PoE function: 107.6 W (without card)

Item	Description
	– 100% PoE loads: 1596 W (system power consumption: 156 W, PoE: 1440 W, without card)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	Using 650 W DC or 500 W AC power modules: 65 W (without card) Using 1150 W AC or 1000 W AC power modules: 71 W (without card)
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 69.6 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02351LKB

4.22.6 S5730-44C-HI-24S

Version Mapping

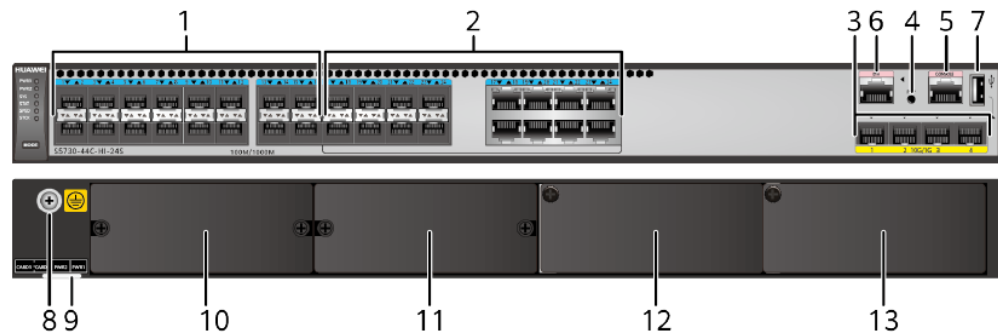
Table 4-1075 lists the mapping between the S5730-44C-HI-24S chassis and software versions.

Table 4-1075 Version mapping

Series	Model	Software Version
S5730-HI	S5730-44C-HI-24S	V200R012C00SPC110, V200R013C00 to V200R019C10 versions

Appearance and Structure

Figure 4-432 S5730-44C-HI-24S appearance



1	<p>Sixteen 100/1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.8 GE-CWDM eSFP Optical Modules (Used Only in the OADM scenario) 	2	<p>Eight combo ports (10/100/1000BASE-T + 100/1000BASE-X)</p> <p>Modules applicable to combo optical ports:</p> <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.8 GE-CWDM eSFP Optical Modules (Used Only in the OADM scenario)
3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable 	4	<p>One PNP button</p> <p>NOTICE</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
5	One console port	6	One ETH management port
7	One USB port	8	Ground screw

			NOTE It is used with a 9.1 Ground Cable.
9	ESN label NOTE You can draw it out to view the ESN and MAC address of the switch.	10	Rear card slot 1 NOTE Cards supported: <ul style="list-style-type: none"> 8.15 ES5D21Q02Q00 (2-Port 40 Gig QSFP+ Rear Interface Card) 8.23 ES5D21X08T00 (8-Port 10GBASE-T RJ45 Rear Interface Card) 8.22 ES5D21X08S00 (8-Port 10GE SFP+ Rear Optical Interface Card)
11	Rear card slot 2 NOTE This slot is reserved for future use.	12	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none"> 5.2 LS5M100PWA00/ES0W2PSA0150 (150 W AC Power Module) 5.3 LS5M100PWD00/ES0W2PSD0150 (150 W DC Power Module)
13	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> 5.2 LS5M100PWA00/ES0W2PSA0150 (150 W AC Power Module) 5.3 LS5M100PWD00/ES0W2PSD0150 (150 W DC Power Module) 	-	-

Port Description

100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. Table 4-1076 describes the attributes of a 100/1000BASE-X port.

Table 4-1076 Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

Combo port

A combo port consists of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. The electrical and optical ports of a combo port are multiplexed, and only one of them can work at a time. When one of the Ethernet ports is working, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-1077 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-1077 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1078.

Table 4-1078 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)

Attribute	Description
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1079 describes the attributes of an ETH management port.

Table 4-1079 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

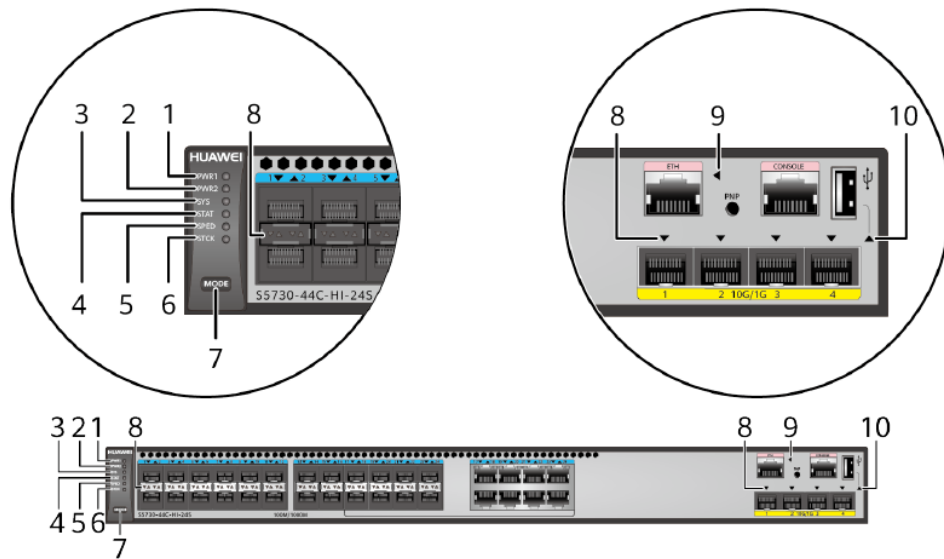
Indicator Description

NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
- If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
- If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 4-433 Indicators on the S5730-44C-HI-24S



NOTE

The S5730-HI series switches provide a command for setting fault indicators, which help field maintenance personnel find a faulty switch quickly.

The SYS indicator and mode indicators (STAT, SPED, and STCK) are used as fault indicators. When an S5730-HI switch is faulty, you can run the command to turn on the fault indicators. Then the SYS indicator and mode indicators fast blink red to help field maintenance personnel quickly find the faulty switch.

Table 4-1080 Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR1	Power module indicator	-	Off	No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 1 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 1:

No.	Indicator	Name	Color	Status	Description
					<ul style="list-style-type: none"> A power module is available in this slot but its power switch is in the OFF position. A power module is available in this slot but it is not connected to a power source. The power module in this slot has failed.
2	PWR 2	Power module indicator	-	Off	No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 2 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 2: <ul style="list-style-type: none"> A power module is available in this slot but its power switch is in the OFF position. A power module is available in this slot but it is not connected to a power source. The power module in this slot has failed.
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Steady on	In the system startup preparation phase, the SYS indicator is steady green for no more than 15 seconds.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or temperature alarm has been generated.
4	STAT	Status indicator	-	Off	The status mode is not selected.
			Green	Steady on	The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
5	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The service port indicators show the port speeds. After 45 seconds, the service port indicators automatically restore to the status mode.

No.	Indicator	Name	Color	Status	Description
6	STCK	Stack indicator	-	Off	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is in stack standby or slave state or the stacking function is not enabled on the switch. If you are changing the indicator mode: The stack mode is not selected.
			Green	Steady on	The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is a stack master switch or a standalone switch with the stacking function enabled. If you are changing the indicator mode: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>
7	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> When you press this button once, the service port indicators change to the speed mode and show the speed of each service port. When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch. When you press this button a third time, the service port indicators restore to the default mode, and the STAT indicator turns green. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED indicator is off, and the STCK indicator is off or blinking green.</p>
8	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see Table 4-1081 and Table 4-1082.		
9	-	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The ETH port is sending or receiving data.

No.	Indicator	Name	Color	Status	Description
			en	ng	
10	-	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> No USB flash drive is connected to the switch. The USB port is damaged. The indicator is damaged. The USB flash drive does not have any configuration file and cannot be used for deployment. The switch has been upgraded using the USB flash drive and is restarting.
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from the USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

Table 4-1081 Description of service port indicators in different modes (two indicators for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Yellow	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green and yellow	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 100M/1000M port: The port is operating at 100 Mbit/s.
	Green and yellow	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 100M/1000M port: The port is operating at 1000 Mbit/s.
Stack	-	Off	Port indicators do not show the stack ID of the

Display Mode	Color	Status	Description
			switch.
	Green and yellow	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
	Green and yellow	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is blinking, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Table 4-1082 Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
	Green	Blinking	The switch is the master switch in a stack.

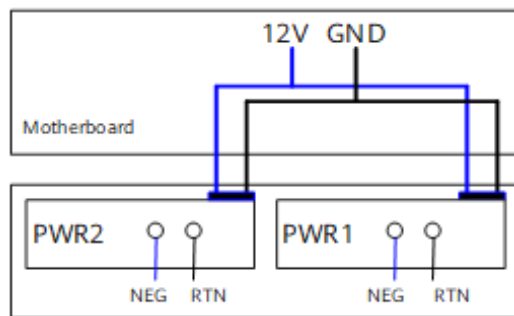
Display Mode	Color	Status	Description
			<ul style="list-style-type: none"> If the indicator of a port is blinking, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Power Supply Configuration

The S5730-44C-HI-24S uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

Figure 4-434 shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 4-434 Power supply connections of dual DC power modules



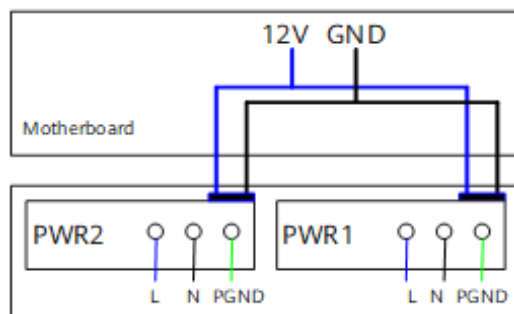
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

Figure 4-435 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 4-435 Power supply connections of dual AC power modules



L: Live wire

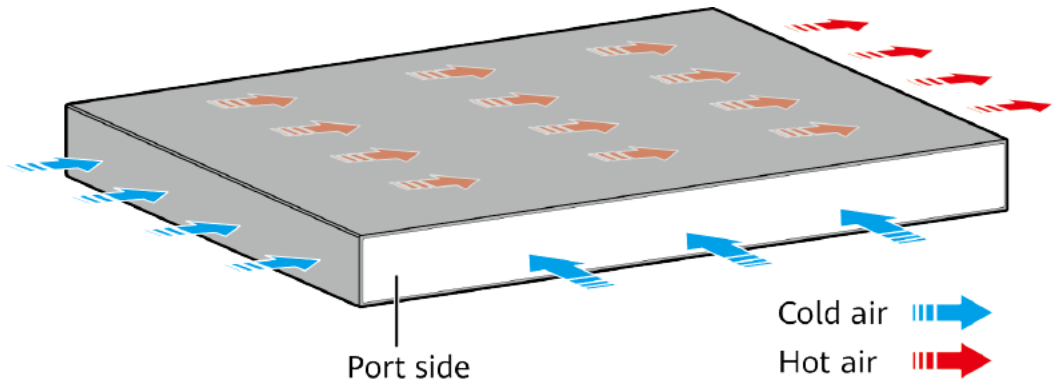
N: Neutral wire

PGND: Protection ground wire

GND: 12 V reference ground

Heat Dissipation

The S5730-44C-HI-24S has three built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1083 lists technical specifications of the S5730-44C-HI-24S.

Table 4-1083 Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	1 GB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	51.12 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.7 mm (1.75 in. x 17.4 in. x 16.72 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm

Item	Description
	x 451.8 mm (1.75 in. x 17.4 in. x 17.79 in.)
Weight (with packaging)	9.72 kg (21.43 lb)
Stack ports	10GE SFP+ ports on the front panel, or 10GE ports or 40GE QSFP+ ports on the rear card
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	78 W (without card)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	64 W (without card)
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 56.1 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none">• AC power modules configured: 0-5000 m (0-16404 ft.)• DC power modules configured: 0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification

Item	Description
	<ul style="list-style-type: none"> Manufacturing certification
Part number	02351XFR

4.22.7 S5730-60C-HI

Version Mapping

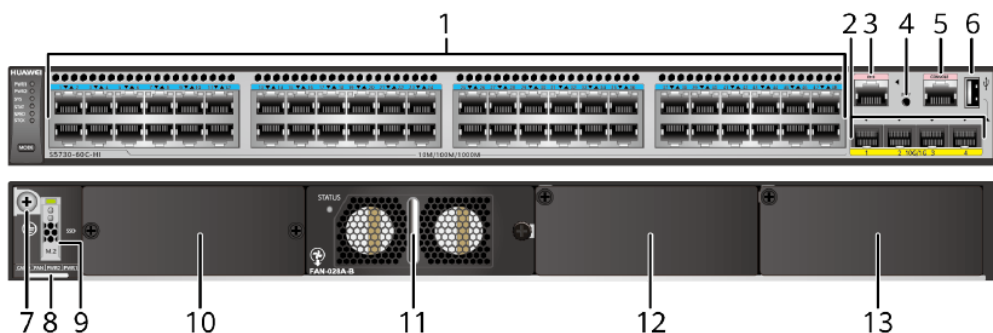
Table 4-1084 lists the mapping between the S5730-60C-HI chassis and software versions.

Table 4-1084 Version mapping

Series	Model	Software Version
S5730-HI	S5730-60C-HI	V200R012C00 to V200R019C10 versions

Appearance and Structure

Figure 4-436 S5730-60C-HI appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> 10.5 GE eSFP Optical Modules 10.7 GE-CWDM eSFP Optical Modules 10.9 GE-DWDM eSFP Optical Modules 10.10 GE SFP Copper Modules 10.12 10GE SFP+ Optical Modules 10.13 10GE-CWDM SFP+ Optical Modules 10.14 10GE-DWDM SFP+ Optical
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			<p>Modules</p> <ul style="list-style-type: none"> 9.15 Copper Cable 9.3 Optical Fiber 9.14 Dedicated Stack Cable
3	One ETH management port	4	<p>One PNP button</p> <p>NOTICE</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
5	One console port	6	One USB port
7	<p>Ground screw</p> <p>NOTE</p> <p>It is used with a 9.1 Ground Cable.</p>	8	<p>ESN label</p> <p>NOTE</p> <p>You can draw it out to view the ESN and MAC address of the switch.</p>
9	<p>SSD card slot</p> <p>NOTE</p> <p>Pluggable SSD card supported: 11.1 SSD-240GB (240 GB SSD Card)</p>	10	<p>Rear card slot</p> <p>NOTE</p> <p>Cards supported:</p> <ul style="list-style-type: none"> 8.15 ES5D21Q02Q00 (2-Port 40 Gig QSFP+ Rear Interface Card) 8.23 ES5D21X08T00 (8-Port 10GBASE-T RJ45 Rear Interface Card) 8.22 ES5D21X08S00 (8-Port 10GE SFP+ Rear Optical Interface Card)
11	<p>Fan slot</p> <p>NOTE</p> <p>Applicable fan module: 7.3 FAN-028A-B Fan Module</p>	12	<p>Power module slot 2</p> <p>NOTE</p> <p>Applicable power modules:</p> <ul style="list-style-type: none"> 5.2 LS5M100PWA00/ES0W2PSA0150 (150 W AC Power Module) 5.3 LS5M100PWD00/ES0W2PSD0150 (150 W DC Power Module)
13	<p>Power module slot 1</p> <p>NOTE</p> <p>Applicable power modules:</p> <ul style="list-style-type: none"> 5.2 LS5M100PWA00/ES0W2PSA0150 (150 W AC Power Module) 5.3 LS5M100PWD00/ES0W2PSD0150 (150 W DC Power Module) 	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-1085 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-1085 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-1086 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-1086 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1087.

Table 4-1087 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)

Attribute	Description
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1088 describes the attributes of an ETH management port.

Table 4-1088 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

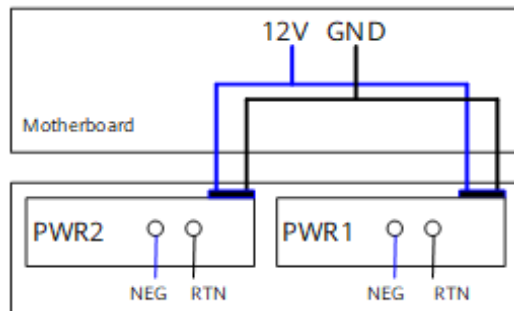
The S5730-60C-HI has similar indicators to those of the S5730-44C-PWH-HI except that the S5730-60C-HI does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5730-60C-HI uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

Figure 4-437 shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

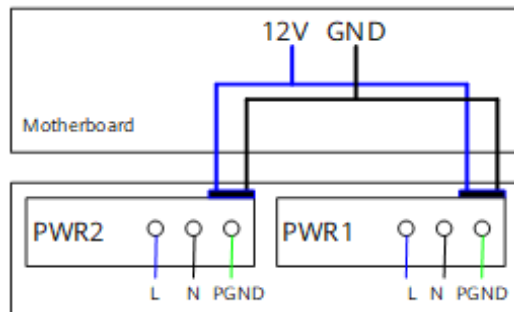
Figure 4-437 Power supply connections of dual DC power modules



NEG: negative wire RTN: positive wire GND: 12 V reference ground

Figure 4-438 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

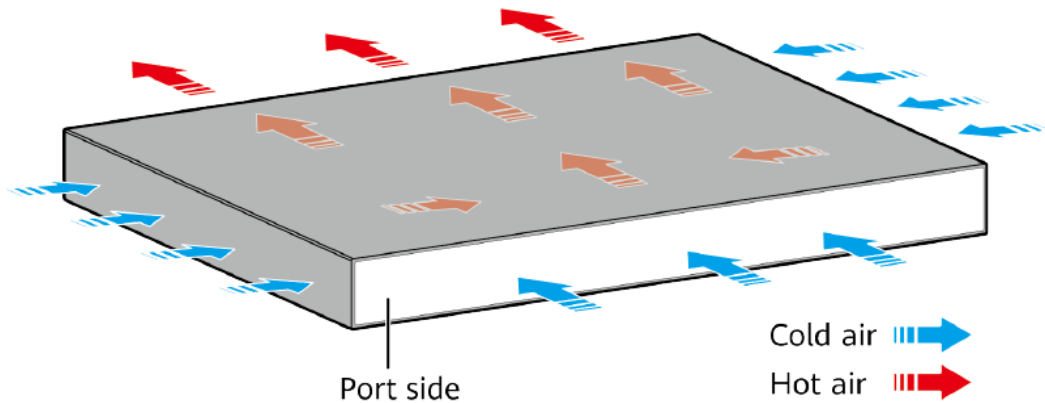
Figure 4-438 Power supply connections of dual AC power modules



L: Live wire N: Neutral wire PGND: Protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5730-60C-HI uses a pluggable fan module for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1089 lists technical specifications of the S5730-60C-HI.

Table 4-1089 Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	1 GB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	47.28 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.7 mm (1.75 in. x 17.4 in. x 16.72 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.8 mm (1.75 in. x 17.4 in. x 17.79 in.)
Weight (with packaging)	8.8 kg (19.40 lb)
Stack ports	10GE SFP+ ports on the front panel, or 10GE ports or 40GE QSFP+ ports on the rear card

Item	Description
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	87.7 W (without card)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	70 W (without card)
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 52.9 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none"> • AC power modules configured: 0-5000 m (0-16404 ft.) • DC power modules configured: 0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02351MQR

4.2.2.8 S5730-60C-PWH-HI

Version Mapping

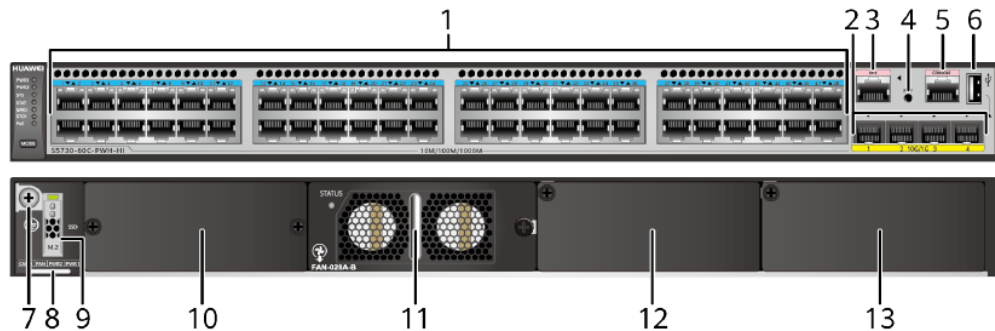
Table 4-1090 lists the mapping between the S5730-60C-PWH-HI chassis and software versions.

Table 4-1090 Version mapping

Series	Model	Software Version
S5730-HI	S5730-60C-PWH-HI	V200R012C00 to V200R019C10 versions

Appearance and Structure

Figure 4-439 S5730-60C-PWH-HI appearance



1	Forty-eight PoE++ 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	One ETH management port	4	One PNP button

			<p>NOTICE</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
5	One console port	6	One USB port
7	<p>Ground screw</p> <p>NOTE It is used with a 9.1 Ground Cable.</p>	8	<p>ESN label</p> <p>NOTE You can draw it out to view the ESN and MAC address of the switch.</p>
9	<p>SSD card slot</p> <p>NOTE Pluggable SSD card supported: 11.1 SSD-240GB (240 GB SSD Card)</p>	10	<p>Rear card slot</p> <p>NOTE Cards supported:</p> <ul style="list-style-type: none"> • 8.15 ES5D21Q02Q00 (2-Port 40 Gig QSFP+ Rear Interface Card) • 8.23 ES5D21X08T00 (8-Port 10GBASE-T RJ45 Rear Interface Card) • 8.22 ES5D21X08S00 (8-Port 10GE SFP+ Rear Optical Interface Card)
11	<p>Fan slot</p> <p>NOTE Applicable fan module: 7.3 FAN-028A-B Fan Module</p>	12	<p>Power module slot 2</p> <p>NOTE Applicable power modules:</p> <ul style="list-style-type: none"> • 5.6 W0PSA5000/PAC-500WA-BE (500 W AC PoE Power Module) • 5.8 PDC-650WA-BE (650 W DC PoE Power Module) • 5.10 W2PSA1150 (1150 W AC PoE Power Module) • 5.9 PAC1000D5412 (1000 W AC PoE Power Module) (applicable in V200R013C00 and later versions)
13	<p>Power module slot 1</p> <p>NOTE Applicable power modules:</p> <ul style="list-style-type: none"> • 5.6 W0PSA5000/PAC-500WA-BE (500 W AC PoE Power Module) • 5.8 PDC-650WA-BE (650 W DC PoE Power Module) • 5.10 W2PSA1150 (1150 W AC PoE Power Module) • 5.9 PAC1000D5412 (1000 W AC PoE Power Module) (applicable in V200R013C00 and later versions) 	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-1091 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-1091 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-1092 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-1092 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1093.

Table 4-1093 Attributes of a console port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1094 describes the attributes of an ETH management port.

Table 4-1094 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5730-60C-PWH-HI has the same types of indicators as the S5730-44C-PWH-HI. For details, see [Indicator Description](#).

Power Supply Configuration

The S5730-60C-PWH-HI is a PoE switch. It has two power module slots, each of which can have a 500 W, 650 W, 1150 W, or 1000 W (applicable in V200R013C00 and later versions) power module installed. A 500 W AC power module and a 650 W DC power module can be used together in the switch. A 1150 W AC power module and a 1000 W AC power module can be used together in the switch. Table 4-1095 lists its power supply configurations.

Table 4-1095 Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
500 W or 650 W	-	369.6 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 12 802.3bt (60 W per port): 6
500 W or 650 W	500 W or 650 W	739.2 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 24 802.3bt (60 W per port): 12
1150 W (220 V)	-	785.4 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 26 802.3bt (60 W per port): 13
1150 W (220 V)	1150 W (220 V)	1440 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 48 802.3bt (60 W per port): 24
1150 W (110 V)	-	446.6 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 29 802.3at (30 W per port): 14 802.3bt (60 W per port): 7
1150 W (110 V)	1150 W (110 V)	893.2 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
			<ul style="list-style-type: none"> • 802.3at (30 W per port): 29 • 802.3bt (60 W per port): 14
1000 W (220 V)	-	754.6 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 48 • 802.3at (30 W per port): 25 • 802.3bt (60 W per port): 12
1000 W (220 V)	1000 W (220 V)	1440 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 48 • 802.3at (30 W per port): 48 • 802.3bt (60 W per port): 24
1000 W (110 V)	-	754.6 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 48 • 802.3at (30 W per port): 25 • 802.3bt (60 W per port): 12
1000 W (110 V)	1000 W (110 V)	1440 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 48 • 802.3at (30 W per port): 48 • 802.3bt (60 W per port): 24
1000 W (220 V)	1150 W (220 V)	1440 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 48 • 802.3at (30 W per port): 48 • 802.3bt (60 W per port): 24
1150 W (220 V)	1000 W (220 V)	1440 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 48 • 802.3at (30 W per port): 48 • 802.3bt (60 W per port): 24
1000 W (110 V)	1150 W (110 V)	893.2 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 48

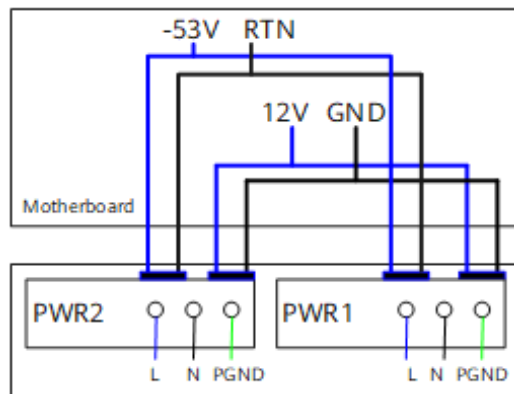
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
			<ul style="list-style-type: none"> 802.3at (30 W per port): 29 802.3bt (60 W per port): 14
1150 W (110 V)	1000 W (110 V)	893.2 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 29 802.3bt (60 W per port): 14

NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

Figure 4-440 shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

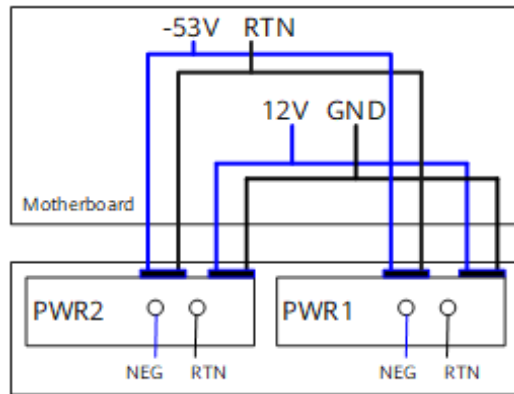
Figure 4-440 Power supply by dual AC PoE power modules



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground RTN: -53 V reference ground

Figure 4-441 shows the power supply connections of dual DC PoE power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V and -53 V output voltages, and the motherboard provides 12 V voltage for the entire device and -53 V voltage for the PDs.

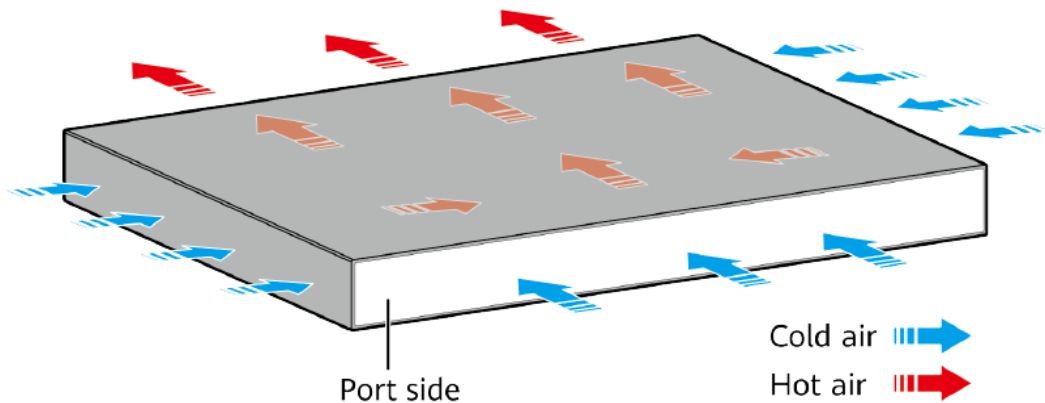
Figure 4-441 Power supply connections of dual DC PoE power modules



NEG: negative wire RTN: positive wire GND: 12 V reference ground RTN: -53 V reference ground

Heat Dissipation

The S5730-60C-PWH-HI uses a pluggable fan module for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1096 lists technical specifications of the S5730-60C-PWH-HI.

Table 4-1096 Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	1 GB in total. To view the available flash memory size, run the display version command.
Mean time between	46.09 years

Item	Description
failures (MTBF)	
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	<ul style="list-style-type: none">Using 500 W AC or 1000 W AC power modules: ± 6 kV in differential mode, ± 6 kV in common modeUsing 650 W DC or 1150 W AC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.7 mm (1.75 in. x 17.4 in. x 16.72 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.8 mm (1.75 in. x 17.4 in. x 17.79 in.) <p>When 1150 W power modules are installed, they stretch out from the chassis. Therefore, the total depth of the switch changes to 541.1 mm (21.3 in.).</p>
Weight (with packaging)	9 kg (19.84 lb)
Stack ports	10GE SFP+ ports on the front panel, or 10GE ports or 40GE QSFP+ ports on the rear card
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none">Using 650 W DC or 500 W AC power modules:<ul style="list-style-type: none">Not providing the PoE function: 106 W (without card)100% PoE loads: 830 W (system power consumption: 90.8 W, PoE: 739.2 W, without card)Using 1150 W AC or 1000 W AC power modules:<ul style="list-style-type: none">Not providing the PoE function: 119.7 W (without card)100% PoE loads: 1610 W (system power consumption: 170 W, PoE: 1440 W, without card)
Typical power consumption (30%)	Using 650 W DC or 500 W AC power modules: 80 W (without card) Using 1150 W AC or 1000 W AC power modules: 83 W (without

Item	Description
of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	card)
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 69 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02351MQV

4.22.9 S5730-60C-HI-48S

Version Mapping

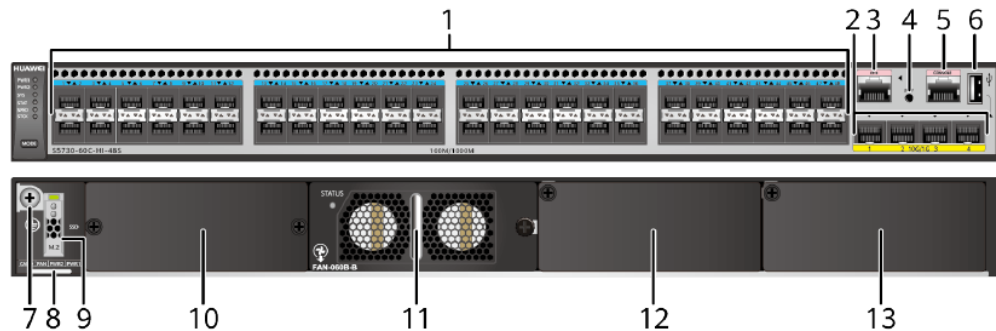
Table 4-1097 lists the mapping between the S5730-60C-HI-48S chassis and software versions.

Table 4-1097 Version mapping

Series	Model	Software Version
S5730-HI	S5730-60C-HI-48S	V200R013C00 to V200R019C10 versions

Appearance and Structure

Figure 4-442 S5730-60C-HI-48S appearance



1	<p>Forty-eight 100/1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.8 GE-CWDM eSFP Optical Modules (Used Only in the OADM scenario) 	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	<p>One ETH management port</p>	4	<p>One PNP button</p> <p>NOTICE</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
5	<p>One console port</p>	6	<p>One USB port</p>
7	<p>Ground screw</p> <p>NOTE</p> <p>It is used with a 9.1 Ground Cable.</p>	8	<p>ESN label</p> <p>NOTE</p> <p>You can draw it out to view the ESN and MAC address of the switch.</p>
9	<p>SSD card slot</p>	10	<p>Rear card slot</p>

	<p>NOTE Pluggable SSD card supported: 11.1 SSD-240GB (240 GB SSD Card)</p>		<p>NOTE Cards supported:</p> <ul style="list-style-type: none"> • 8.15 ES5D21Q02Q00 (2-Port 40 Gig QSFP+ Rear Interface Card) • 8.23 ES5D21X08T00 (8-Port 10GBASE-T RJ45 Rear Interface Card) • 8.22 ES5D21X08S00 (8-Port 10GE SFP+ Rear Optical Interface Card)
11	<p>Fan slot</p> <p>NOTE Applicable fan module: 7.4 FAN-060B-B (Fan box (B, FAN panel side exhaust))</p>	12	<p>Power module slot 2</p> <p>NOTE Applicable power modules:</p> <ul style="list-style-type: none"> • 5.18 PDC-350WA-B (350 W DC Power Module) • 5.19 PAC-600WA-B (600 W AC Power Module)
13	<p>Power module slot 1</p> <p>NOTE Applicable power modules:</p> <ul style="list-style-type: none"> • 5.18 PDC-350WA-B (350 W DC Power Module) • 5.19 PAC-600WA-B (600 W AC Power Module) 	-	-

Port Description

100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. Table 4-1098 describes the attributes of a 100/1000BASE-X port.

Table 4-1098 Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-1099 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-1099 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1100.

Table 4-1100 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1101 describes the attributes of an ETH management port.

Table 4-1101 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum	100 m

Attribute	Description
transmission distance	

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

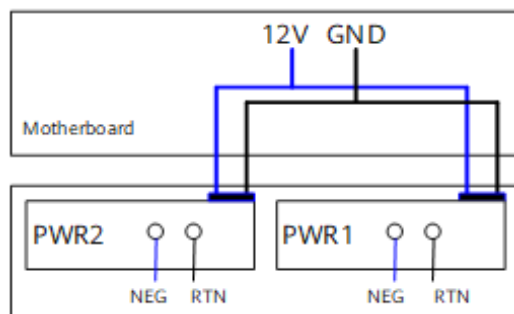
The S5730-60C-HI-48S has the same types of indicators as the S5730-36C-HI-24S. For details, see [Indicator Description](#).

Power Supply Configuration

The S5730-60C-HI-48S uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

Figure 4-443 shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 4-443 Power supply connections of dual DC power modules



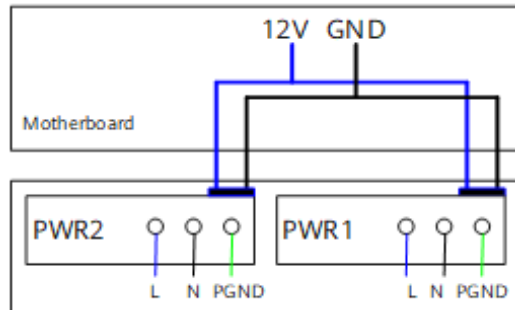
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

Figure 4-444 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 4-444 Power supply connections of dual AC power modules



L: Live wire

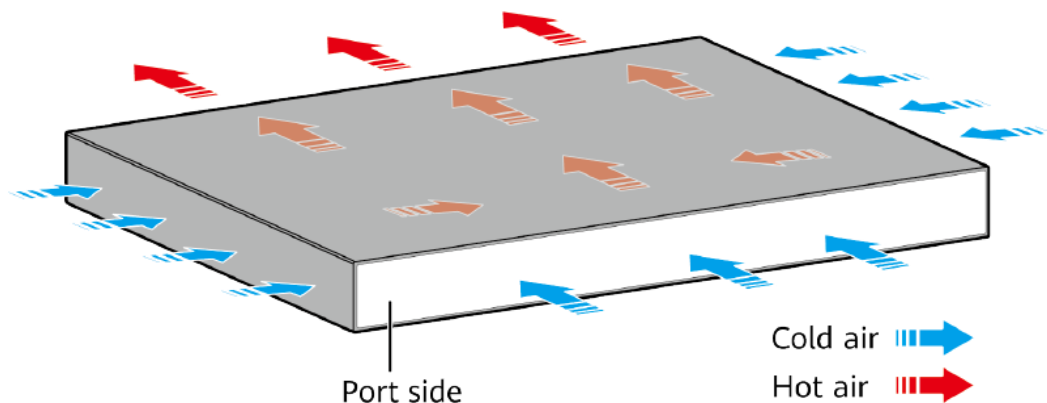
N: Neutral wire

PGND: Protection ground wire

GND: 12 V reference ground

Heat Dissipation

The S5730-60C-HI-48S uses pluggable fan modules for forced air cooling. Air flows in from the left side, right side, and front panel, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1102 lists specifications of the S5730-60C-HI-48S.

Table 4-1102 Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	1 GB in total. To view the available flash memory size, run the display version command.

Item	Description
Mean time between failures (MTBF)	45.53 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	N/A
Power supply surge protection	<ul style="list-style-type: none">Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common modeUsing DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.7 mm (1.75 in. x 17.4 in. x 16.72 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.8 mm (1.75 in. x 17.4 in. x 17.79 in.)
Weight (with packaging)	9.71 kg (21.41 lb)
Stack ports	10GE SFP+ ports on the front panel, or 10GE ports or 40GE QSFP+ ports on the rear card
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	136 W (without card)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">Tested according to ATIS standardEEE enabledNo PoE power consumption	100 W (without card)

Item	Description
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 67.5 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02351XFS

4.22.10 S5730-68C-HI

Version Mapping

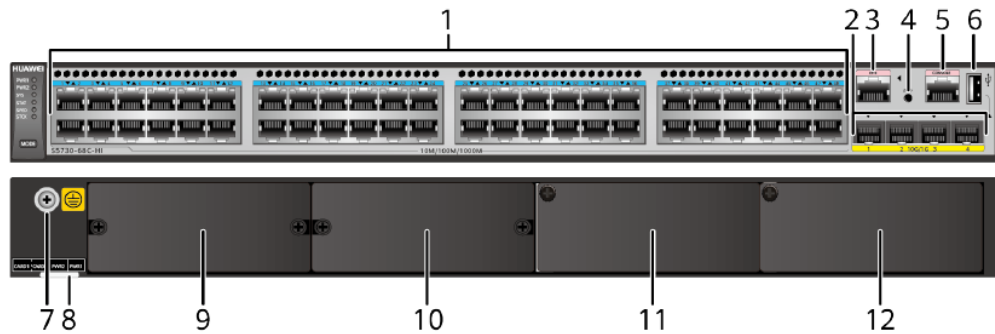
Table 4-1103 lists the mapping between the S5730-68C-HI chassis and software versions.

Table 4-1103 Version mapping

Series	Model	Software Version
S5730-HI	S5730-68C-HI	V200R012C00 to V200R019C10 versions

Appearance and Structure

Figure 4-445 S5730-68C-HI appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	One ETH management port	4	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
5	One console port	6	One USB port
7	Ground screw NOTE It is used with a 9.1 Ground Cable.	8	ESN label NOTE You can draw it out to view the ESN and MAC address of the switch.
9	Rear card slot 1	10	Rear card slot 2

	<p>NOTE</p> <p>Cards supported:</p> <ul style="list-style-type: none"> 8.15 ES5D21Q02Q00 (2-Port 40 Gig QSFP+ Rear Interface Card) 8.23 ES5D21X08T00 (8-Port 10GBASE-T RJ45 Rear Interface Card) 8.22 ES5D21X08S00 (8-Port 10GE SFP+ Rear Optical Interface Card) 		<p>NOTE</p> <p>This slot is reserved for future use.</p>
11	<p>Power module slot 2</p> <p>NOTE</p> <p>Applicable power modules:</p> <ul style="list-style-type: none"> 5.2 LS5M100PWA00/ES0W2PSA0150 (150 W AC Power Module) 5.3 LS5M100PWD00/ES0W2PSD0150 (150 W DC Power Module) 	12	<p>Power module slot 1</p> <p>NOTE</p> <p>Applicable power modules:</p> <ul style="list-style-type: none"> 5.2 LS5M100PWA00/ES0W2PSA0150 (150 W AC Power Module) 5.3 LS5M100PWD00/ES0W2PSD0150 (150 W DC Power Module)

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-1104 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-1104 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-1105 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-1105 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC

Attribute	Description
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1106.

Table 4-1106 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1107 describes the attributes of an ETH management port.

Table 4-1107 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

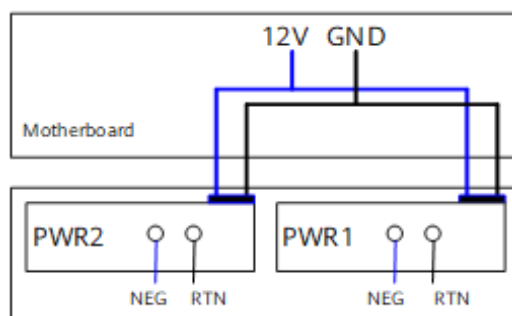
The S5730-68C-HI has similar indicators to those of the S5730-44C-PWH-HI except that the S5730-68C-HI does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5730-68C-HI uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

Figure 4-446 shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 4-446 Power supply connections of dual DC power modules



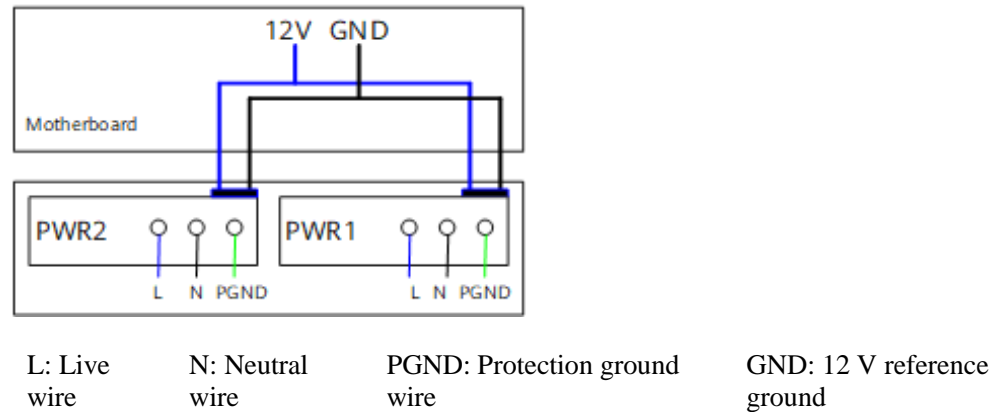
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

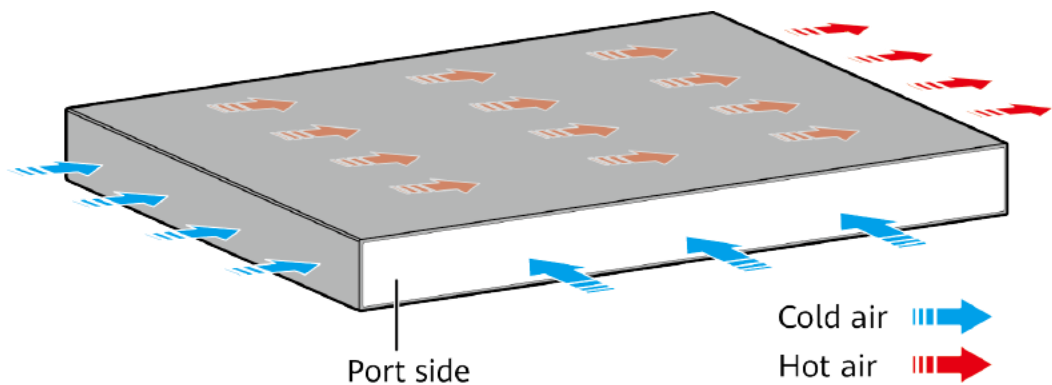
Figure 4-447 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 4-447 Power supply connections of dual AC power modules



Heat Dissipation

The S5730-68C-HI has three built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1108 lists technical specifications of the S5730-68C-HI.

Table 4-1108 Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	1 GB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	49.29 years
Mean time to repair	2 hours

Item	Description
(MTTR)	
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	<ul style="list-style-type: none">Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common modeUsing DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.7 mm (1.75 in. x 17.4 in. x 16.72 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.8 mm (1.75 in. x 17.4 in. x 17.79 in.)
Weight (with packaging)	8.5 kg (18.74 lb)
Stack ports	10GE SFP+ ports on the front panel, or 10GE ports or 40GE QSFP+ ports on the rear card
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	88.05 W (without card)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">Tested according to ATIS standardEEE enabledNo PoE power consumption	62 W (without card)
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220

Item	Description
	m (722 ft.).
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 55.6 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none"> AC power modules configured: 0-5000 m (0-16404 ft.) DC power modules configured: 0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none"> EMC certification Safety certification Manufacturing certification
Part number	02351MQT

4.22.11 S5730-68C-PWH-HI

Version Mapping

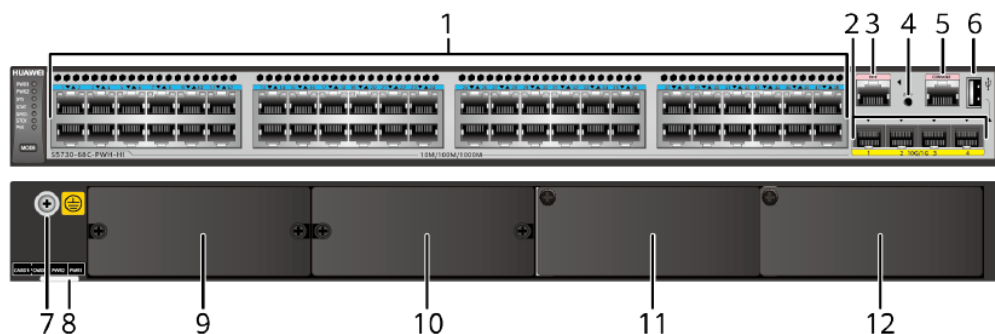
Table 4-1109 lists the mapping between the S5730-68C-PWH-HI chassis and software versions.

Table 4-1109 Version mapping

Series	Model	Software Version
S5730-HI	S5730-68C-PWH-HI	V200R012C00 to V200R019C10 versions

Appearance and Structure

Figure 4-448 S5730-68C-PWH-HI appearance



1	Forty-eight PoE++ 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	One ETH management port	4	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
5	One console port	6	One USB port
7	Ground screw NOTE It is used with a 9.1 Ground Cable.	8	ESN label NOTE You can draw it out to view the ESN and MAC address of the switch.
9	Rear card slot 1 NOTE Cards supported: <ul style="list-style-type: none"> • 8.15 ES5D21Q02Q00 (2-Port 40 Gig QSFP+ Rear Interface Card) • 8.23 ES5D21X08T00 (8-Port 10GBASE-T RJ45 Rear Interface Card) • 8.22 ES5D21X08S00 (8-Port 10GE SFP+ Rear Optical Interface Card) 	10	Rear card slot 2 NOTE This slot is reserved for future use.
11	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none"> • 5.6 W0PSA5000/PAC-500WA-BE (500 W AC PoE Power Module) • 5.8 PDC-650WA-BE (650 W DC PoE 	12	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> • 5.6 W0PSA5000/PAC-500WA-BE (500 W AC PoE Power Module) • 5.8 PDC-650WA-BE (650 W DC PoE

	Power Module) <ul style="list-style-type: none"> 5.10 W2PSA1150 (1150 W AC PoE Power Module) 5.9 PAC1000D5412 (1000 W AC PoE Power Module) (applicable in V200R013C00 and later versions) 		Power Module) <ul style="list-style-type: none"> 5.10 W2PSA1150 (1150 W AC PoE Power Module) 5.9 PAC1000D5412 (1000 W AC PoE Power Module) (applicable in V200R013C00 and later versions)
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Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-1110 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-1110 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-1111 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-1111 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1112.

Table 4-1112 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1113 describes the attributes of an ETH management port.

Table 4-1113 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

 **NOTE**

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5730-68C-PWH-HI has the same types of indicators as the S5730-44C-PWH-HI. For details, see [Indicator Description](#).

Power Supply Configuration

The S5730-68C-PWH-HI is a PoE switch. It has two power module slots, each of which can have a 500 W, 650 W, 1150 W, or 1000 W (applicable in V200R013C00 and later versions) power module installed. A 500 W AC power module and a 650 W DC power module can be used together in the switch. A 1150 W AC power module and a 1000 W AC power module can be used together in the switch. Table 4-1114 lists its power supply configurations.

Table 4-1114 Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
500 W	-	369.6 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 24 • 802.3at (30 W per port): 12 • 802.3bt (60 W per port): 6
500 W	500 W	739.2 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 48 • 802.3at (30 W per port): 24 • 802.3bt (60 W per port): 12
650 W	-	350 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 22 • 802.3at (30 W per port): 11 • 802.3bt (60 W per port): 5
650 W	500 W or 650 W	700 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 45 • 802.3at (30 W per port): 23 • 802.3bt (60 W per port): 11
500 W or 650 W	650 W		

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1150 W (220 V)	-	785.4 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 48 • 802.3at (30 W per port): 26 • 802.3bt (60 W per port): 13
1150 W (220 V)	1150 W (220 V)	1440 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 48 • 802.3at (30 W per port): 48 • 802.3bt (60 W per port): 24
1150 W (110 V)	-	446.6 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 29 • 802.3at (30 W per port): 14 • 802.3bt (60 W per port): 7
1150 W (110 V)	1150 W (110 V)	893.2 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 48 • 802.3at (30 W per port): 29 • 802.3bt (60 W per port): 14
1000 W (220 V)	-	754.6 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 48 • 802.3at (30 W per port): 25 • 802.3bt (60 W per port): 12
1000 W (220 V)	1000 W (220 V)	1440 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 48 • 802.3at (30 W per port): 48 • 802.3bt (60 W per port): 24
1000 W (110 V)	-	754.6 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 48 • 802.3at (30 W per port): 25 • 802.3bt (60 W per port): 12
1000 W (110 V)	1000 W (110 V)	1440 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port):

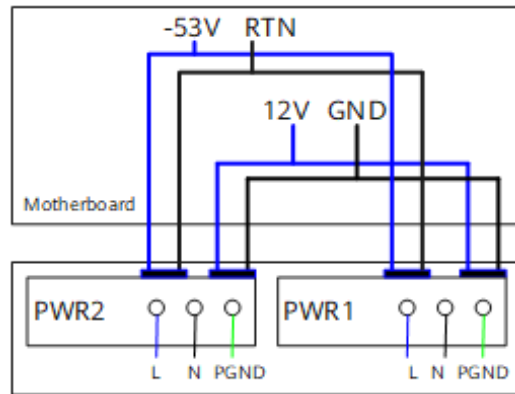
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
V)	V)		48 <ul style="list-style-type: none"> • 802.3at (30 W per port): 48 • 802.3bt (60 W per port): 24
1000 W (220 V)	1150 W (220 V)	1440 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 48 • 802.3at (30 W per port): 48 • 802.3bt (60 W per port): 24
1150 W (220 V)	1000 W (220 V)	1440 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 48 • 802.3at (30 W per port): 48 • 802.3bt (60 W per port): 24
1000 W (110 V)	1150 W (110 V)	893.2 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 48 • 802.3at (30 W per port): 29 • 802.3bt (60 W per port): 14
1150 W (110 V)	1000 W (110 V)	893.2 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 48 • 802.3at (30 W per port): 29 • 802.3bt (60 W per port): 14

 **NOTE**

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

Figure 4-449 shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

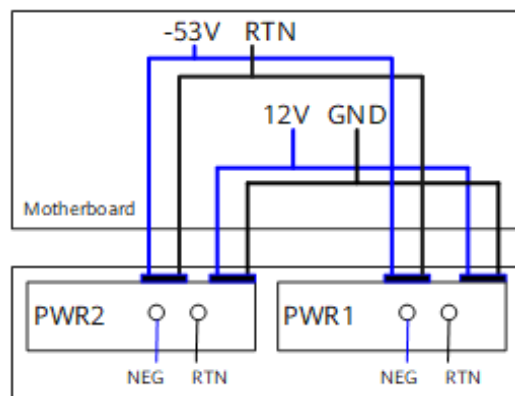
Figure 4-449 Power supply by dual AC PoE power modules



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground RTN: -53 V reference ground

Figure 4-450 shows the power supply connections of dual DC PoE power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V and -53 V output voltages, and the motherboard provides 12 V voltage for the entire device and -53 V voltage for the PDs.

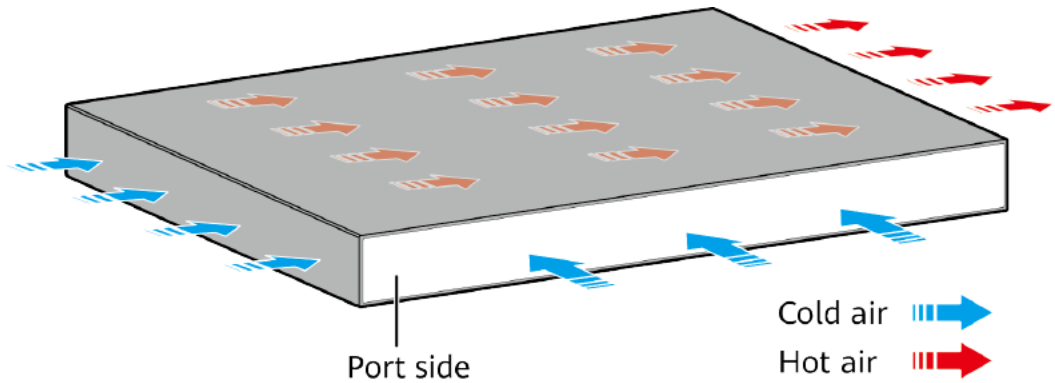
Figure 4-450 Power supply connections of dual DC PoE power modules



NEG: negative wire RTN: positive wire GND: 12 V reference ground RTN: -53 V reference ground

Heat Dissipation

The S5730-68C-PWH-HI has three built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1115 lists technical specifications of the S5730-68C-PWH-HI.

Table 4-1115 Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	1 GB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	48.31 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	<ul style="list-style-type: none"> Using 500 W AC or 1000 W AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using 650 W DC or 1150 W AC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.7 mm (1.75 in. x 17.4 in. x 16.72 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.8 mm (1.75 in. x 17.4 in. x 17.79 in.) <p>When 1150 W power modules are installed, they stretch out from the chassis. Therefore, the total depth of the switch changes to 541.1 mm (21.3 in.).</p>
Weight (with packaging)	8.7 kg (19.18 lb)

Item	Description
Stack ports	10GE SFP+ ports on the front panel, or 10GE ports or 40GE QSFP+ ports on the rear card
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none">Using 650 W DC power modules:<ul style="list-style-type: none">Not providing the PoE function: 106 W (without card)100% PoE loads: 830 W (system power consumption: 130 W, PoE: 700 W, without card)Using 500 W AC power modules:<ul style="list-style-type: none">Not providing the PoE function: 106 W (without card)100% PoE loads: 830 W (system power consumption: 90.8 W, PoE: 739.2 W, without card)Using 1150 W AC or 1000 W AC power modules:<ul style="list-style-type: none">Not providing the PoE function: 116.3 W (without card)100% PoE loads: 1608 W (system power consumption: 168 W, PoE: 1440 W, without card)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">Tested according to ATIS standardEEE enabledNo PoE power consumption	Using 650 W DC or 500 W AC power modules: 72 W (without card) Using 1150 W AC or 1000 W AC power modules: 76 W (without card)
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 69.6 dB(A)

Item	Description
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02351LKE

4.22.12 S5730-68C-HI-48S

Version Mapping

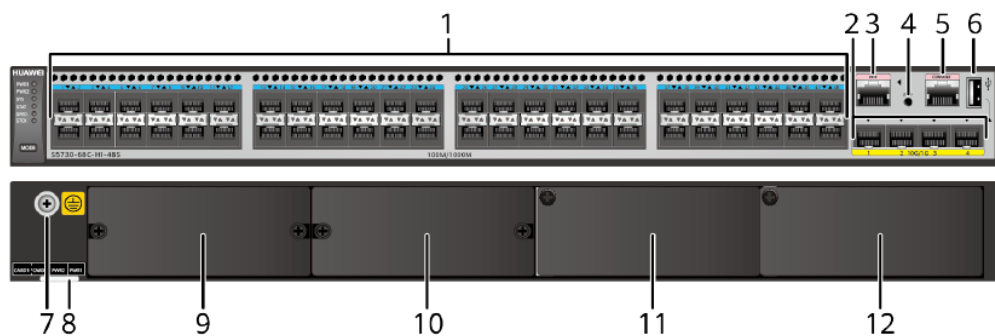
Table 4-1116 lists the mapping between the S5730-68C-HI-48S chassis and software versions.

Table 4-1116 Version mapping

Series	Model	Software Version
S5730-HI	S5730-68C-HI-48S	V200R013C00 to V200R019C10 versions

Appearance and Structure

Figure 4-451 S5730-68C-HI-48S appearance



1	<p>Forty-eight 100/1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules 	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules
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	<ul style="list-style-type: none"> 10.8 GE-CWDM eSFP Optical Modules (Used Only in the OADM scenario) 		<ul style="list-style-type: none"> 10.10 GE SFP Copper Modules 10.12 10GE SFP+ Optical Modules 10.13 10GE-CWDM SFP+ Optical Modules 10.14 10GE-DWDM SFP+ Optical Modules 9.15 Copper Cable 9.3 Optical Fiber 9.14 Dedicated Stack Cable
3	One ETH management port	4	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
5	One console port	6	One USB port
7	Ground screw NOTE It is used with a 9.1 Ground Cable.	8	ESN label NOTE You can draw it out to view the ESN and MAC address of the switch.
9	Rear card slot 1 NOTE Cards supported: <ul style="list-style-type: none"> 8.15 ES5D21Q02Q00 (2-Port 40 Gig QSFP+ Rear Interface Card) 8.23 ES5D21X08T00 (8-Port 10GBASE-T RJ45 Rear Interface Card) 8.22 ES5D21X08S00 (8-Port 10GE SFP+ Rear Optical Interface Card) 	10	Rear card slot 2 NOTE This slot is reserved for future use.
11	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none"> 5.18 PDC-350WA-B (350 W DC Power Module) 5.19 PAC-600WA-B (600 W AC Power Module) 	12	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> 5.18 PDC-350WA-B (350 W DC Power Module) 5.19 PAC-600WA-B (600 W AC Power Module)

Port Description

100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. Table 4-1117 describes the attributes of a 100/1000BASE-X port.

Table 4-1117 Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-1118 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-1118 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1119.

Table 4-1119 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1120 describes the attributes of an ETH management port.

Table 4-1120 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

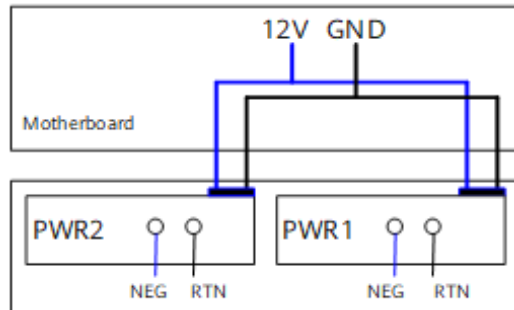
The S5730-68C-HI-48S has the same types of indicators as the S5730-36C-HI-24S. For details, see [Indicator Description](#).

Power Supply Configuration

The S5730-68C-HI-48S uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

Figure 4-452 shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

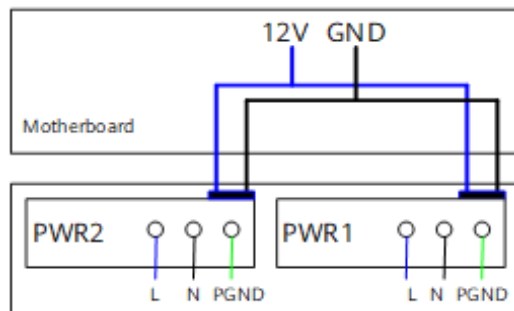
Figure 4-452 Power supply connections of dual DC power modules



NEG: negative wire RTN: positive wire GND: 12 V reference ground

Figure 4-453 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

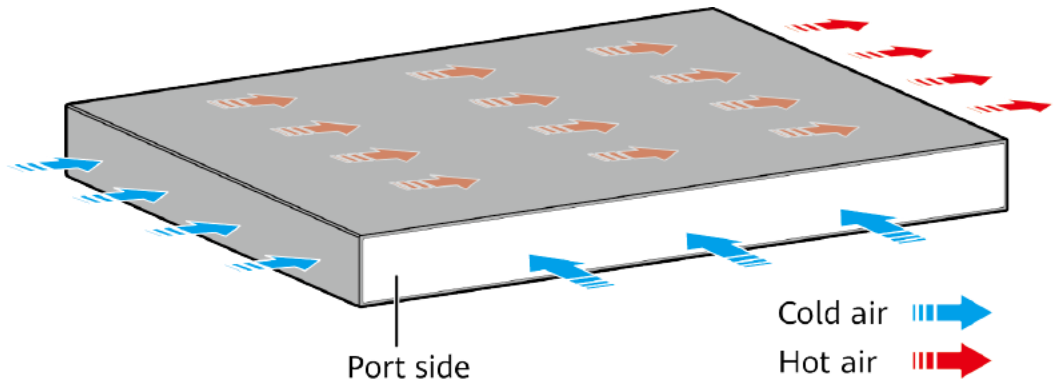
Figure 4-453 Power supply connections of dual AC power modules



L: Live wire N: Neutral wire PGND: Protection ground GND: 12 V reference ground

Heat Dissipation

The S5730-68C-HI-48S has three built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1121 lists specifications of the S5730-68C-HI-48S.

Table 4-1121 Technical specifications

Item	Parameter
Memory (RAM)	2 GB
Flash	1 GB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	46.49 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	N/A
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.7 mm (1.75 in. x 17.4 in. x 16.72 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.8 mm (1.75 in. x 17.4 in. x 17.79 in.)
Weight (with packaging)	9.39 kg (20.7 lb)
Stack ports	10GE SFP+ ports on the front panel, or 10GE ports or 40GE QSFP+ ports on the rear card

Item	Parameter
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	124 W (without card)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	100 W (without card)
Operating temperature	0 °C to 45 °C (32 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 64.7 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02351XFT

4.23 S5731-S

4.23.1 S5731-S24T4X (02353AHU/02353AHU-001/02353AHU-002)

Version Mapping

Table 4-1122 lists the mapping between the S5731-S24T4X chassis and software versions.

Table 4-1122 Version mapping

Series	Model	Software Version
S5731-S	S5731-S24T4X	02353AHU: V200R019C00 and later versions 02353AHU-001: V200R020C10 and later versions

Appearance and Structure

Figure 4-454 S5731-S24T4X (02353AHU) appearance

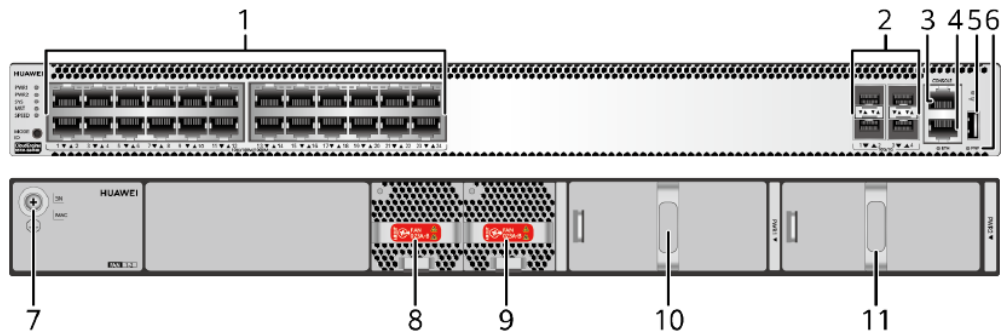
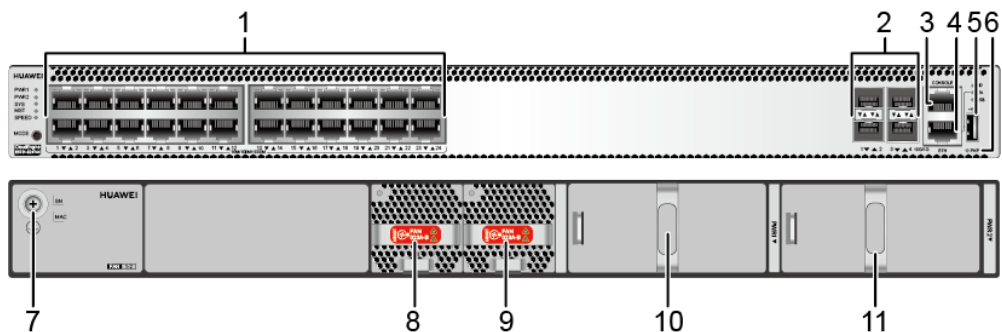


Figure 4-455 S5731-S24T4X (02353AHU-001) appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports
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			<p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	One console port	4	One ETH management port
5	One USB port	6	<p>One PNP button</p> <p>NOTICE</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
7	<p>Ground screw</p> <p>NOTE</p> <p>It is used with a 9.1 Ground Cable.</p>	8	<p>Fan module slot 1</p> <p>NOTE</p> <p>Applicable fan module: 7.5 FAN-023A-B (Fan box(B,FAN panel side exhaust))</p>
9	<p>Fan module slot 2</p> <p>NOTE</p> <p>Applicable fan module: 7.5 FAN-023A-B (Fan box(B,FAN panel side exhaust))</p>	10	<p>Power module slot 1</p> <p>NOTE</p> <p>Applicable power module:</p> <ul style="list-style-type: none"> • 5.20 PAC600S12-CB (600 W AC Power Module) • 5.22 PAC600S12-EB (600 W AC Power Module) • 5.21 PAC600S12-DB (600 W AC Power Module) (applicable in V200R020C10 and later versions) • 5.27 PDC1000S12-DB (1000 W DC Power Module) • 5.12 PAC150S12-R (150 W AC Power Module) • 5.15 PDC180S12-CR (180 W DC Power Module) (applicable in V200R020C00 and later versions)
11	Power module slot 2	-	-

	<p>NOTE</p> <p>Applicable power module:</p> <ul style="list-style-type: none"> • 5.20 PAC600S12-CB (600 W AC Power Module) • 5.22 PAC600S12-EB (600 W AC Power Module) • 5.21 PAC600S12-DB (600 W AC Power Module) (applicable in V200R020C10 and later versions) • 5.27 PDC1000S12-DB (1000 W DC Power Module) • 5.12 PAC150S12-R (150 W AC Power Module) • 5.15 PDC180S12-CR (180 W DC Power Module) (applicable in V200R020C00 and later versions) 		
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Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-1123 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-1123 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ optical port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-1124 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-1124 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used

Attribute	Description
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1125.

Table 4-1125 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1126 describes the attributes of an ETH management port.

Table 4-1126 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

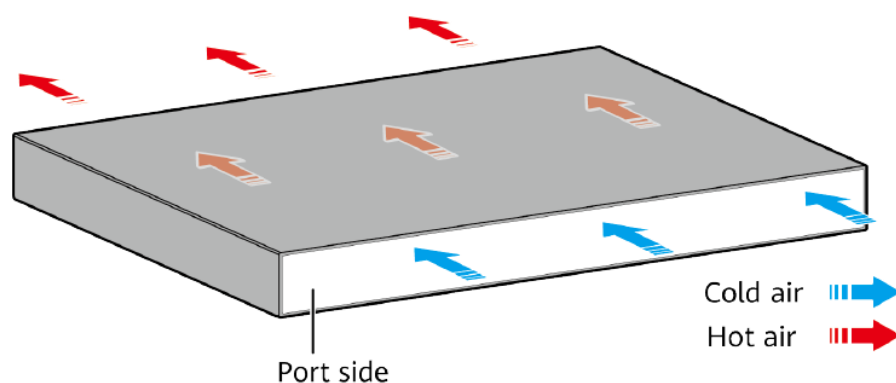
The S5731-S24T4X has similar indicators to those on the S5731-S48P4X except that the S5731-S24T4X does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The switch can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch. However, the power modules with natural heat dissipation and the power modules with fan cannot be used at the same time.

Heat Dissipation

The S5731-S24T4X uses pluggable fan modules for forced air cooling. Air flows in from the front side and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1127 lists technical specifications of the S5731-S24T4X.

Table 4-1127 Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	1 GB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	57.73 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	<ul style="list-style-type: none">Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common modeUsing DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.4 in. x 17.7 in.)
Weight (with packaging)	8.4 kg (18.52 lb)
Stack ports	10GE SFP+ ports on the front panel
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none">AC input: 100 V AC to 240 V AC, 50/60 HzHigh-Voltage DC input: 240 V DCDC input: -48 V DC to -60 V DC
Maximum voltage range	<ul style="list-style-type: none">AC input: 90 V AC to 290 V AC, 45 Hz to 65 HzHigh-Voltage DC input: 190 V DC to 290 V DCDC input: -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	114 W
Typical power consumption (30% of traffic load,	88 W

Item	Description
tested according to ATIS standard)	
Operating temperature	-5 °C to +45 °C (23 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0 °C (32 °F).
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 57.5 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02353AHU 02353AHU-001

4.23.2 S5731-S24P4X

Version Mapping

Table 4-1128 lists the mapping between the S5731-S24P4X chassis and software versions.

Table 4-1128 Version mapping

Series	Model	Software Version
S5731-S	S5731-S24P4X	02353AHX: V200R019C00 and later versions 02353AHX-001: V200R020C10 and later versions 02353AHX-003: V200R021C10SPC600 and later versions

Appearance and Structure

Figure 4-456 S5731-S24P4X (02353AHX) appearance

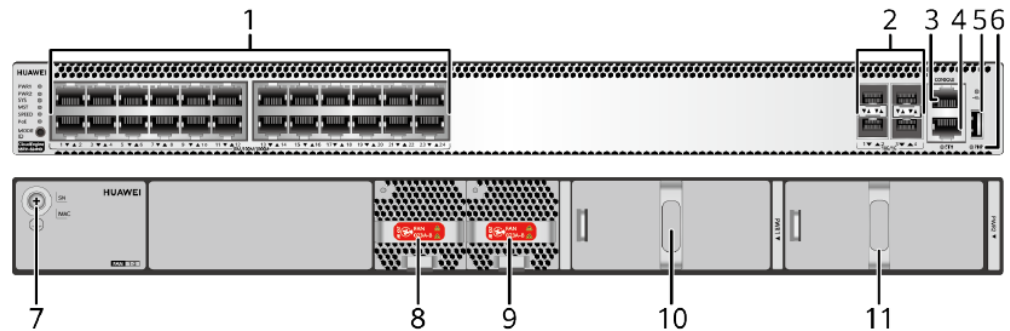
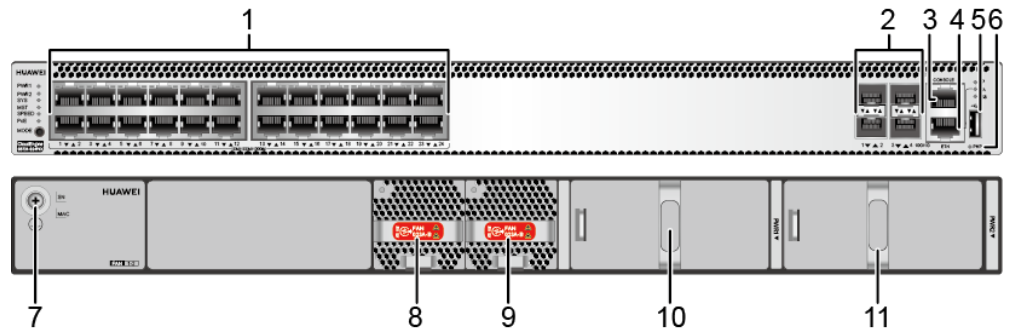


Figure 4-457 S5731-S24P4X (02353AHX-001 or 02353AHX-003) appearance



1	Twenty-four PoE+ 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	One console port	4	One ETH management port

5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw NOTE It is used with a 9.1 Ground Cable.	8	Fan module slot 1 NOTE Applicable fan module: 7.5 FAN-023A-B (Fan box(B,FAN panel side exhaust))
9	Fan module slot 2 NOTE Applicable fan module: 7.5 FAN-023A-B (Fan box(B,FAN panel side exhaust))	10	Power module slot 1 NOTE Applicable power module: <ul style="list-style-type: none"> • 5.24 PAC1000S56-CB (1000 W PoE AC Power Module) • 5.25 PAC1000S56-DB (1000 W PoE AC Power Module) (applicable in V200R020C10 and later versions) • 5.26 PDC1000S56-CB (1000 W PoE DC Power Module) (applicable in V200R021C00 and later versions) • 5.23 PAC600S56-CB (600 W AC&240 V DC Power Module (Back to Front, Power panel side exhaust)) (applicable in V200R021C10 and later versions)
11	Power module slot 2 NOTE Applicable power module: <ul style="list-style-type: none"> • 5.24 PAC1000S56-CB (1000 W PoE AC Power Module) • 5.25 PAC1000S56-DB (1000 W PoE AC Power Module) (applicable in V200R020C10 and later versions) • 5.26 PDC1000S56-CB (1000 W PoE DC Power Module) (applicable in V200R021C00 and later versions) • 5.23 PAC600S56-CB (600 W AC&240 V DC Power Module (Back to Front, Power panel side exhaust)) (applicable in V200R021C10 and later versions) 	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-1129 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-1129 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ optical port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-1130 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-1130 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1131.

Table 4-1131 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1132 describes the attributes of an ETH management port.

Table 4-1132 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5731-S24P4X has the same types of indicators as the S5731-S48P4X. For details, see [Indicator Description](#).

Power Supply Configuration

The switch is a PoE switch and supports two power module slots, each of which can have a 1000 W PoE or 600 W PoE power module installed. Pluggable AC and DC PoE power modules can be used together in the same switch.

Table 4-1133 Power supply configurations

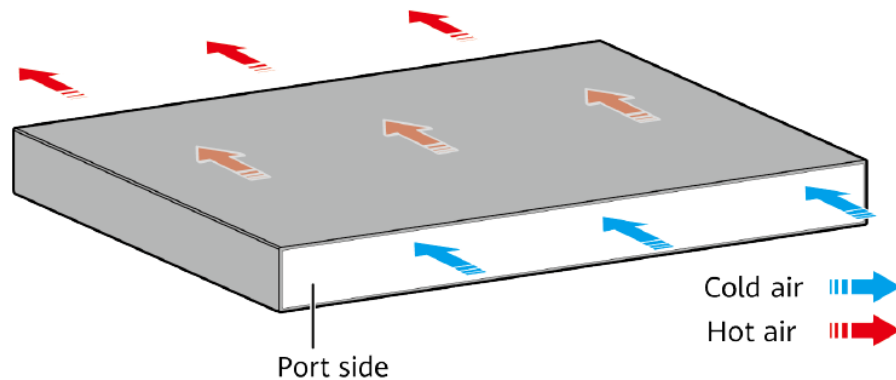
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W AC (220 V) 1000 W DC	–	760 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 24
1000 W AC (110 V)	–	665 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 22
1000 W AC (220 V) 1000 W DC	1000 W AC (220 V) 1000 W DC	1600 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 24
1000 W AC (110 V) 1000 W DC	1000 W AC (110 V)	1330 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 24
600 W AC (220 V)	–	380 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 12
600 W AC (110 V)	–	95 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 6 802.3at (30 W per port): 3
600 W AC (220 V)	600 W AC (220 V)	950 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 24
600 W AC (110 V)	600 W AC (110 V)	380 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 12
1000 W AC (220 V) 1000 W DC	600 W AC (220 V)	1330 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 24

 **NOTE**

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

Heat Dissipation

The S5731-S24P4X uses pluggable fan modules for forced air cooling. Air flows in from the front side and exhausts from the rear panel.



Technical Specifications

Table 4-1134 lists technical specifications of the S5731-S24P4X.

Table 4-1134 Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	1 GB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	57.21 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.4 in. x 17.7 in.)
Weight (with packaging)	8.6 kg (18.96 lb)
Stack ports	10GE SFP+ ports on the front panel

Item	Description
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	<ul style="list-style-type: none">AC input: 100 V AC to 130 V AC, 200 V AC to 240 V AC, 50/60 HzHigh-Voltage DC input: 240 V DCDC input: -48 V DC to -60 V DC
Maximum voltage range	<ul style="list-style-type: none">AC input: 90 V AC to 290 V AC, 45 Hz to 65 HzHigh-Voltage DC input: 190 V DC to 290 V DCDC input: -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none">Not providing the PoE function: 121 W100% PoE loads: 977 W (PoE: 720 W)
Typical power consumption (30% of traffic load, tested according to ATIS standard)	95 W
Operating temperature	-5 °C to +45 °C (23 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0 °C (32 °F).
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 62.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">EMC certificationSafety certificationManufacturing certification
Part number	02353AHX 02353AHX-001 02353AHX-003

4.23.3 S5731-S48T4X (02353AJB/02353AJB-003/02353AJB-004)

Version Mapping

Table 4-1135 lists the mapping between the S5731-S48T4X chassis and software versions.

Table 4-1135 Version mapping

Series	Model	Software Version
S5731-S	S5731-S48T4X	02353AJB: V200R019C00 and later versions 02353AJB-003: V200R020C10 and later versions

Appearance and Structure

Figure 4-458 S5731-S48T4X (02353AJB) appearance

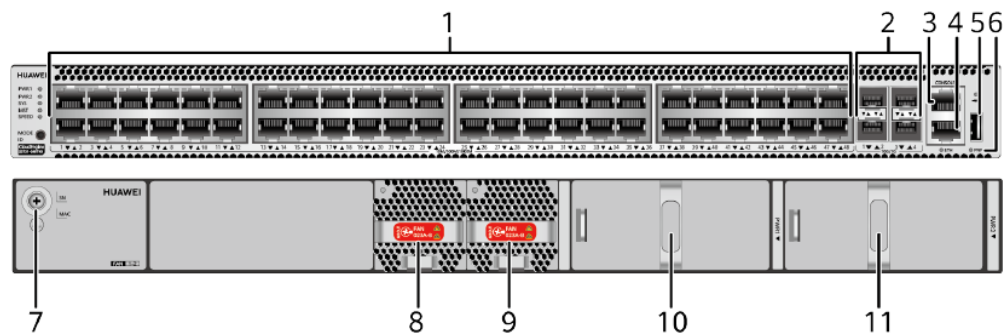
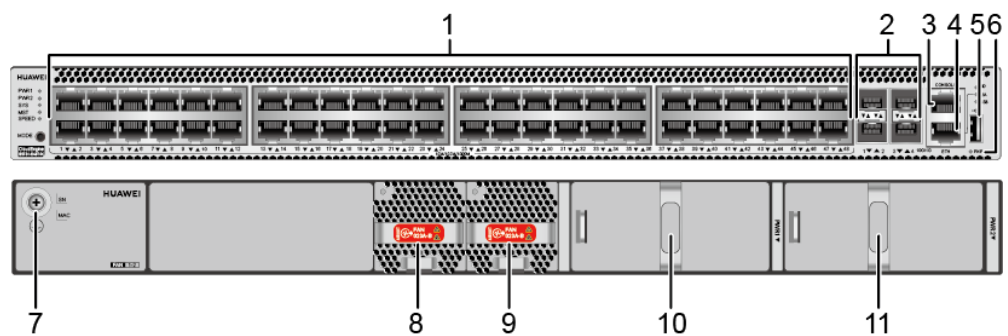


Figure 4-459 S5731-S48T4X (02353AJB-003) appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables:
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			<ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	One console port	4	One ETH management port
5	One USB port	6	<p>One PNP button</p> <p>NOTICE</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
7	<p>Ground screw</p> <p>NOTE</p> <p>It is used with a 9.1 Ground Cable.</p>	8	<p>Fan module slot 1</p> <p>NOTE</p> <p>Applicable fan module: 7.5 FAN-023A-B (Fan box(B,FAN panel side exhaust))</p>
9	<p>Fan module slot 2</p> <p>NOTE</p> <p>Applicable fan module: 7.5 FAN-023A-B (Fan box(B,FAN panel side exhaust))</p>	10	<p>Power module slot 1</p> <p>NOTE</p> <p>Applicable power module:</p> <ul style="list-style-type: none"> • 5.20 PAC600S12-CB (600 W AC Power Module) • 5.22 PAC600S12-EB (600 W AC Power Module) • 5.21 PAC600S12-DB (600 W AC Power Module) (applicable in V200R020C10 and later versions) • 5.27 PDC1000S12-DB (1000 W DC Power Module) • 5.12 PAC150S12-R (150 W AC Power Module) • 5.15 PDC180S12-CR (180 W DC Power Module) (applicable in V200R020C00 and later versions)
11	<p>Power module slot 2</p> <p>NOTE</p>	-	-

	Applicable power module: <ul style="list-style-type: none"> • 5.20 PAC600S12-CB (600 W AC Power Module) • 5.22 PAC600S12-EB (600 W AC Power Module) • 5.21 PAC600S12-DB (600 W AC Power Module) (applicable in V200R020C10 and later versions) • 5.27 PDC1000S12-DB (1000 W DC Power Module) • 5.12 PAC150S12-R (150 W AC Power Module) • 5.15 PDC180S12-CR (180 W DC Power Module) (applicable in V200R020C00 and later versions) 		
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Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-1136 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-1136 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ optical port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-1137 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-1137 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards	IEEE802.3ae

Attribute	Description
compliance	
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1138.

Table 4-1138 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1139 describes the attributes of an ETH management port.

Table 4-1139 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch

for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

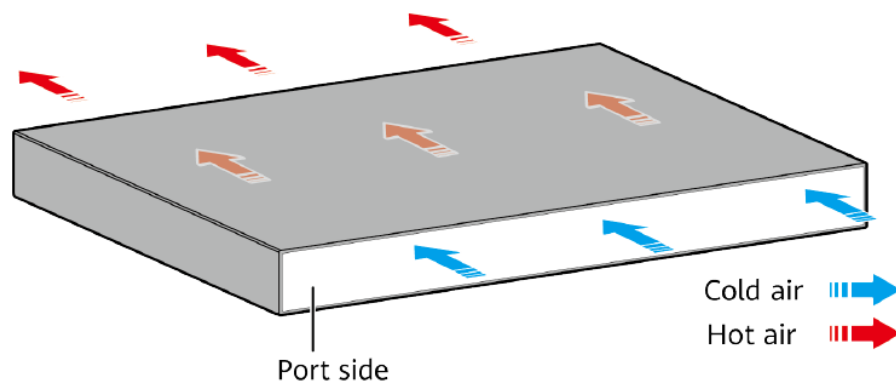
The S5731-S48T4X has similar indicators to those on the S5731-S48P4X except that the S5731-S48T4X does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The switch can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch. However, the power modules with natural heat dissipation and the power modules with fan cannot be used at the same time.

Heat Dissipation

The S5731-S48T4X uses pluggable fan modules for forced air cooling. Air flows in from the front side and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1140 lists technical specifications of the S5731-S48T4X.

Table 4-1140 Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	1 GB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	55.31 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	<ul style="list-style-type: none">Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common modeUsing DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.4 in. x 17.7 in.)
Weight (with packaging)	8.55 kg (18.85 lb)
Stack ports	10GE SFP+ ports on the front panel
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none">AC input: 100 V AC to 240 V AC, 50/60 HzHigh-Voltage DC input: 240 V DCDC input: -48 V DC to -60 V DC
Maximum voltage range	<ul style="list-style-type: none">AC input: 90 V AC to 290 V AC, 45 Hz to 65 HzHigh-Voltage DC input: 190 V DC to 290 V DCDC input: -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	124 W
Typical power consumption (30% of traffic load,	101 W

Item	Description
tested according to ATIS standard)	
Operating temperature	-5 °C to +45 °C (23 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0 °C (32 °F).
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 57.5 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02353AJB 02353AJB-003

4.23.4 S5731-S48P4X

Version Mapping

Table 4-1141 lists the mapping between the S5731-S48P4X chassis and software versions.

Table 4-1141 Version mapping

Series	Model	Software Version
S5731-S	S5731-S48P4X	02353AJH: V200R019C00 and later versions 02353AJH-001: V200R020C10 and later versions 02353AJH-003: V200R021C10SPC600 and later versions

Appearance and Structure

Figure 4-460 S5731-S48P4X (02353AJH) appearance

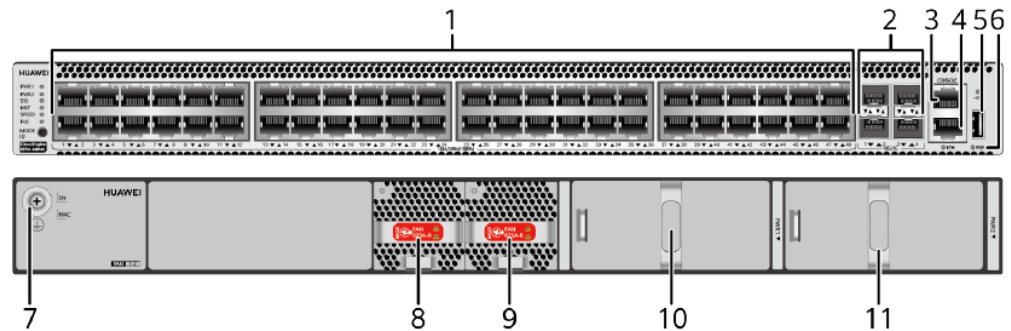
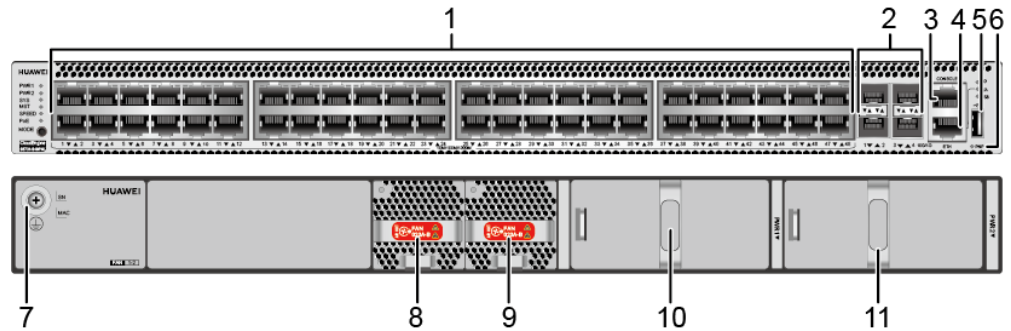


Figure 4-461 S5731-S48P4X (02353AJH-001 or 02353AJH-003) appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	One console port	4	One ETH management port

5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw NOTE It is used with a 9.1 Ground Cable.	8	Fan module slot 1 NOTE Applicable fan module: 7.5 FAN-023A-B (Fan box(B,FAN panel side exhaust))
9	Fan module slot 2 NOTE Applicable fan module: 7.5 FAN-023A-B (Fan box(B,FAN panel side exhaust))	10	Power module slot 1 NOTE Applicable power module: <ul style="list-style-type: none"> • 5.24 PAC1000S56-CB (1000 W PoE AC Power Module) • 5.25 PAC1000S56-DB (1000 W PoE AC Power Module) (applicable in V200R020C10 and later versions) • 5.26 PDC1000S56-CB (1000 W PoE DC Power Module) (applicable in V200R021C00 and later versions) • 5.23 PAC600S56-CB (600 W AC&240 V DC Power Module (Back to Front, Power panel side exhaust)) (applicable in V200R021C10 and later versions)
11	Power module slot 2 NOTE Applicable power module: <ul style="list-style-type: none"> • 5.24 PAC1000S56-CB (1000 W PoE AC Power Module) • 5.25 PAC1000S56-DB (1000 W PoE AC Power Module) (applicable in V200R020C10 and later versions) • 5.26 PDC1000S56-CB (1000 W PoE DC Power Module) (applicable in V200R021C00 and later versions) • 5.23 PAC600S56-CB (600 W AC&240 V DC Power Module (Back to Front, Power panel side exhaust)) (applicable in V200R021C10 and later versions) 	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-1142 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-1142 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ optical port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-1143 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-1143 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1144.

Table 4-1144 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1145 describes the attributes of an ETH management port.

Table 4-1145 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
- If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.

- If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 4-462 Indicators on the S5731-S48P4X (02353AJH)

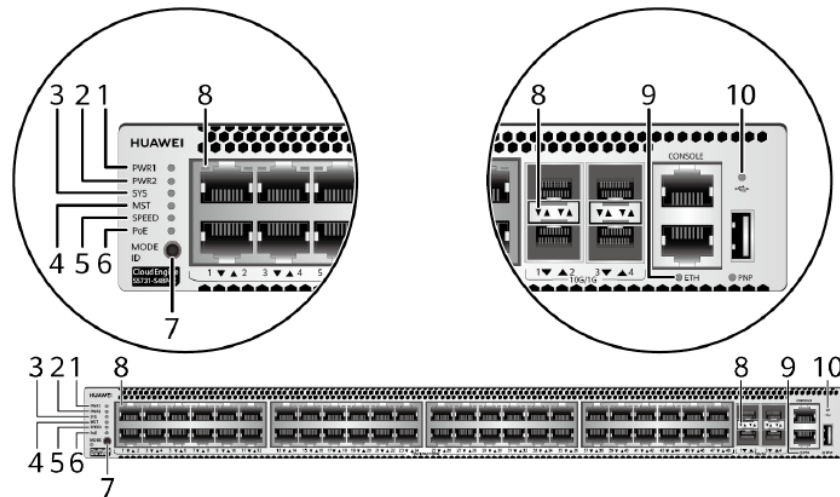


Figure 4-463 Indicators on the S5731-S48P4X (02353AJH-001 or 02353AJH-003)

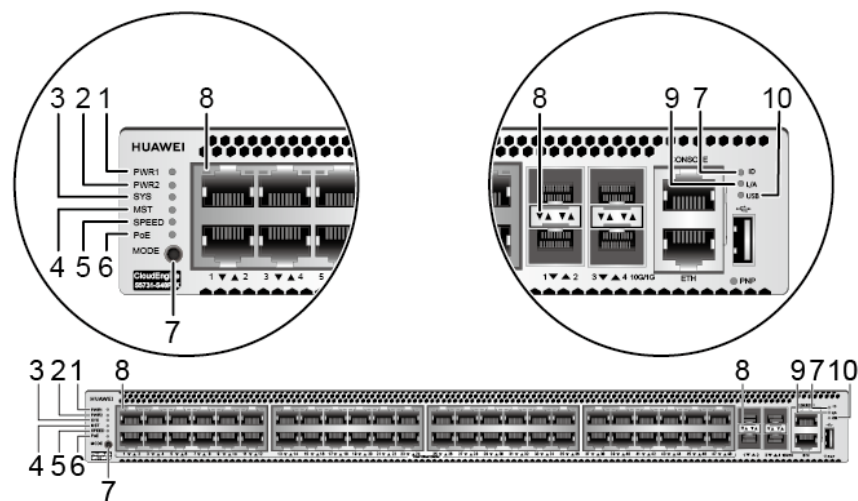


Table 4-1146 Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR1	Power module indicator	-	Off	No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.

No.	Indicator	Name	Color	Status	Description
			Green	Steady on	A power module is installed in power module slot 1 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none"> A power module is available in this slot but it is not connected to a power source. The power module in this slot has failed.
2	PWR 2	Power module indicator	-	Off	No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 2 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 2: <ul style="list-style-type: none"> A power module is available in this slot but it is not connected to a power source. The power module in this slot has failed.
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Steady on	During the system startup preparation phase, the SYS indicator is steady green, which lasts for a maximum of 30 seconds.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or a temperature alarm has been generated.
4	MST	Stack indicator	-	Off	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is a standby or slave switch in a stack or the stacking function is not enabled on the switch. If you are changing the indicator mode:

No.	Indicator	Name	Color	Status	Description
					The stack mode is not selected.
			Green	Steady on	The stack mode is selected. The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is the master switch in a stack or a standalone switch with the stacking function enabled. If you are changing the indicator mode: The stack mode is selected. The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. After 45 seconds, the service port indicators automatically restore to the status mode.
5	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The speed mode is selected, and service port indicators show the speed of each port.
6	PoE	PoE indicator	-	Off	The PoE mode is not selected.
			Green	Steady on	The PoE mode is selected, and service port indicators show the PoE status of each port.
7	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> When you press this button once, the service port indicators change to the stack mode and show the stack ID of the local switch. When you press this button a second time, the service port indicators change to the speed mode and show the speed of each service port. When you press this button a third time, the service port indicators change to the PoE mode and show the PoE status of each service port. When you press this button a fourth time, the service port indicators restore to the default mode and show the connection status and link activity of each service port. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the SPEED and PoE indicators are off.</p>

No.	Indicator	Name	Color	Status	Description
	ID	ID indicator NOTE The mode switch button on the 02353AJH has an ID indicator.	-	Off	The ID indicator is not used (default state).
			Blue	Steady on	The indicator identifies the switch to maintain. The ID indicator can be turned on or off remotely to help field engineers find the switch to maintain.
8	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see Table 4-1147 and Table 4-1148.		
9	ETH	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The ETH port is sending or receiving data.
10	-	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> No USB flash drive is connected to the switch. The USB port is damaged. The indicator is damaged. The USB flash drive does not have any configuration file and cannot be used for deployment. The switch has been upgraded using the USB flash drive and is restarting.
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from a USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

Table 4-1147 Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Default mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
MST stack mode	Green	Off	Port indicators do not show the stack ID of the switch.
		Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none">If the indicator of a port is steady on, the number of this port is the stack ID of the switch.If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
		Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none">If the indicator of a port is blinking, the number of this port is the stack ID of the switch.If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.
Speed mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10 Mbit/s or 100 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s.
PoE mode	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.
	Green	Blinking	The power of the PD connected to the port exceeds the power capacity of the port or the power threshold configured on the port. Alternatively, the PD does not comply with IEEE standards.

Table 4-1148 Description of service port indicators in different modes (two indicators for each port)

Display Mode	Color	Status	Description
Default mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Yellow	Blinking	The port is sending or receiving data.
Speed mode	-	Off	The port is not connected or has been shut down.
	Green and yellow	Steady on	1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green and yellow	Blinking	1000M/10GE port: The port is operating at 10 Gbit/s. 1000M port: The port is operating at 1000 Mbit/s.

Power Supply Configuration

The switch is a PoE switch and supports two power module slots, each of which can have a 1000 W PoE or 600 W PoE power module installed. Pluggable AC and DC PoE power modules can be used together in the same switch.

Table 4-1149 Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W AC (220 V) 1000 W DC	-	760 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 25
1000 W AC (110 V)	-	665 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 43 802.3at (30 W per port): 22
1000 W AC (220 V) 1000 W DC	1000 W AC (220 V) 1000 W DC	1600 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 48
1000 W AC (110 V) 1000 W DC	1000 W AC (110 V)	1330 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 44

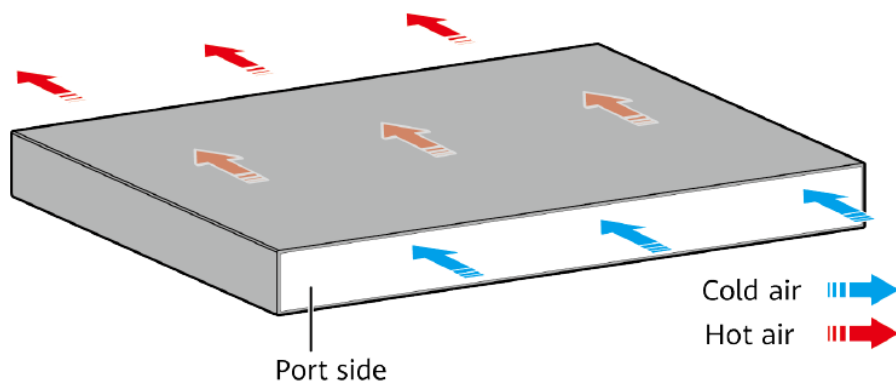
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
600 W AC (220 V)	–	380 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 12
600 W AC (110 V)	–	95 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 6 802.3at (30 W per port): 3
600 W AC (220 V)	600 W AC (220 V)	950 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 31
600 W AC (110 V)	600 W AC (110 V)	380 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 12
1000 W AC (220 V) 1000 W DC	600 W AC (220 V)	1330 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 44

NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

Heat Dissipation

The S5731-S48P4X uses pluggable fan modules for forced air cooling. Air flows in from the front side and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1150 lists technical specifications of the S5731-S48P4X.

Table 4-1150 Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	1 GB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	54.96 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	<ul style="list-style-type: none">Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common modeUsing DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.4 in. x 17.7 in.)
Weight (with packaging)	8.8 kg (19.40 lb)
Stack ports	10GE SFP+ ports on the front panel
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	<ul style="list-style-type: none">AC input: 100 V AC to 130 V AC, 200 V AC to 240 V AC, 50/60 HzHigh-Voltage DC input: 240 V DCDC input: -48 V DC to -60 V DC
Maximum voltage range	<ul style="list-style-type: none">AC input: 90 V AC to 290 V AC, 45 Hz to 65 HzHigh-Voltage DC input: 190 V DC to 290 V DCDC input: -38.4 V DC to -72 V DC
Maximum power consumption	<ul style="list-style-type: none">Not providing the PoE function: 132 W100% PoE loads: 1750 W (PoE: 1440 W)

Item	Description
(100% throughput, full speed of fans)	
Typical power consumption (30% of traffic load, tested according to ATIS standard)	108 W
Operating temperature	-5 °C to +45 °C (23 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0 °C (32 °F).
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 62.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02353AJH 02353AJH-001 02353AJH-003

4.23.5 S5731-S32ST4X

Overview

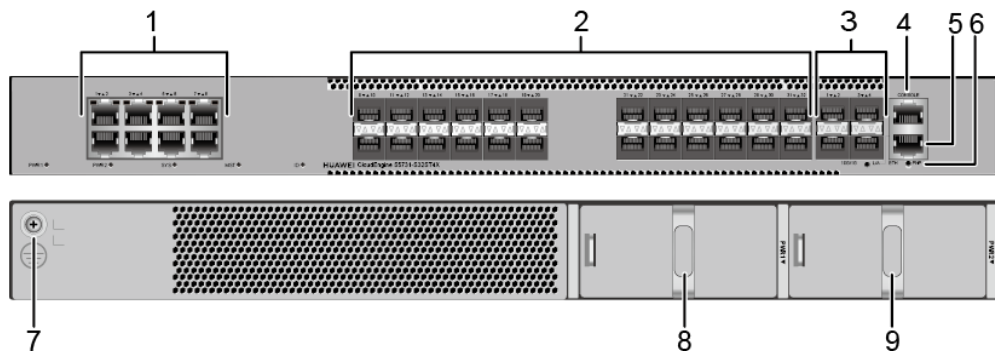
Table 4-1151 Basic information about the S5731-S32ST4X

Item	Details
Description	S5731-S32ST4X(8*10/100/1000BASE-T ports, 24*GE SFP ports, 4*10GE SFP+ ports, without power module)
Part Number	98011813

Item	Details
Model	S5731-S32ST4X
First supported version	V200R021C01

Components

Figure 4-464 S5731-S32ST4X appearance



1	Eight 10/100/1000BASE-T ports	2	Twenty-four 100/1000BASE-X ports
3	Four 10GE SFP+ ports	4	One console port
5	One ETH management port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw NOTE It is used with a 9.1 Ground Cable.	8	Power module slot 1 NOTE Applicable power module: <ul style="list-style-type: none"> • 5.12 PAC150S12-R (150 W AC Power Module) • 5.15 PDC180S12-CR (180 W DC Power Module) • 5.21 PAC600S12-DB (600 W AC Power Module) • 5.22 PAC600S12-EB (600 W AC Power Module)
9	Power module slot 2 NOTE Applicable power module:	-	-

	<ul style="list-style-type: none"> • 5.12 PAC150S12-R (150 W AC Power Module) • 5.15 PDC180S12-CR (180 W DC Power Module) • 5.21 PAC600S12-DB (600 W AC Power Module) • 5.22 PAC600S12-EB (600 W AC Power Module) 		
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Ports

Table 4-1152 Ports on the S5731-S32ST4X

Port	Connector Type	Description	Available Components
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.	9.4 Ethernet Cable
100/1000BASE-X port	SFP	A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s.	<ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13

Port	Connector Type	Description	Available Components
			10GE-CWDM SFP+ Optical Modules <ul style="list-style-type: none">• 10.14 10GE-DWDM SFP+ Optical Modules• 9.15 Copper Cable• 9.3 Optical Fiber• 9.14 Dedicated Stack Cable
Console port	RJ45	The console port is connected to a console for on-site configuration.	9.13 Console Cable
ETH management port	RJ45	You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port.	9.4 Ethernet Cable

Indicators and Buttons

Figure 4-465 Indicators on the S5731-S32ST4X

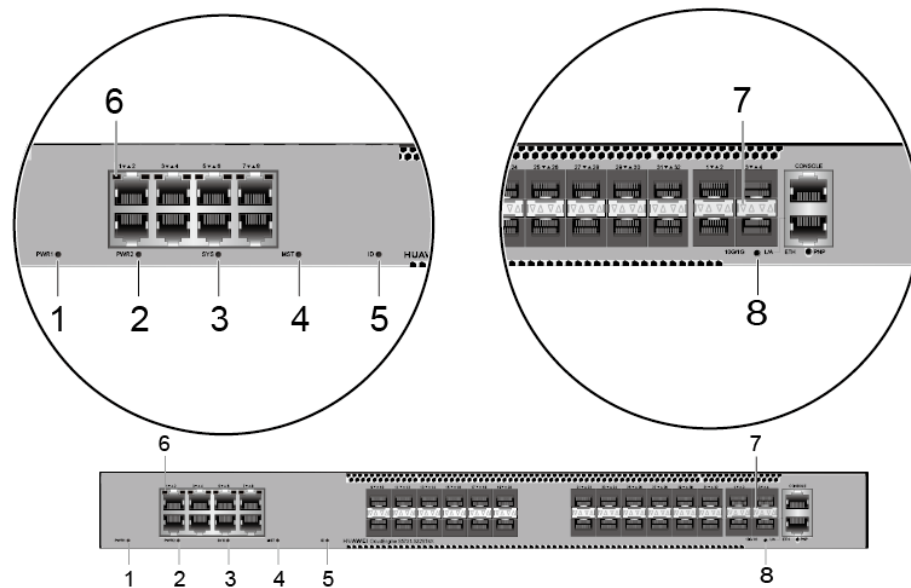


Table 4-1153 Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR1	Power module indicator	-	Off	No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 1 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none"> A power module is available in this slot but it is not connected to a power source. The power module in this slot has failed.
2	PWR2	Power module indicator	-	Off	No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 2 and is working normally.

No.	Indicator	Name	Color	Status	Description
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 2: <ul style="list-style-type: none"> A power module is available in this slot but it is not connected to a power source. The power module in this slot has failed.
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Steady on	During the system startup preparation phase, the SYS indicator is steady green, which lasts for a maximum of 30 seconds.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or a temperature alarm has been generated.
4	MST	Stack indicator	-	Off	The switch is not the master switch in a stack.
			Green	Blinking	The switch is the master switch in a stack or a standalone switch.
5	ID	ID indicator	-	Off	The ID indicator is not used (default state).
			Blue	Steady on	The indicator identifies the switch to maintain. The ID indicator can be turned on or off remotely to help field engineers find the switch to maintain.
6	-	Service port indicator (electrical port)	-	Off	The port is not connected or has been shut down.
			Green	Steady on	A link has been established on the port.
				Blinking	The port is sending or receiving data.
7	-	Service port indicator (optical)	Green	Off	The port is not connected or has been shut down.
				Steady on	A link has been established on the port.

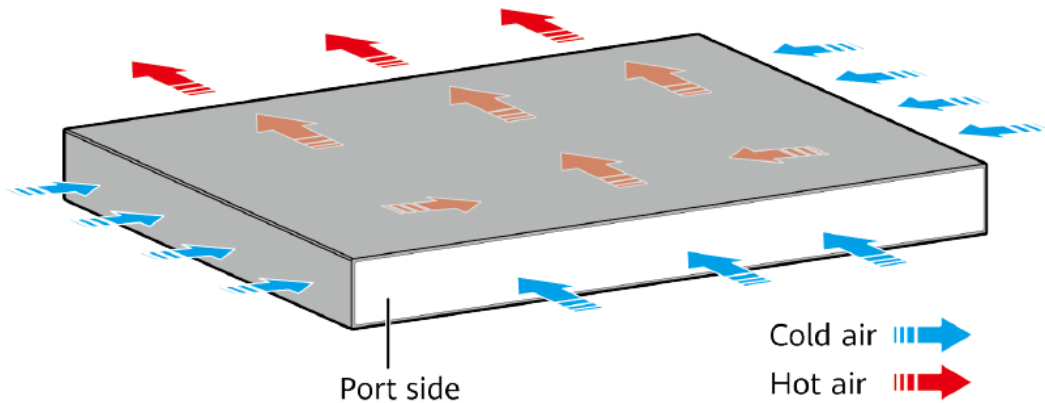
No.	Indicator	Name	Color	Status	Description
		port) NOTE If a power failure occurs on a device's PCB board, indicators of the last four optical ports on the device's front panel blink green cyclically at an interval of 1 second, with each indicator illuminating for 0.25 seconds.	Yellow	Off	The port is not sending or receiving data.
				Blinking	The port is sending or receiving data.
8	L/A	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The Eth port is sending or receiving data.

Power Supply System

The switch can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch. However, the power modules with natural heat dissipation and the power modules with fan cannot be used at the same time.

Heat Dissipation System

The switch has three built-in fans for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1154 Technical specifications of the S5731-S32ST4X

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.40 in. x 16.54 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.40 in. x 17.64 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	185 mm x 650 mm x 550 mm (7.28 in. x 25.59 in. x 21.65 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	4.9 kg (10.80 lb)
Weight with packaging [kg(lb)]	7.43 kg (16.38 lb)
Typical power consumption [W]	73.56 W
Typical heat dissipation [BTU/hour]	250.99 BTU/hour
Maximum power consumption [W]	104.82 (150 W AC or 180 W DC) 119.23 (600 W AC)
Maximum heat dissipation [BTU/hour]	357.66 (150 W AC or 180 W DC) 406.82 (600 W AC)
MTBF [year]	71.54 year
MTTR [hour]	2 hour
Availability	>0.99999

Item	Specification
Noise at normal temperature (acoustic power) [dB(A)]	45.47 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	31.79 dB(A)
Number of card slots	0
Number of power slots	2
Number of fans modules	3
Redundant power supply	1+1 Pluggable AC and DC power modules can be used together in the same switch, but power modules that use natural heat dissipation and power modules that use air cooling cannot be used together.
Long-term operating temperature [°C(°F)]	-5 °C to +45 °C (23 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.)
Short-term operating temperature [°C(°F)]	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>The device can work for a short period of time when the operating temperature is beyond the normal range, but the following conditions must be met:</p> <ul style="list-style-type: none">• The operating temperature can exceed 45 °C (113 °F) for a maximum of 96 consecutive hours in a year.• The total time when the operating temperature exceeds 45 °C (113 °F) in a year is less than or equal to 360 hours.• The number of times the operating temperature exceeds 45 °C (113 °F) is less than or equal to 15 in one year. <p>If any of the preceding conditions is not met, the device may be damaged or an unknown error may occur.</p> <p>Devices cannot start when the temperature is lower than 0 °C (32 °F). The maximum transmission distance of an optical module used for short-term operation cannot exceed 10 km.</p>
Storage temperature [°C(°F)]	-40 °C to +70 °C (-40 °F to +158 °F)

Item	Specification
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	Pluggable power supply
Rated input voltage [V]	<ul style="list-style-type: none">AC input: 100 V AC to 240 V AC, 50/60 HzHigh-voltage DC input: 240 V DCDC input: -48 V DC to -60 V DC
Input voltage range [V]	<ul style="list-style-type: none">AC input: 90 V AC to 290 V AC; 45 Hz to 65 HzHigh-voltage DC input: 190 V DC to 290 V DCDC input: -38.4 V DC to -72 V DC
Maximum input current [A]	The current specifications depend on the pluggable power modules in use. For details, see the related power module specifications.
Memory	2 GB
Flash memory	The physical space is 1 GB. You can run the display version command to view the actual available space.
Console port	RJ45
Eth Management port	RJ45
USB	Not supported
RTC	Supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: ± 7 kV
Power supply surge protection [kV]	<ul style="list-style-type: none">Configured with AC power modules: ± 6 kV in differential mode and ± 6 kV in common modeConfigured with DC power modules: ± 2 kV in differential mode and ± 4 kV in common mode
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left, front and right, air exhaustion from behind

Item	Specification
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

4.23.6 S5731-S32ST4X-A

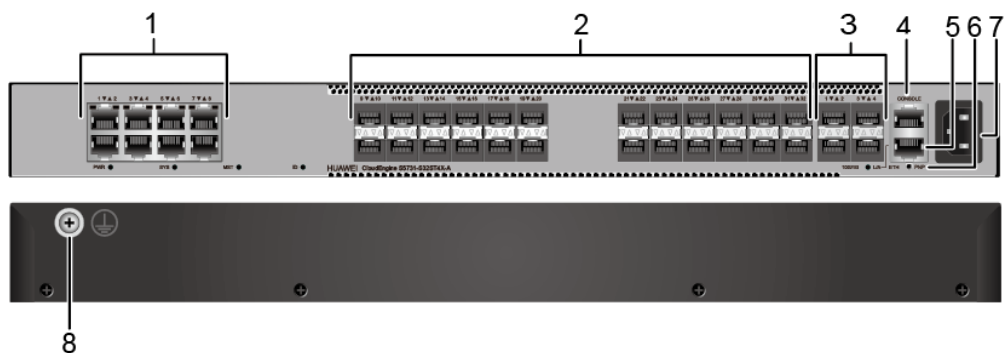
Overview

Table 4-1155 Basic information about the S5731-S32ST4X-A

Item	Details
Description	S5731-S32ST4X-A(8*10/100/1000BASE-T ports, 24*GE SFP ports, 4*10GE SFP+ ports, AC power, front access)
Part Number	98011808
Model	S5731-S32ST4X-A
First supported version	V200R021C01

Components

Figure 4-466 S5731-S32ST4X-A appearance



1	Eight 10/100/1000BASE-T ports	2	Twenty-four 100/1000BASE-X ports
3	Four 10GE SFP+ ports	4	One console port
5	One ETH management port	6	One PNP button
			NOTICE

			<p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
7	<p>AC socket</p> <p>NOTE It is used with an 9.8 AC Power Cable.</p>	8	<p>Ground screw</p> <p>NOTE It is used with a 9.1 Ground Cable.</p>

Ports

Table 4-1156 Ports on the S5731-S32ST4X-A

Port	Connector Type	Description	Available Components
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.	9.4 Ethernet Cable
100/1000BASE-X port	SFP	A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s.	<ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE

Port	Connector Type	Description	Available Components
			<p>SFP+ Optical Modules</p> <ul style="list-style-type: none"> • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
Console port	RJ45	The console port is connected to a console for on-site configuration.	9.13 Console Cable
ETH management port	RJ45	<p>You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely.</p> <p>You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port.</p>	9.4 Ethernet Cable

Indicators and Buttons

Figure 4-467 Indicators on the S5731-S32ST4X-A

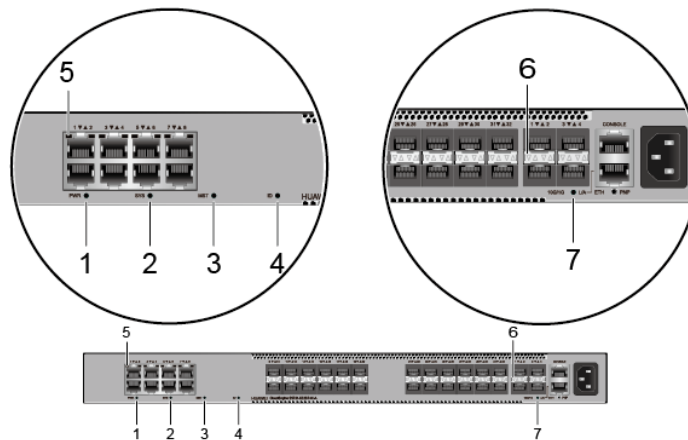


Table 4-1157 Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR	Power module indicator	-	Off	The switch is powered off.
			Green	Steady on	The system power supply is normal.
2	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Steady on	During the system startup preparation phase, the SYS indicator is steady green, which lasts for a maximum of 30 seconds.
			Green	Slow blinking	The system is running normally.
3	MST	Stack indicator	-	Off	The switch is not the master switch in a stack.
			Green	Blinking	The switch is the master switch in a stack or a standalone switch.
4	ID	ID indicator	-	Off	The ID indicator is not used (default state).
			Blue	Steady	The indicator identifies the switch to

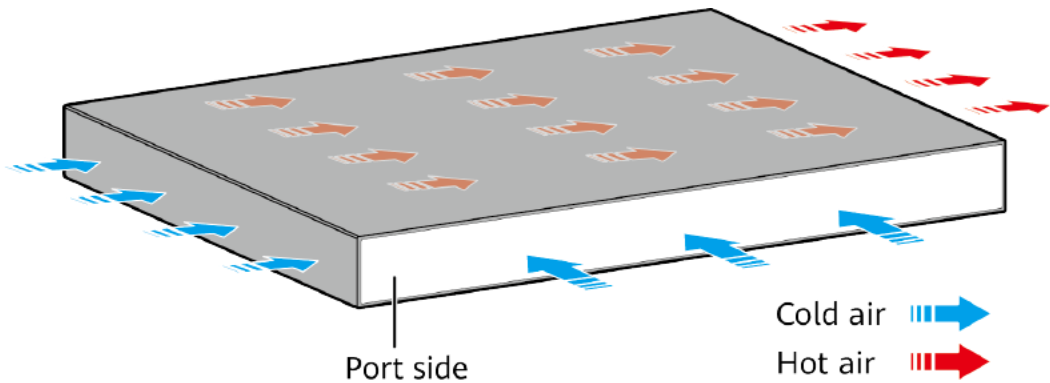
No.	Indicator	Name	Color	Status	Description
				on	maintain. The ID indicator can be turned on or off remotely to help field engineers find the switch to maintain.
5	-	Service port indicator (electrical port)	-	Off	The port is not connected or has been shut down.
			Green	Steady on	A link has been established on the port.
				Blinking	The port is sending or receiving data.
6	-	Service port indicator (optical port)	Green	Off	The port is not connected or has been shut down.
				Steady on	A link has been established on the port.
		Yellow	Off	The port is not sending or receiving data.	
			Blinking	The port is sending or receiving data.	
		NOTE If a power failure occurs on a device's PCB board, indicators of the last four optical ports on the device's front panel blink green cyclically at an interval of 1 second, with each indicator illuminating for 0.25 seconds.			
7	L/A	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The Eth port is sending or receiving data.

Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules.

Heat Dissipation System

The switch has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1158 Technical specifications of the S5731-S32ST4X-A

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.40 in. x 8.66 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.40 in. x 8.94 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90 mm x 550 mm x 355 mm (3.54 in. x 21.65 in. x 13.98 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	3.13 kg (6.90 lb)
Weight with packaging [kg(lb)]	4.49 kg (9.90 lb)
Typical power consumption [W]	66.85 W
Typical heat dissipation [BTU/hour]	228.10 BTU/hour
Maximum power consumption [W]	93.92 W

Item	Specification
Maximum heat dissipation [BTU/hour]	320.46 BTU/hour
MTBF [year]	32.56 year
MTTR [hour]	2 hour
Availability	>0.99999
Noise at normal temperature (acoustic power) [dB(A)]	41.42 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	27.74 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	2
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5 °C to +45 °C (23 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.)
Short-term operating temperature [°C(°F)]	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>The device can work for a short period of time when the operating temperature is beyond the normal range, but the following conditions must be met:</p> <ul style="list-style-type: none"> • The operating temperature can exceed 45 °C (113 °F) for a maximum of 96 consecutive hours in a year. • The total time when the operating temperature exceeds 45 °C (113 °F) in a year is less than or equal to 360 hours. • The number of times the operating temperature exceeds 45 °C (113 °F) is less than or equal to 15 in one year. <p>If any of the preceding conditions is not met, the device may be damaged or an unknown error may occur.</p> <p>Devices cannot start when the temperature is lower than 0 °C (32 °F). The maximum transmission distance of an optical module used for short-term operation cannot exceed 10 km.</p>

Item	Specification
Storage temperature [°C(°F)]	-40 °C to +70 °C (-40 °F to +158 °F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	AC built-in
Rated input voltage [V]	<ul style="list-style-type: none">AC input: 100 V AC to 240 V AC, 50/60 HzHigh-voltage DC input: 240 V DC
Input voltage range [V]	<ul style="list-style-type: none">AC input: 90 V AC to 264 V AC, 47 Hz to 63 HzHigh-voltage DC input: 190 V DC to 290 V DC
Maximum input current [A]	3 A
Memory	2 GB
Flash memory	The physical space is 1 GB. You can run the display version command to view the actual available space.
Console port	RJ45
Eth Management port	RJ45
USB	Not supported
RTC	Supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: ± 7 kV
Power supply surge protection [kV]	± 6 kV in differential mode; ± 6 kV in common mode
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from the front and left and air exhaust from the right
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

4.23.7 S5731-S32ST4X-D

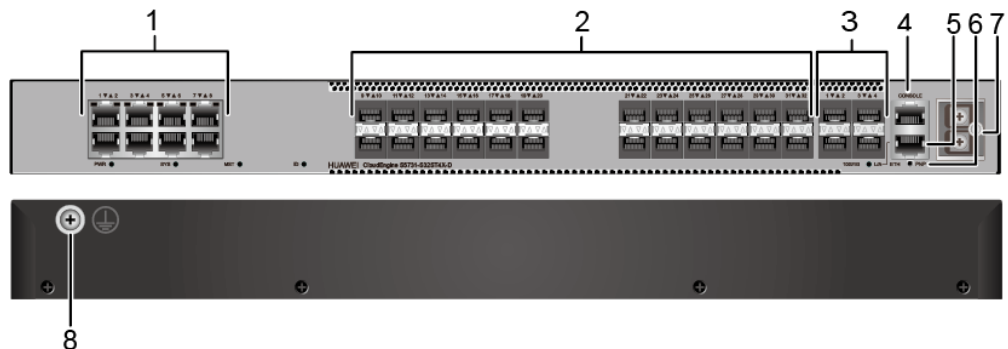
Overview

Table 4-1159 Basic information about the S5731-S32ST4X-D

Item	Details
Description	S5731-S32ST4X-D(8*10/100/1000BASE-T ports, 24*GE SFP ports, 4*10GE SFP+ ports, DC power, front access)
Part Number	98011810
Model	S5731-S32ST4X-D
First supported version	V200R021C01

Components

Figure 4-468 S5731-S32ST4X-D appearance



1	Eight 10/100/1000BASE-T ports	2	Twenty-four 100/1000BASE-X ports
3	Four 10GE SFP+ ports	4	One console port
5	One ETH management port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	DC power terminal NOTE It is used with 9.5 DC Power Cable (with	8	Ground screw NOTE It is used with a 9.1 Ground Cable.

	OT and Cord End Terminals).	
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Ports

Table 4-1160 Ports on the S5731-S32ST4X-D

Port	Connector Type	Description	Available Components
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.	9.4 Ethernet Cable
100/1000BASE-X port	SFP	A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s.	<ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical

Port	Connector Type	Description	Available Components
			Modules <ul style="list-style-type: none">• 9.15 Copper Cable• 9.3 Optical Fiber• 9.14 Dedicated Stack Cable
Console port	RJ45	The console port is connected to a console for on-site configuration.	9.13 Console Cable
ETH management port	RJ45	You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port.	9.4 Ethernet Cable

Indicators and Buttons

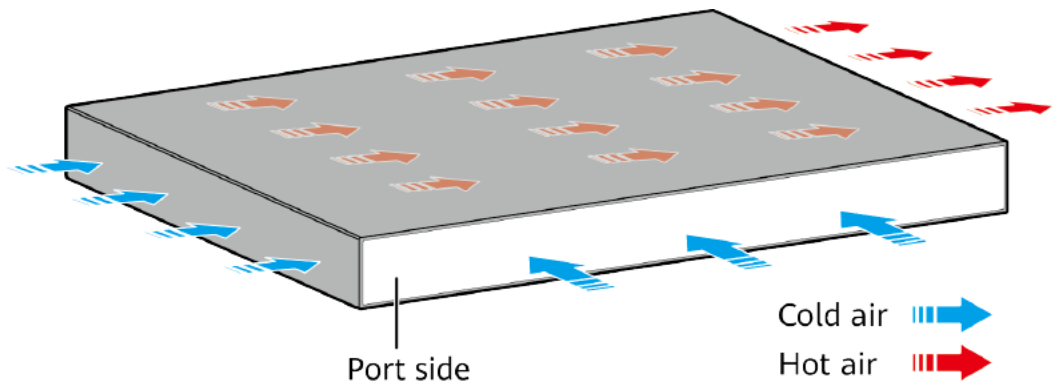
The S5731-S32ST4X-D has the same types of indicators as the S5731-S32ST4X-A. For details, see the S5731-S32ST4X-A.

Power Supply System

The switch has a built-in DC power module and does not support pluggable power modules.

Heat Dissipation System

The switch has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1161 Technical specifications of the S5731-S32ST4X-D

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.40 in. x 8.66 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 236.0 mm (1.72 in. x 17.40 in. x 9.29 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90 mm x 550 mm x 355 mm (3.54 in. x 21.65 in. x 13.98 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	2.98 kg (6.57 lb)
Weight with packaging [kg(lb)]	4.34 kg (9.57 lb)
Typical power consumption [W]	69.46 W
Typical heat dissipation [BTU/hour]	237.00 BTU/hour
Maximum power consumption [W]	93.39 W
Maximum heat dissipation [BTU/hour]	318.66 BTU/hour
MTBF [year]	32.56 year
MTTR [hour]	2 hour
Availability	>0.99999
Noise at normal temperature (acoustic power) [dB(A)]	41.42 dB(A)

Item	Specification
Noise at normal temperature (acoustic pressure) [dB(A)]	27.74 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	2
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5 °C to +45 °C (23 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.)
Short-term operating temperature [°C(°F)]	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>The device can work for a short period of time when the operating temperature is beyond the normal range, but the following conditions must be met:</p> <ul style="list-style-type: none"> • The operating temperature can exceed 45 °C (113 °F) for a maximum of 96 consecutive hours in a year. • The total time when the operating temperature exceeds 45 °C (113 °F) in a year is less than or equal to 360 hours. • The number of times the operating temperature exceeds 45 °C (113 °F) is less than or equal to 15 in one year. <p>If any of the preceding conditions is not met, the device may be damaged or an unknown error may occur.</p> <p>Devices cannot start when the temperature is lower than 0 °C (32 °F). The maximum transmission distance of an optical module used for short-term operation cannot exceed 10 km.</p>
Storage temperature [°C(°F)]	-40 °C to +70 °C (-40 °F to +158 °F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	DC built-in

Item	Specification
Rated input voltage [V]	-48 V DC to -60 V DC
Input voltage range [V]	-38.4 V DC to -72 V DC
Maximum input current [A]	6 A
Memory	2 GB
Flash memory	The physical space is 1 GB. You can run the display version command to view the actual available space.
Console port	RJ45
Eth Management port	RJ45
USB	Not supported
RTC	Supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: ± 7 kV
Power supply surge protection [kV]	± 2 kV in differential mode; ± 4 kV in common mode
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from the front and left and air exhaust from the right
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

4.23.8 S5731-S48S4X

Overview

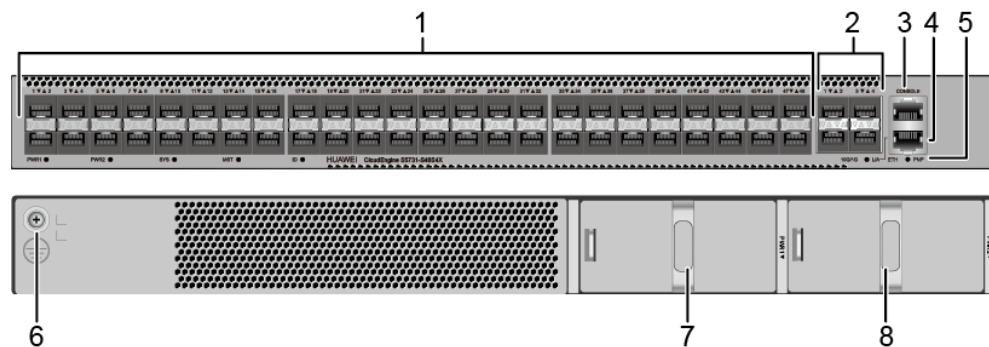
Table 4-1162 Basic information about the S5731-S48S4X

Item	Details
Description	S5731-S48S4X(48*GE SFP ports, 4*10GE SFP+ ports, without power module)
Part Number	98011805

Item	Details
Model	S5731-S48S4X
First supported version	V200R021C01

Components

Figure 4-469 S5731-S48S4X appearance



1	Forty-eight 100/1000BASE-X ports	2	Four 10GE SFP+ ports
3	One console port	4	One ETH management port
5	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.	6	Ground screw NOTE It is used with a 9.1 Ground Cable.
7	Power module slot 1 NOTE Applicable power module: <ul style="list-style-type: none"> 5.12 PAC150S12-R (150 W AC Power Module) 5.15 PDC180S12-CR (180 W DC Power Module) 5.21 PAC600S12-DB (600 W AC Power Module) 5.22 PAC600S12-EB (600 W AC Power Module) 	8	Power module slot 2 NOTE Applicable power module: <ul style="list-style-type: none"> 5.12 PAC150S12-R (150 W AC Power Module) 5.15 PDC180S12-CR (180 W DC Power Module) 5.21 PAC600S12-DB (600 W AC Power Module) 5.22 PAC600S12-EB (600 W AC Power Module)

Ports

Table 4-1163 Ports on the S5731-S48S4X

Port	Connector Type	Description	Available Components
100/1000BASE-X port	SFP	A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s.	<ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
Console port	RJ45	The console port is connected to a console for on-site	9.13 Console Cable

Port	Connector Type	Description	Available Components
		configuration.	
ETH management port	RJ45	<p>You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely.</p> <p>You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port.</p>	9.4 Ethernet Cable

Indicators and Buttons

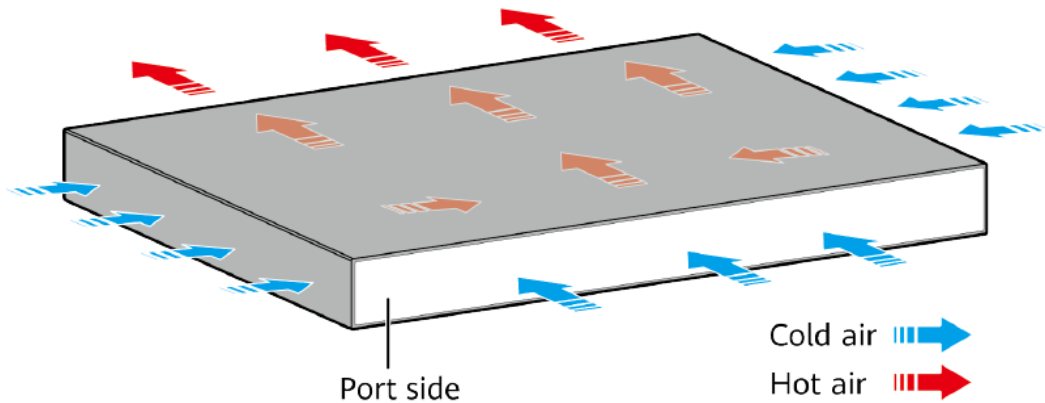
The S5731-S48S4X has the same types of indicators as the S5731-S32ST4X. For details, see the S5731-S32ST4X.

Power Supply System

The switch can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch. However, the power modules with natural heat dissipation and the power modules with fan cannot be used at the same time.

Heat Dissipation System

The switch has three built-in fans for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1164 Technical specifications of the S5731-S48S4X

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.40 in. x 16.54 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.40 in. x 17.64 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	185 mm x 650 mm x 550 mm (7.28 in. x 25.59 in. x 21.65 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	5.12 kg (11.29 lb)
Weight with packaging [kg(lb)]	7.65 kg (16.87 lb)
Typical power consumption [W]	93.69 W
Typical heat dissipation [BTU/hour]	319.68 BTU/hour
Maximum power consumption [W]	128.89 (150 W AC or 180 W DC) 141.96 (600 W AC)
Maximum heat dissipation [BTU/hour]	439.79 (150 W AC or 180 W DC) 484.38 (600 W AC)
MTBF [year]	64.97 year
MTTR [hour]	2 hour
Availability	>0.99999

Item	Specification
Noise at normal temperature (acoustic power) [dB(A)]	45.47 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	31.79 dB(A)
Number of card slots	0
Number of power slots	2
Number of fans modules	3
Redundant power supply	1+1 Pluggable AC and DC power modules can be used together in the same switch, but power modules that use natural heat dissipation and power modules that use air cooling cannot be used together.
Long-term operating temperature [°C(°F)]	-5 °C to +45 °C (23 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.)
Short-term operating temperature [°C(°F)]	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>The device can work for a short period of time when the operating temperature is beyond the normal range, but the following conditions must be met:</p> <ul style="list-style-type: none">• The operating temperature can exceed 45 °C (113 °F) for a maximum of 96 consecutive hours in a year.• The total time when the operating temperature exceeds 45 °C (113 °F) in a year is less than or equal to 360 hours.• The number of times the operating temperature exceeds 45 °C (113 °F) is less than or equal to 15 in one year. <p>If any of the preceding conditions is not met, the device may be damaged or an unknown error may occur.</p> <p>Devices cannot start when the temperature is lower than 0 °C (32 °F). The maximum transmission distance of an optical module used for short-term operation cannot exceed 10 km.</p>
Storage temperature [°C(°F)]	-40 °C to +70 °C (-40 °F to +158 °F)

Item	Specification
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	Pluggable power supply
Rated input voltage [V]	<ul style="list-style-type: none">AC input: 100 V AC to 240 V AC, 50/60 HzHigh-voltage DC input: 240 V DCDC input: -48 V DC to -60 V DC
Input voltage range [V]	<ul style="list-style-type: none">AC input: 90 V AC to 290 V AC; 45 Hz to 65 HzHigh-voltage DC input: 190 V DC to 290 V DCDC input: -38.4 V DC to -72 V DC
Maximum input current [A]	The current specifications depend on the pluggable power modules in use. For details, see the related power module specifications.
Memory	2 GB
Flash memory	The physical space is 1 GB. You can run the display version command to view the actual available space.
Console port	RJ45
Eth Management port	RJ45
USB	Not supported
RTC	Supported
RPS input	Not supported
Service port surge protection [kV]	-
Power supply surge protection [kV]	<ul style="list-style-type: none">Configured with AC power modules: ± 6 kV in differential mode and ± 6 kV in common modeConfigured with DC power modules: ± 2 kV in differential mode and ± 4 kV in common mode
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left, front and right, air exhaustion from behind

Item	Specification
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

4.23.9 S5731-S48S4X-A

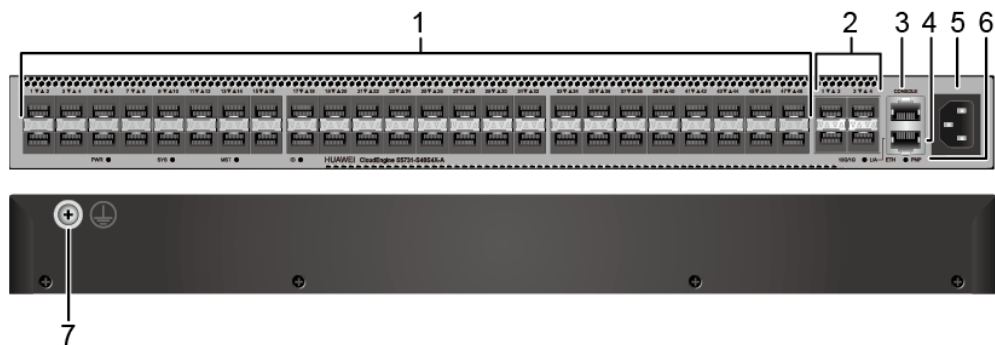
Overview

Table 4-1165 Basic information about the S5731-S48S4X-A

Item	Details
Description	S5731-S48S4X-A(48*GE SFP ports, 4*10GE SFP+ ports, AC power, front access)
Part Number	98011801
Model	S5731-S48S4X-A
First supported version	V200R021C01

Components

Figure 4-470 S5731-S48S4X-A appearance



1	Forty-eight 100/1000BASE-X ports	2	Four 10GE SFP+ ports
3	One console port	4	One ETH management port
5	AC socket NOTE	6	One PNP button NOTICE To restore the factory settings and reset the

	It is used with an 9.8 AC Power Cable.		switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw NOTE It is used with a 9.1 Ground Cable.	-	-

Ports

Table 4-1166 Ports on the S5731-S48S4X-A

Port	Connector Type	Description	Available Components
100/1000BASE-X port	SFP	A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s.	<ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM

Port	Connector Type	Description	Available Components
			SFP+ Optical Modules <ul style="list-style-type: none">• 9.15 Copper Cable• 9.3 Optical Fiber• 9.14 Dedicated Stack Cable
Console port	RJ45	The console port is connected to a console for on-site configuration.	9.13 Console Cable
ETH management port	RJ45	You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port.	9.4 Ethernet Cable

Indicators and Buttons

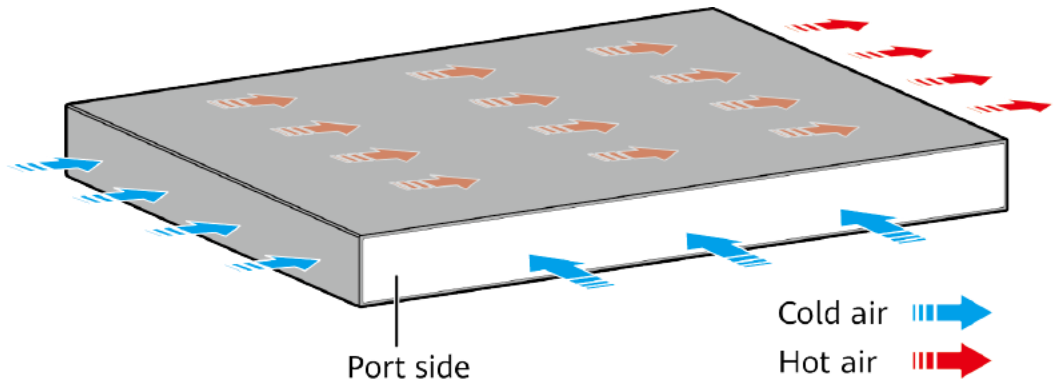
The S5731-S48S4X-A has the same types of indicators as the S5731-S32ST4X-A. For details, see the S5731-S32ST4X-A.

Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules.

Heat Dissipation System

The switch has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1167 Technical specifications of the S5731-S48S4X-A

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.40 in. x 8.66 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.40 in. x 8.94 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90 mm x 550 mm x 355 mm (3.54 in. x 21.65 in. x 13.98 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	3.49 kg (7.69 lb)
Weight with packaging [kg(lb)]	4.85 kg (10.69 lb)
Typical power consumption [W]	87.89 W
Typical heat dissipation [BTU/hour]	299.89 BTU/hour
Maximum power consumption [W]	121.04 W
Maximum heat dissipation [BTU/hour]	413.00 BTU/hour
MTBF [year]	31.39 year
MTTR [hour]	2 hour
Availability	>0.99999
Noise at normal temperature (acoustic power) [dB(A)]	41.42 dB(A)

Item	Specification
Noise at normal temperature (acoustic pressure) [dB(A)]	27.74 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	2
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5 °C to +45 °C (23 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.)
Short-term operating temperature [°C(°F)]	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>The device can work for a short period of time when the operating temperature is beyond the normal range, but the following conditions must be met:</p> <ul style="list-style-type: none">• The operating temperature can exceed 45 °C (113 °F) for a maximum of 96 consecutive hours in a year.• The total time when the operating temperature exceeds 45 °C (113 °F) in a year is less than or equal to 360 hours.• The number of times the operating temperature exceeds 45 °C (113 °F) is less than or equal to 15 in one year. <p>If any of the preceding conditions is not met, the device may be damaged or an unknown error may occur.</p> <p>Devices cannot start when the temperature is lower than 0 °C (32 °F). The maximum transmission distance of an optical module used for short-term operation cannot exceed 10 km.</p>
Storage temperature [°C(°F)]	-40 °C to +70 °C (-40 °F to +158 °F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	AC built-in

Item	Specification
Rated input voltage [V]	<ul style="list-style-type: none">AC input: 100 V AC to 240 V AC, 50/60 HzHigh-voltage DC input: 240 V DC
Input voltage range [V]	<ul style="list-style-type: none">AC input: 90 V AC to 264 V AC, 47 Hz to 63 HzHigh-voltage DC input: 190 V DC to 290 V DC
Maximum input current [A]	3 A
Memory	2 GB
Flash memory	The physical space is 1 GB. You can run the display version command to view the actual available space.
Console port	RJ45
Eth Management port	RJ45
USB	Not supported
RTC	Supported
RPS input	Not supported
Service port surge protection [kV]	-
Power supply surge protection [kV]	± 6 kV in differential mode; ± 6 kV in common mode
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left and air exhaust from right
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

4.24 S5731S-S

4.24.1 S5731S-S24T4X-A (02353AHV/02353AHV-001/02353AHV-002)

Version Mapping

Table 4-1168 lists the mapping between the S5731S-S24T4X-A chassis and software versions.

Table 4-1168 Version mapping

Series	Model	Software Version
S5731S-S	S5731S-S24T4X-A	02353AHV: V200R019C00 and later versions 02353AHV-001: V200R020C10 and later versions

Appearance and Structure

Figure 4-471 S5731S-S24T4X-A (02353AHV) appearance

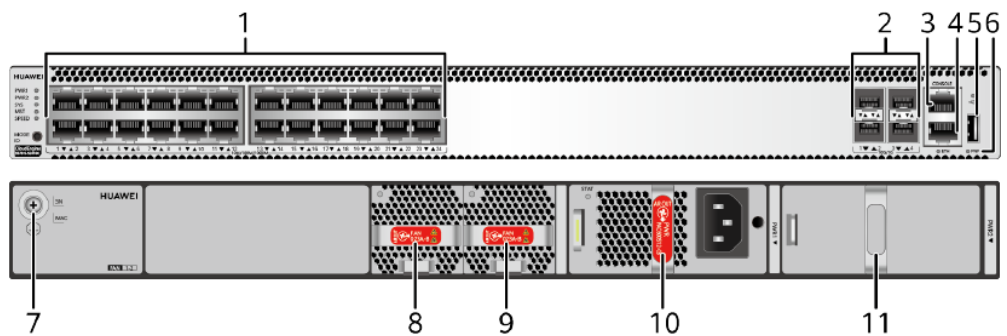
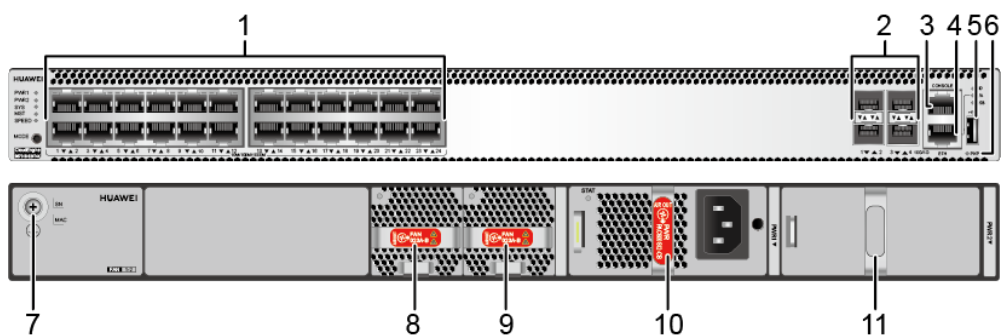


Figure 4-472 S5731S-S24T4X-A (02353AHV-001) appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw NOTE It is used with a 9.1 Ground Cable.	8	Fan module slot 1 NOTE Applicable fan module: 7.5 FAN-023A-B (Fan box(B,FAN panel side exhaust))
9	Fan module slot 2 NOTE Applicable fan module: 7.5 FAN-023A-B (Fan box(B,FAN panel side exhaust))	10	Power module slot 1 NOTE Applicable power module: <ul style="list-style-type: none"> • 5.20 PAC600S12-CB (600 W AC Power Module) • 5.22 PAC600S12-EB (600 W AC Power Module) • 5.21 PAC600S12-DB (600 W AC Power Module) (applicable in V200R020C10 and later versions) • 5.27 PDC1000S12-DB (1000 W DC Power Module) • 5.12 PAC150S12-R (150 W AC Power Module) • 5.15 PDC180S12-CR (180 W DC Power Module) (applicable in V200R020C00 and later versions)

11	<p>Power module slot 2</p> <p>NOTE</p> <p>Applicable power module:</p> <ul style="list-style-type: none"> • 5.20 PAC600S12-CB (600 W AC Power Module) • 5.22 PAC600S12-EB (600 W AC Power Module) • 5.21 PAC600S12-DB (600 W AC Power Module) (applicable in V200R020C10 and later versions) • 5.27 PDC1000S12-DB (1000 W DC Power Module) • 5.12 PAC150S12-R (150 W AC Power Module) • 5.15 PDC180S12-CR (180 W DC Power Module) (applicable in V200R020C00 and later versions) 	-	-
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Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-1169 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-1169 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ optical port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-1170 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-1170 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port	Depend on the optical module used

Attribute	Description
attributes	
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1171.

Table 4-1171 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1172 describes the attributes of an ETH management port.

Table 4-1172 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

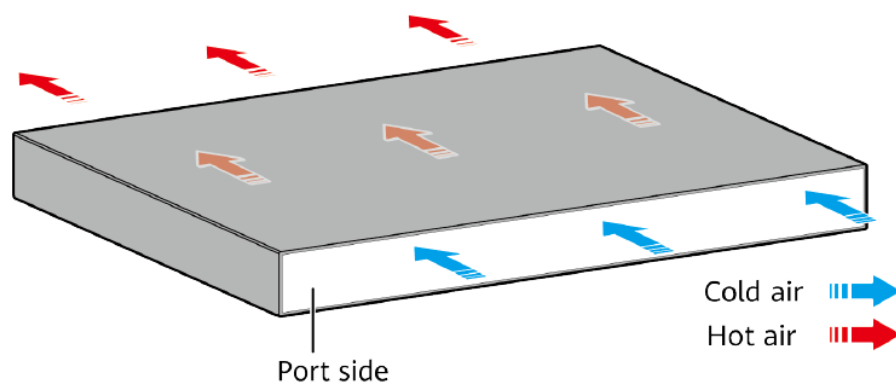
The S5731S-S24T4X-A has similar indicators to those on the S5731S-S48P4X-A except that the S5731S-S24T4X-A does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The switch can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch. However, the power modules with natural heat dissipation and the power modules with fan cannot be used at the same time.

Heat Dissipation

The S5731S-S24T4X-A uses pluggable fan modules for forced air cooling. Air flows in from the front side and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1173 lists technical specifications of the S5731S-S24T4X-A.

Table 4-1173 Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	1 GB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	57.73 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	<ul style="list-style-type: none">Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common modeUsing DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.4 in. x 17.7 in.)
Weight (with packaging)	9.35 kg (20.61 lb)
Stack ports	10GE SFP+ ports on the front panel
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none">AC input: 100 V AC to 240 V AC, 50/60 HzHigh-Voltage DC input: 240 V DCDC input: -48 V DC to -60 V DC
Maximum voltage range	<ul style="list-style-type: none">AC input: 90 V AC to 290 V AC, 45 Hz to 65 HzHigh-Voltage DC input: 190 V DC to 290 V DCDC input: -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput,	114 W

Item	Description
full speed of fans)	
Typical power consumption (30% of traffic load, tested according to ATIS standard)	88 W
Operating temperature	-5 °C to +45 °C (23 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0 °C (32 °F).
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 57.5 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02353AHV 02353AHV-001

4.24.2 S5731S-S24P4X-A

Version Mapping

Table 4-1174 lists the mapping between the S5731S-S24P4X-A chassis and software versions.

Table 4-1174 Version mapping

Series	Model	Software Version
S5731S-S	S5731S-S24P4X-A	02353AHY: V200R019C00 and later versions 02353AHY-001: V200R020C10 and later versions 02353AHY-003: V200R021C10SPC600 and later versions

Appearance and Structure

Figure 4-473 S5731S-S24P4X-A (02353AHY) appearance

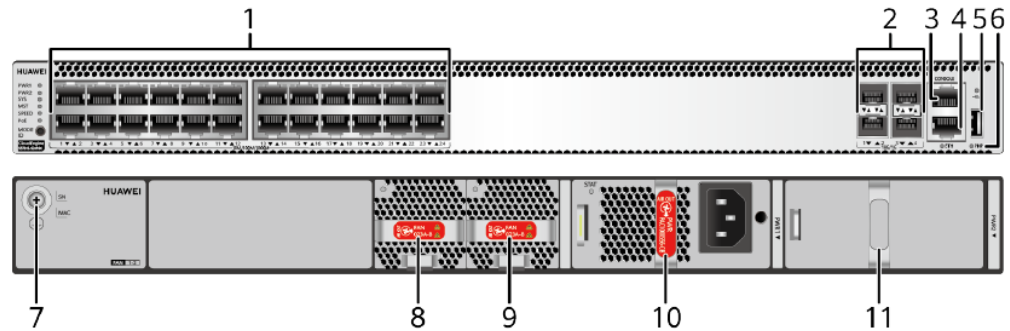
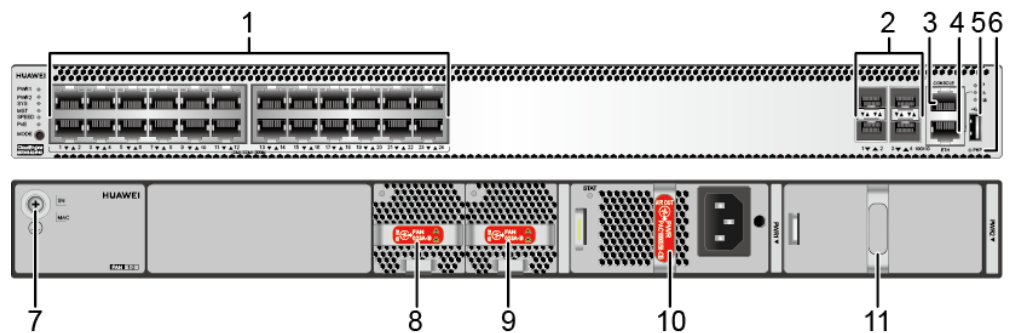


Figure 4-474 S5731S-S24P4X-A (02353AHY-001 or 02353AHY-003) appearance



1	Twenty-four PoE+ 10/100/1000BASE-T ports	2 Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
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3	One console port	4	One ETH management port
5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw NOTE It is used with a 9.1 Ground Cable.	8	Fan module slot 1 NOTE Applicable fan module: 7.5 FAN-023A-B (Fan box(B,FAN panel side exhaust))
9	Fan module slot 2 NOTE Applicable fan module: 7.5 FAN-023A-B (Fan box(B,FAN panel side exhaust))	10	Power module slot 1 NOTE Applicable power module: <ul style="list-style-type: none"> • 5.24 PAC1000S56-CB (1000 W PoE AC Power Module) • 5.25 PAC1000S56-DB (1000 W PoE AC Power Module) (applicable in V200R020C10 and later versions) • 5.26 PDC1000S56-CB (1000 W PoE DC Power Module) (applicable in V200R021C00 and later versions) • 5.23 PAC600S56-CB (600 W AC&240 V DC Power Module (Back to Front, Power panel side exhaust)) (applicable in V200R021C10 and later versions)
11	Power module slot 2 NOTE Applicable power module: <ul style="list-style-type: none"> • 5.24 PAC1000S56-CB (1000 W PoE AC Power Module) • 5.25 PAC1000S56-DB (1000 W PoE AC Power Module) (applicable in V200R020C10 and later versions) • 5.26 PDC1000S56-CB (1000 W PoE DC Power Module) (applicable in V200R021C00 and later versions) • 5.23 PAC600S56-CB (600 W AC&240 V DC Power Module (Back to Front, Power panel side exhaust)) (applicable in V200R021C10 and later versions) 	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-1175 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-1175 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ optical port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-1176 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-1176 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1177.

Table 4-1177 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)

Attribute	Description
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1178 describes the attributes of an ETH management port.

Table 4-1178 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5731S-S24P4X-A has the same types of indicators as the S5731S-S48P4X-A. For details, see [Indicator Description](#).

Power Supply Configuration

The switch is a PoE switch and supports two power module slots, each of which can have a 1000 W PoE or 600 W PoE power module installed. Pluggable AC and DC PoE power modules can be used together in the same switch.

Table 4-1179 Power supply configurations

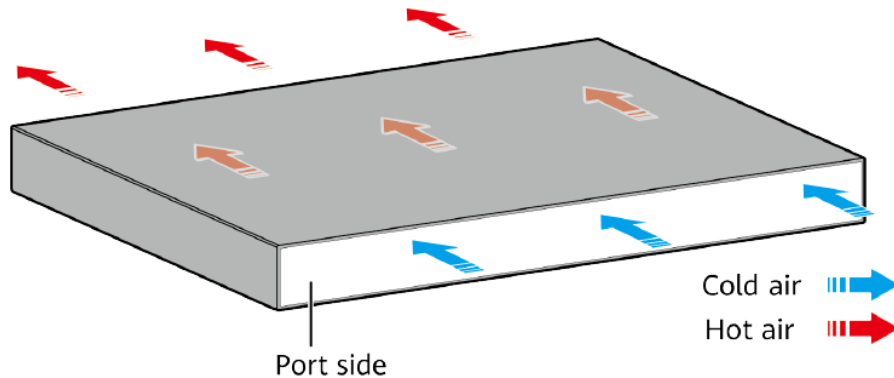
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W AC (220 V) 1000 W DC	–	760 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 24
1000 W AC (110 V)	–	665 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 22
1000 W AC (220 V) 1000 W DC	1000 W AC (220 V) 1000 W DC	1600 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 24
1000 W AC (110 V) 1000 W DC	1000 W AC (110 V)	1330 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 24
600 W AC (220 V)	–	380 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 12
600 W AC (110 V)	–	95 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 6 802.3at (30 W per port): 3
600 W AC (220 V)	600 W AC (220 V)	950 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 24
600 W AC (110 V)	600 W AC (110 V)	380 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 12
1000 W AC (220 V) 1000 W DC	600 W AC (220 V)	1330 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 24

 **NOTE**

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

Heat Dissipation

The S5731S-S24P4X-A uses pluggable fan modules for forced air cooling. Air flows in from the front side and exhausts from the rear panel.



Technical Specifications

Table 4-1180 lists technical specifications of the S5731S-S24P4X-A.

Table 4-1180 Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	1 GB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	57.21 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm

Item	Description
	x 448.0 mm (1.72 in. x 17.4 in. x 17.7 in.)
Weight (with packaging)	9.7 kg (21.38 lb)
Stack ports	10GE SFP+ ports on the front panel
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	<ul style="list-style-type: none">AC input: 100 V AC to 130 V AC, 200 V AC to 240 V AC, 50/60 HzHigh-Voltage DC input: 240 V DCDC input: -48 V DC to -60 V DC
Maximum voltage range	<ul style="list-style-type: none">AC input: 90 V AC to 290 V AC, 45 Hz to 65 HzHigh-Voltage DC input: 190 V DC to 290 V DCDC input: -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none">Not providing the PoE function: 121 W100% PoE loads: 977 W (PoE: 720 W)
Typical power consumption (30% of traffic load, tested according to ATIS standard)	95 W
Operating temperature	-5 °C to +45 °C (23 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0 °C (32 °F).
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 62.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">EMC certificationSafety certification

Item	Description
	<ul style="list-style-type: none"> Manufacturing certification
Part number	02353AHY 02353AHY-001 02353AHY-003

4.24.3 S5731S-S48T4X-A (02353AJC/02353AJC-003/02353AJC-004)

Version Mapping

Table 4-1181 lists the mapping between the S5731S-S48T4X-A chassis and software versions.

Table 4-1181 Version mapping

Series	Model	Software Version
S5731S-S	S5731S-S48T4X-A	02353AJC: V200R019C00 and later versions 02353AJC-003: V200R020C10 and later versions

Appearance and Structure

Figure 4-475 S5731S-S48T4X-A (02353AJC) appearance

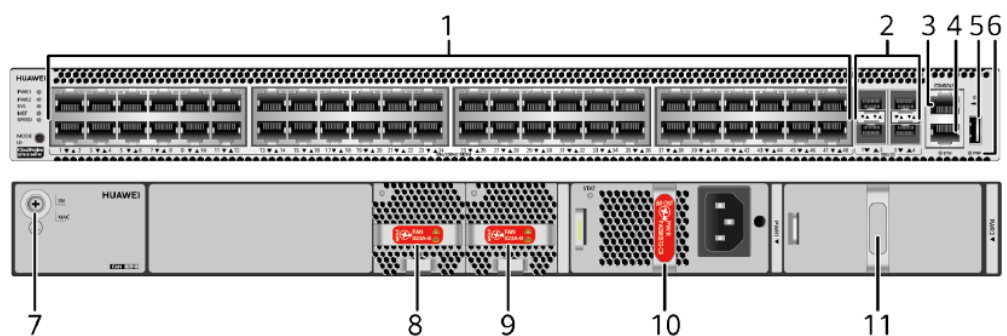
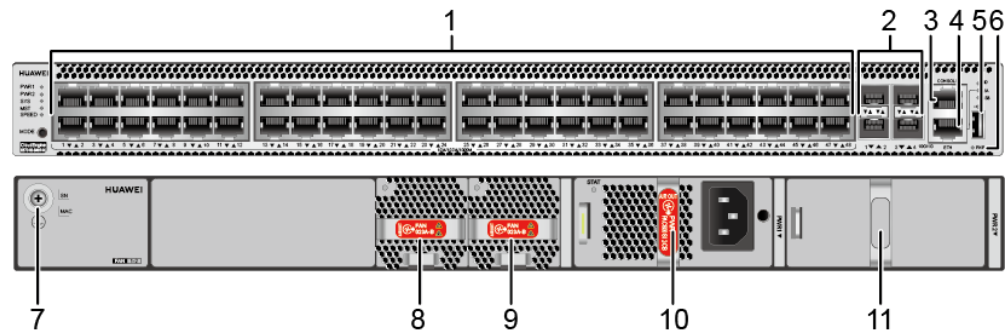


Figure 4-476 S5731S-S48T4X-A (02353AJC-003) appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw NOTE It is used with a 9.1 Ground Cable.	8	Fan module slot 1 NOTE Applicable fan module: 7.5 FAN-023A-B (Fan box(B,FAN panel side exhaust))
9	Fan module slot 2 NOTE Applicable fan module: 7.5 FAN-023A-B	10	Power module slot 1 NOTE Applicable power module:

	(Fan box(B,FAN panel side exhaust))		<ul style="list-style-type: none"> • 5.20 PAC600S12-CB (600 W AC Power Module) • 5.22 PAC600S12-EB (600 W AC Power Module) • 5.21 PAC600S12-DB (600 W AC Power Module) (applicable in V200R020C10 and later versions) • 5.27 PDC1000S12-DB (1000 W DC Power Module) • 5.12 PAC150S12-R (150 W AC Power Module) • 5.15 PDC180S12-CR (180 W DC Power Module) (applicable in V200R020C00 and later versions)
11	<p>Power module slot 2</p> <p>NOTE Applicable power module:</p> <ul style="list-style-type: none"> • 5.20 PAC600S12-CB (600 W AC Power Module) • 5.22 PAC600S12-EB (600 W AC Power Module) • 5.21 PAC600S12-DB (600 W AC Power Module) (applicable in V200R020C10 and later versions) • 5.27 PDC1000S12-DB (1000 W DC Power Module) • 5.12 PAC150S12-R (150 W AC Power Module) • 5.15 PDC180S12-CR (180 W DC Power Module) (applicable in V200R020C00 and later versions) 	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-1182 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-1182 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ optical port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-1183 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-1183 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1184.

Table 4-1184 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1185 describes the attributes of an ETH management port.

Table 4-1185 Attributes of an ETH management port

Attribute	Description
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Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

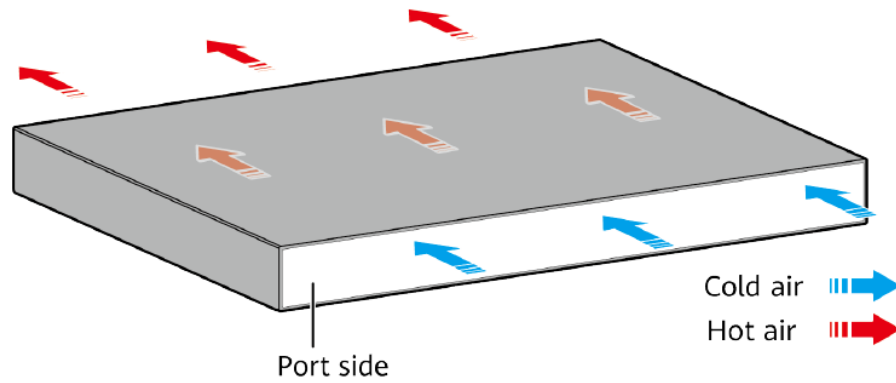
The S5731S-S48T4X-A has similar indicators to those on the S5731S-S48P4X-A except that the S5731S-S48T4X-A does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The switch can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch. However, the power modules with natural heat dissipation and the power modules with fan cannot be used at the same time.

Heat Dissipation

The S5731S-S48T4X-A uses pluggable fan modules for forced air cooling. Air flows in from the front side and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1186 lists technical specifications of the S5731S-S48T4X-A.

Table 4-1186 Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	1 GB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	55.31 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.4 in. x 17.7 in.)
Weight (with packaging)	9.5 kg (20.94 lb)
Stack ports	10GE SFP+ ports on the front panel
RTC	Supported

Item	Description
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none"> AC input: 100 V AC to 240 V AC, 50/60 Hz High-Voltage DC input: 240 V DC DC input: -48 V DC to -60 V DC
Maximum voltage range	<ul style="list-style-type: none"> AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz High-Voltage DC input: 190 V DC to 290 V DC DC input: -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	124 W
Typical power consumption (30% of traffic load, tested according to ATIS standard)	101 W
Operating temperature	<p>-5 °C to +45 °C (23 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>The switch cannot be started when the ambient temperature is lower than 0 °C (32 °F).</p>
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 57.5 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> EMC certification Safety certification Manufacturing certification
Part number	02353AJC 02353AJC-003

4.24.4 S5731S-S48P4X-A

Version Mapping

Table 4-1187 lists the mapping between the S5731S-S48P4X-A chassis and software versions.

Table 4-1187 Version mapping

Series	Model	Software Version
S5731S-S	S5731S-S48P4X-A	02353AJJ: V200R019C00 and later versions 02353AJJ-001: V200R020C10 and later versions 02353AJJ-003: V200R021C10SPC600 and later versions

Appearance and Structure

Figure 4-477 S5731S-S48P4X-A (02353AJJ) appearance

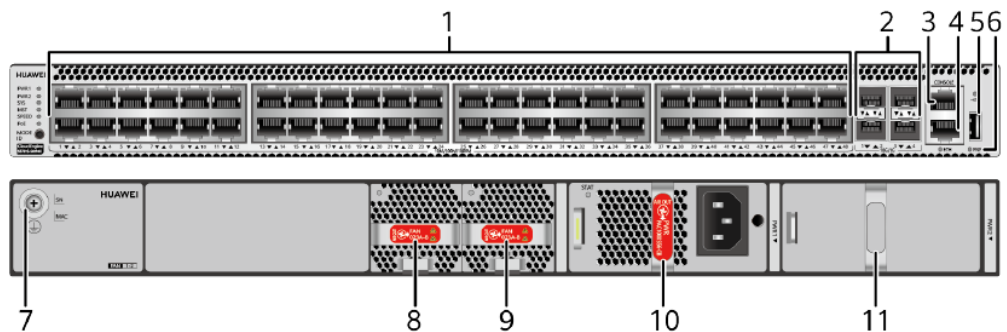
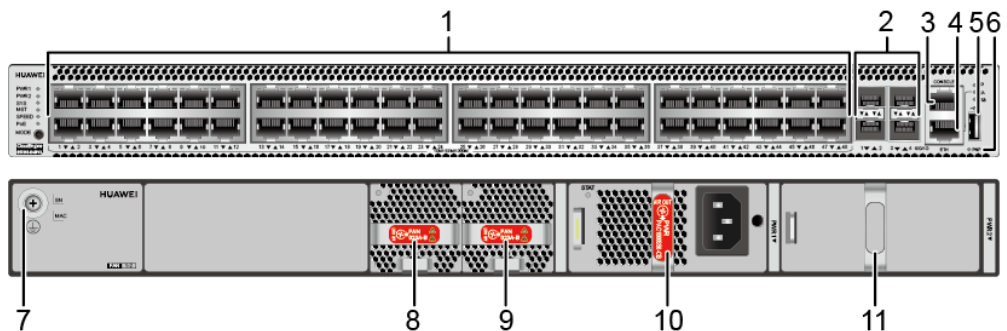


Figure 4-478 S5731S-S48P4X-A (02353AJJ-001 or 02353AJJ-003) appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables:
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			<ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	One console port	4	One ETH management port
5	One USB port	6	<p>One PNP button</p> <p>NOTICE</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
7	<p>Ground screw</p> <p>NOTE</p> <p>It is used with a 9.1 Ground Cable.</p>	8	<p>Fan module slot 1</p> <p>NOTE</p> <p>Applicable fan module: 7.5 FAN-023A-B (Fan box(B,FAN panel side exhaust))</p>
9	<p>Fan module slot 2</p> <p>NOTE</p> <p>Applicable fan module: 7.5 FAN-023A-B (Fan box(B,FAN panel side exhaust))</p>	10	<p>Power module slot 1</p> <p>NOTE</p> <p>Applicable power module:</p> <ul style="list-style-type: none"> • 5.24 PAC1000S56-CB (1000 W PoE AC Power Module) • 5.25 PAC1000S56-DB (1000 W PoE AC Power Module) (applicable in V200R020C10 and later versions) • 5.26 PDC1000S56-CB (1000 W PoE DC Power Module) (applicable in V200R021C00 and later versions) • 5.23 PAC600S56-CB (600 W AC&240 V DC Power Module (Back to Front, Power panel side exhaust)) (applicable in V200R021C10 and later versions)
11	<p>Power module slot 2</p> <p>NOTE</p> <p>Applicable power module:</p> <ul style="list-style-type: none"> • 5.24 PAC1000S56-CB (1000 W PoE 	-	-

	<p>AC Power Module)</p> <ul style="list-style-type: none"> • 5.25 PAC1000S56-DB (1000 W PoE AC Power Module) (applicable in V200R020C10 and later versions) • 5.26 PDC1000S56-CB (1000 W PoE DC Power Module) (applicable in V200R021C00 and later versions) • 5.23 PAC600S56-CB (600 W AC&240 V DC Power Module (Back to Front, Power panel side exhaust)) (applicable in V200R021C10 and later versions) 		
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Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-1188 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-1188 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ optical port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-1189 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-1189 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1190.

Table 4-1190 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1191 describes the attributes of an ETH management port.

Table 4-1191 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
- If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
- If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 4-479 Indicators on the S5731S-S48P4X-A (02353AJJ)

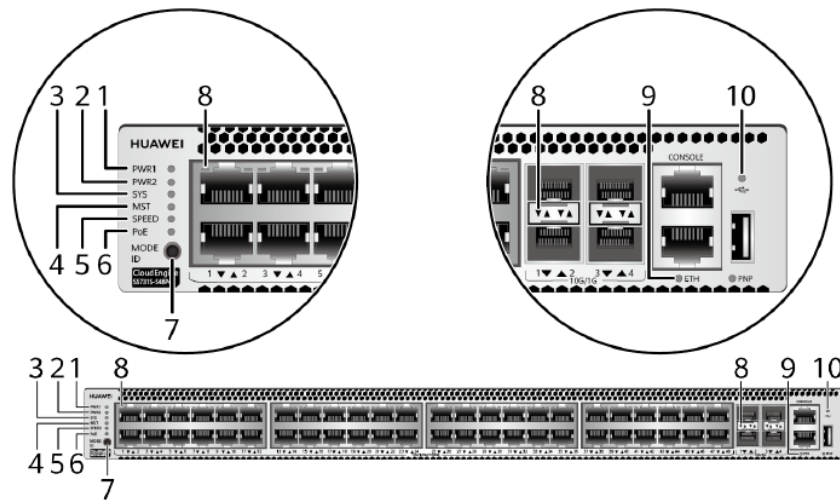


Figure 4-480 Indicators on the S5731S-S48P4X-A (02353AJJ-001 or 02353AJJ-003)

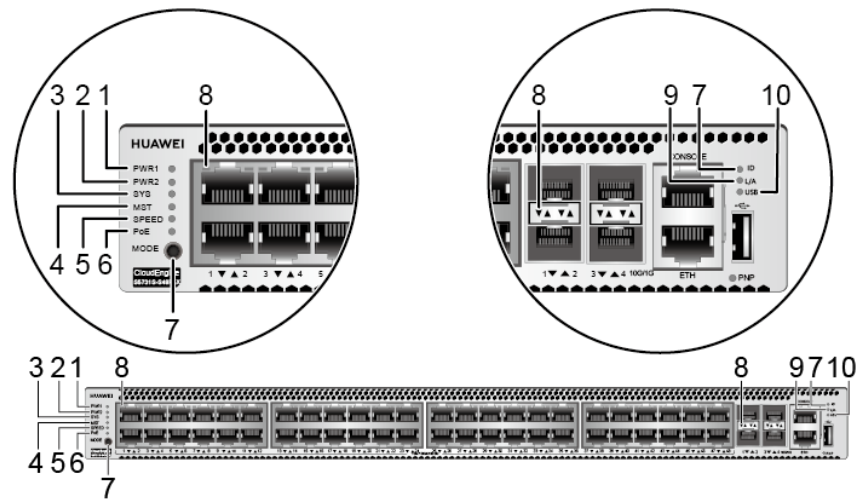


Table 4-1192 Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR1	Power module indicator	-	Off	No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 1 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none"> A power module is available in this slot but it is not connected to a power source. The power module in this slot has failed.
2	PWR2	Power module indicator	-	Off	No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 2 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 2: <ul style="list-style-type: none"> A power module is available in this slot but it is not connected to a power

No.	Indicator	Name	Color	Status	Description
					source. <ul style="list-style-type: none"> The power module in this slot has failed.
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Steady on	During the system startup preparation phase, the SYS indicator is steady green, which lasts for a maximum of 30 seconds.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or a temperature alarm has been generated.
4	MST	Stack indicator	-	Off	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is a standby or slave switch in a stack or the stacking function is not enabled on the switch. If you are changing the indicator mode: The stack mode is not selected.
			Green	Steady on	The stack mode is selected. The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is the master switch in a stack or a standalone switch with the stacking function enabled. If you are changing the indicator mode: The stack mode is selected. The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. After 45 seconds, the service port indicators automatically restore to the status mode.
5	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The speed mode is selected, and service port indicators show the speed of each port.
6	PoE	PoE	-	Off	The PoE mode is not selected.

No.	Indicator	Name	Color	Status	Description
		indicator	Green	Steady on	The PoE mode is selected, and service port indicators show the PoE status of each port.
7	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> When you press this button once, the service port indicators change to the stack mode and show the stack ID of the local switch. When you press this button a second time, the service port indicators change to the speed mode and show the speed of each service port. When you press this button a third time, the service port indicators change to the PoE mode and show the PoE status of each service port. When you press this button a fourth time, the service port indicators restore to the default mode and show the connection status and link activity of each service port. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the SPEED and PoE indicators are off.</p>
	ID	ID indicator NOTE The mode switch button on the 02353AJJ has an ID indicator.	-	Off	The ID indicator is not used (default state).
			Blue	Steady on	The indicator identifies the switch to maintain. The ID indicator can be turned on or off remotely to help field engineers find the switch to maintain.
8	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see Table 4-1193 and Table 4-1194.		
9	ETH	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The ETH port is sending or receiving data.
10	-	USB-based deployment	-	Off	<ul style="list-style-type: none"> No USB flash drive is connected to the switch. The USB port is damaged.

No.	Indicator	Name	Color	Status	Description
		nt indicator			<ul style="list-style-type: none"> The indicator is damaged. The USB flash drive does not have any configuration file and cannot be used for deployment. The switch has been upgraded using the USB flash drive and is restarting.
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from a USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

Table 4-1193 Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Default mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
MST stack mode	Green	Off	Port indicators do not show the stack ID of the switch.
		Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
		Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is blinking, the number of this port is the stack ID of the switch.

Display Mode	Color	Status	Description
			<ul style="list-style-type: none"> If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.
Speed mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10 Mbit/s or 100 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s.
PoE mode	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.
	Green	Blinking	The power of the PD connected to the port exceeds the power capacity of the port or the power threshold configured on the port. Alternatively, the PD does not comply with IEEE standards.

Table 4-1194 Description of service port indicators in different modes (two indicators for each port)

Display Mode	Color	Status	Description
Default mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Yellow	Blinking	The port is sending or receiving data.
Speed mode	-	Off	The port is not connected or has been shut down.
	Green and yellow	Steady on	1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green and yellow	Blinking	1000M/10GE port: The port is operating at 10 Gbit/s. 1000M port: The port is operating at 1000 Mbit/s.

Power Supply Configuration

The switch is a PoE switch and supports two power module slots, each of which can have a 1000 W PoE or 600 W PoE power module installed. Pluggable AC and DC PoE power modules can be used together in the same switch.

Table 4-1195 Power supply configurations

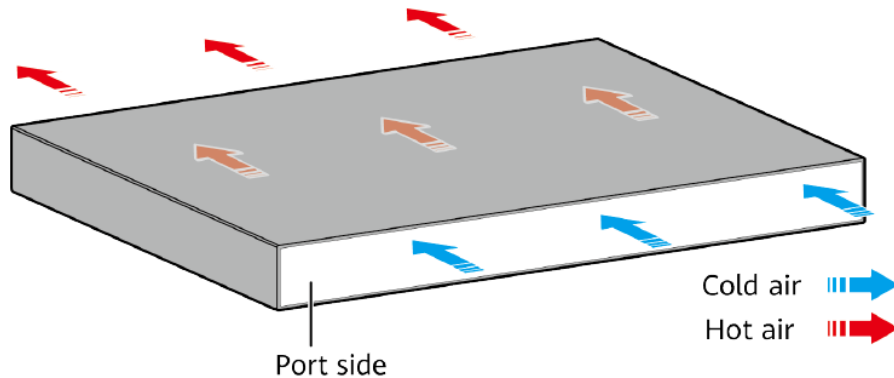
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W AC (220 V) 1000 W DC	–	760 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 25
1000 W AC (110 V)	–	665 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 43 802.3at (30 W per port): 22
1000 W AC (220 V) 1000 W DC	1000 W AC (220 V) 1000 W DC	1600 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 48
1000 W AC (110 V) 1000 W DC	1000 W AC (110 V)	1330 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 44
600 W AC (220 V)	–	380 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 12
600 W AC (110 V)	–	95 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 6 802.3at (30 W per port): 3
600 W AC (220 V)	600 W AC (220 V)	950 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 31
600 W AC (110 V)	600 W AC (110 V)	380 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 12
1000 W AC (220 V) 1000 W DC	600 W AC (220 V)	1330 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 44

 **NOTE**

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

Heat Dissipation

The S5731S-S48P4X-A uses pluggable fan modules for forced air cooling. Air flows in from the front side and exhausts from the rear panel.



 **NOTE**

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1196 lists technical specifications of the S5731S-S48P4X-A.

Table 4-1196 Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	1 GB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	54.96 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body):

Item	Description
W x D)	43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.) <ul style="list-style-type: none">Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.4 in. x 17.7 in.)
Weight (with packaging)	9.9 kg (21.83 lb)
Stack ports	10GE SFP+ ports on the front panel
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	<ul style="list-style-type: none">AC input: 100 V AC to 130 V AC, 200 V AC to 240 V AC, 50/60 HzHigh-Voltage DC input: 240 V DCDC input: -48 V DC to -60 V DC
Maximum voltage range	<ul style="list-style-type: none">AC input: 90 V AC to 290 V AC, 45 Hz to 65 HzHigh-Voltage DC input: 190 V DC to 290 V DCDC input: -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none">Not providing the PoE function: 132 W100% PoE loads: 1750 W (PoE: 1440 W)
Typical power consumption (30% of traffic load, tested according to ATIS standard)	108 W
Operating temperature	-5 °C to +45 °C (23 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0 °C (32 °F).
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 62.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)

Item	Description
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02353AJJ 02353AJJ-001 02353AJJ-003

4.24.5 S5731S-S32ST4X-A

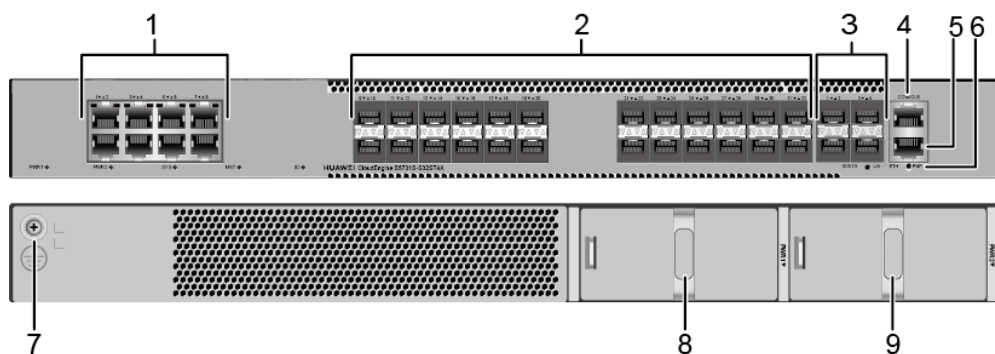
Overview

Table 4-1197 Basic information about the S5731S-S32ST4X-A

Item	Details
Description	S5731S-S32ST4X Bundle(8*10/100/1000BASE-T ports, 24*GE SFP ports, 4*10GE SFP+ ports, with AC power supply)
Part Number	98011814
Model	S5731S-S32ST4X-A
First supported version	V200R021C01

Components

Figure 4-481 S5731S-S32ST4X-A appearance



1	Eight 10/100/1000BASE-T ports	2	Twenty-four 100/1000BASE-X ports
3	Four 10GE SFP+ ports	4	One console port

5	One ETH management port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw NOTE It is used with a 9.1 Ground Cable.	8	Power module slot 1 NOTE Applicable power module: <ul style="list-style-type: none"> • 5.12 PAC150S12-R (150 W AC Power Module) • 5.15 PDC180S12-CR (180 W DC Power Module) • 5.21 PAC600S12-DB (600 W AC Power Module) • 5.22 PAC600S12-EB (600 W AC Power Module)
9	Power module slot 2 NOTE Applicable power module: <ul style="list-style-type: none"> • 5.12 PAC150S12-R (150 W AC Power Module) • 5.15 PDC180S12-CR (180 W DC Power Module) • 5.21 PAC600S12-DB (600 W AC Power Module) • 5.22 PAC600S12-EB (600 W AC Power Module) 	-	-

Ports

Table 4-1198 Ports on the S5731S-S32ST4X-A

Port	Connector Type	Description	Available Components
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.	9.4 Ethernet Cable
100/1000BASE-X port	SFP	A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000	<ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP

Port	Connector Type	Description	Available Components
		Mbit/s.	<p>Optical Modules</p> <ul style="list-style-type: none"> • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
Console port	RJ45	The console port is connected to a console for on-site configuration.	9.13 Console Cable
ETH management port	RJ45	You can connect a switch to a configuration terminal or network management workstation through the ETH	9.4 Ethernet Cable

Port	Connector Type	Description	Available Components
		management port to configure the switch locally or remotely. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port.	

Indicators and Buttons

Figure 4-482 Indicators on the S5731S-S32ST4X-A

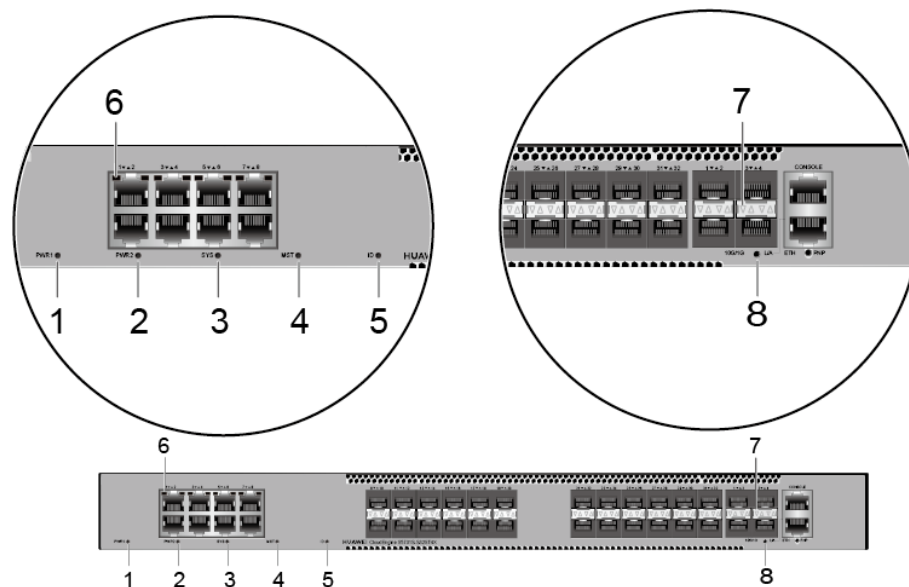


Table 4-1199 Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR 1	Power module	-	Off	No power module is available in power module slot 1, or the switch has only one power module but the power module does

No.	Indicator	Name	Color	Status	Description
		indicator			not work normally.
			Green	Steady on	A power module is installed in power module slot 1 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none"> A power module is available in this slot but it is not connected to a power source. The power module in this slot has failed.
2	PWR 2	Power module indicator	-	Off	No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 2 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 2: <ul style="list-style-type: none"> A power module is available in this slot but it is not connected to a power source. The power module in this slot has failed.
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Steady on	During the system startup preparation phase, the SYS indicator is steady green, which lasts for a maximum of 30 seconds.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or a temperature alarm has been generated.
4	MST	Stack indicator	-	Off	The switch is not the master switch in a stack.
			Green	Blinking	The switch is the master switch in a stack or a standalone switch.

No.	Indicator	Name	Color	Status	Description
5	ID	ID indicator	-	Off	The ID indicator is not used (default state).
			Blue	Steady on	The indicator identifies the switch to maintain. The ID indicator can be turned on or off remotely to help field engineers find the switch to maintain.
6	-	Service port indicator (electrical port)	-	Off	The port is not connected or has been shut down.
			Green	Steady on	A link has been established on the port.
			Blinking		The port is sending or receiving data.
7	-	Service port indicator (optical port) NOTE If a power failure occurs on a device's PCB board, indicators of the last four optical ports on the device's front panel blink green cyclically at an interval of 1 second, with each indicator illuminating for 0.25 seconds.	Green	Off	The port is not connected or has been shut down.
				Steady on	A link has been established on the port.
			Yellow	Off	The port is not sending or receiving data.
				Blinking	The port is sending or receiving data.
8	L/A	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.

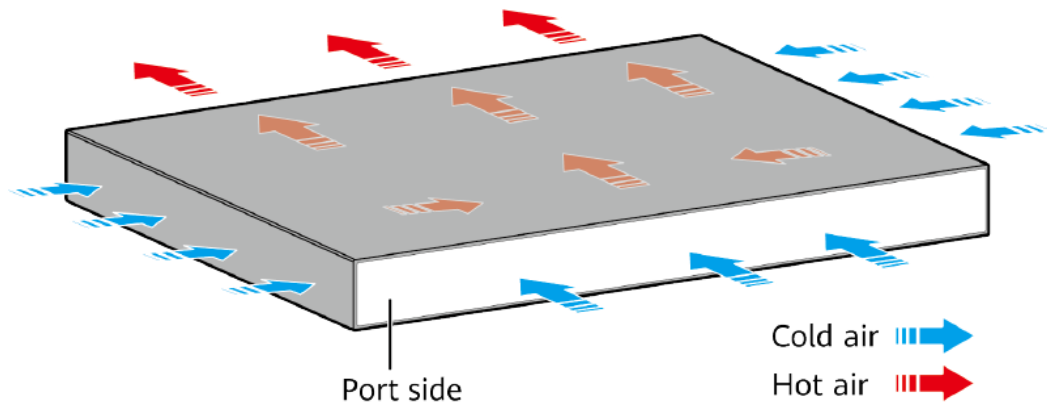
No.	Indicator	Name	Color	Status	Description
			Green	Blinking	The Eth port is sending or receiving data.

Power Supply System

The switch can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch. However, the power modules with natural heat dissipation and the power modules with fan cannot be used at the same time.

Heat Dissipation System

The switch has three built-in fans for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1200 Technical specifications of the S5731S-S32ST4X-A

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.40 in. x 16.54 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.40 in. x 17.64 in.)
Dimensions with packaging (H x W x D)	185 mm x 650 mm x 550 mm (7.28 in. x

Item	Specification
[mm(in.)]	25.59 in. x 21.65 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	5.68 kg (12.52 lb)
Weight with packaging [kg(lb)]	8.21 kg (18.10 lb)
Typical power consumption [W]	73.56 W
Typical heat dissipation [BTU/hour]	250.99 BTU/hour
Maximum power consumption [W]	104.82 (150 W AC or 180 W DC) 119.23 (600 W AC)
Maximum heat dissipation [BTU/hour]	357.66 (150 W AC or 180 W DC) 406.82 (600 W AC)
MTBF [year]	71.54 year
MTTR [hour]	2 hour
Availability	>0.99999
Noise at normal temperature (acoustic power) [dB(A)]	45.47 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	31.79 dB(A)
Number of card slots	0
Number of power slots	2
Number of fans modules	3
Redundant power supply	1+1 Pluggable AC and DC power modules can be used together in the same switch, but power modules that use natural heat dissipation and power modules that use air cooling cannot be used together.
Long-term operating temperature [°C(°F)]	-5 °C to +45 °C (23 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.)
Short-term operating temperature [°C(°F)]	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The device can work for a short period of time when the operating temperature is beyond the normal range, but the following

Item	Specification
	<p>conditions must be met:</p> <ul style="list-style-type: none"> • The operating temperature can exceed 45 °C (113 °F) for a maximum of 96 consecutive hours in a year. • The total time when the operating temperature exceeds 45 °C (113 °F) in a year is less than or equal to 360 hours. • The number of times the operating temperature exceeds 45 °C (113 °F) is less than or equal to 15 in one year. <p>If any of the preceding conditions is not met, the device may be damaged or an unknown error may occur.</p> <p>Devices cannot start when the temperature is lower than 0 °C (32 °F). The maximum transmission distance of an optical module used for short-term operation cannot exceed 10 km.</p>
Storage temperature [°C(°F)]	-40 °C to +70 °C (-40 °F to +158 °F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	Pluggable power supply
Rated input voltage [V]	<ul style="list-style-type: none"> • AC input: 100 V AC to 240 V AC, 50/60 Hz • High-voltage DC input: 240 V DC • DC input: -48 V DC to -60 V DC
Input voltage range [V]	<ul style="list-style-type: none"> • AC input: 90 V AC to 290 V AC; 45 Hz to 65 Hz • High-voltage DC input: 190 V DC to 290 V DC • DC input: -38.4 V DC to -72 V DC
Maximum input current [A]	The current specifications depend on the pluggable power modules in use. For details, see the related power module specifications.
Memory	2 GB
Flash memory	The physical space is 1 GB. You can run the display version command to view the actual available space.
Console port	RJ45

Item	Specification
Eth Management port	RJ45
USB	Not supported
RTC	Supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: ± 7 kV
Power supply surge protection [kV]	<ul style="list-style-type: none">Configured with AC power modules: ± 6 kV in differential mode and ± 6 kV in common modeConfigured with DC power modules: ± 2 kV in differential mode and ± 4 kV in common mode
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left, front and right, air exhaustion from behind
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

4.24.6 S5731S-S32ST4X-A1

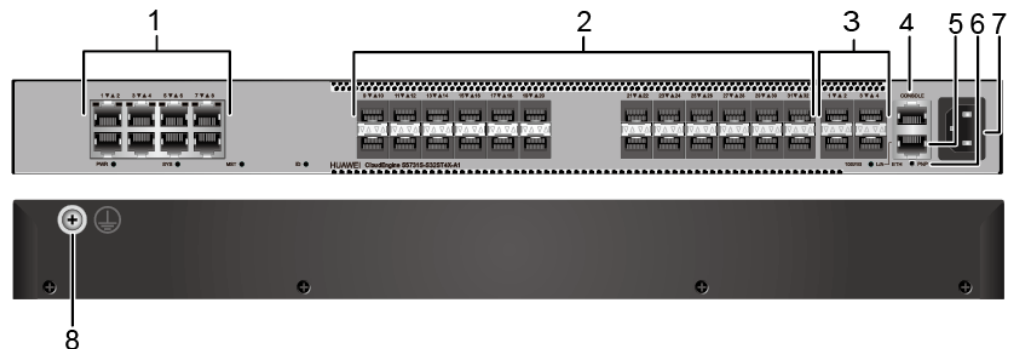
Overview

Table 4-1201 Basic information about the S5731S-S32ST4X-A1

Item	Details
Description	S5731S-S32ST4X-A1(8*10/100/1000BAS E-T ports, 24*GE SFP ports, 4*10GE SFP+ ports, AC power, front access)
Part Number	98011809
Model	S5731S-S32ST4X-A1
First supported version	V200R021C01

Components

Figure 4-483 S5731S-S32ST4X-A1 appearance



1	Eight 10/100/1000BASE-T ports	2	Twenty-four 100/1000BASE-X ports
3	Four 10GE SFP+ ports	4	One console port
5	One ETH management port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	AC socket NOTE It is used with an 9.8 AC Power Cable.	8	Ground screw NOTE It is used with a 9.1 Ground Cable.

Ports

Table 4-1202 Ports on the S5731S-S32ST4X-A1

Port	Connector Type	Description	Available Components
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.	9.4 Ethernet Cable
100/1000BASE-X port	SFP	A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000	<ul style="list-style-type: none"> 10.4 FE SFP/eSFP Optical Modules 10.5 GE eSFP

Port	Connector Type	Description	Available Components
		Mbit/s.	<p>Optical Modules</p> <ul style="list-style-type: none"> • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
Console port	RJ45	The console port is connected to a console for on-site configuration.	9.13 Console Cable
ETH management port	RJ45	You can connect a switch to a configuration terminal or network management workstation through the ETH	9.4 Ethernet Cable

Port	Connector Type	Description	Available Components
		management port to configure the switch locally or remotely. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port.	

Indicators and Buttons

Figure 4-484 Indicators on the S5731S-S32ST4X-A1

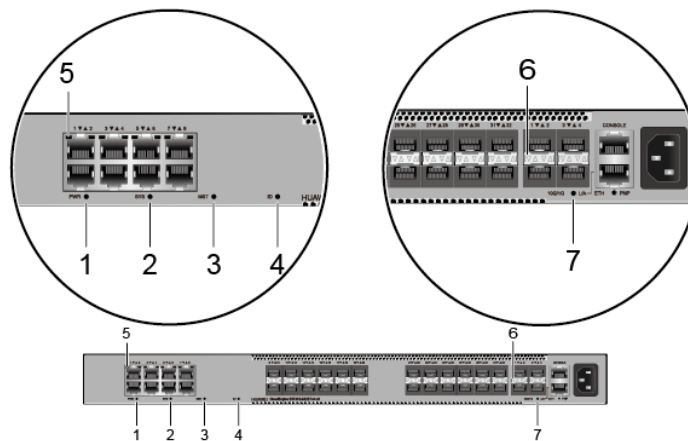


Table 4-1203 Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR	Power module indicator	-	Off	The switch is powered off.
			Green	Steady on	The system power supply is normal.
2	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blink	The system is starting.

No.	Indicator	Name	Color	Status	Description
				ng	
			Green	Steady on	During the system startup preparation phase, the SYS indicator is steady green, which lasts for a maximum of 30 seconds.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or a temperature alarm has been generated.
3	MST	Stack indicator	-	Off	The switch is not the master switch in a stack.
			Green	Blinking	The switch is the master switch in a stack or a standalone switch.
4	ID	ID indicator	-	Off	The ID indicator is not used (default state).
			Blue	Steady on	The indicator identifies the switch to maintain. The ID indicator can be turned on or off remotely to help field engineers find the switch to maintain.
5	-	Service port indicator (electrical port)	-	Off	The port is not connected or has been shut down.
			Green	Steady on	A link has been established on the port.
				Blinking	The port is sending or receiving data.
6	-	Service port indicator (optical port)	Green	Off	The port is not connected or has been shut down.
				Steady on	A link has been established on the port.
		NOTE If a power failure occurs on a device's PCB board, indicators of the last four optical ports on the device's front	Yellow	Off	The port is not sending or receiving data.
				Blinking	The port is sending or receiving data.

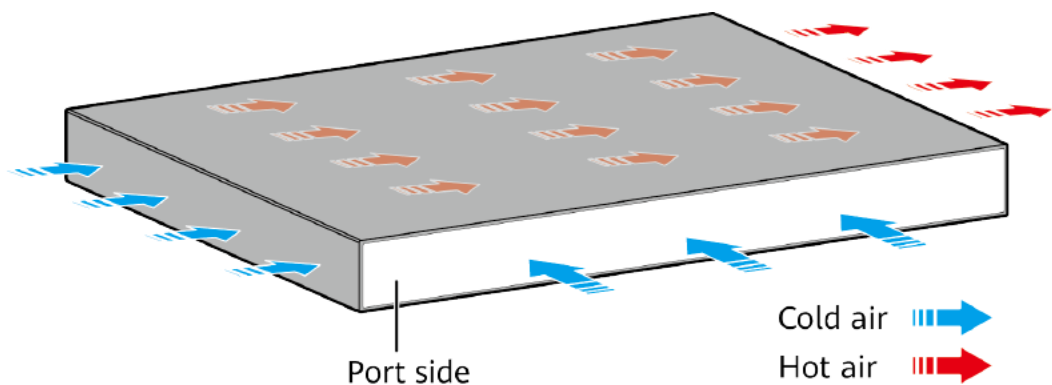
No.	Indicator	Name	Color	Status	Description
		panel blink green cyclically at an interval of 1 second, with each indicator illuminating for 0.25 seconds.			
7	L/A	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The Eth port is sending or receiving data.

Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules.

Heat Dissipation System

The switch has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1204 Technical specifications of the S5731S-S32ST4X-A1

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.40 in. x 8.66 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.40 in. x 8.94 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90 mm x 550 mm x 355 mm (3.54 in. x 21.65 in. x 13.98 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	3.13 kg (6.90 lb)
Weight with packaging [kg(lb)]	4.49 kg (9.90 lb)
Typical power consumption [W]	66.85 W
Typical heat dissipation [BTU/hour]	228.10 BTU/hour
Maximum power consumption [W]	93.92 W
Maximum heat dissipation [BTU/hour]	320.46 BTU/hour
MTBF [year]	32.56 year
MTTR [hour]	2 hour
Availability	>0.99999
Noise at normal temperature (acoustic power) [dB(A)]	41.42 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	27.74 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	2
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5 °C to +45 °C (23 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.)
Short-term operating temperature [°C(°F)]	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.)
Restriction on the operating temperature	When the altitude is 1800-5000 m

Item	Specification
variation rate [°C(°F)]	<p>(5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>The device can work for a short period of time when the operating temperature is beyond the normal range, but the following conditions must be met:</p> <ul style="list-style-type: none">• The operating temperature can exceed 45 °C (113 °F) for a maximum of 96 consecutive hours in a year.• The total time when the operating temperature exceeds 45 °C (113 °F) in a year is less than or equal to 360 hours.• The number of times the operating temperature exceeds 45 °C (113 °F) is less than or equal to 15 in one year. <p>If any of the preceding conditions is not met, the device may be damaged or an unknown error may occur.</p> <p>Devices cannot start when the temperature is lower than 0 °C (32 °F). The maximum transmission distance of an optical module used for short-term operation cannot exceed 10 km.</p>
Storage temperature [°C(°F)]	-40 °C to +70 °C (-40 °F to +158 °F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	AC built-in
Rated input voltage [V]	<ul style="list-style-type: none">• AC input: 100 V AC to 240 V AC, 50/60 Hz• High-voltage DC input: 240 V DC
Input voltage range [V]	<ul style="list-style-type: none">• AC input: 90 V AC to 264 V AC, 47 Hz to 63 Hz• High-voltage DC input: 190 V DC to 290 V DC
Maximum input current [A]	3 A
Memory	2 GB
Flash memory	The physical space is 1 GB. You can run the display version command to view the actual available space.

Item	Specification
Console port	RJ45
Eth Management port	RJ45
USB	Not supported
RTC	Supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: ± 7 kV
Power supply surge protection [kV]	± 6 kV in differential mode; ± 6 kV in common mode
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from the front and left and air exhaust from the right
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

4.24.7 S5731S-S48S4X-A

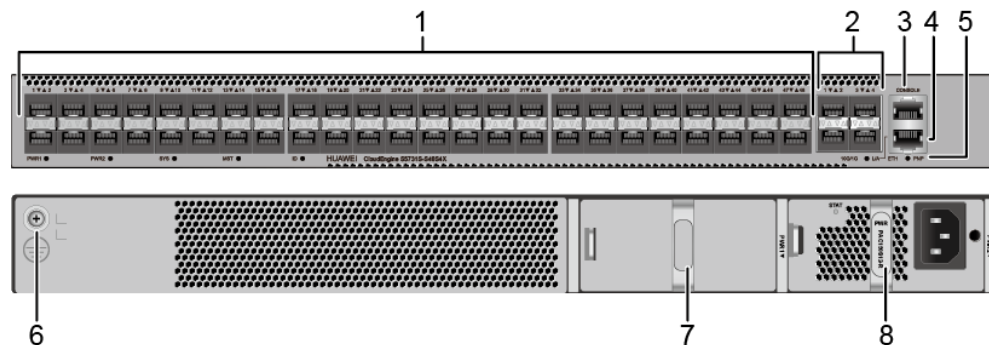
Overview

Table 4-1205 Basic information about the S5731S-S48S4X-A

Item	Details
Description	S5731S-S48S4X Bundle(48*GE SFP ports, 4*10GE SFP+ ports, with AC power supply)
Part Number	98011806
Model	S5731S-S48S4X-A
First supported version	V200R021C01

Components

Figure 4-485 S5731S-S48S4X-A appearance



1	Forty-eight 100/1000BASE-X ports	2	Four 10GE SFP+ ports
3	One console port	4	One ETH management port
5	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.	6	Ground screw NOTE It is used with a 9.1 Ground Cable.
7	Power module slot 1 NOTE Applicable power module: <ul style="list-style-type: none"> 5.12 PAC150S12-R (150 W AC Power Module) 5.15 PDC180S12-CR (180 W DC Power Module) 5.21 PAC600S12-DB (600 W AC Power Module) 5.22 PAC600S12-EB (600 W AC Power Module) 	8	Power module slot 2 NOTE Applicable power module: <ul style="list-style-type: none"> 5.12 PAC150S12-R (150 W AC Power Module) 5.15 PDC180S12-CR (180 W DC Power Module) 5.21 PAC600S12-DB (600 W AC Power Module) 5.22 PAC600S12-EB (600 W AC Power Module)

Ports

Table 4-1206 Ports on the S5731S-S48S4X-A

Port	Connector Type	Description	Available Components
100/1000BASE-X port	SFP	A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000	<ul style="list-style-type: none"> 10.4 FE SFP/eSFP Optical Modules

Port	Connector Type	Description	Available Components
		Mbit/s.	<ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
Console port	RJ45	The console port is connected to a console for on-site configuration.	9.13 Console Cable
ETH management port	RJ45	You can connect a switch to a configuration terminal or network management workstation through	9.4 Ethernet Cable

Port	Connector Type	Description	Available Components
		<p>the ETH management port to configure the switch locally or remotely.</p> <p>You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port.</p>	

Indicators and Buttons

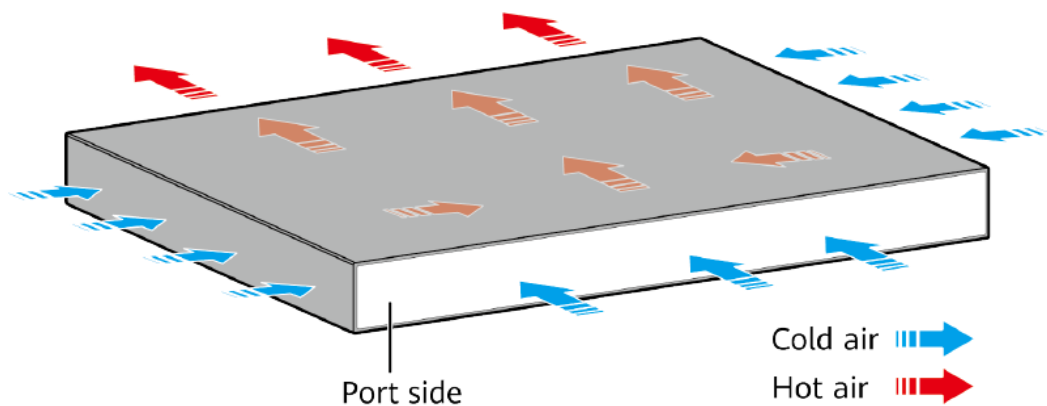
The S5731S-S48S4X-A has the same types of indicators as the S5731S-S32ST4X-A. For details, see the S5731S-S32ST4X-A.

Power Supply System

The switch can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch. However, the power modules with natural heat dissipation and the power modules with fan cannot be used at the same time.

Heat Dissipation System

The switch has three built-in fans for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1207 Technical specifications of the S5731S-S48S4X-A

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.40 in. x 16.54 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.40 in. x 17.64 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	185 mm x 650 mm x 550 mm (7.28 in. x 25.59 in. x 21.65 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	5.9 kg (13.01 lb)
Weight with packaging [kg(lb)]	8.43 kg (18.58 lb)
Typical power consumption [W]	93.69 W
Typical heat dissipation [BTU/hour]	319.68 BTU/hour
Maximum power consumption [W]	128.89 (150 W AC or 180 W DC) 141.96 (600 W AC)
Maximum heat dissipation [BTU/hour]	439.79 (150 W AC or 180 W DC) 484.38 (600 W AC)
MTBF [year]	64.97 year
MTTR [hour]	2 hour
Availability	>0.99999
Noise at normal temperature (acoustic power) [dB(A)]	45.47 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	31.79 dB(A)
Number of card slots	0
Number of power slots	2
Number of fans modules	3
Redundant power supply	1+1 Pluggable AC and DC power modules can be used together in the same switch, but power modules that use natural heat dissipation and power modules that use air

Item	Specification
	cooling cannot be used together.
Long-term operating temperature [°C(°F)]	-5 °C to +45 °C (23 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.)
Short-term operating temperature [°C(°F)]	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>The device can work for a short period of time when the operating temperature is beyond the normal range, but the following conditions must be met:</p> <ul style="list-style-type: none">• The operating temperature can exceed 45 °C (113 °F) for a maximum of 96 consecutive hours in a year.• The total time when the operating temperature exceeds 45 °C (113 °F) in a year is less than or equal to 360 hours.• The number of times the operating temperature exceeds 45 °C (113 °F) is less than or equal to 15 in one year. <p>If any of the preceding conditions is not met, the device may be damaged or an unknown error may occur.</p> <p>Devices cannot start when the temperature is lower than 0 °C (32 °F). The maximum transmission distance of an optical module used for short-term operation cannot exceed 10 km.</p>
Storage temperature [°C(°F)]	-40 °C to +70 °C (-40 °F to +158 °F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	Pluggable power supply
Rated input voltage [V]	<ul style="list-style-type: none">• AC input: 100 V AC to 240 V AC, 50/60 Hz• High-voltage DC input: 240 V DC• DC input: -48 V DC to -60 V DC
Input voltage range [V]	<ul style="list-style-type: none">• AC input: 90 V AC to 290 V AC; 45 Hz to 65 Hz• High-voltage DC input: 190 V DC to

Item	Specification
	290 V DC <ul style="list-style-type: none">DC input: -38.4 V DC to -72 V DC
Maximum input current [A]	The current specifications depend on the pluggable power modules in use. For details, see the related power module specifications.
Memory	2 GB
Flash memory	The physical space is 1 GB. You can run the display version command to view the actual available space.
Console port	RJ45
Eth Management port	RJ45
USB	Not supported
RTC	Supported
RPS input	Not supported
Service port surge protection [kV]	-
Power supply surge protection [kV]	<ul style="list-style-type: none">Configured with AC power modules: ± 6 kV in differential mode and ± 6 kV in common modeConfigured with DC power modules: ± 2 kV in differential mode and ± 4 kV in common mode
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left, front and right, air exhaustion from behind
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

4.24.8 S5731S-S48S4X-A1

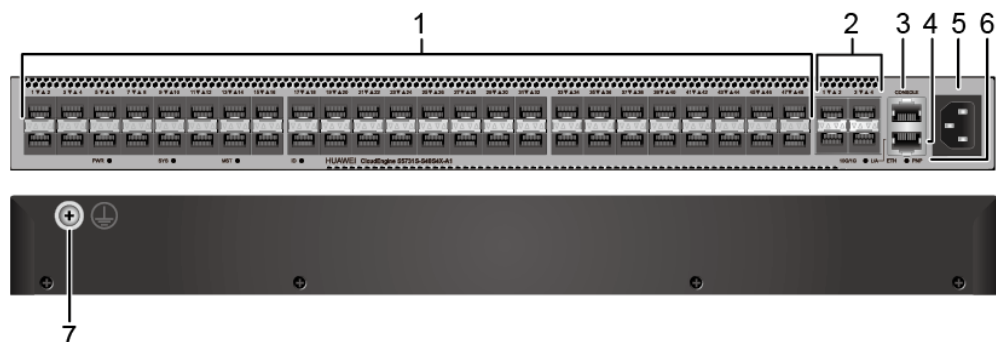
Overview

Table 4-1208 Basic information about the S5731S-S48S4X-A1

Item	Details
Description	S5731S-S48S4X-A1(48*GE SFP ports, 4*10GE SFP+ ports, AC power, front access)
Part Number	98011802
Model	S5731S-S48S4X-A1
First supported version	V200R021C01

Components

Figure 4-486 S5731S-S48S4X-A1 appearance



1	Forty-eight 100/1000BASE-X ports	2	Four 10GE SFP+ ports
3	One console port	4	One ETH management port
5	AC socket NOTE It is used with an 9.8 AC Power Cable.	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw NOTE It is used with a 9.1 Ground Cable.	-	-

Ports

Table 4-1209 Ports on the S5731S-S48S4X-A1

Port	Connector Type	Description	Available Components
100/1000BASE-X port	SFP	A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s.	<ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
Console port	RJ45	The console port is connected to a console for on-site	9.13 Console Cable

Port	Connector Type	Description	Available Components
		configuration.	
ETH management port	RJ45	You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port.	9.4 Ethernet Cable

Indicators and Buttons

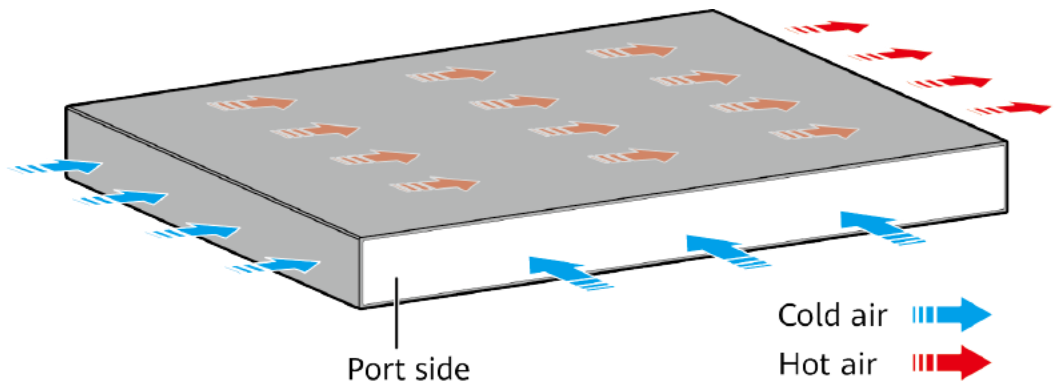
The S5731S-S48S4X-A1 has the same types of indicators as the S5731S-S32ST4X-A1. For details, see the S5731S-S32ST4X-A1.

Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules.

Heat Dissipation System

The switch has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1210 Technical specifications of the S5731S-S48S4X-A1

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.40 in. x 8.66 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.40 in. x 8.94 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90 mm x 550 mm x 355 mm (3.54 in. x 21.65 in. x 13.98 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	3.49 kg (7.69 lb)
Weight with packaging [kg(lb)]	4.85 kg (10.69 lb)
Typical power consumption [W]	87.89 W
Typical heat dissipation [BTU/hour]	299.89 BTU/hour
Maximum power consumption [W]	121.04 W
Maximum heat dissipation [BTU/hour]	413.00 BTU/hour
MTBF [year]	31.39 year
MTTR [hour]	2 hour
Availability	>0.99999
Noise at normal temperature (acoustic power) [dB(A)]	41.42 dB(A)

Item	Specification
Noise at normal temperature (acoustic pressure) [dB(A)]	27.74 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	2
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5 °C to +45 °C (23 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.)
Short-term operating temperature [°C(°F)]	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>The device can work for a short period of time when the operating temperature is beyond the normal range, but the following conditions must be met:</p> <ul style="list-style-type: none"> • The operating temperature can exceed 45 °C (113 °F) for a maximum of 96 consecutive hours in a year. • The total time when the operating temperature exceeds 45 °C (113 °F) in a year is less than or equal to 360 hours. • The number of times the operating temperature exceeds 45 °C (113 °F) is less than or equal to 15 in one year. <p>If any of the preceding conditions is not met, the device may be damaged or an unknown error may occur.</p> <p>Devices cannot start when the temperature is lower than 0 °C (32 °F). The maximum transmission distance of an optical module used for short-term operation cannot exceed 10 km.</p>
Storage temperature [°C(°F)]	-40 °C to +70 °C (-40 °F to +158 °F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	AC built-in

Item	Specification
Rated input voltage [V]	<ul style="list-style-type: none">AC input: 100 V AC to 240 V AC, 50/60 HzHigh-voltage DC input: 240 V DC
Input voltage range [V]	<ul style="list-style-type: none">AC input: 90 V AC to 264 V AC, 47 Hz to 63 HzHigh-voltage DC input: 190 V DC to 290 V DC
Maximum input current [A]	3 A
Memory	2 GB
Flash memory	The physical space is 1 GB. You can run the display version command to view the actual available space.
Console port	RJ45
Eth Management port	RJ45
USB	Not supported
RTC	Supported
RPS input	Not supported
Service port surge protection [kV]	-
Power supply surge protection [kV]	± 6 kV in differential mode; ± 6 kV in common mode
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left and air exhaust from right
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

4.25 S5731-H

4.25.1 S5731-H24T4XC

Version Mapping

Table 4-1211 lists the mapping between the S5731-H24T4XC chassis and software versions.

Table 4-1211 Version mapping

Series	Model	Software Version
S5731-H	S5731-H24T4XC	02352QPP: V200R013C02 and later versions 02352QPP-001: V200R020C10 and later versions

Appearance and Structure

Figure 4-487 S5731-H24T4XC (02352QPP) appearance

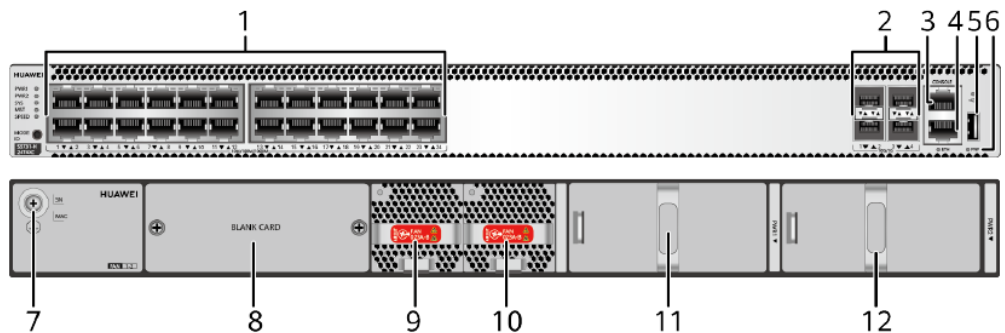
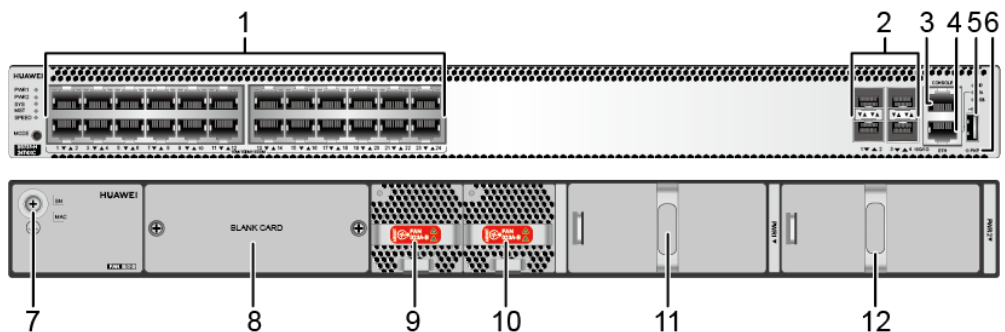


Figure 4-488 S5731-H24T4XC (02352QPP-001) appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports
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			<p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	One console port	4	One ETH management port
5	One USB port	6	<p>One PNP button</p> <p>NOTICE</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
7	<p>Ground screw</p> <p>NOTE</p> <p>It is used with a 9.1 Ground Cable.</p>	8	<p>Rear card slot</p> <p>NOTE</p> <p>Applicable card:</p> <ul style="list-style-type: none"> • 8.23 ES5D21X08T00 (8-Port 10GBASE-T RJ45 Rear Interface Card) • 8.15 ES5D21Q02Q00 (2-Port 40 Gig QSFP+ Rear Interface Card) • 8.24 S7X08000 (8-Port 10GE SFP+ or 2-Port 25GE SFP28 Optical Interface Card (Only Ports 1 and 2 Support 25GE)) (applicable in V200R019C10 and later versions) • 8.26 S7Q02001 (2-port 40GE QSFP+ interface card) (applicable in V200R021C01 and later versions)
9	<p>Fan module slot 1</p> <p>NOTE</p> <p>Applicable fan module: 7.5 FAN-023A-B (Fan box(B,FAN panel side exhaust))</p>	10	<p>Fan module slot 2</p> <p>NOTE</p> <p>Applicable fan module: 7.5 FAN-023A-B (Fan box(B,FAN panel side exhaust))</p>
11	<p>Power module slot 1</p> <p>NOTE</p>	12	<p>Power module slot 2</p> <p>NOTE</p>

<p>Applicable power module:</p> <ul style="list-style-type: none"> • 5.20 PAC600S12-CB (600 W AC Power Module) • 5.22 PAC600S12-EB (600 W AC Power Module) • 5.21 PAC600S12-DB (600 W AC Power Module) (applicable in V200R020C10 and later versions) • 5.27 PDC1000S12-DB (1000 W DC Power Module) • 5.12 PAC150S12-R (150 W AC Power Module) • 5.15 PDC180S12-CR (180 W DC Power Module) (applicable in V200R020C00 and later versions) 	<p>Applicable power module:</p> <ul style="list-style-type: none"> • 5.20 PAC600S12-CB (600 W AC Power Module) • 5.22 PAC600S12-EB (600 W AC Power Module) • 5.21 PAC600S12-DB (600 W AC Power Module) (applicable in V200R020C10 and later versions) • 5.27 PDC1000S12-DB (1000 W DC Power Module) • 5.12 PAC150S12-R (150 W AC Power Module) • 5.15 PDC180S12-CR (180 W DC Power Module) (applicable in V200R020C00 and later versions)
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Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-1212 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-1212 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ optical port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-1213 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-1213 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards	IEEE802.3ae

Attribute	Description
compliance	
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1214.

Table 4-1214 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1215 describes the attributes of an ETH management port.

Table 4-1215 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch

for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

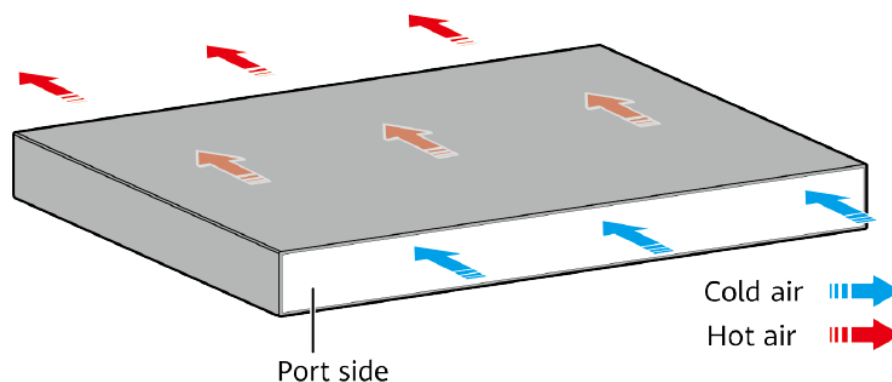
The S5731-H24T4XC has similar indicators to those on the S5731-H48P4XC except that the S5731-H24T4XC does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The switch can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch. However, the power modules with natural heat dissipation and the power modules with fan cannot be used at the same time.

Heat Dissipation

The S5731-H24T4XC uses pluggable fan modules for forced air cooling. Air flows in from the front side and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1216 lists technical specifications of the S5731-H24T4XC.

Table 4-1216 Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	1 GB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	57.73 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	<ul style="list-style-type: none">Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common modeUsing DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.4 in. x 17.7 in.)
Weight (with packaging)	8.4 kg (18.52 lb)
Stack ports	10GE SFP+ ports on the front panel, or ports on the rear card
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none">AC input: 100 V AC to 240 V AC, 50/60 HzHigh-Voltage DC input: 240 V DCDC input: -48 V DC to -60 V DC
Maximum voltage range	<ul style="list-style-type: none">AC input: 90 V AC to 290 V AC, 45 Hz to 65 HzHigh-Voltage DC input: 190 V DC to 290 V DCDC input: -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	114 W (without card)
Typical power consumption (30% of traffic load,	88 W (without card)

Item	Description
tested according to ATIS standard)	
Operating temperature	-5 °C to +45 °C (23 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0 °C (32 °F).
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 57.5 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02352QPP 02352QPP-001

4.25.2 S5731-H24P4XC

Version Mapping

Table 4-1217 lists the mapping between the S5731-H24P4XC chassis and software versions.

Table 4-1217 Version mapping

Series	Model	Software Version
S5731-H	S5731-H24P4XC	02352QPV: V200R013C02 and later versions 02352QPV-001: V200R020C10 and later versions

Appearance and Structure

Figure 4-489 S5731-H24P4XC (02352QPV) appearance

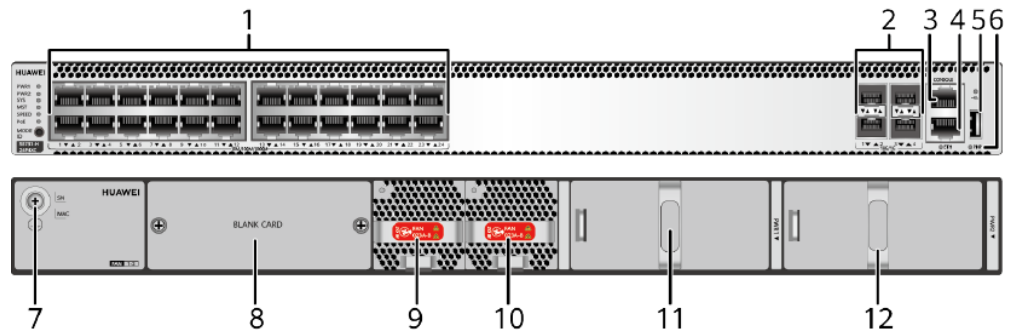
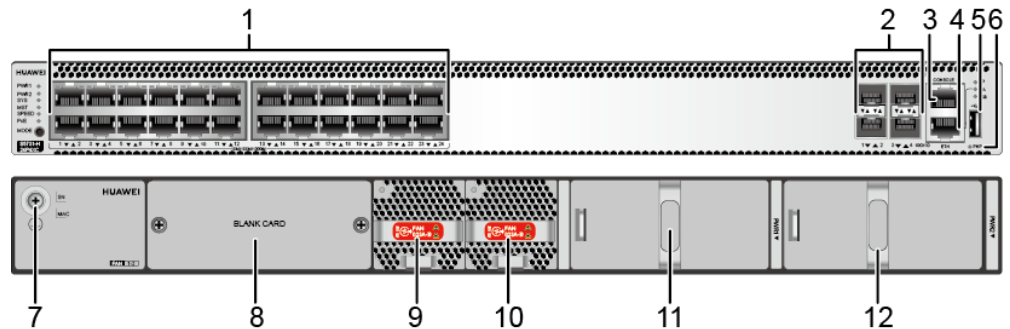


Figure 4-490 S5731-H24P4XC (02352QPV-001) appearance



1	Twenty-four PoE+ 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	One console port	4	One ETH management port

5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw NOTE It is used with a 9.1 Ground Cable.	8	Rear card slot NOTE Applicable card: <ul style="list-style-type: none"> • 8.23 ES5D21X08T00 (8-Port 10GBASE-T RJ45 Rear Interface Card) • 8.15 ES5D21Q02Q00 (2-Port 40 Gig QSFP+ Rear Interface Card) • 8.24 S7X08000 (8-Port 10GE SFP+ or 2-Port 25GE SFP28 Optical Interface Card (Only Ports 1 and 2 Support 25GE)) (applicable in V200R019C10 and later versions) • 8.26 S7Q02001 (2-port 40GE QSFP+ interface card) (applicable in V200R021C01 and later versions)
9	Fan module slot 1 NOTE Applicable fan module: 7.5 FAN-023A-B (Fan box(B,FAN panel side exhaust))	10	Fan module slot 2 NOTE Applicable fan module: 7.5 FAN-023A-B (Fan box(B,FAN panel side exhaust))
11	Power module slot 1 NOTE Applicable power module: <ul style="list-style-type: none"> • 5.24 PAC1000S56-CB (1000 W PoE AC Power Module) • 5.25 PAC1000S56-DB (1000 W PoE AC Power Module) (applicable in V200R020C10 and later versions) • 5.26 PDC1000S56-CB (1000 W PoE DC Power Module) (applicable in V200R021C00 and later versions) • 5.23 PAC600S56-CB (600 W AC&240 V DC Power Module (Back to Front, Power panel side exhaust)) (applicable in V200R021C10 and later versions) 	12	Power module slot 2 NOTE Applicable power module: <ul style="list-style-type: none"> • 5.24 PAC1000S56-CB (1000 W PoE AC Power Module) • 5.25 PAC1000S56-DB (1000 W PoE AC Power Module) (applicable in V200R020C10 and later versions) • 5.26 PDC1000S56-CB (1000 W PoE DC Power Module) (applicable in V200R021C00 and later versions) • 5.23 PAC600S56-CB (600 W AC&240 V DC Power Module (Back to Front, Power panel side exhaust)) (applicable in V200R021C10 and later versions)

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-1218 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-1218 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ optical port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-1219 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-1219 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1220.

Table 4-1220 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1221 describes the attributes of an ETH management port.

Table 4-1221 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5731-H24P4XC has the same types of indicators as the S5731-H48P4XC. For details, see [Indicator Description](#).

Power Supply Configuration

The switch is a PoE switch and supports two power module slots, each of which can have a 1000 W PoE or 600 W PoE power module installed. Pluggable AC and DC PoE power modules can be used together in the same switch.

Table 4-1222 Power supply configurations

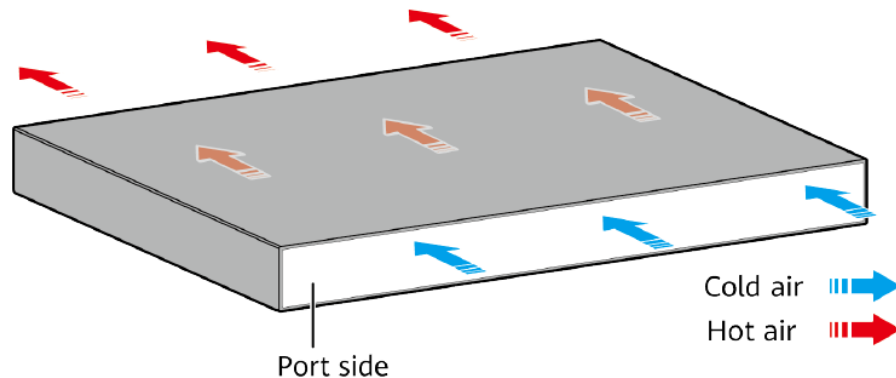
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W AC (220 V) 1000 W DC	–	760 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 24
1000 W AC (110 V)	–	665 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 22
1000 W AC (220 V) 1000 W DC	1000 W AC (220 V) 1000 W DC	1600 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 24
1000 W AC (110 V) 1000 W DC	1000 W AC (110 V)	1330 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 24
600 W AC (220 V)	–	380 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 12
600 W AC (110 V)	–	95 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 6 802.3at (30 W per port): 3
600 W AC (220 V)	600 W AC (220 V)	950 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 24
600 W AC (110 V)	600 W AC (110 V)	380 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 12
1000 W AC (220 V) 1000 W DC	600 W AC (220 V)	1330 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 24

NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

Heat Dissipation

The S5731-H24P4XC uses pluggable fan modules for forced air cooling. Air flows in from the front side and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1223 lists technical specifications of the S5731-H24P4XC.

Table 4-1223 Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	1 GB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	57.21 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.4 in. x 17.7 in.)
Weight (with	8.6 kg (18.96 lb)

Item	Description
packaging)	
Stack ports	10GE SFP+ ports on the front panel, or ports on the rear card
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	<ul style="list-style-type: none">AC input: 100 V AC to 130 V AC, 200 V AC to 240 V AC, 50/60 HzHigh-Voltage DC input: 240 V DCDC input: -48 V DC to -60 V DC
Maximum voltage range	<ul style="list-style-type: none">AC input: 90 V AC to 290 V AC, 45 Hz to 65 HzHigh-Voltage DC input: 190 V DC to 290 V DCDC input: -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none">Not providing the PoE function: 121 W (without card)100% PoE loads: 977 W (PoE: 720 W, without card)
Typical power consumption (30% of traffic load, tested according to ATIS standard)	95 W (without card)
Operating temperature	-5 °C to +45 °C (23 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0 °C (32 °F).
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 62.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">EMC certificationSafety certificationManufacturing certification
Part number	02352QPV

Item	Description
	02352QPV-001

4.25.3 S5731-H48T4XC

Version Mapping

Table 4-1224 lists the mapping between the S5731-H48T4XC chassis and software versions.

Table 4-1224 Version mapping

Series	Model	Software Version
S5731-H	S5731-H48T4XC	02352QPT: V200R013C02 and later versions 02352QPT-003: V200R020C10 and later versions

Appearance and Structure

Figure 4-491 S5731-H48T4XC (02352QPT) appearance

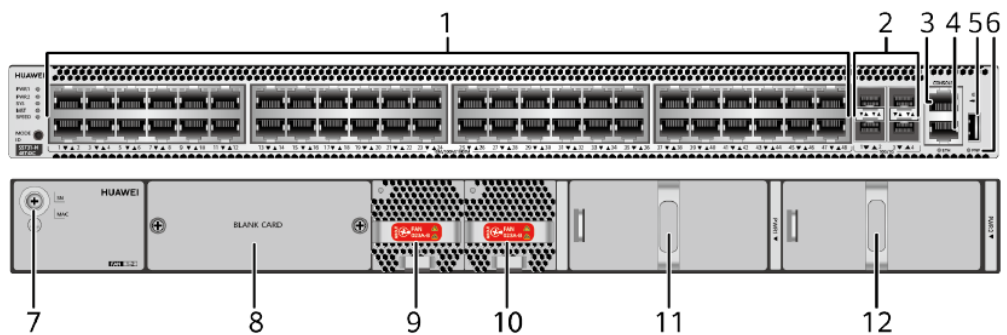
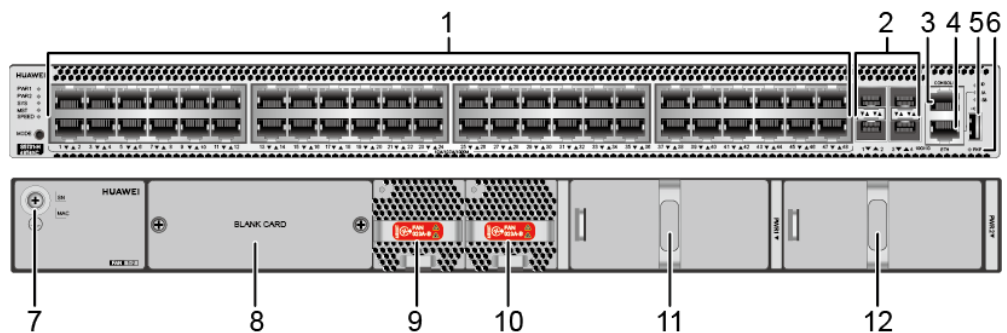


Figure 4-492 S5731-H48T4XC (02352QPT-003) appearance



1	Forty-eight 10/100/1000BASE-T ports	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	One console port	4	One ETH management port
5	One USB port	6	<p>One PNP button</p> <p>NOTICE</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
7	<p>Ground screw</p> <p>NOTE</p> <p>It is used with a 9.1 Ground Cable.</p>	8	<p>Rear card slot</p> <p>NOTE</p> <p>Applicable card:</p> <ul style="list-style-type: none"> • 8.23 ES5D21X08T00 (8-Port 10GBASE-T RJ45 Rear Interface Card) • 8.15 ES5D21Q02Q00 (2-Port 40 Gig QSFP+ Rear Interface Card) • 8.24 S7X08000 (8-Port 10GE SFP+ or 2-Port 25GE SFP28 Optical Interface Card (Only Ports 1 and 2 Support 25GE)) (applicable in V200R019C10 and later versions) • 8.26 S7Q02001 (2-port 40GE QSFP+ interface card) (applicable in V200R021C01 and later versions)
9	<p>Fan module slot 1</p> <p>NOTE</p> <p>Applicable fan module: 7.5 FAN-023A-B (Fan box(B,FAN panel side exhaust))</p>	10	<p>Fan module slot 2</p> <p>NOTE</p> <p>Applicable fan module: 7.5 FAN-023A-B (Fan box(B,FAN panel side exhaust))</p>
11	Power module slot 1	12	Power module slot 2

<p>NOTE</p> <p>Applicable power module:</p> <ul style="list-style-type: none"> • 5.20 PAC600S12-CB (600 W AC Power Module) • 5.22 PAC600S12-EB (600 W AC Power Module) • 5.21 PAC600S12-DB (600 W AC Power Module) (applicable in V200R020C10 and later versions) • 5.27 PDC1000S12-DB (1000 W DC Power Module) • 5.12 PAC150S12-R (150 W AC Power Module) • 5.15 PDC180S12-CR (180 W DC Power Module) (applicable in V200R020C00 and later versions) 	<p>NOTE</p> <p>Applicable power module:</p> <ul style="list-style-type: none"> • 5.20 PAC600S12-CB (600 W AC Power Module) • 5.22 PAC600S12-EB (600 W AC Power Module) • 5.21 PAC600S12-DB (600 W AC Power Module) (applicable in V200R020C10 and later versions) • 5.27 PDC1000S12-DB (1000 W DC Power Module) • 5.12 PAC150S12-R (150 W AC Power Module) • 5.15 PDC180S12-CR (180 W DC Power Module) (applicable in V200R020C00 and later versions)
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Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-1225 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-1225 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ optical port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-1226 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-1226 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used

Attribute	Description
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1227.

Table 4-1227 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1228 describes the attributes of an ETH management port.

Table 4-1228 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

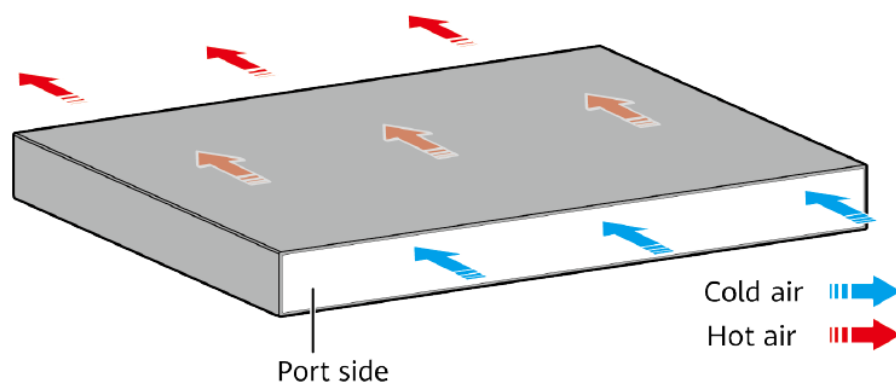
The S5731-H48T4XC has similar indicators to those on the S5731-H48P4XC except that the S5731-H48T4XC does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The switch can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch. However, the power modules with natural heat dissipation and the power modules with fan cannot be used at the same time.

Heat Dissipation

The S5731-H48T4XC uses pluggable fan modules for forced air cooling. Air flows in from the front side and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1229 lists technical specifications of the S5731-H48T4XC.

Table 4-1229 Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	1 GB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	55.31 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	<ul style="list-style-type: none">Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common modeUsing DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.4 in. x 17.7 in.)
Weight (with packaging)	8.55 kg (18.85 lb)
Stack ports	10GE SFP+ ports on the front panel, or ports on the rear card
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none">AC input: 100 V AC to 240 V AC, 50/60 HzHigh-Voltage DC input: 240 V DCDC input: -48 V DC to -60 V DC
Maximum voltage range	<ul style="list-style-type: none">AC input: 90 V AC to 290 V AC, 45 Hz to 65 HzHigh-Voltage DC input: 190 V DC to 290 V DCDC input: -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	124 W (without card)
Typical power consumption (30% of traffic load,	101 W (without card)

Item	Description
tested according to ATIS standard)	
Operating temperature	-5 °C to +45 °C (23 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0 °C (32 °F).
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 57.5 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02352QPT 02352QPT-003

4.25.4 S5731-H48P4XC

Version Mapping

Table 4-1230 lists the mapping between the S5731-H48P4XC chassis and software versions.

Table 4-1230 Version mapping

Series	Model	Software Version
S5731-H	S5731-H48P4XC	02352SVD: V200R013C02 and later versions 02352SVD-001: V200R020C10 and later versions

Appearance and Structure

Figure 4-493 S5731-H48P4XC (02352SVD) appearance

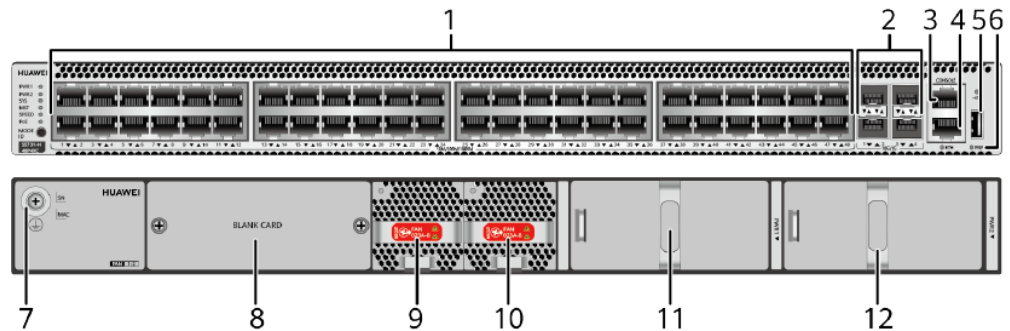
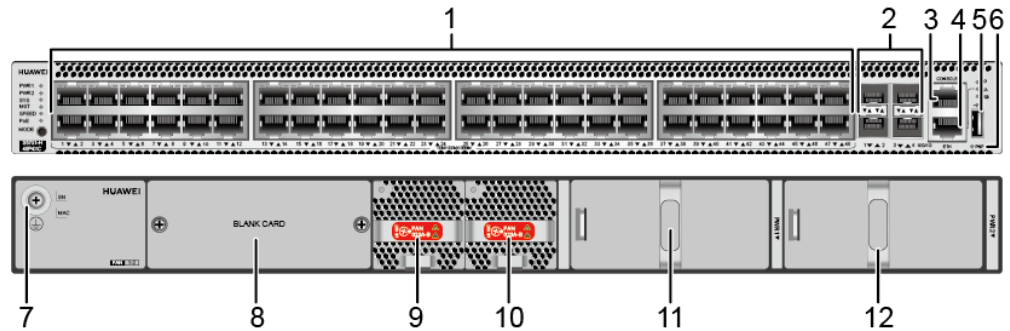


Figure 4-494 S5731-H48P4XC (02352SVD-001) appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	One console port	4	One ETH management port

5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw NOTE It is used with a 9.1 Ground Cable.	8	Rear card slot NOTE Applicable card: <ul style="list-style-type: none"> 8.23 ES5D21X08T00 (8-Port 10GBASE-T RJ45 Rear Interface Card) 8.15 ES5D21Q02Q00 (2-Port 40 Gig QSFP+ Rear Interface Card) 8.24 S7X08000 (8-Port 10GE SFP+ or 2-Port 25GE SFP28 Optical Interface Card (Only Ports 1 and 2 Support 25GE)) (applicable in V200R019C10 and later versions) 8.26 S7Q02001 (2-port 40GE QSFP+ interface card) (applicable in V200R021C01 and later versions)
9	Fan module slot 1 NOTE Applicable fan module: 7.5 FAN-023A-B (Fan box(B,FAN panel side exhaust))	10	Fan module slot 2 NOTE Applicable fan module: 7.5 FAN-023A-B (Fan box(B,FAN panel side exhaust))
11	Power module slot 1 NOTE Applicable power module: <ul style="list-style-type: none"> 5.24 PAC1000S56-CB (1000 W PoE AC Power Module) 5.25 PAC1000S56-DB (1000 W PoE AC Power Module) (applicable in V200R020C10 and later versions) 5.26 PDC1000S56-CB (1000 W PoE DC Power Module) (applicable in V200R021C00 and later versions) 5.23 PAC600S56-CB (600 W AC&240 V DC Power Module (Back to Front, Power panel side exhaust)) (applicable in V200R021C10 and later versions) 	12	Power module slot 2 NOTE Applicable power module: <ul style="list-style-type: none"> 5.24 PAC1000S56-CB (1000 W PoE AC Power Module) 5.25 PAC1000S56-DB (1000 W PoE AC Power Module) (applicable in V200R020C10 and later versions) 5.26 PDC1000S56-CB (1000 W PoE DC Power Module) (applicable in V200R021C00 and later versions) 5.23 PAC600S56-CB (600 W AC&240 V DC Power Module (Back to Front, Power panel side exhaust)) (applicable in V200R021C10 and later versions)

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-1231 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-1231 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ optical port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-1232 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-1232 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1233.

Table 4-1233 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1234 describes the attributes of an ETH management port.

Table 4-1234 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
- If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.

- If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 4-495 Indicators on the S5731-H48P4XC (02352SVD)

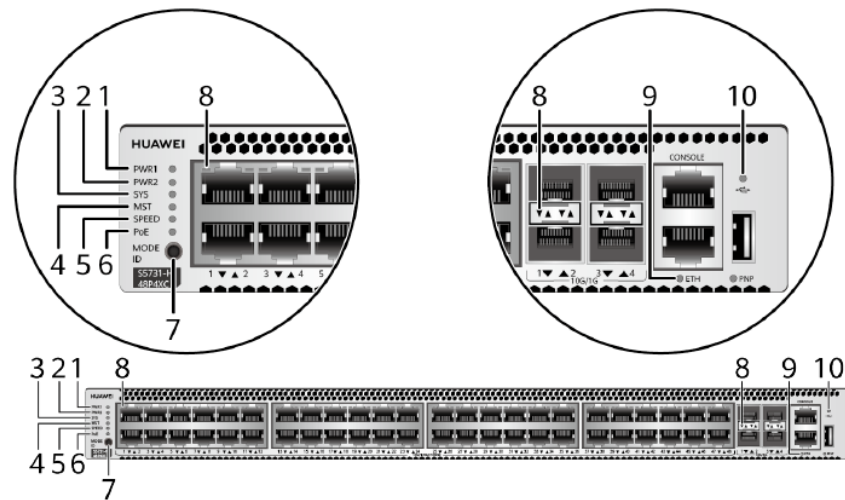


Figure 4-496 Indicators on the S5731-H48P4XC (02352SVD-001)

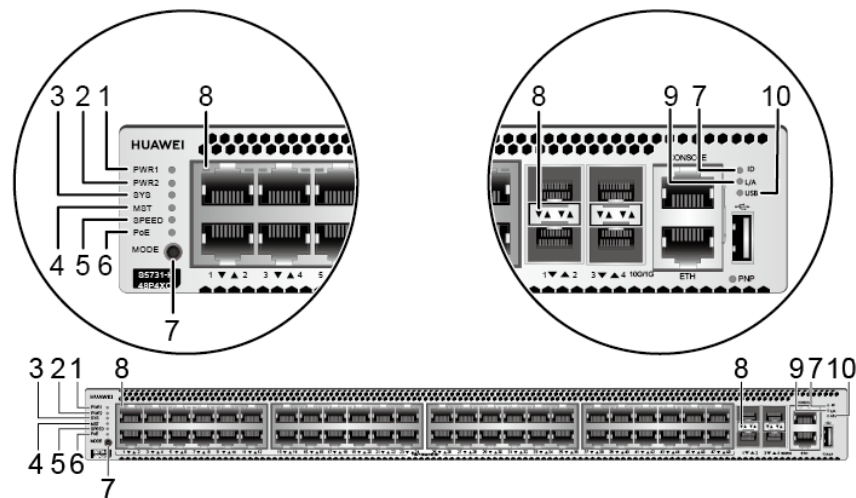


Table 4-1235 Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR1	Power module indicator	-	Off	No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.

No.	Indicator	Name	Color	Status	Description
			Green	Steady on	A power module is installed in power module slot 1 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none"> A power module is available in this slot but it is not connected to a power source. The power module in this slot has failed.
2	PWR 2	Power module indicator	-	Off	No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 2 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 2: <ul style="list-style-type: none"> A power module is available in this slot but it is not connected to a power source. The power module in this slot has failed.
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Steady on	During the system startup preparation phase, the SYS indicator is steady green, which lasts for a maximum of 30 seconds.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or a temperature alarm has been generated.
4	MST	Stack indicator	-	Off	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is a standby or slave switch in a stack or the stacking function is not enabled on the switch. If you are changing the indicator mode:

No.	Indicator	Name	Color	Status	Description
					The stack mode is not selected.
			Green	Steady on	The stack mode is selected. The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is the master switch in a stack or a standalone switch with the stacking function enabled. If you are changing the indicator mode: The stack mode is selected. The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. After 45 seconds, the service port indicators automatically restore to the status mode.
5	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The speed mode is selected, and service port indicators show the speed of each port.
6	PoE	PoE indicator	-	Off	The PoE mode is not selected.
			Green	Steady on	The PoE mode is selected, and service port indicators show the PoE status of each port.
7	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> When you press this button once, the service port indicators change to the stack mode and show the stack ID of the local switch. When you press this button a second time, the service port indicators change to the speed mode and show the speed of each service port. When you press this button a third time, the service port indicators change to the PoE mode and show the PoE status of each service port. When you press this button a fourth time, the service port indicators restore to the default mode and show the connection status and link activity of each service port. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the SPEED and PoE indicators are off.</p>

No.	Indicator	Name	Color	Status	Description
	ID	ID indicator NOTE The mode switch button has an ID indicator.	-	Off	The ID indicator is not used (default state).
			Blue	Steady on	The indicator identifies the switch to maintain. The ID indicator can be turned on or off remotely to help field engineers find the switch to maintain.
8	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see Table 4-1236 and Table 4-1237.		
9	ETH	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The ETH port is sending or receiving data.
10	-	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> No USB flash drive is connected to the switch. The USB port is damaged. The indicator is damaged. The USB flash drive does not have any configuration file and cannot be used for deployment. The switch has been upgraded using the USB flash drive and is restarting.
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from a USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

Table 4-1236 Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
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Display Mode	Color	Status	Description
Default mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
MST stack mode	Green	Off	Port indicators do not show the stack ID of the switch.
		Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
		Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is blinking, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.
Speed mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10 Mbit/s or 100 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s.
PoE mode	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.
	Green	Blinking	The power of the PD connected to the port exceeds the power capacity of the port or the power threshold configured on the port. Alternatively, the PD does not comply with IEEE standards.

Table 4-1237 Description of service port indicators in different modes (two indicators for each port)

Display Mode	Color	Status	Description
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Display Mode	Color	Status	Description
Default mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Yellow	Blinking	The port is sending or receiving data.
Speed mode	-	Off	The port is not connected or has been shut down.
	Green and yellow	Steady on	1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green and yellow	Blinking	1000M/10GE port: The port is operating at 10 Gbit/s. 1000M port: The port is operating at 1000 Mbit/s.

Power Supply Configuration

The switch is a PoE switch and supports two power module slots, each of which can have a 1000 W PoE or 600 W PoE power module installed. Pluggable AC and DC PoE power modules can be used together in the same switch.

Table 4-1238 Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W AC (220 V) 1000 W DC	—	760 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 25
1000 W AC (110 V)	—	665 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 43 802.3at (30 W per port): 22
1000 W AC (220 V) 1000 W DC	1000 W AC (220 V) 1000 W DC	1600 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 48
1000 W AC (110 V) 1000 W DC	1000 W AC (110 V)	1330 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 44
600 W AC (220 V)	—	380 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 25

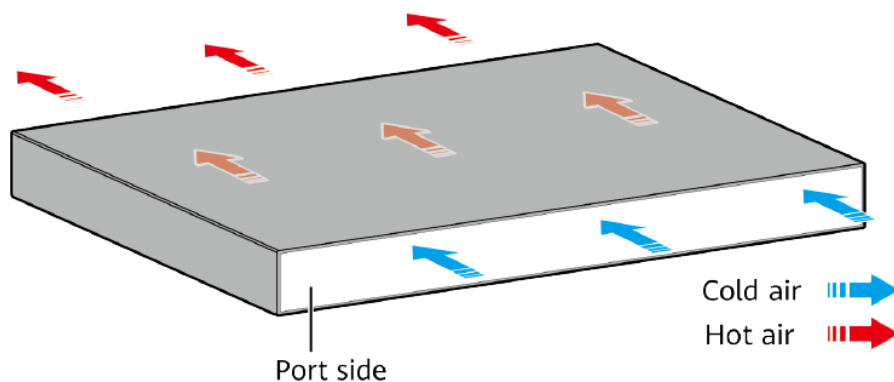
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
V)			24 <ul style="list-style-type: none"> 802.3at (30 W per port): 12
600 W AC (110 V)	–	95 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 6 802.3at (30 W per port): 3
600 W AC (220 V)	600 W AC (220 V)	950 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 31
600 W AC (110 V)	600 W AC (110 V)	380 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 12
1000 W AC (220 V) 1000 W DC	600 W AC (220 V)	1330 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 44

NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

Heat Dissipation

The S5731-H48P4XC uses pluggable fan modules for forced air cooling. Air flows in from the front side and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1239 lists technical specifications of the S5731-H48P4XC.

Table 4-1239 Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	1 GB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	54.96 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	<ul style="list-style-type: none">Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common modeUsing DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.4 in. x 17.7 in.)
Weight (with packaging)	8.8 kg (19.40 lb)
Stack ports	10GE SFP+ ports on the front panel, or ports on the rear card
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	<ul style="list-style-type: none">AC input: 100 V AC to 130 V AC, 200 V AC to 240 V AC, 50/60 HzHigh-Voltage DC input: 240 V DCDC input: -48 V DC to -60 V DC
Maximum voltage range	<ul style="list-style-type: none">AC input: 90 V AC to 290 V AC, 45 Hz to 65 HzHigh-Voltage DC input: 190 V DC to 290 V DCDC input: -38.4 V DC to -72 V DC
Maximum power consumption	<ul style="list-style-type: none">Not providing the PoE function: 132 W (without card)100% PoE loads: 1750 W (PoE: 1440 W, without card)

Item	Description
(100% throughput, full speed of fans)	
Typical power consumption (30% of traffic load, tested according to ATIS standard)	108 W (without card)
Operating temperature	-5 °C to +45 °C (23 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0 °C (32 °F).
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 62.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02352SVD 02352SVD-001

4.25.5 S5731-H48T4XC-B

Version Mapping

Table 4-1240 lists the mapping between the S5731-H48T4XC-B chassis and software versions.

Table 4-1240 Version mapping

Series	Model	Software Version
S5731-H	S5731-H48T4XC-B	02353VAD: V200R020C00 and later versions 02353VAD-003: V200R020C10 and later versions

Appearance and Structure

Figure 4-497 S5731-H48T4XC-B (02353VAD) appearance

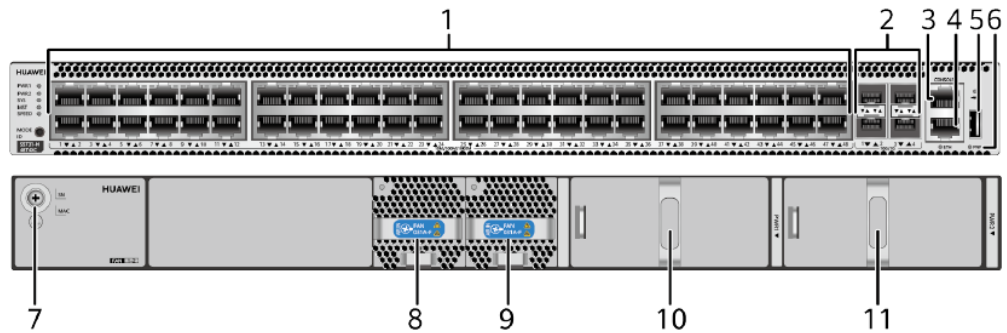
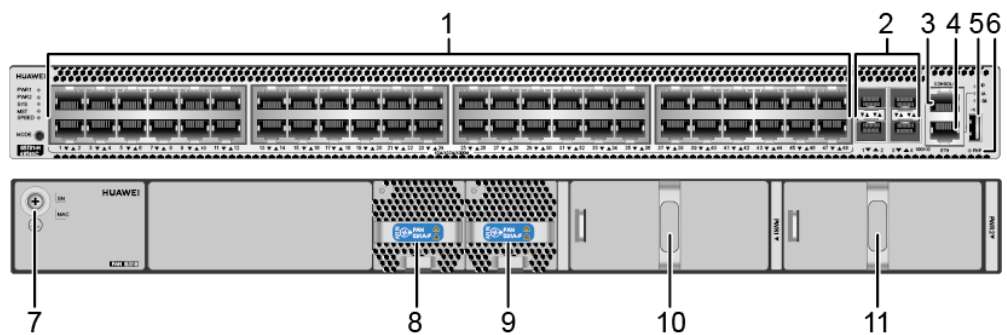


Figure 4-498 S5731-H48T4XC-B (02353VAD-003) appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
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3	One console port	4	One ETH management port
5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw NOTE It is used with a 9.1 Ground Cable.	8	Fan module slot 1 NOTE Applicable fan module: 7.7 FAN-031A-F (Fan box (F, FAN panel side intake))
9	Fan module slot 2 NOTE Applicable fan module: 7.7 FAN-031A-F (Fan box (F, FAN panel side intake))	10	Power module slot 1 NOTE Applicable power module: <ul style="list-style-type: none"> • 5.12 PAC150S12-R (150 W AC Power Module) • 5.15 PDC180S12-CR (180 W DC Power Module)
11	Power module slot 2 NOTE Applicable power module: <ul style="list-style-type: none"> • 5.12 PAC150S12-R (150 W AC Power Module) • 5.15 PDC180S12-CR (180 W DC Power Module) 	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-1241 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-1241 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ optical port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-1242 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-1242 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1243.

Table 4-1243 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1244 describes the attributes of an ETH management port.

Table 4-1244 Attributes of an ETH management port

Attribute	Description
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Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

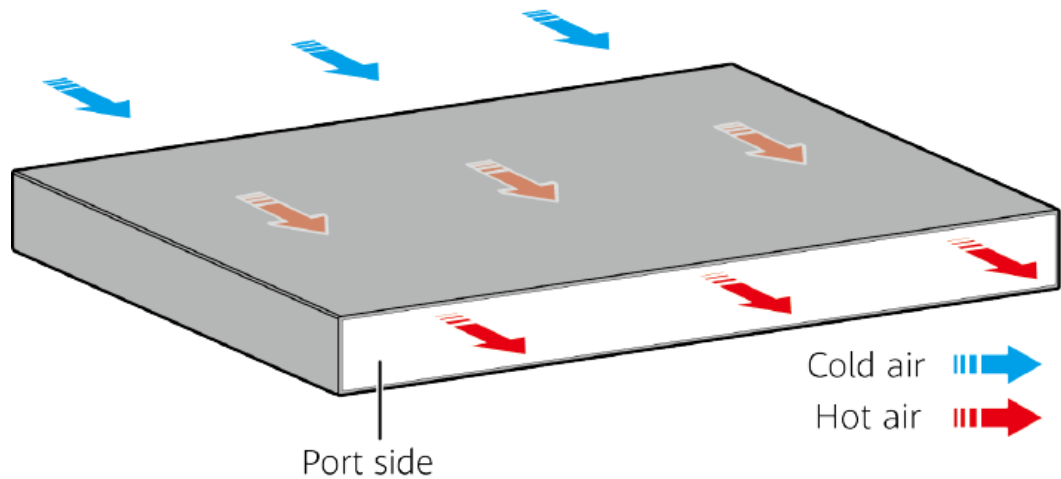
The S5731-H48T4XC-B has similar indicators to those on the S5731-H48P4XC except that the S5731-H48T4XC-B does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The switch can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

Heat Dissipation

The S5731-H48T4XC-B uses pluggable fan modules for forced air cooling. Air flows in from the rear panel and exhausts from the front side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1245 lists technical specifications of the S5731-H48T4XC-B.

Table 4-1245 Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	1 GB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	55.31 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.4 in. x 17.7 in.)
Weight (with packaging)	8.55 kg (18.85 lb)

Item	Description
Stack ports	10GE SFP+ ports on the front panel
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none">AC input: 100 V AC to 240 V AC, 50/60 HzDC input: -48 V DC to -60 V DC
Maximum voltage range	<ul style="list-style-type: none">AC input: 90 V AC to 290 V AC, 45 Hz to 65 HzDC input: -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	130 W
Typical power consumption (30% of traffic load, tested according to ATIS standard)	82.89 W
Operating temperature	-5 °C to +40 °C (23 °F to 104 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0 °C (32 °F).
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 59.9 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">EMC certificationSafety certificationManufacturing certification
Part number	02353VAD 02353VAD-003

4.26 S5731S-H

4.26.1 S5731S-H24T4XC-A

Version Mapping

Table 4-1246 lists the mapping between the S5731S-H24T4XC-A chassis and software versions.

Table 4-1246 Version mapping

Series	Model	Software Version
S5731S-H	S5731S-H24T4XC-A	02352YRG: V200R019C00 and later versions 02352YRG-001: V200R020C10 and later versions

Appearance and Structure

Figure 4-499 S5731S-H24T4XC-A (02352YRG) appearance

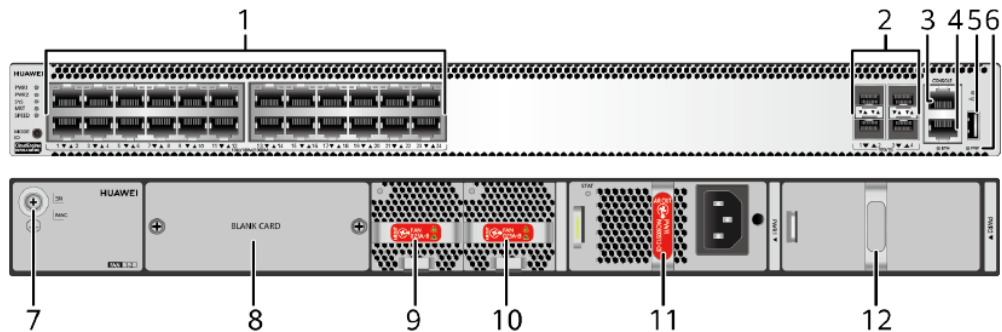
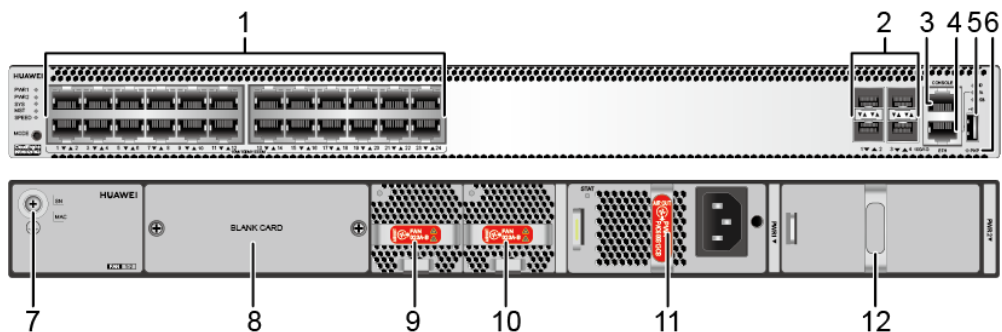


Figure 4-500 S5731S-H24T4XC-A (02352YRG-001) appearance



1	Twenty-four 10/100/1000BASE-T	2	Four 10GE SFP+ ports
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	ports		<p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	One console port	4	One ETH management port
5	One USB port	6	<p>One PNP button</p> <p>NOTICE</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
7	<p>Ground screw</p> <p>NOTE</p> <p>It is used with a 9.1 Ground Cable.</p>	8	<p>Rear card slot</p> <p>NOTE</p> <p>Applicable card:</p> <ul style="list-style-type: none"> • 8.23 ES5D21X08T00 (8-Port 10GBASE-T RJ45 Rear Interface Card) • 8.15 ES5D21Q02Q00 (2-Port 40 Gig QSFP+ Rear Interface Card) • 8.24 S7X08000 (8-Port 10GE SFP+ or 2-Port 25GE SFP28 Optical Interface Card (Only Ports 1 and 2 Support 25GE)) (applicable in V200R019C10 and later versions) • 8.26 S7Q02001 (2-port 40GE QSFP+ interface card) (applicable in V200R021C01 and later versions)
9	<p>Fan module slot 1</p> <p>NOTE</p> <p>Applicable fan module: 7.5 FAN-023A-B (Fan box(B,FAN panel side exhaust))</p>	10	<p>Fan module slot 2</p> <p>NOTE</p> <p>Applicable fan module: 7.5 FAN-023A-B (Fan box(B,FAN panel side exhaust))</p>
11	<p>Power module slot 1</p> <p>NOTE</p>	12	<p>Power module slot 2</p> <p>NOTE</p>

<p>Applicable power module:</p> <ul style="list-style-type: none"> • 5.20 PAC600S12-CB (600 W AC Power Module) • 5.22 PAC600S12-EB (600 W AC Power Module) • 5.21 PAC600S12-DB (600 W AC Power Module) (applicable in V200R020C10 and later versions) • 5.27 PDC1000S12-DB (1000 W DC Power Module) • 5.12 PAC150S12-R (150 W AC Power Module) • 5.15 PDC180S12-CR (180 W DC Power Module) (applicable in V200R020C00 and later versions) 	<p>Applicable power module:</p> <ul style="list-style-type: none"> • 5.20 PAC600S12-CB (600 W AC Power Module) • 5.22 PAC600S12-EB (600 W AC Power Module) • 5.21 PAC600S12-DB (600 W AC Power Module) (applicable in V200R020C10 and later versions) • 5.27 PDC1000S12-DB (1000 W DC Power Module) • 5.12 PAC150S12-R (150 W AC Power Module) • 5.15 PDC180S12-CR (180 W DC Power Module) (applicable in V200R020C00 and later versions)
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Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-1247 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-1247 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ optical port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-1248 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-1248 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards	IEEE802.3ae

Attribute	Description
compliance	
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1249.

Table 4-1249 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1250 describes the attributes of an ETH management port.

Table 4-1250 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch

for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

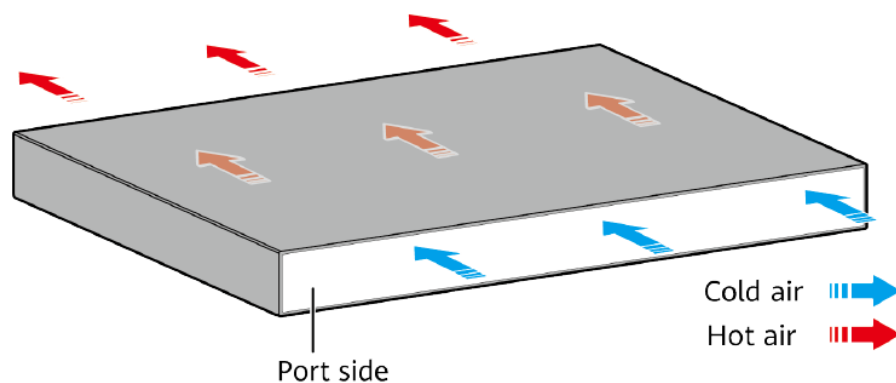
The S5731S-H24T4XC-A has similar indicators to those on the S5731-H48P4XC except that the S5731S-H24T4XC-A does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The switch can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch. However, the power modules with natural heat dissipation and the power modules with fan cannot be used at the same time.

Heat Dissipation

The S5731S-H24T4XC-A uses pluggable fan modules for forced air cooling. Air flows in from the front side and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1251 lists technical specifications of the S5731S-H24T4XC-A.

Table 4-1251 Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	1 GB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	57.73 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	<ul style="list-style-type: none">Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common modeUsing DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.4 in. x 17.7 in.)
Weight (with packaging)	9.35 kg (20.61 lb)
Stack ports	10GE SFP+ ports on the front panel, or ports on the rear card
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none">AC input: 100 V AC to 240 V AC, 50/60 HzHigh-Voltage DC input: 240 V DCDC input: -48 V DC to -60 V DC
Maximum voltage range	<ul style="list-style-type: none">AC input: 90 V AC to 290 V AC, 45 Hz to 65 HzHigh-Voltage DC input: 190 V DC to 290 V DCDC input: -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	114 W (without card)
Typical power consumption (30% of traffic load,	88 W (without card)

Item	Description
tested according to ATIS standard)	
Operating temperature	-5 °C to +45 °C (23 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0 °C (32 °F).
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 57.5 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02352YRG 02352YRG-001

4.26.2 S5731S-H48T4XC-A

Version Mapping

Table 4-1252 lists the mapping between the S5731S-H48T4XC-A chassis and software versions.

Table 4-1252 Version mapping

Series	Model	Software Version
S5731S-H	S5731S-H48T4XC-A	02352YRF: V200R019C00 and later versions 02352YRF-003: V200R020C10 and later versions

Appearance and Structure

Figure 4-501 S5731S-H48T4XC-A (02352YRF) appearance

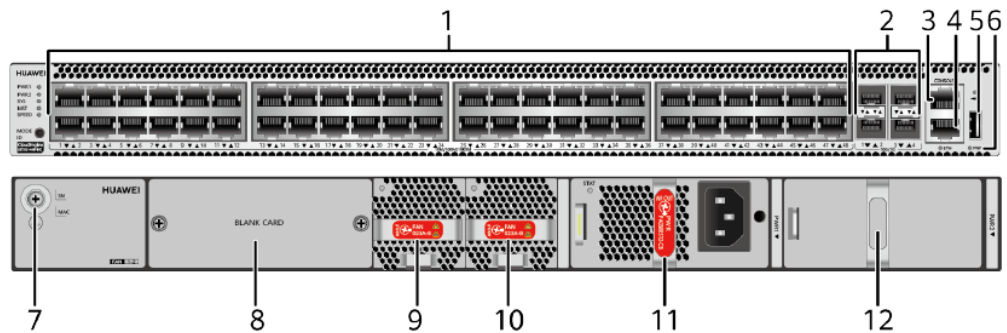
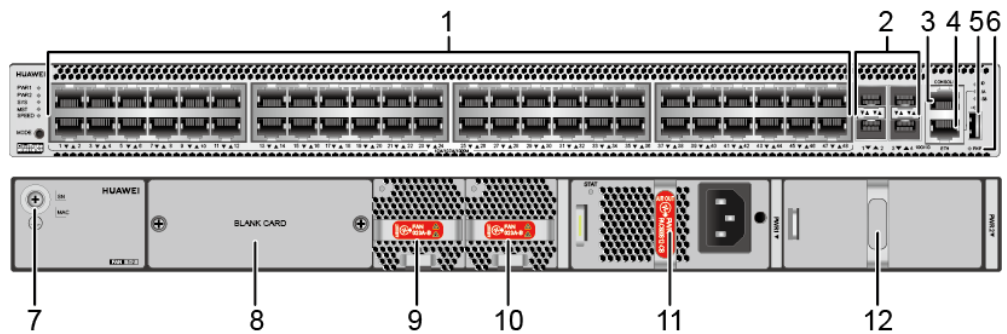


Figure 4-502 S5731S-H48T4XC-A (02352YRF-003) appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	One console port	4	One ETH management port

5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw NOTE It is used with a 9.1 Ground Cable.	8	Rear card slot NOTE Applicable card: <ul style="list-style-type: none"> • 8.23 ES5D21X08T00 (8-Port 10GBASE-T RJ45 Rear Interface Card) • 8.15 ES5D21Q02Q00 (2-Port 40 Gig QSFP+ Rear Interface Card) • 8.24 S7X08000 (8-Port 10GE SFP+ or 2-Port 25GE SFP28 Optical Interface Card (Only Ports 1 and 2 Support 25GE)) (applicable in V200R019C10 and later versions) • 8.26 S7Q02001 (2-port 40GE QSFP+ interface card) (applicable in V200R021C01 and later versions)
9	Fan module slot 1 NOTE Applicable fan module: 7.5 FAN-023A-B (Fan box(B,FAN panel side exhaust))	10	Fan module slot 2 NOTE Applicable fan module: 7.5 FAN-023A-B (Fan box(B,FAN panel side exhaust))
11	Power module slot 1 NOTE Applicable power module: <ul style="list-style-type: none"> • 5.20 PAC600S12-CB (600 W AC Power Module) • 5.22 PAC600S12-EB (600 W AC Power Module) • 5.21 PAC600S12-DB (600 W AC Power Module) (applicable in V200R020C10 and later versions) • 5.27 PDC1000S12-DB (1000 W DC Power Module) • 5.12 PAC150S12-R (150 W AC Power Module) • 5.15 PDC180S12-CR (180 W DC Power Module) (applicable in V200R020C00 and later versions) 	12	Power module slot 2 NOTE Applicable power module: <ul style="list-style-type: none"> • 5.20 PAC600S12-CB (600 W AC Power Module) • 5.22 PAC600S12-EB (600 W AC Power Module) • 5.21 PAC600S12-DB (600 W AC Power Module) (applicable in V200R020C10 and later versions) • 5.27 PDC1000S12-DB (1000 W DC Power Module) • 5.12 PAC150S12-R (150 W AC Power Module) • 5.15 PDC180S12-CR (180 W DC Power Module) (applicable in V200R020C00 and later versions)

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-1253 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-1253 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ optical port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-1254 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-1254 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1255.

Table 4-1255 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)

Attribute	Description
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1256 describes the attributes of an ETH management port.

Table 4-1256 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

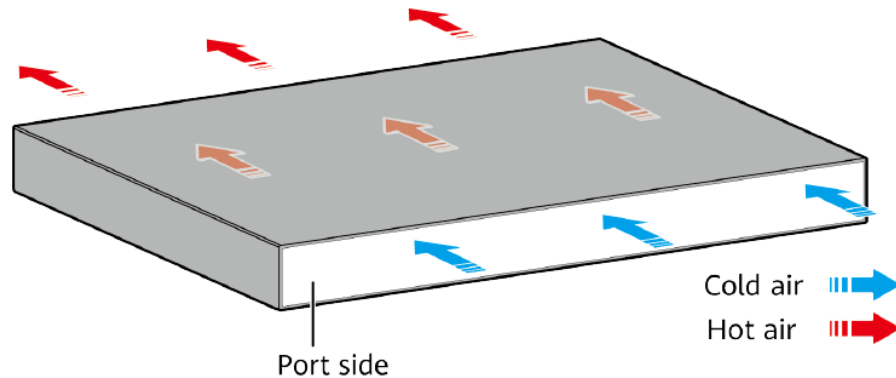
The S5731S-H48T4XC-A has similar indicators to those on the S5731-H48P4XC except that the S5731S-H48T4XC-A does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The switch can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch. However, the power modules with natural heat dissipation and the power modules with fan cannot be used at the same time.

Heat Dissipation

The S5731S-H48T4XC-A uses pluggable fan modules for forced air cooling. Air flows in from the front side and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1257 lists technical specifications of the S5731S-H48T4XC-A.

Table 4-1257 Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	1 GB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	55.31 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode

Item	Description
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.4 in. x 17.7 in.)
Weight (with packaging)	9.5 kg (20.94 lb)
Stack ports	10GE SFP+ ports on the front panel, or ports on the rear card
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none"> AC input: 100 V AC to 240 V AC, 50/60 Hz High-Voltage DC input: 240 V DC DC input: -48 V DC to -60 V DC
Maximum voltage range	<ul style="list-style-type: none"> AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz High-Voltage DC input: 190 V DC to 290 V DC DC input: -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	124 W (without card)
Typical power consumption (30% of traffic load, tested according to ATIS standard)	101 W (without card)
Operating temperature	<p>-5 °C to +45 °C (23 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>The switch cannot be started when the ambient temperature is lower than 0 °C (32 °F).</p>
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 57.5 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)

Item	Description
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02352YRF 02352YRF-003

4.26.3 S5731S-H24T4S-A

Version Mapping

Table 4-1258 lists the mapping between the S5731S-H24T4S-A chassis and software versions.

Table 4-1258 Version mapping

Series	Model	Software Version
S5731S-H	S5731S-H24T4S-A	02353DJE: V200R019C00 and later versions 02353DJE-001: V200R020C10 and later versions

Appearance and Structure

Figure 4-503 S5731S-H24T4S-A (02353DJE) appearance

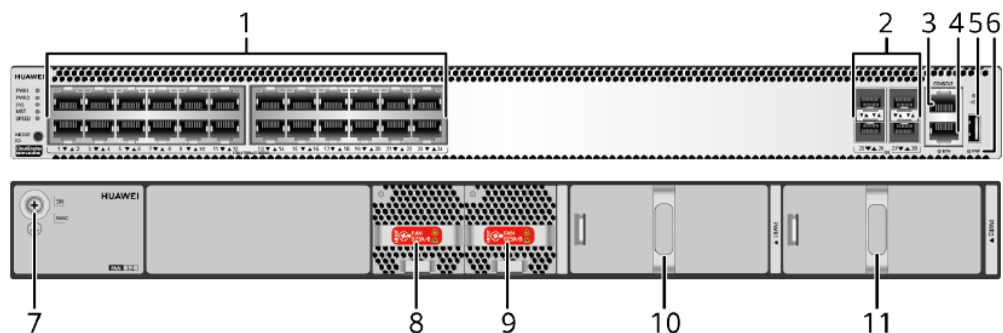
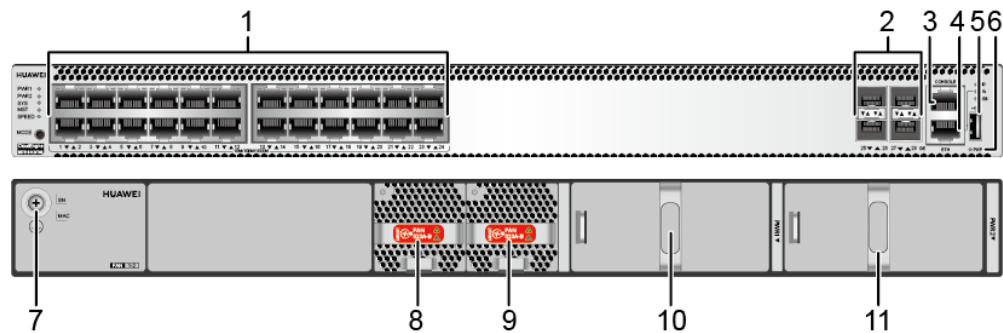


Figure 4-504 S5731S-H24T4S-A (02353DJE-001) appearance



1	Twenty-four 10/100/1000BASE-T ports	2 Four 1000BASE-X ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	One console port	4 One ETH management port
5	One USB port	6 One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw NOTE It is used with a 9.1 Ground Cable.	8 Fan module slot 1 NOTE Applicable fan module: 7.5 FAN-023A-B (Fan box(B,FAN panel side exhaust))
9	Fan module slot 2 NOTE Applicable fan module: 7.5 FAN-023A-B (Fan box(B,FAN panel side exhaust))	10 Power module slot 1 NOTE Applicable power module: <ul style="list-style-type: none"> • 5.20 PAC600S12-CB (600 W AC Power Module) • 5.22 PAC600S12-EB (600 W AC Power Module) • 5.21 PAC600S12-DB (600 W AC

			<p>Power Module) (applicable in V200R020C10 and later versions)</p> <ul style="list-style-type: none"> • 5.27 PDC1000S12-DB (1000 W DC Power Module) • 5.12 PAC150S12-R (150 W AC Power Module) • 5.15 PDC180S12-CR (180 W DC Power Module) (applicable in V200R020C00 and later versions)
11	<p>Power module slot 2</p> <p>NOTE Applicable power module:</p> <ul style="list-style-type: none"> • 5.20 PAC600S12-CB (600 W AC Power Module) • 5.22 PAC600S12-EB (600 W AC Power Module) • 5.21 PAC600S12-DB (600 W AC Power Module) (applicable in V200R020C10 and later versions) • 5.27 PDC1000S12-DB (1000 W DC Power Module) • 5.12 PAC150S12-R (150 W AC Power Module) • 5.15 PDC180S12-CR (180 W DC Power Module) (applicable in V200R020C00 and later versions) 	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-1259 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-1259 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X

port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. Table 4-1260 describes the attributes of a 1000BASE-X Ethernet optical port.

Table 4-1260 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1261.

Table 4-1261 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1262 describes the attributes of an ETH management port.

Table 4-1262 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing

Attribute	Description
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

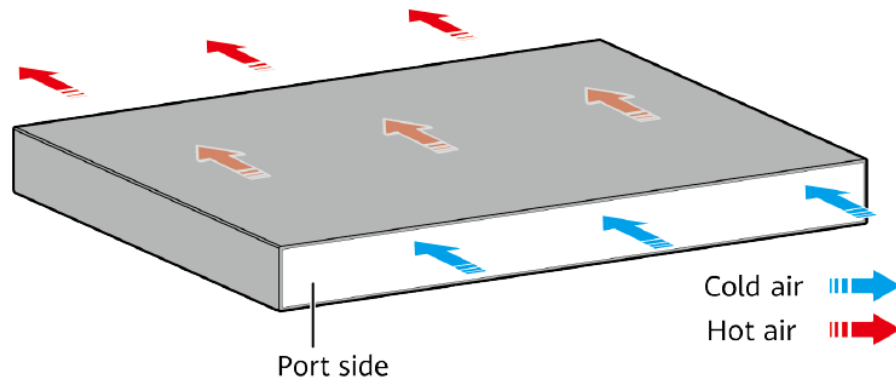
The S5731S-H24T4S-A has similar indicators to those on the S5731-H48P4XC except that the S5731S-H24T4S-A does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The switch can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch. However, the power modules with natural heat dissipation and the power modules with fan cannot be used at the same time.

Heat Dissipation

The S5731S-H24T4S-A uses pluggable fan modules for forced air cooling. Air flows in from the front side and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1263 lists technical specifications of the S5731S-H24T4S-A.

Table 4-1263 Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	1 GB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	57.73 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.4 in. x 17.7 in.)
Weight (with packaging)	9.35 kg (20.61 lb)
Stack ports	1000BASE-X ports on the front panel
RTC	Supported

Item	Description
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none">AC input: 100 V AC to 240 V AC, 50/60 HzHigh-Voltage DC input: 240 V DCDC input: -48 V DC to -60 V DC
Maximum voltage range	<ul style="list-style-type: none">AC input: 90 V AC to 290 V AC, 45 Hz to 65 HzHigh-Voltage DC input: 190 V DC to 290 V DCDC input: -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	91 W
Typical power consumption (30% of traffic load, tested according to ATIS standard)	70 W
Operating temperature	-5 °C to +45 °C (23 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0 °C (32 °F).
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 57.5 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">EMC certificationSafety certificationManufacturing certification
Part number	02353DJE 02353DJE-001

4.26.4 S5731S-H48T4S-A

Version Mapping

Table 4-1264 lists the mapping between the S5731S-H48T4S-A chassis and software versions.

Table 4-1264 Version mapping

Series	Model	Software Version
S5731S-H	S5731S-H48T4S-A	02353DJG: V200R019C00 and later versions 02353DJG-003: V200R020C10 and later versions

Appearance and Structure

Figure 4-505 S5731S-H48T4S-A (02353DJG) appearance

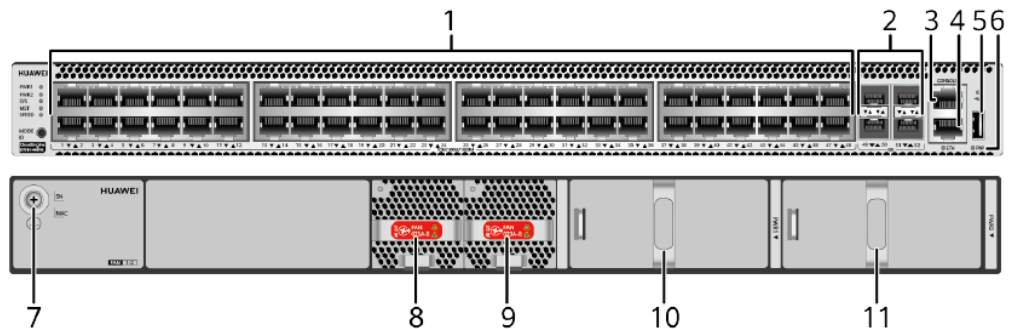
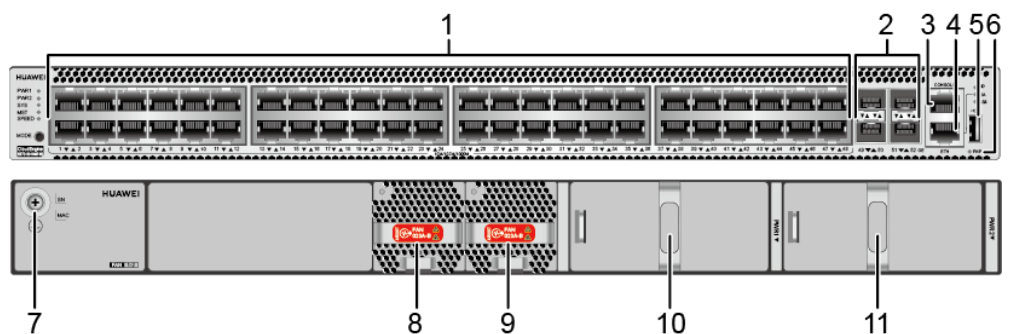


Figure 4-506 S5731S-H48T4S-A (02353DJG-003) appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 1000BASE-X ports Applicable modules and cables: • 10.5 GE eSFP Optical Modules
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			<ul style="list-style-type: none"> • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	One console port	4	One ETH management port
5	One USB port	6	<p>One PNP button</p> <p>NOTICE</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
7	<p>Ground screw</p> <p>NOTE</p> <p>It is used with a 9.1 Ground Cable.</p>	8	<p>Fan module slot 1</p> <p>NOTE</p> <p>Applicable fan module: 7.5 FAN-023A-B (Fan box(B,FAN panel side exhaust))</p>
9	<p>Fan module slot 2</p> <p>NOTE</p> <p>Applicable fan module: 7.5 FAN-023A-B (Fan box(B,FAN panel side exhaust))</p>	10	<p>Power module slot 1</p> <p>NOTE</p> <p>Applicable power module:</p> <ul style="list-style-type: none"> • 5.20 PAC600S12-CB (600 W AC Power Module) • 5.22 PAC600S12-EB (600 W AC Power Module) • 5.21 PAC600S12-DB (600 W AC Power Module) (applicable in V200R020C10 and later versions) • 5.27 PDC1000S12-DB (1000 W DC Power Module) • 5.12 PAC150S12-R (150 W AC Power Module) • 5.15 PDC180S12-CR (180 W DC Power Module) (applicable in V200R020C00 and later versions)
11	<p>Power module slot 2</p> <p>NOTE</p> <p>Applicable power module:</p> <ul style="list-style-type: none"> • 5.20 PAC600S12-CB (600 W AC Power Module) • 5.22 PAC600S12-EB (600 W AC Power Module) • 5.21 PAC600S12-DB (600 W AC 	-	-

	Power Module) (applicable in V200R020C10 and later versions) <ul style="list-style-type: none"> • 5.27 PDC1000S12-DB (1000 W DC Power Module) • 5.12 PAC150S12-R (150 W AC Power Module) • 5.15 PDC180S12-CR (180 W DC Power Module) (applicable in V200R020C00 and later versions) 		
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Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-1265 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-1265 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. Table 4-1266 describes the attributes of a 1000BASE-X Ethernet optical port.

Table 4-1266 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1267.

Table 4-1267 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1268 describes the attributes of an ETH management port.

Table 4-1268 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

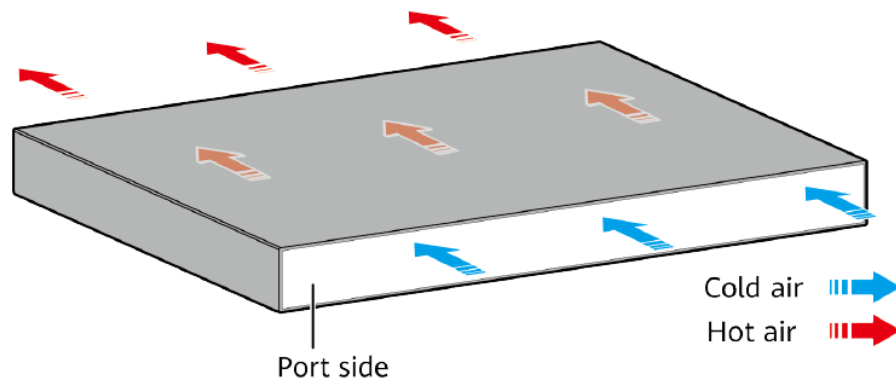
The S5731S-H48T4S-A has similar indicators to those on the S5731-H48P4XC except that the S5731S-H48T4S-A does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The switch can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch. However, the power modules with natural heat dissipation and the power modules with fan cannot be used at the same time.

Heat Dissipation

The S5731S-H48T4S-A uses pluggable fan modules for forced air cooling. Air flows in from the front side and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1269 lists technical specifications of the S5731S-H48T4S-A.

Table 4-1269 Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	1 GB in total. To view the available flash memory size, run the display version command.

Item	Description
Mean time between failures (MTBF)	55.31 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	<ul style="list-style-type: none">Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common modeUsing DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.4 in. x 17.7 in.)
Weight (with packaging)	9.5 kg (20.94 lb)
Stack ports	1000BASE-X ports on the front panel
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none">AC input: 100 V AC to 240 V AC, 50/60 HzHigh-Voltage DC input: 240 V DCDC input: -48 V DC to -60 V DC
Maximum voltage range	<ul style="list-style-type: none">AC input: 90 V AC to 290 V AC, 45 Hz to 65 HzHigh-Voltage DC input: 190 V DC to 290 V DCDC input: -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	113 W
Typical power consumption (30% of traffic load, tested according to ATIS standard)	85 W
Operating temperature	-5 °C to +45 °C (23 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE

Item	Description
	When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0 °C (32 °F).
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 57.5 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02353DJG 02353DJG-003

4.26.5 S5731S-H24T4X-A

Version Mapping

Table 4-1270 lists the mapping between the S5731S-H24T4X-A chassis and software versions.

Table 4-1270 Version mapping

Series	Model	Software Version
S5731S-H	S5731S-H24T4X-A	02353HVH: V200R019C10 and later versions 02353HVH-001: V200R020C10 and later versions

Appearance and Structure

Figure 4-507 S5731S-H24T4X-A (02353HVH) appearance

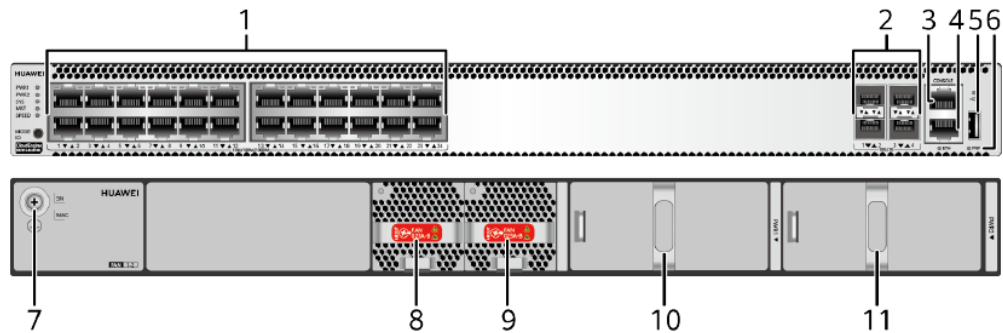
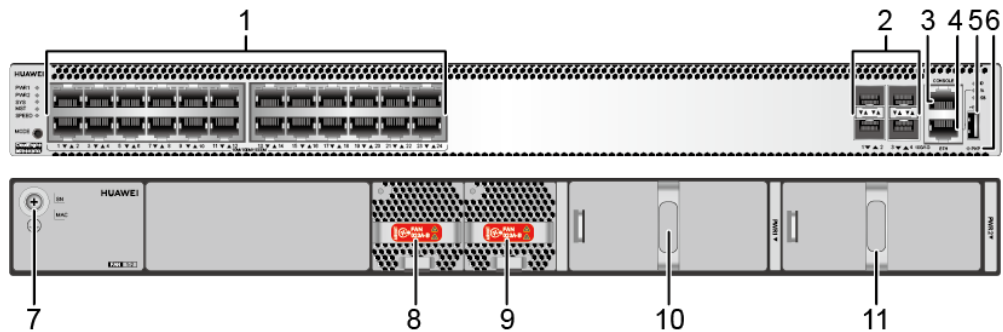


Figure 4-508 S5731S-H24T4X-A (02353HVH-001) appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	One console port	4	One ETH management port

5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw NOTE It is used with a 9.1 Ground Cable.	8	Fan module slot 1 NOTE Applicable fan module: 7.5 FAN-023A-B (Fan box(B,FAN panel side exhaust))
9	Fan module slot 2 NOTE Applicable fan module: 7.5 FAN-023A-B (Fan box(B,FAN panel side exhaust))	10	Power module slot 1 NOTE Applicable power module: <ul style="list-style-type: none"> • 5.20 PAC600S12-CB (600 W AC Power Module) • 5.22 PAC600S12-EB (600 W AC Power Module) • 5.21 PAC600S12-DB (600 W AC Power Module) (applicable in V200R020C10 and later versions) • 5.27 PDC1000S12-DB (1000 W DC Power Module) • 5.12 PAC150S12-R (150 W AC Power Module) • 5.15 PDC180S12-CR (180 W DC Power Module) (applicable in V200R020C00 and later versions)
11	Power module slot 2 NOTE Applicable power module: <ul style="list-style-type: none"> • 5.20 PAC600S12-CB (600 W AC Power Module) • 5.22 PAC600S12-EB (600 W AC Power Module) • 5.21 PAC600S12-DB (600 W AC Power Module) (applicable in V200R020C10 and later versions) • 5.27 PDC1000S12-DB (1000 W DC Power Module) • 5.12 PAC150S12-R (150 W AC Power Module) • 5.15 PDC180S12-CR (180 W DC Power Module) (applicable in V200R020C00 and later versions) 	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-1271 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-1271 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ optical port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-1272 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-1272 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1273.

Table 4-1273 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)

Attribute	Description
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1274 describes the attributes of an ETH management port.

Table 4-1274 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

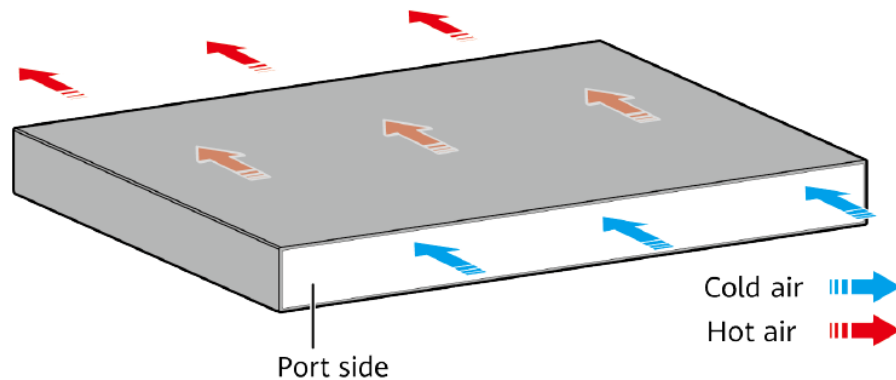
The S5731S-H24T4X-A has similar indicators to those on the S5731-H48P4XC except that the S5731S-H24T4X-A does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The switch can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch. However, the power modules with natural heat dissipation and the power modules with fan cannot be used at the same time.

Heat Dissipation

The S5731S-H24T4X-A uses pluggable fan modules for forced air cooling. Air flows in from the front side and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1275 lists technical specifications of the S5731S-H24T4X-A.

Table 4-1275 Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	1 GB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	57.73 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode

Item	Description
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.4 in. x 17.7 in.)
Weight (with packaging)	9.35 kg (20.61 lb)
Stack ports	10GE SFP+ ports on the front panel
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none">AC input: 100 V AC to 240 V AC, 50/60 HzHigh-Voltage DC input: 240 V DCDC input: -48 V DC to -60 V DC
Maximum voltage range	<ul style="list-style-type: none">AC input: 90 V AC to 290 V AC, 45 Hz to 65 HzHigh-Voltage DC input: 190 V DC to 290 V DCDC input: -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	114 W
Typical power consumption (30% of traffic load, tested according to ATIS standard)	88 W
Operating temperature	-5 °C to +45 °C (23 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0 °C (32 °F).
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 57.5 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)

Item	Description
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02353HVH 02353HVH-001

4.26.6 S5731S-H48T4X-A

Version Mapping

Table 4-1276 lists the mapping between the S5731S-H48T4X-A chassis and software versions.

Table 4-1276 Version mapping

Series	Model	Software Version
S5731S-H	S5731S-H48T4X-A	02353HVJ: V200R019C10 and later versions 02353HVJ-003: V200R020C10 and later versions

Appearance and Structure

Figure 4-509 S5731S-H48T4X-A (02353HVJ) appearance

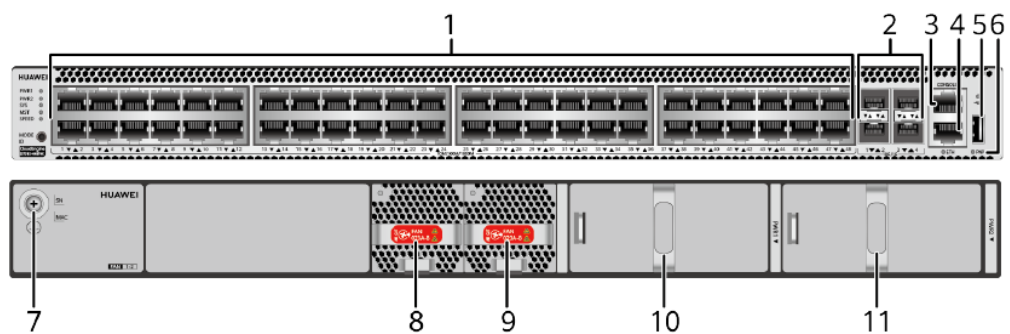
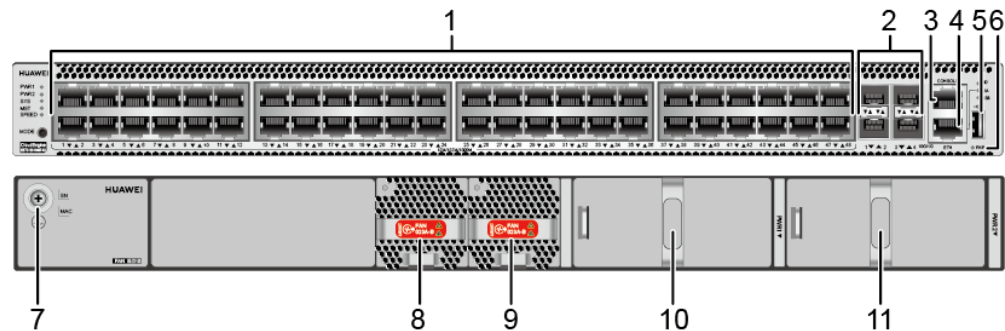


Figure 4-510 S5731S-H48T4X-A (02353HVJ-003) appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw NOTE It is used with a 9.1 Ground Cable.	8	Fan module slot 1 NOTE Applicable fan module: 7.5 FAN-023A-B (Fan box(B,FAN panel side exhaust))
9	Fan module slot 2 NOTE Applicable fan module: 7.5 FAN-023A-B	10	Power module slot 1 NOTE Applicable power module:

	(Fan box(B,FAN panel side exhaust))		<ul style="list-style-type: none"> • 5.20 PAC600S12-CB (600 W AC Power Module) • 5.22 PAC600S12-EB (600 W AC Power Module) • 5.21 PAC600S12-DB (600 W AC Power Module) (applicable in V200R020C10 and later versions) • 5.27 PDC1000S12-DB (1000 W DC Power Module) • 5.12 PAC150S12-R (150 W AC Power Module) • 5.15 PDC180S12-CR (180 W DC Power Module) (applicable in V200R020C00 and later versions)
11	Power module slot 2 NOTE Applicable power module: <ul style="list-style-type: none"> • 5.20 PAC600S12-CB (600 W AC Power Module) • 5.22 PAC600S12-EB (600 W AC Power Module) • 5.21 PAC600S12-DB (600 W AC Power Module) (applicable in V200R020C10 and later versions) • 5.27 PDC1000S12-DB (1000 W DC Power Module) • 5.12 PAC150S12-R (150 W AC Power Module) • 5.15 PDC180S12-CR (180 W DC Power Module) (applicable in V200R020C00 and later versions) 	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-1277 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-1277 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ optical port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-1278 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-1278 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1279.

Table 4-1279 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1280 describes the attributes of an ETH management port.

Table 4-1280 Attributes of an ETH management port

Attribute	Description
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Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

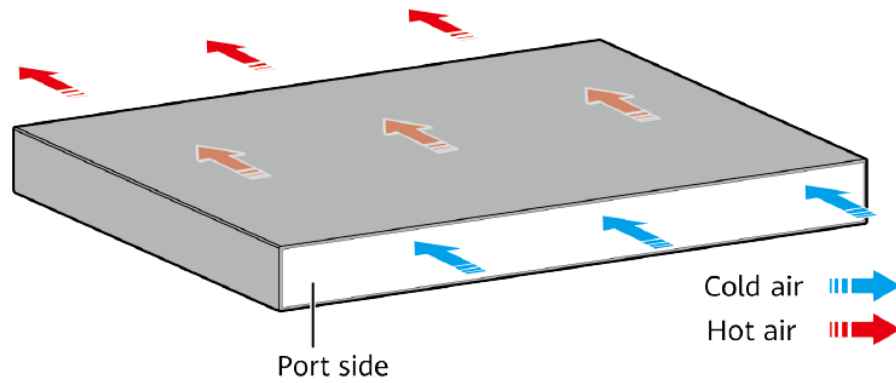
The S5731S-H48T4X-A has similar indicators to those on the S5731-H48P4XC except that the S5731S-H48T4X-A does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The switch can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch. However, the power modules with natural heat dissipation and the power modules with fan cannot be used at the same time.

Heat Dissipation

The S5731S-H48T4X-A uses pluggable fan modules for forced air cooling. Air flows in from the front side and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1281 lists technical specifications of the S5731S-H48T4X-A.

Table 4-1281 Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	1 GB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	55.31 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.4 in. x 17.7 in.)
Weight (with packaging)	9.5 kg (20.94 lb)
Stack ports	10GE SFP+ ports on the front panel
RTC	Supported

Item	Description
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none">AC input: 100 V AC to 240 V AC, 50/60 HzHigh-Voltage DC input: 240 V DCDC input: -48 V DC to -60 V DC
Maximum voltage range	<ul style="list-style-type: none">AC input: 90 V AC to 290 V AC, 45 Hz to 65 HzHigh-Voltage DC input: 190 V DC to 290 V DCDC input: -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	124 W
Typical power consumption (30% of traffic load, tested according to ATIS standard)	101 W
Operating temperature	-5 °C to +45 °C (23 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0 °C (32 °F).
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 57.5 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">EMC certificationSafety certificationManufacturing certification
Part number	02353HVJ 02353HVJ-003

4.27 S5732-H

4.27.1 S5732-H24S6Q

Version Mapping

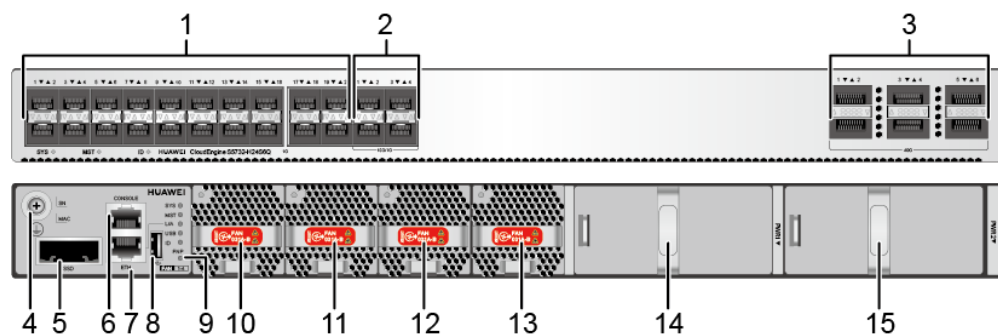
Table 4-1282 lists the mapping between the S5732-H24S6Q chassis and software versions.

Table 4-1282 Version mapping

Series	Model	Software Version
S5732-H	S5732-H24S6Q	<p>02353AJS: V200R019C00 and later versions</p> <p>02353AJS-001: V200R020C10 and later versions</p> <p>02353AJS-003: V200R021C10 and later versions (If V200R021C00 is used, install V200R021SPH010 or a later patch.)</p> <p>NOTE V200R021C01 is not supported.</p> <p>Some models cannot be downgraded due to component upgrade. Therefore, you are advised to run the display system-software information command to check the software versions supported by the device before performing a downgrade. If the device does not support the display system-software information command, it can be downgraded.</p>

Appearance and Structure

Figure 4-511 S5732-H24S6Q appearance



1	<p>Twenty 1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical 	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical
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	<p>Modules</p> <ul style="list-style-type: none"> • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules 		<p>Modules</p> <ul style="list-style-type: none"> • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber
3	<p>Six 40GE/100GE QSFP+ optical ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • 10.16 40GE QSFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 10.18 100GE QSFP28 Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable <p>NOTE</p> <p>A QSFP+ optical port cannot be split into four 10GE ports, regardless of whether the port uses a QSFP28 or QSFP+ optical module.</p> <p>By default, a QSFP+ optical port is a 40GE port. In V200R020C00 and later versions, a license can be loaded to increase the port rate to 100 Gbit/s. After the license is activated, run the assign port-type 100GE command and restart the switch to configure the port as a 100GE port.</p>	4	<p>Ground screw</p> <p>NOTE</p> <p>It is used with a 9.1 Ground Cable.</p>
5	<p>SSD card slot</p> <p>NOTE</p> <p>This slot is reserved for future use.</p>	6	<p>One console port</p>
7	<p>One ETH management port</p>	8	<p>One USB port</p>
9	<p>One PNP button</p> <p>NOTICE</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	10	<p>Fan module slot 1</p> <p>NOTE</p> <p>Applicable fan module: 7.6 FAN-031A-B (Fan box(B,FAN panel side exhaust))</p>

11	Fan module slot 2 NOTE Applicable fan module: 7.6 FAN-031A-B (Fan box(B,FAN panel side exhaust))	12	Fan module slot 3 NOTE Applicable fan module: 7.6 FAN-031A-B (Fan box(B,FAN panel side exhaust))
13	Fan module slot 4 NOTE Applicable fan module: 7.6 FAN-031A-B (Fan box(B,FAN panel side exhaust))	14	Power module slot 1 NOTE Applicable power module: <ul style="list-style-type: none"> • 5.20 PAC600S12-CB (600 W AC Power Module) • 5.22 PAC600S12-EB (600 W AC Power Module) • 5.21 PAC600S12-DB (600 W AC Power Module) (applicable in V200R020C10 and later versions) • 5.27 PDC1000S12-DB (1000 W DC Power Module)
15	Power module slot 2 NOTE Applicable power module: <ul style="list-style-type: none"> • 5.20 PAC600S12-CB (600 W AC Power Module) • 5.22 PAC600S12-EB (600 W AC Power Module) • 5.21 PAC600S12-DB (600 W AC Power Module) (applicable in V200R020C10 and later versions) • 5.27 PDC1000S12-DB (1000 W DC Power Module) 	-	-

Port Description

1000BASE-X Ethernet Optical Port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. Table 4-1283 describes the attributes of a 1000BASE-X Ethernet optical port.

Table 4-1283 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

10GE SFP+ optical port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-1284 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-1284 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

40GE QSFP+ optical port

A 40GE QSFP+ optical port sends and receives service traffic at 40 Gbit/s. Table 4-1285 describes the attributes of a QSFP+ optical port.

Table 4-1285 Attributes of a QSFP+ optical port

Attribute	Description
Connector type	MPO/LC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ba

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1286.

Table 4-1286 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1287 describes the attributes of an ETH management port.

Table 4-1287 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

Figure 4-512 Indicators on the S5732-H24S6Q

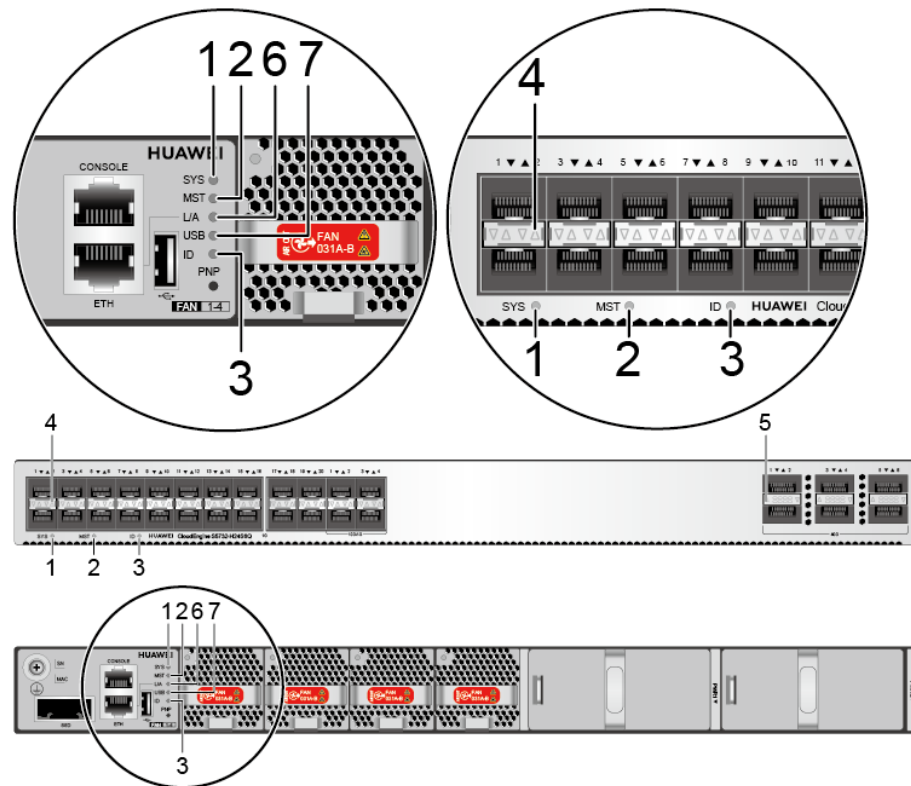


Table 4-1288 Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Steady on	During the system startup preparation phase, the SYS indicator is steady green, which lasts for a maximum of 30 seconds.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or a temperature alarm has been generated.
2	MST	Stack indicator	-	Off	The switch is not the master switch in a stack.

No.	Indicator	Name	Color	Status	Description
			Green	Blinking	The switch is the master switch in a stack or a standalone switch.
3	ID	ID indicator	-	Off	The ID indicator is not used (default state).
			Blue	Steady on	The indicator identifies the switch to maintain. The ID indicator can be turned on or off remotely to help field engineers find the switch to maintain.
4	-	Service port indicator (GE/10GE optical port)	-	Off	The port is not connected or has been shut down.
			Green	Steady on	A link has been established on the port.
			-	Off	The port is not sending or receiving data.
			Yellow	Blinking	The port is sending or receiving data.
5	-	Service port indicator (40GE/100GE optical port)	-	Off	The port is not connected or has been shut down.
			Green	Steady on	A link has been established on the port.
				Blinking	The port is sending or receiving data.
6	L/A	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The Eth port is sending or receiving data.
7	USB	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> No USB flash drive is connected to the switch. The USB port is damaged. The indicator is damaged. The USB flash drive does not have any configuration file and cannot be used for deployment. The switch has been upgraded using the USB flash drive and is restarting.
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from a USB flash drive.
			Yellow	Steady	The switch has copied all the required files

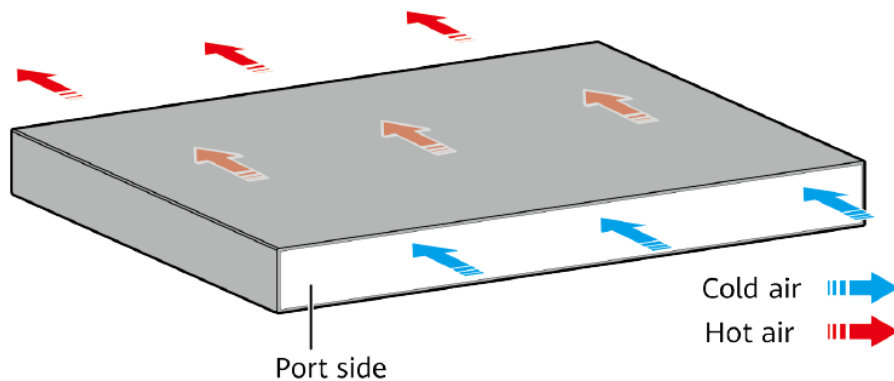
No.	Indicator	Name	Color	Status	Description
				on	and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

Power Supply Configuration

The switch can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

Heat Dissipation

The S5732-H24S6Q uses pluggable fan modules for forced air cooling. Air flows in from the front side and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1289 lists technical specifications of the S5732-H24S6Q.

Table 4-1289 Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	2 GB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	62.27 years
Mean time to repair	2 hours

Item	Description
(MTTR)	
Availability	> 0.99999
Service port surge protection	N/A
Power supply surge protection	<ul style="list-style-type: none">Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common modeUsing DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 446.0 mm (1.72 in. x 17.4 in. x 17.6 in.)
Weight (with packaging)	8.9 kg (19.62 lb)
Stack ports	Any QSFP+ ports
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none">AC input: 100 V AC to 240 V AC, 50/60 HzHigh-Voltage DC input: 240 V DCDC input: -48 V DC to -60 V DC
Maximum voltage range	<ul style="list-style-type: none">AC input: 90 V AC to 290 V AC, 45 Hz to 65 HzHigh-Voltage DC input: 190 V DC to 290 V DCDC input: -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	229 W
Typical power consumption (30% of traffic load, tested according to ATIS standard)	126 W
Operating temperature	-5 °C to +45 °C (23 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0 °C

Item	Description
	(32 F). The operating temperature of the switch is -5 °C to 40 °C (23 F to 104 F) when it uses QSFP-100G-ER4 optical module.
Storage temperature	-40 °C to +70 °C (-40 F to +158 F)
Noise under normal temperature (27 °C, sound power)	< 65 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02353AJS 02353AJS-001 02353AJS-003

4.27.2 S5732-H48S6Q

Version Mapping

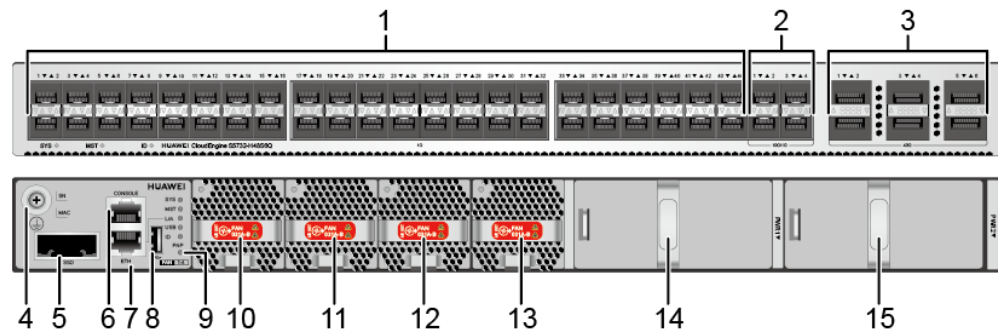
Table 4-1290 lists the mapping between the S5732-H48S6Q chassis and software versions.

Table 4-1290 Version mapping

Series	Model	Software Version
S5732-H	S5732-H48S6Q	02353AJU: V200R019C00 and later versions 02353AJU-001: V200R020C10 and later versions 02353AJU-003: V200R021C10 and later versions (If V200R021C00 is used, install V200R021SPH010 or a later patch.) NOTE V200R021C01 is not supported. Some models cannot be downgraded due to component upgrade. Therefore, you are advised to run the display system-software information command to check the software versions supported by the device before performing a downgrade. If the device does not support the display system-software information command, it can be downgraded.

Appearance and Structure

Figure 4-513 S5732-H48S6Q appearance



1	<p>Forty-four 1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules 	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber
3	<p>Six 40GE/100GE QSFP+ optical ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • 10.16 40GE QSFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 10.18 100GE QSFP28 Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable <p>NOTE</p> <p>A QSFP+ optical port cannot be split into four 10GE ports, regardless of whether the</p>	4	<p>Ground screw</p> <p>NOTE</p> <p>It is used with a 9.1 Ground Cable.</p>

	<p>port uses a QSFP28 or QSFP+ optical module.</p> <p>By default, a QSFP+ optical port is a 40GE port. In V200R020C00 and later versions, a license can be loaded to increase the port rate to 100 Gbit/s. After the license is activated, run the assign port-type 100GE command and restart the switch to configure the port as a 100GE port.</p>		
5	<p>SSD card slot</p> <p>NOTE This slot is reserved for future use.</p>	6	One console port
7	One ETH management port	8	One USB port
9	<p>One PNP button</p> <p>NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	10	<p>Fan module slot 1</p> <p>NOTE Applicable fan module: 7.6 FAN-031A-B (Fan box(B,FAN panel side exhaust))</p>
11	<p>Fan module slot 2</p> <p>NOTE Applicable fan module: 7.6 FAN-031A-B (Fan box(B,FAN panel side exhaust))</p>	12	<p>Fan module slot 3</p> <p>NOTE Applicable fan module: 7.6 FAN-031A-B (Fan box(B,FAN panel side exhaust))</p>
13	<p>Fan module slot 4</p> <p>NOTE Applicable fan module: 7.6 FAN-031A-B (Fan box(B,FAN panel side exhaust))</p>	14	<p>Power module slot 1</p> <p>NOTE Applicable power module:</p> <ul style="list-style-type: none"> • 5.20 PAC600S12-CB (600 W AC Power Module) • 5.22 PAC600S12-EB (600 W AC Power Module) • 5.21 PAC600S12-DB (600 W AC Power Module) (applicable in V200R020C10 and later versions) • 5.27 PDC1000S12-DB (1000 W DC Power Module)
15	<p>Power module slot 2</p> <p>NOTE Applicable power module:</p> <ul style="list-style-type: none"> • 5.20 PAC600S12-CB (600 W AC Power Module) • 5.22 PAC600S12-EB (600 W AC Power Module) • 5.21 PAC600S12-DB (600 W AC Power Module) (applicable in V200R020C10 and later versions) • 5.27 PDC1000S12-DB (1000 W DC Power Module) 	-	-

Port Description

1000BASE-X Ethernet Optical Port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. Table 4-1291 describes the attributes of a 1000BASE-X Ethernet optical port.

Table 4-1291 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

10GE SFP+ optical port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-1292 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-1292 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

40GE QSFP+ optical port

A 40GE QSFP+ optical port sends and receives service traffic at 40 Gbit/s. Table 4-1293 describes the attributes of a QSFP+ optical port.

Table 4-1293 Attributes of a QSFP+ optical port

Attribute	Description
Connector type	MPO/LC
Optical port attributes	Depend on the optical module used

Attribute	Description
Standards compliance	IEEE802.3ba

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1294.

Table 4-1294 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1295 describes the attributes of an ETH management port.

Table 4-1295 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch

for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

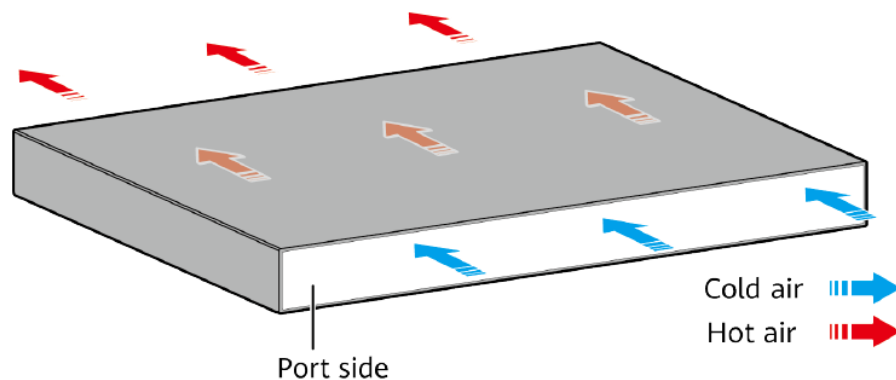
The S5732-H48S6Q has the same types of indicators as the S5732-H24S6Q. For details, see [Indicator Description](#).

Power Supply Configuration

The switch can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

Heat Dissipation

The S5732-H48S6Q uses pluggable fan modules for forced air cooling. Air flows in from the front side and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1296 lists technical specifications of the S5732-H48S6Q.

Table 4-1296 Technical specifications

Item	Description
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Item	Description
Memory (RAM)	4 GB
Flash	2 GB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	56.87 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	N/A
Power supply surge protection	<ul style="list-style-type: none">Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common modeUsing DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 446.0 mm (1.72 in. x 17.4 in. x 17.6 in.)
Weight (with packaging)	9.2 kg (20.28 lb)
Stack ports	Any QSFP+ ports
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none">AC input: 100 V AC to 240 V AC, 50/60 HzHigh-Voltage DC input: 240 V DCDC input: -48 V DC to -60 V DC
Maximum voltage range	<ul style="list-style-type: none">AC input: 90 V AC to 290 V AC, 45 Hz to 65 HzHigh-Voltage DC input: 190 V DC to 290 V DCDC input: -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	255 W
Typical power consumption (30% of traffic load, tested according to	142 W

Item	Description
ATIS standard)	
Operating temperature	-5 °C to +45 °C (23 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0 °C (32 °F). The operating temperature of the switch is -5 °C to 40 °C (23 °F to 104 °F) when it uses QSFP-100G-ER4 optical module.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 65 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02353AJU 02353AJU-001 02353AJU-003

4.27.3 S5732-H24UM2CC

Version Mapping

Table 4-1297 lists the mapping between the S5732-H24UM2CC chassis and software versions.

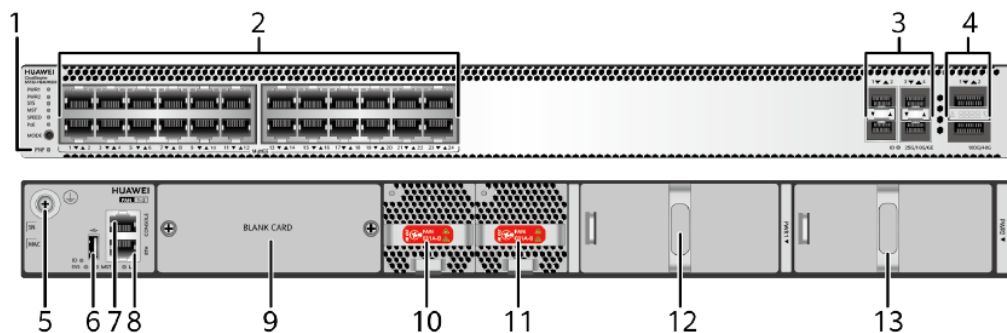
Table 4-1297 Version mapping

Series	Model	Software Version
S5732-H	S5732-H24UM2CC	02353HUC: V200R019C10SPC500 and later versions 02353SJY: V200R019C10SPC500 and later versions 02353SJY-001: V200R019C10SPC500 and later versions 02353SJY-004: V200R019C10SPC500 and

Series	Model	Software Version
		<p>later versions</p> <p>02353HUC-003: V200R021C10 and later versions (If V200R021C00 is used, install V200R021SPH010 or a later patch.)</p> <p>02353SJY-010: V200R021C10 and later versions (If V200R021C00 is used, install V200R021SPH010 or a later patch.)</p> <p>02353SJY-011: V200R021C10 and later versions (If V200R021C00 is used, install V200R021SPH010 or a later patch.)</p> <p>02353SJY-014: V200R021C10 and later versions (If V200R021C00 is used, install V200R021SPH010 or a later patch.)</p> <p>NOTE</p> <p>V200R021C01 is not supported.</p> <p>Some models cannot be downgraded due to component upgrade. Therefore, you are advised to run the display system-software information command to check the software versions supported by the device before performing a downgrade. If the device does not support the display system-software information command, it can be downgraded.</p>

Appearance and Structure

Figure 4-514 S5732-H24UM2CC appearance



1	<p>One PNP button</p> <p>NOTICE</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you</p>	2	<p>Twenty-four 100M/1000M/2.5GE/5GE/10GE BASE-T PoE++ ports (multi-GE ports)</p>
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	press the PNP button.		
3	<p>Four 1GE/10GE/25GE SFP28 optical ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 10.15 25GE SFP28 Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.15 Copper Cable • 9.3 Optical Fiber 	4	<p>Two 40GE/100GE QSFP28 optical ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • 10.16 40GE QSFP+ Optical Modules • 10.18 100GE QSFP28 Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable <p>NOTE</p> <p>You can run the set device port-config-mode enable command to change the working mode of SFP28 and QSFP28 optical ports. By default, the working mode of SFP28 and QSFP28 optical ports is "4 x 25GE + 2 x 40GE".</p> <p>If any QSFP28 optical port is configured to work at 100 Gbit/s or split into four 25GE ports, the four SFP28 optical ports become unavailable.</p>
5	<p>Ground screw</p> <p>NOTE</p> <p>It is used with a 9.1 Ground Cable.</p>	6	<p>One USB port</p>
7	<p>One console port</p>	8	<p>One ETH management port</p>
9	<p>Rear card slot</p> <p>NOTE</p> <p>Applicable card:</p> <ul style="list-style-type: none"> • 8.24 S7X08000 (8-Port 10GE SFP+ or 2-Port 25GE SFP28 Optical Interface Card (Only Ports 1 and 2 Support 25GE)) • 8.25 S7Y08000 (8-Port 25GE SFP28 Optical Interface Card) 	10	<p>Fan module slot 1</p> <p>NOTE</p> <p>Applicable fan module: 7.6 FAN-031A-B (Fan box(B,FAN panel side exhaust))</p>
11	<p>Fan module slot 2</p> <p>NOTE</p> <p>Applicable fan module: 7.6 FAN-031A-B (Fan box(B,FAN panel side exhaust))</p>	12	<p>Power module slot 1</p> <p>NOTE</p> <p>Applicable power module:</p> <ul style="list-style-type: none"> • 5.24 PAC1000S56-CB (1000 W PoE AC Power Module) • 5.25 PAC1000S56-DB (1000 W PoE AC Power Module) (applicable in V200R020C10 and later versions) • 5.26 PDC1000S56-CB (1000 W PoE DC Power Module) (applicable in V200R021C00 and later versions) • 5.23 PAC600S56-CB (600 W AC&240

			V DC Power Module (Back to Front, Power panel side exhaust)) (applicable in V200R021C10 and later versions)
13	Power module slot 2 NOTE Applicable power module: <ul style="list-style-type: none"> • 5.24 PAC1000S56-CB (1000 W PoE AC Power Module) • 5.25 PAC1000S56-DB (1000 W PoE AC Power Module) (applicable in V200R020C10 and later versions) • 5.26 PDC1000S56-CB (1000 W PoE DC Power Module) (applicable in V200R021C00 and later versions) • 5.23 PAC600S56-CB (600 W AC&240 V DC Power Module (Back to Front, Power panel side exhaust)) (applicable in V200R021C10 and later versions) 	-	-

Port Description

100M/1000M/2.5GE/5GE/10GE BASE-T port (multi-GE port)

A 100M/1000M/2.5GE/5GE/10GE BASE-T port (multi-GE port) sends and receives service data at 100 Mbit/s, 1 Gbit/s, 2.5 Gbit/s, 5 Gbit/s, or 10 Gbit/s, and must use an 9.4 Ethernet Cable. If the 2.5 Gbit/s or 5 Gbit/s speed is required, the port must use an Ethernet cable of Cat5e or higher category. If the 10 Gbit/s speed is required, the port must use an Ethernet cable of Cat6A F/UTP or higher category. Table 4-1298 describes the attributes of a 100M/1000M/2.5GE/5GE/10GE BASE-T port.

Table 4-1298 Attributes of a 100M/1000M/2.5GE/5GE/10GE BASE-T port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3u, IEEE802.3ab, IEEE802.3bz, IEEE802.3an
Working Mode	100/1000/2500/5000/10000 Mbit/s auto-sensing

There are several S5732-H24UM2CC bundles, which consist of different power supplies and ports, as listed in Table 4-1299.

Table 4-1299 S5732-H24UM2CC bundles

Part Number	Description	Remarks
02353HUC	S5732-H24UM2CC Premium(24*100M/1G/2.5G/5G/10G Ethernet ports, 4*25GE SFP28 + 2*40GE or	By default, no power supply is configured.
02353HUC-003	2*100GE QSFP28 ports, 1*expansion slot,	By default, multi-GE ports support 100 Mbit/s, 1000

Part Number	Description	Remarks
	PoE++, without power module)	Mbit/s, 2.5 Gbit/s, 5 Gbit/s, and 10 Gbit/s.
02353SJY 02353SJY -010	S5732-H24UM2CC Base(24*100M/1G Ethernet ports, Optional RTU upgrade to 2.5/5/10G, 4*25GE SFP28 + 2*40GE or 2*100GE QSFP28 ports, 1*expansion slot, PoE++, without power module)	By default, no power supply is configured. By default, multi-GE ports support 100 Mbit/s and 1000 Mbit/s. You can purchase an RTU license to increase the port rate to 2.5 Gbit/s, 5 Gbit/s, or 10 Gbit/s.
02353SJY -001 02353SJY -011	S5732-H24UM2CC 2.5&10G Bundle(12*100M/1G/2.5G, 12*100M/1G/2.5G/5G/10G Ethernet ports, Optional RTU upgrade to 5/10G, 4*25GE + 2*40GE or 2*100GE, 1*expansion slot, PoE++, 1*1000W AC power)	By default, one 1000 W AC power module is configured. By default, the first 12 multi-GE ports support 100 Mbit/s, 1000 Mbit/s, and 2.5 Gbit/s. You can purchase an RTU license to increase the port rate to 5 Gbit/s or 10 Gbit/s. By default, the last 12 multi-GE ports support 100 Mbit/s, 1000 Mbit/s, 2.5 Gbit/s, 5 Gbit/s, and 10 Gbit/s. There is a label on the rear side of the device, which contains the default rate "12*2.5GE+12*10GE" supported by the multi-GE ports.
02353SJY -004 02353SJY -014	S5732-H24UM2CC 10G Bundle(24*100M/1G/2.5G/5G/10G Ethernet ports, 4*25GE SFP28 + 2*40GE or 2*100GE QSFP28 ports, 1*expansion slot, PoE++, 1*1000W AC power)	By default, one 1000 W AC power module is configured. By default, multi-GE ports support 100 Mbit/s, 1000 Mbit/s, 2.5 Gbit/s, 5 Gbit/s, and 10 Gbit/s. There is a label on the rear side of the device, which contains the default rate "24*10GE" supported by the multi-GE ports.

 **NOTE**

A pre-configured or loaded RTU (right to use) license of a device is bound to the device ESN and cannot be unbound or transferred to other devices.

For details about the RTU licenses supported by the device and how to load them, see the *License Usage Guide*.

A switch with part number 02353SJY-001 is as an example. The switch has a label on its real panel, which shows the default rate of multi-GE ports on the switch.

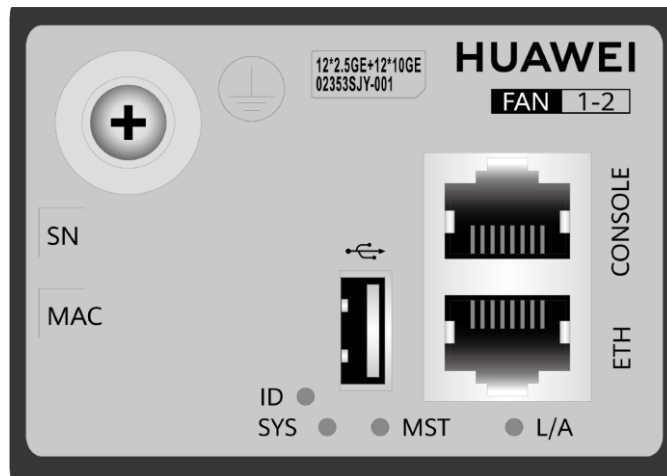


Table 4-1300 lists the maximum transmission distances of different cables on multi-GE ports.

Table 4-1300 Maximum transmission distances of different cables on multi-GE ports

Cable Type (6-a-1 Bundle)	Multi-GE Port (Different Rates)			
	100M/1000M	2.5GE	5GE	10GE
Category 5e unshielded twisted pair (Cat5e UTP)	100 m	100 m	<ul style="list-style-type: none"> • 55 m • 100 m (6-a-1 bundle only for the first 30 m) Not recommended due to high risk	Not supported
Category 5e shielded twisted pair (Cat5e STP)	100 m	100 m	100 m	Not supported
Category 6 unshielded twisted pair (Cat6 UTP)	100 m	100 m	100 m Not recommended due to high risk	Not supported
Category 6 shielded twisted pair (Cat6 STP)	100 m	100 m	100 m	Not supported
Category 6A unshielded twisted	100 m	100 m	100 m Not	Not supported

Cable Type (6-a-1 Bundle)	Multi-GE Port (Different Rates)			
	100M/1000M	2.5GE	5GE	10GE
pair (Cat6A U/UTP)			recommended due to high risk	
Category 6A foiled/unshielded twisted pair (Cat6A F/UTP)	100 m	100 m	100 m	100 m
Category 6A shielded twisted pair (Cat6A STP)	100 m	100 m	100 m	100 m
Category 7 twisted pair (Cat7)	100 m	100 m	100 m	100 m

NOTE

6-a-1 stands for the six-around-one cable bundle mode, with one cable in the center and six cables bundled evenly around it.

Some cables pose high risks and are not recommended for the following reasons:

- 802.3bz requires that the ALSNR value for alien crosstalk between Ethernet cables be greater than 0, but the standards for Cat5e and Cat6 unshielded twisted pairs do not specify the required ALSNR value. Therefore, such cables may not meet the crosstalk requirement in 802.3bz, causing severe problems such as continuous packet loss.
- According the cabling specification TIA TSB-5021, using Cat5e and Cat6 cables for 5G poses high risks.
- Currently, no clear onsite testing or evaluation method is available for checking whether ALSNR of cables conforms to 802.3bz.

If Cat5e and Cat6 unshielded twisted pairs do not meet the 5G requirement, you are advised to replace them with shielded twisted pairs or reduce the rate of ports to 2.5G.

1GE/10GE/25GE SFP28 optical port

A 1GE/10GE/25GE SFP28 optical port sends and receives service data at 1 Gbit/s, 10 Gbit/s, or 25 Gbit/s. Table 4-1301 describes the attributes of a 1GE/10GE/25GE SFP28 optical port.

Table 4-1301 Attributes of a 1GE/10GE/25GE SFP28 optical port

Attribute	Description
Connector Type	LC/PC
Optical port attributes	Depending on the optical module or cable in use
Standards compliance	IEEE802.3z, IEEE802.3ae, and IEEE802.3by
Working mode	<ul style="list-style-type: none"> • When a 25GE optical module or cable is connected to a port, the port can automatically adjust its rate to 25 Gbit/s. • When a 10GE optical module or cable is connected to a port, the

Attribute	Description
	port can automatically adjust its rate to 10 Gbit/s. <ul style="list-style-type: none">• Before installing a GE optical module or copper module on a port, run the port mode ge command to configure the port to work at 1 Gbit/s.

40GE/100GE QSFP28 optical port

A 40GE/100GE QSFP28 optical port sends and receives service traffic at 40 Gbit/s or 100 Gbit/s. Table 4-1302 describes the attributes of a QSFP28 optical port.

Table 4-1302 Attributes of a QSFP28 optical port

Attribute	Description
Connector type	MPO/LC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ba

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1303.

Table 4-1303 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1304 describes the attributes of an ETH management port.

Table 4-1304 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
- If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
- If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 4-515 Indicators on the S5732-H24UM2CC

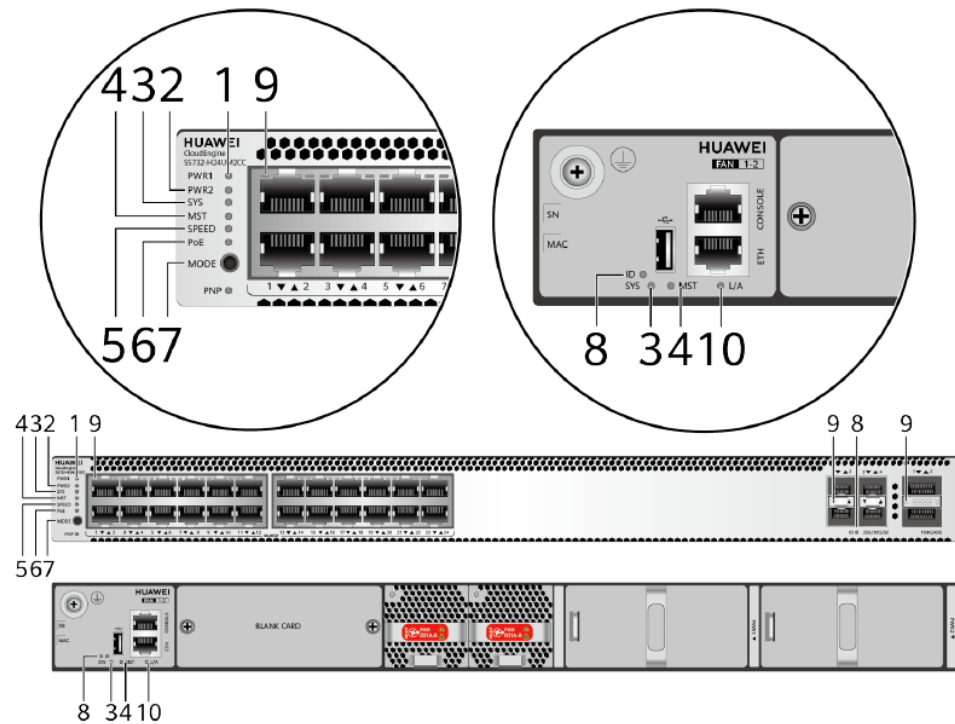


Table 4-1305 Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR1	Power module indicator	-	Off	No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 1 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none"> A power module is available in this slot but it is not connected to a power source. The power module in this slot has failed.
			Red	Steady on	The switch has two power modules installed. An unsupported power module is installed in power module slot 1. NOTE Only the S5732-H48XUM2CC has this

No.	Indicator	Name	Color	Status	Description
					indicator status.
2	PWR 2	Power module indicator	-	Off	No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 2 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 2: <ul style="list-style-type: none"> A power module is available in this slot but it is not connected to a power source. The power module in this slot has failed.
			Red	Steady on	The switch has two power modules installed. An unsupported power module is installed in power module slot 2. NOTE Only the S5732-H48XUM2CC has this indicator status.
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting or is copying the system software and configuration file from a USB flash drive during a USB-based upgrade.
			Green	Steady on	During the system startup preparation phase, the SYS indicator is steady green, which lasts for a maximum of 30 seconds.
			Green	Slow blinking	The system is running normally.
			Yellow	Blinking	The switch has restarted after a successful upgrade using a USB flash drive. You can remove the USB flash drive from the switch.
			Red	Blinking	The system cannot be upgraded after a USB flash drive is inserted. The USB-based upgrade failed.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or a temperature alarm has been generated.

No.	Indicator	Name	Color	Status	Description
4	MST	Stack indicator	-	Off	<ul style="list-style-type: none">If you are not changing the indicator mode (default): The switch is a standby or slave switch in a stack or the stacking function is not enabled on the switch.If you are changing the indicator mode: The stack mode is not selected.
			Green	Steady on	The stack mode is selected. The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none">If you are not changing the indicator mode (default): The switch is the master switch in a stack or a standalone switch with the stacking function enabled.If you are changing the indicator mode: The stack mode is selected. The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. After 45 seconds, the service port indicators automatically restore the status mode.
5	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The speed mode is selected, and service port indicators show the speed of each port.
6	PoE	PoE indicator	-	Off	The PoE mode is not selected.
			Green	Steady on	The PoE mode is selected, and service port indicators show the PoE status of each port.
7	MODE	Mode switch button	-	-	<ul style="list-style-type: none">When you press this button once, the service port indicators change to the stack mode and show the stack ID of the local switch.When you press this button a second time, the service port indicators change to the speed mode and show the speed of each service port.When you press this button a third time, the service port indicators change to the PoE mode and show the PoE status of each service port.When you press this button a fourth time, the service port indicators restore to the default mode and show the connection status and link activity of

No.	Indicator	Name	Color	Status	Description
					each service port. If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the SPEED and PoE indicators are off.
8	ID	ID indicator	-	Off	The ID indicator is not used (default state).
			Blue	Steady on	The indicator identifies the switch to maintain. The ID indicator can be turned on or off remotely to help field engineers find the switch to maintain.
9	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see Table 4-1306.		
10	L/A	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The ETH port is sending or receiving data.

Table 4-1306 Description of service port indicators in different modes

Display Mode	Color	Status	Description
Default mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
	Yellow	Blinking	The port is sending or receiving data. NOTE Only the S5732-H48XUM2CC has this indicator status.
	Yellow	Steady on	The port is supplying PoE power remotely and is not transmitting data. NOTE This port status is supported by the multi-GE ports on the S5732-H48XUM2CC.
MST stack mode	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a

Display Mode	Color	Status	Description
			<p>stack.</p> <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
	Green	Blinking	<p>The switch is the master switch in a stack.</p> <ul style="list-style-type: none"> If the indicator of a port is blinking, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.
Speed mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	<ul style="list-style-type: none"> 100M/1000M/2.5GE/5GE/10GE BASE-T port: The port is operating at 100 Mbit/s or 1000 Mbit/s. 1GE/10GE/25GE SFP28 port: The port is operating at 1 Gbit/s or 10 Gbit/s. 40GE/100GE QSFP28 port: The port is operating at 40 Gbit/s.
	Green and yellow	Steady on	<p>1GE/10GE SFP+ port: The port is operating at 1 Gbit/s.</p> <p>NOTE Only the S5732-H48XUM2CC has this indicator status.</p>
	Green	Blinking	<ul style="list-style-type: none"> 100M/1000M/2.5GE/5GE/10GE BASE-T port: The port is operating at 2.5 Gbit/s, 5 Gbit/s, or 10 Gbit/s. 1GE/10GE/25GE SFP28 port: The port is operating at 25 Gbit/s. 40GE/100GE QSFP28 port: The port is operating at 100 Gbit/s.
	Green and yellow	Blinking	<p>1GE/10GE SFP+ port: The port is operating at 10 Gbit/s.</p> <p>NOTE Only the S5732-H48XUM2CC has this indicator status.</p>
PoE mode	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.

Display Mode	Color	Status	Description
	Yellow	Steady on	The PoE function is disabled on the port.
	Yellow	Blinking	The port stops providing PoE power because of an exception (for example, an incompatible PD is connected to the port).
	Green and yellow	Blinking green and yellow alternately	The port fails to supply power to a PD due to one of the following reasons: <ul style="list-style-type: none"> The power required by the connected PD exceeds the maximum power or the configured power threshold of the port. The total power consumption of PDs has reached the maximum power of the switch. The manual power management mode is used and the port is not enabled to provide power to the PD.

Power Supply Configuration

The switch is a PoE switch and supports two power module slots, each of which can have a 1000 W PoE or 600 W PoE power module installed. Pluggable AC and DC PoE power modules can be used together in the same switch.

Table 4-1307 Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W AC (220 V) 1000 W DC	–	675 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 22 802.3bt (60 W per port): 11
1000 W AC (110 V)	–	580 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 19 802.3bt (60 W per port): 9
1000 W AC (220 V) 1000 W DC	1000 W AC (220 V) 1000 W DC	1440 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 24 802.3bt (60 W per port): 24

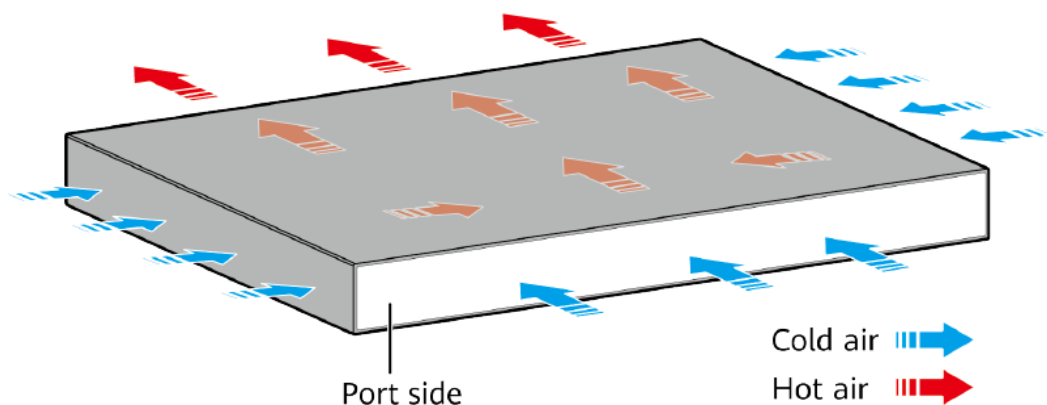
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W AC (110 V) 1000 W DC	1000 W AC (110 V)	1435 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 24 802.3bt (60 W per port): 23
600 W AC (220 V)	–	295 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 19 802.3at (30 W per port): 9
600 W AC (220 V)	600 W AC (220 V)	865 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 24
1000 W AC (220 V) 1000 W DC	600 W AC (220 V)	1245 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 24

NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

Heat Dissipation

The S5732-H24UM2CC uses pluggable fan modules for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1308 lists technical specifications of the S5732-H24UM2CC.

Table 4-1308 Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	2 GB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	38.05 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	<ul style="list-style-type: none">Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common modeUsing DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 446.0 mm (1.72 in. x 17.4 in. x 17.6 in.)
Weight (including package)	8 kg (17.64 lb)
Stack ports	Any Ethernet electrical ports (10GE), optical ports on the front panel (25GE/40GE/100GE), or optical ports on the card (10GE/25GE)
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	<ul style="list-style-type: none">AC input: 100 V AC to 130 V AC, 200 V AC to 240 V AC, 50/60 HzHigh-Voltage DC input: 240 V DCDC input: -48 V DC to -60 V DC
Maximum voltage range	<ul style="list-style-type: none">AC input: 90 V AC to 290 V AC, 45 Hz to 65 HzHigh-Voltage DC input: 190 V DC to 290 V DCDC input: -38.4 V DC to -72 V DC
Maximum power	<ul style="list-style-type: none">Not providing the PoE function: 285 W (without card)

Item	Description
consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> 100% PoE loads: 1933 W (PoE: 1440 W, without card)
Typical power consumption (30% of traffic load, tested according to ATIS standard)	161 W (without card)
Operating temperature	<p>-5 °C to +45 °C (23 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>The switch cannot be started when the ambient temperature is lower than 0 °C (32 °F).</p> <p>The operating temperature of the switch is -5 °C to 40 °C (23 °F to 104 °F) when it uses QSFP-100G-ER4 optical module.</p>
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 59.2 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> EMC certification Safety certification Manufacturing certification
Part number	02353HUC 02353HUC-003 02353SJY 02353SJY-001 02353SJY-004 02353SJY-010 02353SJY-011 02353SJY-014

4.27.4 S5732-H48UM2CC

Version Mapping

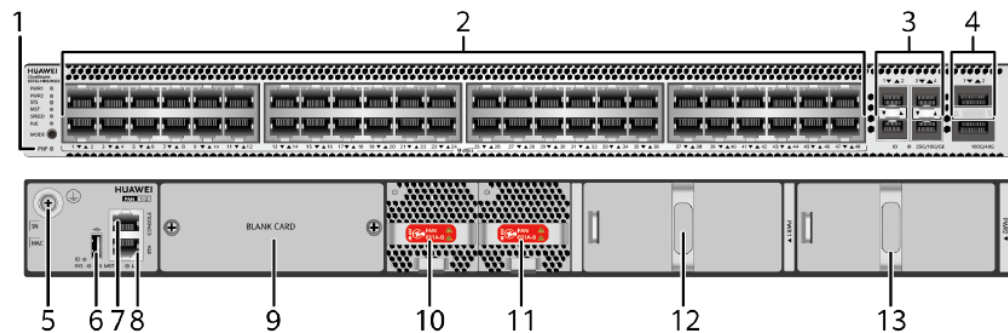
Table 4-1309 lists the mapping between the S5732-H48UM2CC chassis and software versions.

Table 4-1309 Version mapping

Series	Model	Software Version
S5732-H	S5732-H48UM2CC	<p>02353HUB: V200R019C10SPC500 and later versions</p> <p>02353SJT: V200R019C10SPC500 and later versions</p> <p>02353SJT-001: V200R019C10SPC500 and later versions</p> <p>02353SJT-003: V200R019C10SPC500 and later versions</p> <p>02353SJT-004: V200R019C10SPC500 and later versions</p> <p>02353HUB-002: V200R021C10 and later versions (If V200R021C00 is used, install V200R021SPH010 or a later patch.)</p> <p>02353SJT-010: V200R021C10 and later versions (If V200R021C00 is used, install V200R021SPH010 or a later patch.)</p> <p>02353SJT-011: V200R021C10 and later versions (If V200R021C00 is used, install V200R021SPH010 or a later patch.)</p> <p>02353SJT-013: V200R021C10 and later versions (If V200R021C00 is used, install V200R021SPH010 or a later patch.)</p> <p>02353SJT-014: V200R021C10 and later versions (If V200R021C00 is used, install V200R021SPH010 or a later patch.)</p> <p>NOTE</p> <p>V200R021C01 is not supported.</p> <p>Some models cannot be downgraded due to component upgrade. Therefore, you are advised to run the display system-software information command to check the software versions supported by the device before performing a downgrade. If the device does not support the display system-software information command, it can be downgraded.</p>

Appearance and Structure

Figure 4-516 S5732-H48UM2CC appearance



1	<p>One PNP button</p> <p>NOTICE</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	2	<p>Forty-eight 100M/1000M/2.5GE/5GE/10GE BASE-T PoE++ ports (multi-GE ports)</p>
3	<p>Four 1GE/10GE/25GE SFP28 optical ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 10.15 25GE SFP28 Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.15 Copper Cable • 9.3 Optical Fiber 	4	<p>Two 40GE/100GE QSFP28 optical ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • 10.16 40GE QSFP+ Optical Modules • 10.18 100GE QSFP28 Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable <p>NOTE</p> <p>You can run the set device port-config-mode enable command to change the working mode of SFP28 and QSFP28 optical ports. By default, the working mode of SFP28 and QSFP28 optical ports is "4 x 25GE + 2 x 40GE".</p> <p>If any QSFP28 optical port is configured to work at 100 Gbit/s or split into four 25GE ports, the four SFP28 optical ports become unavailable.</p>
5	<p>Ground screw</p> <p>NOTE</p>	6	<p>One USB port</p>

	It is used with a 9.1 Ground Cable.		
7	One console port	8	One ETH management port
9	Rear card slot NOTE Applicable card: <ul style="list-style-type: none"> 8.24 S7X08000 (8-Port 10GE SFP+ or 2-Port 25GE SFP28 Optical Interface Card (Only Ports 1 and 2 Support 25GE)) 8.25 S7Y08000 (8-Port 25GE SFP28 Optical Interface Card) 	10	Fan module slot 1 NOTE Applicable fan module: 7.6 FAN-031A-B (Fan box(B,FAN panel side exhaust))
11	Fan module slot 2 NOTE Applicable fan module: 7.6 FAN-031A-B (Fan box(B,FAN panel side exhaust))	12	Power module slot 1 NOTE Applicable power module: <ul style="list-style-type: none"> 5.24 PAC1000S56-CB (1000 W PoE AC Power Module) 5.25 PAC1000S56-DB (1000 W PoE AC Power Module) (applicable in V200R020C10 and later versions) 5.26 PDC1000S56-CB (1000 W PoE DC Power Module) (applicable in V200R021C00 and later versions) 5.23 PAC600S56-CB (600 W AC&240 V DC Power Module (Back to Front, Power panel side exhaust)) (applicable in V200R021C10 and later versions)
13	Power module slot 2 NOTE Applicable power module: <ul style="list-style-type: none"> 5.24 PAC1000S56-CB (1000 W PoE AC Power Module) 5.25 PAC1000S56-DB (1000 W PoE AC Power Module) (applicable in V200R020C10 and later versions) 5.26 PDC1000S56-CB (1000 W PoE DC Power Module) (applicable in V200R021C00 and later versions) 5.23 PAC600S56-CB (600 W AC&240 V DC Power Module (Back to Front, Power panel side exhaust)) (applicable in V200R021C10 and later versions) 	-	-

Port Description

100M/1000M/2.5GE/5GE/10GE BASE-T port (multi-GE port)

A 100M/1000M/2.5GE/5GE/10GE BASE-T port (multi-GE port) sends and receives service data at 100 Mbit/s, 1 Gbit/s, 2.5 Gbit/s, 5 Gbit/s, or 10 Gbit/s, and must use an 9.4 Ethernet Cable. If the 2.5 Gbit/s or 5 Gbit/s speed is required, the port must use an Ethernet cable of Cat5e or higher category. If the 10 Gbit/s speed is required, the port must use an Ethernet cable of Cat6A F/UTP or higher category. Table 4-1310 describes the attributes of a 100M/1000M/2.5GE/5GE/10GE BASE-T port.

Table 4-1310 Attributes of a 100M/1000M/2.5GE/5GE/10GE BASE-T port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3u, IEEE802.3ab, IEEE802.3bz, IEEE802.3an
Working Mode	100/1000/2500/5000/10000 Mbit/s auto-sensing

There are several S5732-H48UM2CC bundles, which consists of different power supplies and ports, as listed in Table 4-1311.

Table 4-1311 S5732-H48UM2CC bundles

Part Number	Description	Remarks
02353HUB 02353HUB-002	S5732-H48UM2CC Premium(48*100M/1G/2.5G/5G/10G Ethernet ports, 4*25GE SFP28 + 2*40GE ports or 2*100GE QSFP28 ports, 1*expansion slot, PoE++, without power module)	By default, no power supply is configured. By default, multi-GE ports support 100 Mbit/s, 1000 Mbit/s, 2.5 Gbit/s, 5 Gbit/s, and 10 Gbit/s.
02353SJT 02353SJT-010	S5732-H48UM2CC Base(48*100M/1G Ethernet ports,Optional RTU upgrade to 2.5/5/10G, 4*25GE SFP28 + 2*40GE or 2*100GE QSFP28 ports, 1*expansion slot, PoE++, without power module)	By default, no power supply is configured. By default, multi-GE ports support 100 Mbit/s and 1000 Mbit/s. You can purchase an RTU license to increase the port rate to 2.5 Gbit/s, 5 Gbit/s, or 10 Gbit/s.
02353SJT-001 02353SJT-011	S5732-H48UM2CC 2.5&10G Bundle(36*100M/1G/2.5G, 12*100M/1G/2.5G/5G/10G Ethernet ports, Optional RTU upgrade to 5/10G, 4*25GE + 2*40GE or 2*100GE, 1*expansion slot, PoE++, 1*1000W AC power)	By default, one 1000 W AC power module is configured. By default, the first 36 multi-GE ports support 100 Mbit/s, 1000 Mbit/s, and 2.5 Gbit/s. You can purchase an RTU license to increase the port rate to 5 Gbit/s or 10 Gbit/s. By default, the last 12 multi-GE ports support 100 Mbit/s, 1000 Mbit/s, 2.5 Gbit/s, 5 Gbit/s, and 10 Gbit/s. There is a label on the rear side of the device, which contains the default rate "36*2.5GE+12*10GE"

Part Number	Description	Remarks
		supported by the multi-GE ports.
02353SJT-003 02353SJT-013	S5732-H48UM2CC 5G Bundle(48*100M/1G/2.5G/5G Ethernet ports, Optional RTU upgrade to 10G, 4*25GE SFP28 + 2*40GE or 2*100GE QSFP28 ports, 1*expansion slot, PoE++, 1*1000W AC power)	By default, one 1000 W AC power module is configured. By default, multi-GE ports support 100 Mbit/s, 1000 Mbit/s, 2.5 Gbit/s, and 5 Gbit/s. You can purchase an RTU license to increase the port rate to 10 Gbit/s. There is a label on the rear side of the device, which contains the default rate "48*5GE" supported by the multi-GE ports.
02353SJT-004 02353SJT-014	S5732-H48UM2CC 10G Bundle(48*100M/1G/2.5G/5G/10G Ethernet ports, 4*25GE SFP28 + 2*40GE or 2*100GE QSFP28 ports, 1*expansion slot, PoE++, 1*1000W AC power)	By default, one 1000 W AC power module is configured. By default, multi-GE ports support 100 Mbit/s, 1000 Mbit/s, 2.5 Gbit/s, 5 Gbit/s, and 10 Gbit/s. There is a label on the rear side of the device, which contains the default rate "48*10GE" supported by the multi-GE ports.

 **NOTE**

A pre-configured or loaded RTU (right to use) license of a device is bound to the device ESN and cannot be unbound or transferred to other devices.

For details about the RTU licenses supported by the device and how to load them, see the *License Usage Guide*.

A switch with part number 02353SJT-003 is as an example. The switch has a label on its real panel, which shows the default rate of multi-GE ports on the switch.

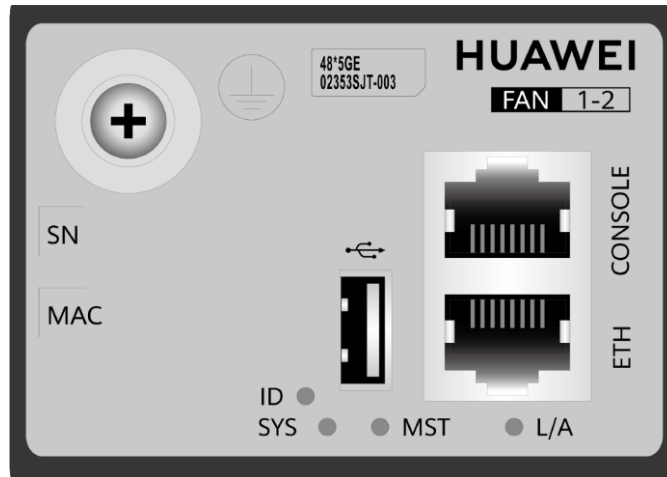


Table 4-1312 lists the maximum transmission distances of different cables on multi-GE ports.

Table 4-1312 Maximum transmission distances of different cables on multi-GE ports

Cable Type (6-a-1 Bundle)	Multi-GE Port (Different Rates)			
	100M/1000M	2.5GE	5GE	10GE
Category 5e unshielded twisted pair (Cat5e UTP)	100 m	100 m	<ul style="list-style-type: none"> 55 m 100 m (6-a-1 bundle only for the first 30 m) Not recommended due to high risk	Not supported
Category 5e shielded twisted pair (Cat5e STP)	100 m	100 m	100 m	Not supported
Category 6 unshielded twisted pair (Cat6 UTP)	100 m	100 m	100 m Not recommended due to high risk	Not supported
Category 6 shielded twisted pair (Cat6 STP)	100 m	100 m	100 m	Not supported
Category 6A unshielded twisted pair (Cat6A U/UTP)	100 m	100 m	100 m Not recommended due to high risk	Not supported

Cable Type (6-a-1 Bundle)	Multi-GE Port (Different Rates)			
	100M/1000M	2.5GE	5GE	10GE
Category 6A foiled/unshielded twisted pair (Cat6A F/UTP)	100 m	100 m	100 m	100 m
Category 6A shielded twisted pair (Cat6A STP)	100 m	100 m	100 m	100 m
Category 7 twisted pair (Cat7)	100 m	100 m	100 m	100 m

 **NOTE**

6-a-1 stands for the six-around-one cable bundle mode, with one cable in the center and six cables bundled evenly around it.

Some cables pose high risks and are not recommended for the following reasons:

- 802.3bz requires that the ALSNR value for alien crosstalk between Ethernet cables be greater than 0, but the standards for Cat5e and Cat6 unshielded twisted pairs do not specify the required ALSNR value. Therefore, such cables may not meet the crosstalk requirement in 802.3bz, causing severe problems such as continuous packet loss.
- According the cabling specification TIA TSB-5021, using Cat5e and Cat6 cables for 5G poses high risks.
- Currently, no clear onsite testing or evaluation method is available for checking whether ALSNR of cables conforms to 802.3bz.

If Cat5e and Cat6 unshielded twisted pairs do not meet the 5G requirement, you are advised to replace them with shielded twisted pairs or reduce the rate of ports to 2.5G.

1GE/10GE/25GE SFP28 optical port

A 1GE/10GE/25GE SFP28 optical port sends and receives service data at 1 Gbit/s, 10 Gbit/s, or 25 Gbit/s. Table 4-1301 describes the attributes of a 1GE/10GE/25GE SFP28 optical port.

Table 4-1313 Attributes of a 1GE/10GE/25GE SFP28 optical port

Attribute	Description
Connector Type	LC/PC
Optical port attributes	Depending on the optical module or cable in use
Standards compliance	IEEE802.3z, IEEE802.3ae, and IEEE802.3by
Working mode	<ul style="list-style-type: none"> • When a 25GE optical module or cable is connected to a port, the port can automatically adjust its rate to 25 Gbit/s. • When a 10GE optical module or cable is connected to a port, the port can automatically adjust its rate to 10 Gbit/s. • Before installing a GE optical module or copper module on a port, run the port mode ge command to configure the port to work at 1

Attribute	Description
	Gbit/s.

40GE/100GE QSFP28 optical port

A 40GE/100GE QSFP28 optical port sends and receives service traffic at 40 Gbit/s or 100 Gbit/s. Table 4-1314 describes the attributes of a QSFP28 optical port.

Table 4-1314 Attributes of a QSFP28 optical port

Attribute	Description
Connector type	MPO/LC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ba

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1315.

Table 4-1315 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1316 describes the attributes of an ETH management port.

Table 4-1316 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5732-H48UM2CC has the same types of indicators as the S5732-H24UM2CC. For details, see [Indicator Description](#).

Power Supply Configuration

The switch is a PoE switch and supports two power module slots, each of which can have a 1000 W PoE or 600 W PoE power module installed. Pluggable AC and DC PoE power modules can be used together in the same switch.

Table 4-1317 Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W AC (220 V) 1000 W DC	—	621 W	<ul style="list-style-type: none">802.3af (15.4 W per port): 40802.3at (30 W per port): 20

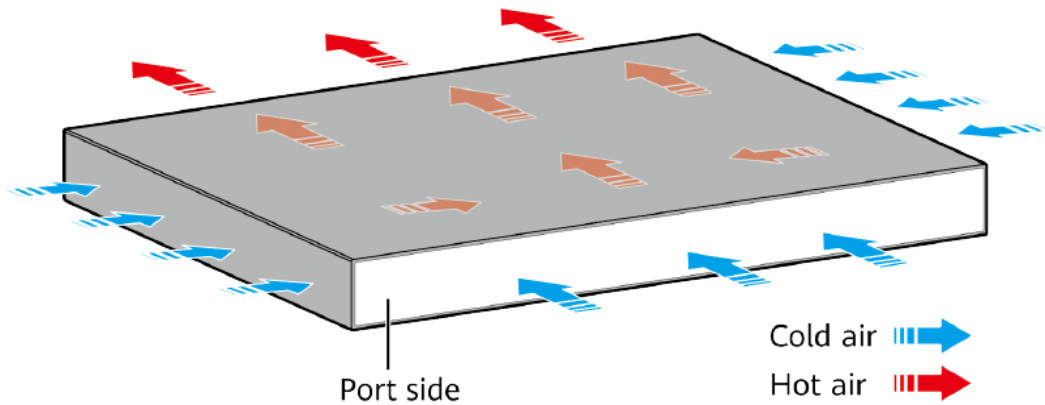
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
			<ul style="list-style-type: none"> 802.3bt (60 W per port): 10
1000 W AC (110 V)	–	526 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 34 802.3at (30 W per port): 17 802.3bt (60 W per port): 8
1000 W AC (220 V) 1000 W DC	1000 W AC (220 V) 1000 W DC	1571 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 48 802.3bt (60 W per port): 26
1000 W AC (110 V) 1000 W DC	1000 W AC (110 V)	1381 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 46 802.3bt (60 W per port): 23
600 W AC (220 V)	–	241 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 15 802.3at (30 W per port): 8
600 W AC (220 V)	600 W AC (220 V)	811 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 27
1000 W AC (220 V) 1000 W DC	600 W AC (220 V)	1191 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 39

NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

Heat Dissipation

The S5732-H48UM2CC uses pluggable fan modules for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1318 lists technical specifications of the S5732-H48UM2CC.

Table 4-1318 Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	2 GB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	32.38 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 446.0 mm (1.72 in. x 17.4 in. x 17.6 in.)
Weight (including package)	8.4 kg (18.52 lb)
Stack ports	Any Ethernet electrical ports (10GE), optical ports on the front panel (25GE/40GE/100GE), or optical ports on the card (10GE/25GE)

Item	Description
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	<ul style="list-style-type: none">AC input: 100 V AC to 130 V AC, 200 V AC to 240 V AC, 50/60 HzHigh-Voltage DC input: 240 V DCDC input: -48 V DC to -60 V DC
Maximum voltage range	<ul style="list-style-type: none">AC input: 90 V AC to 290 V AC, 45 Hz to 65 HzHigh-Voltage DC input: 190 V DC to 290 V DCDC input: -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none">Not providing the PoE function: 347 W (without card)100% PoE loads: 2043 W (PoE: 1571 W, without card)
Typical power consumption (30% of traffic load, tested according to ATIS standard)	215 W (without card)
Operating temperature	-5 °C to +45 °C (23 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0 °C (32 °F). The operating temperature of the switch is -5 °C to 40 °C (23 °F to 104 °F) when it uses QSFP-100G-ER4 optical module.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 59.2 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">EMC certificationSafety certificationManufacturing certification
Part number	02353HUB 02353HUB-002

Item	Description
	02353SJT 02353SJT-001 02353SJT-003 02353SJT-004 02353SJT-010 02353SJT-011 02353SJT-013 02353SJT-014

4.27.5 S5732-H48XUM2CC

Version Mapping

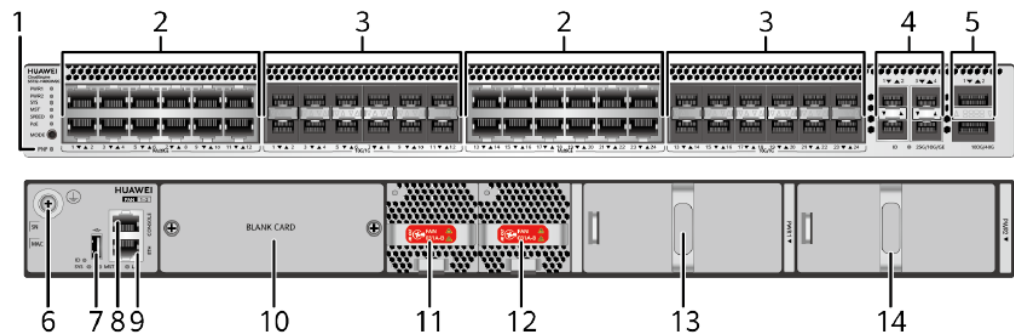
Table 4-1319 lists the mapping between the S5732-H48XUM2CC chassis and software versions.

Table 4-1319 Version mapping

Series	Model	Software Version
S5732-H	S5732-H48XUM2CC	02353MLH: V200R019C20 and later versions 02353MLH-001: V200R021C10 and later versions (If V200R021C00 is used, install V200R021SPH010 or a later patch.) NOTE V200R021C01 is not supported. Some models cannot be downgraded due to component upgrade. Therefore, you are advised to run the display system-software information command to check the software versions supported by the device before performing a downgrade. If the device does not support the display system-software information command, it can be downgraded.

Appearance and Structure

Figure 4-517 S5732-H48XUM2CC appearance



1	<p>One PNP button</p> <p>NOTICE</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	<p>2</p> <p>Twenty-four PoE++ 100M/1000M/2.5GE/5GE/10GE BASE-T ports (multi-GE ports)</p> <p>NOTE</p> <p>The S5732-H48XUM2CC is a hybrid optical-electrical switch. You can use one multi-GE port and one 10GE SFP+ optical port together by connecting them through a hybrid cable. This cable is composed of copper cores terminated on RJ45 connectors and optical fibers terminated on LC connectors. The typical application scenario is as follows:</p> <ul style="list-style-type: none"> • The copper cores connect a multi-GE port of a switch to a PoE_IN port of an AP to allow the switch to supply power to the AP while no data is transmitted over this cable. • The optical fibers connect a SFP+ optical port on the switch to a SFP+ optical port of the AP to transmit data.
3	<p>Twenty-four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable 	<p>4</p> <p>Four 1GE/10GE/25GE SFP28 optical ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules

	<ul style="list-style-type: none"> • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable • 9.17 Hybrid Cable <p>NOTE It is recommended that optical fibers in hybrid cables be fusion spliced onsite. If you assemble optical fibers in hybrid cables in mechanical splicing mode, only SFP-10G-iLR-S optical modules are supported.</p>		<ul style="list-style-type: none"> • 10.15 25GE SFP28 Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.15 Copper Cable • 9.3 Optical Fiber
5	<p>Two 40GE/100GE QSFP28 optical ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • 10.16 40GE QSFP+ Optical Modules • 10.18 100GE QSFP28 Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable <p>NOTE You can run the set device port-config-mode enable command to change the working mode of SFP28 and QSFP28 optical ports. By default, the working mode of SFP28 and QSFP28 optical ports is "4 x 25GE + 2 x 40GE". If any QSFP28 optical port is configured to work at 100 Gbit/s or split into four 25GE ports, the four SFP28 optical ports become unavailable.</p>	6	<p>Ground screw</p> <p>NOTE It is used with a 9.1 Ground Cable.</p>
7	One USB port	8	One console port
9	One ETH management port	10	<p>Rear card slot</p> <p>NOTE Applicable card:</p> <ul style="list-style-type: none"> • 8.24 S7X08000 (8-Port 10GE SFP+ or 2-Port 25GE SFP28 Optical Interface Card (Only Ports 1 and 2 Support 25GE)) • 8.25 S7Y08000 (8-Port 25GE SFP28 Optical Interface Card)
11	<p>Fan module slot 1</p> <p>NOTE Applicable fan module: 7.6 FAN-031A-B (Fan box(B,FAN panel side exhaust))</p>	12	<p>Fan module slot 2</p> <p>NOTE Applicable fan module: 7.6 FAN-031A-B (Fan box(B,FAN panel side exhaust))</p>
13	Power module slot 1	14	Power module slot 2

<p>NOTE</p> <p>Applicable power module:</p> <ul style="list-style-type: none"> • 5.24 PAC1000S56-CB (1000 W PoE AC Power Module) • 5.25 PAC1000S56-DB (1000 W PoE AC Power Module) (applicable in V200R020C10 and later versions) • 5.26 PDC1000S56-CB (1000 W PoE DC Power Module) (applicable in V200R021C00 and later versions) • 5.23 PAC600S56-CB (600 W AC&240 V DC Power Module (Back to Front, Power panel side exhaust)) (applicable in V200R021C10 and later versions) 	<p>NOTE</p> <p>Applicable power module:</p> <ul style="list-style-type: none"> • 5.24 PAC1000S56-CB (1000 W PoE AC Power Module) • 5.25 PAC1000S56-DB (1000 W PoE AC Power Module) (applicable in V200R020C10 and later versions) • 5.26 PDC1000S56-CB (1000 W PoE DC Power Module) (applicable in V200R021C00 and later versions) • 5.23 PAC600S56-CB (600 W AC&240 V DC Power Module (Back to Front, Power panel side exhaust)) (applicable in V200R021C10 and later versions)
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Port Description

100M/1000M/2.5GE/5GE/10GE BASE-T port (multi-GE port)

A 100M/1000M/2.5GE/5GE/10GE BASE-T port (multi-GE port) sends and receives service data at 100 Mbit/s, 1 Gbit/s, 2.5 Gbit/s, 5 Gbit/s, or 10 Gbit/s, and must use an 9.4 Ethernet Cable. If the 2.5 Gbit/s or 5 Gbit/s speed is required, the port must use an Ethernet cable of Cat5e or higher category. If the 10 Gbit/s speed is required, the port must use an Ethernet cable of Cat6A F/UTP or higher category. Table 4-1320 describes the attributes of a 100M/1000M/2.5GE/5GE/10GE BASE-T port.

Table 4-1320 Attributes of a 100M/1000M/2.5GE/5GE/10GE BASE-T port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3u, IEEE802.3ab, IEEE802.3bz, IEEE802.3an
Working Mode	100/1000/2500/5000/10000 Mbit/s auto-sensing

Table 4-1321 lists the maximum transmission distances of different cables on multi-GE ports.

Table 4-1321 Maximum transmission distances of different cables on multi-GE ports

Cable Type (6-a-1 Bundle)	Multi-GE Port (Different Rates)			
	100M/1000M	2.5GE	5GE	10GE
Category 5e unshielded twisted pair (Cat5e UTP)	100 m	100 m	<ul style="list-style-type: none"> • 55 m • 100 m (6-a-1 bundle only for the first 30 m) Not recommended	Not supported

Cable Type (6-a-1 Bundle)	Multi-GE Port (Different Rates)			
	100M/1000M	2.5GE	5GE	10GE
			due to high risk	
Category 5e shielded twisted pair (Cat5e STP)	100 m	100 m	100 m	Not supported
Category 6 unshielded twisted pair (Cat6 UTP)	100 m	100 m	100 m Not recommended due to high risk	Not supported
Category 6 shielded twisted pair (Cat6 STP)	100 m	100 m	100 m	Not supported
Category 6A unshielded twisted pair (Cat6A U/UTP)	100 m	100 m	100 m Not recommended due to high risk	Not supported
Category 6A foiled/unshielded twisted pair (Cat6A F/UTP)	100 m	100 m	100 m	100 m
Category 6A shielded twisted pair (Cat6A STP)	100 m	100 m	100 m	100 m
Category 7 twisted pair (Cat7)	100 m	100 m	100 m	100 m

 **NOTE**

6-a-1 stands for the six-around-one cable bundle mode, with one cable in the center and six cables bundled evenly around it.

Some cables pose high risks and are not recommended for the following reasons:

- 802.3bz requires that the ALSNR value for alien crosstalk between Ethernet cables be greater than 0, but the standards for Cat5e and Cat6 unshielded twisted pairs do not specify the required ALSNR value. Therefore, such cables may not meet the crosstalk requirement in 802.3bz, causing severe problems such as continuous packet loss.
- According the cabling specification TIA TSB-5021, using Cat5e and Cat6 cables for 5G poses high risks.
- Currently, no clear onsite testing or evaluation method is available for checking whether ALSNR of cables conforms to 802.3bz.

If Cat5e and Cat6 unshielded twisted pairs do not meet the 5G requirement, you are advised to replace them with shielded twisted pairs or reduce the rate of ports to 2.5G.

The PoE power supply capability and distance of multi-GE ports on the S5732-H48XUM2CC vary depending on the power supply medium, as listed in Table 4-1322.

Table 4-1322 PoE power supply capabilities of multi-GE ports when different power supply media are used

Power Supply Medium (Cable Diameter)	Power Received by an AP	AP-Side Voltage	Maximum Power Supply Distance
Category 5e Ethernet cable (AWG23)	53 W (class 6)	47.2 V	100 m
	51 W (class 6)	45.0 V	150 m
Category 6 or 6A Ethernet cable (AWG24)	55 W (class 6)	47.2 V	100 m
	52 W (class 6)	45.0 V	150 m
Hybrid cable (1.5 mm ²)	57 W (class 6)	52.2 V	100 m
	55 W (class 6)	50.8 V	150 m
	54 W (class 6)	50.0 V	180 m
	54 W (class 6)	49.4 V	200 m
	52 W (class 6)	48.0 V	250 m
	51 W (class 6)	46.5 V	300 m

NOTE

An AP can receive a maximum of 57 W power from a multi-GE port within the power supply distance of 100 m.

When a common Cat6A shielded cable is used for both PoE power supply and data transmission (10 Gbit/s), the maximum power supply distance is 100 m in compliance with 802.3bt.

When a common Cat5E, Cat6, or Cat6A Ethernet cable is used only for PoE power supply and optical fibers are used for data transmission, the maximum power supply distance is 150 m in compliance with 802.3bt.

A hybrid cable supplies PoE power to specific AP models through its copper cores and transmits data through its optical fibers. For details about the AP models to which hybrid cables can supply power, see the WLAN AP product documentation.

A hybrid cable cannot be used to supply power to dual-signature APs.

A hybrid cable can offer the power supply capabilities listed in Table 4-1322 only when the impedance of its copper cores is within 12.8 ohms/km. If the impedance exceeds this value, the power supply capabilities (power received by and voltage of the AP) will decrease.

10GE SFP+ optical port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-1323 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-1323 Attributes of a 10GE SFP+ port

Attribute	Description
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Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

1GE/10GE/25GE SFP28 optical port

A 1GE/10GE/25GE SFP28 optical port sends and receives service data at 1 Gbit/s, 10 Gbit/s, or 25 Gbit/s. Table 4-1301 describes the attributes of a 1GE/10GE/25GE SFP28 optical port.

Table 4-1324 Attributes of a 1GE/10GE/25GE SFP28 optical port

Attribute	Description
Connector Type	LC/PC
Optical port attributes	Depending on the optical module or cable in use
Standards compliance	IEEE802.3z, IEEE802.3ae, and IEEE802.3by
Working mode	<ul style="list-style-type: none">• When a 25GE optical module or cable is connected to a port, the port can automatically adjust its rate to 25 Gbit/s.• When a 10GE optical module or cable is connected to a port, the port can automatically adjust its rate to 10 Gbit/s.• Before installing a GE optical module or copper module on a port, run the port mode ge command to configure the port to work at 1 Gbit/s.

40GE/100GE QSFP28 optical port

A 40GE/100GE QSFP28 optical port sends and receives service traffic at 40 Gbit/s or 100 Gbit/s. Table 4-1325 describes the attributes of a QSFP28 optical port.

Table 4-1325 Attributes of a QSFP28 optical port

Attribute	Description
Connector type	MPO/LC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ba

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1326.

Table 4-1326 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1327 describes the attributes of an ETH management port.

Table 4-1327 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

 **NOTE**

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5732-H48XUM2CC has the same types of indicators as the S5732-H24UM2CC. For details, see [Indicator Description](#).

Power Supply Configuration

The switch is a PoE switch and supports two power module slots, each of which can have a 1000 W PoE or 600 W PoE power module installed. Pluggable AC and DC PoE power modules can be used together in the same switch.

Table 4-1328 Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W AC (220 V) 1000 W DC	–	598 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 24 • 802.3at (30 W per port): 19 • 802.3bt (60 W per port): 9
1000 W AC (110 V)	–	503 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 24 • 802.3at (30 W per port): 16 • 802.3bt (60 W per port): 8
1000 W AC (220 V) 1000 W DC	1000 W AC (220 V) 1000 W DC	1440 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 24 • 802.3at (30 W per port): 24 • 802.3bt (60 W per port): 24
1000 W AC (110 V) 1000 W DC	1000 W AC (110 V)	1358 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 24 • 802.3at (30 W per port): 24 • 802.3bt (60 W per port): 22
600 W AC (220 V)	–	218 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 14

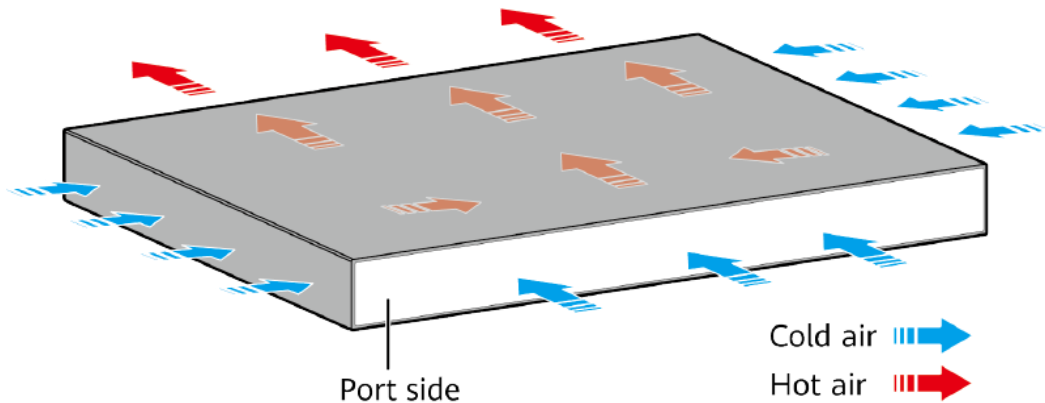
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
			<ul style="list-style-type: none"> 802.3at (30 W per port): 7
600 W AC (220 V)	600 W AC (220 V)	788 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 24
1000 W AC (220 V) 1000 W DC	600 W AC (220 V)	1168 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 24

NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

Heat Dissipation

The S5732-H48XUM2CC uses pluggable fan modules for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1329 lists technical specifications of the S5732-H48XUM2CC.

Table 4-1329 Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	2 GB in total. To view the available flash memory size, run the display version command.

Item	Description
Mean time between failures (MTBF)	32.38 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	<ul style="list-style-type: none">Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common modeUsing DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 446.0 mm (1.72 in. x 17.4 in. x 17.6 in.)
Weight (including package)	8.2 kg (18.08 lb)
Stack ports	Any Ethernet electrical ports (10GE), optical ports on the front panel (10GE/25GE/40GE/100GE), or optical ports on the card (10GE/25GE)
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	<ul style="list-style-type: none">AC input: 100 V AC to 130 V AC, 200 V AC to 240 V AC, 50/60 HzHigh-Voltage DC input: 240 V DCDC input: -48 V DC to -60 V DC
Maximum voltage range	<ul style="list-style-type: none">AC input: 90 V AC to 290 V AC, 45 Hz to 65 HzHigh-Voltage DC input: 190 V DC to 290 V DCDC input: -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none">Not providing the PoE function: 338 W (without card)100% PoE loads: 1980 W (PoE: 1440 W, without card)
Typical power consumption (30% of traffic load, tested according to ATIS standard)	231 W (without card)

Item	Description
Operating temperature	-5 °C to +45 °C (23 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0 °C (32 °F). The operating temperature of the switch is -5 °C to 40 °C (23 °F to 104 °F) when it uses QSFP-100G-ER4 optical module.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 63.1 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02353MLH 02353MLH-001

4.28 S5735-L

4.28.1 S5735-L12T4S-A

Version Mapping

Table 4-1330 lists the mapping between the S5735-L12T4S-A chassis and software versions.

Table 4-1330 Version mapping

Series	Model	Software Version
S5735-L	S5735-L12T4S-A	V200R019C00 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-518 S5735-L12T4S-A appearance



1	Twelve 10/100/1000BASE-T ports	2	Four 1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw NOTE It is used with a 9.1 Ground Cable.	8	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.
9	AC socket NOTE It is used with an 9.8 AC Power Cable.	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-1331 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-1331 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a FE optical module, it can transmit and receive data at 100 Mbit/s. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. Table 4-1332 describes the attributes of a 1000BASE-X Ethernet optical port.

Table 4-1332 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1333.

Table 4-1333 Attributes of a console port

Attribute	Description
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Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1334 describes the attributes of an ETH management port.

Table 4-1334 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5735-L12T4S-A has similar indicators to those on the S5735-L12P4S-A except that the S5735-L12T4S-A does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5735-L12T4S-A has a built-in AC power module and does not support pluggable power modules.

Heat Dissipation

The S5735-L12T4S-A has no fans and uses natural heat dissipation.

Technical Specifications

Table 4-1335 lists technical specifications of the S5735-L12T4S-A.

Table 4-1335 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	98.6 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Weight (with packaging)	3.83 kg (8.44 lb)
Stack ports	Any 10/100/1000BASE-T ports or 1000BASE-X ports (applicable in V200R019C10 and later versions)
RTC	Not supported
RPS	Not supported

Item	Description
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none">AC input: 100 V AC to 240 V AC, 50/60 HzHigh-Voltage DC input: 240 V DC
Maximum voltage range	<ul style="list-style-type: none">AC input: 90 V AC to 264 V AC, 47 Hz to 63 HzHigh-Voltage DC input: 190 V DC to 290 V DC
Maximum power consumption (100% throughput)	29 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">Tested according to ATIS standardEEE enabledNo PoE power consumption	23 W
Operating temperature	<p>-5 °C to +45 °C (23 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>The switch cannot be started when the ambient temperature is lower than 0 °C (32 °F).</p> <p>The operating temperature of the switch is -5 °C to +40 °C (23 °F to 104 °F) when it uses GE SFP optical modules with 40 km or longer transmission distance.</p> <p>When SFP+ copper cables or dedicated stack cables are used to set up a stack, the switch can operate in the following temperature range:</p> <ul style="list-style-type: none">-5 °C to +45 °C (23 °F to 113 °F) (installed in the ventilation cabinet, with the wind speed of at least 40 LFM) <p>When SFP+ AOC cables or 10GE SFP+ optical modules are used to set up a stack, the switch can operate in the following temperature range:</p> <ul style="list-style-type: none">-5 °C to +45 °C (23 °F to 113 °F) (installed in the ventilation cabinet shipped with fans with a fan speed of at least 200 LFM)
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)

Item	Description
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010918

4.28.2 S5735-L12P4S-A

Version Mapping

Table 4-1336 lists the mapping between the S5735-L12P4S-A chassis and software versions.

Table 4-1336 Version mapping

Series	Model	Software Version
S5735-L	S5735-L12P4S-A	V200R019C00 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-519 S5735-L12P4S-A appearance



1	Twelve PoE+ 10/100/1000BASE-T ports	2	Four 1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules
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			<ul style="list-style-type: none"> • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw NOTE It is used with a 9.1 Ground Cable.	8	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.
9	AC socket NOTE It is used with an 9.8 AC Power Cable.	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-1337 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-1337 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X

port uses a FE optical module, it can transmit and receive data at 100 Mbit/s. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. Table 4-1338 describes the attributes of a 1000BASE-X Ethernet optical port.

Table 4-1338 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1339.

Table 4-1339 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1340 describes the attributes of an ETH management port.

Table 4-1340 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3

Attribute	Description
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
- If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
- If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 4-520 Indicators on the S5735-L12P4S-A

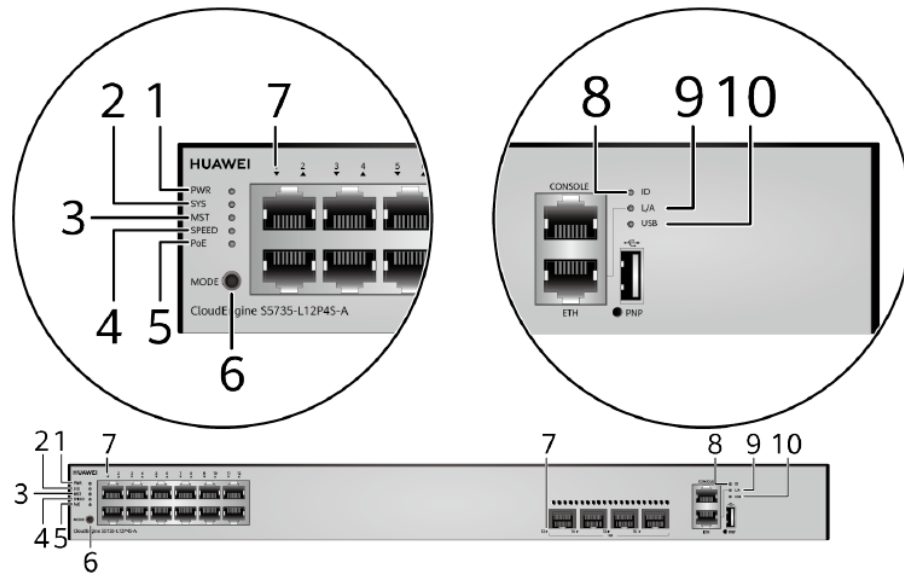


Table 4-1341 Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR	Power module indicator	-	Off	The switch is powered off.
			Green	Steady on	The system power supply is normal.
2	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Steady on	During the system startup preparation phase, the SYS indicator is steady green, which lasts for a maximum of 30 seconds.
			Green	Slow blinking	The system is running normally.
3	MST	Stack indicator	-	Off	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is a standby or slave switch in a stack or the stacking function is not enabled on the switch. If you are changing the indicator mode:
			-	Off	

No.	Indicator	Name	Color	Status	Description
					The stack mode is not selected.
			Green	Steady on	The stack mode is selected. The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is the master switch in a stack or a standalone switch with the stacking function enabled. If you are changing the indicator mode: The stack mode is selected. The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. After 45 seconds, the service port indicators automatically restore to the status mode.
4	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The speed mode is selected, and service port indicators show the speed of each port.
5	PoE	PoE indicator	-	Off	The PoE mode is not selected.
			Green	Steady on	The PoE mode is selected, and service port indicators show the PoE status of each port.
6	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> When you press this button once, the service port indicators change to the stack mode and show the stack ID of the local switch. When you press this button a second time, the service port indicators change to the speed mode and show the speed of each service port. When you press this button a third time, the service port indicators change to the PoE mode and show the PoE status of each service port. When you press this button a fourth time, the service port indicators restore to the default mode and show the connection status and link activity of each service port. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the SPEED and PoE indicators are off.</p>

No.	Indicator	Name	Color	Status	Description
7	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see Table 4-1342 and Table 4-1343.		
8	ID	ID indicator	-	Off	The ID indicator is not used (default state).
			Blue	Steady on	The indicator identifies the switch to maintain. The ID indicator can be turned on or off remotely to help field engineers find the switch to maintain.
9	L/A	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The ETH port is sending or receiving data.
10	USB	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> No USB flash drive is connected to the switch. The USB port is damaged. The indicator is damaged. The USB flash drive does not have any configuration file and cannot be used for deployment. The switch has been upgraded using the USB flash drive and is restarting.
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from a USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

Table 4-1342 Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Default mode	-	Off	The port is not connected or has been shut down.

Display Mode	Color	Status	Description
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
MST stack mode	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none">If the indicator of a port is steady on, the number of this port is the stack ID of the switch.If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none">If the indicator of a port is blinking, the number of this port is the stack ID of the switch.If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.
Speed mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10 Mbit/s or 100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
PoE mode	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.
	Yellow	Steady on	The PoE function is disabled on the port.
	Yellow	Blinking	The port stops providing PoE power because of an exception (for example, an incompatible PD is connected to the port).

Display Mode	Color	Status	Description
	Green and yellow	Blinking green and yellow alternately	<p>The port fails to supply power to a PD due to one of the following reasons:</p> <ul style="list-style-type: none"> The power required by the connected PD exceeds the maximum power or the configured power threshold of the port. The total power consumption of PDs has reached the maximum power of the switch. The manual power management mode is used and the port is not enabled to provide power to the PD.

Table 4-1343 Description of service port indicators in different modes (two indicators for each port)

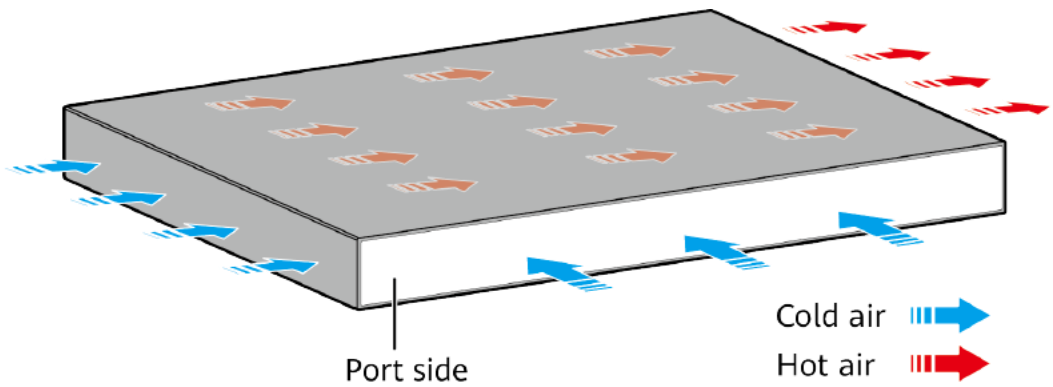
Display Mode	Color	Status	Description
Default mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Yellow	Blinking	The port is sending or receiving data.
Speed mode	-	Off	The port is not connected or has been shut down.
	Green and yellow	Steady on	1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green and yellow	Blinking	1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.

Power Supply Configuration

The S5735-L12P4S-A has a built-in power module and does not support pluggable power modules. The built-in power module can provide 360 W PoE power, which ensures full PoE power on 12 ports in compliance with 802.3af or 802.3at.

Heat Dissipation

The S5735-L12P4S-A has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1344 lists technical specifications of the S5735-L12P4S-A.

Table 4-1344 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	85.52 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Weight (with packaging)	4.24 kg (9.35 lb)
Stack ports	Any 10/100/1000BASE-T ports or 1000BASE-X ports (applicable in V200R019C10 and later versions)
RTC	Not supported

Item	Description
RPS	Not supported
PoE	Supported
Rated voltage range	<ul style="list-style-type: none"> AC input: 100 V AC to 240 V AC, 50/60 Hz High-Voltage DC input: 240 V DC
Maximum voltage range	<ul style="list-style-type: none"> AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz High-Voltage DC input: 190 V DC to 290 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> Not providing the PoE function: 49 W 100% PoE loads: 441 W (PoE: 360 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> Tested according to ATIS standard EEE enabled No PoE power consumption 	38 W
Operating temperature	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0 °C (32 °F).
Short-term operating temperature	-5 °C to +55 °C (23 °F to 131 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> The equipment operates at a temperature of over 50 °C (122 °F) consecutively for at most 96 hours in one year. The equipment operates at a temperature of over 50 °C (122 °F) for a total of no more than 360 hours in one year. The equipment operates at a temperature of over 50 °C (122 °F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.

Item	Description
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 57.7 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010922

4.28.3 S5735-L24T4S-A

Version Mapping

Table 4-1345 lists the mapping between the S5735-L24T4S-A chassis and software versions.

Table 4-1345 Version mapping

Series	Model	Software Version
S5735-L	S5735-L24T4S-A	V200R019C00 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-521 S5735-L24T4S-A appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw NOTE It is used with a 9.1 Ground Cable.	8	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.
9	AC socket NOTE It is used with an 9.8 AC Power Cable.	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-1346 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-1346 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab

Attribute	Description
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a FE optical module, it can transmit and receive data at 100 Mbit/s. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. Table 4-1347 describes the attributes of a 1000BASE-X Ethernet optical port.

Table 4-1347 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1348.

Table 4-1348 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must

use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1349 describes the attributes of an ETH management port.

Table 4-1349 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5735-L24T4S-A has similar indicators to those on the S5735-L12P4S-A except that the S5735-L24T4S-A does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5735-L24T4S-A has a built-in AC power module and does not support pluggable power modules.

Heat Dissipation

The S5735-L24T4S-A has no fans and uses natural heat dissipation.

Technical Specifications

Table 4-1350 lists technical specifications of the S5735-L24T4S-A.

Table 4-1350 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	111.94 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Weight (with packaging)	4.08 kg (9 lb)
Stack ports	Any 10/100/1000BASE-T ports or 1000BASE-X ports (applicable in V200R019C10 and later versions)
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none">AC input: 100 V AC to 240 V AC, 50/60 HzHigh-Voltage DC input: 240 V DC
Maximum voltage range	<ul style="list-style-type: none">AC input: 90 V AC to 264 V AC, 47 Hz to 63 HzHigh-Voltage DC input: 190 V DC to 290 V DC
Maximum power consumption (100% throughput)	34 W
Typical power consumption (30% of traffic load)	28 W

Item	Description
<ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	
Operating temperature	<p>-5 °C to +45 °C (23 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>The switch cannot be started when the ambient temperature is lower than 0 °C (32 °F).</p> <p>The operating temperature of the switch is -5 °C to +40 °C (23 °F to 104 °F) when it uses GE SFP optical modules with 40 km or longer transmission distance.</p> <p>When SFP+ copper cables or dedicated stack cables are used to set up a stack, the switch can operate in the following temperature range:</p> <ul style="list-style-type: none">• -5 °C to +45 °C (23 °F to 113 °F) (installed in the ventilation cabinet, with the wind speed of at least 40 LFM) <p>When SFP+ AOC cables or 10GE SFP+ optical modules are used to set up a stack, the switch can operate in the following temperature range:</p> <ul style="list-style-type: none">• -5 °C to +45 °C (23 °F to 113 °F) (installed in the ventilation cabinet shipped with fans with a fan speed of at least 200 LFM)
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010914

4.28.4 S5735-L24P4S-A

Version Mapping

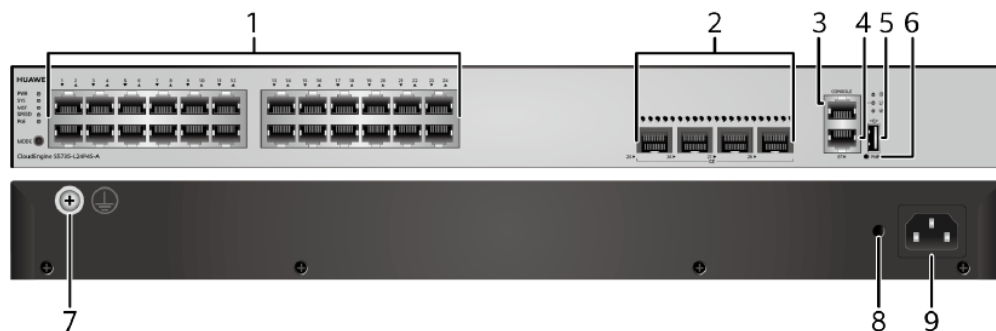
Table 4-1351 lists the mapping between the S5735-L24P4S-A chassis and software versions.

Table 4-1351 Version mapping

Series	Model	Software Version
S5735-L	S5735-L24P4S-A	V200R019C00 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-522 S5735-L24P4S-A appearance



1	Twenty-four PoE+ 10/100/1000BASE-T ports	2	Four 1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you

			press the PNP button.
7	Ground screw NOTE It is used with a 9.1 Ground Cable.	8	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.
9	AC socket NOTE It is used with an 9.8 AC Power Cable.	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-1352 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-1352 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a FE optical module, it can transmit and receive data at 100 Mbit/s. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. Table 4-1353 describes the attributes of a 1000BASE-X Ethernet optical port.

Table 4-1353 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1354.

Table 4-1354 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1355 describes the attributes of an ETH management port.

Table 4-1355 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

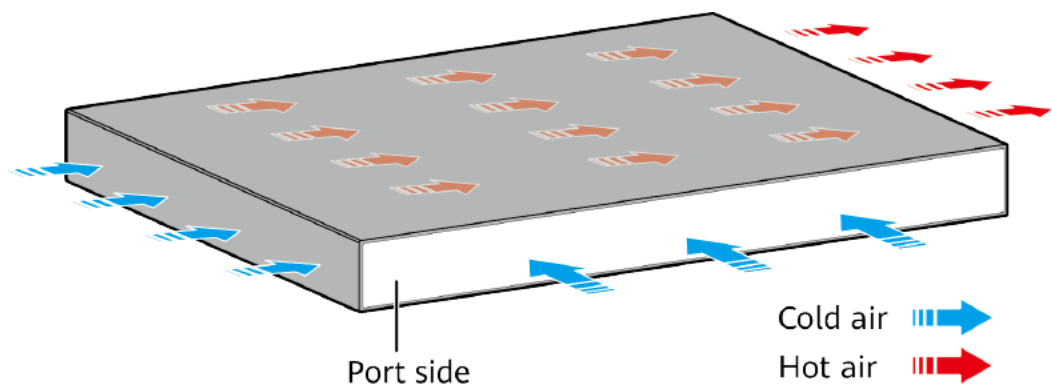
The S5735-L24P4S-A has the same types of indicators as the S5735-L12P4S-A. For details, see [Indicator Description](#).

Power Supply Configuration

The S5735-L24P4S-A has a built-in power module and does not support pluggable power modules. The built-in power module can provide 380 W PoE power, which ensures full PoE power on 24 ports in compliance with 802.3af or on 12 ports in compliance with 802.3at.

Heat Dissipation

The S5735-L24P4S-A has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1356 lists technical specifications of the S5735-L24P4S-A.

Table 4-1356 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between	92.2 years

Item	Description
failures (MTBF)	
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Weight (with packaging)	4.31 kg (9. lb)
Stack ports	Any 10/100/1000BASE-T ports or 1000BASE-X ports (applicable in V200R019C10 and later versions)
RTC	Not supported
RPS	Not supported
PoE	Supported
Rated voltage range	<ul style="list-style-type: none"> AC input: 100 V AC to 240 V AC, 50/60 Hz High-Voltage DC input: 240 V DC
Maximum voltage range	<ul style="list-style-type: none"> AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz High-Voltage DC input: 190 V DC to 290 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> Not providing the PoE function: 53 W 100% PoE loads: 451 W (PoE: 380 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> Tested according to ATIS standard EEE enabled No PoE power consumption 	39 W
Operating temperature	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE

Item	Description
	<p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>The switch cannot be started when the ambient temperature is lower than 0 °C (32 °F).</p>
Short-term operating temperature	<p>-5 °C to +55 °C (23 °F to 131 °F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none">• The equipment operates at a temperature of over 50 °C (122 °F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 50 °C (122 °F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 50 °C (122 °F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 57.7 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010924

4.28.5 S5735-L24T4X-A

Version Mapping

Table 4-1357 lists the mapping between the S5735-L24T4X-A chassis and software versions.

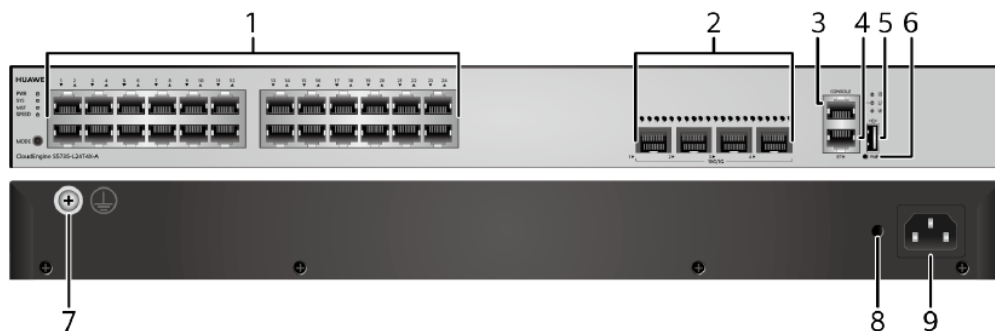
Table 4-1357 Version mapping

Series	Model	Software Version
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Series	Model	Software Version
S5735-L	S5735-L24T4X-A	V200R019C00 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-523 S5735-L24T4X-A appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button.

			Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw NOTE It is used with a 9.1 Ground Cable.	8	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.
9	AC socket NOTE It is used with an 9.8 AC Power Cable.	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-1358 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-1358 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-1359 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-1359 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1360.

Table 4-1360 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1361 describes the attributes of an ETH management port.

Table 4-1361 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

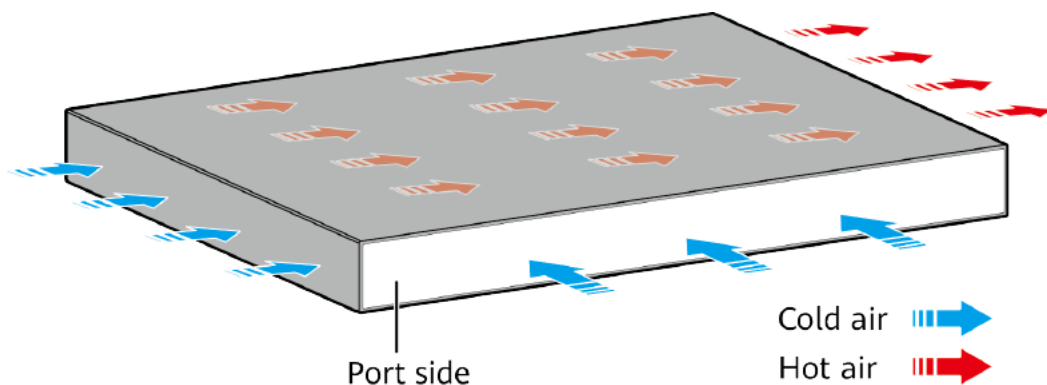
The S5735-L24T4X-A has similar indicators to those on the S5735-L12P4S-A except that the S5735-L24T4X-A does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5735-L24T4X-A has a built-in AC power module and does not support pluggable power modules.

Heat Dissipation

The S5735-L24T4X-A has one built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1362 lists technical specifications of the S5735-L24T4X-A.

Table 4-1362 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	50.68 years

Item	Description
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Weight (with packaging)	4 kg (8.82 lb)
Stack ports	Any 10/100/1000BASE-T ports or 10GE SFP+ ports (applicable in V200R019C10 and later versions)
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none"> AC input: 100 V AC to 240 V AC, 50/60 Hz High-Voltage DC input: 240 V DC
Maximum voltage range	<ul style="list-style-type: none"> AC input: 90 V AC to 264 V AC, 47 Hz to 63 Hz High-Voltage DC input: 190 V DC to 290 V DC
Maximum power consumption (100% throughput, full speed of fans)	43 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> Tested according to ATIS standard EEE enabled No PoE power consumption 	27 W
Operating temperature	<p>-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220</p>

Item	Description
	m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0 °C (32 °F).
Short-term operating temperature	-5 °C to +55 °C (23 °F to 131 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">• The equipment operates at a temperature of over 50 °C (122 °F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 50 °C (122 °F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 50 °C (122 °F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 47.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010920

4.28.6 S5735-L24T4X-D

Version Mapping

Table 4-1363 lists the mapping between the S5735-L24T4X-D chassis and software versions.

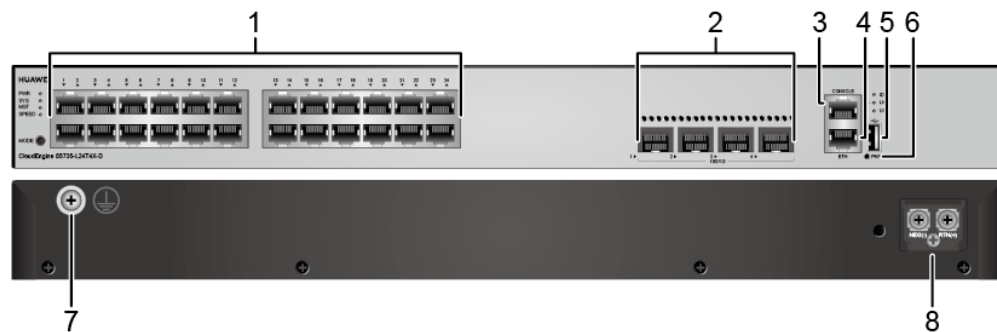
Table 4-1363 Version mapping

Series	Model	Software Version
S5735-L	S5735-L24T4X-D	V200R020C00 and later versions

Series	Model	Software Version
		NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-524 S5735-L24T4X-D appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you

			press the PNP button.
7	Ground screw NOTE It is used with a 9.1 Ground Cable.	8	DC power terminal NOTE It is used with 9.5 DC Power Cable (with OT and Cord End Terminals).

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-1364 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-1364 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-1365 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-1365 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1366.

Table 4-1366 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1367 describes the attributes of an ETH management port.

Table 4-1367 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

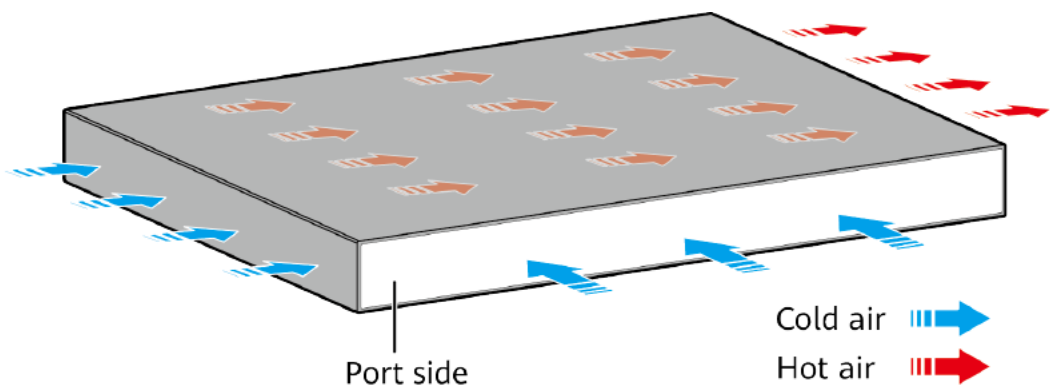
The S5735-L24T4X-D has similar indicators to those on the S5735-L12P4S-A except that the S5735-L24T4X-D does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5735-L24T4X-D has a built-in DC power module and does not support pluggable power modules.

Heat Dissipation

The S5735-L24T4X-D has one built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1368 lists technical specifications of the S5735-L24T4X-D.

Table 4-1368 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	50.68 years

Item	Description
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Weight (with packaging)	4 kg (8.82 lb)
Stack ports	Any 10/100/1000BASE-T ports or 10GE SFP+ ports
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	-48 V DC to -60 V DC
Maximum voltage range	-38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	43 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">Tested according to ATIS standardEEE enabledNo PoE power consumption	27 W
Operating temperature	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0 °C

Item	Description
	(32 ℱ).
Short-term operating temperature	<p>-5 ℃ to +55 ℃ (23 ℱ to 131 ℱ) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 ℃ (1.8 ℱ) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> • The equipment operates at a temperature of over 50 ℃ (122 ℱ) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 50 ℃ (122 ℱ) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 50 ℃ (122 ℱ) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0 ℃ (32 ℱ). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40 ℃ to +70 ℃ (-40 ℱ to +158 ℱ)
Noise under normal temperature (27 ℃, sound power)	< 47.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010961

4.28.7 S5735-L24P4X-A

Version Mapping

Table 4-1369 lists the mapping between the S5735-L24P4X-A chassis and software versions.

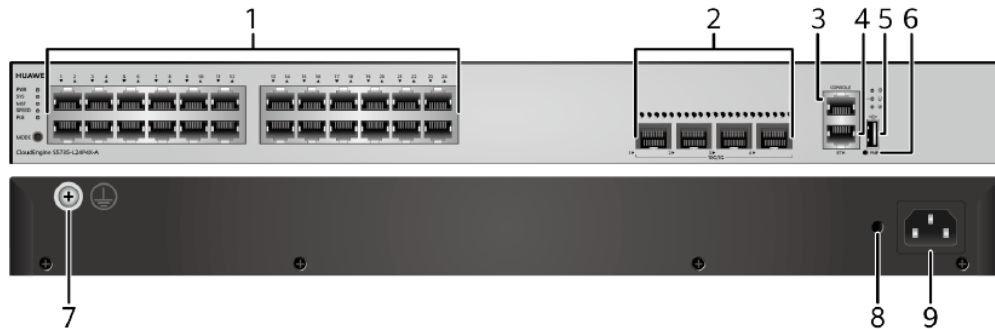
Table 4-1369 Version mapping

Series	Model	Software Version
S5735-L	S5735-L24P4X-A	V200R019C00 and later versions
		NOTE

Series	Model	Software Version
		V200R021C01 is not supported.

Appearance and Structure

Figure 4-525 S5735-L24P4X-A appearance



1	Twenty-four PoE+ 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.

7	Ground screw NOTE It is used with a 9.1 Ground Cable.	8	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.
9	AC socket NOTE It is used with an 9.8 AC Power Cable.	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-1370 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-1370 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-1371 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-1371 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1372.

Table 4-1372 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1373 describes the attributes of an ETH management port.

Table 4-1373 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

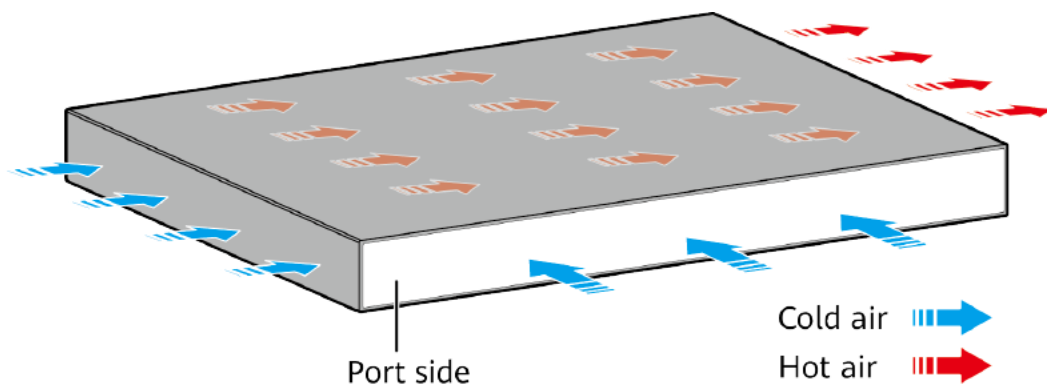
The S5735-L24P4X-A has the same types of indicators as the S5735-L12P4S-A. For details, see [Indicator Description](#).

Power Supply Configuration

The S5735-L24P4X-A has a built-in AC power module and does not support pluggable power modules. The built-in power module can provide 380 W PoE power, which ensures full PoE power on 24 ports in compliance with 802.3af or on 12 ports in compliance with 802.3at.

Heat Dissipation

The S5735-L24P4X-A has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1374 lists technical specifications of the S5735-L24P4X-A.

Table 4-1374 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between	57.07 years

Item	Description
failures (MTBF)	
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Weight (with packaging)	4.31 kg (9.5 lb)
Stack ports	Any 10/100/1000BASE-T ports or 10GE SFP+ ports (applicable in V200R019C10 and later versions)
RTC	Not supported
RPS	Not supported
PoE	Supported
Rated voltage range	<ul style="list-style-type: none">AC input: 100 V AC to 240 V AC, 50/60 HzHigh-Voltage DC input: 240 V DC
Maximum voltage range	<ul style="list-style-type: none">AC input: 90 V AC to 290 V AC, 45 Hz to 65 HzHigh-Voltage DC input: 190 V DC to 290 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none">Not providing the PoE function: 56 W100% PoE loads: 458 W (PoE: 380 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">Tested according to ATIS standardEEE enabledNo PoE power consumption	43 W
Operating temperature	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE

Item	Description
	<p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>The switch cannot be started when the ambient temperature is lower than 0 °C (32 °F).</p>
Short-term operating temperature	<p>-5 °C to +55 °C (23 °F to 131 °F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none">• The equipment operates at a temperature of over 50 °C (122 °F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 50 °C (122 °F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 50 °C (122 °F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 57.7 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010927

4.28.8 S5735-L32ST4X-A

Version Mapping

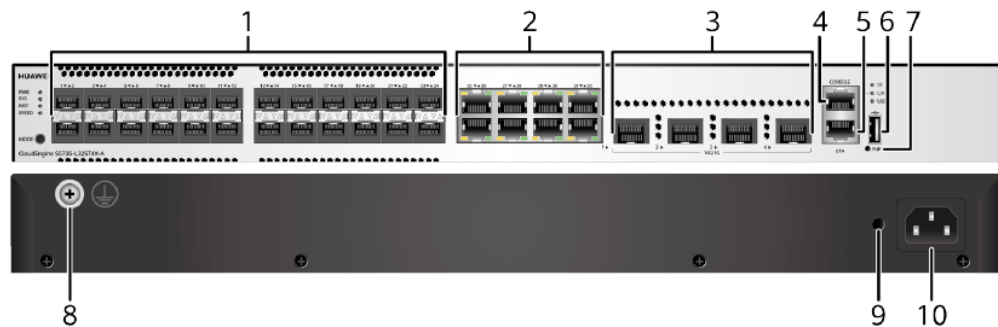
Table 4-1375 lists the mapping between the S5735-L32ST4X-A chassis and software versions.

Table 4-1375 Version mapping

Series	Model	Software Version
S5735-L	S5735-L32ST4X-A	V200R019C00 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-526 S5735-L32ST4X-A appearance



1	<p>Twenty-four 100/1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules (maximum transmission distance \leq 40 km) • 10.10 GE SFP Copper Modules 	2	<p>Eight 10/100/1000BASE-T ports</p>
3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber 	4	<p>One console port</p>

	<ul style="list-style-type: none"> 9.14 Dedicated Stack Cable 		
5	One ETH management port	6	One USB port
7	<p>One PNP button</p> <p>NOTICE</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	8	<p>Ground screw</p> <p>NOTE</p> <p>It is used with a 9.1 Ground Cable.</p>
9	<p>Jack for AC power cable locking strap</p> <p>NOTE</p> <p>The AC power cable locking strap is not delivered with the switch.</p>	10	<p>AC socket</p> <p>NOTE</p> <p>It is used with an 9.8 AC Power Cable.</p>

Port Description

100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. Table 4-1376 describes the attributes of a 100/1000BASE-X port.

Table 4-1376 Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-1377 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-1377 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab

Attribute	Description
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-1378 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-1378 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1379.

Table 4-1379 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the

ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1380 describes the attributes of an ETH management port.

Table 4-1380 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
- If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
- If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 4-527 Indicators on the S5735-L32ST4X-A

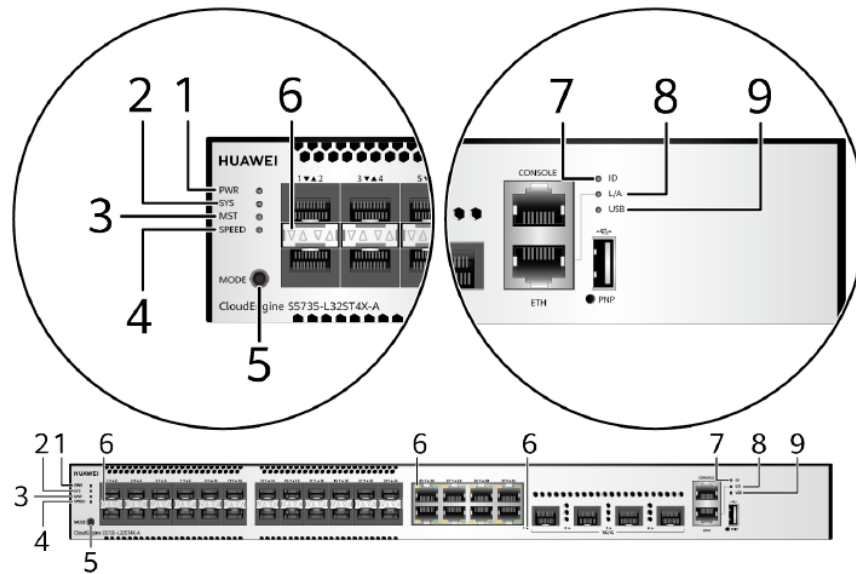


Table 4-1381 Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR	Power module indicator	-	Off	The switch is powered off.
			Green	Steady on	The system power supply is normal.
2	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Steady on	During the system startup preparation phase, the SYS indicator is steady green, which lasts for a maximum of 30 seconds.
			Green	Slow blinking	The system is running normally.
3	MST	Stack indicator	-	Off	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is a standby or slave switch in a stack or the stacking function is not enabled on the switch. If you are changing the indicator mode:

No.	Indicator	Name	Color	Status	Description
					The stack mode is not selected.
			Green	Steady on	The stack mode is selected. The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is the master switch in a stack or a standalone switch with the stacking function enabled. If you are changing the indicator mode: The stack mode is selected. The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. After 45 seconds, the service port indicators automatically restore to the status mode.
4	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The speed mode is selected, and service port indicators show the speed of each port.
5	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> When you press this button once, the service port indicators change to the stack mode and show the stack ID of the local switch. When you press this button a second time, the service port indicators change to the speed mode and show the speed of each service port. When you press the button a third time, the service port indicators restore to the default mode and show the connection status and link activity of each service port. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the SPEED indicators are off.</p>
6	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see Table 4-1382 and Table 4-1383.		
7	ID	ID indicator	-	Off	The ID indicator is not used (default state).
			Blue	Steady on	The indicator identifies the switch to maintain. The ID indicator can be turned on or off remotely to help field engineers find the switch to maintain.

No.	Indicator	Name	Color	Status	Description
8	L/A	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The ETH port is sending or receiving data.
9	USB	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> No USB flash drive is connected to the switch. The USB port is damaged. The indicator is damaged. The USB flash drive does not have any configuration file and cannot be used for deployment. The switch has been upgraded using the USB flash drive and is restarting.
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from a USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

Table 4-1382 Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Default mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	1000M/10GE port: The port is operating at 1000 Mbit/s.

Display Mode	Color	Status	Description
	Green	Blinking	1000M/10GE port: The port is operating at 10 Gbit/s.

Table 4-1383 Description of service port indicators in different modes (two indicators for each port)

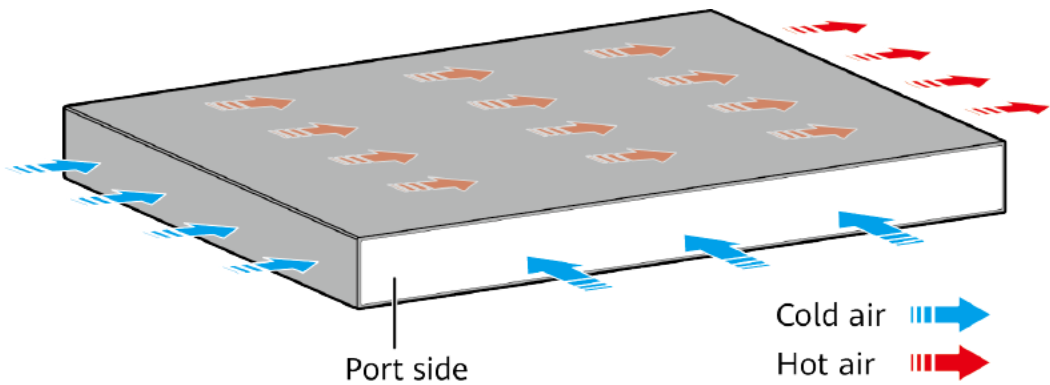
Display Mode	Color	Status	Description
Default mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Yellow	Blinking	The port is sending or receiving data.
MST stack mode	-	Off	Port indicators do not show the stack ID of the switch.
	Green and yellow	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
	Green and yellow	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is blinking, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.
Speed mode	-	Off	The port is not connected or has been shut down.
	Green and yellow	Steady on	10M/100M/1000M port: The port is operating at 10 Mbit/s or 100 Mbit/s. 100M/1000M port: The port is operating at 100 Mbit/s.
	Green and yellow	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 100M/1000M port: The port is operating at 1000 Mbit/s.

Power Supply Configuration

The S5735-L32ST4X-A has a built-in AC power module and does not support pluggable power modules.

Heat Dissipation

The S5735-L32ST4X-A has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1384 lists technical specifications of the S5735-L32ST4X-A.

Table 4-1384 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	85.87 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm

Item	Description
	x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Weight (with packaging)	4.31 kg (9.5 lb)
Stack ports	Any 10/100/1000BASE-T ports, 100/1000BASE-X ports, or 10GE SFP+ ports (applicable in V200R019C10 and later versions)
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none">AC input: 100 V AC to 240 V AC, 50/60 HzHigh-Voltage DC input: 240 V DC
Maximum voltage range	<ul style="list-style-type: none">AC input: 90 V AC to 264 V AC, 47 Hz to 63 HzHigh-Voltage DC input: 190 V DC to 290 V DC
Maximum power consumption (100% throughput, full speed of fans)	65 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">Tested according to ATIS standardEEE enabledNo PoE power consumption	46 W
Operating temperature	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0 °C (32 °F).
Short-term operating temperature	-5 °C to +55 °C (23 °F to 131 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">The equipment operates at a temperature of over 50 °C (122 °F) consecutively for at most 96 hours in one year.

Item	Description
	<ul style="list-style-type: none">The equipment operates at a temperature of over 50 °C (122 °F) for a total of no more than 360 hours in one year.The equipment operates at a temperature of over 50 °C (122 °F) for no more than 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 53.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">EMC certificationSafety certificationManufacturing certification
Part number	98010929

4.28.9 S5735-L32ST4X-D

Version Mapping

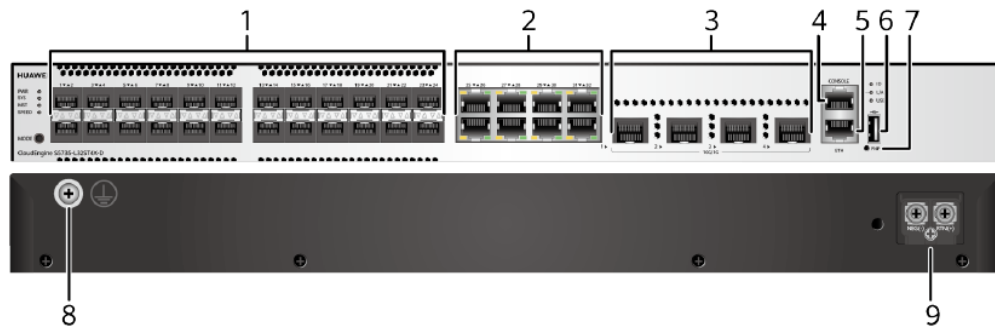
Table 4-1385 lists the mapping between the S5735-L32ST4X-D chassis and software versions.

Table 4-1385 Version mapping

Series	Model	Software Version
S5735-L	S5735-L32ST4X-D	V200R020C00 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-528 S5735-L32ST4X-D appearance



1	<p>Twenty-four 100/1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules (maximum transmission distance \leq 40 km) • 10.10 GE SFP Copper Modules 	2	<p>Eight 10/100/1000BASE-T ports</p>
3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable 	4	<p>One console port</p>
5	<p>One ETH management port</p>	6	<p>One USB port</p>
7	<p>One PNP button</p> <p>NOTICE</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p>	8	<p>Ground screw</p> <p>NOTE</p> <p>It is used with a 9.1 Ground Cable.</p>

	Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.		
9	DC power terminal NOTE It is used with 9.5 DC Power Cable (with OT and Cord End Terminals).	-	-

Port Description

100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. Table 4-1386 describes the attributes of a 100/1000BASE-X port.

Table 4-1386 Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-1387 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-1387 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-1388 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-1388 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1389.

Table 4-1389 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1390 describes the attributes of an ETH management port.

Table 4-1390 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards	IEEE802.3

Attribute	Description
compliance	
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

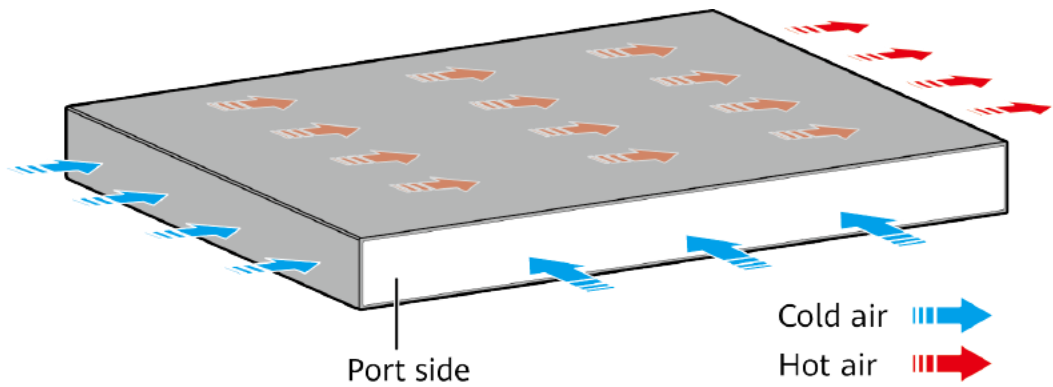
The S5735-L32ST4X-D has similar indicators to those on the S5735-L32ST4X-A. For details, see [Indicator Description](#).

Power Supply Configuration

The S5735-L32ST4X-D has a built-in DC power module and does not support pluggable power modules.

Heat Dissipation

The S5735-L32ST4X-D has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1391 lists technical specifications of the S5735-L32ST4X-D.

Table 4-1391 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	85.87 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Weight (with packaging)	4.31 kg (9.5 lb)
Stack ports	Any 10/100/1000BASE-T ports, 100/1000BASE-X ports, or 10GE SFP+ ports
RTC	Not supported

Item	Description
RPS	Not supported
PoE	Not supported
Rated voltage range	-48 V DC to -60 V DC
Maximum voltage range	-38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	65 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	46 W
Operating temperature	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0 °C (32 °F).
Short-term operating temperature	-5 °C to +55 °C (23 °F to 131 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> • The equipment operates at a temperature of over 50 °C (122 °F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 50 °C (122 °F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 50 °C (122 °F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.

Item	Description
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 53.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010965

4.28.10 S5735-L48T4S-A

Version Mapping

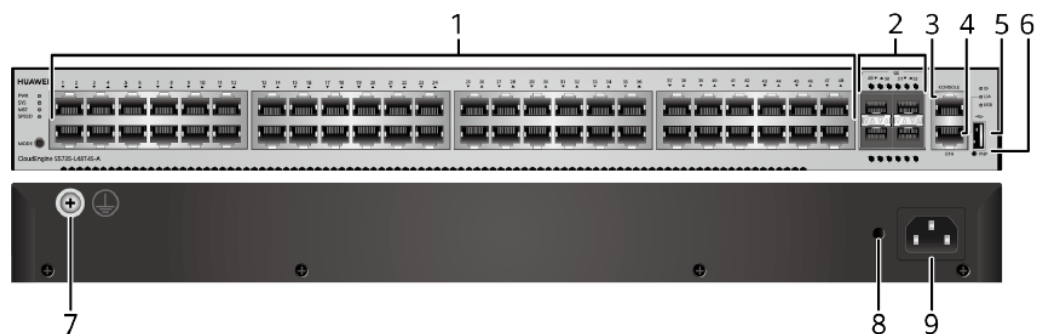
Table 4-1392 lists the mapping between the S5735-L48T4S-A chassis and software versions.

Table 4-1392 Version mapping

Series	Model	Software Version
S5735-L	S5735-L48T4S-A	V200R019C00 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-529 S5735-L48T4S-A appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw NOTE It is used with a 9.1 Ground Cable.	8	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.
9	AC socket NOTE It is used with an 9.8 AC Power Cable.	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-1393 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-1393 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab

Attribute	Description
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a FE optical module, it can transmit and receive data at 100 Mbit/s. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. Table 4-1394 describes the attributes of a 1000BASE-X Ethernet optical port.

Table 4-1394 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1395.

Table 4-1395 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must

use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1396 describes the attributes of an ETH management port.

Table 4-1396 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

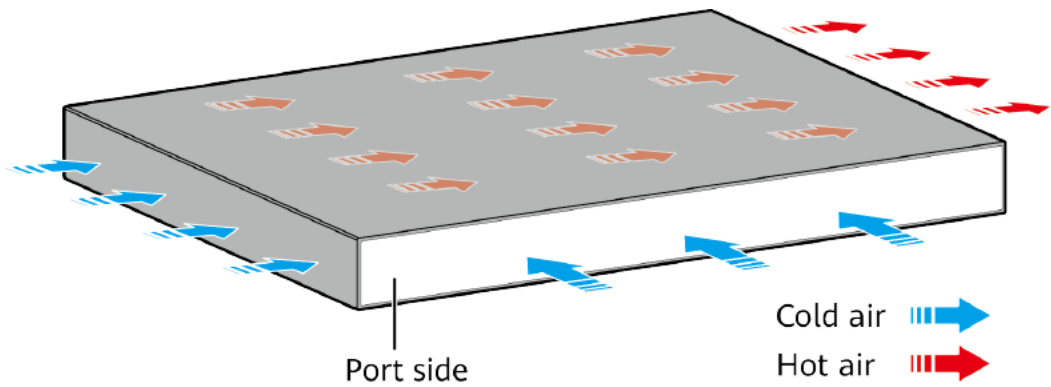
The S5735-L48T4S-A has similar indicators to those on the S5735-L12P4S-A except that the S5735-L48T4S-A does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5735-L48T4S-A has a built-in AC power module and does not support pluggable power modules.

Heat Dissipation

The S5735-L48T4S-A has one built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1397 lists technical specifications of the S5735-L48T4S-A.

Table 4-1397 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	46.36 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Weight (with packaging)	4.42 kg (9.75 lb)
Stack ports	Any 10/100/1000BASE-T ports or 1000BASE-X ports (applicable in V200R019C10 and later versions)
RTC	Not supported

Item	Description
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none"> AC input: 100 V AC to 240 V AC, 50/60 Hz High-Voltage DC input: 240 V DC
Maximum voltage range	<ul style="list-style-type: none"> AC input: 90 V AC to 264 V AC, 47 Hz to 63 Hz High-Voltage DC input: 190 V DC to 290 V DC
Maximum power consumption (100% throughput, full speed of fans)	53 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> Tested according to ATIS standard EEE enabled No PoE power consumption 	37 W
Operating temperature	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0 °C (32 °F).
Short-term operating temperature	-5 °C to +55 °C (23 °F to 131 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> The equipment operates at a temperature of over 50 °C (122 °F) consecutively for at most 96 hours in one year. The equipment operates at a temperature of over 50 °C (122 °F) for a total of no more than 360 hours in one year. The equipment operates at a temperature of over 50 °C (122 °F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.

Item	Description
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 53.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010933

4.28.11 S5735-L48T4X-A

Version Mapping

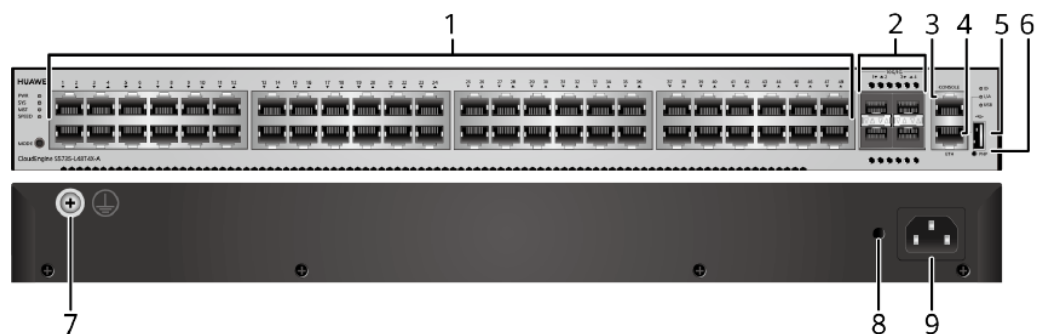
Table 4-1398 lists the mapping between the S5735-L48T4X-A chassis and software versions.

Table 4-1398 Version mapping

Series	Model	Software Version
S5735-L	S5735-L48T4X-A	V200R019C00 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-530 S5735-L48T4X-A appearance



1	Forty-eight 10/100/1000BASE-T ports	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	One console port	4	One ETH management port
5	One USB port	6	<p>One PNP button</p> <p>NOTICE</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
7	<p>Ground screw</p> <p>NOTE</p> <p>It is used with a 9.1 Ground Cable.</p>	8	<p>Jack for AC power cable locking strap</p> <p>NOTE</p> <p>The AC power cable locking strap is not delivered with the switch.</p>
9	<p>AC socket</p> <p>NOTE</p> <p>It is used with an 9.8 AC Power Cable.</p>	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-1399 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-1399 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-1400 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-1400 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1401.

Table 4-1401 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1402 describes the attributes of an ETH management port.

Table 4-1402 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

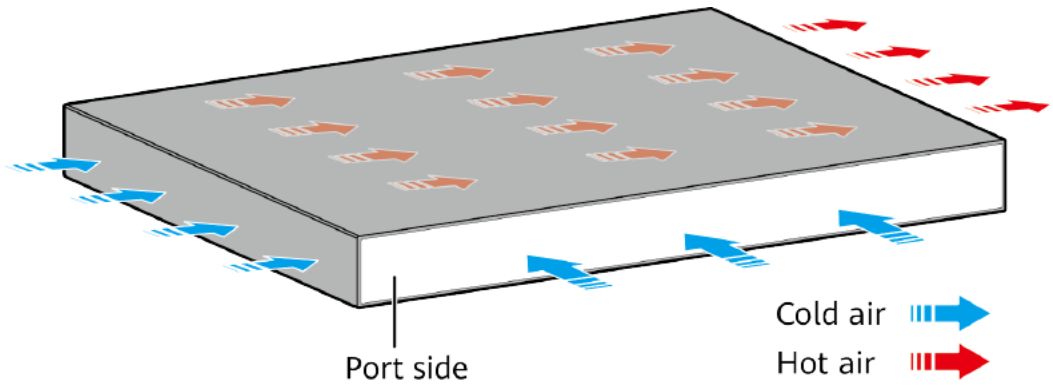
The S5735-L48T4X-A has similar indicators to those on the S5735-L12P4S-A except that the S5735-L48T4X-A does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5735-L48T4X-A has a built-in AC power module and does not support pluggable power modules.

Heat Dissipation

The S5735-L48T4X-A has one built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1403 lists technical specifications of the S5735-L48T4X-A.

Table 4-1403 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	41.48 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Weight (with packaging)	4.42 kg (9.75 lb)
Stack ports	Any 10/100/1000BASE-T ports or 10GE SFP+ ports (applicable in V200R019C10 and later versions)
RTC	Not supported

Item	Description
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none"> AC input: 100 V AC to 240 V AC, 50/60 Hz High-Voltage DC input: 240 V DC
Maximum voltage range	<ul style="list-style-type: none"> AC input: 90 V AC to 264 V AC, 47 Hz to 63 Hz High-Voltage DC input: 190 V DC to 290 V DC
Maximum power consumption (100% throughput, full speed of fans)	54 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> Tested according to ATIS standard EEE enabled No PoE power consumption 	39 W
Operating temperature	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0 °C (32 °F). The operating temperature of the switch is -5 °C to +45 °C (23 °F to 113 °F) when it uses 10GE SFP+ optical modules with 40 km or longer transmission distances.
Short-term operating temperature	-5 °C to +55 °C (23 °F to 131 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> The equipment operates at a temperature of over 50 °C (122 °F) consecutively for at most 96 hours in one year. The equipment operates at a temperature of over 50 °C (122 °F) for a total of no more than 360 hours in one year. The equipment operates at a temperature of over 50 °C (122 °F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.

Item	Description
	The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 53.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010936

4.28.12 S5735-L48P4X-A

Version Mapping

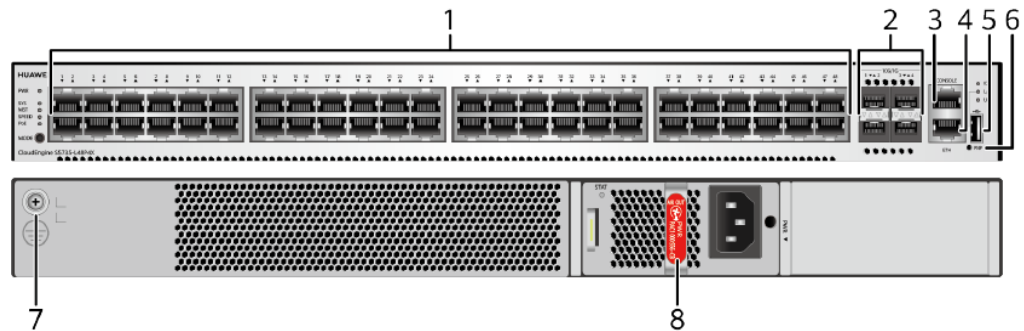
Table 4-1404 lists the mapping between the S5735-L48P4X-A chassis and software versions.

Table 4-1404 Version mapping

Series	Model	Software Version
S5735-L	S5735-L48P4X-A	V200R019C00 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-531 S5735-L48P4X-A appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw NOTE It is used with a 9.1 Ground Cable.	8	Power module slot NOTE Applicable power module: <ul style="list-style-type: none"> • 5.24 PAC1000S56-CB (1000 W PoE AC Power Module)

			<ul style="list-style-type: none"> • 5.25 PAC1000S56-DB (1000 W PoE AC Power Module) (applicable in V200R020C10 and later versions) • 5.26 PDC1000S56-CB (1000 W PoE DC Power Module) (applicable in V200R021C00 and later versions) • 5.23 PAC600S56-CB (600 W AC&240 V DC Power Module (Back to Front, Power panel side exhaust)) (applicable in V200R021C10 and later versions)
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Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-1405 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-1405 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ optical port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-1406 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-1406 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1407.

Table 4-1407 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1408 describes the attributes of an ETH management port.

Table 4-1408 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

 **NOTE**

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5735-L48P4X-A has the same types of indicators as the S5735-L12P4S-A. For details, see [Indicator Description](#).

Power Supply Configuration

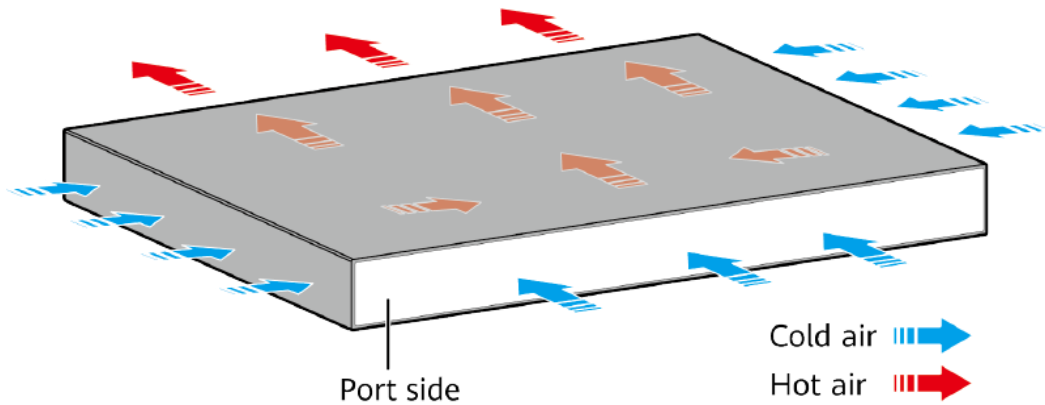
The S5735-L48P4X-A is a PoE switch. It has one power module slot, which can have a 1000 W PoE or 600 W PoE power module installed. Table 4-1409 lists its power supply configurations.

Table 4-1409 Power supply configurations

Power Module	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W AC (220 V) 1000 W DC	874 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 48 • 802.3at (30 W per port): 29
1000 W AC (110 V)	779 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 48 • 802.3at (30 W per port): 25
600 W AC (220 V)	494 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 32 • 802.3at (30 W per port): 16
600 W AC (110 V)	209 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 13 • 802.3at (30 W per port): 7

Heat Dissipation

The S5735-L48P4X-A has two built-in fans for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1410 lists technical specifications of the S5735-L48P4X-A.

Table 4-1410 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	61.7 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 444.2 mm (1.72 in. x 17.4 in. x 17.49 in.)
Weight (with packaging)	8.7 kg (19.18 lb)
Stack ports	Any 10/100/1000BASE-T ports or 10GE SFP+ ports (applicable in V200R019C10 and later versions)

Item	Description
RTC	Not supported
RPS	Not supported
PoE	Supported
Rated voltage range	<ul style="list-style-type: none">AC input: 100 V AC to 130 V AC, 200 V AC to 240 V AC, 50/60 HzHigh-Voltage DC input: 240 V DCDC input: -48 V DC to -60 V DC
Maximum voltage range	<ul style="list-style-type: none">AC input: 90 V AC to 290 V AC, 45 Hz to 65 HzHigh-Voltage DC input: 190 V DC to 290 V DCDC input: -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none">Not providing the PoE function: 80 W100% PoE loads: 914 W (PoE: 874 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">Tested according to ATIS standardEEE enabledNo PoE power consumption	59 W
Operating temperature	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0 °C (32 °F).
Short-term operating temperature	-5 °C to +55 °C (23 °F to 131 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">The equipment operates at a temperature of over 50 °C (122 °F) consecutively for at most 96 hours in one year.The equipment operates at a temperature of over 50 °C (122 °F) for a total of no more than 360 hours in one year.The equipment operates at a temperature of over 50 °C (122 °F) for no

Item	Description
	more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 58.9 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010944

4.29 S5735S-L

4.29.1 S5735S-L12T4S-A

Version Mapping

Table 4-1411 lists the mapping between the S5735S-L12T4S-A chassis and software versions.

Table 4-1411 Version mapping

Series	Model	Software Version
S5735S-L	S5735S-L12T4S-A	V200R019C00 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-532 S5735S-L12T4S-A appearance



1	Twelve 10/100/1000BASE-T ports	2	Four 1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw NOTE It is used with a 9.1 Ground Cable.	8	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.
9	AC socket NOTE It is used with an 9.8 AC Power Cable.	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-1412 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-1412 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a FE optical module, it can transmit and receive data at 100 Mbit/s. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. Table 4-1413 describes the attributes of a 1000BASE-X Ethernet optical port.

Table 4-1413 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1414.

Table 4-1414 Attributes of a console port

Attribute	Description
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Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1415 describes the attributes of an ETH management port.

Table 4-1415 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5735S-L12T4S-A has similar indicators to those on the S5735-L12P4S-A except that the S5735S-L12T4S-A does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5735S-L12T4S-A has a built-in AC power module and does not support pluggable power modules.

Heat Dissipation

The S5735S-L12T4S-A has no fans and uses natural heat dissipation.

Technical Specifications

Table 4-1416 lists technical specifications of the S5735S-L12T4S-A.

Table 4-1416 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	98.6 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Weight (with packaging)	3.83 kg (8.44 lb)
Stack ports	Any 10/100/1000BASE-T ports or 1000BASE-X ports (applicable in V200R019C10 and later versions)
RTC	Not supported
RPS	Not supported

Item	Description
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none">AC input: 100 V AC to 240 V AC, 50/60 HzHigh-Voltage DC input: 240 V DC
Maximum voltage range	<ul style="list-style-type: none">AC input: 90 V AC to 264 V AC, 47 Hz to 63 HzHigh-Voltage DC input: 190 V DC to 290 V DC
Maximum power consumption (100% throughput)	29 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">Tested according to ATIS standardEEE enabledNo PoE power consumption	23 W
Operating temperature	<p>-5 °C to +45 °C (23 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>The switch cannot be started when the ambient temperature is lower than 0 °C (32 °F).</p> <p>The operating temperature of the switch is -5 °C to +40 °C (23 °F to 104 °F) when it uses GE SFP optical modules with 40 km or longer transmission distance.</p> <p>When SFP+ copper cables or dedicated stack cables are used to set up a stack, the switch can operate in the following temperature range:</p> <ul style="list-style-type: none">-5 °C to +45 °C (23 °F to 113 °F) (installed in the ventilation cabinet, with the wind speed of at least 40 LFM) <p>When SFP+ AOC cables or 10GE SFP+ optical modules are used to set up a stack, the switch can operate in the following temperature range:</p> <ul style="list-style-type: none">-5 °C to +45 °C (23 °F to 113 °F) (installed in the ventilation cabinet shipped with fans with a fan speed of at least 200 LFM)
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)

Item	Description
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010919

4.29.2 S5735S-L12P4S-A

Version Mapping

Table 4-1417 lists the mapping between the S5735S-L12P4S-A chassis and software versions.

Table 4-1417 Version mapping

Series	Model	Software Version
S5735S-L	S5735S-L12P4S-A	V200R019C00 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-533 S5735S-L12P4S-A appearance



1	Twelve PoE+ 10/100/1000BASE-T ports	2	Four 1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules
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			<ul style="list-style-type: none"> • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw NOTE It is used with a 9.1 Ground Cable.	8	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.
9	AC socket NOTE It is used with an 9.8 AC Power Cable.	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-1418 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-1418 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X

port uses a FE optical module, it can transmit and receive data at 100 Mbit/s. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. Table 4-1419 describes the attributes of a 1000BASE-X Ethernet optical port.

Table 4-1419 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1420.

Table 4-1420 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1421 describes the attributes of an ETH management port.

Table 4-1421 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3

Attribute	Description
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

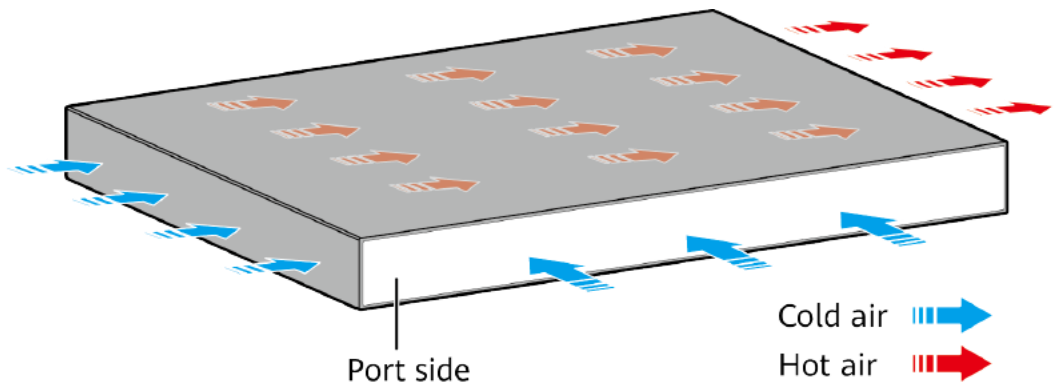
The S5735S-L12P4S-A has the same types of indicators as the S5735-L12P4S-A. For details, see [Indicator Description](#).

Power Supply Configuration

The S5735S-L12P4S-A has a built-in power module and does not support pluggable power modules. The built-in power module can provide 360 W PoE power, which ensures full PoE power on 12 ports in compliance with 802.3af or 802.3at.

Heat Dissipation

The S5735S-L12P4S-A has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1422 lists technical specifications of the S5735S-L12P4S-A.

Table 4-1422 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	85.52 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Weight (with packaging)	4.24 kg (9.35 lb)
Stack ports	Any 10/100/1000BASE-T ports or 1000BASE-X ports (applicable in V200R019C10 and later versions)
RTC	Not supported

Item	Description
RPS	Not supported
PoE	Supported
Rated voltage range	<ul style="list-style-type: none"> AC input: 100 V AC to 240 V AC, 50/60 Hz High-Voltage DC input: 240 V DC
Maximum voltage range	<ul style="list-style-type: none"> AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz High-Voltage DC input: 190 V DC to 290 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> Not providing the PoE function: 49 W 100% PoE loads: 441 W (PoE: 360 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> Tested according to ATIS standard EEE enabled No PoE power consumption 	38 W
Operating temperature	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0 °C (32 °F).
Short-term operating temperature	-5 °C to +55 °C (23 °F to 131 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> The equipment operates at a temperature of over 50 °C (122 °F) consecutively for at most 96 hours in one year. The equipment operates at a temperature of over 50 °C (122 °F) for a total of no more than 360 hours in one year. The equipment operates at a temperature of over 50 °C (122 °F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.

Item	Description
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 57.7 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010923

4.29.3 S5735S-L24FT4S-A

Version Mapping

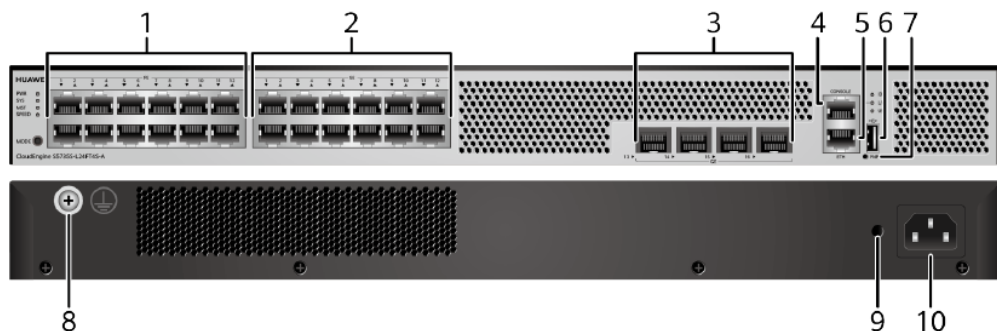
Table 4-1423 lists the mapping between the S5735S-L24FT4S-A chassis and software versions.

Table 4-1423 Version mapping

Series	Model	Software Version
S5735S-L	S5735S-L24FT4S-A	V200R019C00 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-534 S5735S-L24FT4S-A appearance



1	Twelve 10/100BASE-TX ports	2	Twelve 10/100/1000BASE-T ports
3	<p>Four 1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable 	4	One console port
5	One ETH management port	6	One USB port
7	<p>One PNP button</p> <p>NOTICE</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	8	<p>Ground screw</p> <p>NOTE</p> <p>It is used with a 9.1 Ground Cable.</p>
9	<p>Jack for AC power cable locking strap</p> <p>NOTE</p> <p>The AC power cable locking strap is not delivered with the switch.</p>	10	<p>AC socket</p> <p>NOTE</p> <p>It is used with an 9.8 AC Power Cable.</p>

Port Description

10/100BASE-TX port

A 10/100BASE-TX Ethernet electrical port sends and receives service data at 10/100 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-1424 lists the attributes of a 10/100BASE-TX Ethernet electrical port.

Table 4-1424 Attributes of a 10/100BASE-TX Ethernet electrical port

Attribute	Item
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100 Mbit/s auto-sensing
Maximum	100 m

Attribute	Item
transmission distance	

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-1425 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-1425 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a FE optical module, it can transmit and receive data at 100 Mbit/s. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. Table 4-1426 describes the attributes of a 1000BASE-X Ethernet optical port.

Table 4-1426 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1427.

Table 4-1427 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1428 describes the attributes of an ETH management port.

Table 4-1428 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

 **NOTE**

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5735S-L24FT4S-A has similar indicators to those on the S5735-L12P4S-A except that the S5735S-L24FT4S-A does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5735S-L24FT4S-A has a built-in AC power module and does not support pluggable power modules.

Heat Dissipation

The S5735S-L24FT4S-A has no fans and uses natural heat dissipation.

Technical Specifications

Table 4-1429 lists technical specifications of the S5735S-L24FT4S-A.

Table 4-1429 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	55.89 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Weight (with packaging)	4.08 kg (9 lb)

Item	Description
Stack ports	Any 10/100/1000BASE-T ports or 1000BASE-X ports (applicable in V200R019C10 and later versions)
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none">AC input: 100 V AC to 240 V AC, 50/60 HzHigh-Voltage DC input: 240 V DC
Maximum voltage range	<ul style="list-style-type: none">AC input: 90 V AC to 264 V AC, 47 Hz to 63 HzHigh-Voltage DC input: 190 V DC to 290 V DC
Maximum power consumption (100% throughput)	32 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">Tested according to ATIS standardEEE enabledNo PoE power consumption	26 W
Operating temperature	<p>-5 °C to +45 °C (23 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>The switch cannot be started when the ambient temperature is lower than 0 °C (32 °F).</p> <p>The operating temperature of the switch is -5 °C to +40 °C (23 °F to 104 °F) when it uses GE SFP optical modules with 40 km or longer transmission distance.</p> <p>When SFP+ copper cables or dedicated stack cables are used to set up a stack, the switch can operate in the following temperature range:</p> <ul style="list-style-type: none">-5 °C to +45 °C (23 °F to 113 °F) (installed in the ventilation cabinet, with the wind speed of at least 40 LFM) <p>When SFP+ AOC cables or 10GE SFP+ optical modules are used to set up a stack, the switch can operate in the following temperature range:</p> <ul style="list-style-type: none">-5 °C to +45 °C (23 °F to 113 °F) (installed in the ventilation cabinet shipped with fans with a fan speed of at least 200 LFM)
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C,	Noise-free (no fans)

Item	Description
sound power)	
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010917

4.29.4 S5735S-L24T4S-A

Version Mapping

Table 4-1430 lists the mapping between the S5735S-L24T4S-A chassis and software versions.

Table 4-1430 Version mapping

Series	Model	Software Version
S5735S-L	S5735S-L24T4S-A	V200R019C00 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-535 S5735S-L24T4S-A appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules
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			<ul style="list-style-type: none"> • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw NOTE It is used with a 9.1 Ground Cable.	8	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.
9	AC socket NOTE It is used with an 9.8 AC Power Cable.	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-1431 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-1431 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a FE optical module, it can transmit and receive data at 100 Mbit/s. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. Table 4-1432 describes the attributes of a 1000BASE-X Ethernet optical port.

Table 4-1432 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1433.

Table 4-1433 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1434 describes the attributes of an ETH management port.

Table 4-1434 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5735S-L24T4S-A has similar indicators to those on the S5735-L12P4S-A except that the S5735S-L24T4S-A does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5735S-L24T4S-A has a built-in AC power module and does not support pluggable power modules.

Heat Dissipation

The S5735S-L24T4S-A has no fans and uses natural heat dissipation.

Technical Specifications

Table 4-1435 lists technical specifications of the S5735S-L24T4S-A.

Table 4-1435 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	92.82 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Weight (with packaging)	4.08 kg (9 lb)
Stack ports	Any 10/100/1000BASE-T ports or 1000BASE-X ports (applicable in V200R019C10 and later versions)
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none"> AC input: 100 V AC to 240 V AC, 50/60 Hz High-Voltage DC input: 240 V DC
Maximum voltage range	<ul style="list-style-type: none"> AC input: 90 V AC to 264 V AC, 47 Hz to 63 Hz High-Voltage DC input: 190 V DC to 290 V DC
Maximum power consumption (100% throughput)	34 W
Typical power consumption (30% of traffic load)	28 W <ul style="list-style-type: none"> Tested according to ATIS standard EEE enabled

Item	Description
• No PoE power consumption	
Operating temperature	<p>-5 °C to +45 °C (23 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>The switch cannot be started when the ambient temperature is lower than 0 °C (32 °F).</p> <p>The operating temperature of the switch is -5 °C to +40 °C (23 °F to 104 °F) when it uses GE SFP optical modules with 40 km or longer transmission distance.</p> <p>When SFP+ copper cables or dedicated stack cables are used to set up a stack, the switch can operate in the following temperature range:</p> <ul style="list-style-type: none">-5 °C to +45 °C (23 °F to 113 °F) (installed in the ventilation cabinet, with the wind speed of at least 40 LFM) <p>When SFP+ AOC cables or 10GE SFP+ optical modules are used to set up a stack, the switch can operate in the following temperature range:</p> <ul style="list-style-type: none">-5 °C to +45 °C (23 °F to 113 °F) (installed in the ventilation cabinet shipped with fans with a fan speed of at least 200 LFM)
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">EMC certificationSafety certificationManufacturing certification
Part number	98010915

4.29.5 S5735S-L24T4X-A

Version Mapping

Table 4-1436 lists the mapping between the S5735S-L24T4X-A chassis and software versions.

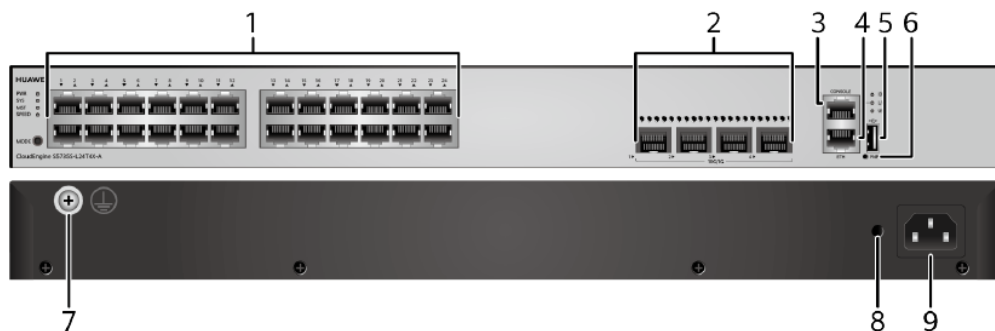
Table 4-1436 Version mapping

Series	Model	Software Version
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Series	Model	Software Version
S5735S-L	S5735S-L24T4X-A	V200R019C00 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-536 S5735S-L24T4X-A appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button.

			Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw NOTE It is used with a 9.1 Ground Cable.	8	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.
9	AC socket NOTE It is used with an 9.8 AC Power Cable.	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-1437 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-1437 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-1438 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-1438 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1439.

Table 4-1439 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1440 describes the attributes of an ETH management port.

Table 4-1440 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

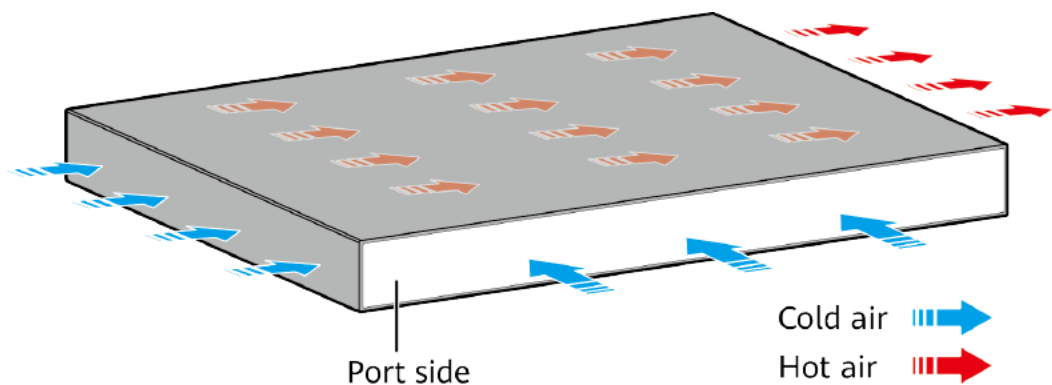
The S5735S-L24T4X-A has similar indicators to those on the S5735-L12P4S-A except that the S5735S-L24T4X-A does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5735S-L24T4X-A has a built-in AC power module and does not support pluggable power modules.

Heat Dissipation

The S5735S-L24T4X-A has one built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1441 lists technical specifications of the S5735S-L24T4X-A.

Table 4-1441 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between	50.68 years

Item	Description
failures (MTBF)	
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Weight (with packaging)	4 kg (8.82 lb)
Stack ports	Any 10/100/1000BASE-T ports or 10GE SFP+ ports (applicable in V200R019C10 and later versions)
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none">AC input: 100 V AC to 240 V AC, 50/60 HzHigh-Voltage DC input: 240 V DC
Maximum voltage range	<ul style="list-style-type: none">AC input: 90 V AC to 264 V AC, 47 Hz to 63 HzHigh-Voltage DC input: 190 V DC to 290 V DC
Maximum power consumption (100% throughput, full speed of fans)	43 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">Tested according to ATIS standardEEE enabledNo PoE power consumption	27 W
Operating temperature	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE

Item	Description
	<p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>The switch cannot be started when the ambient temperature is lower than 0 °C (32 °F).</p>
Short-term operating temperature	<p>-5 °C to +55 °C (23 °F to 131 °F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none">• The equipment operates at a temperature of over 50 °C (122 °F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 50 °C (122 °F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 50 °C (122 °F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 47.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010921

4.29.6 S5735S-L24P4S-A

Version Mapping

Table 4-1442 lists the mapping between the S5735S-L24P4S-A chassis and software versions.

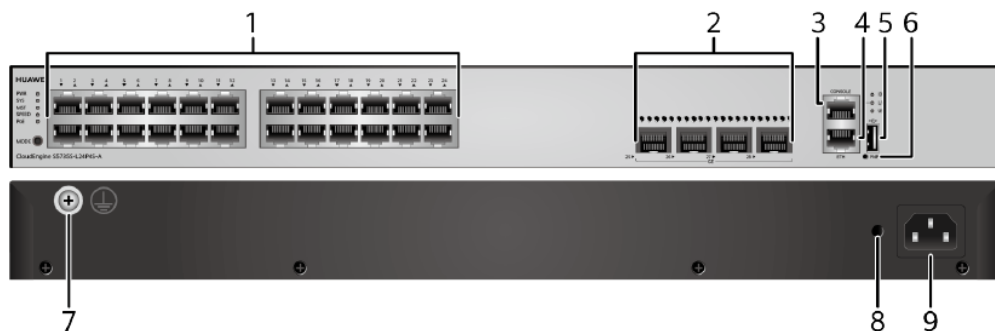
Table 4-1442 Version mapping

Series	Model	Software Version
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Series	Model	Software Version
S5735S-L	S5735S-L24P4S-A	V200R019C00 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-537 S5735S-L24P4S-A appearance



1	Twenty-four PoE+ 10/100/1000BASE-T ports	2	Four 1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.

7	Ground screw NOTE It is used with a 9.1 Ground Cable.	8	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.
9	AC socket NOTE It is used with an 9.8 AC Power Cable.	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-1443 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-1443 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a FE optical module, it can transmit and receive data at 100 Mbit/s. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. Table 4-1444 describes the attributes of a 1000BASE-X Ethernet optical port.

Table 4-1444 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1445.

Table 4-1445 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1446 describes the attributes of an ETH management port.

Table 4-1446 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

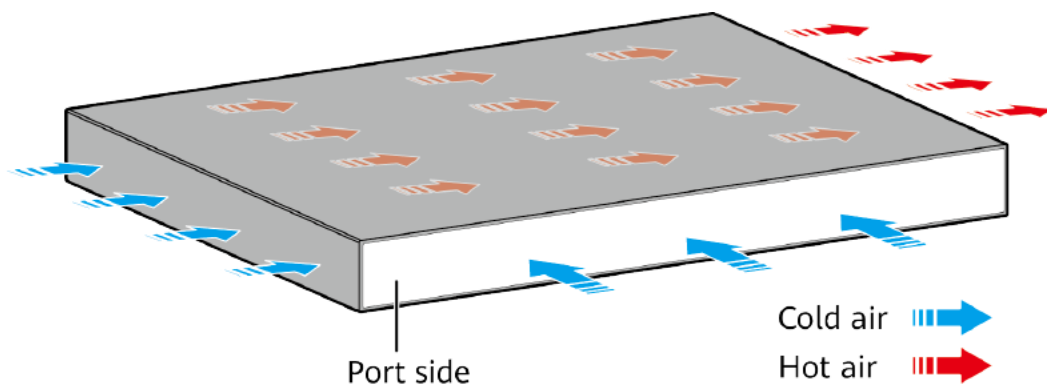
The S5735S-L24P4S-A has the same types of indicators as the S5735-L12P4S-A. For details, see [Indicator Description](#).

Power Supply Configuration

The S5735S-L24P4S-A has a built-in power module and does not support pluggable power modules. The built-in power module can provide 380 W PoE power, which ensures full PoE power on 24 ports in compliance with 802.3af or on 12 ports in compliance with 802.3at.

Heat Dissipation

The S5735S-L24P4S-A has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1447 lists technical specifications of the S5735S-L24P4S-A.

Table 4-1447 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between	92.2 years

Item	Description
failures (MTBF)	
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Weight (with packaging)	4.31 kg (9. lb)
Stack ports	Any 10/100/1000BASE-T ports or 1000BASE-X ports (applicable in V200R019C10 and later versions)
RTC	Not supported
RPS	Not supported
PoE	Supported
Rated voltage range	<ul style="list-style-type: none"> AC input: 100 V AC to 240 V AC, 50/60 Hz High-Voltage DC input: 240 V DC
Maximum voltage range	<ul style="list-style-type: none"> AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz High-Voltage DC input: 190 V DC to 290 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> Not providing the PoE function: 53 W 100% PoE loads: 451 W (PoE: 380 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> Tested according to ATIS standard EEE enabled No PoE power consumption 	39 W
Operating temperature	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE

Item	Description
	<p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>The switch cannot be started when the ambient temperature is lower than 0 °C (32 °F).</p>
Short-term operating temperature	<p>-5 °C to +55 °C (23 °F to 131 °F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none">• The equipment operates at a temperature of over 50 °C (122 °F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 50 °C (122 °F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 50 °C (122 °F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 57.7 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010925

4.29.7 S5735S-L24P4X-A

Version Mapping

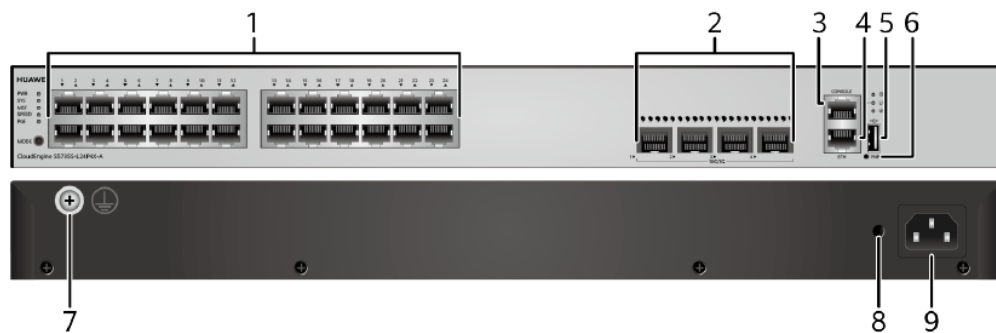
Table 4-1448 lists the mapping between the S5735S-L24P4X-A chassis and software versions.

Table 4-1448 Version mapping

Series	Model	Software Version
S5735S-L	S5735S-L24P4X-A	V200R019C00 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-538 S5735S-L24P4X-A appearance



1	Twenty-four PoE+ 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.

			To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw NOTE It is used with a 9.1 Ground Cable.	8	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.
9	AC socket NOTE It is used with an 9.8 AC Power Cable.	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-1449 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-1449 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-1450 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-1450 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae

Attribute	Description
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1451.

Table 4-1451 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1452 describes the attributes of an ETH management port.

Table 4-1452 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved

the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

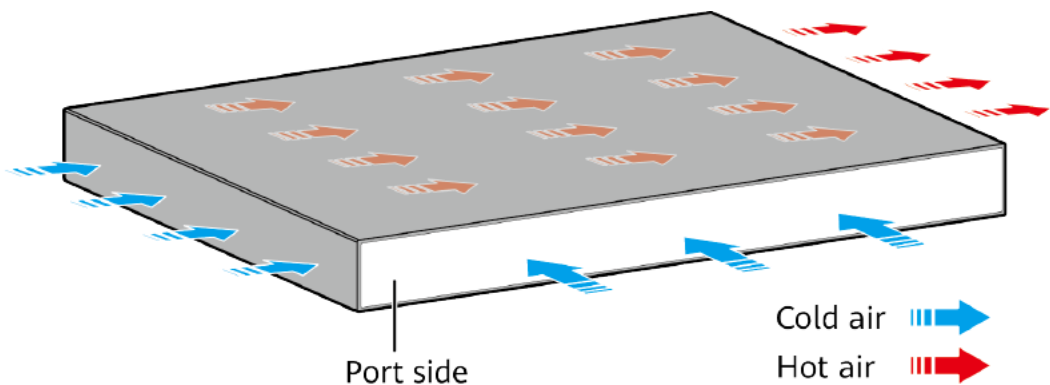
The S5735S-L24P4X-A has the same types of indicators as the S5735-L12P4S-A. For details, see [Indicator Description](#).

Power Supply Configuration

The S5735S-L24P4X-A has a built-in AC power module and does not support pluggable power modules. The built-in power module can provide 380 W PoE power, which ensures full PoE power on 24 ports in compliance with 802.3af or on 12 ports in compliance with 802.3at.

Heat Dissipation

The S5735S-L24P4X-A has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1453 lists technical specifications of the S5735S-L24P4X-A.

Table 4-1453 Technical specifications

Item	Description
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Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	57.07 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Weight (with packaging)	4.31 kg (9.5 lb)
Stack ports	Any 10/100/1000BASE-T ports or 10GE SFP+ ports (applicable in V200R019C10 and later versions)
RTC	Not supported
RPS	Not supported
PoE	Supported
Rated voltage range	<ul style="list-style-type: none"> AC input: 100 V AC to 240 V AC, 50/60 Hz High-Voltage DC input: 240 V DC
Maximum voltage range	<ul style="list-style-type: none"> AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz High-Voltage DC input: 190 V DC to 290 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> Not providing the PoE function: 56 W 100% PoE loads: 458 W (PoE: 380 W)
Typical power consumption (30% of traffic load)	<p>43 W</p> <ul style="list-style-type: none"> Tested according to ATIS standard EEE enabled

Item	Description
• No PoE power consumption	
Operating temperature	<p>-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>The switch cannot be started when the ambient temperature is lower than 0 °C (32 °F).</p>
Short-term operating temperature	<p>-5 °C to +55 °C (23 °F to 131 °F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> • The equipment operates at a temperature of over 50 °C (122 °F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 50 °C (122 °F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 50 °C (122 °F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 57.7 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010928

4.29.8 S5735S-L32ST4X-A

Version Mapping

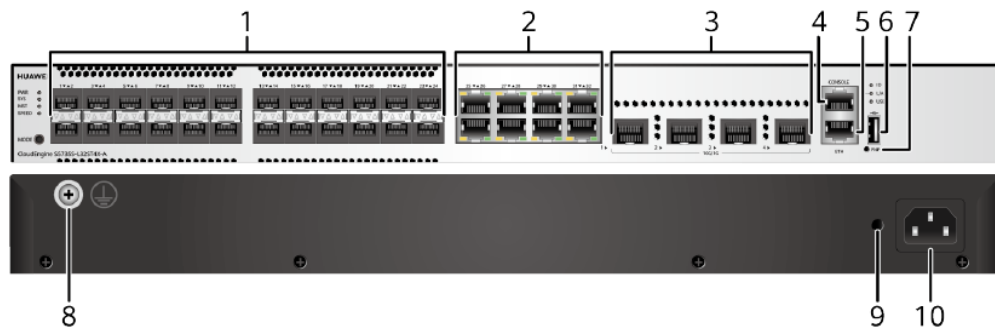
Table 4-1454 lists the mapping between the S5735S-L32ST4X-A chassis and software versions.

Table 4-1454 Version mapping

Series	Model	Software Version
S5735S-L	S5735S-L32ST4X-A	V200R019C00 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-539 S5735S-L32ST4X-A appearance



1	<p>Twenty-four 100/1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules (maximum transmission distance \leq 40 km) • 10.10 GE SFP Copper Modules 	2	<p>Eight 10/100/1000BASE-T ports</p>
3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules 	4	<p>One console port</p>

	<ul style="list-style-type: none"> • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable 		
5	One ETH management port	6	One USB port
7	<p>One PNP button</p> <p>NOTICE</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	8	<p>Ground screw</p> <p>NOTE</p> <p>It is used with a 9.1 Ground Cable.</p>
9	<p>Jack for AC power cable locking strap</p> <p>NOTE</p> <p>The AC power cable locking strap is not delivered with the switch.</p>	10	<p>AC socket</p> <p>NOTE</p> <p>It is used with an 9.8 AC Power Cable.</p>

Port Description

100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. Table 4-1455 describes the attributes of a 100/1000BASE-X port.

Table 4-1455 Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-1456 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-1456 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-1457 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-1457 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1458.

Table 4-1458 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1459 describes the attributes of an ETH management port.

Table 4-1459 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

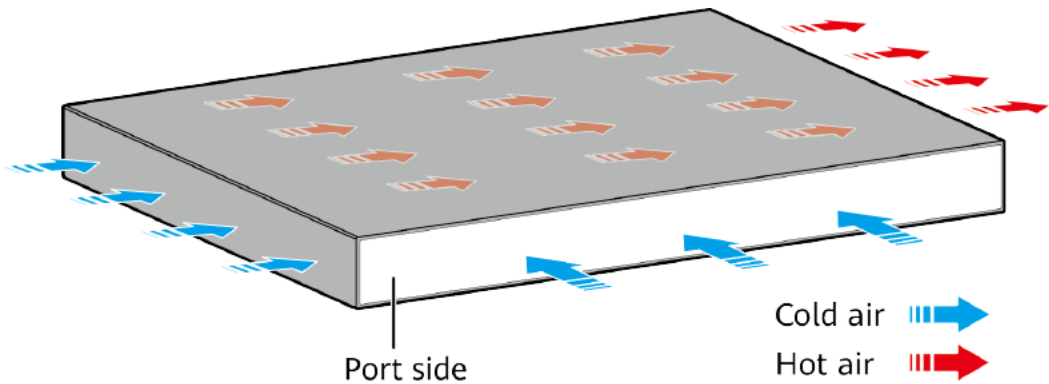
The S5735S-L32ST4X-A has the same types of indicators as the S5735-L32ST4X-A. For details, see [Indicator Description](#).

Power Supply Configuration

The S5735S-L32ST4X-A has a built-in AC power module and does not support pluggable power modules.

Heat Dissipation

The S5735S-L32ST4X-A has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1460 lists technical specifications of the S5735S-L32ST4X-A.

Table 4-1460 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	85.87 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Weight (with packaging)	4.31 kg (9.5 lb)

Item	Description
Stack ports	Any 10/100/1000BASE-T ports, 100/1000BASE-X ports, or 10GE SFP+ ports (applicable in V200R019C10 and later versions)
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none">AC input: 100 V AC to 240 V AC, 50/60 HzHigh-Voltage DC input: 240 V DC
Maximum voltage range	<ul style="list-style-type: none">AC input: 90 V AC to 264 V AC, 47 Hz to 63 HzHigh-Voltage DC input: 190 V DC to 290 V DC
Maximum power consumption (100% throughput, full speed of fans)	65 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">Tested according to ATIS standardEEE enabledNo PoE power consumption	46 W
Operating temperature	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0 °C (32 °F).
Short-term operating temperature	-5 °C to +55 °C (23 °F to 131 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">The equipment operates at a temperature of over 50 °C (122 °F) consecutively for at most 96 hours in one year.The equipment operates at a temperature of over 50 °C (122 °F) for a total of no more than 360 hours in one year.The equipment operates at a temperature of over 50 °C (122 °F) for no more in 15 times in one year.

Item	Description
	The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 53.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010930

4.29.9 S5735S-L48FT4S-A

Version Mapping

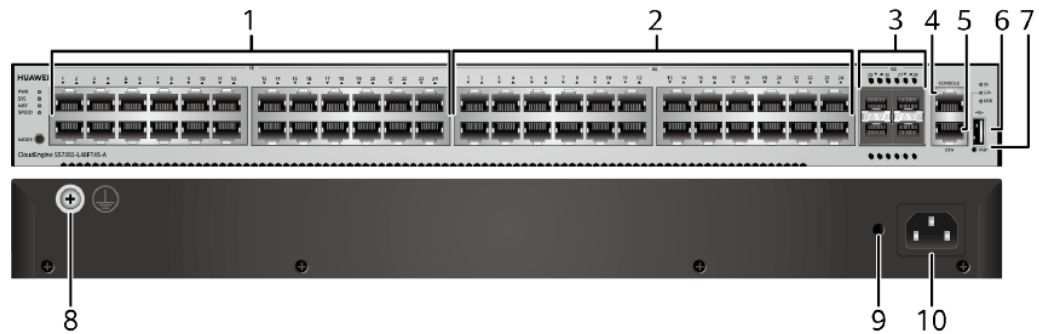
Table 4-1461 lists the mapping between the S5735S-L48FT4S-A chassis and software versions.

Table 4-1461 Version mapping

Series	Model	Software Version
S5735S-L	S5735S-L48FT4S-A	V200R019C00 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-540 S5735S-L48FT4S-A appearance



1	Twenty-four 10/100BASE-TX ports	2	Twenty-four 10/100/1000BASE-T ports
3	Four 1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable 	4	One console port
5	One ETH management port	6	One USB port
7	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.	8	Ground screw NOTE It is used with a 9.1 Ground Cable.
9	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.	10	AC socket NOTE It is used with an 9.8 AC Power Cable.

Port Description

10/100BASE-TX port

A 10/100BASE-TX Ethernet electrical port sends and receives service data at 10/100 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-1462 lists the attributes of a 10/100BASE-TX Ethernet electrical port.

Table 4-1462 Attributes of a 10/100BASE-TX Ethernet electrical port

Attribute	Item
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-1463 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-1463 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a FE optical module, it can transmit and receive data at 100 Mbit/s. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. Table 4-1464 describes the attributes of a 1000BASE-X Ethernet optical port.

Table 4-1464 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1465.

Table 4-1465 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1466 describes the attributes of an ETH management port.

Table 4-1466 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

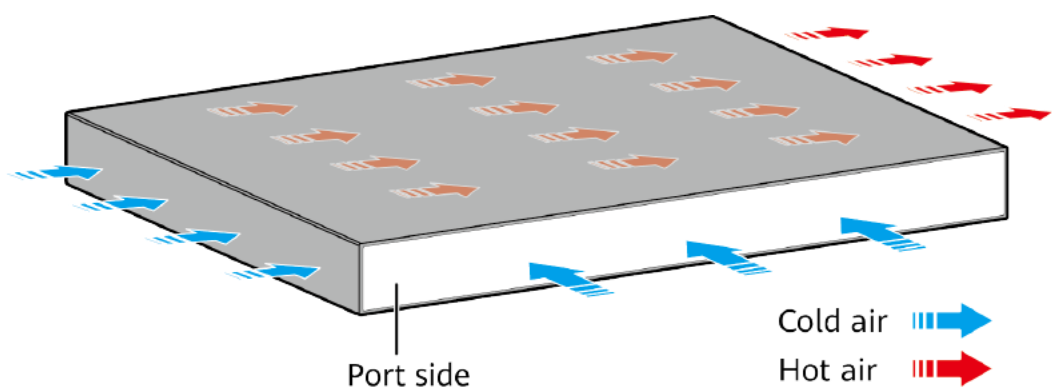
The S5735S-L48FT4S-A has similar indicators to those on the S5735-L12P4S-A except that the S5735S-L48FT4S-A does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5735S-L48FT4S-A has a built-in AC power module and does not support pluggable power modules.

Heat Dissipation

The S5735S-L48FT4S-A has one built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1467 lists technical specifications of the S5735S-L48FT4S-A.

Table 4-1467 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	50.68 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Weight (with packaging)	4.42 kg (9.75 lb)
Stack ports	Any 10/100/1000BASE-T ports or 1000BASE-X ports (applicable in V200R019C10 and later versions)
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none">AC input: 100 V AC to 240 V AC, 50/60 HzHigh-Voltage DC input: 240 V DC
Maximum voltage range	<ul style="list-style-type: none">AC input: 90 V AC to 264 V AC, 47 Hz to 63 HzHigh-Voltage DC input: 190 V DC to 290 V DC
Maximum power consumption (100% throughput, full speed of fans)	44 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">Tested according to ATIS standard	30 W

Item	Description
<ul style="list-style-type: none"> • EEE enabled • No PoE power consumption 	
<p>Operating temperature</p>	<p>-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>The switch cannot be started when the ambient temperature is lower than 0 °C (32 °F).</p>
<p>Short-term operating temperature</p>	<p>-5 °C to +55 °C (23 °F to 131 °F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> • The equipment operates at a temperature of over 50 °C (122 °F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 50 °C (122 °F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 50 °C (122 °F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
<p>Storage temperature</p>	<p>-40 °C to +70 °C (-40 °F to +158 °F)</p>
<p>Noise under normal temperature (27 °C, sound power)</p>	<p>< 53.3 dB(A)</p>
<p>Relative humidity</p>	<p>5% to 95%, noncondensing</p>
<p>Operating altitude</p>	<p>0-5000 m (0-16404 ft.)</p>
<p>Certification</p>	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
<p>Part number</p>	<p>98010935</p>

4.29.10 S5735S-L48T4S-A

Version Mapping

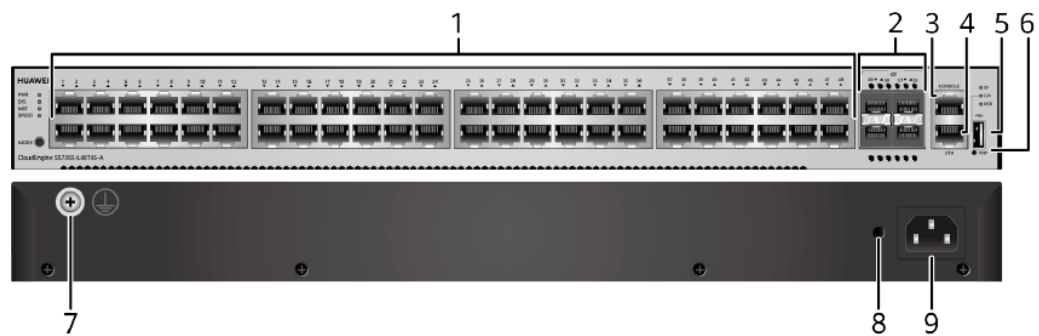
Table 4-1468 lists the mapping between the S5735S-L48T4S-A chassis and software versions.

Table 4-1468 Version mapping

Series	Model	Software Version
S5735S-L	S5735S-L48T4S-A	V200R019C00 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-541 S5735S-L48T4S-A appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button

			<p>NOTICE</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
7	<p>Ground screw</p> <p>NOTE</p> <p>It is used with a 9.1 Ground Cable.</p>	8	<p>Jack for AC power cable locking strap</p> <p>NOTE</p> <p>The AC power cable locking strap is not delivered with the switch.</p>
9	<p>AC socket</p> <p>NOTE</p> <p>It is used with an 9.8 AC Power Cable.</p>	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-1469 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-1469 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a FE optical module, it can transmit and receive data at 100 Mbit/s. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. Table 4-1470 describes the attributes of a 1000BASE-X Ethernet optical port.

Table 4-1470 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
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Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1471.

Table 4-1471 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1472 describes the attributes of an ETH management port.

Table 4-1472 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

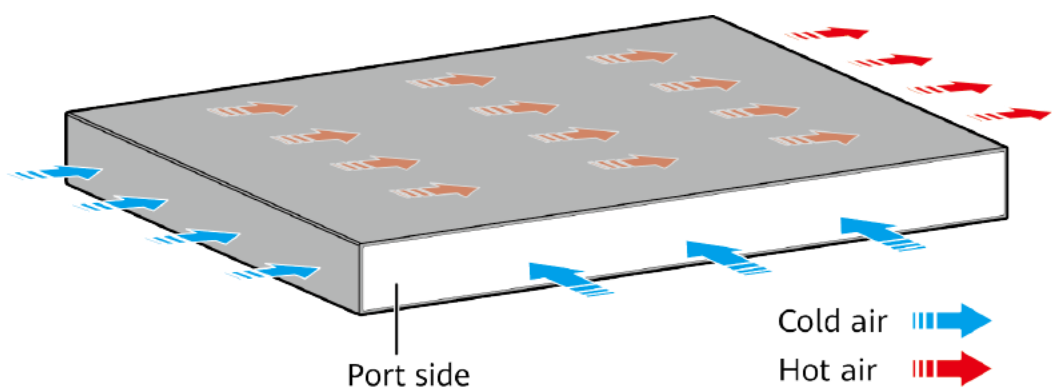
The S5735S-L48T4S-A has similar indicators to those on the S5735-L12P4S-A except that the S5735S-L48T4S-A does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5735S-L48T4S-A has a built-in AC power module and does not support pluggable power modules.

Heat Dissipation

The S5735S-L48T4S-A has one built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1473 lists technical specifications of the S5735S-L48T4S-A.

Table 4-1473 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	46.36 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Weight (with packaging)	4.42 kg (9.75 lb)
Stack ports	Any 10/100/1000BASE-T ports or 1000BASE-X ports (applicable in V200R019C10 and later versions)
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none">AC input: 100 V AC to 240 V AC, 50/60 HzHigh-Voltage DC input: 240 V DC
Maximum voltage range	<ul style="list-style-type: none">AC input: 90 V AC to 264 V AC, 47 Hz to 63 HzHigh-Voltage DC input: 190 V DC to 290 V DC
Maximum power consumption (100% throughput, full speed of fans)	53 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">Tested according to ATIS standard	37 W

Item	Description
<ul style="list-style-type: none"> • EEE enabled • No PoE power consumption 	
<p>Operating temperature</p>	<p>-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>The switch cannot be started when the ambient temperature is lower than 0 °C (32 °F).</p>
<p>Short-term operating temperature</p>	<p>-5 °C to +55 °C (23 °F to 131 °F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> • The equipment operates at a temperature of over 50 °C (122 °F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 50 °C (122 °F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 50 °C (122 °F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
<p>Storage temperature</p>	<p>-40 °C to +70 °C (-40 °F to +158 °F)</p>
<p>Noise under normal temperature (27 °C, sound power)</p>	<p>< 53.3 dB(A)</p>
<p>Relative humidity</p>	<p>5% to 95%, noncondensing</p>
<p>Operating altitude</p>	<p>0-5000 m (0-16404 ft.)</p>
<p>Certification</p>	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
<p>Part number</p>	<p>98010934</p>

4.29.11 S5735S-L48T4X-A

Version Mapping

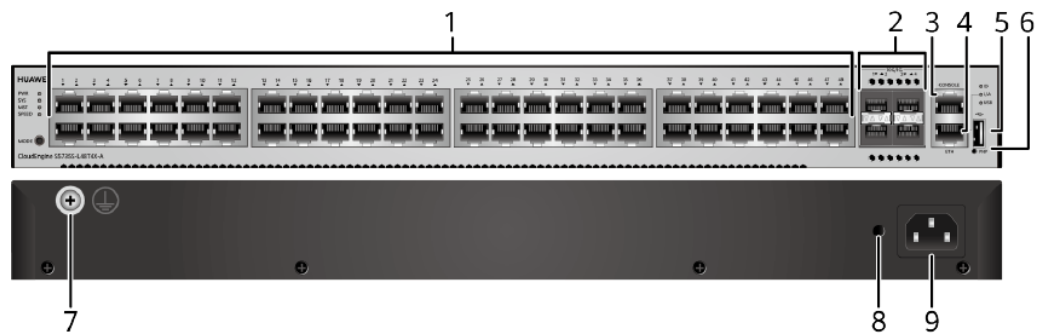
Table 4-1474 lists the mapping between the S5735S-L48T4X-A chassis and software versions.

Table 4-1474 Version mapping

Series	Model	Software Version
S5735S-L	S5735S-L48T4X-A	V200R019C00 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-542 S5735S-L48T4X-A appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber
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			• 9.14 Dedicated Stack Cable
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw NOTE It is used with a 9.1 Ground Cable.	8	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.
9	AC socket NOTE It is used with an 9.8 AC Power Cable.	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-1475 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-1475 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-1476 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-1476 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1477.

Table 4-1477 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1478 describes the attributes of an ETH management port.

Table 4-1478 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum	100 m

Attribute	Description
transmission distance	

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

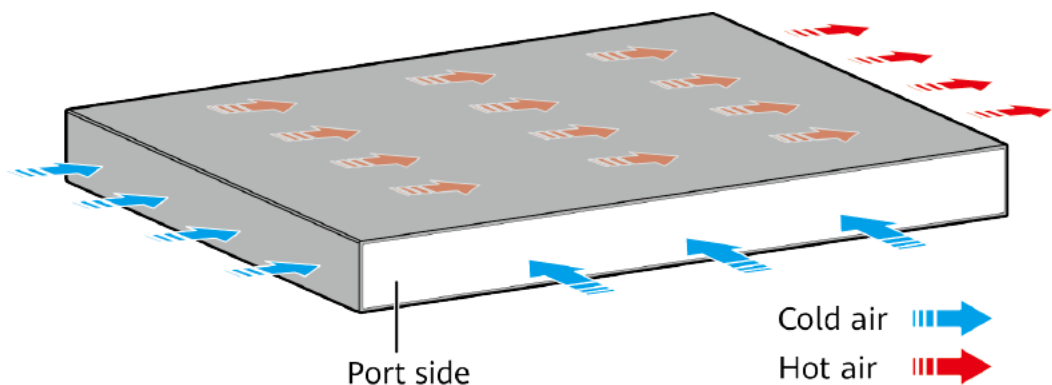
The S5735S-L48T4X-A has similar indicators to those on the S5735S-L12P4S-A except that the S5735S-L48T4X-A does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5735S-L48T4X-A has a built-in AC power module and does not support pluggable power modules.

Heat Dissipation

The S5735S-L48T4X-A has one built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



 NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1479 lists technical specifications of the S5735S-L48T4X-A.

Table 4-1479 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	41.48 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Weight (with packaging)	4.42 kg (9.75 lb)
Stack ports	Any 10/100/1000BASE-T ports or 10GE SFP+ ports (applicable in V200R019C10 and later versions)
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none"> AC input: 100 V AC to 240 V AC, 50/60 Hz High-Voltage DC input: 240 V DC
Maximum voltage range	<ul style="list-style-type: none"> AC input: 90 V AC to 264 V AC, 47 Hz to 63 Hz High-Voltage DC input: 190 V DC to 290 V DC
Maximum power consumption (100% throughput,	54 W

Item	Description
full speed of fans)	
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	39 W
Operating temperature	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) <p>NOTE</p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0 °C (32 °F). The operating temperature of the switch is -5 °C to +45 °C (23 °F to 113 °F) when it uses 10GE SFP+ optical modules with 40 km or longer transmission distances.
Short-term operating temperature	-5 °C to +55 °C (23 °F to 131 °F) at an altitude of 0-1800 m (0-5906 ft.) <p>NOTE</p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> • The equipment operates at a temperature of over 50 °C (122 °F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 50 °C (122 °F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 50 °C (122 °F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 53.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)

Item	Description
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010937

4.29.12 S5735S-L48P4S-A

Version Mapping

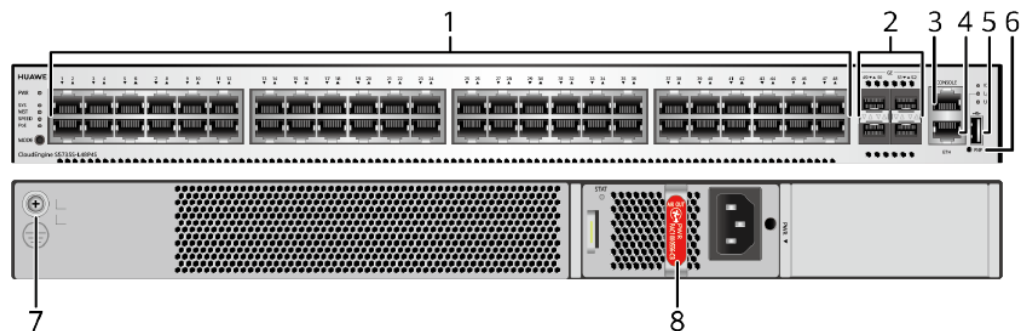
Table 4-1480 lists the mapping between the S5735S-L48P4S-A chassis and software versions.

Table 4-1480 Version mapping

Series	Model	Software Version
S5735S-L	S5735S-L48P4S-A	V200R019C00 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-543 S5735S-L48P4S-A appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	Four 1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules
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			<ul style="list-style-type: none"> • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	One console port	4	One ETH management port
5	One USB port	6	<p>One PNP button</p> <p>NOTICE</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
7	<p>Ground screw</p> <p>NOTE</p> <p>It is used with a 9.1 Ground Cable.</p>	8	<p>Power module slot</p> <p>NOTE</p> <p>Applicable power module:</p> <ul style="list-style-type: none"> • 5.24 PAC1000S56-CB (1000 W PoE AC Power Module) • 5.25 PAC1000S56-DB (1000 W PoE AC Power Module) (applicable in V200R020C10 and later versions) • 5.26 PDC1000S56-CB (1000 W PoE DC Power Module) (applicable in V200R021C00 and later versions) • 5.23 PAC600S56-CB (600 W AC&240 V DC Power Module (Back to Front, Power panel side exhaust)) (applicable in V200R021C10 and later versions)

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-1481 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-1481 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission	100 m

Attribute	Description
distance	

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a FE optical module, it can transmit and receive data at 100 Mbit/s. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. Table 4-1482 describes the attributes of a 1000BASE-X Ethernet optical port.

Table 4-1482 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1483.

Table 4-1483 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1484 describes the attributes of an ETH management port.

Table 4-1484 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5735S-L48P4S-A has the same types of indicators as the S5735-L12P4S-A. For details, see [Indicator Description](#).

Power Supply Configuration

The S5735S-L48P4S-A is a PoE switch. It has one power module slot, which can have a 1000 W PoE power module installed. Table 4-1485 lists its power supply configurations.

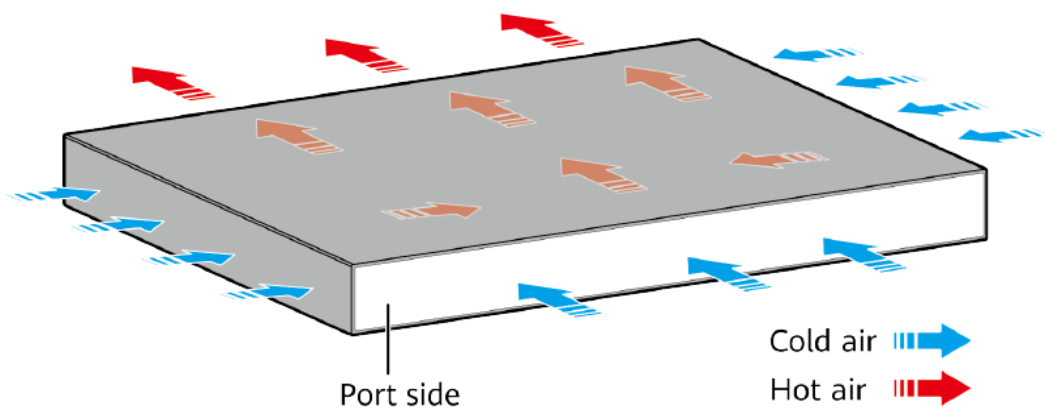
Table 4-1485 Power supply configurations

Power Module	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W AC (220 V) 1000 W DC	874 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 48 • 802.3at (30 W per port): 29
1000 W AC (110 V)	779 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 48 • 802.3at (30 W per port): 25

Power Module	Available PoE Power	Maximum Number of Ports (Fully Loaded)
600 W AC (220 V)	494 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 32 802.3at (30 W per port): 16
600 W AC (110 V)	209 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 13 802.3at (30 W per port): 7

Heat Dissipation

The S5735S-L48P4S-A has two built-in fans for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1486 lists technical specifications of the S5735S-L48P4S-A.

Table 4-1486 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	61.7 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV

Item	Description
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 444.2 mm (1.72 in. x 17.4 in. x 17.49 in.)
Weight (with packaging)	8.7 kg (19.18 lb)
Stack ports	Any 10/100/1000BASE-T ports or 1000BASE-X ports (applicable in V200R019C10 and later versions)
RTC	Not supported
RPS	Not supported
PoE	Supported
Rated voltage range	<ul style="list-style-type: none"> AC input: 100 V AC to 130 V AC, 200 V AC to 240 V AC, 50/60 Hz High-Voltage DC input: 240 V DC DC input: -48 V DC to -60 V DC
Maximum voltage range	<ul style="list-style-type: none"> AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz High-Voltage DC input: 190 V DC to 290 V DC DC input: -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> Not providing the PoE function: 75 W 100% PoE loads: 911 W (PoE: 874 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> Tested according to ATIS standard EEE enabled No PoE power consumption 	58 W
Operating temperature	<p>-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p>

Item	Description
	The switch cannot be started when the ambient temperature is lower than 0 °C (32 °F).
Short-term operating temperature	<p>-5 °C to +55 °C (23 °F to 131 °F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none">• The equipment operates at a temperature of over 50 °C (122 °F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 50 °C (122 °F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 50 °C (122 °F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 58.9 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010946

4.29.13 S5735S-L48P4X-A

Version Mapping

Table 4-1487 lists the mapping between the S5735S-L48P4X-A chassis and software versions.

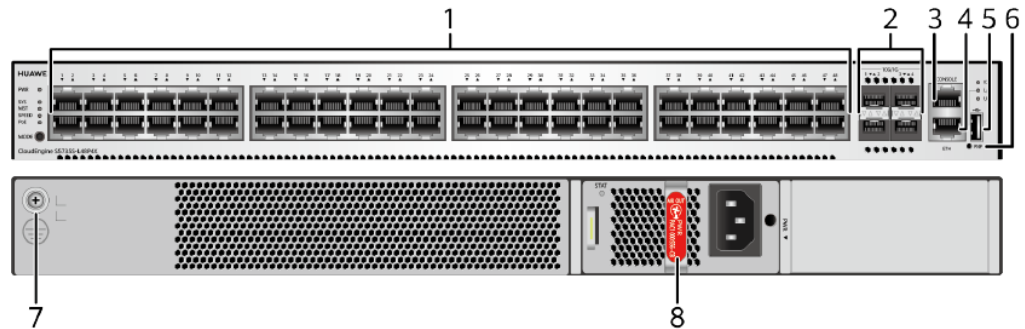
Table 4-1487 Version mapping

Series	Model	Software Version
S5735S-L	S5735S-L48P4X-A	V200R019C00 and later versions

Series	Model	Software Version
		NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-544 S5735S-L48P4X-A appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you

			press the PNP button.
7	<p>Ground screw</p> <p>NOTE It is used with a 9.1 Ground Cable.</p>	8	<p>Power module slot</p> <p>NOTE Applicable power module:</p> <ul style="list-style-type: none"> • 5.24 PAC1000S56-CB (1000 W PoE AC Power Module) • 5.25 PAC1000S56-DB (1000 W PoE AC Power Module) (applicable in V200R020C10 and later versions) • 5.26 PDC1000S56-CB (1000 W PoE DC Power Module) (applicable in V200R021C00 and later versions) • 5.23 PAC600S56-CB (600 W AC&240 V DC Power Module (Back to Front, Power panel side exhaust)) (applicable in V200R021C10 and later versions)

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-1488 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-1488 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ optical port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-1489 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-1489 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used

Attribute	Description
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1490.

Table 4-1490 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1491 describes the attributes of an ETH management port.

Table 4-1491 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5735S-L48P4X-A has the same types of indicators as the S5735-L12P4S-A. For details, see [Indicator Description](#).

Power Supply Configuration

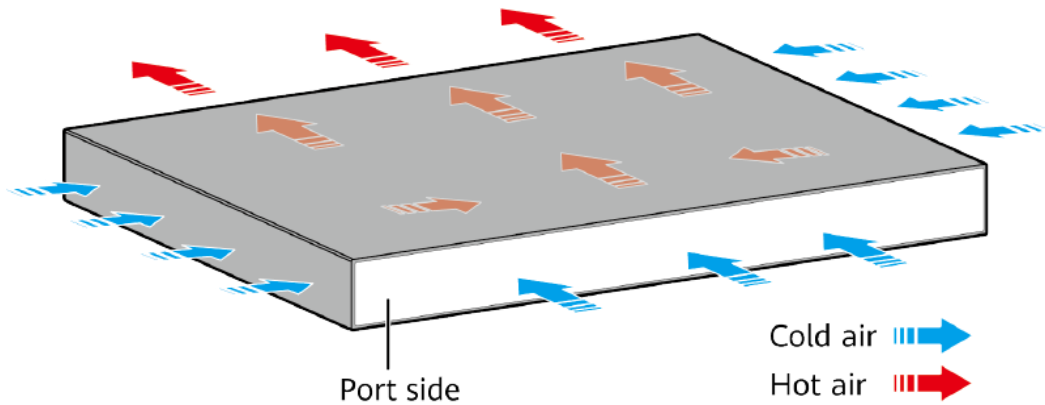
The S5735S-L48P4X-A is a PoE switch. It has one power module slot, which can have a 1000 W PoE power module installed. Table 4-1492 lists its power supply configurations.

Table 4-1492 Power supply configurations

Power Module	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W AC (220 V) 1000 W DC	874 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 48 • 802.3at (30 W per port): 29
1000 W AC (110 V)	779 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 48 • 802.3at (30 W per port): 25
600 W AC (220 V)	494 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 32 • 802.3at (30 W per port): 16
600 W AC (110 V)	209 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 13 • 802.3at (30 W per port): 7

Heat Dissipation

The S5735S-L48P4X-A has two built-in fans for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1493 lists technical specifications of the S5735S-L48P4X-A.

Table 4-1493 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	61.7 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 444.2 mm (1.72 in. x 17.4 in. x 17.49 in.)
Weight (with packaging)	8.7 kg (19.18 lb)
Stack ports	Any 10/100/1000BASE-T ports or 10GE SFP+ ports (applicable in V200R019C10 and later versions)

Item	Description
RTC	Not supported
RPS	Not supported
PoE	Supported
Rated voltage range	<ul style="list-style-type: none"> AC input: 100 V AC to 130 V AC, 200 V AC to 240 V AC, 50/60 Hz High-Voltage DC input: 240 V DC DC input: -48 V DC to -60 V DC
Maximum voltage range	<ul style="list-style-type: none"> AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz High-Voltage DC input: 190 V DC to 290 V DC DC input: -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> Not providing the PoE function: 80 W 100% PoE loads: 914 W (PoE: 874 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> Tested according to ATIS standard EEE enabled No PoE power consumption 	59 W
Operating temperature	<p>-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>The switch cannot be started when the ambient temperature is lower than 0 °C (32 °F).</p>
Short-term operating temperature	<p>-5 °C to +55 °C (23 °F to 131 °F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> The equipment operates at a temperature of over 50 °C (122 °F) consecutively for at most 96 hours in one year. The equipment operates at a temperature of over 50 °C (122 °F) for a total of no more than 360 hours in one year. The equipment operates at a temperature of over 50 °C (122 °F) for no

Item	Description
	more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 58.9 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010945

4.30 S5735-L1

4.30.1 S5735-L8T4S-A1

Overview

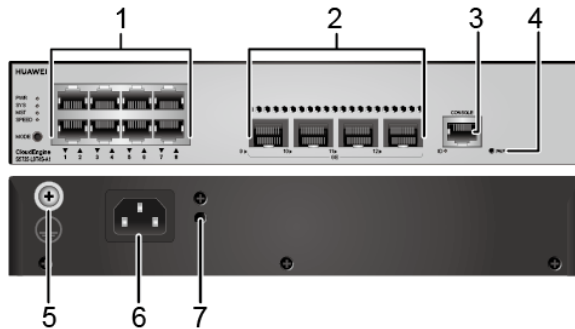
Table 4-1494 Basic information about the S5735-L8T4S-A1

Item	Details
Description	S5735-L8T4S-A1 (8*10/100/1000BASE-T ports, 4*GE SFP ports, AC power)
Part Number	98011284
Model	S5735-L8T4S-A1
First supported version	V200R020C10
Remarks	Some models cannot be downgraded due to component upgrade. Therefore, you are advised to run the display system-software information command to check the software versions supported by the device before performing a downgrade. If the device does not support the display system-software

Item	Details
	information command, it can be downgraded.

Components

Figure 4-545 S5735-L8T4S-A1 appearance



1	Eight 10/100/1000BASE-T ports	2	Four 1000BASE-X ports
3	One console port	4	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
5	Ground screw NOTE It is used with a 9.1 Ground Cable.	6	AC socket NOTE It is used with an 9.8 AC Power Cable.
7	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.	-	-

Ports

Table 4-1495 Ports on the S5735-L8T4S-A1

Port	Connector Type	Description	Available Components
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-	9.4 Ethernet Cable

Port	Connector Type	Description	Available Components
		T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.	
1000BASE-X port	SFP	A 1000BASE-X port can send and receive data at 100 or 1000 Mbit/s.	<ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.17 Industrial Optical Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
Console port	RJ45	The console port is connected to a console for on-site configuration.	9.13 Console Cable

Indicators and Buttons

The S5735-L8T4S-A1 has similar indicators to those on the S5735-L24P4X-A1 except that the S5735-L8T4S-A1 does not have USB and PoE mode indicators. For details, see the S5735-L24P4X-A1.

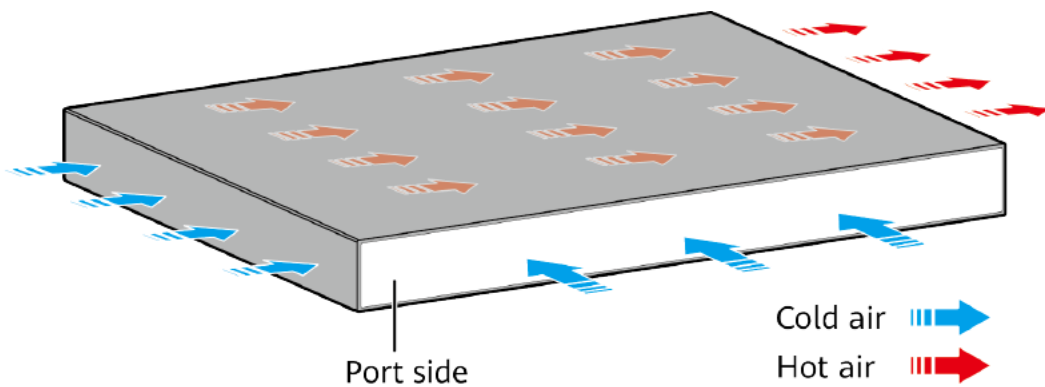
Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules.

Heat Dissipation System

The switch has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.

When working properly at a normal temperature, the device meets the desktop-class noise requirements. However, the fan speed may be high and the noise may be loud during device startup.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1496 Technical specifications of the S5735-L8T4S-A1

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 250.0 mm x 180.0 mm (1.72 in. x 9.84 in. x 7.1 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 250.0 mm x 187.0 mm (1.72 in. x 9.84 in. x 7.36 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90.0 mm x 370.0 mm x 380.0 mm (3.54 in. x 14.57 in. x 14.96 in.)
Chassis height [U]	1 U

Item	Specification
Weight without packaging [kg(lb)]	1.38 kg (3.04 lb)
Weight with packaging [kg(lb)]	2.02 kg (4.45 lb)
Typical power consumption [W]	21.2 W
Typical heat dissipation [BTU/hour]	72.34 BTU/hour
Maximum power consumption [W]	26.3 W
Maximum heat dissipation [BTU/hour]	89.74 BTU/hour
MTBF [year]	71.82 year
MTTR [hour]	2 hour
Availability	>0.99999
Noise at normal temperature (acoustic power) [dB(A)]	43 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	31.5 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	1
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5 °C to +50 °C (23 °F to 122 °F) (0 m to 1800 m altitude, non-industrial optical modules) -5 °C to +55 °C (23 °F to 131 °F) (0 m to 1800 m altitude, industrial optical modules with transmission distances less than or equal to 10 km)
Short-term operating temperature [°C(°F)]	Not supported
Restriction on the operating temperature variation rate [°C(°F)]	When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0 °C (32 °F). The operating temperature ranges from -5 °C to +45 °C (23 °F to 113 °F) when optical modules with transmission distances greater than or equal to 70 km are used.
Storage temperature [°C(°F)]	-40 °C to +70 °C (-40 °F to +158 °F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing

Item	Specification
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	AC built-in
Rated input voltage [V]	AC input: 100 V AC to 240 V AC, 50/60 Hz
Input voltage range [V]	AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz
Maximum input current [A]	0.8 A
Memory	512 MB
Flash memory	512 MB
Console port	RJ45
Eth Management port	Not supported
USB	Not supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: ± 7 kV
Power supply surge protection [kV]	± 6 kV in differential mode, ± 6 kV in common mode
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

4.30.2 S5735-L8P4S-A1

Overview

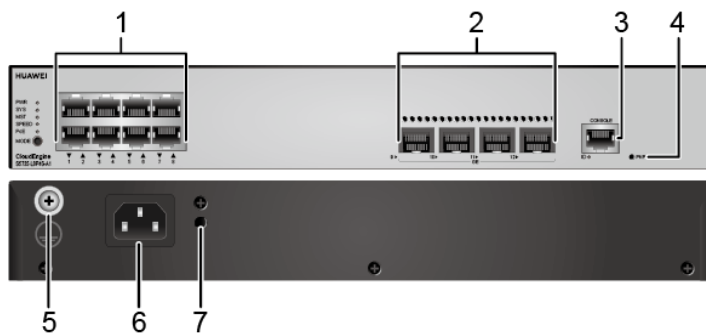
Table 4-1497 Basic information about the S5735-L8P4S-A1

Item	Details
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Item	Details
Description	S5735-L8P4S-A1 (8*10/100/1000BASE-T ports, 4*GE SFP ports, PoE+, AC power)
Part Number	98011295
Model	S5735-L8P4S-A1
First supported version	V200R020C10

Components

Figure 4-546 S5735-L8P4S-A1 appearance



1	Eight 10/100/1000BASE-T PoE+ ports	2	Four 1000BASE-X ports
3	One console port	4	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
5	Ground screw NOTE It is used with a 9.1 Ground Cable.	6	AC socket NOTE It is used with an 9.8 AC Power Cable.
7	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.	-	-

Ports

Table 4-1498 Ports on the S5735-L8P4S-A1

Port	Connector Type	Description	Available Components
10/100/1000BASE-T PoE+ port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s. The port supports the PoE function.	9.4 Ethernet Cable
1000BASE-X port	SFP	A 1000BASE-X port can send and receive data at 100 or 1000 Mbit/s.	<ul style="list-style-type: none">• 10.4 FE SFP/eSFP Optical Modules• 10.5 GE eSFP Optical Modules• 10.7 GE-CWDM eSFP Optical Modules• 10.9 GE-DWDM eSFP Optical Modules• 10.10 GE SFP Copper Modules• 10.17 Industrial Optical Modules• 10.12 10GE SFP+ Optical Modules• 10.13 10GE-CWDM SFP+ Optical Modules• 10.14 10GE-DWDM SFP+ Optical Modules• 9.15 Copper Cable• 9.3 Optical Fiber• 9.14 Dedicated Stack Cable
Console port	RJ45	The console port is connected to a	9.13 Console Cable

Port	Connector Type	Description	Available Components
		console for on-site configuration.	

Indicators and Buttons

The S5735-L8P4S-A1 has the same types of indicators as the S5735-L24P4X-A1. For details, see the S5735-L24P4X-A1.

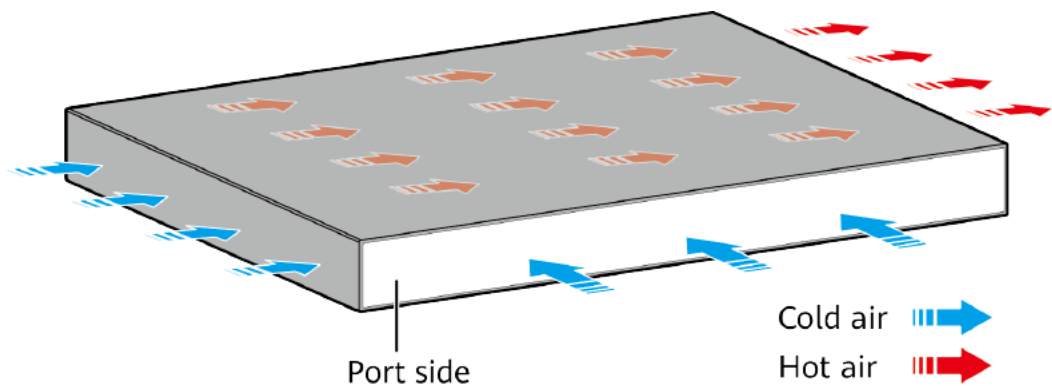
Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules. The built-in power module can provide 124 W PoE power, which ensures full PoE power on 8 ports in compliance with 802.3af or on 4 ports in compliance with 802.3at.

Heat Dissipation System

The switch has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.

When working properly at a normal temperature, the device meets the desktop-class noise requirements. However, the fan speed may be high and the noise may be loud during device startup.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1499 Technical specifications of the S5735-L8P4S-A1

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 300.0 mm x 220.0 mm (1.72 in. x 11.8 in. x 8.7 in.)

Item	Specification
	Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 300.0 mm x 227.0 mm (1.72 in. x 11.8 in. x 8.94 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	110.0 mm x 435.0 mm x 360.0 mm (4.33 in. x 17.13 in. x 14.17 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	2.25 kg (4.96 lb)
Weight with packaging [kg(lb)]	3.17 kg (7 lb)
Typical power consumption [W]	28.4 W
Typical heat dissipation [BTU/hour]	96.9 BTU/hour
Maximum power consumption [W]	<ul style="list-style-type: none"> Not providing the PoE function: 38.6 W 100% PoE loads: 162.6 W (PoE: 124 W)
Maximum heat dissipation [BTU/hour]	<ul style="list-style-type: none"> Not providing the PoE function: 131.71 100% PoE loads: 554.81
MTBF [year]	66.56 year
MTTR [hour]	2 hour
Availability	>0.99999
Noise at normal temperature (acoustic power) [dB(A)]	42.2 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	1
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	<p>-5 °C to +50 °C (23 °F to 122 °F) (0 m to 1800 m altitude, non-industrial optical modules)</p> <p>-5 °C to +55 °C (23 °F to 131 °F) (0 m to 1800 m altitude, industrial optical modules with transmission distances less than or equal to 10 km)</p>
Short-term operating temperature [°C(°F)]	Not supported
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>The switch cannot be started when the</p>

Item	Specification
	ambient temperature is lower than 0 °C (32 °F). The operating temperature ranges from -5 °C to +45 °C (23 °F to 113 °F) when optical modules with transmission distances greater than or equal to 70 km are used.
Storage temperature [°C(°F)]	-40 °C to +70 °C (-40 °F to +158 °F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	AC built-in
Rated input voltage [V]	AC input: 100 V AC to 240 V AC, 50/60 Hz
Input voltage range [V]	AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz
Maximum input current [A]	3 A
Memory	512 MB
Flash memory	512 MB
Console port	RJ45
Eth Management port	Not supported
USB	Not supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: ±7 kV
Power supply surge protection [kV]	±6 kV in differential mode, ±6 kV in common mode
Types of fans	Built-in
Heat dissipation	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Supported
Certification	EMC certification Safety certification Manufacturing certification

4.30.3 S5735-L8T4X-A1

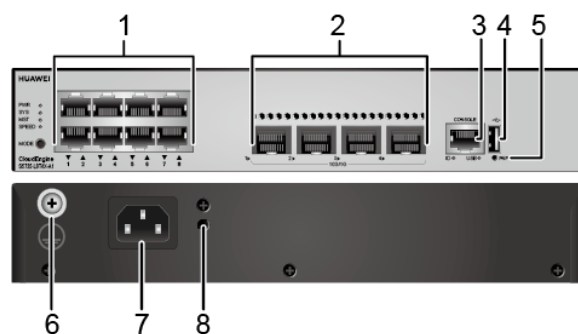
Overview

Table 4-1500 Basic information about the S5735-L8T4X-A1

Item	Details
Description	S5735-L8T4X-A1 (8*10/100/1000BASE-T ports, 4*10GE SFP+ ports, AC power)
Part Number	98011282
Model	S5735-L8T4X-A1
First supported version	V200R020C10
Remarks	Some models cannot be downgraded due to component upgrade. Therefore, you are advised to run the display system-software information command to check the software versions supported by the device before performing a downgrade. If the device does not support the display system-software information command, it can be downgraded.

Components

Figure 4-547 S5735-L8T4X-A1 appearance



1	Eight 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports
3	One console port	4	One USB port
5	One PNP button NOTICE To restore the factory settings and reset the	6	Ground screw NOTE It is used with a 9.1 Ground Cable.

	<p>switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>		
7	<p>AC socket</p> <p>NOTE It is used with an 9.8 AC Power Cable.</p>	8	<p>Jack for AC power cable locking strap</p> <p>NOTE The AC power cable locking strap is not delivered with the switch.</p>

Ports

Table 4-1501 Ports on the S5735-L8T4X-A1

Port	Connector Type	Description	Available Components
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.	9.4 Ethernet Cable
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 10.17 Industrial Optical Modules • 9.15 Copper Cable

Port	Connector Type	Description	Available Components
			<ul style="list-style-type: none">• 9.3 Optical Fiber• 9.14 Dedicated Stack Cable
Console port	RJ45	The console port is connected to a console for on-site configuration.	9.13 Console Cable
USB port	USB 2.0 Type A	<p>The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.</p> <p>USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.</p>	USB flash drive

Indicators and Buttons

The S5735-L8T4X-A1 has similar indicators to those on the S5735-L24P4X-A1 except that the S5735-L8T4X-A1 does not have a PoE mode indicator. For details, see the S5735-L24P4X-A1.

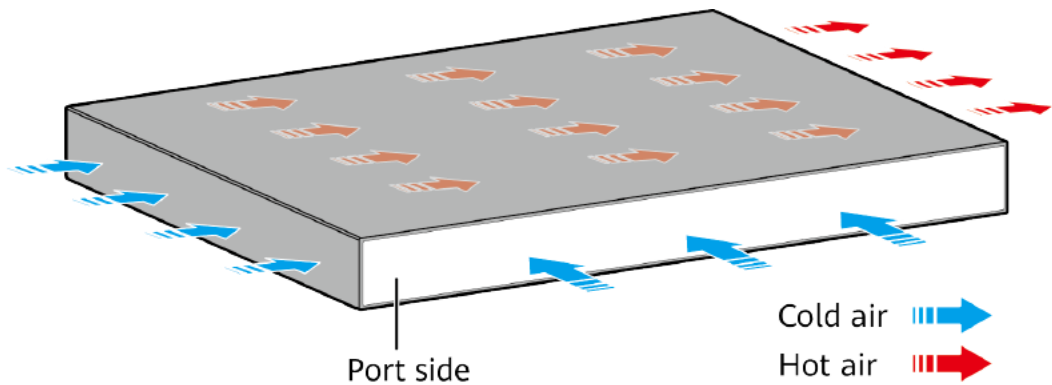
Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules.

Heat Dissipation System

The switch has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.

When working properly at a normal temperature, the device meets the desktop-class noise requirements. However, the fan speed may be high and the noise may be loud during device startup.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1502 Technical specifications of the S5735-L8T4X-A1

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 250.0 mm x 180.0 mm (1.72 in. x 9.84 in. x 7.1 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 250.0 mm x 187.0 mm (1.72 in. x 9.84 in. x 7.36 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90.0 mm x 370.0 mm x 380.0 mm (3.54 in. x 14.57 in. x 14.96 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	1.44 kg (3.18 lb)
Weight with packaging [kg(lb)]	2.08 kg (4.59 lb)
Typical power consumption [W]	21.1 W
Typical heat dissipation [BTU/hour]	72 BTU/hour
Maximum power consumption [W]	26.3 W
Maximum heat dissipation [BTU/hour]	89.74 BTU/hour

Item	Specification
MTBF [year]	67.07 year
MTTR [hour]	2 hour
Availability	>0.99999
Noise at normal temperature (acoustic power) [dB(A)]	43 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	31.5 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	1
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5 °C to +50 °C (23 °F to 122 °F) (0 m to 1800 m altitude, non-industrial optical modules) -5 °C to +55 °C (23 °F to 131 °F) (0 m to 1800 m altitude, industrial optical modules with transmission distances less than or equal to 10 km)
Short-term operating temperature [°C(°F)]	Not supported
Restriction on the operating temperature variation rate [°C(°F)]	When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0 °C (32 °F). The operating temperature ranges from -5 °C to +45 °C (23 °F to 113 °F) when optical modules with transmission distances greater than or equal to 70 km are used.
Storage temperature [°C(°F)]	-40 °C to +70 °C (-40 °F to +158 °F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	AC built-in
Rated input voltage [V]	AC input: 100 V AC to 240 V AC, 50/60 Hz
Input voltage range [V]	AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz

Item	Specification
Maximum input current [A]	0.8 A
Memory	512 MB
Flash memory	512 MB
Console port	RJ45
Eth Management port	Not supported
USB	Supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: ± 7 kV
Power supply surge protection [kV]	± 6 kV in differential mode, ± 6 kV in common mode
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

4.30.4 S5735-L8P4X-A1

Overview

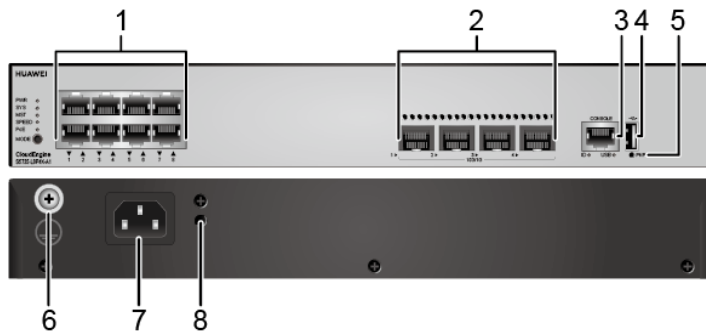
Table 4-1503 Basic information about the S5735-L8P4X-A1

Item	Details
Description	S5735-L8P4X-A1 (8*10/100/1000BASE-T ports, 4*10GE SFP+ ports, PoE+, AC power)
Part Number	98011291
Model	S5735-L8P4X-A1
First supported version	V200R020C10
Remarks	Some models cannot be downgraded due to

Item	Details
	<p>component upgrade. Therefore, you are advised to run the display system-software information command to check the software versions supported by the device before performing a downgrade. If the device does not support the display system-software information command, it can be downgraded.</p>

Components

Figure 4-548 S5735-L8P4X-A1 appearance



1	Eight 10/100/1000BASE-T PoE+ ports	2	Four 10GE SFP+ ports
3	One console port	4	One USB port
5	<p>One PNP button</p> <p>NOTICE</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	6	<p>Ground screw</p> <p>NOTE</p> <p>It is used with a 9.1 Ground Cable.</p>
7	<p>AC socket</p> <p>NOTE</p> <p>It is used with an 9.8 AC Power Cable.</p>	8	<p>Jack for AC power cable locking strap</p> <p>NOTE</p> <p>The AC power cable locking strap is not delivered with the switch.</p>

Ports

Table 4-1504 Ports on the S5735-L8P4X-A1

Port	Connector Type	Description	Available Components
10/100/1000BASE-T PoE+ port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s. The port supports the PoE function.	9.4 Ethernet Cable
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none">• 10.5 GE eSFP Optical Modules• 10.7 GE-CWDM eSFP Optical Modules• 10.9 GE-DWDM eSFP Optical Modules• 10.10 GE SFP Copper Modules• 10.12 10GE SFP+ Optical Modules• 10.13 10GE-CWDM SFP+ Optical Modules• 10.14 10GE-DWDM SFP+ Optical Modules• 10.17 Industrial Optical Modules• 9.15 Copper Cable• 9.3 Optical Fiber• 9.14 Dedicated Stack Cable
Console port	RJ45	The console port is connected to a console for on-site configuration.	9.13 Console Cable
USB port	USB 2.0 Type A	The USB port can	USB flash drive

Port	Connector Type	Description	Available Components
		<p>have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.</p> <p>USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.</p>	

Indicators and Buttons

The S5735-L8P4X-A1 has the same types of indicators as the S5735-L24P4X-A1. For details, see the S5735-L24P4X-A1.

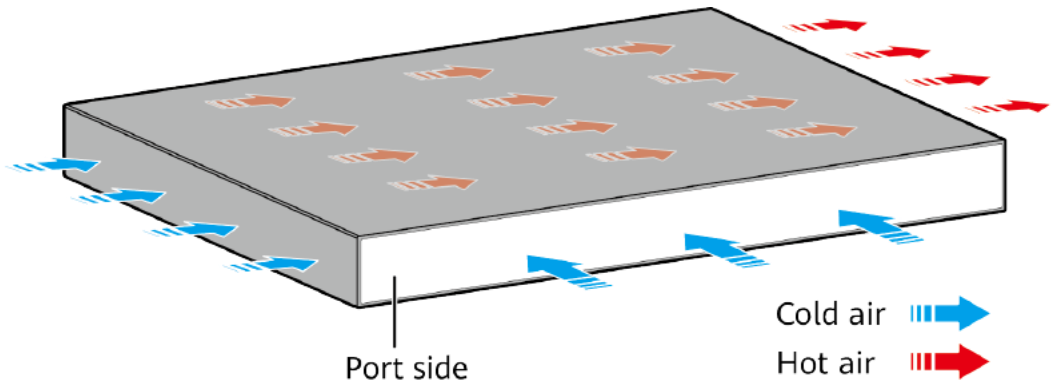
Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules. The built-in power module can provide 124 W PoE power, which ensures full PoE power on 8 ports in compliance with 802.3af or on 4 ports in compliance with 802.3at.

Heat Dissipation System

The switch has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.

When working properly at a normal temperature, the device meets the desktop-class noise requirements. However, the fan speed may be high and the noise may be loud during device startup.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1505 Technical specifications of the S5735-L8P4X-A1

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 300.0 mm x 220.0 mm (1.72 in. x 11.8 in. x 8.7 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 300.0 mm x 227.0 mm (1.72 in. x 11.8 in. x 8.94 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	110.0 mm x 435.0 mm x 360.0 mm (4.33 in. x 17.13 in. x 14.17 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	2.25 kg (4.96 lb)
Weight with packaging [kg(lb)]	3.17 kg (7 lb)
Typical power consumption [W]	28.7 W
Typical heat dissipation [BTU/hour]	97.93 BTU/hour
Maximum power consumption [W]	<ul style="list-style-type: none"> Not providing the PoE function: 39.1 W 100% PoE loads: 163.1 W (PoE: 124 W)
Maximum heat dissipation [BTU/hour]	<ul style="list-style-type: none"> Not providing the PoE function: 133.41 100% PoE loads: 556.51
MTBF [year]	62.46 year
MTTR [hour]	2 hour
Availability	>0.99999

Item	Specification
Noise at normal temperature (acoustic power) [dB(A)]	42.2 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	30.5 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	1
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5 °C to +50 °C (23 °F to 122 °F) (0 m to 1800 m altitude, non-industrial optical modules) -5 °C to +55 °C (23 °F to 131 °F) (0 m to 1800 m altitude, industrial optical modules with transmission distances less than or equal to 10 km)
Short-term operating temperature [°C(°F)]	Not supported
Restriction on the operating temperature variation rate [°C(°F)]	When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0 °C (32 °F). The operating temperature ranges from -5 °C to +45 °C (23 °F to 113 °F) when optical modules with transmission distances greater than or equal to 70 km are used.
Storage temperature [°C(°F)]	-40 °C to +70 °C (-40 °F to +158 °F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	AC built-in
Rated input voltage [V]	AC input: 100 V AC to 240 V AC, 50/60 Hz
Input voltage range [V]	AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz
Maximum input current [A]	3 A
Memory	512 MB
Flash memory	512 MB

Item	Specification
Console port	RJ45
Eth Management port	Not supported
USB	Supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: ± 7 kV
Power supply surge protection [kV]	± 6 kV in differential mode, ± 6 kV in common mode
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Supported
Certification	EMC certification Safety certification Manufacturing certification

4.30.5 S5735-L24T4S-A1

Overview

Table 4-1506 Basic information about the S5735-L24T4S-A1

Item	Details
Description	S5735-L24T4S-A1 (24*10/100/1000BASE-T ports, 4*GE SFP ports, AC power)
Part Number	98011306
Model	S5735-L24T4S-A1
First supported version	V200R020C10
Remarks	Some models cannot be downgraded due to component upgrade. Therefore, you are advised to run the display system-software information command to check the software versions supported by the device before performing a downgrade. If the device does not support the display system-software

Item	Details
	information command, it can be downgraded.

Components

Figure 4-549 S5735-L24T4S-A1 appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 1000BASE-X ports
3	One console port	4	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
5	Ground screw NOTE It is used with a 9.1 Ground Cable.	6	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.
7	AC socket NOTE It is used with an 9.8 AC Power Cable.	-	-

Ports

Table 4-1507 Ports on the S5735-L24T4S-A1

Port	Connector Type	Description	Available Components
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-	9.4 Ethernet Cable

Port	Connector Type	Description	Available Components
		T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.	
1000BASE-X port	SFP	A 1000BASE-X port can send and receive data at 100 or 1000 Mbit/s.	<ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.17 Industrial Optical Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
Console port	RJ45	The console port is connected to a console for on-site configuration.	9.13 Console Cable

Indicators and Buttons

The S5735-L24T4S-A1 has similar indicators to those on the S5735-L24P4X-A1 except that the S5735-L24T4S-A1 does not have USB and PoE mode indicators. For details, see the S5735-L24P4X-A1.

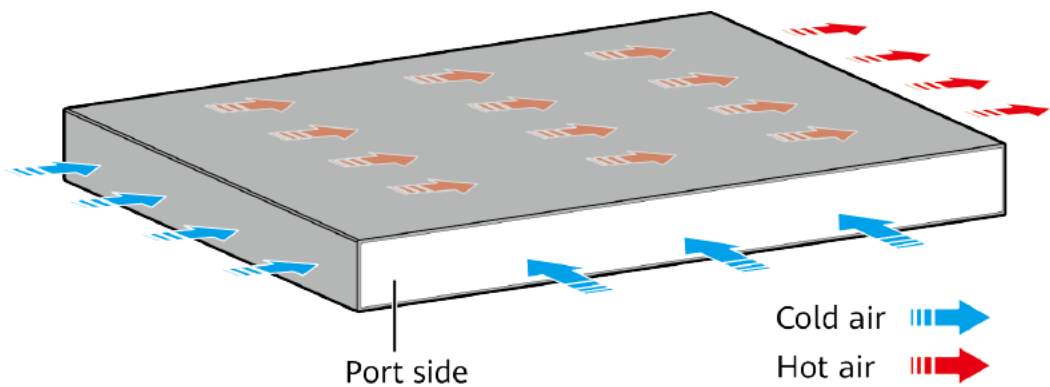
Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules.

Heat Dissipation System

The switch has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.

When working properly at a normal temperature, the device meets the desktop-class noise requirements. However, the fan speed may be high and the noise may be loud during device startup.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1508 Technical specifications of the S5735-L24T4S-A1

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90.0 mm x 550.0 mm x 360.0 mm (3.54 in. x 21.65 in. x 14.17 in.)
Chassis height [U]	1 U

Item	Specification
Weight without packaging [kg(lb)]	2.45 kg (5.4 lb)
Weight with packaging [kg(lb)]	3.34 kg (7.36 lb)
Typical power consumption [W]	32.7 W
Typical heat dissipation [BTU/hour]	111.58 BTU/hour
Maximum power consumption [W]	47.6 W
Maximum heat dissipation [BTU/hour]	162.42 BTU/hour
MTBF [year]	66.16 year
MTTR [hour]	2 hour
Availability	>0.99999
Noise at normal temperature (acoustic power) [dB(A)]	39 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	27.2 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	1
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5 °C to +50 °C (23 °F to 122 °F) (0 m to 1800 m altitude, non-industrial optical modules) -5 °C to +55 °C (23 °F to 131 °F) (0 m to 1800 m altitude, industrial optical modules with transmission distances less than or equal to 10 km)
Short-term operating temperature [°C(°F)]	Not supported
Restriction on the operating temperature variation rate [°C(°F)]	When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0 °C (32 °F). The operating temperature ranges from -5 °C to +45 °C (23 °F to 113 °F) when optical modules with transmission distances greater than or equal to 70 km are used.
Storage temperature [°C(°F)]	-40 °C to +70 °C (-40 °F to +158 °F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing

Item	Specification
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	AC built-in
Rated input voltage [V]	AC input: 100 V AC to 240 V AC, 50/60 Hz
Input voltage range [V]	AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz
Maximum input current [A]	2 A
Memory	512 MB
Flash memory	512 MB
Console port	RJ45
Eth Management port	Not supported
USB	Not supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: ± 7 kV
Power supply surge protection [kV]	± 6 kV in differential mode, ± 6 kV in common mode
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

4.30.6 S5735-L24P4S-A1

Overview

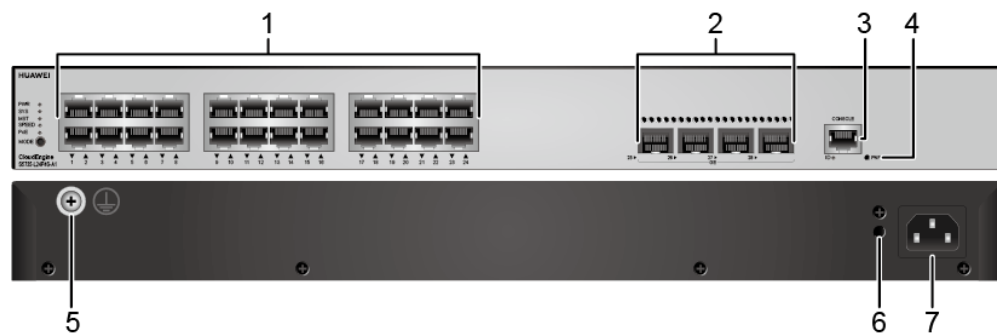
Table 4-1509 Basic information about the S5735-L24P4S-A1

Item	Details
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Item	Details
Description	S5735-L24P4S-A1 (24*10/100/1000BASE-T ports, 4*GE SFP ports, PoE+, AC power)
Part Number	98011321
Model	S5735-L24P4S-A1
First supported version	V200R020C10
Remarks	Some models cannot be downgraded due to component upgrade. Therefore, you are advised to run the display system-software information command to check the software versions supported by the device before performing a downgrade. If the device does not support the display system-software information command, it can be downgraded.

Components

Figure 4-550 S5735-L24P4S-A1 appearance



1	Twenty-four 10/100/1000BASE-T PoE+ ports	2	Four 1000BASE-X ports
3	One console port	4	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
5	Ground screw	6	Jack for AC power cable locking strap

	NOTE It is used with a 9.1 Ground Cable.		NOTE The AC power cable locking strap is not delivered with the switch.
7	AC socket NOTE It is used with an 9.8 AC Power Cable.	-	-

Ports

Table 4-1510 Ports on the S5735-L24P4S-A1

Port	Connector Type	Description	Available Components
10/100/1000BASE-T PoE+ port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s. The port supports the PoE function.	9.4 Ethernet Cable
1000BASE-X port	SFP	A 1000BASE-X port can send and receive data at 100 or 1000 Mbit/s.	<ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable

Port	Connector Type	Description	Available Components
			<ul style="list-style-type: none"> 9.3 Optical Fiber 9.14 Dedicated Stack Cable
Console port	RJ45	The console port is connected to a console for on-site configuration.	9.13 Console Cable

Indicators and Buttons

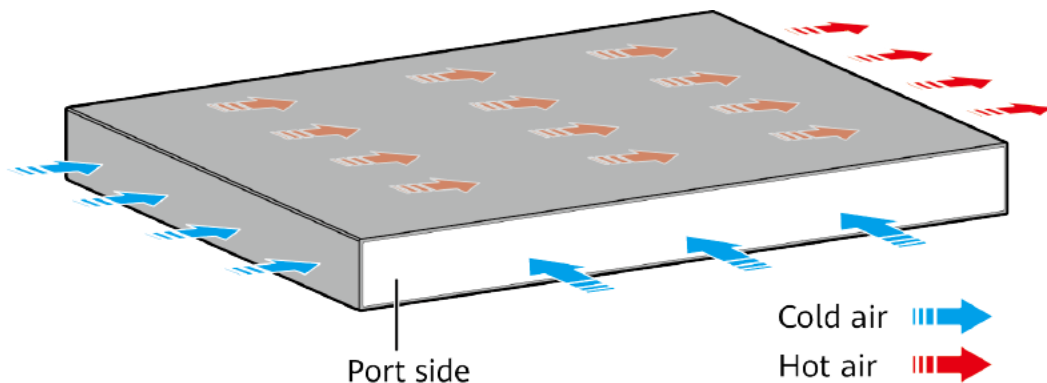
The S5735-L24P4S-A1 has similar indicators to those on the S5735-L24P4X-A1 except that the S5735-L24P4S-A1 does not have a USB indicator. For details, see the S5735-L24P4X-A1.

Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules. The built-in power module can provide 380 W PoE power, which ensures full PoE power on 24 ports in compliance with 802.3af or on 12 ports in compliance with 802.3at.

Heat Dissipation System

The switch has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1511 Technical specifications of the S5735-L24P4S-A1

Item	Specification
Dimensions without packaging (H x W x D)	Basic dimensions (excluding the parts)

Item	Specification
[mm(in.)]	protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90.0 mm x 550.0 mm x 360.0 mm (3.54 in. x 21.65 in. x 14.17 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	2.94 kg (6.48 lb)
Weight with packaging [kg(lb)]	3.91 kg (8.62 lb)
Typical power consumption [W]	41.7 W
Typical heat dissipation [BTU/hour]	142.29 BTU/hour
Maximum power consumption [W]	<ul style="list-style-type: none">Not providing the PoE function: 53.2 W100% PoE loads: 433.2 W (PoE: 380 W)
Maximum heat dissipation [BTU/hour]	<ul style="list-style-type: none">Not providing the PoE function: 181.52100% PoE loads: 1478.12
MTBF [year]	55.72 year
MTTR [hour]	2 hour
Availability	>0.99999
Noise at normal temperature (acoustic power) [dB(A)]	50 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	38.2 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	2
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.)
Short-term operating temperature [°C(°F)]	-5 °C to +55 °C (23 °F to 131 °F) at an altitude of 0-1800 m (0-5906 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722

Item	Specification
	ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> • The equipment operates at a temperature of over 50 °C (122 °F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 50 °C (122 °F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 50 °C (122 °F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature [°C(°F)]	-40 °C to +70 °C (-40 °F to +158 °F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	AC built-in
Rated input voltage [V]	<ul style="list-style-type: none"> • AC input: 100 V AC to 240 V AC, 50/60 Hz • High-Voltage DC input: 240 V DC
Input voltage range [V]	<ul style="list-style-type: none"> • AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz • High-Voltage DC input: 190 V DC to 290 V DC
Maximum input current [A]	6 A
Memory	512 MB
Flash memory	512 MB
Console port	RJ45
Eth Management port	Not supported
USB	Not supported
RTC	Not supported

Item	Specification
RPS input	Not supported
Service port surge protection [kV]	Common mode: ± 7 kV
Power supply surge protection [kV]	± 6 kV in differential mode, ± 6 kV in common mode
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Supported
Certification	EMC certification Safety certification Manufacturing certification

4.30.7 S5735-L24T4X-A1

Overview

Table 4-1512 Basic information about the S5735-L24T4X-A1

Item	Details
Description	S5735-L24T4X-A1 (24*10/100/1000BASE-T ports, 4*10GE SFP+ ports, AC power)
Part Number	98011302
Model	S5735-L24T4X-A1
First supported version	V200R020C10
Other part numbers	98011302-001: S5735-L24T4X-A1 (24*10/100/1000BASE-T ports, 4*10GE SFP+ ports, AC power, Only for India and Pakistan)
Remarks	Some models cannot be downgraded due to component upgrade. Therefore, you are advised to run the display system-software information command to check the software versions supported by the device before performing a downgrade. If the device does not support the display system-software information command, it can be

Item	Details
	downgraded.

Components

Figure 4-551 S5735-L24T4X-A1 appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports
3	One console port	4	One USB port
5	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.	6	Ground screw NOTE It is used with a 9.1 Ground Cable.
7	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.	8	AC socket NOTE It is used with an 9.8 AC Power Cable.

Ports

Table 4-1513 Ports on the S5735-L24T4X-A1

Port	Connector Type	Description	Available Components
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data	9.4 Ethernet Cable

Port	Connector Type	Description	Available Components
		at 10/100/1000 Mbit/s.	
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none">• 10.5 GE eSFP Optical Modules• 10.7 GE-CWDM eSFP Optical Modules• 10.9 GE-DWDM eSFP Optical Modules• 10.10 GE SFP Copper Modules• 10.12 10GE SFP+ Optical Modules• 10.13 10GE-CWDM SFP+ Optical Modules• 10.14 10GE-DWDM SFP+ Optical Modules• 10.17 Industrial Optical Modules• 9.15 Copper Cable• 9.3 Optical Fiber• 9.14 Dedicated Stack Cable
Console port	RJ45	The console port is connected to a console for on-site configuration.	9.13 Console Cable
USB port	USB 2.0 Type A	The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.	USB flash drive

Port	Connector Type	Description	Available Components
		USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.	

Indicators and Buttons

The S5735-L24T4X-A1 has similar indicators to those on the S5735-L24P4X-A1 except that the S5735-L24T4X-A1 does not have a PoE mode indicator. For details, see the S5735-L24P4X-A1.

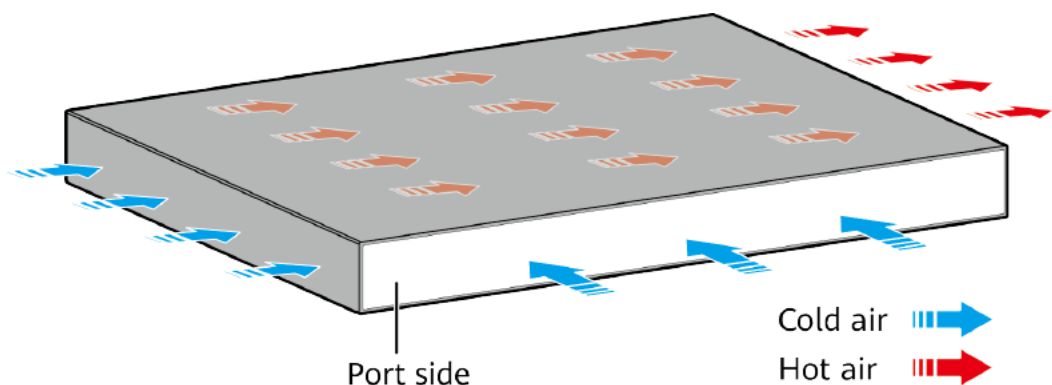
Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules.

Heat Dissipation System

The switch has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.

When working properly at a normal temperature, the device meets the desktop-class noise requirements. However, the fan speed may be high and the noise may be loud during device startup.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1514 Technical specifications of the S5735-L24T4X-A1

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90.0 mm x 550.0 mm x 360.0 mm (3.54 in. x 21.65 in. x 14.17 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	2.54 kg (5.6 lb)
Weight with packaging [kg(lb)]	3.48 kg (7.67 lb)
Typical power consumption [W]	33.2 W
Typical heat dissipation [BTU/hour]	113.28 BTU/hour
Maximum power consumption [W]	45.6 W
Maximum heat dissipation [BTU/hour]	155.59 BTU/hour
MTBF [year]	62.05 year
MTTR [hour]	2 hour
Availability	>0.99999
Noise at normal temperature (acoustic power) [dB(A)]	39 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	27.2 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	1
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5 °C to +50 °C (23 °F to 122 °F) (0 m to 1800 m altitude, non-industrial optical modules) -5 °C to +55 °C (23 °F to 131 °F) (0 m to 1800 m altitude, industrial optical modules with transmission distances less than or equal to 10 km)

Item	Specification
Short-term operating temperature [°C(°F)]	Not supported
Restriction on the operating temperature variation rate [°C(°F)]	When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0 °C (32 °F). The operating temperature ranges from -5 °C to +45 °C (23 °F to 113 °F) when optical modules with transmission distances greater than or equal to 70 km are used.
Storage temperature [°C(°F)]	-40 °C to +70 °C (-40 °F to +158 °F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	AC built-in
Rated input voltage [V]	AC input: 100 V AC to 240 V AC, 50/60 Hz
Input voltage range [V]	AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz
Maximum input current [A]	2 A
Memory	512 MB
Flash memory	512 MB
Console port	RJ45
Eth Management port	Not supported
USB	Supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	98011302: Common mode: ± 7 kV 98011302-001: Common mode: ± 2 kV
Power supply surge protection [kV]	± 6 kV in differential mode, ± 6 kV in common mode
Types of fans	Built-in

Item	Specification
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

4.30.8 S5735-L24T4X-D1

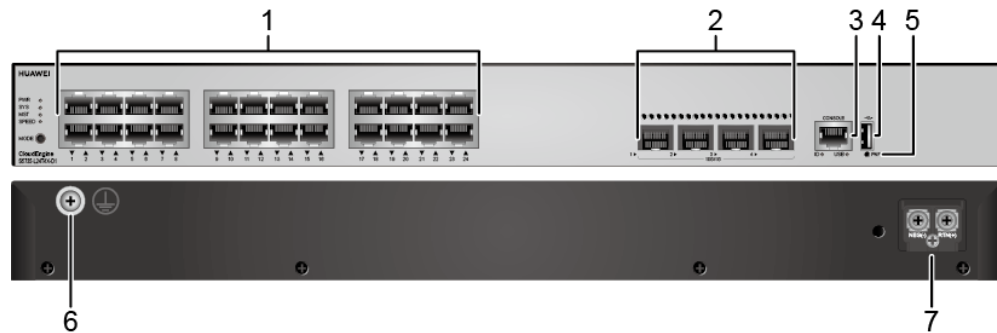
Overview

Table 4-1515 Basic information about the S5735-L24T4X-D1

Item	Details
Description	S5735-L24T4X-D1 (24*10/100/1000BASE-T ports, 4*10GE SFP+ ports, DC power)
Part Number	98011304
Model	S5735-L24T4X-D1
First supported version	V200R020C10
Remarks	Some models cannot be downgraded due to component upgrade. Therefore, you are advised to run the display system-software information command to check the software versions supported by the device before performing a downgrade. If the device does not support the display system-software information command, it can be downgraded.

Components

Figure 4-552 S5735-L24T4X-D1 appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports
3	One console port	4	One USB port
5	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.	6	Ground screw NOTE It is used with a 9.1 Ground Cable.
7	DC power terminal NOTE It is used with 9.5 DC Power Cable (with OT and Cord End Terminals).	-	-

Ports

Table 4-1516 Ports on the S5735-L24T4X-D1

Port	Connector Type	Description	Available Components
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.	9.4 Ethernet Cable
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000	<ul style="list-style-type: none"> 10.5 GE eSFP Optical Modules 10.7 GE-CWDM

Port	Connector Type	Description	Available Components
		Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none">eSFP Optical Modules• 10.9 GE-DWDM eSFP Optical Modules• 10.10 GE SFP Copper Modules• 10.12 10GE SFP+ Optical Modules• 10.13 10GE-CWDM SFP+ Optical Modules• 10.14 10GE-DWDM SFP+ Optical Modules• 10.17 Industrial Optical Modules• 9.15 Copper Cable• 9.3 Optical Fiber• 9.14 Dedicated Stack Cable
Console port	RJ45	The console port is connected to a console for on-site configuration.	9.13 Console Cable
USB port	USB 2.0 Type A	<p>The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.</p> <p>USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive</p>	USB flash drive

Port	Connector Type	Description	Available Components
		cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.	

Indicators and Buttons

The S5735-L24T4X-D1 has similar indicators to those on the S5735-L24P4X-A1 except that the S5735-L24T4X-D1 does not have a PoE mode indicator. For details, see the S5735-L24P4X-A1.

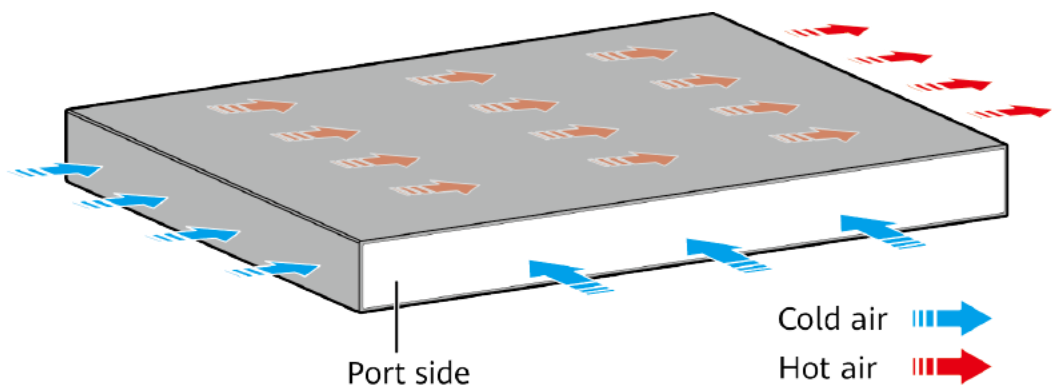
Power Supply System

The switch has a built-in DC power module and does not support pluggable power modules.

Heat Dissipation System

The switch has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.

When working properly at a normal temperature, the device meets the desktop-class noise requirements. However, the fan speed may be high and the noise may be loud during device startup.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1517 Technical specifications of the S5735-L24T4X-D1

Item	Specification
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Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90.0 mm x 550.0 mm x 360.0 mm (3.54 in. x 21.65 in. x 14.17 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	2.39 kg (5.27 lb)
Weight with packaging [kg(lb)]	3.28 kg (7.23 lb)
Typical power consumption [W]	34 W
Typical heat dissipation [BTU/hour]	116.01 BTU/hour
Maximum power consumption [W]	37.3 W
Maximum heat dissipation [BTU/hour]	127.27 BTU/hour
MTBF [year]	62.05 year
MTTR [hour]	2 hour
Availability	>0.99999
Noise at normal temperature (acoustic power) [dB(A)]	39 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	27.2 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	1
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5 °C to +50 °C (23 °F to 122 °F) (0 m to 1800 m altitude, non-industrial optical modules) -5 °C to +55 °C (23 °F to 131 °F) (0 m to 1800 m altitude, industrial optical modules with transmission distances less than or equal to 10 km)
Short-term operating temperature [°C(°F)]	Not supported
Restriction on the operating temperature	When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating

Item	Specification
variation rate [°C(°F)]	temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0 °C (32 °F). The operating temperature ranges from -5 °C to +45 °C (23 °F to 113 °F) when optical modules with transmission distances greater than or equal to 70 km are used.
Storage temperature [°C(°F)]	-40 °C to +70 °C (-40 °F to +158 °F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	DC built-in
Rated input voltage [V]	DC input: -48 V DC to -60 V DC
Input voltage range [V]	DC input: -38.4 V DC to -72 V DC
Maximum input current [A]	6A
Memory	512 MB
Flash memory	512 MB
Console port	RJ45
Eth Management port	Not supported
USB	Supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: ± 7 kV
Power supply surge protection [kV]	± 2 kV in differential mode, ± 4 kV in common mode
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Not supported
Certification	EMC certification Safety certification

Item	Specification
	Manufacturing certification

4.30.9 S5735-L24P4X-A1

Overview

Table 4-1518 Basic information about the S5735-L24P4X-A1

Item	Details
Description	S5735-L24P4X-A1 (24*10/100/1000BASE-T ports, 4*10GE SFP+ ports, PoE+, AC power)
Part Number	98011318
Model	S5735-L24P4X-A1
First supported version	V200R020C10
Other part numbers	98011318-001: S5735-L24P4X-A1 (24*10/100/1000BASE-T ports, 4*10GE SFP+ ports, PoE+, AC power, Only for India and Pakistan)
Remarks	Some models cannot be downgraded due to component upgrade. Therefore, you are advised to run the display system-software information command to check the software versions supported by the device before performing a downgrade. If the device does not support the display system-software information command, it can be downgraded.

Components

Figure 4-553 S5735-L24P4X-A1 appearance



1	Twenty-four 10/100/1000BASE-T PoE+ ports	2	Four 10GE SFP+ ports
3	One console port	4	One USB port
5	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.	6	Ground screw NOTE It is used with a 9.1 Ground Cable.
7	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.	8	AC socket NOTE It is used with an 9.8 AC Power Cable.

Ports

Table 4-1519 Ports on the S5735-L24P4X-A1

Port	Connector Type	Description	Available Components
10/100/1000BASE-T PoE+ port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s. The port supports the PoE function.	9.4 Ethernet Cable

Port	Connector Type	Description	Available Components
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none">• 10.5 GE eSFP Optical Modules• 10.7 GE-CWDM eSFP Optical Modules• 10.9 GE-DWDM eSFP Optical Modules• 10.10 GE SFP Copper Modules• 10.12 10GE SFP+ Optical Modules• 10.13 10GE-CWDM SFP+ Optical Modules• 10.14 10GE-DWDM SFP+ Optical Modules• 9.15 Copper Cable• 9.3 Optical Fiber• 9.14 Dedicated Stack Cable
Console port	RJ45	The console port is connected to a console for on-site configuration.	9.13 Console Cable
USB port	USB 2.0 Type A	<p>The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.</p> <p>USB flash drives from different vendors differ in model compatibility and drivers. If a</p>	USB flash drive

Port	Connector Type	Description	Available Components
		USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.	

Indicators and Buttons

Figure 4-554 Indicators on the S5735-L24P4X-A1

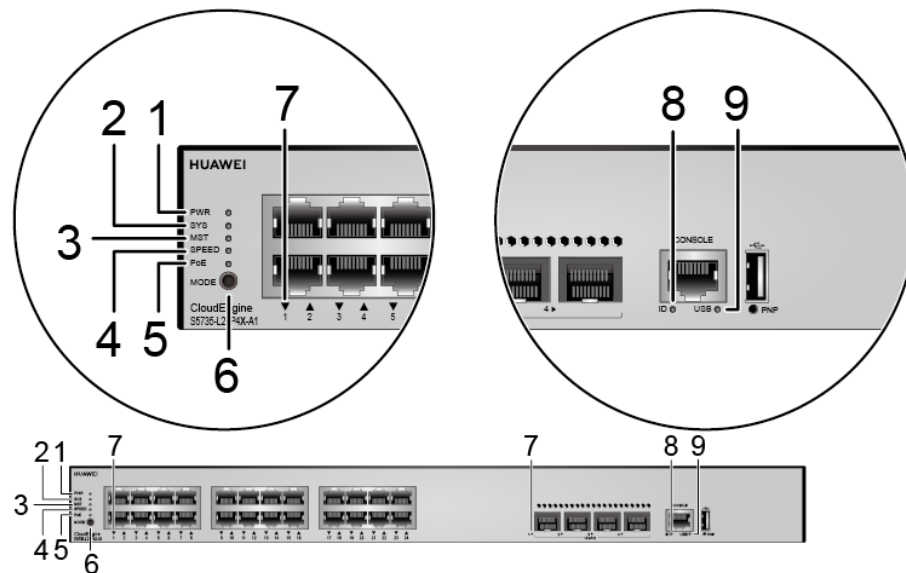


Table 4-1520 Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR	Power module indicator	-	Off	The switch is powered off.
			Green	Steady on	The system power supply is normal.
2	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.

No.	Indicator	Name	Color	Status	Description
			Green	Steady on	During the system startup preparation phase, the SYS indicator is steady green, which lasts for a maximum of 30 seconds.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or a temperature alarm has been generated.
3	MST	Stack indicator	-	Off	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is a standby or slave switch in a stack or the stacking function is not enabled on the switch. If you are changing the indicator mode: The stack mode is not selected.
			Green	Steady on	The stack mode is selected. The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is the master switch in a stack or a standalone switch with the stacking function enabled. If you are changing the indicator mode: The stack mode is selected. The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. After 45 seconds, the service port indicators automatically restore to the status mode.
4	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The speed mode is selected, and service port indicators show the speed of each port.
5	PoE	PoE indicator	-	Off	The PoE mode is not selected.
			Green	Steady on	The PoE mode is selected, and service port indicators show the PoE status of each port.
6	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> When you press this button once, the service port indicators change to the stack mode and show the stack ID of the local switch. When you press this button a second time, the service port indicators change

No.	Indicator	Name	Color	Status	Description
					<p>to the speed mode and show the speed of each service port.</p> <ul style="list-style-type: none"> When you press this button a third time, the service port indicators change to the PoE mode and show the PoE status of each service port. When you press this button a fourth time, the service port indicators restore to the default mode and show the connection status and link activity of each service port. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the SPEED and PoE indicators are off.</p> <p>NOTE</p> <p>Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:</p> <ul style="list-style-type: none"> If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows: <ul style="list-style-type: none"> If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes. If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status. If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.
7	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see Table 4-1521.		<p>NOTE</p> <p>If a power failure occurs on a device's PCB board, indicators of the last four optical ports on the device's front panel blink green cyclically at an interval of 1 second, with each indicator illuminating for 0.25 seconds.</p>
8	ID	ID indicator	-	Off	The ID indicator is not used (default state).
			Blue	Steady on	The indicator identifies the switch to maintain. The ID indicator can be turned on or off remotely to help field engineers find the switch to maintain.
9	USB	USB-base	-	Off	<ul style="list-style-type: none"> No USB flash drive is connected to the

No.	Indicator	Name	Color	Status	Description
		Deployment indicator			switch. <ul style="list-style-type: none"> The USB port is damaged. The indicator is damaged. The USB flash drive does not have any configuration file and cannot be used for deployment. The switch has been upgraded using the USB flash drive and is restarting.
			Green	Steady on	A USB-based deployment has been completed.
			Green	Fast blinking	The system is reading data from a USB flash drive.
			Green	Slow blinking	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Fast blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

Table 4-1521 Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Default mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
MST stack mode	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.

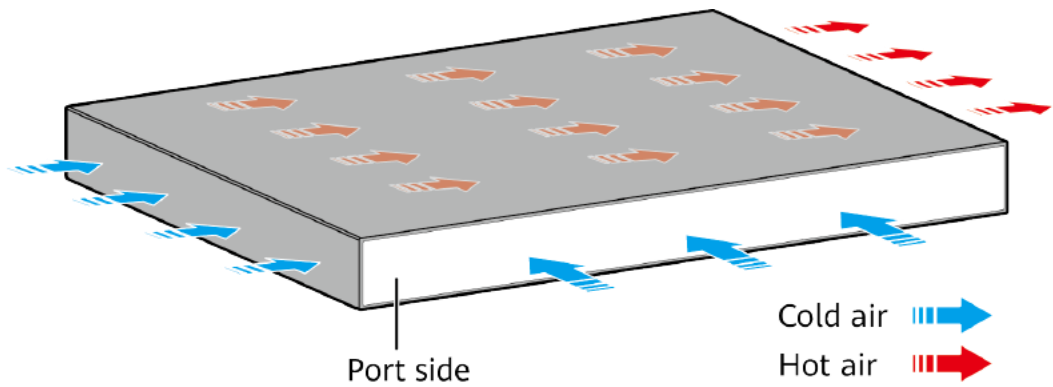
Display Mode	Color	Status	Description
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none">If the indicator of a port is blinking, the number of this port is the stack ID of the switch.If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.
Speed mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10 Mbit/s or 100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
PoE mode	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.
	Green	Blinking	The power of the PD connected to the port exceeds the power capacity of the port or the power threshold configured on the port. Alternatively, the PD does not comply with IEEE standards.

Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules. The built-in power module can provide 380 W PoE power, which ensures full PoE power on 24 ports in compliance with 802.3af or on 12 ports in compliance with 802.3at.

Heat Dissipation System

The switch has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1522 Technical specifications of the S5735-L24P4X-A1

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90.0 mm x 550.0 mm x 360.0 mm (3.54 in. x 21.65 in. x 14.17 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	2.96 kg (6.53 lb)
Weight with packaging [kg(lb)]	3.93 kg (8.66 lb)
Typical power consumption [W]	42.4 W
Typical heat dissipation [BTU/hour]	144.67 BTU/hour
Maximum power consumption [W]	<ul style="list-style-type: none"> Not providing the PoE function: 53.8 W 100% PoE loads: 433.8 W (PoE: 380 W)
Maximum heat dissipation [BTU/hour]	<ul style="list-style-type: none"> Not providing the PoE function: 183.57 100% PoE loads: 1480.17
MTBF [year]	52.74 year
MTTR [hour]	2 hour
Availability	>0.99999

Item	Specification
Noise at normal temperature (acoustic power) [dB(A)]	50 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	38.2 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	2
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.)
Short-term operating temperature [°C(°F)]	-5 °C to +55 °C (23 °F to 131 °F) at an altitude of 0-1800 m (0-5906 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> • The equipment operates at a temperature of over 50 °C (122 °F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 50 °C (122 °F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 50 °C (122 °F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature [°C(°F)]	-40 °C to +70 °C (-40 °F to +158 °F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)

Item	Specification
Power supply mode	AC built-in
Rated input voltage [V]	<ul style="list-style-type: none">AC input: 100 V AC to 240 V AC, 50/60 HzHigh-Voltage DC input: 240 V DC
Input voltage range [V]	<ul style="list-style-type: none">AC input: 90 V AC to 290 V AC, 45 Hz to 65 HzHigh-Voltage DC input: 190 V DC to 290 V DC
Maximum input current [A]	6 A
Memory	512 MB
Flash memory	512 MB
Console port	RJ45
Eth Management port	Not supported
USB	Supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	98011318: Common mode: ± 7 kV 98011318-001: Common mode: ± 2 kV
Power supply surge protection [kV]	± 6 kV in differential mode, ± 6 kV in common mode
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Supported
Certification	EMC certification Safety certification Manufacturing certification

4.30.10 S5735-L32ST4X-A1

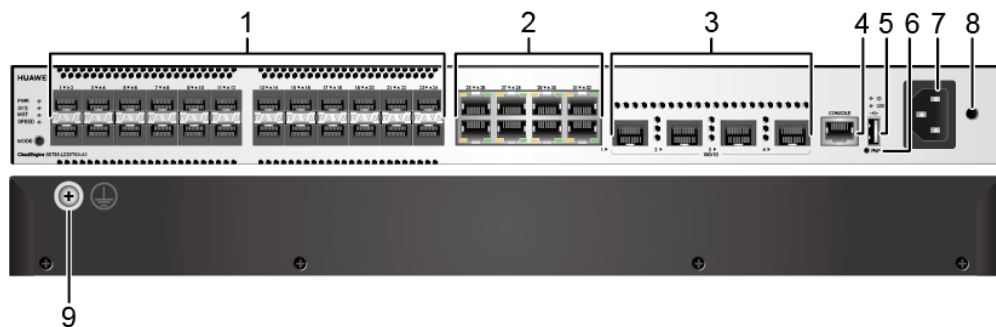
Overview

Table 4-1523 Basic information about the S5735-L32ST4X-A1

Item	Details
Description	S5735-L32ST4X-A1 (24*GE SFP ports, 8*10/100/1000BASE-T ports, 4*10GE SFP+ ports, AC power, front access)
Part Number	98011396
Model	S5735-L32ST4X-A1
First supported version	V200R020C10

Components

Figure 4-555 S5735-L32ST4X-A1 appearance



1	Twenty-four 100/1000BASE-X ports	2	Eight 10/100/1000BASE-T ports
3	Four 10GE SFP+ ports	4	One console port
5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	AC socket NOTE It is used with an 9.8 AC Power Cable.	8	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.

9	Ground screw NOTE It is used with a 9.1 Ground Cable.	-	-
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Ports

Table 4-1524 Ports on the S5735-L32ST4X-A1

Port	Connector Type	Description	Available Components
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.	9.4 Ethernet Cable
100/1000BASE-X port	SFP	A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s.	<ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14

Port	Connector Type	Description	Available Components
			10GE-DWDM SFP+ Optical Modules <ul style="list-style-type: none">• 9.15 Copper Cable• 9.3 Optical Fiber• 9.14 Dedicated Stack Cable
Console port	RJ45	The console port is connected to a console for on-site configuration.	9.13 Console Cable
USB port	USB 2.0 Type A	<p>The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.</p> <p>USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.</p>	USB flash drive

Indicators and Buttons

Figure 4-556 Indicators on the S5735-L32ST4X-A1

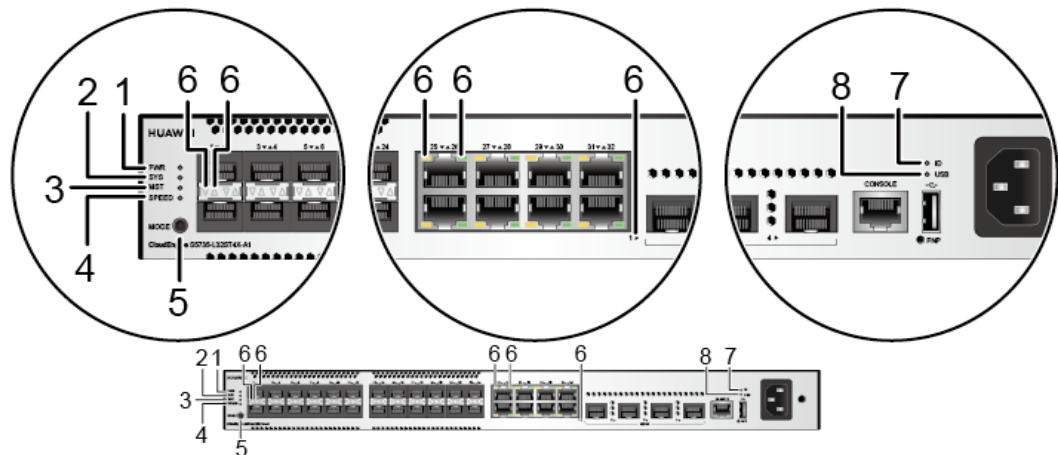


Table 4-1525 Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR	Power module indicator	-	Off	The switch is powered off.
			Green	Steady on	The system power supply is normal.
2	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Steady on	During the system startup preparation phase, the SYS indicator is steady green, which lasts for a maximum of 30 seconds.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or a temperature alarm has been generated.
3	MST	Stack indicator	-	Off	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is a standby or slave switch in a stack or the stacking function is not enabled on the switch. If you are changing the indicator mode: The stack mode is not selected.

No.	Indicator	Name	Color	Status	Description
			Green	Steady on	The stack mode is selected. The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is the master switch in a stack or a standalone switch with the stacking function enabled. If you are changing the indicator mode: The stack mode is selected. The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. After 45 seconds, the service port indicators automatically restore to the status mode.
4	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The speed mode is selected, and service port indicators show the speed of each port.
5	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> When you press this button once, the service port indicators change to the stack mode and show the stack ID of the local switch. When you press this button a second time, the service port indicators change to the speed mode and show the speed of each service port. When you press this button a third time, the service port indicators restore to the default mode and show the connection status and link activity of each service port. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the SPEED indicator is off.</p> <p>NOTE</p> <p>Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:</p> <ul style="list-style-type: none"> If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows: If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.

No.	Indicator	Name	Color	Status	Description
					<ul style="list-style-type: none"> If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status. If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.
6	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see Table 4-1526 and Table 4-1527. NOTE If a power failure occurs on a device's PCB board, indicators of the last four optical ports on the device's front panel blink green cyclically at an interval of 1 second, with each indicator illuminating for 0.25 seconds.		
7	ID	ID indicator	-	Off	The ID indicator is not used (default state).
			Blue	Steady on	The indicator identifies the switch to maintain. The ID indicator can be turned on or off remotely to help field engineers find the switch to maintain.
8	USB	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> No USB flash drive is connected to the switch. The USB port is damaged. The indicator is damaged. The USB flash drive does not have any configuration file and cannot be used for deployment. The switch has been upgraded using the USB flash drive and is restarting.
			Green	Steady on	A USB-based deployment has been completed.
			Green	Fast blinking	The system is reading data from a USB flash drive.
			Green	Slow blinking	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Fast blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

Table 4-1526 Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Default mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	1000M/10GE port: The port is operating at 10 Gbit/s.

Table 4-1527 Description of service port indicators in different modes (two indicators for each port)

Display Mode	Color	Status	Description
Default mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Yellow	Blinking	The port is sending or receiving data.
MST stack mode	-	Off	Port indicators do not show the stack ID of the switch.
	Green and yellow	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
	Green and yellow	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is blinking, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

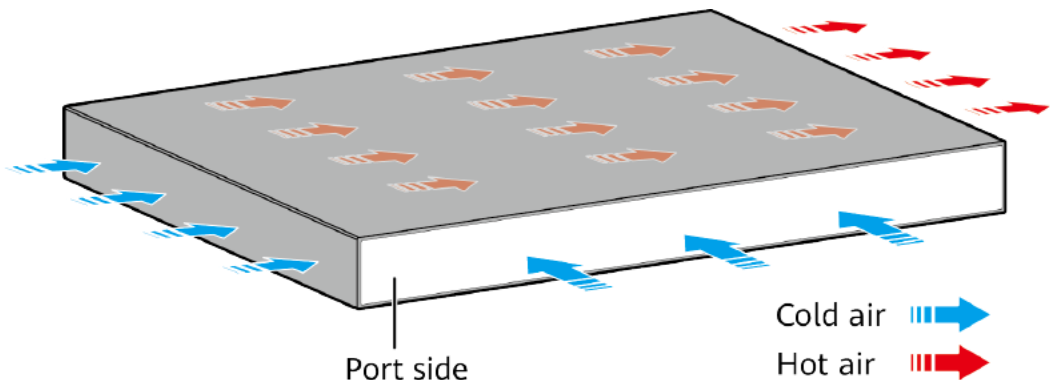
Display Mode	Color	Status	Description
Speed mode	-	Off	The port is not connected or has been shut down.
	Green and yellow	Steady on	10M/100M/1000M port: The port is operating at 10 Mbit/s or 100 Mbit/s. 100M/1000M port: The port is operating at 100 Mbit/s.
	Green and yellow	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 100M/1000M port: The port is operating at 1000 Mbit/s.

Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules.

Heat Dissipation System

The switch has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1528 Technical specifications of the S5735-L32ST4X-A1

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the

Item	Specification
	parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90.0 mm x 550.0 mm x 360.0 mm (3.54 in. x 21.65 in. x 14.17 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	2.88 kg (6.35 lb)
Weight with packaging [kg(lb)]	4.03 kg (8.89 lb)
Typical power consumption [W]	53.2 W
Typical heat dissipation [BTU/hour]	181.52 BTU/hour
Maximum power consumption [W]	66.8 W
Maximum heat dissipation [BTU/hour]	227.93 BTU/hour
MTBF [year]	58.44 year
MTTR [hour]	2 hour
Availability	>0.99999
Noise at normal temperature (acoustic power) [dB(A)]	46.8 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	35 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	2
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.)
Short-term operating temperature [°C(°F)]	-5 °C to +55 °C (23 °F to 131 °F) at an altitude of 0-1800 m (0-5906 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none">• The equipment operates at a temperature of over 50 °C (122 °F) consecutively for

Item	Specification
	<p>at most 96 hours in one year.</p> <ul style="list-style-type: none"> The equipment operates at a temperature of over 50 °C (122 °F) for a total of no more than 360 hours in one year. The equipment operates at a temperature of over 50 °C (122 °F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature [°C(°F)]	-40 °C to +70 °C (-40 °F to +158 °F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	AC built-in
Rated input voltage [V]	<ul style="list-style-type: none"> AC input: 100 V AC to 240 V AC, 50/60 Hz High-Voltage DC input: 240 V DC
Input voltage range [V]	<ul style="list-style-type: none"> AC input: 90 V AC to 264 V AC, 47 Hz to 63 Hz High-Voltage DC input: 190 V DC to 290 V DC
Maximum input current [A]	2 A
Memory	512 MB
Flash memory	512 MB
Console port	RJ45
Eth Management port	Not supported
USB	Supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: ±7 kV
Power supply surge protection [kV]	±6 kV in differential mode, ±6 kV in common mode
Types of fans	Built-in

Item	Specification
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

4.30.11 S5735-L32ST4X-D1

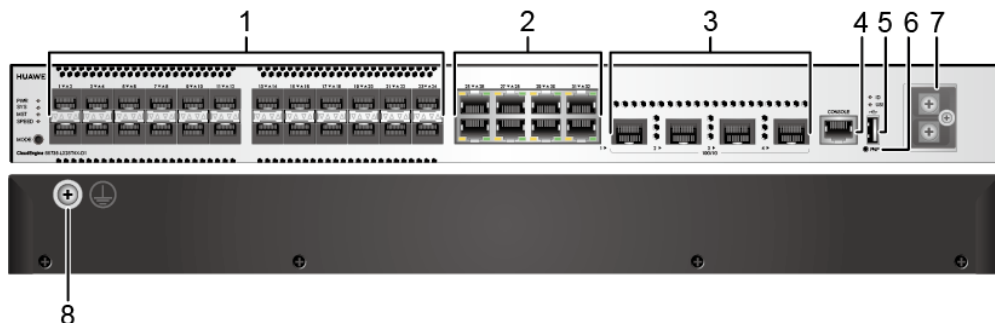
Overview

Table 4-1529 Basic information about the S5735-L32ST4X-D1

Item	Details
Description	S5735-L32ST4X-D1 (24*GE SFP ports, 8*10/100/1000BASE-T ports, 4*10GE SFP+ ports, DC power, front access)
Part Number	98011399
Model	S5735-L32ST4X-D1
First supported version	V200R020C10

Components

Figure 4-557 S5735-L32ST4X-D1 appearance



1	Twenty-four 100/1000BASE-X ports	2	Eight 10/100/1000BASE-T ports
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3	Four 10GE SFP+ ports	4	One console port
5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	DC power terminal NOTE It is used with 9.5 DC Power Cable (with OT and Cord End Terminals).	8	Ground screw NOTE It is used with a 9.1 Ground Cable.

Ports

Table 4-1530 Ports on the S5735-L32ST4X-D1

Port	Connector Type	Description	Available Components
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.	9.4 Ethernet Cable
100/1000BASE-X port	SFP	A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s.	<ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10	<ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical

Port	Connector Type	Description	Available Components
		Gbit/s.	Modules <ul style="list-style-type: none">• 10.10 GE SFP Copper Modules• 10.12 10GE SFP+ Optical Modules• 10.13 10GE-CWDM SFP+ Optical Modules• 10.14 10GE-DWDM SFP+ Optical Modules• 9.15 Copper Cable• 9.3 Optical Fiber• 9.14 Dedicated Stack Cable
Console port	RJ45	The console port is connected to a console for on-site configuration.	9.13 Console Cable
USB port	USB 2.0 Type A	<p>The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.</p> <p>USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash</p>	USB flash drive

Port	Connector Type	Description	Available Components
		drives.	

Indicators and Buttons

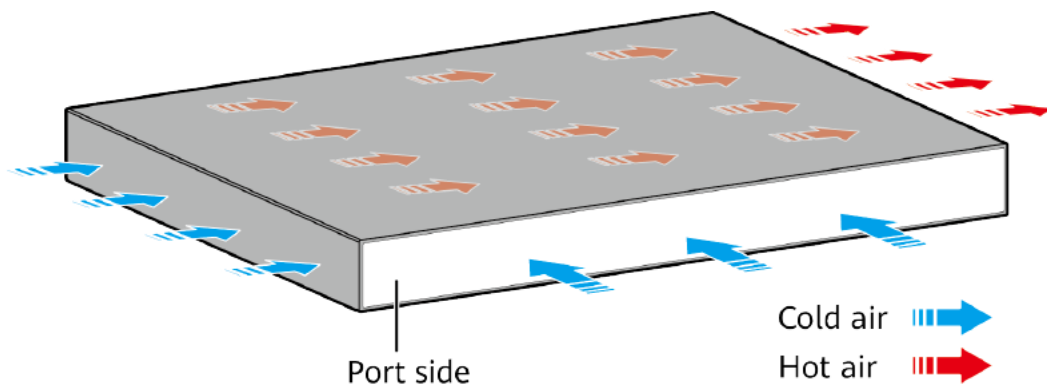
The S5735-L32ST4X-D1 has the same types of indicators as the S5735-L32ST4X-A1. For details, see the S5735-L32ST4X-A1.

Power Supply System

The switch has a built-in DC power module and does not support pluggable power modules.

Heat Dissipation System

The switch has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1531 Technical specifications of the S5735-L32ST4X-D1

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Dimensions with packaging (H x W x D)	90.0 mm x 550.0 mm x 360.0 mm (3.54 in.)

Item	Specification
[mm(in.)]	x 21.65 in. x 14.17 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	2.75 kg (6.06 lb)
Weight with packaging [kg(lb)]	3.85 kg (8.49 lb)
Typical power consumption [W]	60.7 W
Typical heat dissipation [BTU/hour]	207.12 BTU/hour
Maximum power consumption [W]	61.9 W
Maximum heat dissipation [BTU/hour]	211.21 BTU/hour
MTBF [year]	58.44 year
MTTR [hour]	2 hour
Availability	>0.99999
Noise at normal temperature (acoustic power) [dB(A)]	46.8 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	35 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	2
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.)
Short-term operating temperature [°C(°F)]	-5 °C to +55 °C (23 °F to 131 °F) at an altitude of 0-1800 m (0-5906 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none">• The equipment operates at a temperature of over 50 °C (122 °F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 50 °C (122 °F) for a total of no more than 360 hours in one year.

Item	Specification
	<ul style="list-style-type: none">The equipment operates at a temperature of over 50 °C (122 °F) for no more than 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature [°C (°F)]	-40 °C to +70 °C (-40 °F to +158 °F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	DC built-in
Rated input voltage [V]	-48 V DC to -60 V DC
Input voltage range [V]	-38.4 V DC to -72 V DC
Maximum input current [A]	6 A
Memory	512 MB
Flash memory	512 MB
Console port	RJ45
Eth Management port	Not supported
USB	Supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: ± 7 kV
Power supply surge protection [kV]	± 2 kV in differential mode, ± 4 kV in common mode
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Not supported
Certification	EMC certification Safety certification

Item	Specification
	Manufacturing certification

4.30.12 S5735-L48T4S-A1

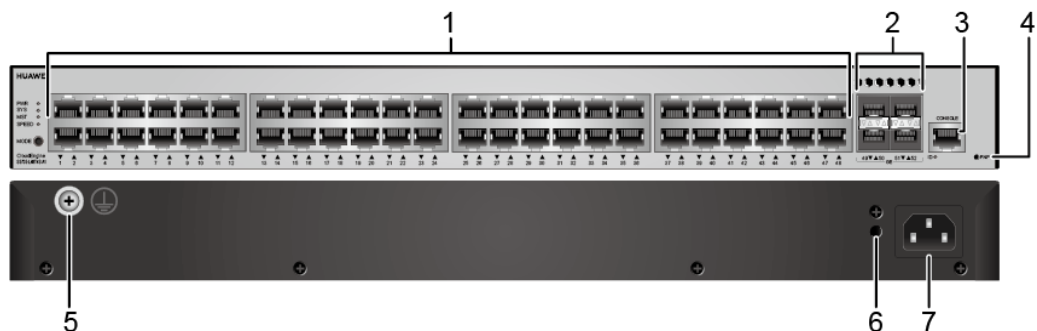
Overview

Table 4-1532 Basic information about the S5735-L48T4S-A1

Item	Details
Description	S5735-L48T4S-A1 (48*10/100/1000BASE-T ports, 4*GE SFP ports, AC power)
Part Number	98011334
Model	S5735-L48T4S-A1
First supported version	V200R020C10
Remarks	Some models cannot be downgraded due to component upgrade. Therefore, you are advised to run the display system-software information command to check the software versions supported by the device before performing a downgrade. If the device does not support the display system-software information command, it can be downgraded.

Components

Figure 4-558 S5735-L48T4S-A1 appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 1000BASE-X ports
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3	One console port	4	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
5	Ground screw NOTE It is used with a 9.1 Ground Cable.	6	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.
7	AC socket NOTE It is used with an 9.8 AC Power Cable.	-	-

Ports

Table 4-1533 Ports on the S5735-L48T4S-A1

Port	Connector Type	Description	Available Components
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.	9.4 Ethernet Cable
1000BASE-X port	SFP	A 1000BASE-X port can send and receive data at 100 or 1000 Mbit/s.	<ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM

Port	Connector Type	Description	Available Components
			SFP+ Optical Modules <ul style="list-style-type: none"> • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
Console port	RJ45	The console port is connected to a console for on-site configuration.	9.13 Console Cable

Indicators and Buttons

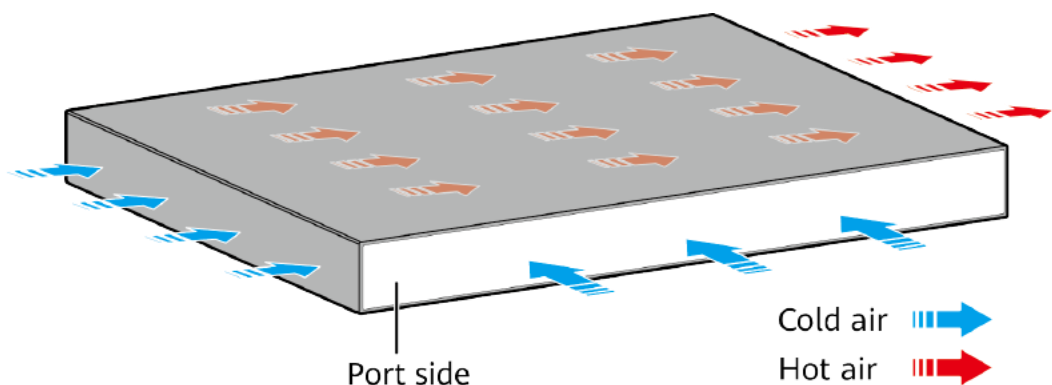
The S5735-L48T4S-A1 has similar indicators to those on the S5735-L48P4X-A1 except that the S5735-L48T4S-A1 does not have USB and PoE mode indicators. For details, see the S5735-L48P4X-A1.

Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules.

Heat Dissipation System

The switch has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1534 Technical specifications of the S5735-L48T4S-A1

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90.0 mm x 550.0 mm x 360.0 mm (3.54 in. x 21.65 in. x 14.17 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	2.76 kg (6.09 lb)
Weight with packaging [kg(lb)]	3.74 kg (8.25 lb)
Typical power consumption [W]	43.3 W
Typical heat dissipation [BTU/hour]	147.74 BTU/hour
Maximum power consumption [W]	50.4 W
Maximum heat dissipation [BTU/hour]	171.97 BTU/hour
MTBF [year]	56.7 year
MTTR [hour]	2 hour
Availability	>0.99999
Noise at normal temperature (acoustic power) [dB(A)]	48 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	36.2 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	1
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.)
Short-term operating temperature [°C(°F)]	-5 °C to +55 °C (23 °F to 131 °F) at an altitude of 0-1800 m (0-5906 ft.)
Restriction on the operating temperature	When the altitude is 1800-5000 m

Item	Specification
variation rate [°C(°F)]	<p>(5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>The operating temperature ranges from -5 °C to +45 °C (23 °F to 113 °F) when optical modules with transmission distances greater than or equal to 70 km are used.</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none">• The equipment operates at a temperature of over 50 °C (122 °F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 50 °C (122 °F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 50 °C (122 °F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature [°C(°F)]	-40 °C to +70 °C (-40 °F to +158 °F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	AC built-in
Rated input voltage [V]	AC input: 100 V AC to 240 V AC, 50/60 Hz
Input voltage range [V]	AC input: 90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum input current [A]	2 A
Memory	512 MB
Flash memory	512 MB
Console port	RJ45
Eth Management port	Not supported

Item	Specification
USB	Not supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: ± 7 kV
Power supply surge protection [kV]	± 6 kV in differential mode, ± 6 kV in common mode
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

4.30.13 S5735-L48P4S-A1

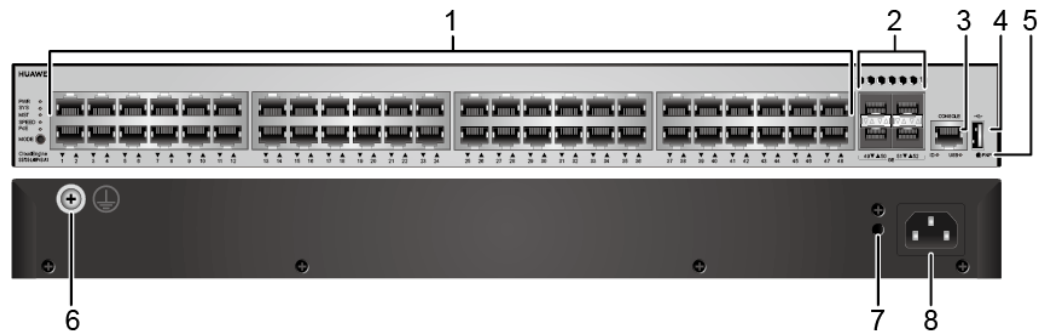
Overview

Table 4-1535 Basic information about the S5735-L48P4S-A1

Item	Details
Description	S5735-L48P4S-A1 (48*10/100/1000BASE-T ports, 4*GE SFP ports, PoE+, AC power)
Part Number	98011345
Model	S5735-L48P4S-A1
First supported version	V200R020C10
Remarks	Some models cannot be downgraded due to component upgrade. Therefore, you are advised to run the display system-software information command to check the software versions supported by the device before performing a downgrade. If the device does not support the display system-software information command, it can be downgraded.

Components

Figure 4-559 S5735-L48P4S-A1 appearance



1	Forty-eight 10/100/1000BASE-T PoE+ ports	2	Four 1000BASE-X ports
3	One console port	4	One USB port
5	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.	6	Ground screw NOTE It is used with a 9.1 Ground Cable.
7	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.	8	AC socket NOTE It is used with an 9.8 AC Power Cable.

Ports

Table 4-1536 Ports on the S5735-L48P4S-A1

Port	Connector Type	Description	Available Components
10/100/1000BASE-T PoE+ port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s. The port supports	9.4 Ethernet Cable

Port	Connector Type	Description	Available Components
		the PoE function.	
1000BASE-X port	SFP	A 1000BASE-X port can send and receive data at 100 or 1000 Mbit/s.	<ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
Console port	RJ45	The console port is connected to a console for on-site configuration.	9.13 Console Cable
USB port	USB 2.0 Type A	The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.	USB flash drive

Port	Connector Type	Description	Available Components
		USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.	

Indicators and Buttons

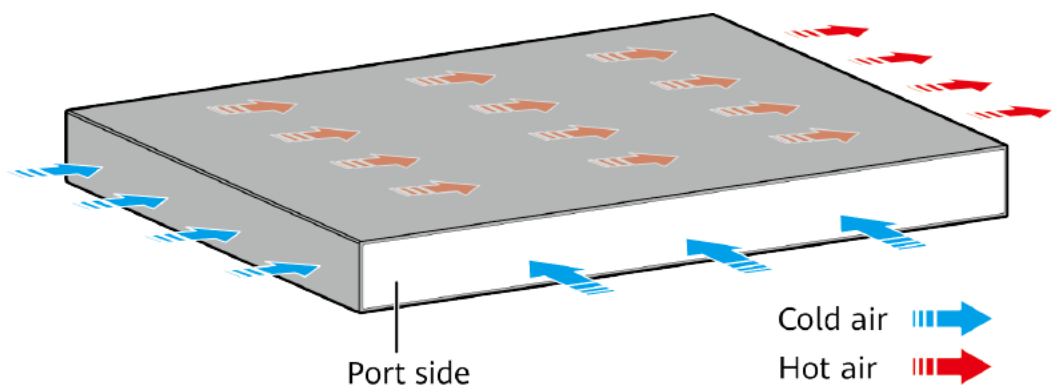
The S5735-L48P4S-A1 has the same types of indicators as the S5735-L48P4X-A1. For details, see the S5735-L48P4X-A1.

Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules. The built-in power module can provide 380 W PoE power, which ensures full PoE power on 24 ports in compliance with 802.3af or on 12 ports in compliance with 802.3at.

Heat Dissipation System

The switch has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1537 Technical specifications of the S5735-L48P4S-A1

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90.0 mm x 550.0 mm x 360.0 mm (3.54 in. x 21.65 in. x 14.17 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	3.23 kg (7.12 lb)
Weight with packaging [kg(lb)]	4.28 kg (9.44 lb)
Typical power consumption [W]	58.7 W
Typical heat dissipation [BTU/hour]	200.29 BTU/hour
Maximum power consumption [W]	<ul style="list-style-type: none">Not providing the PoE function: 76.1 W100% PoE loads: 456.1 W (PoE: 380 W)
Maximum heat dissipation [BTU/hour]	<ul style="list-style-type: none">Not providing the PoE function: 259.66100% PoE loads: 1556.26
MTBF [year]	44.9 year
MTTR [hour]	2 hour
Availability	>0.99999
Noise at normal temperature (acoustic power) [dB(A)]	50 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	38.2 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	2
Redundant power supply	Not supported
Long-term operating temperature [°C (°F)]	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.)
Short-term operating temperature [°C (°F)]	-5 °C to +55 °C (23 °F to 131 °F) at an altitude

Item	Specification
	of 0-1800 m (0-5906 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none">• The equipment operates at a temperature of over 50 °C (122 °F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 50 °C (122 °F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 50 °C (122 °F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature [°C(°F)]	-40 °C to +70 °C (-40 °F to +158 °F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	AC built-in
Rated input voltage [V]	<ul style="list-style-type: none">• AC input: 100 V AC to 240 V AC, 50/60 Hz• High-Voltage DC input: 240 V DC
Input voltage range [V]	<ul style="list-style-type: none">• AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz• High-Voltage DC input: 190 V DC to 290 V DC
Maximum input current [A]	6 A
Memory	512 MB
Flash memory	512 MB
Console port	RJ45

Item	Specification
Eth Management port	Not supported
USB	Supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: ± 7 kV
Power supply surge protection [kV]	± 6 kV in differential mode, ± 6 kV in common mode
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Supported
Certification	EMC certification Safety certification Manufacturing certification

4.30.14 S5735-L48T4X-A1

Overview

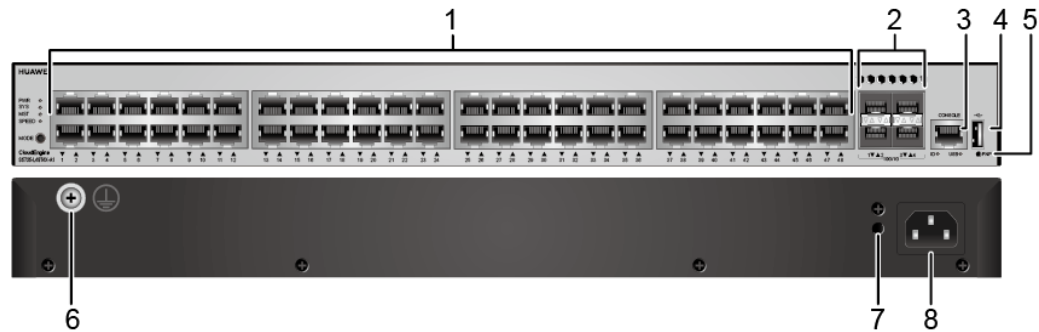
Table 4-1538 Basic information about the S5735-L48T4X-A1

Item	Details
Description	S5735-L48T4X-A1 (48*10/100/1000BASE-T ports, 4*10GE SFP+ ports, AC power)
Part Number	98011332
Model	S5735-L48T4X-A1
First supported version	V200R020C10
Remarks	Some models cannot be downgraded due to component upgrade. Therefore, you are advised to run the display system-software information command to check the software versions supported by the device before performing a downgrade. If the device does not support the display system-software information command, it can be

Item	Details
	downgraded.

Components

Figure 4-560 S5735-L48T4X-A1 appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports
3	One console port	4	One USB port
5	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.	6	Ground screw NOTE It is used with a 9.1 Ground Cable.
7	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.	8	AC socket NOTE It is used with an 9.8 AC Power Cable.

Ports

Table 4-1539 Ports on the S5735-L48T4X-A1

Port	Connector Type	Description	Available Components
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data	9.4 Ethernet Cable

Port	Connector Type	Description	Available Components
		at 10/100/1000 Mbit/s.	
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
Console port	RJ45	The console port is connected to a console for on-site configuration.	9.13 Console Cable
USB port	USB 2.0 Type A	<p>The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.</p> <p>USB flash drives from different vendors differ in</p>	USB flash drive

Port	Connector Type	Description	Available Components
		model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.	

Indicators and Buttons

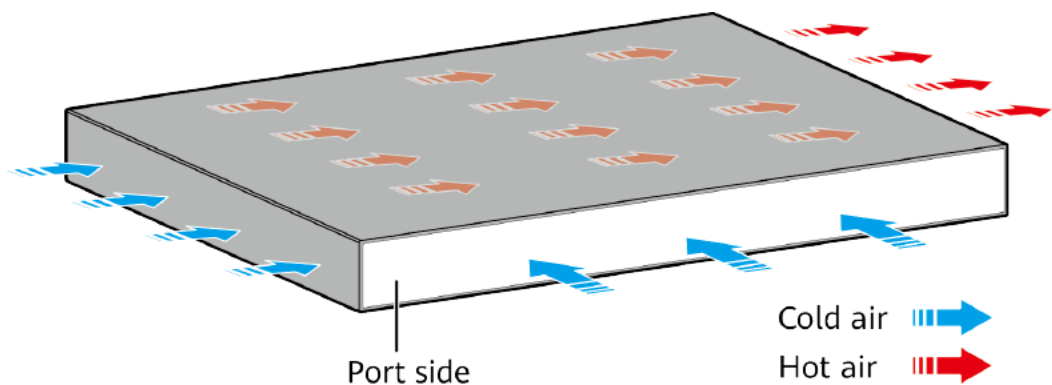
The S5735-L48T4X-A1 has similar indicators to those on the S5735-L48P4X-A1 except that the S5735-L48T4X-A1 does not have a PoE mode indicator. For details, see the S5735-L48P4X-A1.

Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules.

Heat Dissipation System

The switch has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1540 Technical specifications of the S5735-L48T4X-A1

Item	Specification
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Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90.0 mm x 550.0 mm x 360.0 mm (3.54 in. x 21.65 in. x 14.17 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	2.81 kg (6.2 lb)
Weight with packaging [kg(lb)]	3.79 kg (8.36 lb)
Typical power consumption [W]	43.2 W
Typical heat dissipation [BTU/hour]	147.4 BTU/hour
Maximum power consumption [W]	51.9 W
Maximum heat dissipation [BTU/hour]	177.09 BTU/hour
MTBF [year]	53.67 year
MTTR [hour]	2 hour
Availability	>0.99999
Noise at normal temperature (acoustic power) [dB(A)]	48 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	36.2 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	1
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.)
Short-term operating temperature [°C(°F)]	-5 °C to +55 °C (23 °F to 131 °F) at an altitude of 0-1800 m (0-5906 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).

Item	Specification
	<p>The operating temperature ranges from -5 °C to +45 °C (23 °F to 113 °F) when optical modules with transmission distances greater than or equal to 70 km are used.</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none">• The equipment operates at a temperature of over 50 °C (122 °F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 50 °C (122 °F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 50 °C (122 °F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature [°C(°F)]	-40 °C to +70 °C (-40 °F to +158 °F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	AC built-in
Rated input voltage [V]	AC input: 100 V AC to 240 V AC, 50/60 Hz
Input voltage range [V]	AC input: 90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum input current [A]	2 A
Memory	512 MB
Flash memory	512 MB
Console port	RJ45
Eth Management port	Not supported
USB	Supported
RTC	Not supported

Item	Specification
RPS input	Not supported
Service port surge protection [kV]	Common mode: ± 7 kV
Power supply surge protection [kV]	± 6 kV in differential mode, ± 6 kV in common mode
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

4.30.15 S5735-L48P4X-A1

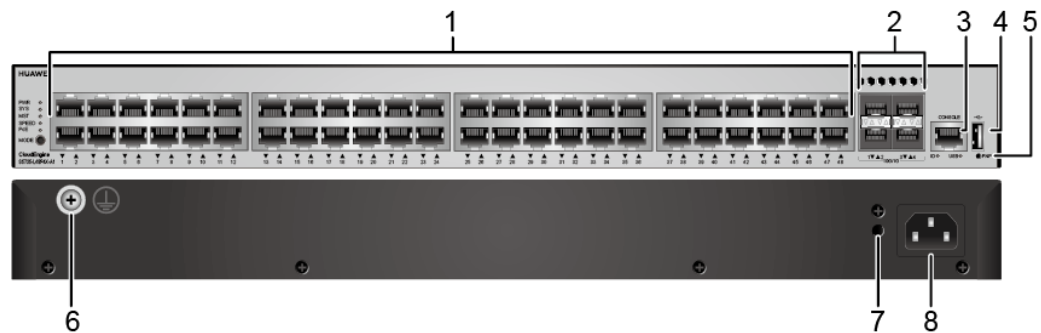
Overview

Table 4-1541 Basic information about the S5735-L48P4X-A1

Item	Details
Description	S5735-L48P4X-A1 (48*10/100/1000BASE-T ports, 4*10GE SFP+ ports, PoE+, AC power)
Part Number	98011343
Model	S5735-L48P4X-A1
First supported version	V200R020C10
Remarks	Some models cannot be downgraded due to component upgrade. Therefore, you are advised to run the display system-software information command to check the software versions supported by the device before performing a downgrade. If the device does not support the display system-software information command, it can be downgraded.

Components

Figure 4-561 S5735-L48P4X-A1 appearance



1	Forty-eight 10/100/1000BASE-T PoE+ ports	2	Four 10GE SFP+ ports
3	One console port	4	One USB port
5	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.	6	Ground screw NOTE It is used with a 9.1 Ground Cable.
7	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.	8	AC socket NOTE It is used with an 9.8 AC Power Cable.

Ports

Table 4-1542 Ports on the S5735-L48P4X-A1

Port	Connector Type	Description	Available Components
10/100/1000BASE-T PoE+ port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s. The port supports the PoE function.	9.4 Ethernet Cable

Port	Connector Type	Description	Available Components
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
Console port	RJ45	The console port is connected to a console for on-site configuration.	9.13 Console Cable
USB port	USB 2.0 Type A	<p>The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.</p> <p>USB flash drives from different vendors differ in model compatibility and drivers. If a</p>	USB flash drive

Port	Connector Type	Description	Available Components
		USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.	

Indicators and Buttons

Figure 4-562 Indicators on the S5735-L48P4X-A1

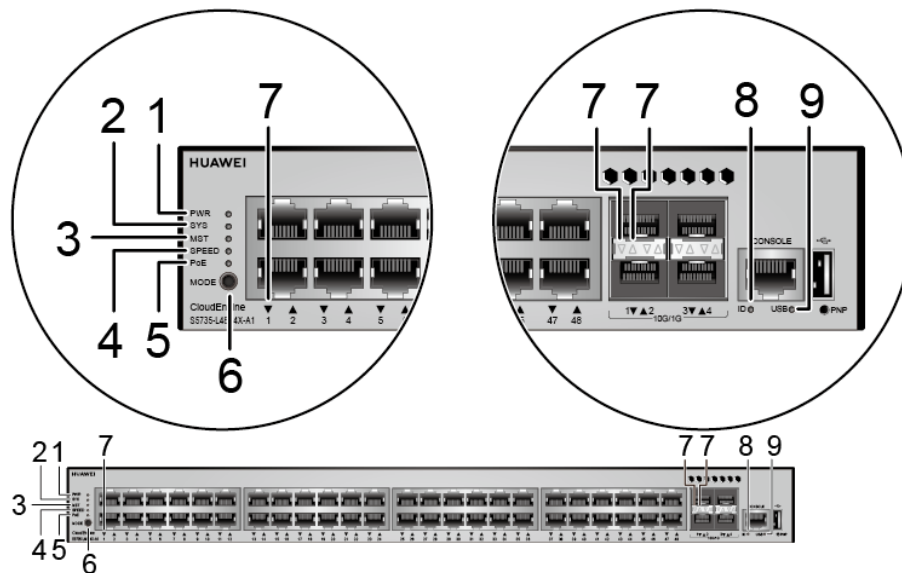


Table 4-1543 Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR	Power module indicator	-	Off	The switch is powered off.
			Green	Steady on	The system power supply is normal.
2	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.

No.	Indicator	Name	Color	Status	Description
			Green	Steady on	During the system startup preparation phase, the SYS indicator is steady green, which lasts for a maximum of 30 seconds.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or a temperature alarm has been generated.
3	MST	Stack indicator	-	Off	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is a standby or slave switch in a stack or the stacking function is not enabled on the switch. If you are changing the indicator mode: The stack mode is not selected.
			Green	Steady on	The stack mode is selected. The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is the master switch in a stack or a standalone switch with the stacking function enabled. If you are changing the indicator mode: The stack mode is selected. The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. After 45 seconds, the service port indicators automatically restore to the status mode.
4	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The speed mode is selected, and service port indicators show the speed of each port.
5	PoE	PoE indicator	-	Off	The PoE mode is not selected.
			Green	Steady on	The PoE mode is selected, and service port indicators show the PoE status of each port.
6	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> When you press this button once, the service port indicators change to the stack mode and show the stack ID of the local switch. When you press this button a second time, the service port indicators change

No.	Indicator	Name	Color	Status	Description
					<p>to the speed mode and show the speed of each service port.</p> <ul style="list-style-type: none"> When you press this button a third time, the service port indicators change to the PoE mode and show the PoE status of each service port. When you press this button a fourth time, the service port indicators restore to the default mode and show the connection status and link activity of each service port. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the SPEED and PoE indicators are off.</p> <p>NOTE</p> <p>Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:</p> <ul style="list-style-type: none"> If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows: If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes. If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status. If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.
7	-	Service port indicator	<p>Meanings of service port indicators vary in different modes. For details, see Table 4-1544 and Table 4-1545.</p> <p>NOTE</p> <p>If a power failure occurs on a device's PCB board, indicators of the last four optical ports on the device's front panel blink green cyclically at an interval of 1 second, with each indicator illuminating for 0.25 seconds.</p>		
8	ID	ID indicator	-	Off	The ID indicator is not used (default state).
			Blue	Steady on	The indicator identifies the switch to maintain. The ID indicator can be turned on or off remotely to help field engineers find the switch to maintain.
9	USB	USB-base	-	Off	<ul style="list-style-type: none"> No USB flash drive is connected to the

No.	Indicator	Name	Color	Status	Description
		Deployment indicator			<p>switch.</p> <ul style="list-style-type: none"> The USB port is damaged. The indicator is damaged. The USB flash drive does not have any configuration file and cannot be used for deployment. The switch has been upgraded using the USB flash drive and is restarting.
			Green	Steady on	A USB-based deployment has been completed.
			Green	Fast blinking	The system is reading data from a USB flash drive.
			Green	Slow blinking	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Fast blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

Table 4-1544 Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Default mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
MST stack mode	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	<p>The switch is not the master switch in a stack.</p> <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.

Display Mode	Color	Status	Description
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is blinking, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.
Speed mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10 Mbit/s or 100 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s.
PoE mode	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.
	Green	Blinking	The power of the PD connected to the port exceeds the power capacity of the port or the power threshold configured on the port. Alternatively, the PD does not comply with IEEE standards.

Table 4-1545 Description of service port indicators in different modes (two indicators for each port)

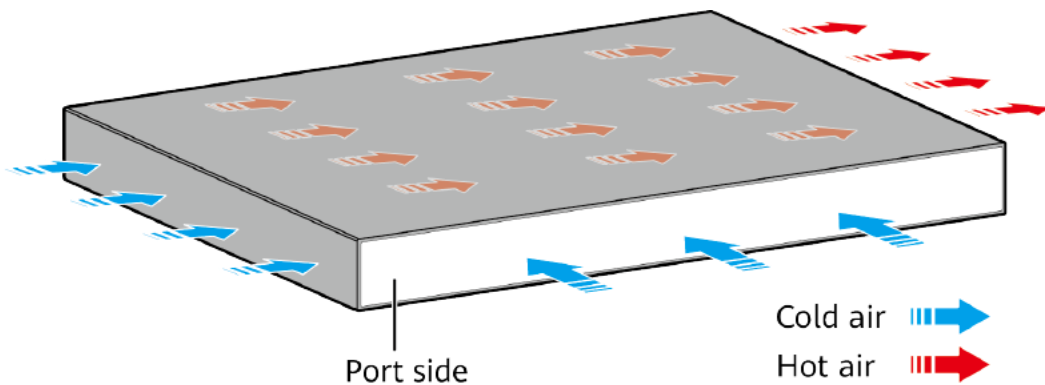
Display Mode	Color	Status	Description
Default mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Yellow	Blinking	The port is sending or receiving data.
Speed mode	-	Off	The port is not connected or has been shut down.
	Green and yellow	Steady on	1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green and yellow	Blinking	1000M/10GE port: The port is operating at 10 Gbit/s. 1000M port: The port is operating at 1000 Mbit/s.

Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules. The built-in power module can provide 380 W PoE power, which ensures full PoE power on 24 ports in compliance with 802.3af or on 12 ports in compliance with 802.3at.

Heat Dissipation System

The switch has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1546 Technical specifications of the S5735-L48P4X-A1

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90.0 mm x 550.0 mm x 360.0 mm (3.54 in. x 21.65 in. x 14.17 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	3.23 kg (7.12 lb)
Weight with packaging [kg(lb)]	4.28 kg (9.44 lb)
Typical power consumption [W]	58.7 W

Item	Specification
Typical heat dissipation [BTU/hour]	200.29 BTU/hour
Maximum power consumption [W]	<ul style="list-style-type: none">Not providing the PoE function: 76.1 W100% PoE loads: 456.1 W (PoE: 380 W)
Maximum heat dissipation [BTU/hour]	<ul style="list-style-type: none">Not providing the PoE function: 259.66100% PoE loads: 1556.26
MTBF [year]	44.03 year
MTTR [hour]	2 hour
Availability	>0.99999
Noise at normal temperature (acoustic power) [dB(A)]	50 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	38.2 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	2
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.)
Short-term operating temperature [°C(°F)]	-5 °C to +55 °C (23 °F to 131 °F) at an altitude of 0-1800 m (0-5906 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none">The equipment operates at a temperature of over 50 °C (122 °F) consecutively for at most 96 hours in one year.The equipment operates at a temperature of over 50 °C (122 °F) for a total of no more than 360 hours in one year.The equipment operates at a temperature of over 50 °C (122 °F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of</p>

Item	Specification
	the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature [°C(°F)]	-40 °C to +70 °C (-40 °F to +158 °F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	AC built-in
Rated input voltage [V]	<ul style="list-style-type: none">AC input: 100 V AC to 240 V AC, 50/60 HzHigh-Voltage DC input: 240 V DC
Input voltage range [V]	<ul style="list-style-type: none">AC input: 90 V AC to 290 V AC, 45 Hz to 65 HzHigh-Voltage DC input: 190 V DC to 290 V DC
Maximum input current [A]	6 A
Memory	512 MB
Flash memory	512 MB
Console port	RJ45
Eth Management port	Not supported
USB	Supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: ±7 kV
Power supply surge protection [kV]	±6 kV in differential mode, ±6 kV in common mode
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Supported
Certification	EMC certification Safety certification

Item	Specification
	Manufacturing certification

4.30.16 S5735-L8T4S-QA1

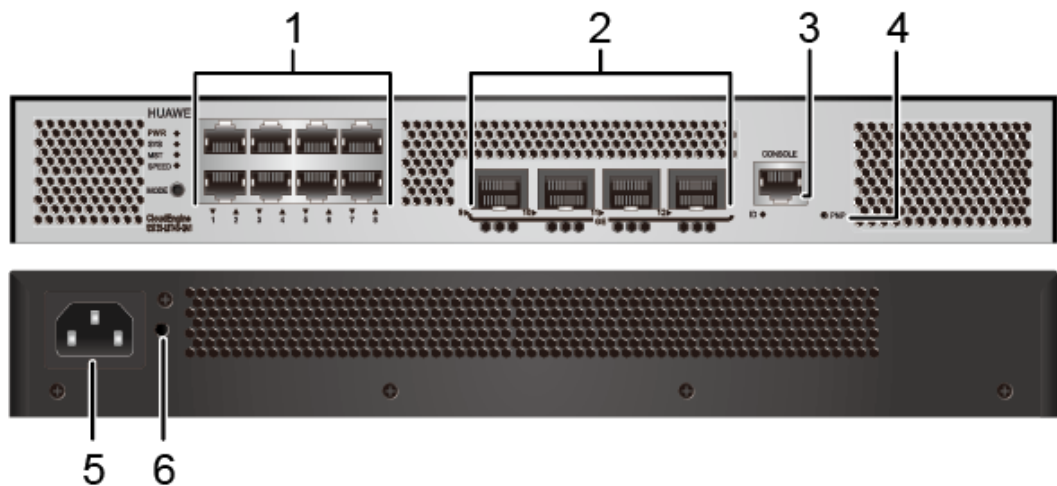
Overview

Table 4-1547 Basic information about the S5735-L8T4S-QA1

Item	Details
Description	S5735-L8T4S-QA1 (8*10/100/1000BASE-T ports, 4*GE SFP ports, AC power, Fanless)
Part Number	98011551
Model	S5735-L8T4S-QA1
First supported version	V200R021C00

Components

Figure 4-563 S5735-L8T4S-QA1 appearance



1	Eight 10/100/1000BASE-T ports	2	Four 1000BASE-X ports
3	One console port	4	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.

			To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
5	AC socket NOTE It is used with an 9.8 AC Power Cable.	6	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.
-	Ground screw NOTE The ground screw is on the left side of the chassis.	-	-

Ports

Table 4-1548 Ports on the S5735-L8T4S-QA1

Port	Connector Type	Description	Available Components
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.	9.4 Ethernet Cable
1000BASE-X port	SFP	A 1000BASE-X port can send and receive data at 100 or 1000 Mbit/s.	<ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.17 Industrial Optical Modules • 10.12 10GE SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
Console port	RJ45	The console port is connected to a	9.13 Console Cable

Port	Connector Type	Description	Available Components
		console for on-site configuration.	

Indicators and Buttons

The S5735-L8T4S-QA1 has similar indicators to those on the S5735-L24P4X-A1 except that the S5735-L8T4S-QA1 does not have USB and PoE mode indicators. For details, see the S5735-L24P4X-A1.

Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules.

Heat Dissipation System

The switch has no fans and uses natural heat dissipation.

Technical Specifications

Table 4-1549 Technical specifications of the S5735-L8T4S-QA1

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 320.0 mm x 210.0 mm (1.72 in. x 12.6 in. x 8.27 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 320.0 mm x 217.0 mm (1.72 in. x 12.6 in. x 8.54 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90.0 mm x 465.0 mm x 380.0 mm (3.54 in. x 18.31 in. x 14.96 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	2.30 kg (5.07 lb)
Weight with packaging [kg(lb)]	3.10 kg (6.83 lb)
Typical power consumption [W]	20.5 W
Typical heat dissipation [BTU/hour]	69.95 BTU/hour
Maximum power consumption [W]	22 W
Maximum heat dissipation [BTU/hour]	75.07 BTU/hour
MTBF [year]	71.82 year

Item	Specification
MTTR [hour]	2 hour
Availability	>0.99999
Noise at normal temperature (acoustic power) [dB(A)]	Noise-free (no fans), < 30
Noise at normal temperature (acoustic pressure) [dB(A)]	Noise-free (no fans), < 20
Number of card slots	0
Number of power slots	0
Number of fans modules	0
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	−5 °C to +45 °C (23 °F to 113 °F) at an altitude of 0 to 1800 m (0 to 5905.51 ft.)
Short-term operating temperature [°C(°F)]	Not supported
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>Devices cannot start when the temperature is lower than 0 °C (32 °F).</p> <p>When the following optical modules are used, the device can operate in the temperature range of −5 °C to +40 °C (23 °F to 104 °F):</p> <ul style="list-style-type: none"> • 10GE non-industrial optical module with a transmission distance of 10 km • Non-industrial FE/GE optical module with a transmission distance of 40 km or 80 km
Storage temperature [°C(°F)]	−40 °C to +70 °C (−40 °F to +158 °F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	AC built-in
Rated input voltage [V]	AC input: 100 V AC to 240 V AC, 50/60 Hz
Input voltage range [V]	AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz

Item	Specification
Maximum input current [A]	0.8 A
Memory	512 MB
Flash memory	512 MB
Console port	RJ45
Eth Management port	Not supported
USB	Not supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: ± 7 kV
Power supply surge protection [kV]	± 6 kV in differential mode, ± 6 kV in common mode
Types of fans	None
Heat dissipation mode	Natural heat dissipation
Airflow direction	-
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

4.30.17 S5735-L8P4S-QA1

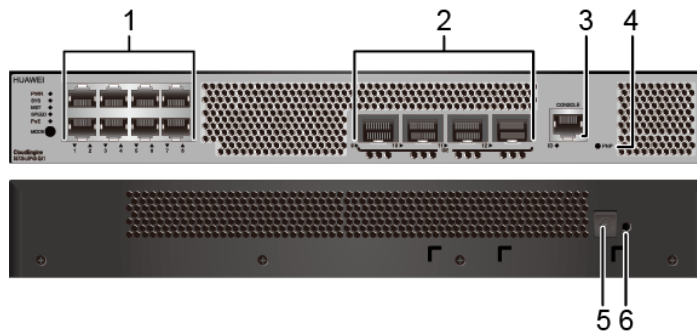
Overview

Table 4-1550 Basic information about the S5735-L8P4S-QA1

Item	Details
Description	S5735-L8P4S-QA1 (8*10/100/1000BASE-T ports, 4*GE SFP ports, PoE+, AC power, Fanless)
Part Number	98011565
Model	S5735-L8P4S-QA1
First supported version	V200R021C00

Components

Figure 4-564 S5735-L8P4S-QA1 appearance



1	Eight 10/100/1000BASE-T PoE+ ports	2	Four 1000BASE-X ports
3	One console port	4	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
5	Power adapter socket NOTE It is used with the power adapter delivered with the switch.	6	Jack for power adapter cable locking strap NOTE The power adapter cable locking strap is delivered with the switch.
-	Ground screw NOTE The ground screw is on the left side of the chassis.	-	-

Ports

Table 4-1551 Ports on the S5735-L8P4S-QA1

Port	Connector Type	Description	Available Components
10/100/1000BASE-T PoE+ port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.	9.4 Ethernet Cable

Port	Connector Type	Description	Available Components
		The port supports the PoE function.	
1000BASE-X port	SFP	A 1000BASE-X port can send and receive data at 100 or 1000 Mbit/s.	<ul style="list-style-type: none">• 10.4 FE SFP/eSFP Optical Modules• 10.5 GE eSFP Optical Modules• 10.7 GE-CWDM eSFP Optical Modules• 10.10 GE SFP Copper Modules• 10.17 Industrial Optical Modules• 10.12 10GE SFP+ Optical Modules• 9.15 Copper Cable• 9.3 Optical Fiber• 9.14 Dedicated Stack Cable
Console port	RJ45	The console port is connected to a console for on-site configuration.	9.13 Console Cable

Indicators and Buttons

The S5735-L8P4S-QA1 has similar indicators to those on the S5735-L24P4X-A1 except that the S5735-L8P4S-QA1 does not have a USB indicator. For details, see the S5735-L24P4X-A1.

Power Supply System

The switch uses an external power adapter to power the device and PDs. The adapter can provide 114 W PoE power, which ensures full PoE power on 7 ports in compliance with 802.3af or on 3 ports in compliance with 802.3at.

Figure 4-565 shows the power adapter delivered with the switch. The power adapter must be used with the C7 connector power cable delivered with the switch.

Figure 4-565 Appearance of a power adapter



Heat Dissipation System

The switch has no fans and uses natural heat dissipation.

Technical Specifications

Table 4-1552 Technical specifications of the S5735-L8P4S-QA1

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 320.0 mm x 210.0 mm (1.72 in. x 12.6 in. x 8.27 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 320.0 mm x 227.0 mm (1.72 in. x 12.6 in. x 8.94 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90.0 mm x 465.0 mm x 380.0 mm (3.54 in. x 18.31 in. x 14.96 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	2.41 kg (5.31 lb)
Weight with packaging [kg(lb)]	4.06 kg (8.95 lb)
Typical power consumption [W]	26.3 W
Typical heat dissipation [BTU/hour]	89.74 BTU/hour
Maximum power consumption [W]	<ul style="list-style-type: none"> Without PoE: 28 W Full PoE load: 159 W (PoE: 114 W)
Maximum heat dissipation [BTU/hour]	<ul style="list-style-type: none"> Without PoE: 95.54

Item	Specification
	<ul style="list-style-type: none">Full PoE load: 543.89
MTBF [year]	66.56 year
MTTR [hour]	2 hour
Availability	>0.99999
Noise at normal temperature (acoustic power) [dB(A)]	Noise-free (no fans), < 30
Noise at normal temperature (acoustic pressure) [dB(A)]	Noise-free (no fans), < 20
Number of card slots	0
Number of power slots	0
Number of fans modules	0
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	–5 °C to +45 °C (23 °F to 113 °F) at an altitude of 0 to 1800 m (0 to 5905.51 ft.)
Short-term operating temperature [°C(°F)]	Not supported
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>Devices cannot start when the temperature is lower than 0 °C (32 °F).</p> <p>When the following optical modules are used, the device can operate in the temperature range of –5 °C to +40 °C (23 °F to 104 °F):</p> <ul style="list-style-type: none">10GE non-industrial optical module with a transmission distance of 10 kmNon-industrial FE/GE optical module with a transmission distance of 40 km or 80 km
Storage temperature [°C(°F)]	–40 °C to +70 °C (–40 °F to +158 °F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	Power adapter
Rated input voltage [V]	AC input: 100 V AC to 240 V AC, 50/60 Hz

Item	Specification
Input voltage range [V]	AC input: 90 V AC to 290 V AC; 47 Hz to 63 Hz
Maximum input current [A]	2 A
Memory	512 MB
Flash memory	512 MB
Console port	RJ45
Eth Management port	Not supported
USB	Not supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: ± 7 kV
Power supply surge protection [kV]	± 4 kV in differential mode and ± 4 kV in common mode
Types of fans	None
Heat dissipation mode	Natural heat dissipation
Airflow direction	-
PoE	Supported
Certification	EMC certification Safety certification Manufacturing certification

4.30.18 S5735-L24T4S-QA1

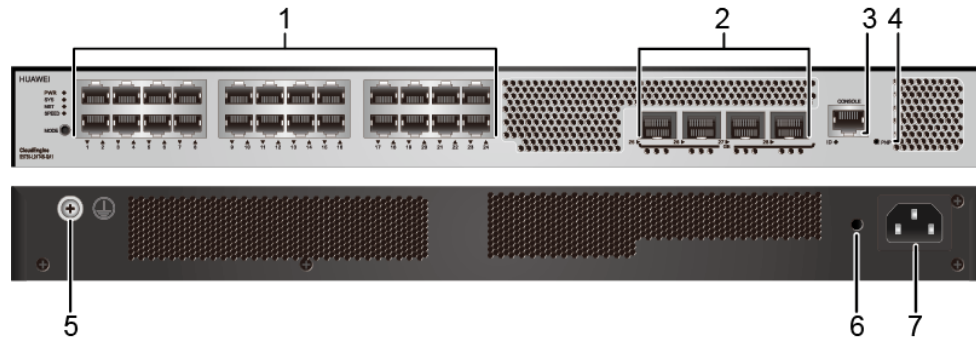
Overview

Table 4-1553 Basic information about the S5735-L24T4S-QA1

Item	Details
Description	S5735-L24T4S-QA1 (24*10/100/1000BASE-T ports, 4*GE SFP ports, AC power, Fanless)
Part Number	98011585
Model	S5735-L24T4S-QA1
First supported version	V200R021C00

Components

Figure 4-566 S5735-L24T4S-QA1 appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 1000BASE-X ports
3	One console port	4	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
5	Ground screw NOTE It is used with a 9.1 Ground Cable.	6	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.
7	AC socket NOTE It is used with an 9.8 AC Power Cable.	-	-

Ports

Table 4-1554 Ports on the S5735-L24T4S-QA1

Port	Connector Type	Description	Available Components
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000	9.4 Ethernet Cable

Port	Connector Type	Description	Available Components
		Mbit/s.	
1000BASE-X port	SFP	A 1000BASE-X port can send and receive data at 100 or 1000 Mbit/s.	<ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.17 Industrial Optical Modules • 10.12 10GE SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
Console port	RJ45	The console port is connected to a console for on-site configuration.	9.13 Console Cable

Indicators and Buttons

The S5735-L24T4S-QA1 has similar indicators to those on the S5735-L24P4X-A1 except that the S5735-L24T4S-QA1 does not have USB and PoE mode indicators. For details, see the S5735-L24P4X-A1.

Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules.

Heat Dissipation System

The switch has no fans and uses natural heat dissipation.

Technical Specifications

Table 4-1555 Technical specifications of the S5735-L24T4S-QA1

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.66 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90.0 mm x 550.0 mm x 360.0 mm (3.54 in. x 21.65 in. x 14.17 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	3.69 kg (8.14 lb)
Weight with packaging [kg(lb)]	4.45 kg (9.81 lb)
Typical power consumption [W]	29.8 W
Typical heat dissipation [BTU/hour]	101.68 BTU/hour
Maximum power consumption [W]	33 W
Maximum heat dissipation [BTU/hour]	112.60 BTU/hour
MTBF [year]	66.16 year
MTTR [hour]	2 hour
Availability	>0.99999
Noise at normal temperature (acoustic power) [dB(A)]	Noise-free (no fans), < 30
Noise at normal temperature (acoustic pressure) [dB(A)]	Noise-free (no fans), < 20
Number of card slots	0
Number of power slots	0
Number of fans modules	0
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5 °C to +45 °C (23 °F to 113 °F) at an altitude of 0 to 1800 m (0 to 5905.51 ft.)
Short-term operating temperature [°C(°F)]	Not supported
Restriction on the operating temperature variation rate [°C(°F)]	When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating

Item	Specification
	<p>temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>Devices cannot start when the temperature is lower than 0 °C (32 °F).</p> <p>When the following optical modules are used, the device can operate in the temperature range of -5 °C to +40 °C (23 °F to 104 °F):</p> <ul style="list-style-type: none">• 10GE non-industrial optical module with a transmission distance of 10 km• Non-industrial FE/GE optical module with a transmission distance of 40 km or 80 km
Storage temperature [°C(°F)]	-40 °C to +70 °C (-40 °F to +158 °F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	AC built-in
Rated input voltage [V]	AC input: 100 V AC to 240 V AC, 50/60 Hz
Input voltage range [V]	AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz
Maximum input current [A]	2 A
Memory	512 MB
Flash memory	512 MB
Console port	RJ45
Eth Management port	Not supported
USB	Not supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: ±7 kV
Power supply surge protection [kV]	±6 kV in differential mode, ±6 kV in common mode
Types of fans	None
Heat dissipation mode	Natural heat dissipation
Airflow direction	-

Item	Specification
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

4.30.19 S5735-L24T4X-QA1

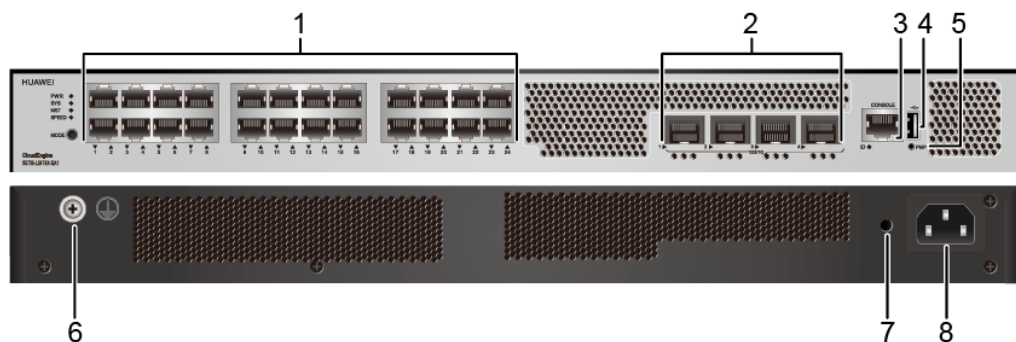
Overview

Table 4-1556 Basic information about the S5735-L24T4X-QA1

Item	Details
Description	S5735-L24T4X-QA1 (24*10/100/1000BASE-T ports, 4*10GE SFP+ ports, AC power, Fanless)
Part Number	98011583
Model	S5735-L24T4X-QA1
First supported version	V200R021C00

Components

Figure 4-567 S5735-L24T4X-QA1 appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports
3	One console port	4	One USB port
5	One PNP button NOTICE To restore the factory settings and reset the	6	Ground screw NOTE

	<p>switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>		<p>It is used with a 9.1 Ground Cable.</p>
7	<p>Jack for AC power cable locking strap</p> <p>NOTE The AC power cable locking strap is not delivered with the switch.</p>	8	<p>AC socket</p> <p>NOTE It is used with an 9.8 AC Power Cable.</p>

Ports

Table 4-1557 Ports on the S5735-L24T4X-QA1

Port	Connector Type	Description	Available Components
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.	9.4 Ethernet Cable
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.17 Industrial Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
Console port	RJ45	The console port is connected to a console for on-site configuration.	9.13 Console Cable
USB port	USB 2.0 Type A	The USB port can have a USB flash drive connected to	USB flash drive

Port	Connector Type	Description	Available Components
		<p>upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.</p> <p>USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.</p>	

Indicators and Buttons

The S5735-L24T4X-QA1 has similar indicators to those on the S5735-L24P4X-A1 except that the S5735-L24T4X-QA1 does not have a PoE mode indicator. For details, see the S5735-L24P4X-A1.

Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules.

Heat Dissipation System

The switch has no fans and uses natural heat dissipation.

Technical Specifications

Table 4-1558 Technical specifications of the S5735-L24T4X-QA1

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	<p>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.66 in.)</p> <p>Maximum dimensions (the depth is the</p>

Item	Specification
	distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90.0 mm x 550.0 mm x 360.0 mm (3.54 in. x 21.65 in. x 14.17 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	3.69 kg (8.14 lb)
Weight with packaging [kg(lb)]	4.45 kg (9.81 lb)
Typical power consumption [W]	30.8 W
Typical heat dissipation [BTU/hour]	105.09 BTU/hour
Maximum power consumption [W]	34 W
Maximum heat dissipation [BTU/hour]	116.01 BTU/hour
MTBF [year]	62.05 year
MTTR [hour]	2 hour
Availability	>0.99999
Noise at normal temperature (acoustic power) [dB(A)]	Noise-free (no fans), < 30
Noise at normal temperature (acoustic pressure) [dB(A)]	Noise-free (no fans), < 20
Number of card slots	0
Number of power slots	0
Number of fans modules	0
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5 °C to +45 °C (23 °F to 113 °F) at an altitude of 0 to 1800 m (0 to 5905.51 ft.)
Short-term operating temperature [°C(°F)]	Not supported
Restriction on the operating temperature variation rate [°C(°F)]	When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). Devices cannot start when the temperature is lower than 0 °C (32 °F). When the following optical modules are used, the device can operate in the temperature range of -5 °C to +40 °C (23 °F to 104 °F):

Item	Specification
	<ul style="list-style-type: none">10GE non-industrial optical module with a transmission distance of 10 kmNon-industrial FE/GE optical module with a transmission distance of 40 km or 80 km
Storage temperature [°C(°F)]	-40 °C to +70 °C (-40 °F to +158 °F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	AC built-in
Rated input voltage [V]	AC input: 100 V AC to 240 V AC, 50/60 Hz
Input voltage range [V]	AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz
Maximum input current [A]	2 A
Memory	512 MB
Flash memory	512 MB
Console port	RJ45
Eth Management port	Not supported
USB	Supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: ± 7 kV
Power supply surge protection [kV]	± 6 kV in differential mode, ± 6 kV in common mode
Types of fans	None
Heat dissipation mode	Natural heat dissipation
Airflow direction	-
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

4.31 S5735S-L1

4.31.1 S5735S-L8T4S-A1

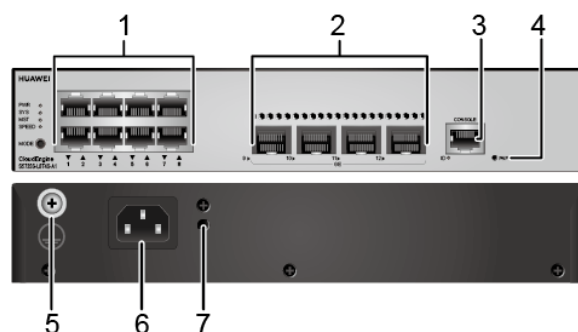
Overview

Table 4-1559 Basic information about the S5735S-L8T4S-A1

Item	Details
Description	S5735S-L8T4S-A1 (8*10/100/1000BASE-T ports, 4*GE SFP ports, AC power)
Part Number	98011285
Model	S5735S-L8T4S-A1
First supported version	V200R020C10
Remarks	Some models cannot be downgraded due to component upgrade. Therefore, you are advised to run the display system-software information command to check the software versions supported by the device before performing a downgrade. If the device does not support the display system-software information command, it can be downgraded.

Components

Figure 4-568 S5735S-L8T4S-A1 appearance



1	Eight 10/100/1000BASE-T ports	2	Four 1000BASE-X ports
3	One console port	4	One PNP button
			NOTICE To restore the factory settings and reset the

			<p>switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
5	<p>Ground screw</p> <p>NOTE It is used with a 9.1 Ground Cable.</p>	6	<p>AC socket</p> <p>NOTE It is used with an 9.8 AC Power Cable.</p>
7	<p>Jack for AC power cable locking strap</p> <p>NOTE The AC power cable locking strap is not delivered with the switch.</p>	-	-

Ports

Table 4-1560 Ports on the S5735S-L8T4S-A1

Port	Connector Type	Description	Available Components
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.	9.4 Ethernet Cable
1000BASE-X port	SFP	A 1000BASE-X port can send and receive data at 100 or 1000 Mbit/s.	<ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.17 Industrial Optical Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical

Port	Connector Type	Description	Available Components
			Modules <ul style="list-style-type: none"> • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
Console port	RJ45	The console port is connected to a console for on-site configuration.	9.13 Console Cable

Indicators and Buttons

The S5735S-L8T4S-A1 has similar indicators to those on the S5735S-L24P4X-A1 except that the S5735S-L8T4S-A1 does not have a PoE mode indicator. For details, see the S5735S-L24P4X-A1.

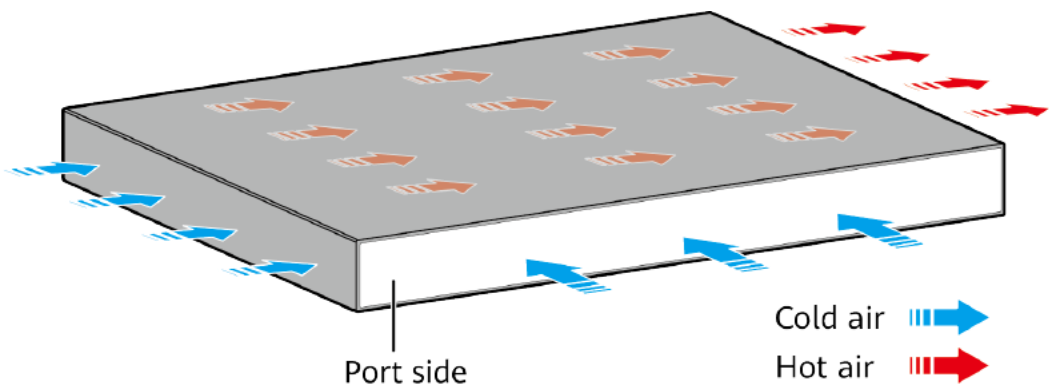
Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules.

Heat Dissipation System

The switch has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.

When working properly at a normal temperature, the device meets the desktop-class noise requirements. However, the fan speed may be high and the noise may be loud during device startup.



 **NOTE**

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1561 Technical specifications of the S5735S-L8T4S-A1

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 250.0 mm x 180.0 mm (1.72 in. x 9.84 in. x 7.1 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 250.0 mm x 187.0 mm (1.72 in. x 9.84 in. x 7.36 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90.0 mm x 370.0 mm x 380.0 mm (3.54 in. x 14.57 in. x 14.96 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	1.38 kg (3.04 lb)
Weight with packaging [kg(lb)]	2.02 kg (4.45 lb)
Typical power consumption [W]	21.2 W
Typical heat dissipation [BTU/hour]	72.34 BTU/hour
Maximum power consumption [W]	26.3 W
Maximum heat dissipation [BTU/hour]	89.74 BTU/hour
MTBF [year]	71.82 year
MTTR [hour]	2 hour
Availability	>0.99999
Noise at normal temperature (acoustic power) [dB(A)]	43 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	31.5 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	1
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5 °C to +50 °C (23 °F to 122 °F) (0 m to 1800 m altitude, non-industrial optical modules)

Item	Specification
	-5 °C to +55 °C (23 °F to 131 °F) (0 m to 1800 m altitude, industrial optical modules with transmission distances less than or equal to 10 km)
Short-term operating temperature [°C(°F)]	Not supported
Restriction on the operating temperature variation rate [°C(°F)]	When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0 °C (32 °F). The operating temperature ranges from -5 °C to +45 °C (23 °F to 113 °F) when optical modules with transmission distances greater than or equal to 70 km are used.
Storage temperature [°C(°F)]	-40 °C to +70 °C (-40 °F to +158 °F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	AC built-in
Rated input voltage [V]	AC input: 100 V AC to 240 V AC, 50/60 Hz
Input voltage range [V]	AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz
Maximum input current [A]	0.8 A
Memory	512 MB
Flash memory	512 MB
Console port	RJ45
Eth Management port	Not supported
USB	Not supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: ±7 kV
Power supply surge protection [kV]	±6 kV in differential mode, ±6 kV in common mode
Types of fans	Built-in

Item	Specification
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

4.31.2 S5735S-L8P4S-A1

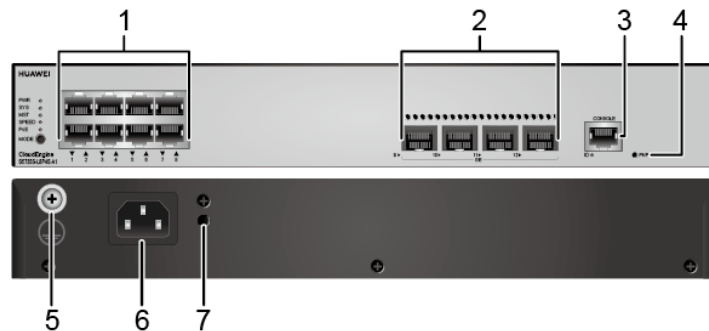
Overview

Table 4-1562 Basic information about the S5735S-L8P4S-A1

Item	Details
Description	S5735S-L8P4S-A1 (8*10/100/1000BASE-T ports, 4*GE SFP ports, PoE+, AC power)
Part Number	98011296
Model	S5735S-L8P4S-A1
First supported version	V200R020C10
Remarks	Some models cannot be downgraded due to component upgrade. Therefore, you are advised to run the display system-software information command to check the software versions supported by the device before performing a downgrade. If the device does not support the display system-software information command, it can be downgraded.

Components

Figure 4-569 S5735S-L8P4S-A1 appearance



1	Eight 10/100/1000BASE-T PoE+ ports	2	Four 1000BASE-X ports
3	One console port	4	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
5	Ground screw NOTE It is used with a 9.1 Ground Cable.	6	AC socket NOTE It is used with an 9.8 AC Power Cable.
7	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.	-	-

Ports

Table 4-1563 Ports on the S5735S-L8P4S-A1

Port	Connector Type	Description	Available Components
10/100/1000BASE-T PoE+ port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s. The port supports	9.4 Ethernet Cable

Port	Connector Type	Description	Available Components
		the PoE function.	
1000BASE-X port	SFP	A 1000BASE-X port can send and receive data at 100 or 1000 Mbit/s.	<ul style="list-style-type: none">• 10.4 FE SFP/eSFP Optical Modules• 10.5 GE eSFP Optical Modules• 10.7 GE-CWDM eSFP Optical Modules• 10.9 GE-DWDM eSFP Optical Modules• 10.10 GE SFP Copper Modules• 10.17 Industrial Optical Modules• 10.12 10GE SFP+ Optical Modules• 10.13 10GE-CWDM SFP+ Optical Modules• 10.14 10GE-DWDM SFP+ Optical Modules• 9.15 Copper Cable• 9.3 Optical Fiber• 9.14 Dedicated Stack Cable
Console port	RJ45	The console port is connected to a console for on-site configuration.	9.13 Console Cable

Indicators and Buttons

The S5735S-L8P4S-A1 has the same types of indicators as the S5735S-L24P4X-A1. For details, see the S5735S-L24P4X-A1.

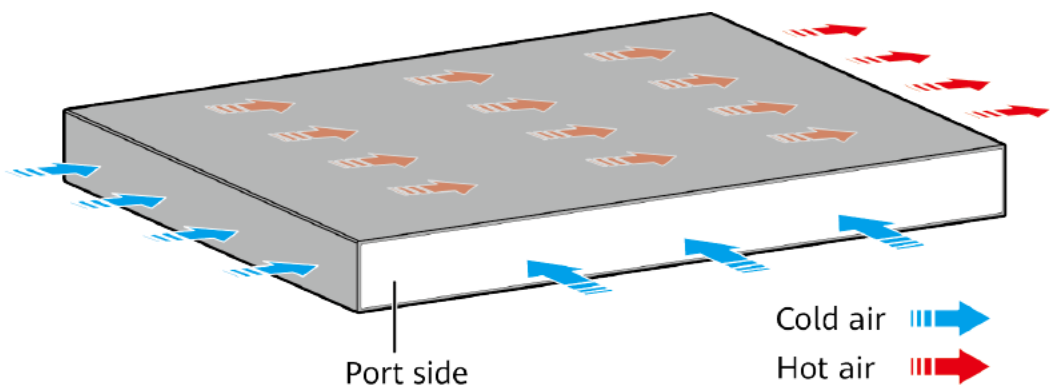
Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules. The built-in power module can provide 124 W PoE power, which ensures full PoE power on 8 ports in compliance with 802.3af or on 4 ports in compliance with 802.3at.

Heat Dissipation System

The switch has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.

When working properly at a normal temperature, the device meets the desktop-class noise requirements. However, the fan speed may be high and the noise may be loud during device startup.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1564 Technical specifications of the S5735S-L8P4S-A1

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 300.0 mm x 220.0 mm (1.72 in. x 11.8 in. x 8.7 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 300.0 mm x 227.0 mm (1.72 in. x 11.8 in. x 8.94 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	110.0 mm x 435.0 mm x 360.0 mm (4.33 in. x 17.13 in. x 14.17 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	2.25 kg (4.96 lb)
Weight with packaging [kg(lb)]	3.17 kg (7 lb)

Item	Specification
Typical power consumption [W]	28.4 W
Typical heat dissipation [BTU/hour]	96.9 BTU/hour
Maximum power consumption [W]	<ul style="list-style-type: none">Not providing the PoE function: 38.6 W100% PoE loads: 162.6 W (PoE: 124 W)
Maximum heat dissipation [BTU/hour]	<ul style="list-style-type: none">Not providing the PoE function: 131.71100% PoE loads: 554.81
MTBF [year]	66.56 year
MTTR [hour]	2 hour
Availability	>0.99999
Noise at normal temperature (acoustic power) [dB(A)]	42.2 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	30.5 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	1
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5 °C to +50 °C (23 °F to 122 °F) (0 m to 1800 m altitude, non-industrial optical modules) -5 °C to +55 °C (23 °F to 131 °F) (0 m to 1800 m altitude, industrial optical modules with transmission distances less than or equal to 10 km)
Short-term operating temperature [°C(°F)]	Not supported
Restriction on the operating temperature variation rate [°C(°F)]	When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0 °C (32 °F). The operating temperature ranges from -5 °C to +45 °C (23 °F to 113 °F) when optical modules with transmission distances greater than or equal to 70 km are used.
Storage temperature [°C(°F)]	-40 °C to +70 °C (-40 °F to +158 °F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing

Item	Specification
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	AC built-in
Rated input voltage [V]	AC input: 100 V AC to 240 V AC, 50/60 Hz
Input voltage range [V]	AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz
Maximum input current [A]	3 A
Memory	512 MB
Flash memory	512 MB
Console port	RJ45
Eth Management port	Not supported
USB	Not supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: ± 7 kV
Power supply surge protection [kV]	± 6 kV in differential mode, ± 6 kV in common mode
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Supported
Certification	EMC certification Safety certification Manufacturing certification

4.31.3 S5735S-L24T4S-A1

Overview

Table 4-1565 Basic information about the S5735S-L24T4S-A1

Item	Details
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Item	Details
Description	S5735S-L24T4S-A1 (24*10/100/1000BASE-T ports, 4*GE SFP ports, AC power)
Part Number	98011307
Model	S5735S-L24T4S-A1
First supported version	V200R020C10
Remarks	Some models cannot be downgraded due to component upgrade. Therefore, you are advised to run the display system-software information command to check the software versions supported by the device before performing a downgrade. If the device does not support the display system-software information command, it can be downgraded.

Components

Figure 4-570 S5735S-L24T4S-A1 appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 1000BASE-X ports
3	One console port	4	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
5	Ground screw NOTE	6	Jack for AC power cable locking strap NOTE

	It is used with a 9.1 Ground Cable.		The AC power cable locking strap is not delivered with the switch.
7	AC socket NOTE It is used with an 9.8 AC Power Cable.	-	-

Ports

Table 4-1566 Ports on the S5735S-L24T4S-A1

Port	Connector Type	Description	Available Components
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.	9.4 Ethernet Cable
1000BASE-X port	SFP	A 1000BASE-X port can send and receive data at 100 or 1000 Mbit/s.	<ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.17 Industrial Optical Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber

Port	Connector Type	Description	Available Components
			<ul style="list-style-type: none"> 9.14 Dedicated Stack Cable
Console port	RJ45	The console port is connected to a console for on-site configuration.	9.13 Console Cable

Indicators and Buttons

The S5735S-L24T4S-A1 has similar indicators to those on the S5735S-L24P4X-A1 except that the S5735S-L24T4S-A1 does not have a PoE mode indicator. For details, see the S5735S-L24P4X-A1.

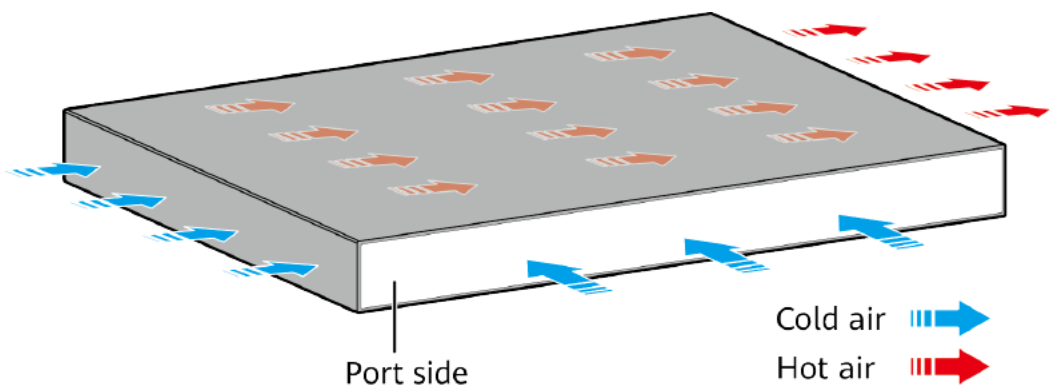
Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules.

Heat Dissipation System

The switch has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.

When working properly at a normal temperature, the device meets the desktop-class noise requirements. However, the fan speed may be high and the noise may be loud during device startup.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1567 Technical specifications of the S5735S-L24T4S-A1

Item	Specification
Dimensions without packaging (H x W x D)	Basic dimensions (excluding the parts)

Item	Specification
[mm(in.)]	protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90.0 mm x 550.0 mm x 360.0 mm (3.54 in. x 21.65 in. x 14.17 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	2.45 kg (5.4 lb)
Weight with packaging [kg(lb)]	3.34 kg (7.36 lb)
Typical power consumption [W]	32.7 W
Typical heat dissipation [BTU/hour]	111.58 BTU/hour
Maximum power consumption [W]	47.6 W
Maximum heat dissipation [BTU/hour]	162.42 BTU/hour
MTBF [year]	66.16 year
MTTR [hour]	2 hour
Availability	>0.99999
Noise at normal temperature (acoustic power) [dB(A)]	39 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	27.2 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	1
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5 °C to +50 °C (23 °F to 122 °F) (0 m to 1800 m altitude, non-industrial optical modules) -5 °C to +55 °C (23 °F to 131 °F) (0 m to 1800 m altitude, industrial optical modules with transmission distances less than or equal to 10 km)
Short-term operating temperature [°C(°F)]	Not supported
Restriction on the operating temperature variation rate [°C(°F)]	When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every

Item	Specification
	time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0 °C (32 °F). The operating temperature ranges from -5 °C to +45 °C (23 °F to 113 °F) when optical modules with transmission distances greater than or equal to 70 km are used.
Storage temperature [°C (°F)]	-40 °C to +70 °C (-40 °F to +158 °F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	AC built-in
Rated input voltage [V]	AC input: 100 V AC to 240 V AC, 50/60 Hz
Input voltage range [V]	AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz
Maximum input current [A]	2 A
Memory	512 MB
Flash memory	512 MB
Console port	RJ45
Eth Management port	Not supported
USB	Not supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: ±7 kV
Power supply surge protection [kV]	±6 kV in differential mode, ±6 kV in common mode
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Not supported
Certification	EMC certification

Item	Specification
	Safety certification
	Manufacturing certification

4.31.4 S5735S-L24P4S-A1

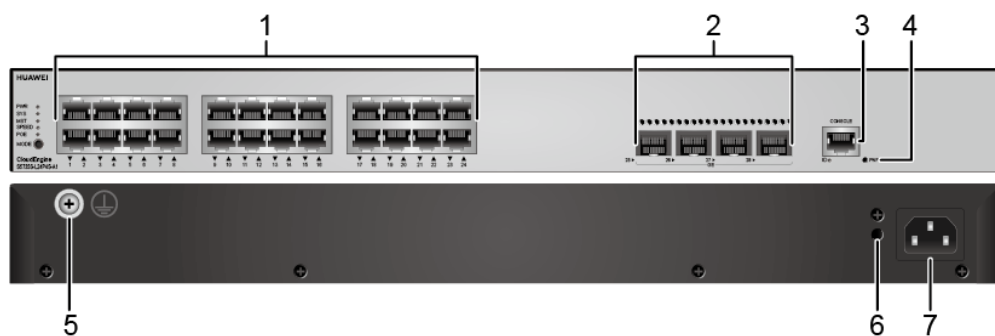
Overview

Table 4-1568 Basic information about the S5735S-L24P4S-A1

Item	Details
Description	S5735S-L24P4S-A1 (24*10/100/1000BASE-T ports, 4*GE SFP ports, PoE+, AC power)
Part Number	98011322
Model	S5735S-L24P4S-A1
First supported version	V200R020C10
Remarks	Some models cannot be downgraded due to component upgrade. Therefore, you are advised to run the display system-software information command to check the software versions supported by the device before performing a downgrade. If the device does not support the display system-software information command, it can be downgraded.

Components

Figure 4-571 S5735S-L24P4S-A1 appearance



1	Twenty-four 10/100/1000BASE-T PoE+ ports	2	Four 1000BASE-X ports
3	One console port	4	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
5	Ground screw NOTE It is used with a 9.1 Ground Cable.	6	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.
7	AC socket NOTE It is used with an 9.8 AC Power Cable.	-	-

Ports

Table 4-1569 Ports on the S5735S-L24P4S-A1

Port	Connector Type	Description	Available Components
10/100/1000BASE-T PoE+ port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s. The port supports the PoE function.	9.4 Ethernet Cable
1000BASE-X port	SFP	A 1000BASE-X port can send and receive data at 100 or 1000 Mbit/s.	<ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules

Port	Connector Type	Description	Available Components
			<ul style="list-style-type: none"> • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
Console port	RJ45	The console port is connected to a console for on-site configuration.	9.13 Console Cable

Indicators and Buttons

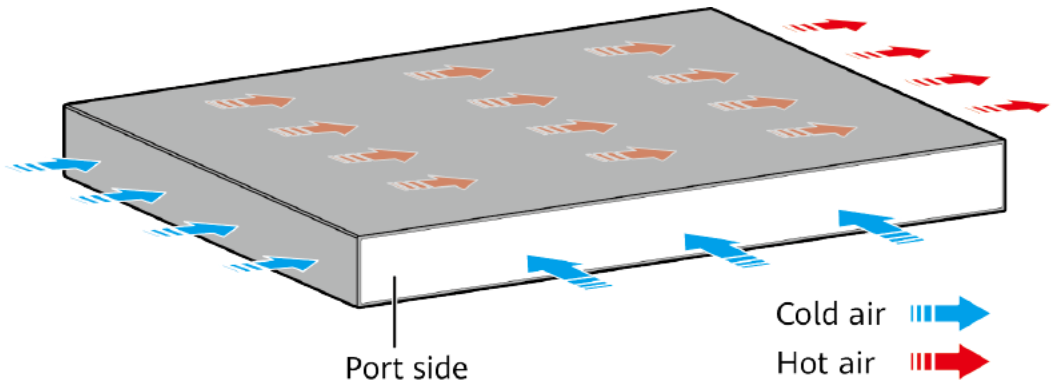
The S5735S-L24P4S-A1 has the same types of indicators as the S5735S-L24P4X-A1. For details, see the S5735S-L24P4X-A1.

Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules. The built-in power module can provide 380 W PoE power, which ensures full PoE power on 24 ports in compliance with 802.3af or on 12 ports in compliance with 802.3at.

Heat Dissipation System

The switch has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1570 Technical specifications of the S5735S-L24P4S-A1

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90.0 mm x 550.0 mm x 360.0 mm (3.54 in. x 21.65 in. x 14.17 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	2.94 kg (6.48 lb)
Weight with packaging [kg(lb)]	3.91 kg (8.62 lb)
Typical power consumption [W]	41.7 W
Typical heat dissipation [BTU/hour]	142.29 BTU/hour
Maximum power consumption [W]	<ul style="list-style-type: none"> Not providing the PoE function: 53.2 W 100% PoE loads: 433.2 W (PoE: 380 W)
Maximum heat dissipation [BTU/hour]	<ul style="list-style-type: none"> Not providing the PoE function: 181.52 100% PoE loads: 1478.12
MTBF [year]	55.72 year
MTTR [hour]	2 hour
Availability	>0.99999

Item	Specification
Noise at normal temperature (acoustic power) [dB(A)]	50 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	38.2 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	2
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.)
Short-term operating temperature [°C(°F)]	-5 °C to +55 °C (23 °F to 131 °F) at an altitude of 0-1800 m (0-5906 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> • The equipment operates at a temperature of over 50 °C (122 °F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 50 °C (122 °F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 50 °C (122 °F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature [°C(°F)]	-40 °C to +70 °C (-40 °F to +158 °F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)

Item	Specification
Power supply mode	AC built-in
Rated input voltage [V]	<ul style="list-style-type: none">AC input: 100 V AC to 240 V AC, 50/60 HzHigh-Voltage DC input: 240 V DC
Input voltage range [V]	<ul style="list-style-type: none">AC input: 90 V AC to 290 V AC, 45 Hz to 65 HzHigh-Voltage DC input: 190 V DC to 290 V DC
Maximum input current [A]	6 A
Memory	512 MB
Flash memory	512 MB
Console port	RJ45
Eth Management port	Not supported
USB	Not supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: ± 7 kV
Power supply surge protection [kV]	± 6 kV in differential mode, ± 6 kV in common mode
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Supported
Certification	EMC certification Safety certification Manufacturing certification

4.31.5 S5735S-L24T4X-A1

Overview

Table 4-1571 Basic information about the S5735S-L24T4X-A1

Item	Details
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Item	Details
Description	S5735S-L24T4X-A1 (24*10/100/1000BASE-T ports, 4*XGE SFP+ ports, AC power)
Part Number	98011310
Model	S5735S-L24T4X-A1
First supported version	V200R020C10
Remarks	Some models cannot be downgraded due to component upgrade. Therefore, you are advised to run the display system-software information command to check the software versions supported by the device before performing a downgrade. If the device does not support the display system-software information command, it can be downgraded.

Components

Figure 4-572 S5735S-L24T4X-A1 appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports
3	One console port	4	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
5	Ground screw NOTE	6	Jack for AC power cable locking strap NOTE

	It is used with a 9.1 Ground Cable.		The AC power cable locking strap is not delivered with the switch.
7	AC socket NOTE It is used with an 9.8 AC Power Cable.	-	-

Ports

Table 4-1572 Ports on the S5735S-L24T4X-A1

Port	Connector Type	Description	Available Components
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.	9.4 Ethernet Cable
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 10.17 Industrial Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable

Port	Connector Type	Description	Available Components
Console port	RJ45	The console port is connected to a console for on-site configuration.	9.13 Console Cable

Indicators and Buttons

The S5735S-L24T4X-A1 has similar indicators to those on the S5735S-L24P4X-A1 except that the S5735S-L24T4X-A1 does not have a PoE mode indicator. For details, see the S5735S-L24P4X-A1.

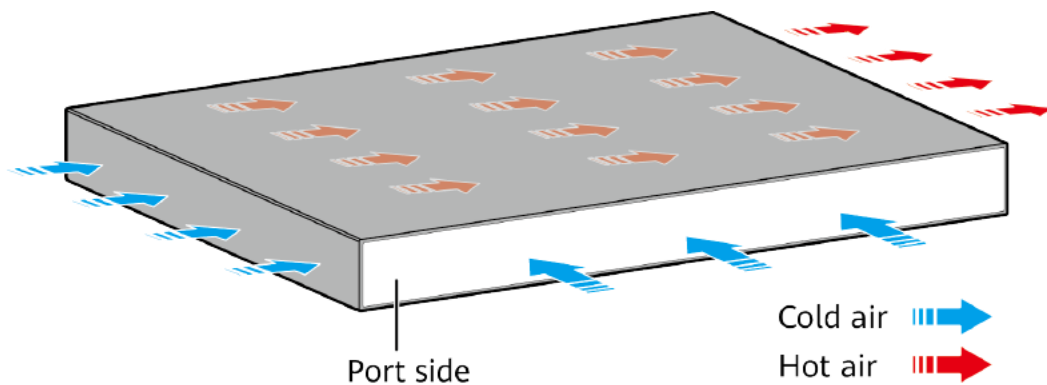
Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules.

Heat Dissipation System

The switch has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.

When working properly at a normal temperature, the device meets the desktop-class noise requirements. However, the fan speed may be high and the noise may be loud during device startup.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1573 Technical specifications of the S5735S-L24T4X-A1

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7

Item	Specification
	in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90.0 mm x 550.0 mm x 360.0 mm (3.54 in. x 21.65 in. x 14.17 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	2.45 kg (5.4 lb)
Weight with packaging [kg(lb)]	3.34 kg (7.36 lb)
Typical power consumption [W]	32.7 W
Typical heat dissipation [BTU/hour]	111.58 BTU/hour
Maximum power consumption [W]	47.6 W
Maximum heat dissipation [BTU/hour]	162.42 BTU/hour
MTBF [year]	64.3 year
MTTR [hour]	2 hour
Availability	>0.99999
Noise at normal temperature (acoustic power) [dB(A)]	39 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	27.2 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	1
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5 °C to +50 °C (23 °F to 122 °F) (0 m to 1800 m altitude, non-industrial optical modules) -5 °C to +55 °C (23 °F to 131 °F) (0 m to 1800 m altitude, industrial optical modules with transmission distances less than or equal to 10 km)
Short-term operating temperature [°C(°F)]	Not supported
Restriction on the operating temperature variation rate [°C(°F)]	When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).

Item	Specification
	The switch cannot be started when the ambient temperature is lower than 0 °C (32 °F). The operating temperature ranges from -5 °C to +45 °C (23 °F to 113 °F) when optical modules with transmission distances greater than or equal to 70 km are used.
Storage temperature [°C(°F)]	-40 °C to +70 °C (-40 °F to +158 °F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	AC built-in
Rated input voltage [V]	AC input: 100 V AC to 240 V AC, 50/60 Hz
Input voltage range [V]	AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz
Maximum input current [A]	2 A
Memory	512 MB
Flash memory	512 MB
Console port	RJ45
Eth Management port	Not supported
USB	Not supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: ±7 kV
Power supply surge protection [kV]	±6 kV in differential mode, ±6 kV in common mode
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

4.31.6 S5735S-L24P4X-A1

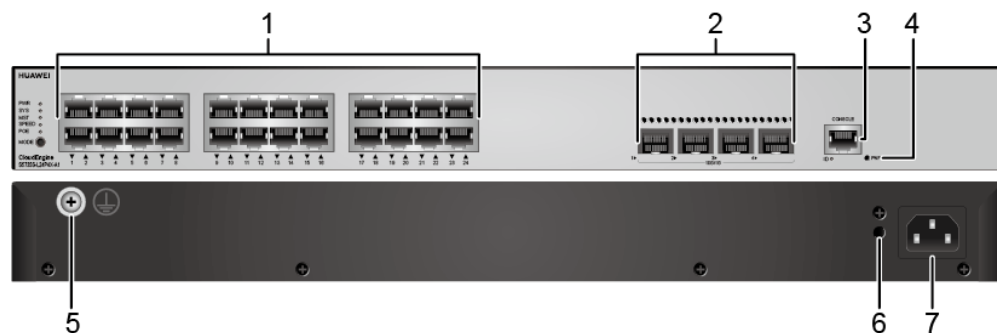
Overview

Table 4-1574 Basic information about the S5735S-L24P4X-A1

Item	Details
Description	S5735S-L24P4X-A1 (24*10/100/1000BASE-T ports, 4*10GE SFP+ ports, PoE+, AC power)
Part Number	98011328
Model	S5735S-L24P4X-A1
First supported version	V200R020C10
Remarks	Some models cannot be downgraded due to component upgrade. Therefore, you are advised to run the display system-software information command to check the software versions supported by the device before performing a downgrade. If the device does not support the display system-software information command, it can be downgraded.

Components

Figure 4-573 S5735S-L24P4X-A1 appearance



1	Twenty-four 10/100/1000BASE-T PoE+ ports	2	Four 10GE SFP+ ports
3	One console port	4	One PNP button NOTICE To restore the factory settings and reset the

			<p>switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
5	<p>Ground screw</p> <p>NOTE It is used with a 9.1 Ground Cable.</p>	6	<p>Jack for AC power cable locking strap</p> <p>NOTE The AC power cable locking strap is not delivered with the switch.</p>
7	<p>AC socket</p> <p>NOTE It is used with an 9.8 AC Power Cable.</p>	-	-

Ports

Table 4-1575 Ports on the S5735S-L24P4X-A1

Port	Connector Type	Description	Available Components
10/100/1000BASE-T PoE+ port	RJ45	<p>A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.</p> <p>The port supports the PoE function.</p>	9.4 Ethernet Cable
10GE SFP+ optical port	SFP+	<p>A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.</p>	<ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM

Port	Connector Type	Description	Available Components
			SFP+ Optical Modules <ul style="list-style-type: none"> 9.15 Copper Cable 9.3 Optical Fiber 9.14 Dedicated Stack Cable
Console port	RJ45	The console port is connected to a console for on-site configuration.	9.13 Console Cable

Indicators and Buttons

Figure 4-574 Indicators on the S5735S-L24P4X-A1

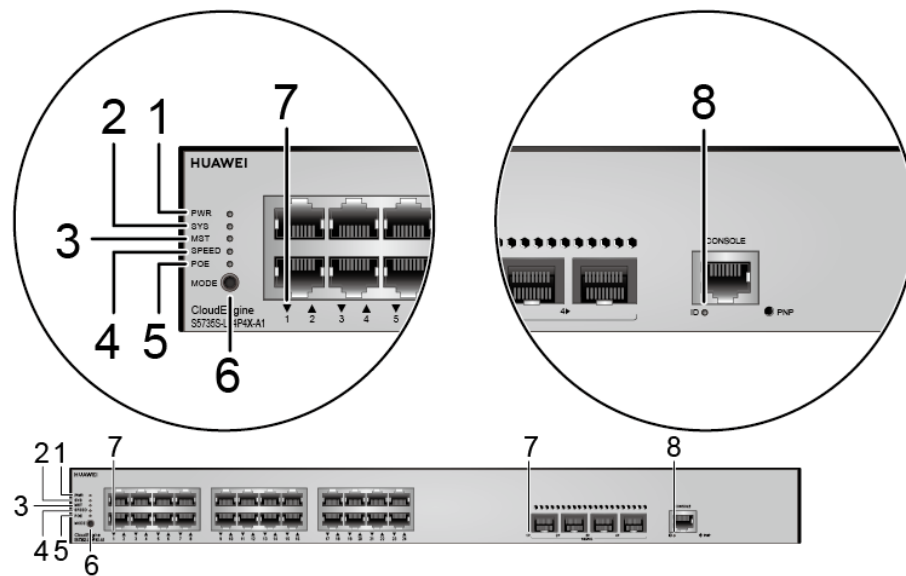


Table 4-1576 Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR	Power module indicator	-	Off	The switch is powered off.
			Green	Steady on	The system power supply is normal.
2	SYS	System	-	Off	The system is not running.

No.	Indicator	Name	Color	Status	Description
		status indicator	Green	Fast blinking	The system is starting.
			Green	Steady on	During the system startup preparation phase, the SYS indicator is steady green, which lasts for a maximum of 30 seconds.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or a temperature alarm has been generated.
3	MST	Stack indicator	-	Off	<ul style="list-style-type: none">If you are not changing the indicator mode (default): The switch is a standby or slave switch in a stack or the stacking function is not enabled on the switch.If you are changing the indicator mode: The stack mode is not selected.
			Green	Steady on	The stack mode is selected. The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none">If you are not changing the indicator mode (default): The switch is the master switch in a stack or a standalone switch with the stacking function enabled.If you are changing the indicator mode: The stack mode is selected. The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. After 45 seconds, the service port indicators automatically restore to the status mode.
4	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The speed mode is selected, and service port indicators show the speed of each port.
5	PoE	PoE indicator	-	Off	The PoE mode is not selected.
			Green	Steady on	The PoE mode is selected, and service port indicators show the PoE status of each port.
6	MODE	Mode switch	-	-	<ul style="list-style-type: none">When you press this button once, the service port indicators change to the

No.	Indicator	Name	Color	Status	Description
		button			<p>stack mode and show the stack ID of the local switch.</p> <ul style="list-style-type: none"> When you press this button a second time, the service port indicators change to the speed mode and show the speed of each service port. When you press this button a third time, the service port indicators change to the PoE mode and show the PoE status of each service port. When you press this button a fourth time, the service port indicators restore to the default mode and show the connection status and link activity of each service port. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the SPEED and PoE indicators are off.</p> <p>NOTE</p> <p>Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:</p> <ul style="list-style-type: none"> If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows: If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes. If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status. If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.
7	-	Service port indicator	<p>Meanings of service port indicators vary in different modes. For details, see Table 4-1577.</p> <p>NOTE</p> <p>If a power failure occurs on a device's PCB board, indicators of the last four optical ports on the device's front panel blink green cyclically at an interval of 1 second, with each indicator illuminating for 0.25 seconds.</p>		
8	ID	ID indicator	-	Off	The ID indicator is not used (default state).
			Blue	Steady	The indicator identifies the switch to maintain. The ID indicator can be turned

No.	Indicator	Name	Color	Status	Description
				on	on or off remotely to help field engineers find the switch to maintain.

Table 4-1577 Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Default mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
MST stack mode	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is blinking, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.
Speed mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10 Mbit/s or 100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is

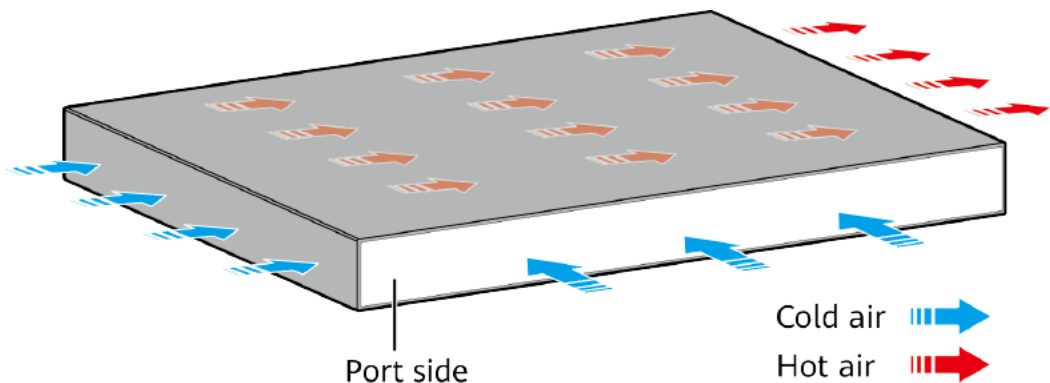
Display Mode	Color	Status	Description
			operating at 10 Gbit/s.
PoE mode	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.
	Green	Blinking	The power of the PD connected to the port exceeds the power capacity of the port or the power threshold configured on the port. Alternatively, the PD does not comply with IEEE standards.

Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules. The built-in power module can provide 380 W PoE power, which ensures full PoE power on 24 ports in compliance with 802.3af or on 12 ports in compliance with 802.3at.

Heat Dissipation System

The switch has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1578 Technical specifications of the S5735S-L24P4X-A1

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.) Maximum dimensions (the depth is the

Item	Specification
	distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90.0 mm x 550.0 mm x 360.0 mm (3.54 in. x 21.65 in. x 14.17 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	2.94 kg (6.48 lb)
Weight with packaging [kg(lb)]	3.91 kg (8.62 lb)
Typical power consumption [W]	41.7 W
Typical heat dissipation [BTU/hour]	142.29 BTU/hour
Maximum power consumption [W]	<ul style="list-style-type: none">Not providing the PoE function: 53.2 W100% PoE loads: 433.2 W (PoE: 380 W)
Maximum heat dissipation [BTU/hour]	<ul style="list-style-type: none">Not providing the PoE function: 181.52100% PoE loads: 1478.12
MTBF [year]	55.72 year
MTTR [hour]	2 hour
Availability	>0.99999
Noise at normal temperature (acoustic power) [dB(A)]	50 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	38.2 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	2
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.)
Short-term operating temperature [°C(°F)]	-5 °C to +55 °C (23 °F to 131 °F) at an altitude of 0-1800 m (0-5906 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following

Item	Specification
	<p>conditions must be met:</p> <ul style="list-style-type: none">• The equipment operates at a temperature of over 50 °C (122 °F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 50 °C (122 °F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 50 °C (122 °F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature [°C(°F)]	-40 °C to +70 °C (-40 °F to +158 °F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	AC built-in
Rated input voltage [V]	<ul style="list-style-type: none">• AC input: 100 V AC to 240 V AC, 50/60 Hz• High-Voltage DC input: 240 V DC
Input voltage range [V]	<ul style="list-style-type: none">• AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz• High-Voltage DC input: 190 V DC to 290 V DC
Maximum input current [A]	6 A
Memory	512 MB
Flash memory	512 MB
Console port	RJ45
Eth Management port	Not supported
USB	Not supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: ±7 kV

Item	Specification
Power supply surge protection [kV]	±6 kV in differential mode, ±6 kV in common mode
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Supported
Certification	EMC certification Safety certification Manufacturing certification

4.31.7 S5735S-L32ST4X-A1

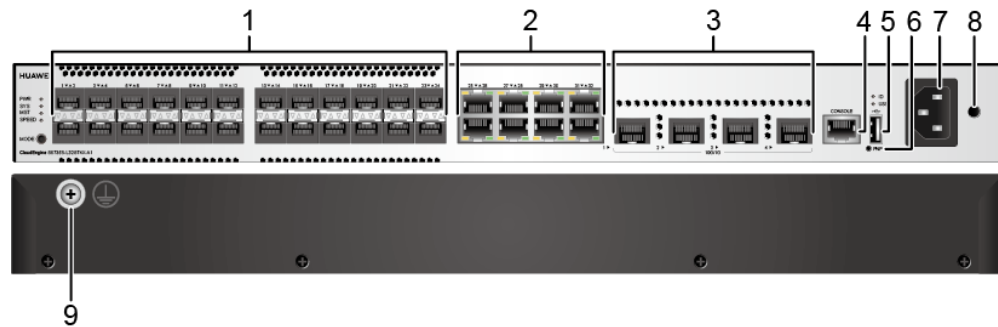
Overview

Table 4-1579 Basic information about the S5735S-L32ST4X-A1

Item	Details
Description	S5735S-L32ST4X-A1 (24*GE SFP ports, 8*10/100/1000BASE-T ports, 4*10GE SFP+ ports, AC power, front access)
Part Number	98011398
Model	S5735S-L32ST4X-A1
First supported version	V200R020C10
Remarks	Some models cannot be downgraded due to component upgrade. Therefore, you are advised to run the display system-software information command to check the software versions supported by the device before performing a downgrade. If the device does not support the display system-software information command, it can be downgraded.

Components

Figure 4-575 S5735S-L32ST4X-A1 appearance



1	Twenty-four 100/1000BASE-X ports	2	Eight 10/100/1000BASE-T ports
3	Four 10GE SFP+ ports	4	One console port
5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	AC socket NOTE It is used with an 9.8 AC Power Cable.	8	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.
9	Ground screw NOTE It is used with a 9.1 Ground Cable.	-	-

Ports

Table 4-1580 Ports on the S5735S-L32ST4X-A1

Port	Connector Type	Description	Available Components
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.	9.4 Ethernet Cable

Port	Connector Type	Description	Available Components
100/1000BASE-X port	SFP	A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s.	<ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
Console port	RJ45	The console port is connected to a console for on-site configuration.	9.13 Console Cable
USB port	USB 2.0 Type A	The USB port can have a USB flash	USB flash drive

Port	Connector Type	Description	Available Components
		<p>drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.</p> <p>USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.</p>	

Indicators and Buttons

Figure 4-576 Indicators on the S5735S-L32ST4X-A1

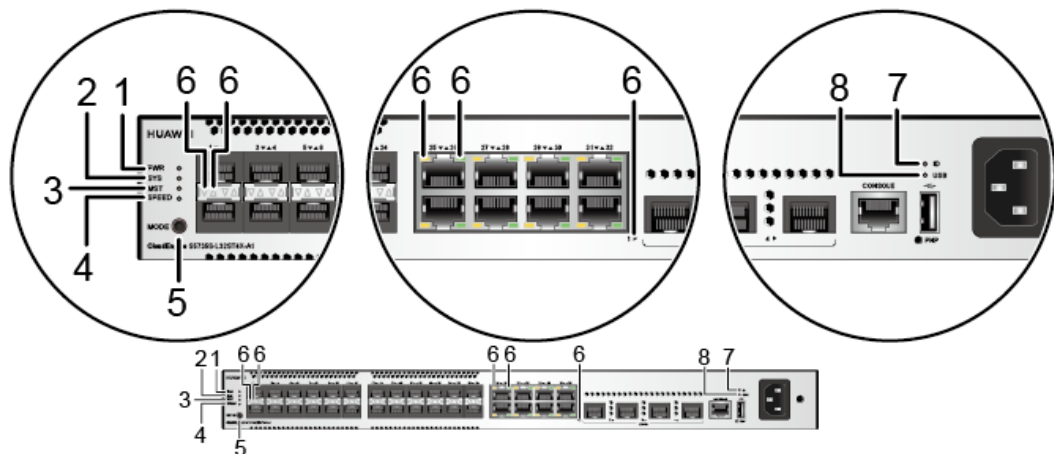


Table 4-1581 Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR	Power module indicator	-	Off	The switch is powered off.
			Green	Steady on	The system power supply is normal.
2	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Steady on	During the system startup preparation phase, the SYS indicator is steady green, which lasts for a maximum of 30 seconds.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or a temperature alarm has been generated.
3	MST	Stack indicator	-	Off	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is a standby or slave switch in a stack or the stacking function is not enabled on the switch. If you are changing the indicator mode: The stack mode is not selected.
			Green	Steady on	The stack mode is selected. The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is the master switch in a stack or a standalone switch with the stacking function enabled. If you are changing the indicator mode: The stack mode is selected. The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. After 45 seconds, the service port indicators automatically restore to the status mode.
4	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The speed mode is selected, and service port indicators show the speed of each port.

No.	Indicator	Name	Color	Status	Description
5	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> When you press this button once, the service port indicators change to the stack mode and show the stack ID of the local switch. When you press this button a second time, the service port indicators change to the speed mode and show the speed of each service port. When you press this button a third time, the service port indicators restore to the default mode and show the connection status and link activity of each service port. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the SPEED indicator is off.</p> <p>NOTE</p> <p>Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:</p> <ul style="list-style-type: none"> If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows: If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes. If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status. If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.
6	-	Service port indicator	<p>Meanings of service port indicators vary in different modes. For details, see Table 4-1582 and Table 4-1583.</p> <p>NOTE</p> <p>If a power failure occurs on a device's PCB board, indicators of the last four optical ports on the device's front panel blink green cyclically at an interval of 1 second, with each indicator illuminating for 0.25 seconds.</p>		
7	ID	ID indicator	-	Off	The ID indicator is not used (default state).
			Blue	Steady on	The indicator identifies the switch to maintain. The ID indicator can be turned on or off remotely to help field engineers find the switch to maintain.

No.	Indicator	Name	Color	Status	Description
8	USB	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> No USB flash drive is connected to the switch. The USB port is damaged. The indicator is damaged. The USB flash drive does not have any configuration file and cannot be used for deployment. The switch has been upgraded using the USB flash drive and is restarting.
			Green	Steady on	A USB-based deployment has been completed.
			Green	Fast blinking	The system is reading data from a USB flash drive.
			Green	Slow blinking	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Fast blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

Table 4-1582 Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Default mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	1000M/10GE port: The port is operating at 10 Gbit/s.

Table 4-1583 Description of service port indicators in different modes (two indicators for each port)

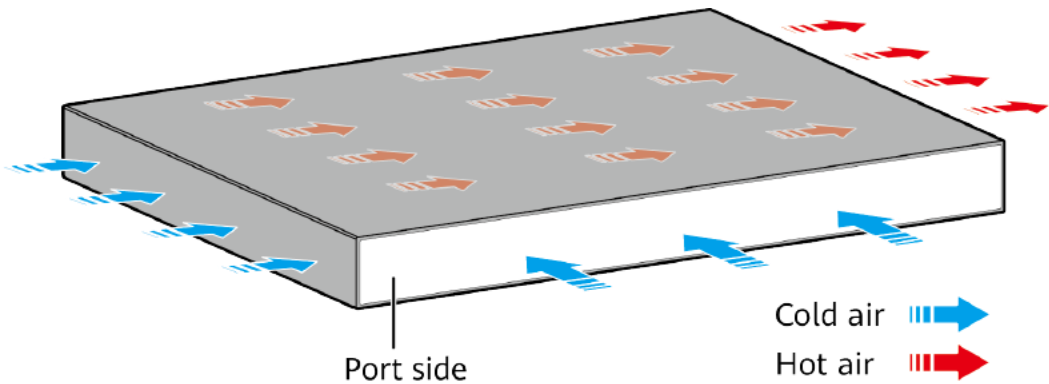
Display Mode	Color	Status	Description
Default mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Yellow	Blinking	The port is sending or receiving data.
MST stack mode	-	Off	Port indicators do not show the stack ID of the switch.
	Green and yellow	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
	Green and yellow	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is blinking, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.
Speed mode	-	Off	The port is not connected or has been shut down.
	Green and yellow	Steady on	10M/100M/1000M port: The port is operating at 10 Mbit/s or 100 Mbit/s. 100M/1000M port: The port is operating at 100 Mbit/s.
	Green and yellow	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 100M/1000M port: The port is operating at 1000 Mbit/s.

Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules.

Heat Dissipation System

The switch has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1584 Technical specifications of the S5735S-L32ST4X-A1

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90.0 mm x 550.0 mm x 360.0 mm (3.54 in. x 21.65 in. x 14.17 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	2.88 kg (6.35 lb)
Weight with packaging [kg(lb)]	4.03 kg (8.89 lb)
Typical power consumption [W]	53.2 W
Typical heat dissipation [BTU/hour]	181.52 BTU/hour
Maximum power consumption [W]	66.8 W
Maximum heat dissipation [BTU/hour]	227.93 BTU/hour
MTBF [year]	58.44 year
MTTR [hour]	2 hour

Item	Specification
Availability	>0.99999
Noise at normal temperature (acoustic power) [dB(A)]	46.8 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	35 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	2
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.)
Short-term operating temperature [°C(°F)]	-5 °C to +55 °C (23 °F to 131 °F) at an altitude of 0-1800 m (0-5906 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none">• The equipment operates at a temperature of over 50 °C (122 °F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 50 °C (122 °F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 50 °C (122 °F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature [°C(°F)]	-40 °C to +70 °C (-40 °F to +158 °F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)

Item	Specification
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	AC built-in
Rated input voltage [V]	<ul style="list-style-type: none">AC input: 100 V AC to 240 V AC, 50/60 HzHigh-Voltage DC input: 240 V DC
Input voltage range [V]	<ul style="list-style-type: none">AC input: 90 V AC to 264 V AC, 47 Hz to 63 HzHigh-Voltage DC input: 190 V DC to 290 V DC
Maximum input current [A]	2 A
Memory	512 MB
Flash memory	512 MB
Console port	RJ45
Eth Management port	Not supported
USB	Supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: ± 7 kV
Power supply surge protection [kV]	± 6 kV in differential mode, ± 6 kV in common mode
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

4.31.8 S5735S-L48T4S-A1

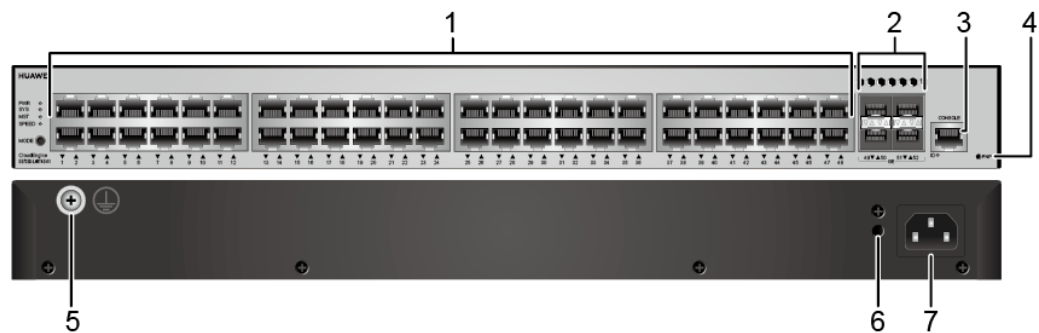
Overview

Table 4-1585 Basic information about the S5735S-L48T4S-A1

Item	Details
Description	S5735S-L48T4S-A1 (48*10/100/1000BASE-T ports, 4*GE SFP ports, AC power)
Part Number	98011335
Model	S5735S-L48T4S-A1
First supported version	V200R020C10
Remarks	Some models cannot be downgraded due to component upgrade. Therefore, you are advised to run the display system-software information command to check the software versions supported by the device before performing a downgrade. If the device does not support the display system-software information command, it can be downgraded.

Components

Figure 4-577 S5735S-L48T4S-A1 appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 1000BASE-X ports
3	One console port	4	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.

			To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
5	Ground screw NOTE It is used with a 9.1 Ground Cable.	6	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.
7	AC socket NOTE It is used with an 9.8 AC Power Cable.	-	-

Ports

Table 4-1586 Ports on the S5735S-L48T4S-A1

Port	Connector Type	Description	Available Components
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.	9.4 Ethernet Cable
1000BASE-X port	SFP	A 1000BASE-X port can send and receive data at 100 or 1000 Mbit/s.	<ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical

Port	Connector Type	Description	Available Components
			Modules <ul style="list-style-type: none"> 9.15 Copper Cable 9.3 Optical Fiber 9.14 Dedicated Stack Cable
Console port	RJ45	The console port is connected to a console for on-site configuration.	9.13 Console Cable

Indicators and Buttons

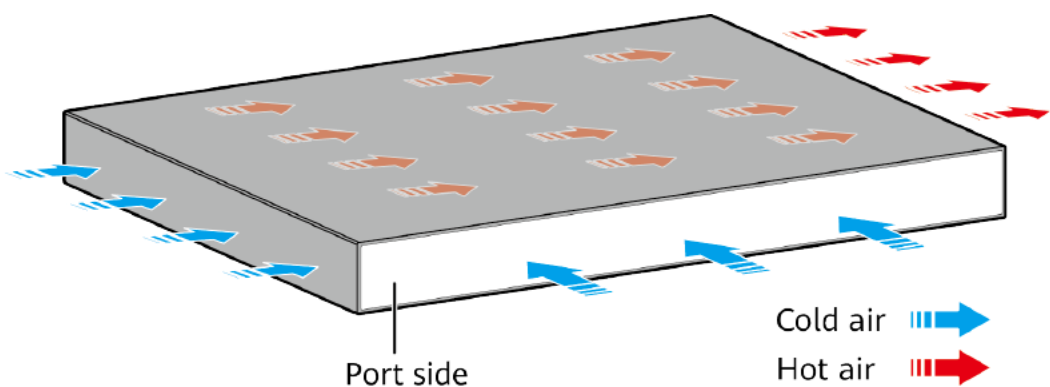
The S5735S-L48T4S-A1 has similar indicators to those on the S5735S-L48P4X-A1 except that the S5735S-L48T4S-A1 does not have USB and PoE mode indicators. For details, see the S5735S-L48P4X-A1.

Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules.

Heat Dissipation System

The switch has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1587 Technical specifications of the S5735S-L48T4S-A1

Item	Specification
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Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90.0 mm x 550.0 mm x 360.0 mm (3.54 in. x 21.65 in. x 14.17 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	2.76 kg (6.09 lb)
Weight with packaging [kg(lb)]	3.74 kg (8.25 lb)
Typical power consumption [W]	43.3 W
Typical heat dissipation [BTU/hour]	147.74 BTU/hour
Maximum power consumption [W]	50.4 W
Maximum heat dissipation [BTU/hour]	171.97 BTU/hour
MTBF [year]	56.7 year
MTTR [hour]	2 hour
Availability	>0.99999
Noise at normal temperature (acoustic power) [dB(A)]	48 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	36.2 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	1
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.)
Short-term operating temperature [°C(°F)]	-5 °C to +55 °C (23 °F to 131 °F) at an altitude of 0-1800 m (0-5906 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).

Item	Specification
	<p>The operating temperature ranges from -5 °C to +45 °C (23 °F to 113 °F) when optical modules with transmission distances greater than or equal to 70 km are used.</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> • The equipment operates at a temperature of over 50 °C (122 °F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 50 °C (122 °F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 50 °C (122 °F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature [°C(°F)]	-40 °C to +70 °C (-40 °F to +158 °F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	AC built-in
Rated input voltage [V]	AC input: 100 V AC to 240 V AC, 50/60 Hz
Input voltage range [V]	AC input: 90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum input current [A]	2 A
Memory	512 MB
Flash memory	512 MB
Console port	RJ45
Eth Management port	Not supported
USB	Not supported
RTC	Not supported

Item	Specification
RPS input	Not supported
Service port surge protection [kV]	Common mode: ± 7 kV
Power supply surge protection [kV]	± 6 kV in differential mode, ± 6 kV in common mode
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

4.31.9 S5735S-L48P4S-A1

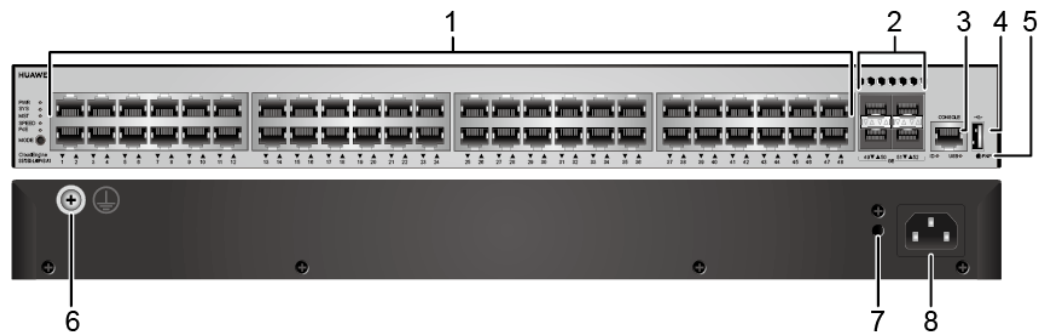
Overview

Table 4-1588 Basic information about the S5735S-L48P4S-A1

Item	Details
Description	S5735S-L48P4S-A1 (48*10/100/1000BASE-T ports, 4*GE SFP ports, PoE+, AC power)
Part Number	98011346
Model	S5735S-L48P4S-A1
First supported version	V200R020C10
Remarks	Some models cannot be downgraded due to component upgrade. Therefore, you are advised to run the display system-software information command to check the software versions supported by the device before performing a downgrade. If the device does not support the display system-software information command, it can be downgraded.

Components

Figure 4-578 S5735S-L48P4S-A1 appearance



1	Forty-eight 10/100/1000BASE-T PoE+ ports	2	Four 1000BASE-X ports
3	One console port	4	One USB port
5	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.	6	Ground screw NOTE It is used with a 9.1 Ground Cable.
7	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.	8	AC socket NOTE It is used with an 9.8 AC Power Cable.

Ports

Table 4-1589 Ports on the S5735S-L48P4S-A1

Port	Connector Type	Description	Available Components
10/100/1000BASE-T PoE+ port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s. The port supports the PoE function.	9.4 Ethernet Cable

Port	Connector Type	Description	Available Components
1000BASE-X port	SFP	A 1000BASE-X port can send and receive data at 100 or 1000 Mbit/s.	<ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
Console port	RJ45	The console port is connected to a console for on-site configuration.	9.13 Console Cable
USB port	USB 2.0 Type A	The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0. USB flash drives from different	USB flash drive

Port	Connector Type	Description	Available Components
		vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.	

Indicators and Buttons

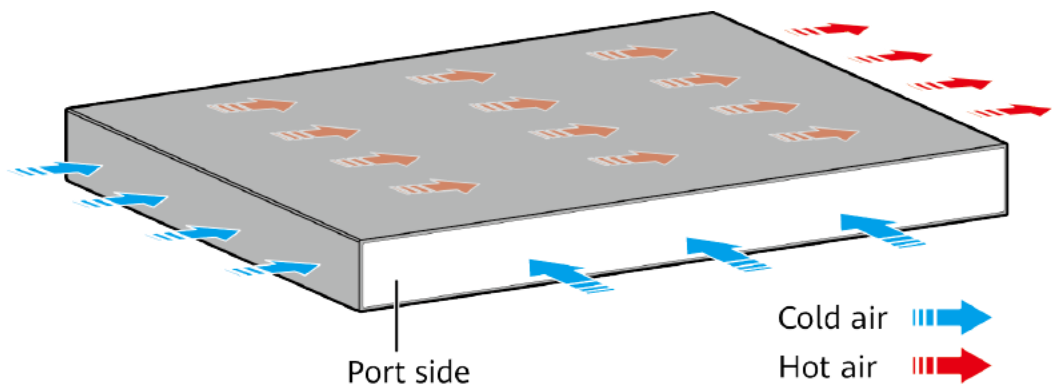
The S5735S-L48P4S-A1 has the same types of indicators as the S5735S-L48P4X-A1. For details, see the S5735S-L48P4X-A1.

Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules. The built-in power module can provide 380 W PoE power, which ensures full PoE power on 24 ports in compliance with 802.3af or on 12 ports in compliance with 802.3at.

Heat Dissipation System

The switch has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1590 Technical specifications of the S5735S-L48P4S-A1

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90.0 mm x 550.0 mm x 360.0 mm (3.54 in. x 21.65 in. x 14.17 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	3.23 kg (7.12 lb)
Weight with packaging [kg(lb)]	4.28 kg (9.44 lb)
Typical power consumption [W]	58.7 W
Typical heat dissipation [BTU/hour]	200.29 BTU/hour
Maximum power consumption [W]	<ul style="list-style-type: none">Not providing the PoE function: 76.1 W100% PoE loads: 456.1 W (PoE: 380 W)
Maximum heat dissipation [BTU/hour]	<ul style="list-style-type: none">Not providing the PoE function: 259.66100% PoE loads: 1556.26
MTBF [year]	44.9 year
MTTR [hour]	2 hour
Availability	>0.99999
Noise at normal temperature (acoustic power) [dB(A)]	50 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	38.2 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	2
Redundant power supply	Not supported
Long-term operating temperature [°C (°F)]	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.)
Short-term operating temperature [°C (°F)]	-5 °C to +55 °C (23 °F to 131 °F) at an altitude

Item	Specification
	of 0-1800 m (0-5906 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none">• The equipment operates at a temperature of over 50 °C (122 °F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 50 °C (122 °F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 50 °C (122 °F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature [°C(°F)]	-40 °C to +70 °C (-40 °F to +158 °F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	AC built-in
Rated input voltage [V]	<ul style="list-style-type: none">• AC input: 100 V AC to 240 V AC, 50/60 Hz• High-Voltage DC input: 240 V DC
Input voltage range [V]	<ul style="list-style-type: none">• AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz• High-Voltage DC input: 190 V DC to 290 V DC
Maximum input current [A]	6 A
Memory	512 MB
Flash memory	512 MB
Console port	RJ45

Item	Specification
Eth Management port	Not supported
USB	Supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: ± 7 kV
Power supply surge protection [kV]	± 6 kV in differential mode, ± 6 kV in common mode
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Supported
Certification	EMC certification Safety certification Manufacturing certification

4.31.10 S5735S-L48T4X-A1

Overview

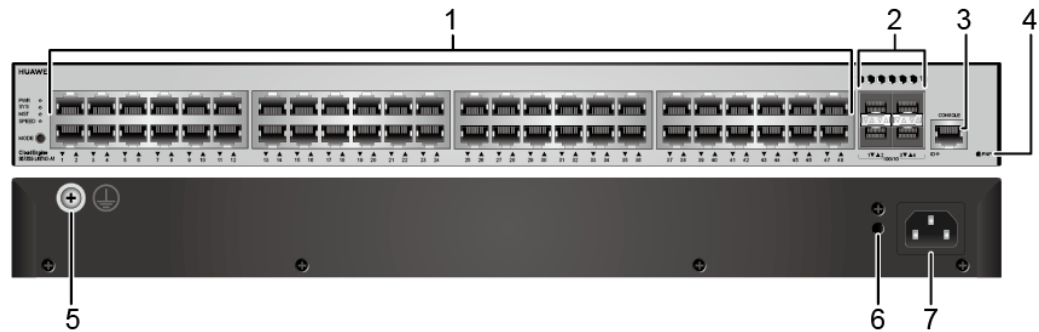
Table 4-1591 Basic information about the S5735S-L48T4X-A1

Item	Details
Description	S5735S-L48T4X-A1 (48*10/100/1000BASE-T ports, 4*10GE SFP+ ports, AC power)
Part Number	98011338
Model	S5735S-L48T4X-A1
First supported version	V200R020C10
Remarks	Some models cannot be downgraded due to component upgrade. Therefore, you are advised to run the display system-software information command to check the software versions supported by the device before performing a downgrade. If the device does not support the display system-software information command, it can be

Item	Details
	downgraded.

Components

Figure 4-579 S5735S-L48T4X-A1 appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports
3	One console port	4	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
5	Ground screw NOTE It is used with a 9.1 Ground Cable.	6	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.
7	AC socket NOTE It is used with an 9.8 AC Power Cable.	-	-

Ports

Table 4-1592 Ports on the S5735S-L48T4X-A1

Port	Connector Type	Description	Available Components
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-T Ethernet electrical	9.4 Ethernet Cable

Port	Connector Type	Description	Available Components
		port sends and receives service data at 10/100/1000 Mbit/s.	
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
Console port	RJ45	The console port is connected to a console for on-site configuration.	9.13 Console Cable

Indicators and Buttons

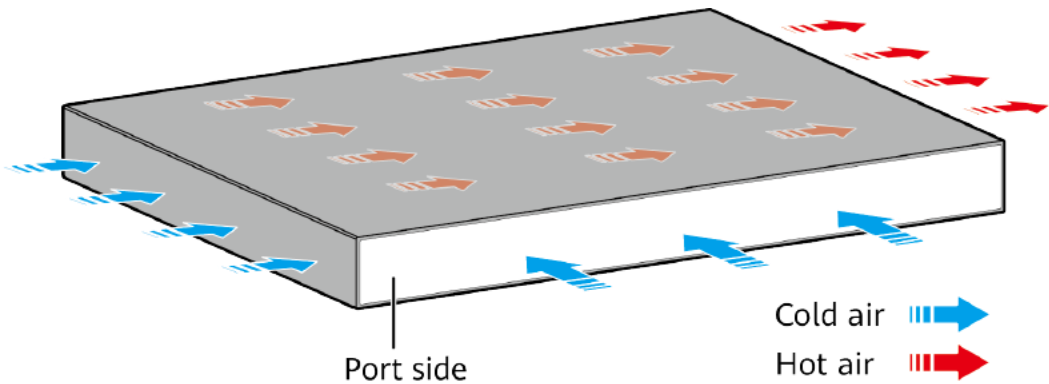
The S5735S-L48T4X-A1 has similar indicators to those on the S5735S-L48P4X-A1 except that the S5735S-L48T4S-A1 does not have USB and PoE mode indicators. For details, see the S5735S-L48P4X-A1.

Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules.

Heat Dissipation System

The switch has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1593 Technical specifications of the S5735S-L48T4X-A1

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90.0 mm x 550.0 mm x 360.0 mm (3.54 in. x 21.65 in. x 14.17 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	2.76 kg (6.09 lb)
Weight with packaging [kg(lb)]	3.74 kg (8.25 lb)
Typical power consumption [W]	43.3 W
Typical heat dissipation [BTU/hour]	147.74 BTU/hour
Maximum power consumption [W]	50.4 W
Maximum heat dissipation [BTU/hour]	171.97 BTU/hour
MTBF [year]	55.33 year
MTTR [hour]	2 hour

Item	Specification
Availability	>0.99999
Noise at normal temperature (acoustic power) [dB(A)]	48 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	36.2 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	1
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.)
Short-term operating temperature [°C(°F)]	-5 °C to +55 °C (23 °F to 131 °F) at an altitude of 0-1800 m (0-5906 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>The operating temperature ranges from -5 °C to +45 °C (23 °F to 113 °F) when optical modules with transmission distances greater than or equal to 70 km are used.</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none">• The equipment operates at a temperature of over 50 °C (122 °F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 50 °C (122 °F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 50 °C (122 °F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature [°C(°F)]	-40 °C to +70 °C (-40 °F to +158 °F)

Item	Specification
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	AC built-in
Rated input voltage [V]	AC input: 100 V AC to 240 V AC, 50/60 Hz
Input voltage range [V]	AC input: 90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum input current [A]	2 A
Memory	512 MB
Flash memory	512 MB
Console port	RJ45
Eth Management port	Not supported
USB	Not supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: ± 7 kV
Power supply surge protection [kV]	± 6 kV in differential mode, ± 6 kV in common mode
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

4.31.11 S5735S-L48P4X-A1

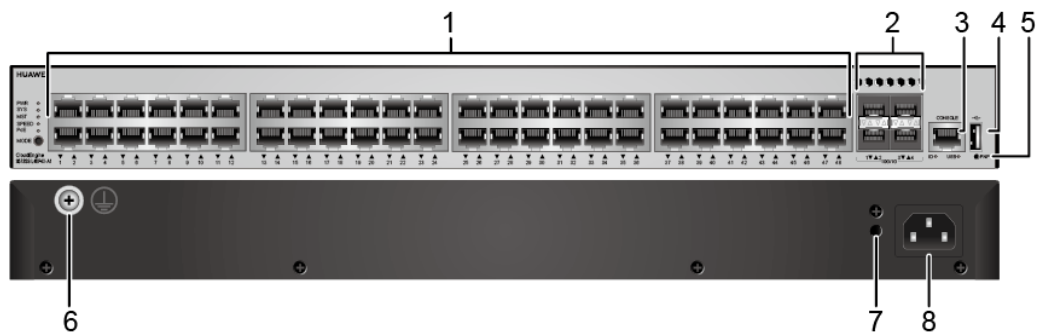
Overview

Table 4-1594 Basic information about the S5735S-L48P4X-A1

Item	Details
Description	S5735S-L48P4X-A1 (48*10/100/1000BASE-T ports, 4*10GE SFP+ ports, PoE+, AC power)
Part Number	98011344
Model	S5735S-L48P4X-A1
First supported version	V200R020C10
Remarks	Some models cannot be downgraded due to component upgrade. Therefore, you are advised to run the display system-software information command to check the software versions supported by the device before performing a downgrade. If the device does not support the display system-software information command, it can be downgraded.

Components

Figure 4-580 S5735S-L48P4X-A1 appearance



1	Forty-eight 10/100/1000BASE-T PoE+ ports	2	Four 10GE SFP+ ports
3	One console port	4	One USB port
5	One PNP button NOTICE To restore the factory settings and reset the	6	Ground screw NOTE

	<p>switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>		<p>It is used with a 9.1 Ground Cable.</p>
7	<p>Jack for AC power cable locking strap</p> <p>NOTE The AC power cable locking strap is not delivered with the switch.</p>	8	<p>AC socket</p> <p>NOTE It is used with an 9.8 AC Power Cable.</p>

Ports

Table 4-1595 Ports on the S5735S-L48P4X-A1

Port	Connector Type	Description	Available Components
10/100/1000BASE-T PoE+ port	RJ45	<p>A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.</p> <p>The port supports the PoE function.</p>	9.4 Ethernet Cable
10GE SFP+ optical port	SFP+	<p>A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.</p>	<ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable

Port	Connector Type	Description	Available Components
			<ul style="list-style-type: none">• 9.3 Optical Fiber• 9.14 Dedicated Stack Cable
Console port	RJ45	The console port is connected to a console for on-site configuration.	9.13 Console Cable
USB port	USB 2.0 Type A	<p>The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.</p> <p>USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.</p>	USB flash drive

Indicators and Buttons

Figure 4-581 Indicators on the S5735S-L48P4X-A1

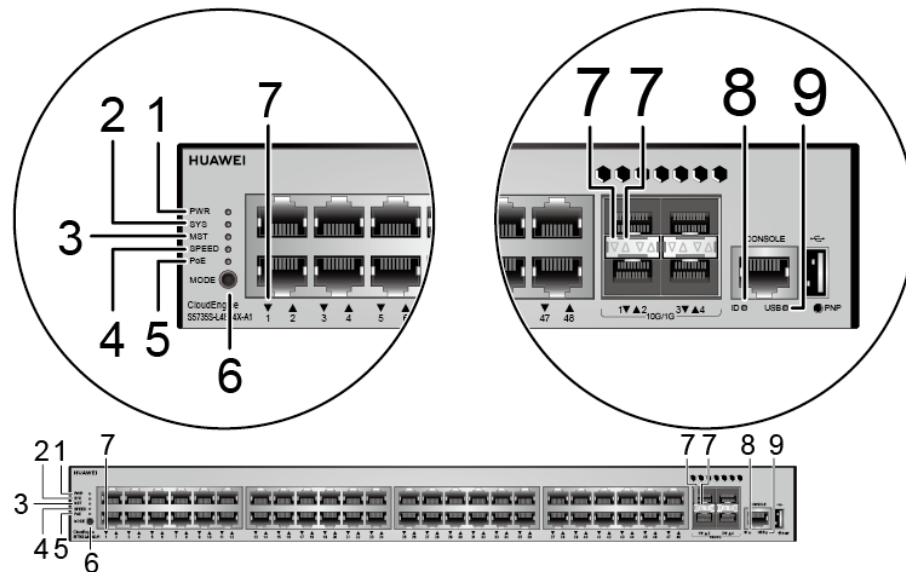


Table 4-1596 Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR	Power module indicator	-	Off	The switch is powered off.
			Green	Steady on	The system power supply is normal.
2	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Steady on	During the system startup preparation phase, the SYS indicator is steady green, which lasts for a maximum of 30 seconds.
			Green	Slow blinking	The system is running normally.
	Red	Steady on	The system does not work normally after registration, or a fan alarm or a temperature alarm has been generated.		
3	MST	Stack indicator	-	Off	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is a standby or slave switch in a stack or the stacking function is not enabled on the

No.	Indicator	Name	Color	Status	Description
					<p>switch.</p> <ul style="list-style-type: none"> If you are changing the indicator mode: The stack mode is not selected.
			Green	Steady on	The stack mode is selected. The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is the master switch in a stack or a standalone switch with the stacking function enabled. If you are changing the indicator mode: The stack mode is selected. The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. After 45 seconds, the service port indicators automatically restore to the status mode.
4	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The speed mode is selected, and service port indicators show the speed of each port.
5	PoE	PoE indicator	-	Off	The PoE mode is not selected.
			Green	Steady on	The PoE mode is selected, and service port indicators show the PoE status of each port.
6	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> When you press this button once, the service port indicators change to the stack mode and show the stack ID of the local switch. When you press this button a second time, the service port indicators change to the speed mode and show the speed of each service port. When you press this button a third time, the service port indicators change to the PoE mode and show the PoE status of each service port. When you press this button a fourth time, the service port indicators restore to the default mode and show the connection status and link activity of each service port. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In</p>

No.	Indicator	Name	Color	Status	Description
					<p>this case, the SPEED and PoE indicators are off.</p> <p>NOTE</p> <p>Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:</p> <ul style="list-style-type: none"> • If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows: • If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes. • If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status. • If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.
7	-	Service port indicator	<p>Meanings of service port indicators vary in different modes. For details, see Table 4-1597 and Table 4-1598.</p> <p>NOTE</p> <p>If a power failure occurs on a device's PCB board, indicators of the last four optical ports on the device's front panel blink green cyclically at an interval of 1 second, with each indicator illuminating for 0.25 seconds.</p>		
8	ID	ID indicator	-	Off	The ID indicator is not used (default state).
			Blue	Steady on	The indicator identifies the switch to maintain. The ID indicator can be turned on or off remotely to help field engineers find the switch to maintain.
9	USB	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> • No USB flash drive is connected to the switch. • The USB port is damaged. • The indicator is damaged. • The USB flash drive does not have any configuration file and cannot be used for deployment. • The switch has been upgraded using the USB flash drive and is restarting.
			Green	Steady on	A USB-based deployment has been completed.
			Green	Fast blink	The system is reading data from a USB flash drive.

No.	Indicator	Name	Color	Status	Description
				ng	
			Green	Slow blinking	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Fast blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

Table 4-1597 Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Default mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
MST stack mode	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is blinking, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.
Speed mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10 Mbit/s or 100 Mbit/s.

Display Mode	Color	Status	Description
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s.
PoE mode	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.
	Green	Blinking	The power of the PD connected to the port exceeds the power capacity of the port or the power threshold configured on the port. Alternatively, the PD does not comply with IEEE standards.

Table 4-1598 Description of service port indicators in different modes (two indicators for each port)

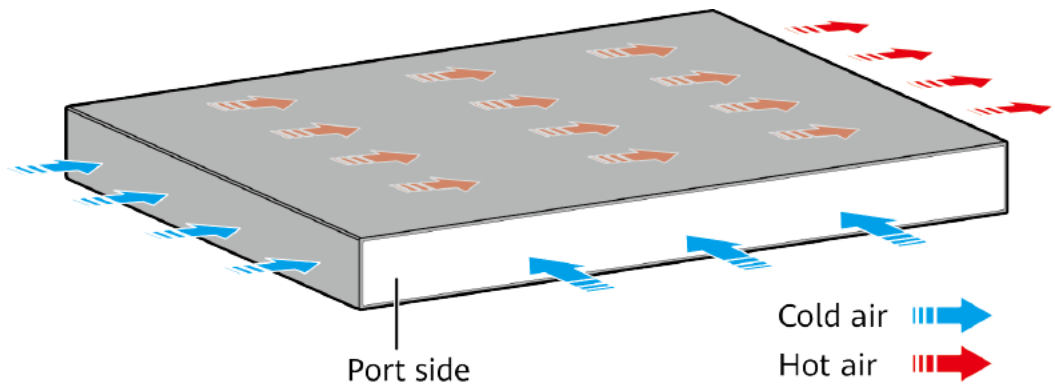
Display Mode	Color	Status	Description
Default mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Yellow	Blinking	The port is sending or receiving data.
Speed mode	-	Off	The port is not connected or has been shut down.
	Green and yellow	Steady on	1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green and yellow	Blinking	1000M/10GE port: The port is operating at 10 Gbit/s. 1000M port: The port is operating at 1000 Mbit/s.

Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules. The built-in power module can provide 380 W PoE power, which ensures full PoE power on 24 ports in compliance with 802.3af or on 12 ports in compliance with 802.3at.

Heat Dissipation System

The switch has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1599 Technical specifications of the S5735S-L48P4X-A1

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90.0 mm x 550.0 mm x 360.0 mm (3.54 in. x 21.65 in. x 14.17 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	3.23 kg (7.12 lb)
Weight with packaging [kg(lb)]	4.28 kg (9.44 lb)
Typical power consumption [W]	58.7 W
Typical heat dissipation [BTU/hour]	200.29 BTU/hour
Maximum power consumption [W]	<ul style="list-style-type: none"> Not providing the PoE function: 76.1 W 100% PoE loads: 456.1 W (PoE: 380 W)
Maximum heat dissipation [BTU/hour]	<ul style="list-style-type: none"> Not providing the PoE function: 259.66 100% PoE loads: 1556.26
MTBF [year]	44.03 year
MTTR [hour]	2 hour
Availability	>0.99999

Item	Specification
Noise at normal temperature (acoustic power) [dB(A)]	50 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	38.2 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	2
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.)
Short-term operating temperature [°C(°F)]	-5 °C to +55 °C (23 °F to 131 °F) at an altitude of 0-1800 m (0-5906 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none">• The equipment operates at a temperature of over 50 °C (122 °F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 50 °C (122 °F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 50 °C (122 °F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature [°C(°F)]	-40 °C to +70 °C (-40 °F to +158 °F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)

Item	Specification
Power supply mode	AC built-in
Rated input voltage [V]	<ul style="list-style-type: none">AC input: 100 V AC to 240 V AC, 50/60 HzHigh-Voltage DC input: 240 V DC
Input voltage range [V]	<ul style="list-style-type: none">AC input: 90 V AC to 290 V AC, 45 Hz to 65 HzHigh-Voltage DC input: 190 V DC to 290 V DC
Maximum input current [A]	6 A
Memory	512 MB
Flash memory	512 MB
Console port	RJ45
Eth Management port	Not supported
USB	Supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: ± 7 kV
Power supply surge protection [kV]	± 6 kV in differential mode, ± 6 kV in common mode
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Supported
Certification	EMC certification Safety certification Manufacturing certification

4.32 S5735S-L-M

4.32.1 S5735S-L24T4S-MA

Version Mapping

Table 4-1600 lists the mapping between the S5735S-L24T4S-MA chassis and software versions.

Table 4-1600 Version mapping

Series	Model	Software Version
S5735S-L-M	S5735S-L24T4S-MA	V200R019C00 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-582 S5735S-L24T4S-MA appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
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3	One console port	4	One ETH management port
5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw NOTE It is used with a 9.1 Ground Cable.	8	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.
9	AC socket NOTE It is used with an 9.8 AC Power Cable.	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-1601 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-1601 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a FE optical module, it can transmit and receive data at 100 Mbit/s. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. Table 4-1602 describes the attributes of a 1000BASE-X Ethernet optical port.

Table 4-1602 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1603.

Table 4-1603 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1604 describes the attributes of an ETH management port.

Table 4-1604 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5735S-L24T4S-MA has similar indicators to those on the S5735S-L12P4S-A except that the S5735S-L24T4S-MA does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5735S-L24T4S-MA has a built-in AC power module and does not support pluggable power modules.

Heat Dissipation

The S5735S-L24T4S-MA has no fans and uses natural heat dissipation.

Technical Specifications

Table 4-1605 lists technical specifications of the S5735S-L24T4S-MA.

Table 4-1605 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	92.82 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999

Item	Description
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Weight (with packaging)	4.08 kg (9 lb)
Stack ports	Any 10/100/1000BASE-T ports or 1000BASE-X ports (applicable in V200R019C10 and later versions)
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none"> AC input: 100 V AC to 240 V AC, 50/60 Hz High-Voltage DC input: 240 V DC
Maximum voltage range	<ul style="list-style-type: none"> AC input: 90 V AC to 264 V AC, 47 Hz to 63 Hz High-Voltage DC input: 190 V DC to 290 V DC
Maximum power consumption (100% throughput)	34 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> Tested according to ATIS standard EEE enabled No PoE power consumption 	28 W
Operating temperature	<p>-5 °C to +45 °C (23 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>The switch cannot be started when the ambient temperature is lower than 0 °C (32 °F).</p> <p>The operating temperature of the switch is -5 °C to +40 °C (23 °F to 104 °F) when it uses GE SFP optical modules with 40 km or longer transmission</p>

Item	Description
	distance. When SFP+ copper cables or dedicated stack cables are used to set up a stack, the switch can operate in the following temperature range: <ul style="list-style-type: none">-5 °C to +45 °C (23 °F to 113 °F) (installed in the ventilation cabinet, with the wind speed of at least 40 LFM) When SFP+ AOC cables or 10GE SFP+ optical modules are used to set up a stack, the switch can operate in the following temperature range: <ul style="list-style-type: none">-5 °C to +45 °C (23 °F to 113 °F) (installed in the ventilation cabinet shipped with fans with a fan speed of at least 200 LFM)
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">EMC certificationSafety certificationManufacturing certification
Part number	98010916

4.32.2 S5735S-L24P4S-MA

Version Mapping

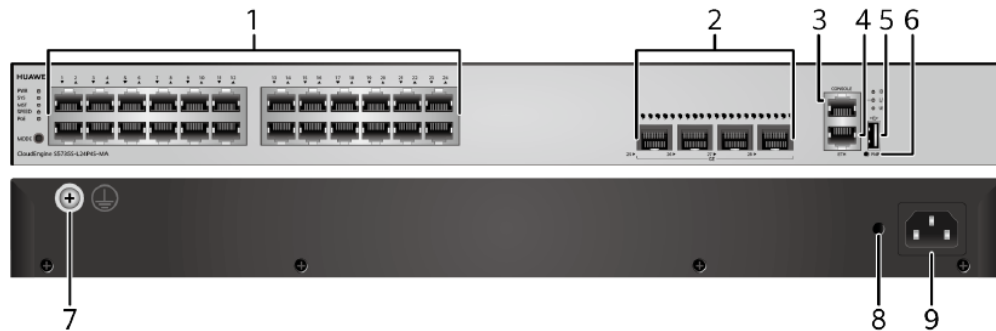
Table 4-1606 lists the mapping between the S5735S-L24P4S-MA chassis and software versions.

Table 4-1606 Version mapping

Series	Model	Software Version
S5735S-L-M	S5735S-L24P4S-MA	V200R019C00 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-583 S5735S-L24P4S-MA appearance



1	Twenty-four PoE+ 10/100/1000BASE-T ports	2	Four 1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw NOTE It is used with a 9.1 Ground Cable.	8	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.
9	AC socket NOTE It is used with an 9.8 AC Power Cable.	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-1607 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-1607 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a FE optical module, it can transmit and receive data at 100 Mbit/s. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. Table 4-1608 describes the attributes of a 1000BASE-X Ethernet optical port.

Table 4-1608 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1609.

Table 4-1609 Attributes of a console port

Attribute	Description
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Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1610 describes the attributes of an ETH management port.

Table 4-1610 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

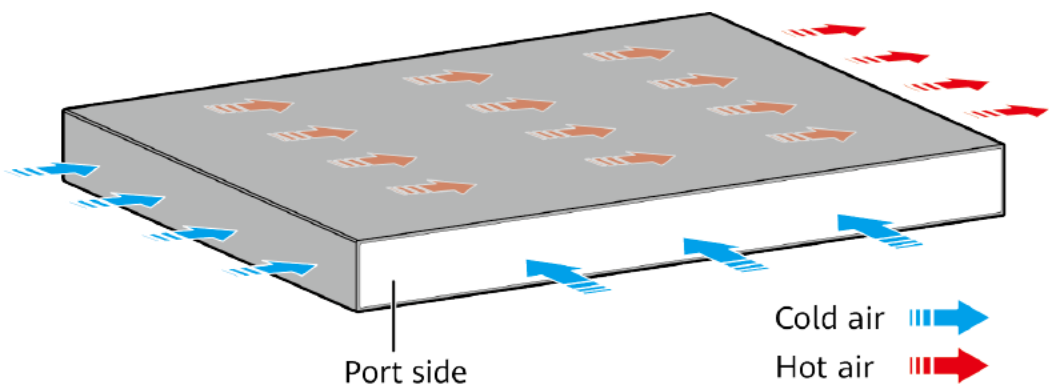
The S5735S-L24P4S-MA has the same types of indicators as the S5735-L12P4S-A. For details, see [Indicator Description](#).

Power Supply Configuration

The S5735S-L24P4S-MA has a built-in power module and does not support pluggable power modules. The built-in power module can provide 380 W PoE power, which ensures full PoE power on 24 ports in compliance with 802.3af or on 12 ports in compliance with 802.3at.

Heat Dissipation

The S5735S-L24P4S-MA has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1611 lists technical specifications of the S5735S-L24P4S-MA.

Table 4-1611 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	76.1 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV

Item	Description
Power supply surge protection	±6 kV in differential mode, ±6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Weight (with packaging)	4.31 kg (9. lb)
Stack ports	Any 10/100/1000BASE-T ports or 1000BASE-X ports (applicable in V200R019C10 and later versions)
RTC	Not supported
RPS	Not supported
PoE	Supported
Rated voltage range	<ul style="list-style-type: none">AC input: 100 V AC to 240 V AC, 50/60 HzHigh-Voltage DC input: 240 V DC
Maximum voltage range	<ul style="list-style-type: none">AC input: 90 V AC to 290 V AC, 45 Hz to 65 HzHigh-Voltage DC input: 190 V DC to 290 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none">Not providing the PoE function: 53 W100% PoE loads: 451 W (PoE: 380 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">Tested according to ATIS standardEEE enabledNo PoE power consumption	39 W
Operating temperature	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0 °C (32 °F).
Short-term operating temperature	-5 °C to +55 °C (23 °F to 131 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE

Item	Description
	<p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none">• The equipment operates at a temperature of over 50 °C (122 °F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 50 °C (122 °F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 50 °C (122 °F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 57.7 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010926

4.32.3 S5735S-L48T4S-MA

Version Mapping

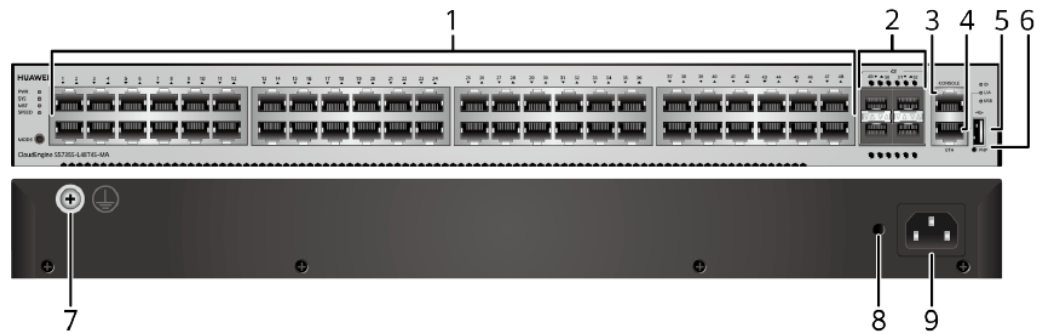
Table 4-1612 lists the mapping between the S5735S-L48T4S-MA chassis and software versions.

Table 4-1612 Version mapping

Series	Model	Software Version
S5735S-L-M	S5735S-L48T4S-MA	V200R019C10SPC500 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-584 S5735S-L48T4S-MA appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw NOTE It is used with a 9.1 Ground Cable.	8	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.
9	AC socket NOTE It is used with an 9.8 AC Power Cable.	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-1613 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-1613 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a FE optical module, it can transmit and receive data at 100 Mbit/s. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. Table 4-1614 describes the attributes of a 1000BASE-X Ethernet optical port.

Table 4-1614 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1615.

Table 4-1615 Attributes of a console port

Attribute	Description
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Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1616 describes the attributes of an ETH management port.

Table 4-1616 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

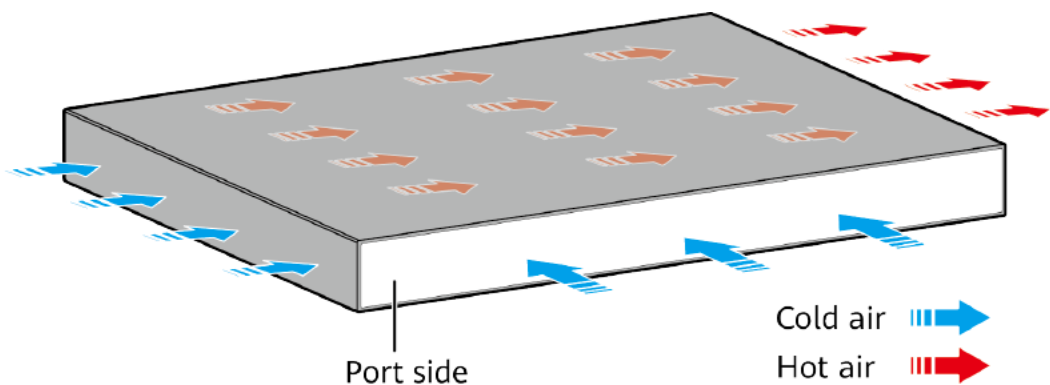
The S5735S-L48T4S-MA has similar indicators to those on the S5735-L12P4S-A except that the S5735S-L48T4S-MA does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5735S-L48T4S-MA has a built-in AC power module and does not support pluggable power modules.

Heat Dissipation

The S5735S-L48T4S-MA has one built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1617 lists technical specifications of the S5735S-L48T4S-MA.

Table 4-1617 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	46.36 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV

Item	Description
Power supply surge protection	±6 kV in differential mode, ±6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Weight (with packaging)	4.42 kg (9.75 lb)
Stack ports	Any 10/100/1000BASE-T ports or 1000BASE-X ports (applicable in V200R019C10 and later versions)
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none">AC input: 100 V AC to 240 V AC, 50/60 HzHigh-Voltage DC input: 240 V DC
Maximum voltage range	<ul style="list-style-type: none">AC input: 90 V AC to 264 V AC, 47 Hz to 63 HzHigh-Voltage DC input: 190 V DC to 290 V DC
Maximum power consumption (100% throughput, full speed of fans)	53 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">Tested according to ATIS standardEEE enabledNo PoE power consumption	37 W
Operating temperature	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0 °C (32 °F).
Short-term operating temperature	-5 °C to +55 °C (23 °F to 131 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE

Item	Description
	<p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> • The equipment operates at a temperature of over 50 °C (122 °F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 50 °C (122 °F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 50 °C (122 °F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 53.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010971

4.33 S5735-L-I

4.33.1 S5735-L8T4X-IA1

Overview

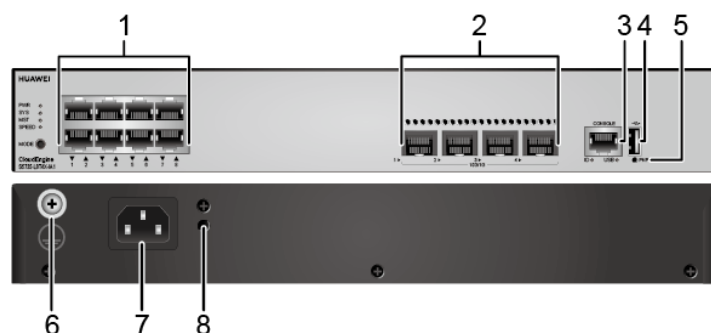
Table 4-1618 Basic information about the S5735-L8T4X-IA1

Item	Details
Description	S5735-L8T4X-IA1 (8*10/100/1000BASE-T ports, 4*10GE SFP+ ports, AC power)
Part Number	98011581
Model	S5735-L8T4X-IA1

Item	Details
First supported version	V200R021C00

Components

Figure 4-585 S5735-L8T4X-IA1 appearance



1	Eight 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports
3	One console port	4	One USB port
5	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.	6	Ground screw NOTE It is used with a 9.1 Ground Cable.
7	AC socket NOTE It is used with an 9.8 AC Power Cable.	8	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.

Ports

Table 4-1619 Ports on the S5735-L8T4X-IA1

Port	Connector Type	Description	Available Components
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data	9.4 Ethernet Cable

Port	Connector Type	Description	Available Components
		at 10/100/1000 Mbit/s.	
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	10.17 Industrial Optical Modules
Console port	RJ45	The console port is connected to a console for on-site configuration.	9.13 Console Cable
USB port	USB 2.0 Type A	The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0. USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.	USB flash drive

Indicators and Buttons

The S5735-L8T4X-IA1 has similar indicators to those on the S5735-L24P4X-A1 except that the S5735-L8T4X-IA1 does not have a PoE mode indicator. For details, see the S5735-L24P4X-A1.

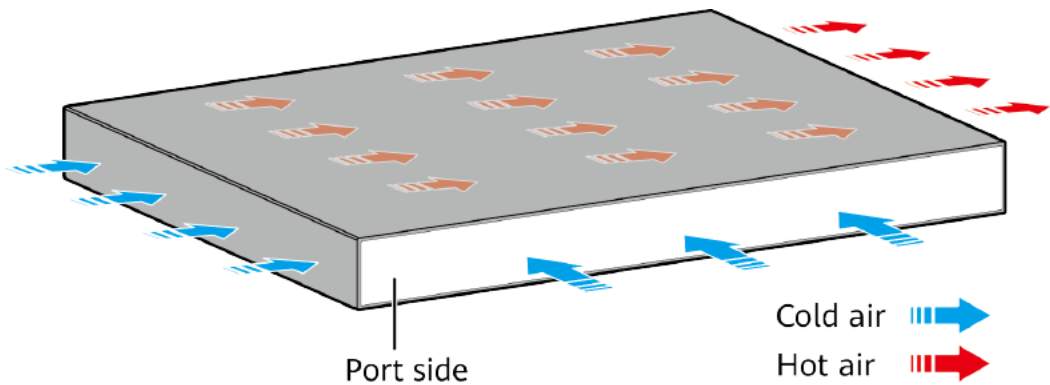
Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules.

Heat Dissipation System

The switch has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.

When working properly at a normal temperature, the device meets the desktop-class noise requirements. However, the fan speed may be high and the noise may be loud during device startup.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1620 Technical specifications of the S5735-L8T4X-IA1

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 300.0 mm x 220.0 mm (1.72 in. x 11.81 in. x 8.66 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 300.0 mm x 227.0 mm (1.72 in. x 11.81 in. x 8.94 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	110.0 mm x 435.0 mm x 360.0 mm (4.33 in. x 17.13 in. x 14.17 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	1.97 kg (4.34 lb)
Weight with packaging [kg(lb)]	2.78 kg (6.13 lb)
Typical power consumption [W]	23.5 W

Item	Specification
Typical heat dissipation [BTU/hour]	80.18 BTU/hour
Maximum power consumption [W]	30 W
Maximum heat dissipation [BTU/hour]	102.36 BTU/hour
MTBF [year]	67.07 year
MTTR [hour]	2 hour
Availability	>0.99999
Noise at normal temperature (acoustic power) [dB(A)]	43 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	31.5 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	1
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	–40 °C to +65 °C (–40 °F to +149 °F) at an altitude of 0–1800 m (0–5906 ft.) NOTE –40 °C to –30 °C (–40 °F to –22 °F): Stable port performance can be achieved only when at least two Ethernet electrical ports go Up.
Short-term operating temperature [°C(°F)]	–40 °C to +70 °C (–40 °F to +158 °F) at an altitude of 0-1800 m (0-5906 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The device can work for a short period of time when the operating temperature is beyond the normal range, but the following conditions must be met: <ul style="list-style-type: none">• The operating temperature can exceed 65 °C (149 °F) for a maximum of 96 consecutive hours in a year.• The total time when the operating temperature exceeds 65 °C (149 °F) in a year is less than or equal to 360 hours.• The number of times the operating temperature exceeds 65 °C (149 °F) is less than or equal to 15 in one year. If any of the preceding conditions is not

Item	Specification
	met, the device may be damaged or an unknown error may occur. The maximum transmission distance of an optical module used for short-term operation cannot exceed 10 km.
Storage temperature [°C(°F)]	–40 °C to +75 °C (–40 °F to +167 °F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	AC built-in
Rated input voltage [V]	AC input: 100 V AC to 240 V AC, 50/60 Hz
Input voltage range [V]	AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz
Maximum input current [A]	2 A
Memory	512 MB
Flash memory	512 MB
Console port	RJ45
Eth Management port	Not supported
USB	Supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: ± 7 kV
Power supply surge protection [kV]	± 6 kV in differential mode, ± 6 kV in common mode
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

4.33.2 S5735-L8P4X-IA1

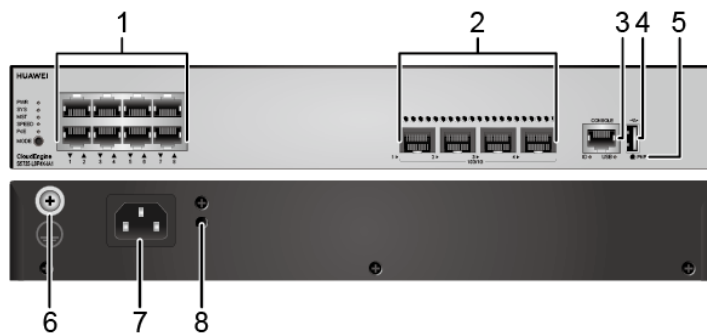
Overview

Table 4-1621 Basic information about the S5735-L8P4X-IA1

Item	Details
Description	S5735-L8P4X-IA1 (8*10/100/1000BASE-T ports, 4*10GE SFP+ ports, PoE+, AC power)
Part Number	98011579
Model	S5735-L8P4X-IA1
First supported version	V200R021C00

Components

Figure 4-586 S5735-L8P4X-IA1 appearance



1	Eight 10/100/1000BASE-T PoE+ ports	2	Four 10GE SFP+ ports
3	One console port	4	One USB port
5	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.	6	Ground screw NOTE It is used with a 9.1 Ground Cable.
7	AC socket NOTE It is used with an 9.8 AC Power Cable.	8	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not

		delivered with the switch.
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Ports

Table 4-1622 Ports on the S5735-L8P4X-IA1

Port	Connector Type	Description	Available Components
10/100/1000BASE-T PoE+ port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s. The port supports the PoE function.	9.4 Ethernet Cable
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	10.17 Industrial Optical Modules
Console port	RJ45	The console port is connected to a console for on-site configuration.	9.13 Console Cable
USB port	USB 2.0 Type A	The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0. USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor.	USB flash drive

Port	Connector Type	Description	Available Components
		Switches support a maximum of 128 GB USB flash drives.	

Indicators and Buttons

The S5735-L8P4X-IA1 has the same types of indicators as the S5735-L24P4X-A1. For details, see the S5735-L24P4X-A1.

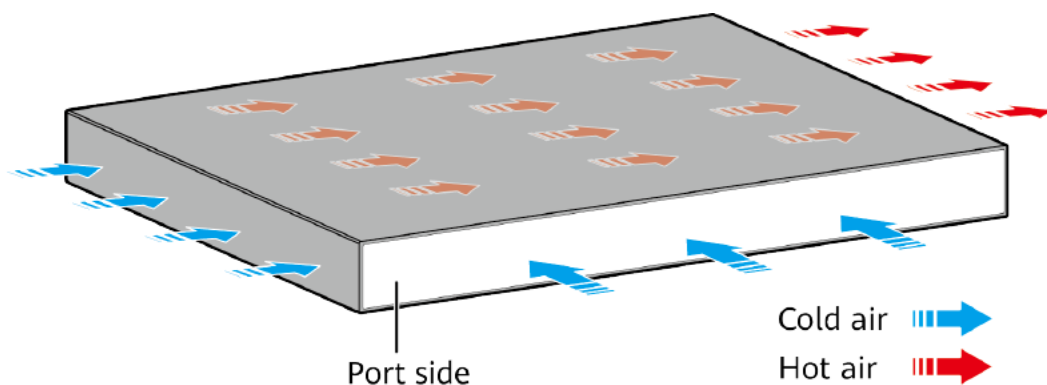
Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules. The built-in power module can provide 124 W PoE power, which ensures full PoE power on 8 ports in compliance with 802.3af or on 4 ports in compliance with 802.3at.

Heat Dissipation System

The switch has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.

When working properly at a normal temperature, the device meets the desktop-class noise requirements. However, the fan speed may be high and the noise may be loud during device startup.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1623 Technical specifications of the S5735-L8P4X-IA1

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 300.0 mm x 220.0 mm (1.72 in. x 11.81 in. x 8.66

Item	Specification
	in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 300.0 mm x 227.0 mm (1.72 in. x 11.81 in. x 8.94 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	110.0 mm x 435.0 mm x 360.0 mm (4.33 in. x 17.13 in. x 14.17 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	2.23 kg (4.92 lb)
Weight with packaging [kg(lb)]	3.04 kg (6.7 lb)
Typical power consumption [W]	26.2 W
Typical heat dissipation [BTU/hour]	89.40 BTU/hour
Maximum power consumption [W]	<ul style="list-style-type: none">Without PoE: 33 WFull PoE load: 178 W (PoE: 124 W)
Maximum heat dissipation [BTU/hour]	<ul style="list-style-type: none">Without PoE: 112.60Full PoE load: 607.35
MTBF [year]	62.46 year
MTTR [hour]	2 hour
Availability	>0.99999
Noise at normal temperature (acoustic power) [dB(A)]	42.2 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	30.5 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	1
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	–40 °C to +65 °C (–40 °F to +149 °F) at an altitude of 0–1800 m (0–5906 ft.) NOTE –40 °C to –30 °C (–40 °F to –22 °F): Stable port performance can be achieved only when at least two Ethernet electrical ports go Up.
Short-term operating temperature [°C(°F)]	–40 °C to +70 °C (–40 °F to +158 °F) at an altitude of 0–1800 m (0–5906 ft.)
Restriction on the operating temperature	When the altitude is 1800–5000 m (5906–16404 ft.), the highest operating

Item	Specification
variation rate [°C(°F)]	<p>temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>The device can work for a short period of time when the operating temperature is beyond the normal range, but the following conditions must be met:</p> <ul style="list-style-type: none">• The operating temperature can exceed 65 °C (149 °F) for a maximum of 96 consecutive hours in a year.• The total time when the operating temperature exceeds 65 °C (149 °F) in a year is less than or equal to 360 hours.• The number of times the operating temperature exceeds 65 °C (149 °F) is less than or equal to 15 in one year. <p>If any of the preceding conditions is not met, the device may be damaged or an unknown error may occur.</p> <p>The maximum transmission distance of an optical module used for short-term operation cannot exceed 10 km.</p>
Storage temperature [°C(°F)]	–40 °C to +75 °C (–40 °F to +167 °F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	AC built-in
Rated input voltage [V]	AC input: 100 V AC to 240 V AC, 50/60 Hz
Input voltage range [V]	AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz
Maximum input current [A]	3 A
Memory	512 MB
Flash memory	512 MB
Console port	RJ45
Eth Management port	Not supported
USB	Supported
RTC	Not supported
RPS input	Not supported

Item	Specification
Service port surge protection [kV]	Common mode: ± 7 kV
Power supply surge protection [kV]	± 6 kV in differential mode, ± 6 kV in common mode
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Supported
Certification	EMC certification Safety certification Manufacturing certification

4.33.3 S5735-L24T4X-IA1

Overview

Table 4-1624 Basic information about the S5735-L24T4X-IA1

Item	Details
Description	S5735-L24T4X-IA1 (24*10/100/1000BASE-T ports, 4*10GE SFP+ ports, AC power)
Part Number	98011597
Model	S5735-L24T4X-IA1
First supported version	V200R021C00

Components

Figure 4-587 S5735-L24T4X-IA1 appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports
3	One console port	4	One USB port
5	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.	6	Ground screw NOTE It is used with a 9.1 Ground Cable.
7	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.	8	AC socket NOTE It is used with an 9.8 AC Power Cable.

Ports

Table 4-1625 Ports on the S5735-L24T4X-IA1

Port	Connector Type	Description	Available Components
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.	9.4 Ethernet Cable
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000	10.17 Industrial Optical Modules

Port	Connector Type	Description	Available Components
		Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	
Console port	RJ45	The console port is connected to a console for on-site configuration.	9.13 Console Cable
USB port	USB 2.0 Type A	The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0. USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.	USB flash drive

Indicators and Buttons

The S5735-L24T4X-IA1 has similar indicators to those on the S5735-L24P4X-A1 except that the S5735-L24T4X-IA1 does not have a PoE mode indicator. For details, see the S5735-L24P4X-A1.

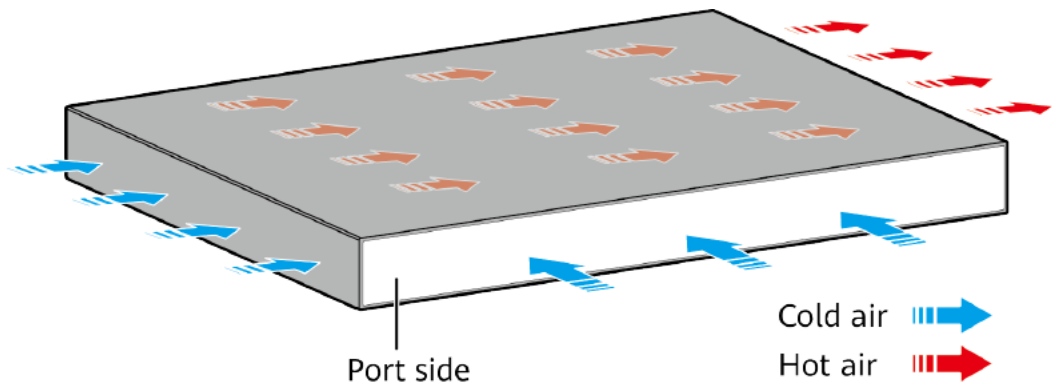
Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules.

Heat Dissipation System

The switch has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.

When working properly at a normal temperature, the device meets the desktop-class noise requirements. However, the fan speed may be high and the noise may be loud during device startup.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1626 Technical specifications of the S5735-L24T4X-IA1

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.66 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90.0 mm x 550.0 mm x 360.0 mm (3.54 in. x 21.65 in. x 14.17 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	2.5 kg (5.51 lb)
Weight with packaging [kg(lb)]	3.3 kg (7.28 lb)
Typical power consumption [W]	29.8 W
Typical heat dissipation [BTU/hour]	101.68 BTU/hour
Maximum power consumption [W]	46 W
Maximum heat dissipation [BTU/hour]	155.96 BTU/hour

Item	Specification
MTBF [year]	62.05 year
MTTR [hour]	2 hour
Availability	>0.99999
Noise at normal temperature (acoustic power) [dB(A)]	39 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	27.2 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	1
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	–40 °C to +65 °C (–40 °F to +149 °F) at an altitude of 0–1800 m (0–5906 ft.) NOTE –40 °C to –30 °C (–40 °F to –22 °F): Stable port performance can be achieved only when at least four of the first eight Ethernet electrical ports go Up.
Short-term operating temperature [°C(°F)]	–40 °C to +70 °C (–40 °F to +158 °F) at an altitude of 0–1800 m (0–5906 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The device can work for a short period of time when the operating temperature is beyond the normal range, but the following conditions must be met: <ul style="list-style-type: none">• The operating temperature can exceed 65 °C (149 °F) for a maximum of 96 consecutive hours in a year.• The total time when the operating temperature exceeds 65 °C (149 °F) in a year is less than or equal to 360 hours.• The number of times the operating temperature exceeds 65 °C (149 °F) is less than or equal to 15 in one year. If any of the preceding conditions is not met, the device may be damaged or an unknown error may occur. The maximum transmission distance of an optical module used for short-term

Item	Specification
	operation cannot exceed 10 km.
Storage temperature [°C(°F)]	–40 °C to +75 °C (–40 °F to +167 °F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0–5000 m (0–16404 ft.)
Storage altitude [m(ft.)]	0–5000 m (0–16404 ft.)
Power supply mode	AC built-in
Rated input voltage [V]	AC input: 100 V AC to 240 V AC, 50/60 Hz
Input voltage range [V]	AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz
Maximum input current [A]	2 A
Memory	512 MB
Flash memory	512 MB
Console port	RJ45
Eth Management port	Not supported
USB	Supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: ± 7 kV
Power supply surge protection [kV]	± 6 kV in differential mode, ± 6 kV in common mode
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

4.34 S5735-S

4.34.1 S5735-S24T4X

Version Mapping

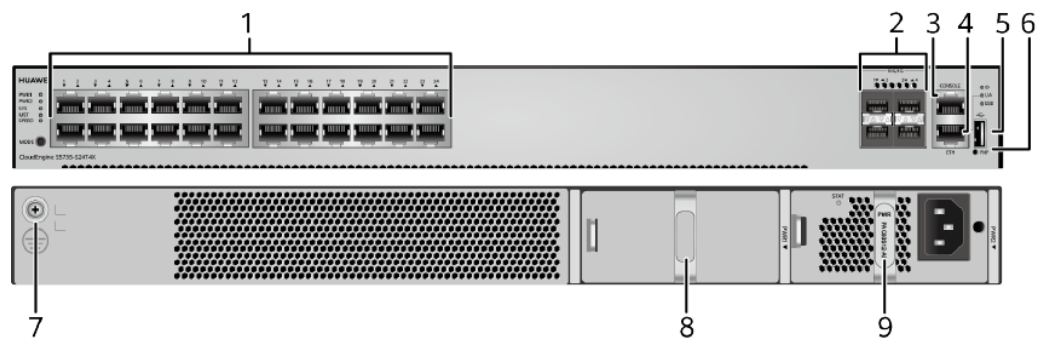
Table 4-1627 lists the mapping between the S5735-S24T4X chassis and software versions.

Table 4-1627 Version mapping

Series	Model	Software Version
S5735-S	S5735-S24T4X	V200R019C00 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-588 S5735-S24T4X appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable
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			<ul style="list-style-type: none"> • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw NOTE It is used with a 9.1 Ground Cable.	8	Power module slot 1 NOTE Applicable power module: <ul style="list-style-type: none"> • 5.11 PAC60S12-AR (60 W AC Power Module) • 5.27 PDC1000S12-DB (1000 W DC Power Module) • 5.15 PDC180S12-CR (180 W DC Power Module) (applicable in V200R020C00 and later versions)
9	Power module slot 2 NOTE Applicable power module: <ul style="list-style-type: none"> • 5.11 PAC60S12-AR (60 W AC Power Module) • 5.27 PDC1000S12-DB (1000 W DC Power Module) • 5.15 PDC180S12-CR (180 W DC Power Module) (applicable in V200R020C00 and later versions) 	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-1628 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-1628 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing

Attribute	Description
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-1629 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-1629 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1630.

Table 4-1630 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management

port is faster than transfer through the console port. Table 4-1631 describes the attributes of an ETH management port.

Table 4-1631 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

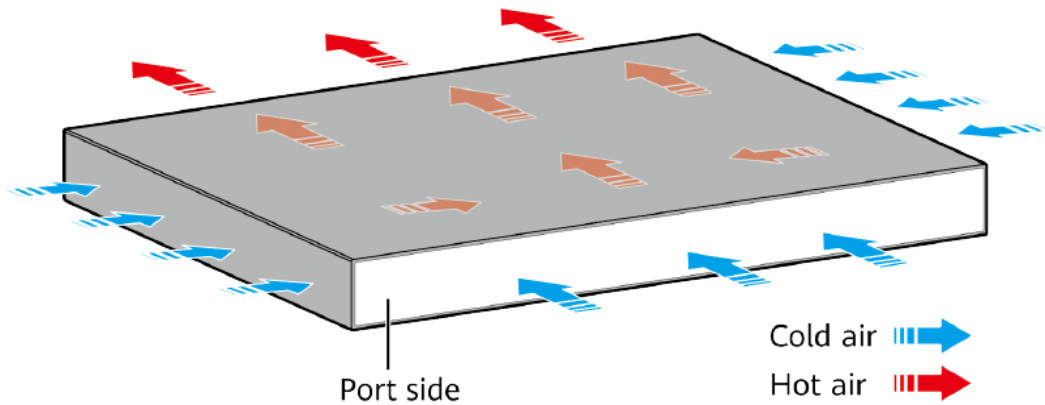
The S5735-S24T4X has similar indicators to those on the S5735-S24P4X except that the S5735-S24T4X does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The switch can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch. However, the power modules with natural heat dissipation and the power modules with fan cannot be used at the same time.

Heat Dissipation

The S5735-S24T4X has two built-in fans for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1632 lists technical specifications of the S5735-S24T4X.

Table 4-1632 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	69.42 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 444.2 mm (1.72 in. x 17.4 in. x 17.49 in.)
Weight (with packaging)	7.21 kg (15.9 lb)
Stack ports	Any 10/100/1000BASE-T ports or 10GE SFP+ ports (applicable in V200R019C10 and later versions)

Item	Description
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none">AC input: 100 V AC to 240 V AC, 50/60 HzHigh-Voltage DC input: 240 V DCDC input: -48 V DC to -60 V DC
Maximum voltage range	<ul style="list-style-type: none">AC input: 90 V AC to 264 V AC, 47 Hz to 63 HzHigh-Voltage DC input: 190 V DC to 290 V DCDC input: -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	46 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">Tested according to ATIS standardEEE enabledNo PoE power consumption	31 W
Operating temperature	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0 °C (32 °F).
Short-term operating temperature	-5 °C to +55 °C (23 °F to 131 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year.The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year.The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year.

Item	Description
	<p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 58.9 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010938

4.34.2 S5735-S24P4X

Version Mapping

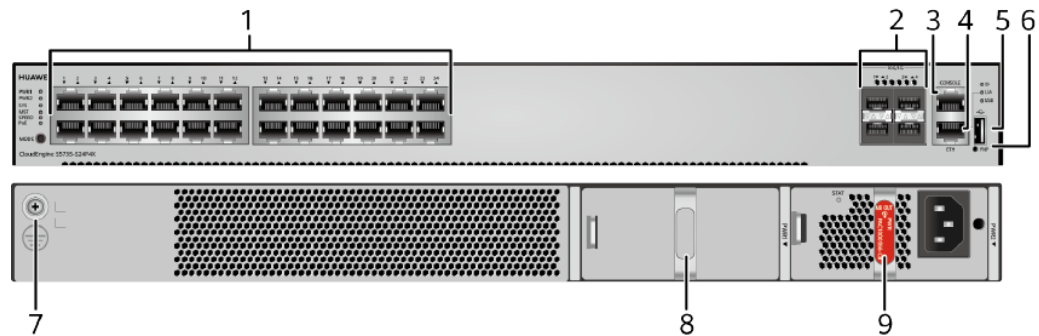
Table 4-1633 lists the mapping between the S5735-S24P4X chassis and software versions.

Table 4-1633 Version mapping

Series	Model	Software Version
S5735-S	S5735-S24P4X	V200R019C00 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-589 S5735-S24P4X appearance



1	Twenty-four PoE+ 10/100/1000BASE-T ports	2 Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	One console port	4 One ETH management port
5	One USB port	6 One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw NOTE It is used with a 9.1 Ground Cable.	8 Power module slot 1 NOTE Applicable power module: <ul style="list-style-type: none"> • 5.24 PAC1000S56-CB (1000 W PoE AC Power Module)

			<ul style="list-style-type: none"> • 5.25 PAC1000S56-DB (1000 W PoE AC Power Module) (applicable in V200R020C10 and later versions) • 5.26 PDC1000S56-CB (1000 W PoE DC Power Module) (applicable in V200R021C00 and later versions) • 5.23 PAC600S56-CB (600 W AC&240 V DC Power Module (Back to Front, Power panel side exhaust)) (applicable in V200R021C10 and later versions)
9	<p>Power module slot 2</p> <p>NOTE</p> <p>Applicable power module:</p> <ul style="list-style-type: none"> • 5.24 PAC1000S56-CB (1000 W PoE AC Power Module) • 5.25 PAC1000S56-DB (1000 W PoE AC Power Module) (applicable in V200R020C10 and later versions) • 5.26 PDC1000S56-CB (1000 W PoE DC Power Module) (applicable in V200R021C00 and later versions) • 5.23 PAC600S56-CB (600 W AC&240 V DC Power Module (Back to Front, Power panel side exhaust)) (applicable in V200R021C10 and later versions) 	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-1634 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-1634 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-1635 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-1635 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1636.

Table 4-1636 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1637 describes the attributes of an ETH management port.

Table 4-1637 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum	100 m

Attribute	Description
transmission distance	

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
- If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
- If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 4-590 Indicators on the S5735-S24P4X

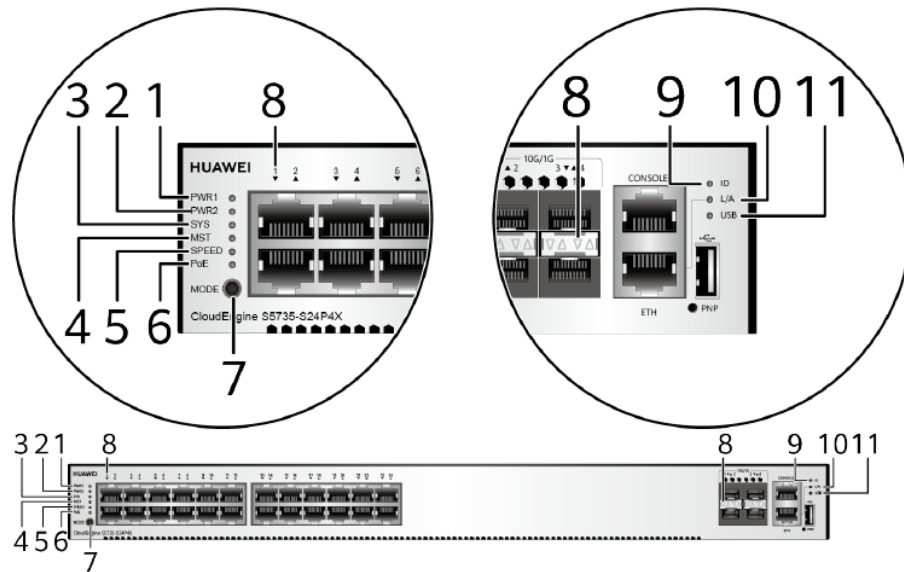


Table 4-1638 Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR 1	Power module indicator	-	Off	No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 1 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none"> A power module is available in this slot but it is not connected to a power source. The power module in this slot has failed.
2	PWR 2	Power module indicator	-	Off	No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 2 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 2: <ul style="list-style-type: none"> A power module is available in this slot but it is not connected to a power source. The power module in this slot has failed.

No.	Indicator	Name	Color	Status	Description
					<ul style="list-style-type: none"> A power module is available in this slot but it is not connected to a power source. The power module in this slot has failed.
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Steady on	During the system startup preparation phase, the SYS indicator is steady green, which lasts for a maximum of 30 seconds.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or a temperature alarm has been generated.
4	MST	Stack indicator	-	Off	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is a standby or slave switch in a stack or the stacking function is not enabled on the switch. If you are changing the indicator mode: The stack mode is not selected.
			Green	Steady on	The stack mode is selected. The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is the master switch in a stack or a standalone switch with the stacking function enabled. If you are changing the indicator mode: The stack mode is selected. The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. After 45 seconds, the service port indicators automatically restore to the status mode.
5	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The speed mode is selected, and service port indicators show the speed of each port.

No.	Indicator	Name	Color	Status	Description
6	PoE	PoE indicator	-	Off	The PoE mode is not selected.
			Green	Steady on	The PoE mode is selected, and service port indicators show the PoE status of each port.
7	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> When you press this button once, the service port indicators change to the stack mode and show the stack ID of the local switch. When you press this button a second time, the service port indicators change to the speed mode and show the speed of each service port. When you press this button a third time, the service port indicators change to the PoE mode and show the PoE status of each service port. When you press this button a fourth time, the service port indicators restore to the default mode and show the connection status and link activity of each service port. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the SPEED and PoE indicators are off.</p>
8	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see Table 4-1639 and Table 4-1640.		
9	ID	ID indicator	-	Off	The ID indicator is not used (default state).
			Blue	Steady on	The indicator identifies the switch to maintain. The ID indicator can be turned on or off remotely to help field engineers find the switch to maintain.
10	L/A	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The ETH port is sending or receiving data.
11	USB	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> No USB flash drive is connected to the switch. The USB port is damaged. The indicator is damaged. The USB flash drive does not have any

No.	Indicator	Name	Color	Status	Description
					configuration file and cannot be used for deployment. <ul style="list-style-type: none"> The switch has been upgraded using the USB flash drive and is restarting.
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from a USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

Table 4-1639 Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Default mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
MST stack mode	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is blinking, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are

Display Mode	Color	Status	Description
			blinking, the stack ID of the switch is 0.
Speed mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10 Mbit/s or 100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
PoE mode	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.
	Yellow	Steady on	The PoE function is disabled on the port.
	Yellow	Blinking	The port stops providing PoE power because of an exception (for example, an incompatible PD is connected to the port).
	Green and yellow	Blinking green and yellow alternately	The port fails to supply power to a PD due to one of the following reasons: <ul style="list-style-type: none"> The power required by the connected PD exceeds the maximum power or the configured power threshold of the port. The total power consumption of PDs has reached the maximum power of the switch. The manual power management mode is used and the port is not enabled to provide power to the PD.

Table 4-1640 Description of service port indicators in different modes (two indicators for each port)

Display Mode	Color	Status	Description
Default mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the

Display Mode	Color	Status	Description
			port.
	Yellow	Blinking	The port is sending or receiving data.
MST stack mode	-	Off	Port indicators do not show the stack ID of the switch.
	Green and yellow	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none">If the indicator of a port is steady on, the number of this port is the stack ID of the switch.If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
	Green and yellow	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none">If the indicator of a port is blinking, the number of this port is the stack ID of the switch.If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.
Speed mode	-	Off	The port is not connected or has been shut down.
	Green and yellow	Steady on	10M/100M/1000M port: The port is operating at 10 Mbit/s or 100 Mbit/s. 100M/1000M port: The port is operating at 100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green and yellow	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 100M/1000M port: The port is operating at 1000 Mbit/s. 1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.

Power Supply Configuration

The switch is a PoE switch and supports two power module slots, each of which can have a 1000 W PoE or 600 W PoE power module installed. Pluggable AC and DC PoE power modules can be used together in the same switch.

Table 4-1641 Power supply configurations

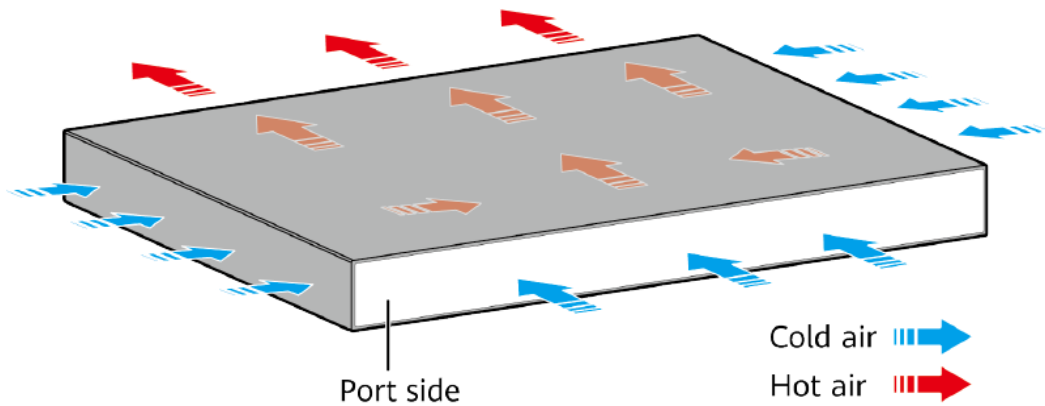
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W AC (220 V) 1000 W DC	–	874 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 24
1000 W AC (110 V)	–	779 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 24
1000 W AC (220 V) 1000 W DC	1000 W AC (220 V) 1000 W DC	1600 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 24
1000 W AC (110 V) 1000 W DC	1000 W AC (110 V)	1600 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 24
600 W AC (220 V)	–	494 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 16
600 W AC (110 V)	–	209 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 13 802.3at (30 W per port): 6
600 W AC (220 V)	600 W AC (220 V)	1064 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 24
600 W AC (110 V)	600 W AC (110 V)	494 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 16
1000 W AC (220 V) 1000 W DC	600 W AC (220 V)	1444 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 24

 **NOTE**

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

Heat Dissipation

The S5735-S24P4X has two built-in fans for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1642 lists technical specifications of the S5735-S24P4X.

Table 4-1642 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	59.88 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 444.2 mm (1.72 in. x 17.4 in. x 17.49 in.)

Item	Description
Weight (with packaging)	7.39 kg (16.29 lb)
Stack ports	Any 10/100/1000BASE-T ports or 10GE SFP+ ports (applicable in V200R019C10 and later versions)
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	<ul style="list-style-type: none"> AC input: 100 V AC to 130 V AC, 200 V AC to 240 V AC, 50/60 Hz High-Voltage DC input: 240 V DC DC input: -48 V DC to -60 V DC
Maximum voltage range	<ul style="list-style-type: none"> AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz High-Voltage DC input: 190 V DC to 290 V DC DC input: -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> Not providing the PoE function: 65 W 100% PoE loads: 847 W (PoE: 720 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> Tested according to ATIS standard EEE enabled No PoE power consumption 	51 W
Operating temperature	<p>-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>The switch cannot be started when the ambient temperature is lower than 0 °C (32 °F).</p>
Short-term operating temperature	<p>-5 °C to +55 °C (23 °F to 131 °F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p>

Item	Description
	<ul style="list-style-type: none">The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year.The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year.The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 58.9 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">EMC certificationSafety certificationManufacturing certification
Part number	98010940

4.34.3 S5735-S32ST4X

Version Mapping

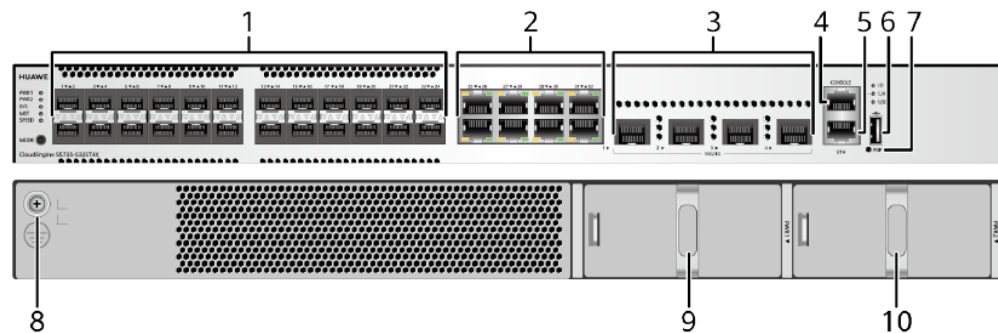
Table 4-1643 lists the mapping between the S5735-S32ST4X chassis and software versions.

Table 4-1643 Version mapping

Series	Model	Software Version
S5735-S	S5735-S32ST4X	V200R019C00 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-591 S5735-S32ST4X appearance



1	Twenty-four 100/1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules (maximum transmission distance \leq 40 km) • 10.10 GE SFP Copper Modules 	2	Eight 10/100/1000BASE-T ports
3	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable 	4	One console port
5	One ETH management port	6	One USB port
7	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button.	8	Ground screw NOTE It is used with a 9.1 Ground Cable.

	Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.		
9	<p>Power module slot 1</p> <p>NOTE Applicable power module:</p> <ul style="list-style-type: none"> • 5.11 PAC60S12-AR (60 W AC Power Module) • 5.27 PDC1000S12-DB (1000 W DC Power Module) • 5.15 PDC180S12-CR (180 W DC Power Module) (applicable in V200R020C00 and later versions) 	10	<p>Power module slot 2</p> <p>NOTE Applicable power module:</p> <ul style="list-style-type: none"> • 5.11 PAC60S12-AR (60 W AC Power Module) • 5.27 PDC1000S12-DB (1000 W DC Power Module) • 5.15 PDC180S12-CR (180 W DC Power Module) (applicable in V200R020C00 and later versions)

Port Description

100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. Table 4-1644 describes the attributes of a 100/1000BASE-X port.

Table 4-1644 Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-1645 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-1645 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission	100 m

Attribute	Description
distance	

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-1646 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-1646 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1647.

Table 4-1647 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1648 describes the attributes of an ETH management port.

Table 4-1648 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

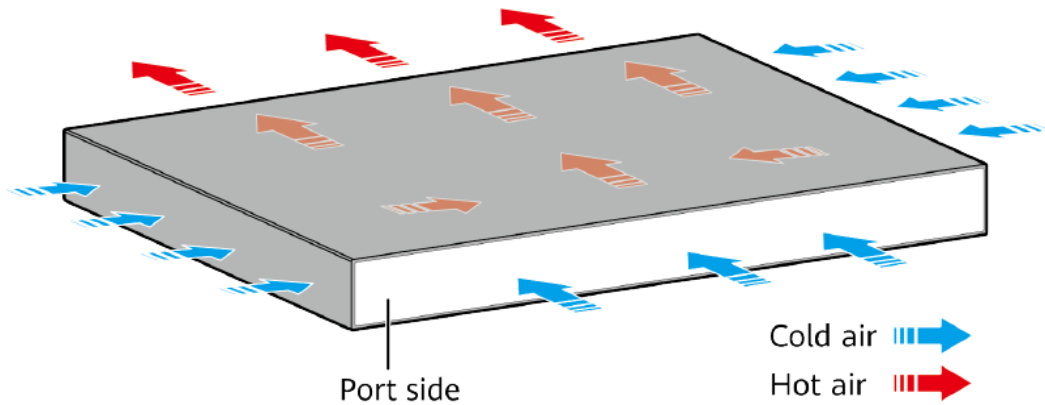
The S5735-S32ST4X has similar indicators to those on the S5735-S24P4X except that the S5735-S32ST4X does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The switch can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch. However, the power modules with natural heat dissipation and the power modules with fan cannot be used at the same time.

Heat Dissipation

The S5735-S32ST4X has two built-in fans for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1649 lists technical specifications of the S5735-S32ST4X.

Table 4-1649 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	68.59 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 444.2 mm (1.72 in. x 17.4 in. x 17.49 in.)
Weight (with packaging)	7.47 kg (16.47 lb)
Stack ports	Any 10/100/1000BASE-T ports, 100/1000BASE-X ports, or 10GE SFP+ ports (applicable in V200R019C10 and later versions)

Item	Description
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none"> AC input: 100 V AC to 240 V AC, 50/60 Hz High-Voltage DC input: 240 V DC DC input: -48 V DC to -60 V DC
Maximum voltage range	<ul style="list-style-type: none"> AC input: 90 V AC to 264 V AC, 47 Hz to 63 Hz High-Voltage DC input: 190 V DC to 290 V DC DC input: -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	66 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> Tested according to ATIS standard EEE enabled No PoE power consumption 	47 W
Operating temperature	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0 °C (32 °F).
Short-term operating temperature	-5 °C to +55 °C (23 °F to 131 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year. The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year. The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year.

Item	Description
	The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 59.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010931

4.34.4 S5735-S48T4X

Version Mapping

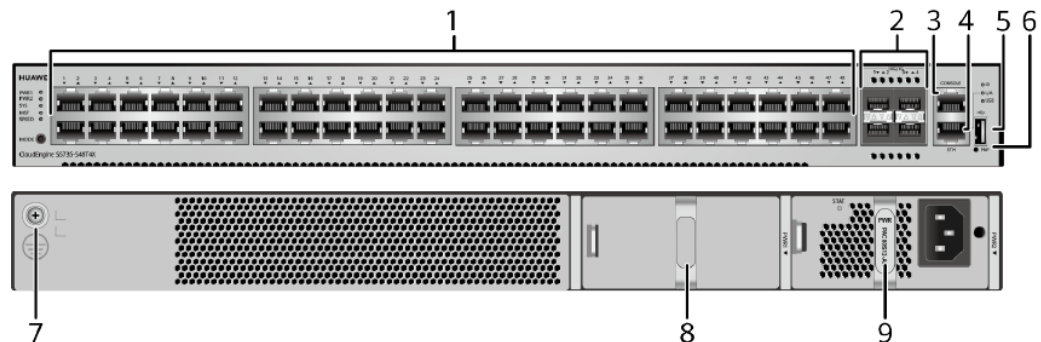
Table 4-1650 lists the mapping between the S5735-S48T4X chassis and software versions.

Table 4-1650 Version mapping

Series	Model	Software Version
S5735-S	S5735-S48T4X	V200R019C00 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-592 S5735-S48T4X appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw NOTE It is used with a 9.1 Ground Cable.	8	Power module slot 1 NOTE Applicable power module: <ul style="list-style-type: none"> • 5.11 PAC60S12-AR (60 W AC Power Module)

			<ul style="list-style-type: none"> • 5.27 PDC1000S12-DB (1000 W DC Power Module) • 5.15 PDC180S12-CR (180 W DC Power Module) (applicable in V200R020C00 and later versions)
9	<p>Power module slot 2</p> <p>NOTE</p> <p>Applicable power module:</p> <ul style="list-style-type: none"> • 5.11 PAC60S12-AR (60 W AC Power Module) • 5.27 PDC1000S12-DB (1000 W DC Power Module) • 5.15 PDC180S12-CR (180 W DC Power Module) (applicable in V200R020C00 and later versions) 	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-1651 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-1651 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-1652 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-1652 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used

Attribute	Description
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1653.

Table 4-1653 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1654 describes the attributes of an ETH management port.

Table 4-1654 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

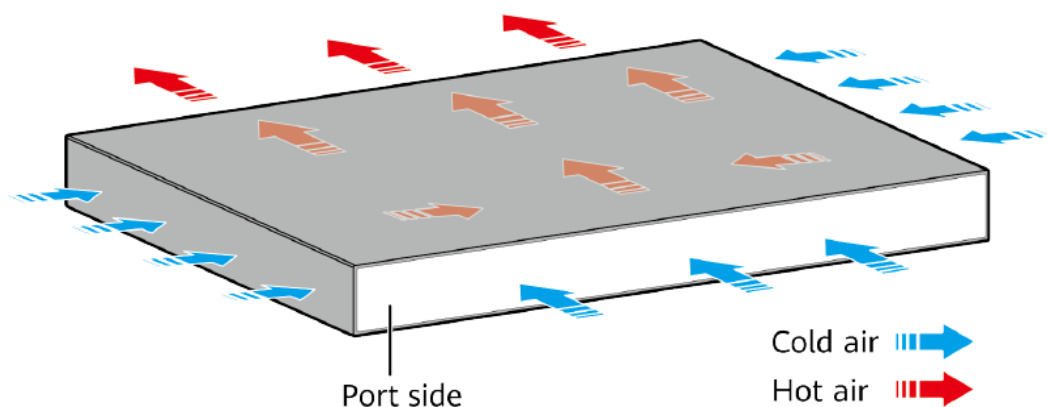
The S5735-S48T4X has similar indicators to those on the S5735-S24P4X except that the S5735-S48T4X does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The switch can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch. However, the power modules with natural heat dissipation and the power modules with fan cannot be used at the same time.

Heat Dissipation

The S5735-S48T4X has two built-in fans for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1655 lists technical specifications of the S5735-S48T4X.

Table 4-1655 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	74.7 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	<ul style="list-style-type: none">Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common modeUsing DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 444.2 mm (1.72 in. x 17.4 in. x 17.49 in.)
Weight (with packaging)	7.69 kg (16.95 lb)
Stack ports	Any 10/100/1000BASE-T ports or 10GE SFP+ ports (applicable in V200R019C10 and later versions)
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none">AC input: 100 V AC to 240 V AC, 50/60 HzHigh-Voltage DC input: 240 V DCDC input: -48 V DC to -60 V DC
Maximum voltage range	<ul style="list-style-type: none">AC input: 90 V AC to 264 V AC, 47 Hz to 63 HzHigh-Voltage DC input: 190 V DC to 290 V DCDC input: -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	59 W
Typical power consumption (30%)	40 W

Item	Description
of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	
Operating temperature	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0 °C (32 °F).
Short-term operating temperature	-5 °C to +55 °C (23 °F to 131 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">• The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 58.9 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010941

4.34.5 S5735-S48P4X

Version Mapping

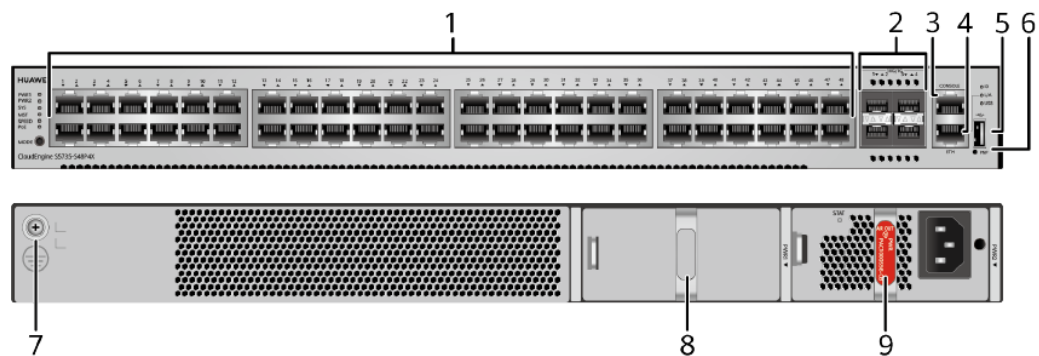
Table 4-1656 lists the mapping between the S5735-S48P4X chassis and software versions.

Table 4-1656 Version mapping

Series	Model	Software Version
S5735-S	S5735-S48P4X	V200R019C00 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-593 S5735-S48P4X appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable
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			<ul style="list-style-type: none"> • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw NOTE It is used with a 9.1 Ground Cable.	8	Power module slot 1 NOTE Applicable power module: <ul style="list-style-type: none"> • 5.24 PAC1000S56-CB (1000 W PoE AC Power Module) • 5.25 PAC1000S56-DB (1000 W PoE AC Power Module) (applicable in V200R020C10 and later versions) • 5.26 PDC1000S56-CB (1000 W PoE DC Power Module) (applicable in V200R021C00 and later versions) • 5.23 PAC600S56-CB (600 W AC&240 V DC Power Module (Back to Front, Power panel side exhaust)) (applicable in V200R021C10 and later versions)
9	Power module slot 2 NOTE Applicable power module: <ul style="list-style-type: none"> • 5.24 PAC1000S56-CB (1000 W PoE AC Power Module) • 5.25 PAC1000S56-DB (1000 W PoE AC Power Module) (applicable in V200R020C10 and later versions) • 5.26 PDC1000S56-CB (1000 W PoE DC Power Module) (applicable in V200R021C00 and later versions) • 5.23 PAC600S56-CB (600 W AC&240 V DC Power Module (Back to Front, Power panel side exhaust)) (applicable in V200R021C10 and later versions) 	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-1657 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-1657 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-1658 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-1658 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1659.

Table 4-1659 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1660 describes the attributes of an ETH management port.

Table 4-1660 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5735-S48P4X has the same types of indicators as the S5735-S24P4X. For details, see [Indicator Description](#).

Power Supply Configuration

The switch is a PoE switch and supports two power module slots, each of which can have a 1000 W PoE or 600 W PoE power module installed. Pluggable AC and DC PoE power modules can be used together in the same switch.

Table 4-1661 Power supply configurations

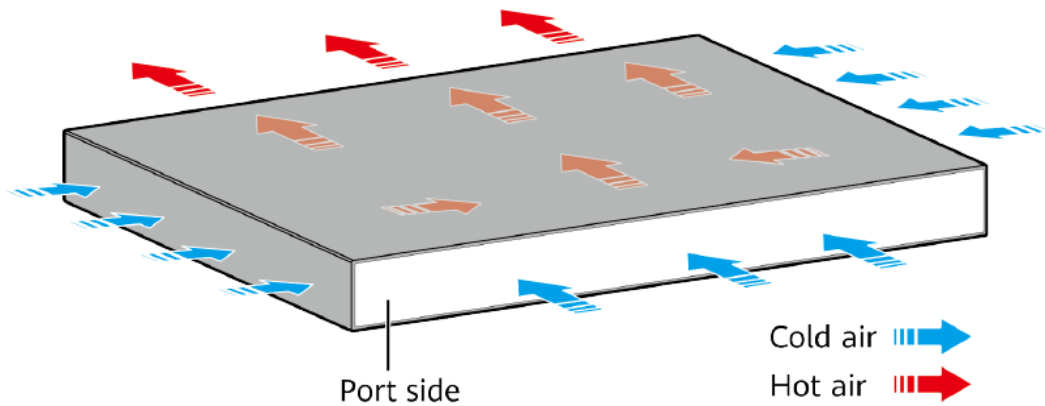
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W AC (220 V) 1000 W DC	–	874 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 29
1000 W AC (110 V)	–	779 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 25
1000 W AC (220 V) 1000 W DC	1000 W AC (220 V) 1000 W DC	1600 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 48
1000 W AC (110 V) 1000 W DC	1000 W AC (110 V)	1600 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 48
600 W AC (220 V)	–	494 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 32 802.3at (30 W per port): 16
600 W AC (110 V)	–	209 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 13 802.3at (30 W per port): 6
600 W AC (220 V)	600 W AC (220 V)	1064 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 35
600 W AC (110 V)	600 W AC (110 V)	494 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 32 802.3at (30 W per port): 16
1000 W AC (220 V) 1000 W DC	600 W AC (220 V)	1444 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 48

 **NOTE**

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

Heat Dissipation

The S5735-S48P4X has two built-in fans for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1662 lists technical specifications of the S5735-S48P4X.

Table 4-1662 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	54.88 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 444.2 mm (1.72 in. x 17.4 in. x 17.49 in.)

Item	Description
Weight (with packaging)	7.64 kg (16.84 lb)
Stack ports	Any 10/100/1000BASE-T ports or 10GE SFP+ ports (applicable in V200R019C10 and later versions)
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	<ul style="list-style-type: none">AC input: 100 V AC to 130 V AC, 200 V AC to 240 V AC, 50/60 HzHigh-Voltage DC input: 240 V DCDC input: -48 V DC to -60 V DC
Maximum voltage range	<ul style="list-style-type: none">AC input: 90 V AC to 290 V AC, 45 Hz to 65 HzHigh-Voltage DC input: 190 V DC to 290 V DCDC input: -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none">Not providing the PoE function: 77 W100% PoE loads: 1661 W (PoE: 1440 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">Tested according to ATIS standardEEE enabledNo PoE power consumption	59 W
Operating temperature	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0 °C (32 °F).
Short-term operating temperature	-5 °C to +55 °C (23 °F to 131 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:

Item	Description
	<ul style="list-style-type: none">• The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 58.9 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010943

4.34.6 S5735-S48S4X

Version Mapping

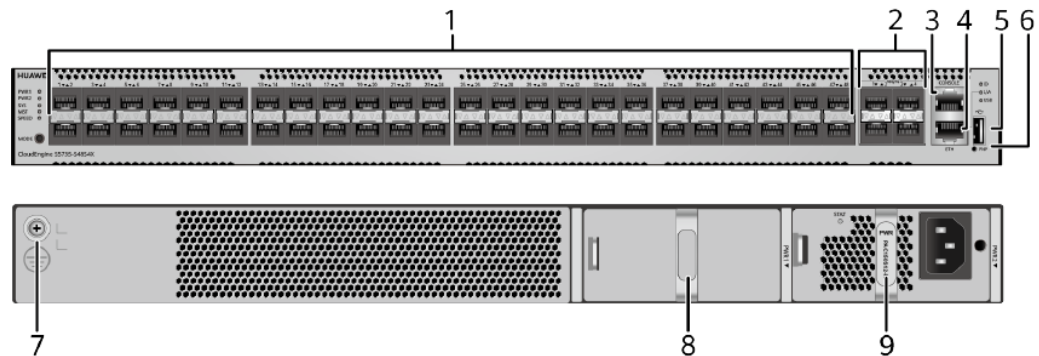
Table 4-1663 lists the mapping between the S5735-S48S4X chassis and software versions.

Table 4-1663 Version mapping

Series	Model	Software Version
S5735-S	S5735-S48S4X	V200R019C00 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-594 S5735-S48S4X appearance



1	<p>Forty-eight 100/1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules 	<p>2</p> <p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable 	
3	One console port	4	One ETH management port
5	One USB port	6	<p>One PNP button</p> <p>NOTICE</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
7	<p>Ground screw</p> <p>NOTE</p> <p>It is used with a 9.1 Ground Cable.</p>	8	<p>Power module slot 1</p> <p>NOTE</p> <p>Applicable power module:</p> <ul style="list-style-type: none"> • 5.27 PDC1000S12-DB (1000 W DC)

			Power Module) <ul style="list-style-type: none"> 5.12 PAC150S12-R (150 W AC Power Module) 5.15 PDC180S12-CR (180 W DC Power Module) (applicable in V200R020C00 and later versions)
9	Power module slot 2 NOTE Applicable power module: <ul style="list-style-type: none"> 5.27 PDC1000S12-DB (1000 W DC Power Module) 5.12 PAC150S12-R (150 W AC Power Module) 5.15 PDC180S12-CR (180 W DC Power Module) (applicable in V200R020C00 and later versions) 	-	-

Port Description

100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. Table 4-1664 describes the attributes of a 100/1000BASE-X port.

Table 4-1664 Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-1665 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-1665 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards	IEEE802.3ae

Attribute	Description
compliance	
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1666.

Table 4-1666 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1667 describes the attributes of an ETH management port.

Table 4-1667 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch

for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

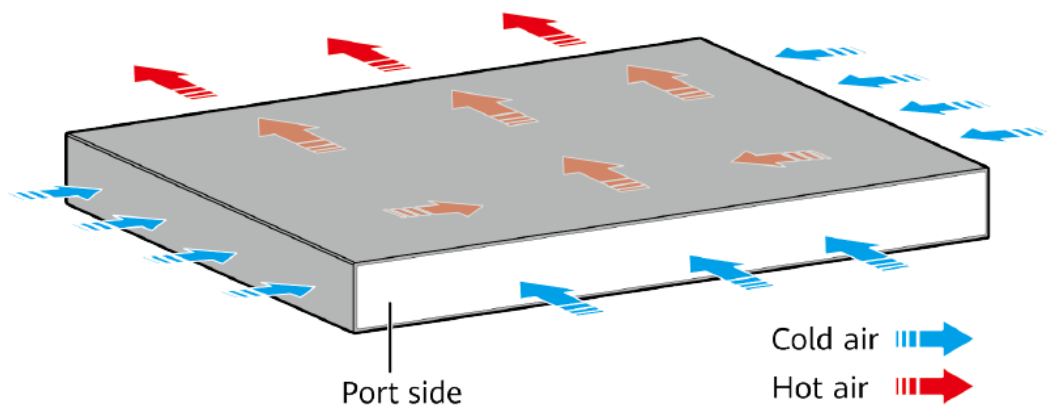
The S5735-S48S4X has similar indicators to those on the S5735-S24P4X except that the S5735-S48S4X does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The switch can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch. However, the power modules with natural heat dissipation and the power modules with fan cannot be used at the same time.

Heat Dissipation

The S5735-S48S4X has three built-in fans for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1668 lists technical specifications of the S5735-S48S4X.

Table 4-1668 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	66.33 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	NA
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 444.2 mm (1.72 in. x 17.4 in. x 17.49 in.)
Weight (with packaging)	8.27 kg (18.23 lb)
Stack ports	Any 100/1000BASE-X ports or 10GE SFP+ ports (applicable in V200R019C10 and later versions)
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none"> AC input: 100 V AC to 240 V AC, 50/60 Hz DC input: -48 V DC to -60 V DC
Maximum voltage range	<ul style="list-style-type: none"> AC input: 90 V AC to 264 V AC, 47 Hz to 63 Hz DC input: -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	89 W
Typical power consumption (30% of traffic load, tested according to	67 W

Item	Description
ATIS standard)	
Operating temperature	<p>-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>The switch cannot be started when the ambient temperature is lower than 0 °C (32 °F).</p>
Short-term operating temperature	<p>-5 °C to +55 °C (23 °F to 131 °F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 61 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010947

4.35 S5735-S-I

4.35.1 S5735-S4T2X-IA150G1

Version Mapping

Table 4-1669 lists the mapping between the S5735-S4T2X-IA150G1 chassis and software versions.

Table 4-1669 Version mapping

Series	Model	Software Version
S5735-S-I	S5735-S4T2X-IA150G1	V200R019C10 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-595 S5735-S4T2X-IA150G1 appearance

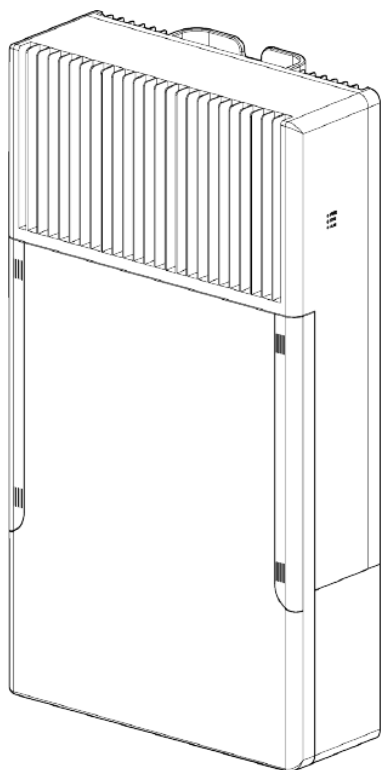
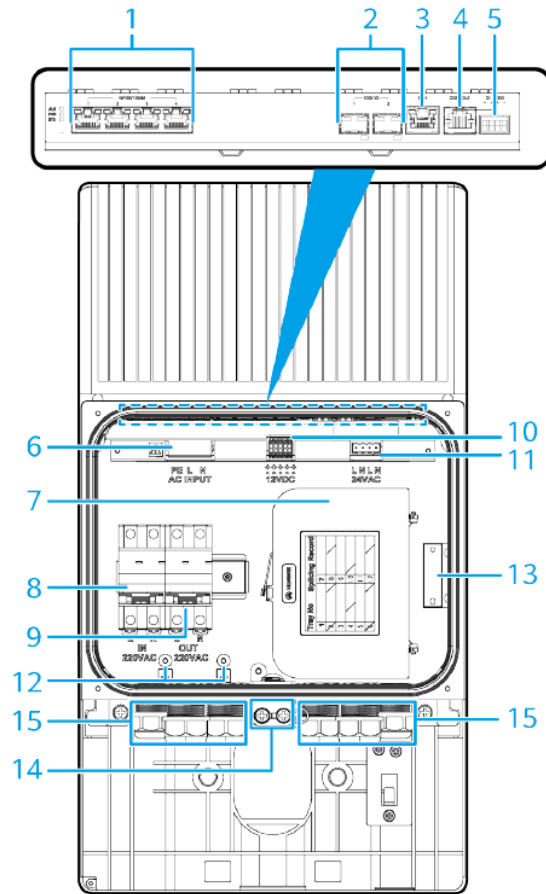


Figure 4-596 Interior of the S5735-S4T2X-IA150G1 maintenance compartment



1	Four 10/100/1000BASE-T ports	2 Two 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.17 Industrial Optical Modules • 10.19 GPON Optical Modules • Third-party GPON optical modules (Hisense LTE3415-SH+ and CIG G-97S) NOTE If one port uses a GPON optical module, the other port cannot be used at the same time.
3	One ETH management port	4 One console port
5	Monitoring port <ul style="list-style-type: none"> • DI: signal input line, which connects to a door status sensor. • DO: signal output line, which connects to a camera alarm signal cable. NOTE	6 220 V AC power input socket

	<p>The monitoring port can be used to detect the status of a connected external device, such as the opening and closing of the maintenance compartment door.</p> <p>The monitoring port is used with a conductive cable. The minimum cross-sectional area of the conductor connected to a conductive cable is 0.3 mm² or 22 AWG, and the maximum cross-sectional area of the conductor is 1.3 mm² or 16 AWG.</p> <p>For details about how to use a monitoring port, see "Monitoring Interface Configuration" in the <i>Configuration Guide - Device Management Configuration</i>.</p>		
7	<p>Fiber management tray (FMT)</p> <p>NOTE The FMT is optional.</p>	8	<p>220 V AC power input circuit breaker</p> <p>NOTICE This circuit breaker is optional. Connect an external power cable to the 220 V AC power input circuit breaker when it is in use. An external power cable needs to be prepared onsite. Ensure that the wires of the external cable are correctly connected to the L and N sockets of a plug. The circuit breaker supports a maximum of 32 A input current and provides two 220 V AC outputs.</p> <ul style="list-style-type: none"> • One output is connected to the AC power input socket of the switch to supply power to the switch. • The other output is connected to the 220 V AC power output circuit breaker of the switch to supply power to connected PDs (such as strobe lights and non-PoE PTZ dome cameras).
9	<p>220 V AC power output circuit breaker</p> <p>NOTICE This circuit breaker is optional. The 220 V AC power output circuit breaker provides overcurrent protection only, and is only used for external power conversion. It supports a maximum of 10 A output current. The connected external devices need to provide certain surge protection capabilities. It is recommended that the surge protection capabilities for both differential and common modes be 20 kA.</p>	10	<p>12 V DC power output socket</p> <p>NOTE The switch provides five 12 V DC outputs to external devices, such as strobe lights and non-PoE PTZ dome cameras.</p>
11	<p>24 V AC power output socket</p> <p>NOTE The switch provides two 24 V AC outputs to external devices, such as strobe lights and non-PoE PTZ dome cameras.</p>	12	<p>PE cable ground terminal</p> <p>NOTE It is used to ground a PE power cable for 220 V AC input or output.</p>

13	Door status sensor NOTE It reports an alarm when the maintenance compartment door of the switch is opened.	14	Ground screw NOTE It is used to ground the switch. The ground cable needs to be purchased separately.
15	Cable outlet	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-1670 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-1670 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-1671 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-1671 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1672.

Table 4-1672 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1673 describes the attributes of an ETH management port.

Table 4-1673 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

Indicator Description

Figure 4-597 Indicators on the outside of the S5735-S4T2X-IA150G1

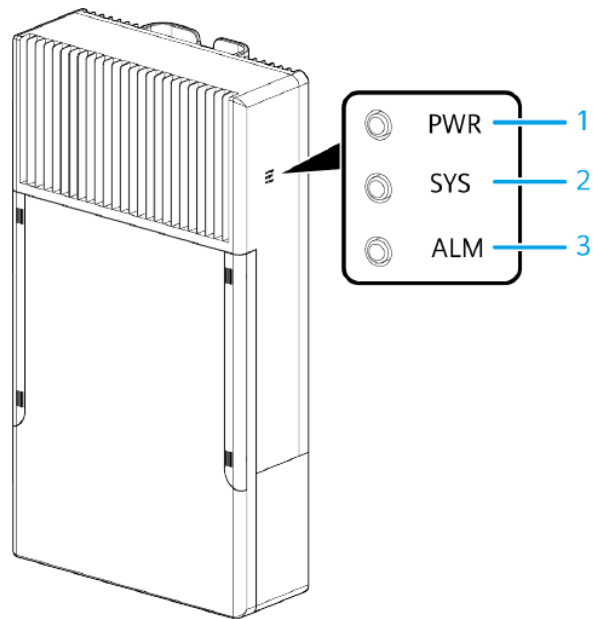


Figure 4-598 Indicators inside the maintenance compartment of the S5735-S4T2X-IA150G1

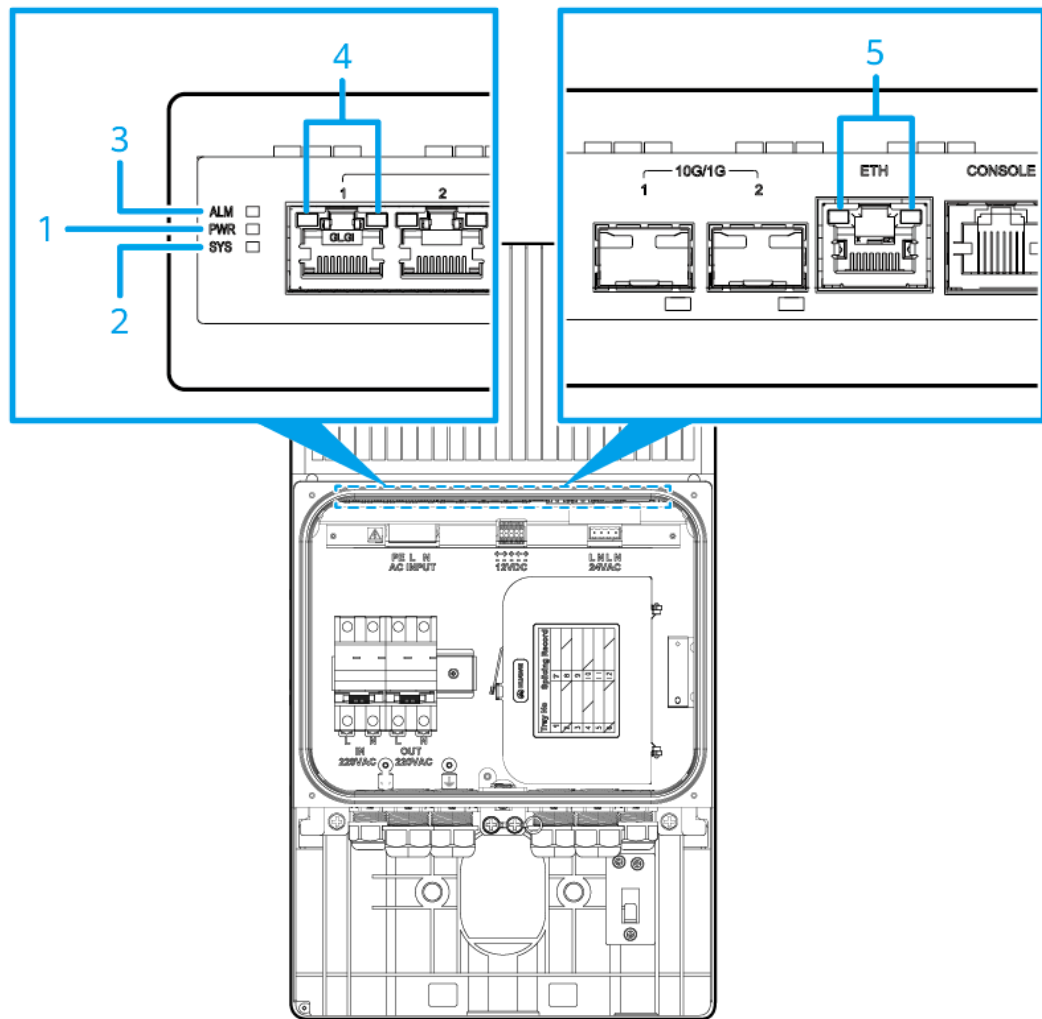


Table 4-1674 Description of indicators

No.	Indicator	Name	Color	Status	Description
1	PWR	Power indicator	-	Steady off	The switch is powered off.
			Green	Steady on	The switch is powered on and can communicate with the built-in power module properly.
			Yellow	Steady on	The switch is powered on but cannot communicate with the built-in power module properly.
2	SYS	System status	-	Steady off	The system is not running.

No.	Indicator	Name	Color	Status	Description
		indicator	Green	Fast blinking	The system is starting.
			Green	Steady on	In the system startup preparation phase, the SYS indicator is steady green for no more than 30 seconds.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a temperature alarm has been generated.
			Red	Fast blinking	The indicator identifies the switch to maintain. The indicator can be turned on or off remotely to help field engineers find the switch to maintain.
3	ALM	Alarm indicator	-	Steady off	There is no AC input or power supply is normal.
			Red	Steady on	The power supply to the switch is abnormal.
4	-	Service port indicator (electrical ports)	-	Steady off	The port is not connected or has been shut down.
			Green and yellow	Steady on	The port is connected.
			Green and yellow	Blinking	The port is sending or receiving data.
		Service port indicator (optical ports)	-	Steady off	The port is not connected or has been shut down.
			Green	Steady on	The port is connected.
			Green	Blinking	The port is sending or receiving data.
5	-	ETH port indicator	-	Steady off	The ETH port is not connected.
			Green and yellow	Steady on	The ETH port is connected.
			Green and	Blinking	The port is sending or receiving data.

No.	Indicator	Name	Color	Status	Description
			yellow		

Power Supply Configuration

The S5735-S4T2X-IA150G1 has a built-in power module and does not support pluggable power modules. The S5735-S4T2X-IA150G1 can be directly connected to an external 220 V AC power supply and provide power for external devices. Table 4-1675 lists the power supply configurations of the S5735-S4T2X-IA150G1.

Table 4-1675 Power supply configurations

Power Supply Mode	Available Power
12 V DC	Five 12 V DC outputs provide a total of 72 W power. The maximum power of a single output is 72 W.
24 V AC	Two 24 V AC outputs provide a total of 72 W power. The maximum power of a single output is 72 W.

NOTE

The five 12 V DC outputs and two 24 V AC outputs provides a combined total power output of 144 W.

Heat Dissipation

The S5735-S4T2X-IA150G1 has no fans and uses natural heat dissipation.

Technical Specifications

Table 4-1676 lists technical specifications of the S5735-S4T2X-IA150G1.

Table 4-1676 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	57.28 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge	±1.5 kV in differential mode, ±6 kV in common mode

Item	Description
protection	
Power supply surge protection	Surge current: <ul style="list-style-type: none">AC input: 20 kA Surge: <ul style="list-style-type: none">AC input: ± 6 kV in differential mode; ± 6 kV in common mode12 V DC output: ± 2 kV in differential mode; ± 4 kV in common mode24 V AC output: ± 2 kV in differential mode; ± 6 kV in common mode
Dimensions (H x W x D)	550 mm x 300 mm x 135 mm (21.65 in. x 11.81 in. x 5.31 in.)
Weight (including packaging)	12.2 kg (26.9 lb)
Stack ports	Not supported
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	220 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	176 V AC to 264 V AC, 45 Hz to 66 Hz
Maximum power consumption (100% throughput)	29 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">Tested according to ATIS standardEEE enabledNo PoE power consumption	28 W
Operating temperature	-40 °C to +75 °C (-40 °F to 167 °F) NOTE <ul style="list-style-type: none">-25 °C to +75 °C (-13 °F to +167 °F): sun shield needed; 400 LFM air velocity (minimum); GPON optical modules not supported-25 °C to +70 °C (-13 °F to +158 °F): sun shield needed; 200 LFM air velocity (minimum); GPON optical modules supported-30 °C to +60 °C (-22 °F to +140 °F): sun shield needed; 40 LFM air velocity (minimum); GPON optical modules supported-35 °C to +55 °C (-31 °F to +131 °F): sun shield needed; no requirement on the

Item	Description
	air velocity; GPON optical modules supported –35 °C to +45 °C (–31 °F to +113 °F): 1120 W/m ² solar radiation (maximum); no requirement on the air velocity –40 °C to –35 °C (–40 °F to –31 °F): stable port performance can be achieved only when at least four Ethernet electrical ports go Up When the altitude is 1800–4000 m (5906-13123 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	–40 °C to +85 °C (–40 °F to +185 °F)
IP rating	IP55
Salt spray protection	Supported, allowing the switch to be installed in areas more than 500 meters away from the sea
Noise under normal temperature (27 °C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-4000 m (0-13123 ft.)
Product certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02312NTA

4.35.2 S5735-S8P2X-IA200G1

Version Mapping

Table 4-1677 lists the mapping between the S5735-S8P2X-IA200G1 chassis and software versions.

Table 4-1677 Version mapping

Series	Model	Software Version
S5735-S-I	S5735-S8P2X-IA200G1	V200R019C10 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-599 S5735-S8P2X-IA200G1 appearance

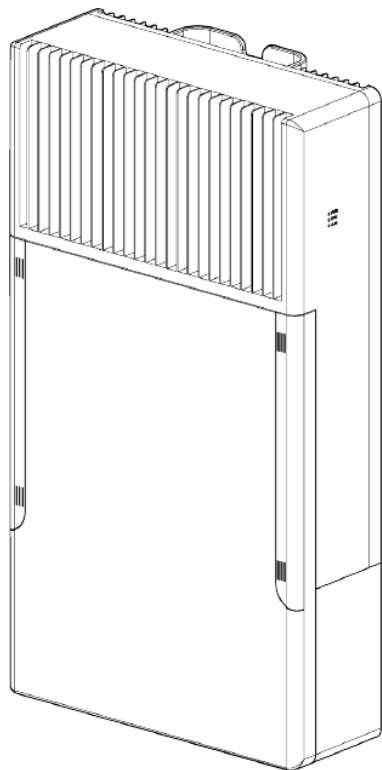
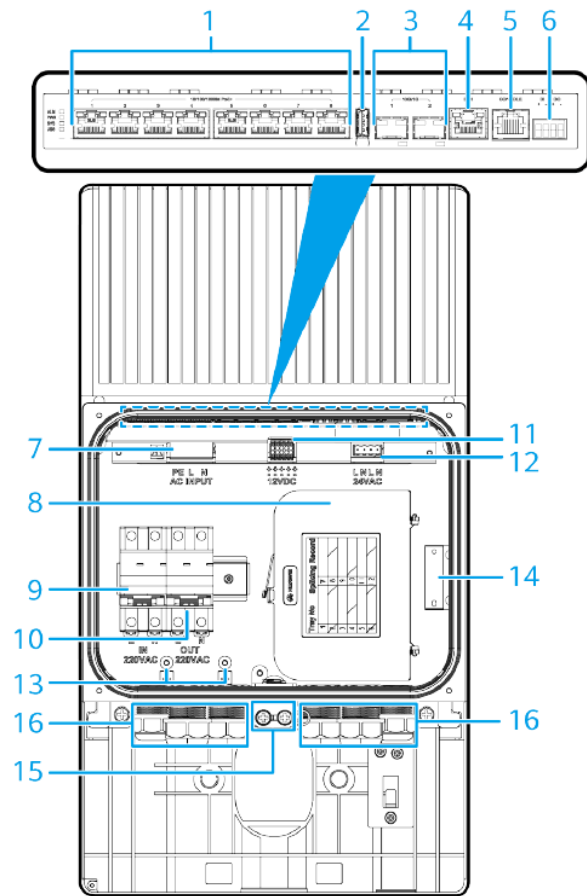


Figure 4-600 Interior of the S5735-S8P2X-IA200G1 maintenance compartment



1	Eight PoE+ 10/100/1000BASE-T ports	2	One USB port
3	Two 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.17 Industrial Optical Modules • 10.19 GPON Optical Modules • Third-party GPON optical modules (Hisense LTE3415-SH+ and CIG G-97S) NOTE If one port uses a GPON optical module, the other port cannot be used at the same time.	4	One ETH management port
5	One console port	6	Monitoring port <ul style="list-style-type: none"> • DI: signal input line, which connects to a door status sensor. • DO: signal output line, which connects to a camera alarm signal cable. NOTE

			<p>The monitoring port can be used to detect the status of a connected external device, such as the opening and closing of the maintenance compartment door.</p> <p>The monitoring port is used with a conductive cable. The minimum cross-sectional area of the conductor connected to a conductive cable is 0.3 mm² or 22 AWG, and the maximum cross-sectional area of the conductor is 1.3 mm² or 16 AWG.</p> <p>For details about how to use a monitoring port, see "Monitoring Interface Configuration" in the <i>Configuration Guide - Device Management Configuration</i>.</p>
7	220 V AC power input socket	8	<p>Fiber management tray (FMT)</p> <p>NOTE The FMT is optional.</p>
9	<p>220 V AC power input circuit breaker</p> <p>NOTICE This circuit breaker is optional.</p> <p>Connect an external power cable to the 220 V AC power input circuit breaker when it is in use.</p> <p>An external power cable needs to be prepared onsite. Ensure that the wires of the external cable are correctly connected to the L and N sockets of a plug.</p> <p>The circuit breaker supports a maximum of 32 A input current and provides two 220 V AC outputs.</p> <ul style="list-style-type: none"> One output is connected to the AC power input socket of the switch to supply power to the switch. The other output is connected to the 220 V AC power output circuit breaker of the switch to supply power to connected PDs (such as strobe lights and non-PoE PTZ dome cameras). 	10	<p>220 V AC power output circuit breaker</p> <p>NOTICE This circuit breaker is optional.</p> <p>The 220 V AC power output circuit breaker provides overcurrent protection only, and is only used for external power conversion. It supports a maximum of 10 A output current.</p> <p>The connected external devices need to provide certain surge protection capabilities. It is recommended that the surge protection capabilities for both differential and common modes be 20 kA.</p>
11	<p>12 V DC power output socket</p> <p>NOTE The switch provides five 12 V DC outputs to external devices, such as strobe lights and non-PoE PTZ dome cameras.</p>	12	<p>24 V AC power output socket</p> <p>NOTE The switch provides two 24 V AC outputs to external devices, such as strobe lights and non-PoE PTZ dome cameras.</p>
13	<p>PE cable ground terminal</p> <p>NOTE It is used to ground a PE power cable for 220 V AC input or output.</p>	14	<p>Door status sensor</p> <p>NOTE It reports an alarm when the maintenance compartment door of the switch is opened.</p>
15	<p>Ground screw</p> <p>NOTE It is used to ground the switch. The ground cable needs to be purchased separately.</p>	16	<p>Cable outlet</p>

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-1678 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-1678 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-1679 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-1679 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1680.

Table 4-1680 Attributes of a console port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1681 describes the attributes of an ETH management port.

Table 4-1681 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

Figure 4-601 Indicators on the outside of the S5735-S8P2X-IA200G1

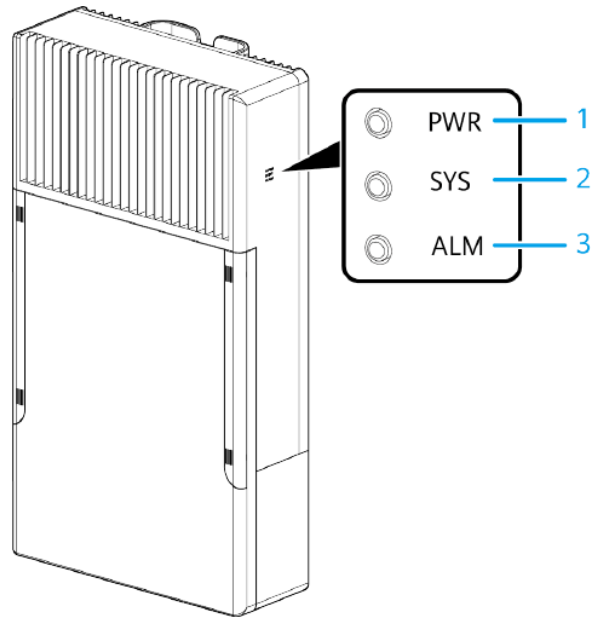


Figure 4-602 Indicators inside the maintenance compartment of the S5735-S8P2X-IA200G1

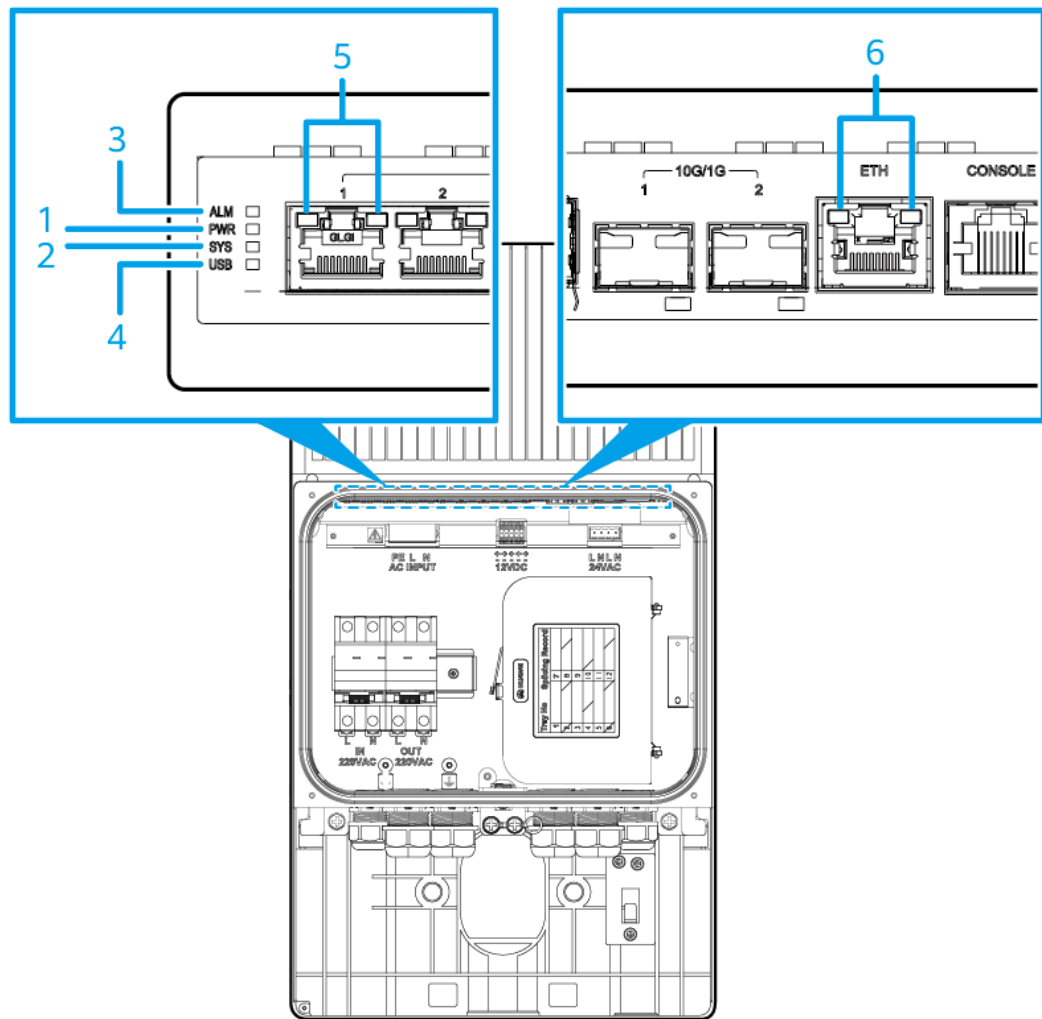


Table 4-1682 Description of indicators

No.	Indicator	Name	Color	Status	Description
1	PWR	Power indicator	-	Steady off	The switch is powered off.
			Green	Steady on	The switch is powered on and can communicate with the built-in power module properly.
			Yellow	Steady on	The switch is powered on but cannot communicate with the built-in power module properly.
2	SYS	System status	-	Steady off	The system is not running.

No.	Indicator	Name	Color	Status	Description
		indicator	Green	Fast blinking	The system is starting.
			Green	Steady on	In the system startup preparation phase, the SYS indicator is steady green for no more than 30 seconds.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a temperature alarm has been generated.
			Red	Fast blinking	The indicator identifies the switch to maintain. The indicator can be turned on or off remotely to help field engineers find the switch to maintain.
3	ALM	Alarm indicator	-	Steady off	There is no AC input or power supply is normal.
			Red	Steady on	The power supply to the switch is abnormal.
4	USB	USB-based deployment indicator	-	Steady off	<ul style="list-style-type: none"> No USB flash drive is connected to the switch. The USB port is damaged. The indicator is damaged. The USB flash drive does not have any configuration file and cannot be used for deployment. The switch has been upgraded using the USB flash drive and is restarting.
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from a USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.
5	-	Service port	Green	Steady off	The port is not connected or has been shut down.

No.	Indicator	Name	Color	Status	Description	
		indicator		Steady on	The port is connected.	
				Blinking	The port is sending or receiving data.	
			Yellow	Steady off	The port does not supply power to any PD.	
				Steady on	The port is supplying power to the connected PD.	
				Blinking	The PD connected to the port is not a standard PD or its power exceeds the maximum power or power threshold of the port.	
6	-	ETH port indicator	-	Steady off	The ETH port is not connected.	
				Green and yellow	Steady on	The ETH port is connected.
				Green and yellow	Blinking	The port is sending or receiving data.

Power Supply Configuration

The S5735-S8P2X-IA200G1 has a built-in power module and does not support pluggable power modules. The S5735-S8P2X-IA200G1 can be directly connected to an external 220 V AC power supply and provide power for external devices. Table 4-1683 lists the power supply configurations of the S5735-S8P2X-IA200G1.

Table 4-1683 Power supply configurations

Power Supply Mode	Available Power
PoE	160 W Maximum number of PoE ports (fully loaded): <ul style="list-style-type: none"> • 802.3af (15.4 W per port): 8 • 802.3at (30 W per port): 5
12 V DC	Five 12 V DC outputs provide a total of 72 W power. The maximum power of a single output is 72 W.
24 V AC	Two 24 V AC outputs provide a total of 72 W power. The maximum power of a single output is 72 W.

 **NOTE**

The total maximum output power of PoE power output, five 12 V DC outputs, and two 24 V AC outputs is 160 W.

In the following scenarios, a device can supply up to 150 W available power.

- PoE-only scenario: If a device that is supplying more than 150 W PoE power is restarted upon power-off or is reset, the device can only supply up to 150 W available power due to load fluctuation errors.
- Hybrid power supply scenario: When a device uses both PoE and 12 V/24 V power supplies, and the device is powered on with loads, is restarted upon power-off, or is reset, the device can only supply up to 150 W power due to load fluctuation errors.

Heat Dissipation

The S5735-S8P2X-IA200G1 has no fans and uses natural heat dissipation.

Technical Specifications

Table 4-1684 lists technical specifications of the S5735-S8P2X-IA200G1.

Table 4-1684 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	57.28 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	±1.5 kV in differential mode, ±6 kV in common mode
Power supply surge protection	Surge current: <ul style="list-style-type: none">• AC input: 20 kA Surge: <ul style="list-style-type: none">• AC input: ±6 kV in differential mode; ±6 kV in common mode• 12 V DC output: ±2 kV in differential mode; ±4 kV in common mode• 24 V AC output: ±2 kV in differential mode; ±6 kV in common mode
Dimensions (H x W x D)	550 mm x 300 mm x 135 mm (21.65 in. x 11.81 in. x 5.31 in.)
Weight (including packaging)	12.2 kg (26.9 lb)

Item	Description
Stack ports	Not supported
RTC	Not supported
RPS	Not supported
PoE	Supported
Rated voltage range	220 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	176 V AC to 264 V AC, 45 Hz to 66 Hz
Maximum power consumption (100% throughput)	<ul style="list-style-type: none">• With no output power: 34 W• With output power: 209 W (device power consumption: 49 W; output power: 160 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	31 W
Operating temperature	<p>-40 °C to +75 °C (-40 °F to 167 °F)</p> <p>NOTE</p> <p>-25 °C to +75 °C (-13 °F to +167 °F): sun shield needed; 400 LFM air velocity (minimum); GPON optical modules not supported</p> <p>-25 °C to +70 °C (-13 °F to +158 °F): sun shield needed; 200 LFM air velocity (minimum); GPON optical modules supported</p> <p>-30 °C to +60 °C (-22 °F to +140 °F): sun shield needed; 40 LFM air velocity (minimum); GPON optical modules supported</p> <p>-35 °C to +55 °C (-31 °F to +131 °F): sun shield needed; no requirement on the air velocity; GPON optical modules supported</p> <p>-35 °C to +45 °C (-31 °F to +113 °F): 1120 W/m² solar radiation (maximum); no requirement on the air velocity</p> <p>-40 °C to -35 °C (-40 °F to -31 °F): stable port performance can be achieved only when at least four Ethernet electrical ports go Up</p> <p>When the altitude is 1800–4000 m (5906-13123 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p>
Storage temperature	-40 °C to +85 °C (-40 °F to +185 °F)
IP rating	IP55
Salt spray protection	Supported, allowing the switch to be installed in areas more than 500 meters away from the sea
Noise under normal temperature (27 °C,	Noise-free (no fans)

Item	Description
sound power)	
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-4000 m (0-13123 ft.)
Product certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02312NTA-001

4.35.3 S5735-S8P2X-IA200H1

Overview

Table 4-1685 Basic information about the S5735-S8P2X-IA200H1

Item	Details
Description	Function Module, S5735-S8P2X-IA200H1, Single-Phase Or Dual-Live Wire Or PV Input, PoE 53Vdc/3.8A, 12Vdc/6A, 24Vac/4A, Natural Heat Dissipation
Part Number	02313CMQ
Model	S5735-S8P2X-IA200H1
First supported version	V200R020C10
Remarks	<p>External power supply capability:</p> <p>When only AC input is used:</p> <p>Maximum output power: 300 W (AC input range: 100 V AC to 120 V AC)</p> <p>Maximum output power: 450 W (AC input range: 200 V AC to 240 V AC)</p> <p>When only PV input is used:</p> <p>Maximum output power: 500 W (DC input range: 36 V DC to 58 V DC)</p> <p>Maximum output power: 1400 W (DC input range: 58 V DC to 72 V DC)</p> <p>Maximum output power: 1000 W (DC input range: 72 V DC to 120 V DC)</p> <p>When PV and AC power inputs are included:</p> <p>Maximum output power: 1400 W</p> <p>When lithium batteries are used, the lithium battery charging capability is the maximum</p>

Item	Details
	output power minus the power consumption (including 12 V DC, 24 V AC, PoE, and device power consumption).

Components

Figure 4-603 S5735-S8P2X-IA200H1 appearance

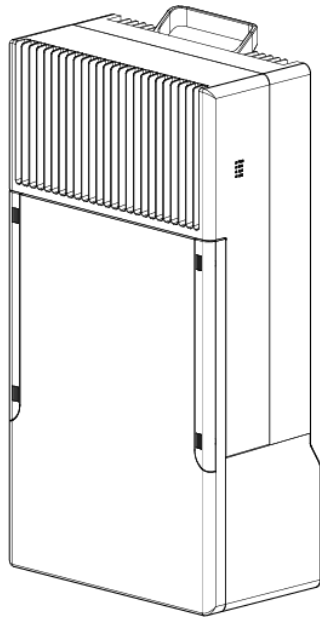
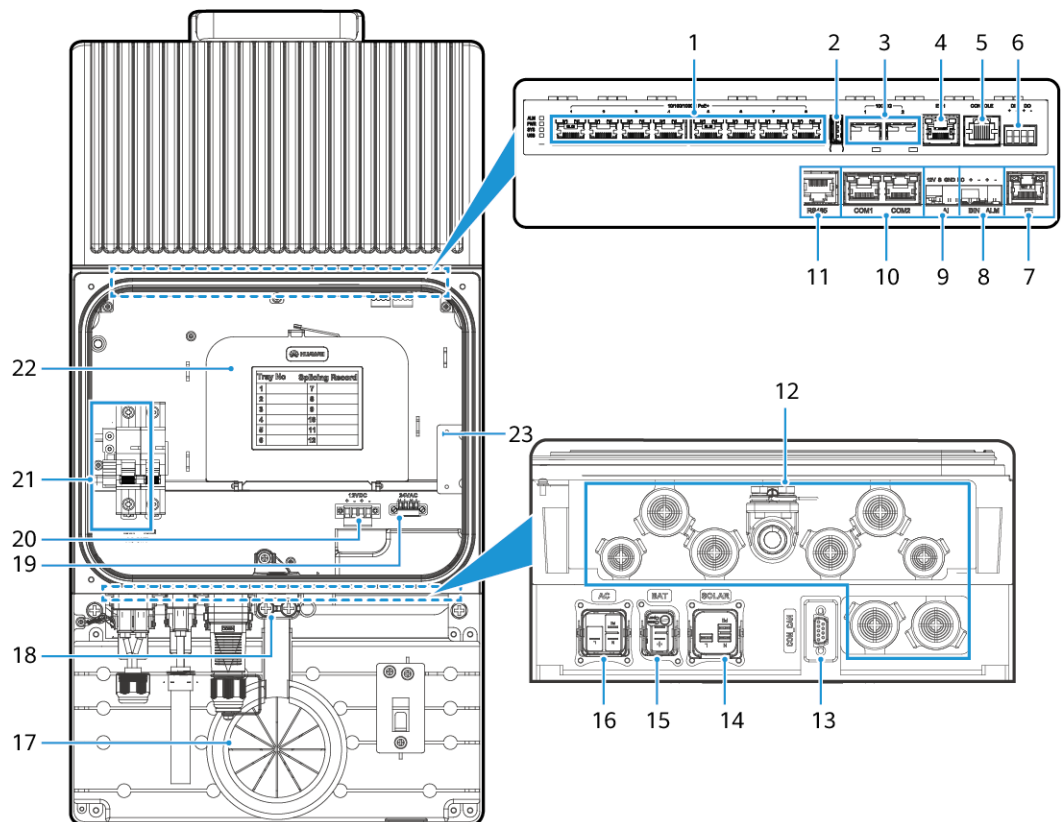


Figure 4-604 Interior of the S5735-S8P2X-IA200H1 maintenance compartment



1	Eight 10/100/1000BASE-T PoE+ ports	2	One USB port
3	Two 10GE SFP+ ports	4	One ETH management port
5	One console port	6	DI/DO monitoring port <ul style="list-style-type: none"> • DI: signal input line, which connects to a door status sensor. • DO: signal output line, which connects to a camera alarm signal cable. <p>NOTE</p> <p>The monitoring port can be used to detect the status of a connected external device, such as the opening and closing of the maintenance compartment door.</p> <p>The monitoring port is used with a conductive cable. The minimum cross-sectional area of the conductor connected to a conductive cable is 0.3 mm² or 22 AWG, and the maximum cross-sectional area of the conductor is 1.3 mm² or 16 AWG.</p> <p>For details about how to use a monitoring port, see "Monitoring Interface Configuration" in the <i>Configuration Guide - Device Management Configuration</i>.</p>

7	FE communication port NOTE The FE communication port is used for power commissioning. <ul style="list-style-type: none"> 10 M/100 M autonegotiation, RJ45 port Communication protocol: NetEco BIN 	8	Monitoring port (reserved)
9	Temperature sensor port (reserved)	10	COM1 and COM2 ports (reserved)
11	RS485 port NOTE The RS485 port is used to communicate with a PC for commissioning the power locally. <ul style="list-style-type: none"> Baud rate: 9600 bit/s by default Communication protocol: Modbus 	12	Cable outlet
13	COM_CAN port NOTE This port can be connected to lithium batteries to monitor and manage the batteries. <ul style="list-style-type: none"> Baud rate: 125 kbit/s Communication protocol: CAN 	14	Photovoltaics (PV) input port NOTE This port can be connected to an external PV system to supply power to the switch.
15	BAT port NOTE This port can be connected to an external lithium battery to supply power to the switch or charge the lithium battery.	16	220 V AC power input socket
17	Cable outlet	18	Ground screw NOTE It is used to ground the switch.
19	24 V AC power output socket NOTE The switch provides two 24 V AC outputs to external devices, such as strobe lights and non-PoE PTZ dome cameras.	20	12 V DC power output socket NOTE The switch provides two 12 V DC outputs to external devices, such as strobe lights and non-PoE PTZ dome cameras.
21	220 V AC power output circuit breaker NOTICE One 220 V AC power output is provided. The 220 V AC power output circuit breaker provides only overcurrent protection. The connected external devices need to provide certain surge protection capabilities. It is recommended that the surge protection capabilities for both differential and common modes be 20 kA.	22	Fiber management tray (FMT)
23	Door status sensor NOTE It reports an alarm when the maintenance	-	-

	compartment door of the switch is opened.	
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Indicators Description

Figure 4-605 Indicators on the outside of the S5735-S8P2X-IA200H1

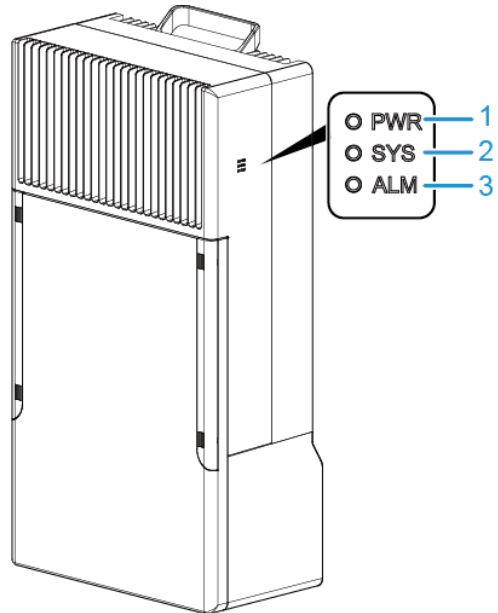


Figure 4-606 Indicators inside the maintenance compartment of the S5735-S8P2X-IA200H1

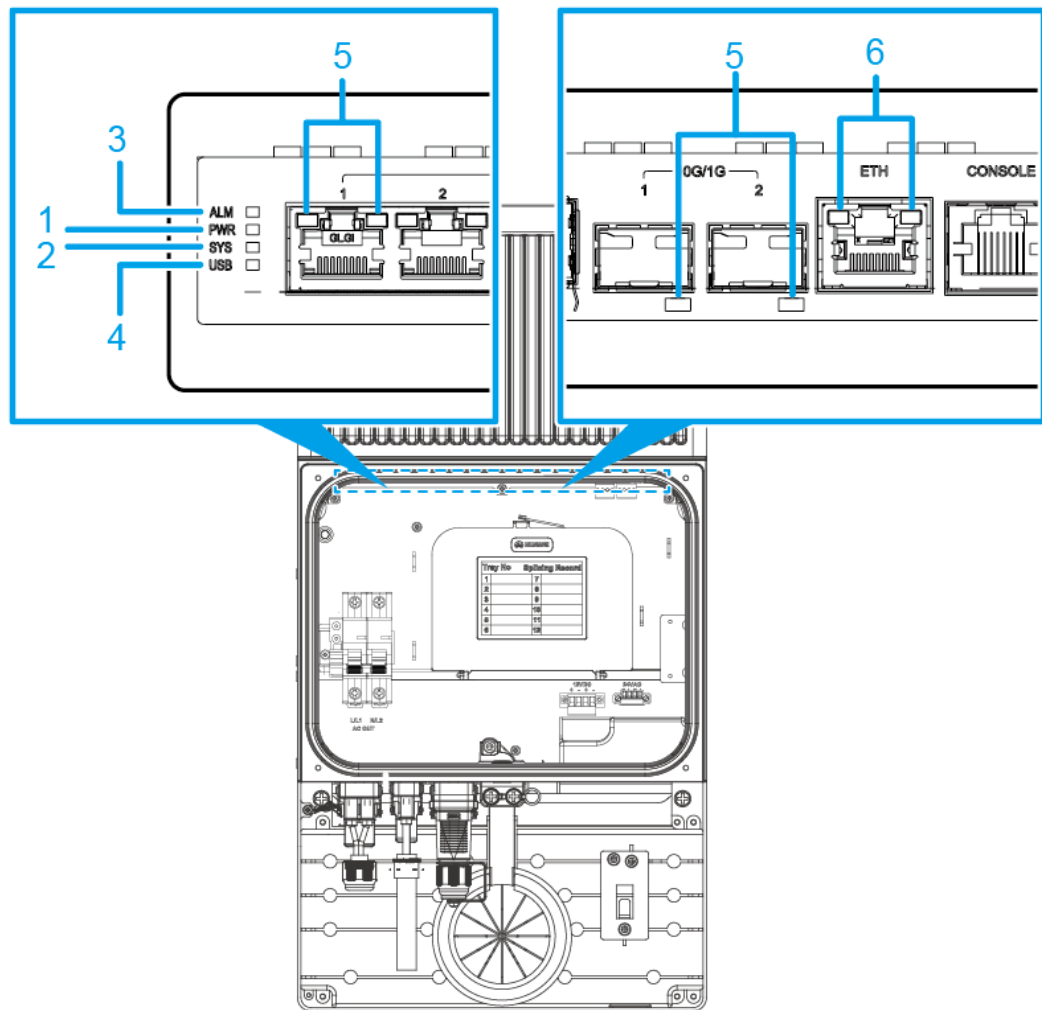


Table 4-1686 Description of indicators

No.	Indicator	Name	Color	Status	Description
1	PWR	Power indicator	-	Steady off	The switch is powered off.
			Green	Steady on	The switch is powered on and can communicate with the built-in power module properly.
			Yellow	Steady on	The switch is powered on but cannot communicate with the built-in power module properly.
2	SYS	System status	-	Steady off	The system is not running.

No.	Indicator	Name	Color	Status	Description
		indicator	Green	Fast blinking	The system is starting.
			Green	Steady on	In the system startup preparation phase, the SYS indicator is steady green for no more than 30 seconds.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a temperature alarm has been generated.
			Red	Fast blinking	The indicator identifies the switch to maintain. The indicator can be turned on or off remotely to help field engineers find the switch to maintain.
3	ALM	Alarm indicator	-	Steady off	There is no protection alarm or fault alarm.
			Red	Steady on	A fault alarm is generated due to device faults and cannot be cleared.
			Red	Slow blinking	A protection alarm is generated due to external faults and can be cleared.
4	USB	USB-based deployment indicator	-	Steady off	<ul style="list-style-type: none">No USB flash drive is connected to the switch.The USB port is damaged.The indicator is damaged.The USB flash drive does not have any configuration file and cannot be used for deployment.The switch has been upgraded using the USB flash drive and is restarting.
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from a USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading

No.	Indicator	Name	Color	Status	Description
					data from the USB flash drive.
5	-	Service port indicator	Green	Steady off	The port is not connected or has been shut down.
				Steady on	The port is connected.
				Blinking	The port is sending or receiving data.
			Yellow	Steady off	The port does not supply power to any PD.
				Steady on	The port is supplying power to the connected PD.
				Blinking	The PD connected to the port is not a standard PD or its power exceeds the maximum power or power threshold of the port.
6	-	ETH port indicator	-	Steady off	The ETH port is not connected.
			Green and yellow	Steady on	The ETH port is connected.
			Green and yellow	Blinking	The port is sending or receiving data.

Ports

Table 4-1687 Ports on the S5735-S8P2X-IA200H1

Port	Connector Type	Description	Available Components
10/100/1000BASE-T PoE+ port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s. The port supports the PoE function.	9.4 Ethernet Cable
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port	<ul style="list-style-type: none"> 10.17 Industrial Optical Modules

Port	Connector Type	Description	Available Components
		supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. If one port uses a GPON optical module, the other port cannot be used at the same time.	<ul style="list-style-type: none">• 10.19 GPON Optical Modules• Third-party GPON optical modules (Hisense LTE3415-SH+ and CIG G-97S)
Console port	RJ45	The console port is connected to a console for on-site configuration.	9.13 Console Cable
ETH management port	RJ45	You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port.	9.4 Ethernet Cable
USB port	USB 2.0 Type A	The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.	USB flash drive

Port	Connector Type	Description	Available Components
		USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.	

Power Supply System

The S5735-S8P2X-IA200H1 has a built-in AC power module and can be directly connected to the AC mains or an external PV system. External lithium batteries can also be connected to the switch for power backup. The switch supports the following power supply combinations:

- Solar hybrid scenario: PV input, AC mains input, and lithium batteries for backup
- Grid hybrid scenario: AC mains input and lithium batteries for backup
- Mains scenario: AC mains input
- Solar-Only scenario: PV input and lithium batteries for backup

Table 4-1688 Configurations in the solar hybrid scenario

Item	Description
Function module	S5735-S8P2X-IA200H1
Lithium battery	Maximum configuration: two DBU20B-N12A3s or two DBU50B-N12A1s
Pole	Solar pole
PV module	Two PV modules

Table 4-1689 Configurations in the grid hybrid scenario

Item	Description
Function module	S5735-S8P2X-IA200H1
Lithium battery	Maximum configuration: two DBU20B-N12A3s or two

Item	Description
	DBU50B-N12A1s
Pole	Mains pole

Table 4-1690 Configurations in the mains scenario

Item	Description
Function module	S5735-S8P2X-IA200H1
Pole	Mains pole

Table 4-1691 Configuration in the solar-only scenario

Item	Description
Function module	S5735-S8P2X-IA200H1
Lithium battery	Maximum configuration: two ESM-48100Bs or two ESM-48100A8s
Pole	Solar pole
PV module	Two PV modules or Four PV modules

 **NOTE**

For details about poles, lithium batteries, and PV modules, see [PowerCube 500 User Manual \(S5735-S8P2X-IA200H1\)](#).

The S5735-S8P2X-IA200H1 can also supply power to external devices. For details, see Table 4-1692.

Table 4-1692 Supplying power to external devices

Power Supply Mode	Available Power
PoE	200 W Maximum number of PoE ports (fully loaded): <ul style="list-style-type: none"> • 802.3af (15.4 W per port): 8 • 802.3at (30 W per port): 6
12 V DC	Two 12 V DC outputs provide a total of 72 W power. The maximum power of a single output is 72 W.
24 V AC	Two 24 V AC outputs provide a total of 100 W power. The maximum power of a single output is 100 W.

 **NOTE**

The total maximum output power of PoE power output, two 12 V DC outputs, and two 24 V AC outputs is 200 W.

In the following scenarios, a device can supply up to 190 W available power.

- PoE-only scenario: If a device that is supplying more than 190 W PoE power is restarted upon power-off or is reset, the device can only supply up to 190 W available power due to load fluctuation errors.
- Hybrid power supply scenario: When a device uses both PoE and 12 V/24 V power supplies, and the device is powered on with loads, is restarted upon power-off, or is reset, the device can only supply up to 190 W power due to load fluctuation errors.

Heat Dissipation System

The S5735-S8P2X-IA200H1 has no fans and uses natural heat dissipation.

Technical Specifications

Table 4-1693 Technical specifications of the S5735-S8P2X-IA200H1

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Including the protruding portions: 582 mm x 300 mm x 165.5 mm (22.91 in. x 11.81 in. x 6.52 in.) Excluding the protruding portions: 570 mm x 300 mm x 150 mm (22.44 in. x 11.81 in. x 5.91 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	270 mm x 450 mm x 670 mm (10.63 in. x 17.72 in. x 26.38 in.)
Weight without packaging [kg(lb)]	14.5 kg (31.97 lb)
Weight with packaging [kg(lb)]	17.6 kg (38.8 lb)
Typical power consumption [W]	38 W
Typical heat dissipation [BTU/hour]	129.66 BTU/hour
Maximum power consumption [W]	<ul style="list-style-type: none"> • With no output power: 45 W • With output power: 269 W (device power consumption: 69 W; output power: 200 W)
Maximum heat dissipation [BTU/hour]	<ul style="list-style-type: none"> • With no output power: 153.55 • With output power: 917.86
MTBF [year]	41.85 year
MTTR [hour]	2 hour
Availability	>0.99999
Noise at normal temperature (acoustic power) [dB(A)]	Noise-free (no fans)

Item	Specification
Noise at normal temperature (acoustic pressure) [dB(A)]	Noise-free (no fans)
Number of card slots	0
Number of power slots	0
Number of fans modules	0
Redundant power supply	The S5735-S8P2X-IA200H1 has a built-in AC power module and can be directly connected to the AC mains or an external PV system. External lithium batteries can also be connected to the switch for power backup.
Long-term operating temperature [°C(°F)]	-40 °C to +55 °C (-40 °F to 131 °F) NOTE -35 °C to +55 °C (-31 °F to +131 °F): sunshade needed; no requirement on the air velocity; GPON optical modules supported -35 °C to +45 °C (-31 °F to +113 °F): 1120 W/m ² solar radiation (maximum); no requirement on the air velocity -40 °C to -35 °C (-40 °F to -31 °F): Stable port performance can be achieved only when at least four Ethernet electrical ports go Up.
Short-term operating temperature [°C(°F)]	Not supported
Restriction on the operating temperature variation rate [°C(°F)]	When the altitude is 2000-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 200 m (656 ft.).
Storage temperature [°C(°F)]	-40 °C to +85 °C (-40 °F to +185 °F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	-150 m to 5000 m (-492 to 16404 ft.)
Storage altitude [m(ft.)]	-150 m to 5000 m (-492 to 16404 ft.)
Power supply mode	<ul style="list-style-type: none">• AC built-in• Solar power supply• Lithium battery power supply
Rated input voltage [V]	AC input: 100 V AC to 240 V AC, 50/60 Hz PV input: 72 V DC Battery input: 53.5 V DC
Input voltage range [V]	AC input: 85 V AC to 290 V AC, 45 Hz to 65 Hz

Item	Specification
	PV input: 36 V DC to 120 V DC
Maximum input current [A]	AC input: 4.5 A PV input: 28 A
Memory	1 GB
Flash memory	512 MB in total. To view the available flash memory size, run the display version command.
Console port	RJ45
Eth Management port	RJ45
USB	Supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	± 1.5 kV in differential mode, ± 6 kV in common mode
Power supply surge protection [kV]	Surge current: <ul style="list-style-type: none">AC input: 20 kAPV input: ± 3 kA in differential mode; ± 5 kA in common modeBattery input: ± 3 kA in differential mode; ± 5 kA in common mode Surge: <ul style="list-style-type: none">AC input: ± 6 kV in differential mode; ± 6 kV in common modePV input: ± 2 kV in differential mode; ± 4 kV in common modeBattery input: ± 2 kV in differential mode; ± 4 kV in common mode12 V DC output: ± 2 kV in differential mode; ± 4 kV in common mode24 V AC output: ± 2 kV in differential mode; ± 6 kV in common mode
Types of fans	None
Heat dissipation mode	Natural heat dissipation without fans
Airflow direction	-
PoE	Supported
Certification	EMC certification Safety certification Manufacturing certification

NOTE

The protection level of the device is IP55 and can be installed in a class C environment (GR-487).

4.35.4 S5735-S24T4X-I

Version Mapping

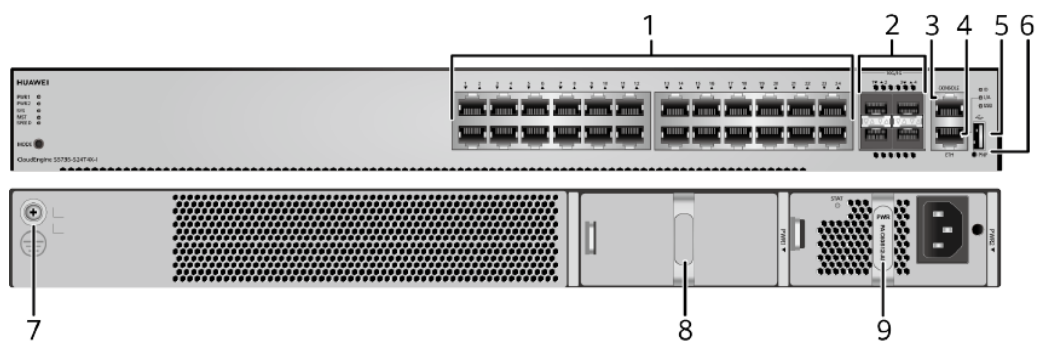
Table 4-1694 lists the mapping between the S5735-S24T4X-I chassis and software versions.

Table 4-1694 Version mapping

Series	Model	Software Version
S5735-S-I	S5735-S24T4X-I	V200R019C10SPC500 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-607 S5735-S24T4X-I appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: • 10.17 Industrial Optical Modules
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.

7	<p>Ground screw</p> <p>NOTE It is used with a 9.1 Ground Cable.</p>	8	<p>Power module slot 1</p> <p>NOTE Applicable power module:</p> <ul style="list-style-type: none"> • 5.11 PAC60S12-AR (60 W AC Power Module) • 5.15 PDC180S12-CR (180 W DC Power Module) (applicable in V200R020C00 and later versions)
9	<p>Power module slot 2</p> <p>NOTE Applicable power module:</p> <ul style="list-style-type: none"> • 5.11 PAC60S12-AR (60 W AC Power Module) • 5.15 PDC180S12-CR (180 W DC Power Module) (applicable in V200R020C00 and later versions) 	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-1695 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-1695 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-1696 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-1696 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port	Depend on the optical module used

Attribute	Description
attributes	
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1697.

Table 4-1697 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1698 describes the attributes of an ETH management port.

Table 4-1698 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

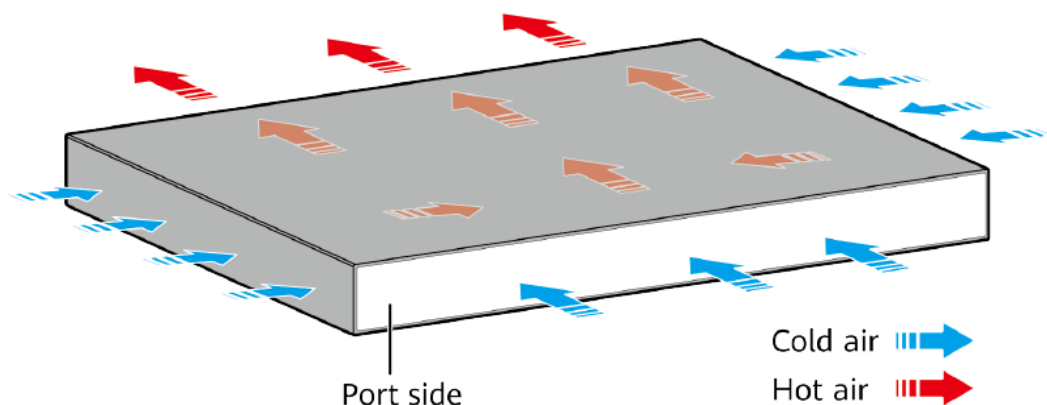
The S5735-S24T4X-I has similar indicators to those on the S5735-S24P4X except that the S5735-S24T4X-I does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5735-S24T4X-I can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

Heat Dissipation

The S5735-S24T4X-I has three built-in fans for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1699 lists technical specifications of the S5735-S24T4X-I.

Table 4-1699 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	62.88 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	<ul style="list-style-type: none">Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common modeUsing DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 444.2 mm (1.72 in. x 17.4 in. x 17.49 in.)
Weight (with packaging)	7.02 kg (15.48 lb)
Stack ports	Any 10/100/1000BASE-T ports or 10GE SFP+ ports (applicable in V200R020C00 and later versions)
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none">AC input: 100 V AC to 240 V AC, 50/60 HzHigh-Voltage DC input: 240 V DCDC input: -48 V DC to -60 V DC
Maximum voltage range	<ul style="list-style-type: none">AC input: 90 V AC to 264 V AC, 47 Hz to 63 HzHigh-Voltage DC input: 190 V DC to 290 V DCDC input: -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	55.2 W
Typical power consumption (30%)	36.8 W

Item	Description
of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	
Operating temperature	-40 °C to +65 °C (-40 °F to +149 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-40 °C to +70 °C (-40 °F to 158 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> • The equipment operates at a temperature of over 65 °C (149 °F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 65 °C (149 °F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 65 °C (149 °F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40 °C to +75 °C (-40 °F to +167 °F)
Noise under normal temperature (27 °C, sound power)	< 49.5 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010960

4.36 S5735S-S

4.36.1 S5735S-S24T4S-A

Version Mapping

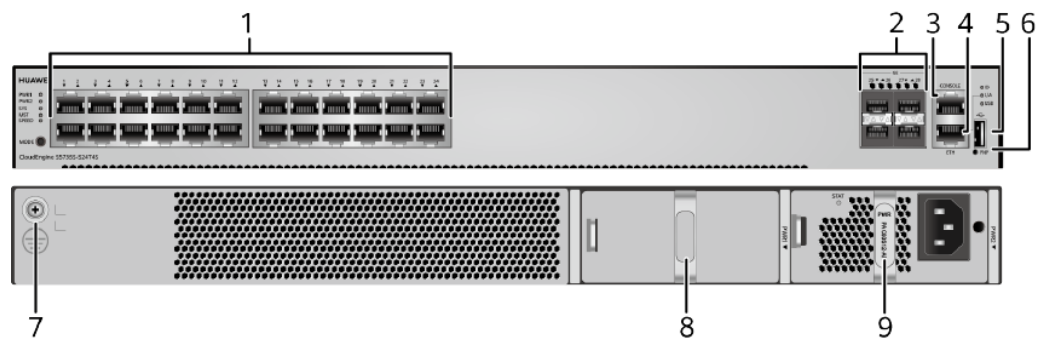
Table 4-1700 lists the mapping between the S5735S-S24T4S-A chassis and software versions.

Table 4-1700 Version mapping

Series	Model	Software Version
S5735S-S	S5735S-S24T4S-A	V200R019C00 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-608 S5735S-S24T4S-A appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
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3	One console port	4	One ETH management port
5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw NOTE It is used with a 9.1 Ground Cable.	8	Power module slot 1 NOTE Applicable power module: <ul style="list-style-type: none"> • 5.11 PAC60S12-AR (60 W AC Power Module) • 5.27 PDC1000S12-DB (1000 W DC Power Module) • 5.15 PDC180S12-CR (180 W DC Power Module) (applicable in V200R020C00 and later versions)
9	Power module slot 2 NOTE Applicable power module: <ul style="list-style-type: none"> • 5.11 PAC60S12-AR (60 W AC Power Module) • 5.27 PDC1000S12-DB (1000 W DC Power Module) • 5.15 PDC180S12-CR (180 W DC Power Module) (applicable in V200R020C00 and later versions) 	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-1701 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-1701 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission	100 m

Attribute	Description
distance	

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a FE optical module, it can transmit and receive data at 100 Mbit/s. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. Table 4-1702 describes the attributes of a 1000BASE-X Ethernet optical port.

Table 4-1702 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1703.

Table 4-1703 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1704 describes the attributes of an ETH management port.

Table 4-1704 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

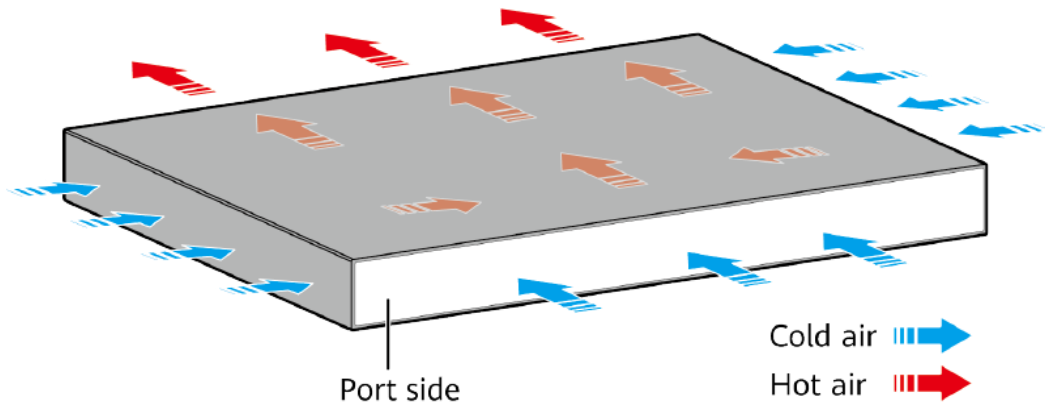
The S5735S-S24T4S-A has similar indicators to those on the S5735-S24P4X except that the S5735S-S24T4S-A does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The switch can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch. However, the power modules with natural heat dissipation and the power modules with fan cannot be used at the same time.

Heat Dissipation

The S5735S-S24T4S-A has two built-in fans for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1705 lists technical specifications of the S5735S-S24T4S-A.

Table 4-1705 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	69.42 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 444.2 mm (1.72 in. x 17.4 in. x 17.49 in.)
Weight (with packaging)	7.89 kg (17.4 lb)
Stack ports	Any 10/100/1000BASE-T ports or 1000BASE-X ports (applicable in V200R019C10 and later versions)

Item	Description
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none">AC input: 100 V AC to 240 V AC, 50/60 HzHigh-Voltage DC input: 240 V DCDC input: -48 V DC to -60 V DC
Maximum voltage range	<ul style="list-style-type: none">AC input: 90 V AC to 264 V AC, 47 Hz to 63 HzHigh-Voltage DC input: 190 V DC to 290 V DCDC input: -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	44 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">Tested according to ATIS standardEEE enabledNo PoE power consumption	29 W
Operating temperature	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0 °C (32 °F).
Short-term operating temperature	-5 °C to +55 °C (23 °F to 131 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year.The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year.The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year.

Item	Description
	The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 58.9 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010939

4.36.2 S5735S-S32ST4X-A

Version Mapping

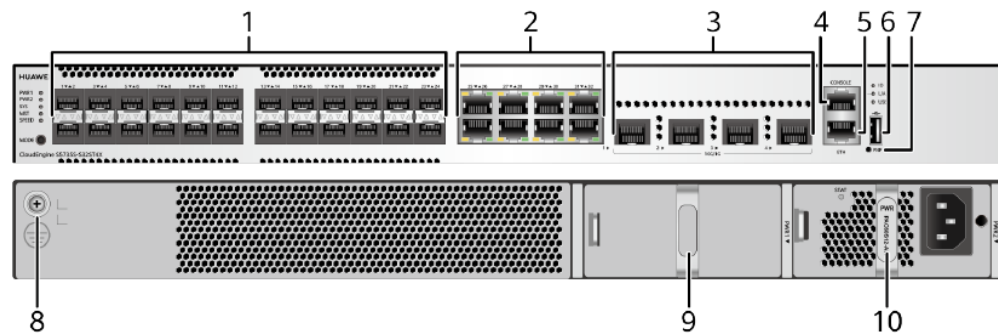
Table 4-1706 lists the mapping between the S5735S-S32ST4X-A chassis and software versions.

Table 4-1706 Version mapping

Series	Model	Software Version
S5735S-S	S5735S-S32ST4X-A	V200R019C00 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-609 S5735S-S32ST4X-A appearance



1	Twenty-four 100/1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules (maximum transmission distance \leq 40 km) • 10.10 GE SFP Copper Modules 	2	Eight 10/100/1000BASE-T ports
3	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable 	4	One console port
5	One ETH management port	6	One USB port
7	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button.	8	Ground screw NOTE It is used with a 9.1 Ground Cable.

	Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.		
9	<p>Power module slot 1</p> <p>NOTE Applicable power module:</p> <ul style="list-style-type: none"> • 5.11 PAC60S12-AR (60 W AC Power Module) • 5.27 PDC1000S12-DB (1000 W DC Power Module) • 5.15 PDC180S12-CR (180 W DC Power Module) (applicable in V200R020C00 and later versions) 	10	<p>Power module slot 2</p> <p>NOTE Applicable power module:</p> <ul style="list-style-type: none"> • 5.11 PAC60S12-AR (60 W AC Power Module) • 5.27 PDC1000S12-DB (1000 W DC Power Module) • 5.15 PDC180S12-CR (180 W DC Power Module) (applicable in V200R020C00 and later versions)

Port Description

100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. Table 4-1707 describes the attributes of a 100/1000BASE-X port.

Table 4-1707 Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-1708 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-1708 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission	100 m

Attribute	Description
distance	

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-1709 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-1709 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1710.

Table 4-1710 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1711 describes the attributes of an ETH management port.

Table 4-1711 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

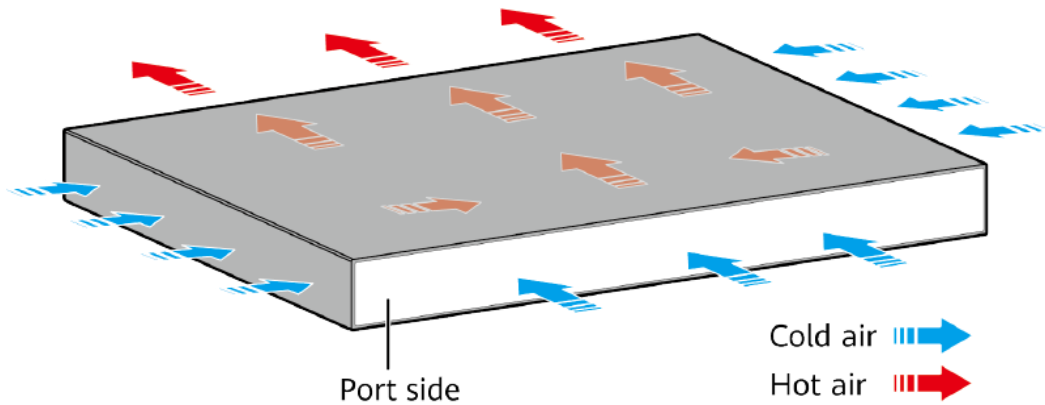
The S5735S-S32ST4X-A has similar indicators to those on the S5735-S24P4X except that the S5735S-S32ST4X-A does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The switch can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch. However, the power modules with natural heat dissipation and the power modules with fan cannot be used at the same time.

Heat Dissipation

The S5735S-S32ST4X-A has two built-in fans for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1712 lists technical specifications of the S5735S-S32ST4X-A.

Table 4-1712 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	68.59 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 444.2 mm (1.72 in. x 17.4 in. x 17.49 in.)
Weight (with packaging)	8.15 kg (17.97 lb)
Stack ports	Any 10/100/1000BASE-T ports, 100/1000BASE-X ports, or 10GE SFP+ ports (applicable in V200R019C10 and later versions)

Item	Description
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none">AC input: 100 V AC to 240 V AC, 50/60 HzHigh-Voltage DC input: 240 V DCDC input: -48 V DC to -60 V DC
Maximum voltage range	<ul style="list-style-type: none">AC input: 90 V AC to 264 V AC, 47 Hz to 63 HzHigh-Voltage DC input: 190 V DC to 290 V DCDC input: -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	66 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">Tested according to ATIS standardEEE enabledNo PoE power consumption	47 W
Operating temperature	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0 °C (32 °F).
Short-term operating temperature	-5 °C to +55 °C (23 °F to 131 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year.The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year.The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year.

Item	Description
	The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 59.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010932

4.36.3 S5735S-S48T4S-A

Version Mapping

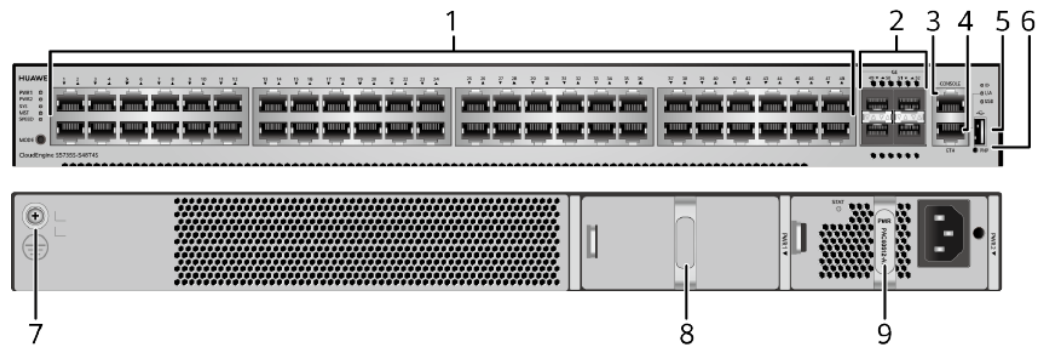
Table 4-1713 lists the mapping between the S5735S-S48T4S-A chassis and software versions.

Table 4-1713 Version mapping

Series	Model	Software Version
S5735S-S	S5735S-S48T4S-A	V200R019C00 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-610 S5735S-S48T4S-A appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw NOTE It is used with a 9.1 Ground Cable.	8	Power module slot 1 NOTE Applicable power module: <ul style="list-style-type: none"> • 5.11 PAC60S12-AR (60 W AC Power Module) • 5.27 PDC1000S12-DB (1000 W DC Power Module) • 5.15 PDC180S12-CR (180 W DC

			Power Module) (applicable in V200R020C00 and later versions)
9	Power module slot 2 NOTE Applicable power module: <ul style="list-style-type: none">• 5.11 PAC60S12-AR (60 W AC Power Module)• 5.27 PDC1000S12-DB (1000 W DC Power Module)• 5.15 PDC180S12-CR (180 W DC Power Module) (applicable in V200R020C00 and later versions)	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-1714 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-1714 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a FE optical module, it can transmit and receive data at 100 Mbit/s. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. Table 4-1715 describes the attributes of a 1000BASE-X Ethernet optical port.

Table 4-1715 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used

Attribute	Description
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1716.

Table 4-1716 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1717 describes the attributes of an ETH management port.

Table 4-1717 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch

for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

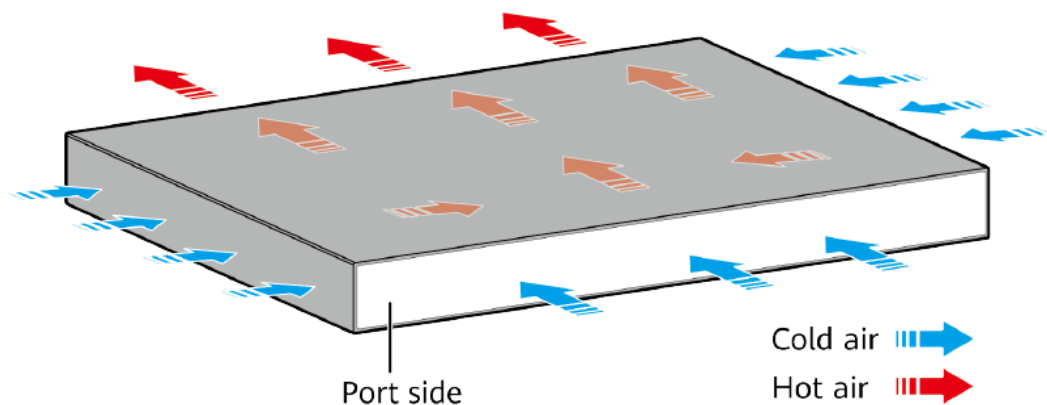
The S5735S-S48T4S-A has similar indicators to those on the S5735-S24P4X except that the S5735S-S48T4S-A does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The switch can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch. However, the power modules with natural heat dissipation and the power modules with fan cannot be used at the same time.

Heat Dissipation

The S5735S-S48T4S-A has two built-in fans for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1718 lists technical specifications of the S5735S-S48T4S-A.

Table 4-1718 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	74.7 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	<ul style="list-style-type: none">Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common modeUsing DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 444.2 mm (1.72 in. x 17.4 in. x 17.49 in.)
Weight (with packaging)	8.37 kg (18.45 lb)
Stack ports	Any 10/100/1000BASE-T ports or 1000BASE-X ports (applicable in V200R019C10 and later versions)
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none">AC input: 100 V AC to 240 V AC, 50/60 HzHigh-Voltage DC input: 240 V DCDC input: -48 V DC to -60 V DC
Maximum voltage range	<ul style="list-style-type: none">AC input: 90 V AC to 264 V AC, 47 Hz to 63 HzHigh-Voltage DC input: 190 V DC to 290 V DCDC input: -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	58 W
Typical power consumption (30%)	41 W

Item	Description
of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	
Operating temperature	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0 °C (32 °F).
Short-term operating temperature	-5 °C to +55 °C (23 °F to 131 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">• The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 58.9 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010942

4.36.4 S5735S-S24T4X-A

Version Mapping

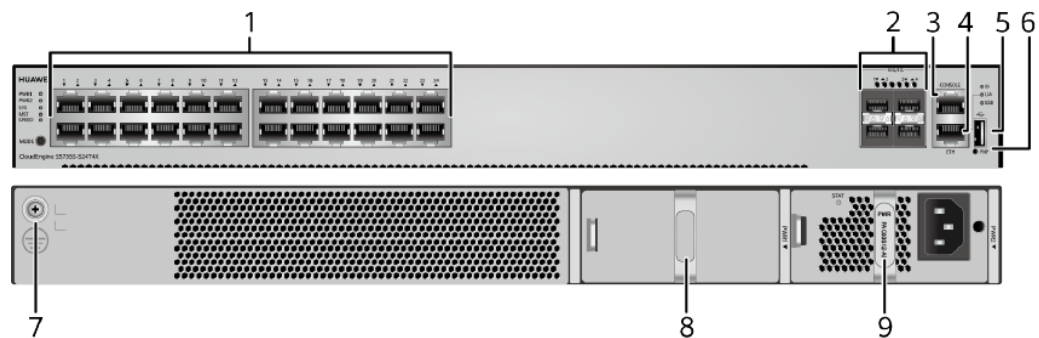
Table 4-1719 lists the mapping between the S5735S-S24T4X-A chassis and software versions.

Table 4-1719 Version mapping

Series	Model	Software Version
S5735-S	S5735S-S24T4X-A	V200R019C10SPC500 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-611 S5735S-S24T4X-A appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable
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			<ul style="list-style-type: none"> 9.3 Optical Fiber 9.14 Dedicated Stack Cable
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw NOTE It is used with a 9.1 Ground Cable.	8	Power module slot 1 NOTE Applicable power module: <ul style="list-style-type: none"> 5.11 PAC60S12-AR (60 W AC Power Module) 5.27 PDC1000S12-DB (1000 W DC Power Module) 5.15 PDC180S12-CR (180 W DC Power Module) (applicable in V200R020C00 and later versions)
9	Power module slot 2 NOTE Applicable power module: <ul style="list-style-type: none"> 5.11 PAC60S12-AR (60 W AC Power Module) 5.27 PDC1000S12-DB (1000 W DC Power Module) 5.15 PDC180S12-CR (180 W DC Power Module) (applicable in V200R020C00 and later versions) 	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-1720 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-1720 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing

Attribute	Description
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-1721 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-1721 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1722.

Table 4-1722 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management

port is faster than transfer through the console port. Table 4-1723 describes the attributes of an ETH management port.

Table 4-1723 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

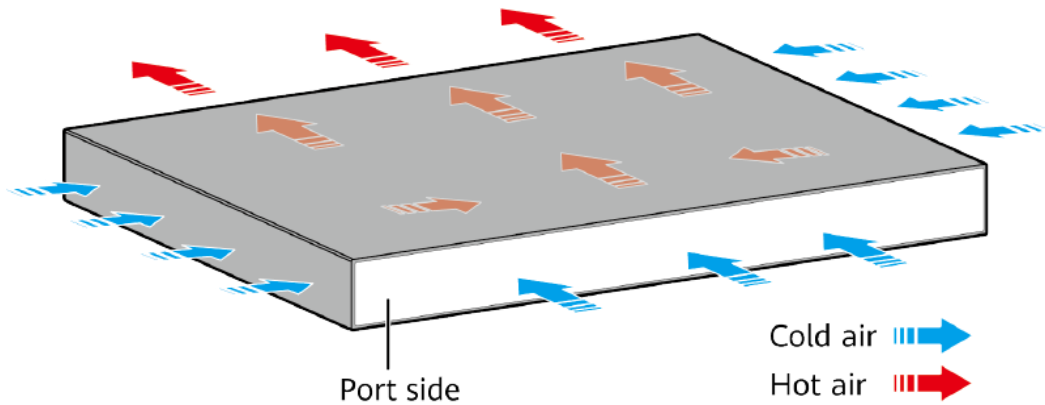
The S5735S-S24T4X-A has similar indicators to those on the S5735-S24P4X except that the S5735S-S24T4X-A does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The switch can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch. However, the power modules with natural heat dissipation and the power modules with fan cannot be used at the same time.

Heat Dissipation

The S5735S-S24T4X-A has two built-in fans for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1724 lists technical specifications of the S5735S-S24T4X-A.

Table 4-1724 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	69.42 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 444.2 mm (1.72 in. x 17.4 in. x 17.49 in.)
Weight (with packaging)	7.89 kg (17.4 lb)
Stack ports	Any 10/100/1000BASE-T ports or 10GE SFP+ ports (applicable in V200R019C10 and later versions)

Item	Description
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none">AC input: 100 V AC to 240 V AC, 50/60 HzHigh-Voltage DC input: 240 V DCDC input: -48 V DC to -60 V DC
Maximum voltage range	<ul style="list-style-type: none">AC input: 90 V AC to 264 V AC, 47 Hz to 63 HzHigh-Voltage DC input: 190 V DC to 290 V DCDC input: -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	46 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">Tested according to ATIS standardEEE enabledNo PoE power consumption	31 W
Operating temperature	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0 °C (32 °F).
Short-term operating temperature	-5 °C to +55 °C (23 °F to 131 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year.The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year.The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year.

Item	Description
	The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 58.9 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010967

4.36.5 S5735S-S24P4X-A

Version Mapping

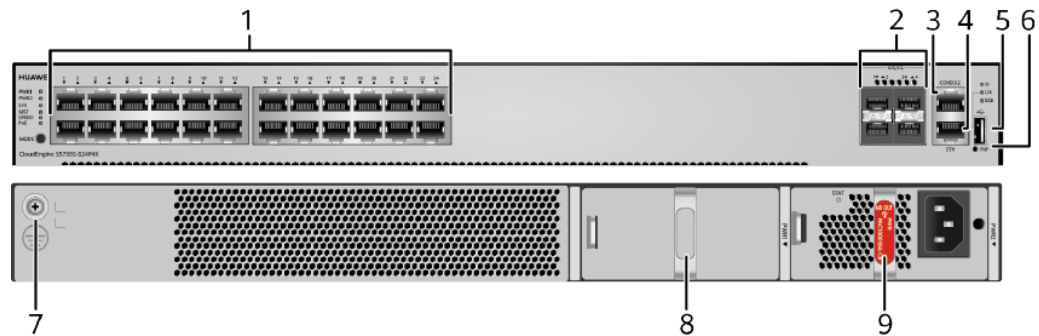
Table 4-1725 lists the mapping between the S5735S-S24P4X-A chassis and software versions.

Table 4-1725 Version mapping

Series	Model	Software Version
S5735S-S	S5735S-S24P4X-A	V200R019C10SPC500 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-612 S5735S-S24P4X-A appearance



1	Twenty-four PoE+ 10/100/1000BASE-T ports	2 Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	One console port	4 One ETH management port
5	One USB port	6 One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw NOTE It is used with a 9.1 Ground Cable.	8 Power module slot 1 NOTE Applicable power module: <ul style="list-style-type: none"> • 5.24 PAC1000S56-CB (1000 W PoE AC Power Module)

			<ul style="list-style-type: none"> • 5.25 PAC1000S56-DB (1000 W PoE AC Power Module) (applicable in V200R020C10 and later versions) • 5.26 PDC1000S56-CB (1000 W PoE DC Power Module) (applicable in V200R021C00 and later versions) • 5.23 PAC600S56-CB (600 W AC&240 V DC Power Module (Back to Front, Power panel side exhaust)) (applicable in V200R021C10 and later versions)
9	<p>Power module slot 2</p> <p>NOTE</p> <p>Applicable power module:</p> <ul style="list-style-type: none"> • 5.24 PAC1000S56-CB (1000 W PoE AC Power Module) • 5.25 PAC1000S56-DB (1000 W PoE AC Power Module) (applicable in V200R020C10 and later versions) • 5.26 PDC1000S56-CB (1000 W PoE DC Power Module) (applicable in V200R021C00 and later versions) • 5.23 PAC600S56-CB (600 W AC&240 V DC Power Module (Back to Front, Power panel side exhaust)) (applicable in V200R021C10 and later versions) 	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-1726 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-1726 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-1727 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-1727 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1728.

Table 4-1728 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1729 describes the attributes of an ETH management port.

Table 4-1729 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum	100 m

Attribute	Description
transmission distance	

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5735S-S24P4X-A has the same types of indicators as the S5735-S24P4X. For details, see [Indicator Description](#).

Power Supply Configuration

The switch is a PoE switch and supports two power module slots, each of which can have a 1000 W PoE or 600 W PoE power module installed. Pluggable AC and DC PoE power modules can be used together in the same switch.

Table 4-1730 Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W AC (220 V) 1000 W DC	–	874 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 24
1000 W AC (110 V)	–	779 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 24
1000 W AC (220 V) 1000 W DC	1000 W AC (220 V) 1000 W DC	1600 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port):

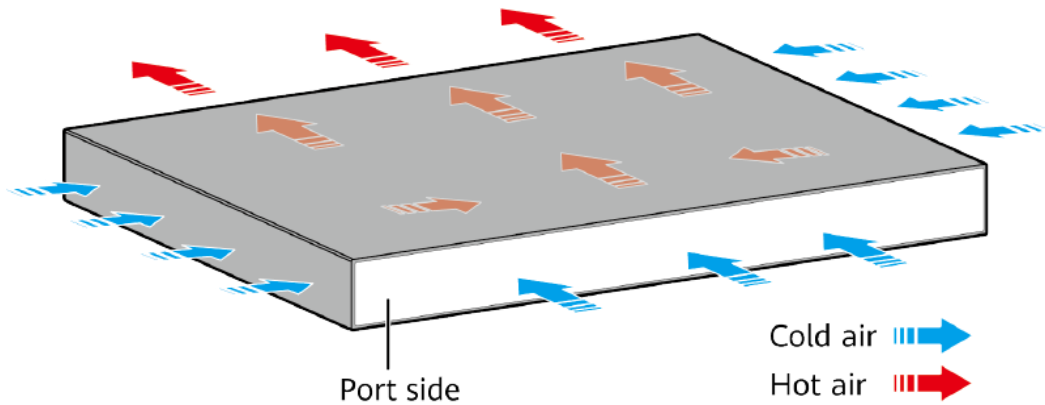
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
			24
1000 W AC (110 V) 1000 W DC	1000 W AC (110 V)	1600 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 24
600 W AC (220 V)	–	494 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 16
600 W AC (110 V)	–	209 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 13 802.3at (30 W per port): 6
600 W AC (220 V)	600 W AC (220 V)	1064 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 24
600 W AC (110 V)	600 W AC (110 V)	494 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 16
1000 W AC (220 V) 1000 W DC	600 W AC (220 V)	1444 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 24

NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

Heat Dissipation

The S5735S-S24P4X-A has two built-in fans for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1731 lists technical specifications of the S5735S-S24P4X-A.

Table 4-1731 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	59.88 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 444.2 mm (1.72 in. x 17.4 in. x 17.49 in.)
Weight (with packaging)	8.49 kg (18.72 lb)
Stack ports	Any 10/100/1000BASE-T ports or 10GE SFP+ ports (applicable in V200R019C10 and later versions)

Item	Description
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	<ul style="list-style-type: none"> AC input: 100 V AC to 130 V AC, 200 V AC to 240 V AC, 50/60 Hz High-Voltage DC input: 240 V DC DC input: -48 V DC to -60 V DC
Maximum voltage range	<ul style="list-style-type: none"> AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz High-Voltage DC input: 190 V DC to 290 V DC DC input: -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> Not providing the PoE function: 65 W 100% PoE loads: 847 W (PoE: 720 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> Tested according to ATIS standard EEE enabled No PoE power consumption 	51 W
Operating temperature	<p>-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>The switch cannot be started when the ambient temperature is lower than 0 °C (32 °F).</p>
Short-term operating temperature	<p>-5 °C to +55 °C (23 °F to 131 °F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year. The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year. The equipment operates at a temperature of over 45 °C (113 °F) for no

Item	Description
	more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 58.9 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010969

4.36.6 S5735S-S48T4X-A

Version Mapping

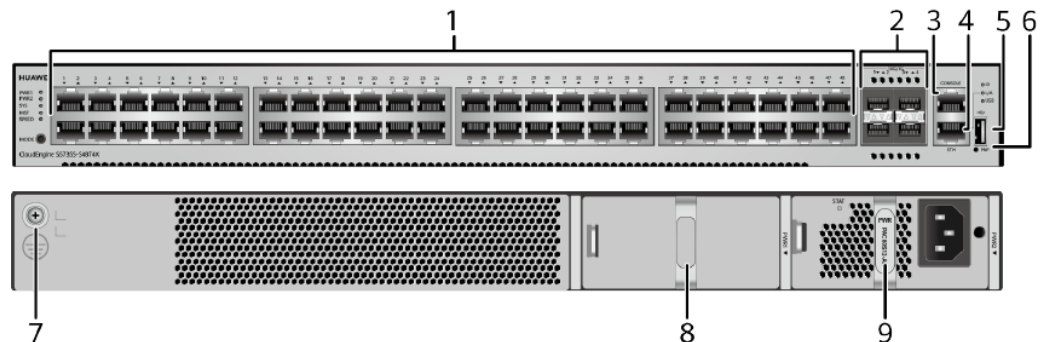
Table 4-1732 lists the mapping between the S5735S-S48T4X-A chassis and software versions.

Table 4-1732 Version mapping

Series	Model	Software Version
S5735S-S	S5735S-S48T4X-A	V200R019C10SPC500 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-613 S5735S-S48T4X-A appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw NOTE It is used with a 9.1 Ground Cable.	8	Power module slot 1 NOTE Applicable power module: <ul style="list-style-type: none"> • 5.11 PAC60S12-AR (60 W AC Power Module)

			<ul style="list-style-type: none"> • 5.27 PDC1000S12-DB (1000 W DC Power Module) • 5.15 PDC180S12-CR (180 W DC Power Module) (applicable in V200R020C00 and later versions)
9	<p>Power module slot 2</p> <p>NOTE</p> <p>Applicable power module:</p> <ul style="list-style-type: none"> • 5.11 PAC60S12-AR (60 W AC Power Module) • 5.27 PDC1000S12-DB (1000 W DC Power Module) • 5.15 PDC180S12-CR (180 W DC Power Module) (applicable in V200R020C00 and later versions) 	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-1733 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-1733 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-1734 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-1734 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used

Attribute	Description
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1735.

Table 4-1735 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1736 describes the attributes of an ETH management port.

Table 4-1736 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

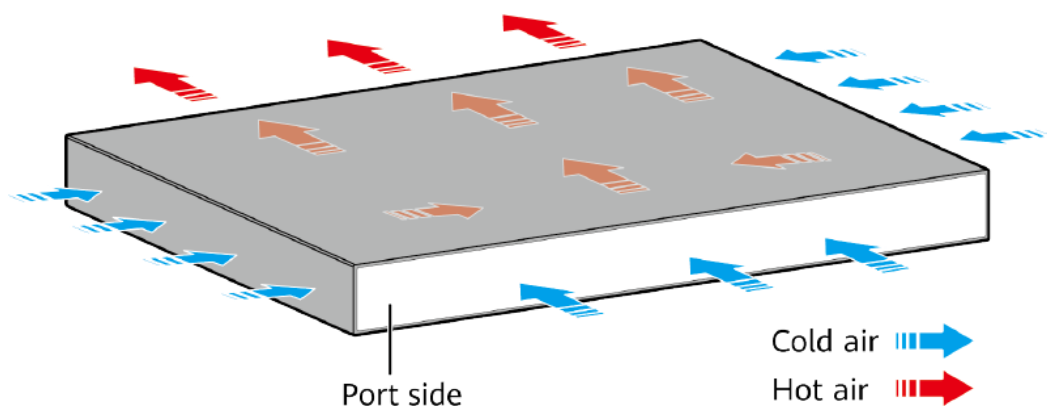
The S5735S-S48T4X-A has similar indicators to those on the S5735-S24P4X except that the S5735S-S48T4X-A does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The switch can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch. However, the power modules with natural heat dissipation and the power modules with fan cannot be used at the same time.

Heat Dissipation

The S5735S-S48T4X-A has two built-in fans for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1737 lists technical specifications of the S5735S-S48T4X-A.

Table 4-1737 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	74.7 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	<ul style="list-style-type: none">Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common modeUsing DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 444.2 mm (1.72 in. x 17.4 in. x 17.49 in.)
Weight (with packaging)	8.37 kg (18.45 lb)
Stack ports	Any 10/100/1000BASE-T ports or 10GE SFP+ ports (applicable in V200R019C10 and later versions)
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none">AC input: 100 V AC to 240 V AC, 50/60 HzHigh-Voltage DC input: 240 V DCDC input: -48 V DC to -60 V DC
Maximum voltage range	<ul style="list-style-type: none">AC input: 90 V AC to 264 V AC, 47 Hz to 63 HzHigh-Voltage DC input: 190 V DC to 290 V DCDC input: -38.4 V DC to -72 V DC
Maximum power consumption	59 W

Item	Description
(100% throughput, full speed of fans)	
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	40 W
Operating temperature	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) <p>NOTE</p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0 °C (32 °F).
Short-term operating temperature	-5 °C to +55 °C (23 °F to 131 °F) at an altitude of 0-1800 m (0-5906 ft.) <p>NOTE</p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Noise under normal temperature (27 °C, sound power)	< 58.9 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification

Item	Description
	<ul style="list-style-type: none"> Safety certification Manufacturing certification
Part number	98010968

4.36.7 S5735S-S48P4X-A

Version Mapping

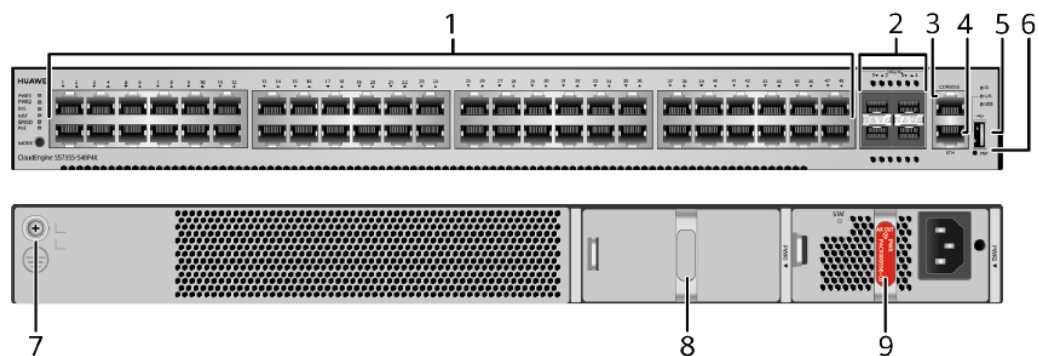
Table 4-1738 lists the mapping between the S5735S-S48P4X-A chassis and software versions.

Table 4-1738 Version mapping

Series	Model	Software Version
S5735S-S	S5735S-S48P4X-A	V200R019C10SPC500 and later versions NOTE V200R021C01 is not supported.

Appearance and Structure

Figure 4-614 S5735S-S48P4X-A appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> 10.5 GE eSFP Optical Modules 10.7 GE-CWDM eSFP Optical Modules 10.9 GE-DWDM eSFP Optical Modules 10.10 GE SFP Copper Modules 10.12 10GE SFP+ Optical Modules
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			<ul style="list-style-type: none"> • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
3	One console port	4	One ETH management port
5	One USB port	6	<p>One PNP button</p> <p>NOTICE</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
7	<p>Ground screw</p> <p>NOTE</p> <p>It is used with a 9.1 Ground Cable.</p>	8	<p>Power module slot 1</p> <p>NOTE</p> <p>Applicable power module:</p> <ul style="list-style-type: none"> • 5.24 PAC1000S56-CB (1000 W PoE AC Power Module) • 5.25 PAC1000S56-DB (1000 W PoE AC Power Module) (applicable in V200R020C10 and later versions) • 5.26 PDC1000S56-CB (1000 W PoE DC Power Module) (applicable in V200R021C00 and later versions) • 5.23 PAC600S56-CB (600 W AC&240 V DC Power Module (Back to Front, Power panel side exhaust)) (applicable in V200R021C10 and later versions)
9	<p>Power module slot 2</p> <p>NOTE</p> <p>Applicable power module:</p> <ul style="list-style-type: none"> • 5.24 PAC1000S56-CB (1000 W PoE AC Power Module) • 5.25 PAC1000S56-DB (1000 W PoE AC Power Module) (applicable in V200R020C10 and later versions) • 5.26 PDC1000S56-CB (1000 W PoE DC Power Module) (applicable in V200R021C00 and later versions) • 5.23 PAC600S56-CB (600 W AC&240 V DC Power Module (Back to Front, Power panel side exhaust)) (applicable in V200R021C10 and later versions) 	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an 9.4 Ethernet Cable. Table 4-1739 describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-1739 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. Table 4-1740 describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 4-1740 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a 9.13 Console Cable. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see Table 4-1741.

Table 4-1741 Attributes of a console port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an 9.4 Ethernet Cable. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. Table 4-1742 describes the attributes of an ETH management port.

Table 4-1742 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5735S-S48P4X-A has the same types of indicators as the S5735-S24P4X. For details, see [Indicator Description](#).

Power Supply Configuration

The switch is a PoE switch and supports two power module slots, each of which can have a 1000 W PoE or 600 W PoE power module installed. Pluggable AC and DC PoE power modules can be used together in the same switch.

Table 4-1743 Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W AC (220 V) 1000 W DC	–	874 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 29
1000 W AC (110 V)	–	779 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 25
1000 W AC (220 V) 1000 W DC	1000 W AC (220 V) 1000 W DC	1600 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 48
1000 W AC (110 V) 1000 W DC	1000 W AC (110 V)	1600 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 48
600 W AC (220 V)	–	494 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 32 802.3at (30 W per port): 16
600 W AC (110 V)	–	209 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 13 802.3at (30 W per port): 6
600 W AC (220 V)	600 W AC (220 V)	1064 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 35
600 W AC (110 V)	600 W AC (110 V)	494 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 32 802.3at (30 W per port): 16

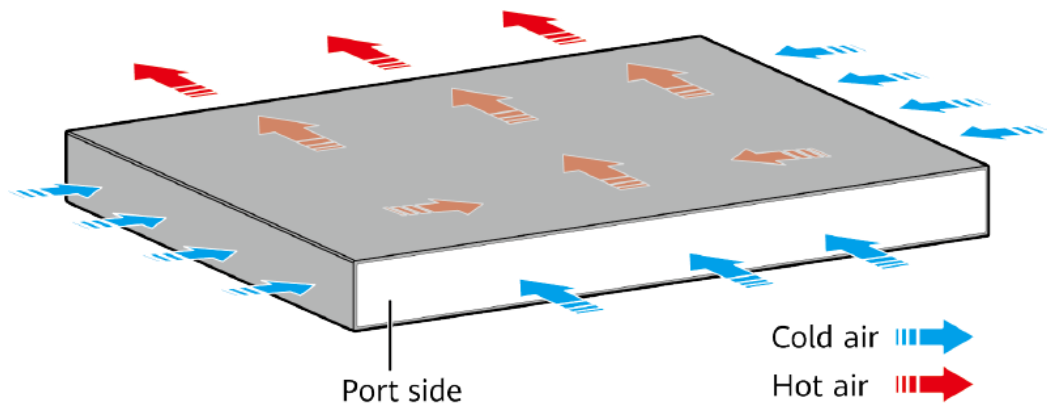
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W AC (220 V) 1000 W DC	600 W AC (220 V)	1444 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 48

NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

Heat Dissipation

The S5735S-S48P4X-A has two built-in fans for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1744 lists technical specifications of the S5735S-S48P4X-A.

Table 4-1744 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	54.88 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999

Item	Description
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	<ul style="list-style-type: none">Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common modeUsing DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 444.2 mm (1.72 in. x 17.4 in. x 17.49 in.)
Weight (with packaging)	8.74 kg (19.27 lb)
Stack ports	Any 10/100/1000BASE-T ports or 10GE SFP+ ports (applicable in V200R019C10 and later versions)
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	<ul style="list-style-type: none">AC input: 100 V AC to 130 V AC, 200 V AC to 240 V AC, 50/60 HzHigh-Voltage DC input: 240 V DCDC input: -48 V DC to -60 V DC
Maximum voltage range	<ul style="list-style-type: none">AC input: 90 V AC to 290 V AC, 45 Hz to 65 HzHigh-Voltage DC input: 190 V DC to 290 V DCDC input: -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none">Not providing the PoE function: 77 W100% PoE loads: 1661 W (PoE: 1440 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">Tested according to ATIS standardEEE enabledNo PoE power consumption	59 W
Operating temperature	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.) NOTE

Item	Description
	<p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>The switch cannot be started when the ambient temperature is lower than 0 °C (32 °F).</p>
<p>Short-term operating temperature</p>	<p>-5 °C to +55 °C (23 °F to 131 °F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
<p>Storage temperature</p>	<p>-40 °C to +70 °C (-40 °F to +158 °F)</p>
<p>Noise under normal temperature (27 °C, sound power)</p>	<p>< 58.9 dB(A)</p>
<p>Relative humidity</p>	<p>5% to 95%, noncondensing</p>
<p>Operating altitude</p>	<p>0-5000 m (0-16404 ft.)</p>
<p>Certification</p>	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
<p>Part number</p>	<p>98010970</p>

4.37 S5735S-H

4.37.1 S5735S-H24S4XC-A

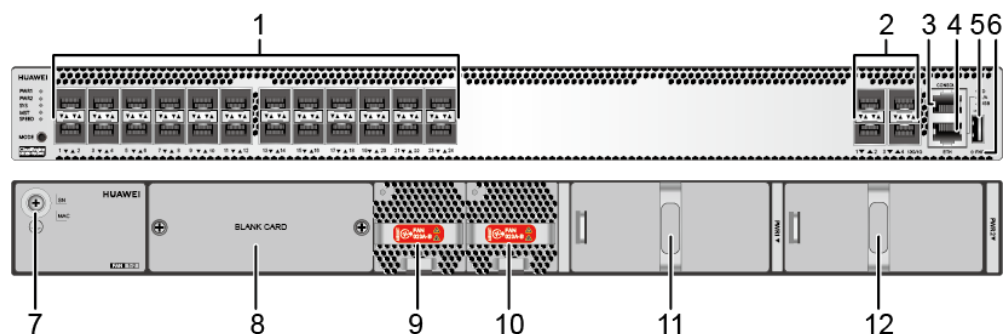
Overview

Table 4-1745 Basic information about the S5735S-H24S4XC-A

Item	Details
Description	S5735S-H24S4XC bundle (24*GE SFP ports, 4*10GE SFP+ ports, 1*expansion slot, 1*AC power module)
Part Number	98011041
Model	S5735S-H24S4XC-A
First supported version	V200R021C01
Remarks	Some models cannot be downgraded due to component upgrade. Therefore, you are advised to run the display system-software information command to check the software versions supported by the device before performing a downgrade. If the device does not support the display system-software information command, it can be downgraded.

Components

Figure 4-615 S5735S-H24S4XC-A appearance



1	Twenty-four 100/1000BASE-X ports	2	Four 10GE SFP+ optical ports
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button

			<p>NOTICE</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
7	<p>Ground screw</p> <p>NOTE It is used with a 9.1 Ground Cable.</p>	8	<p>Rear card slot</p> <p>NOTE Applicable card:</p> <ul style="list-style-type: none"> • 8.24 S7X08000 (8-Port 10GE SFP+ or 2-Port 25GE SFP28 Optical Interface Card (Only Ports 1 and 2 Support 25GE)) (applicable in V200R020C10 and later versions) • 8.15 ES5D21Q02Q00 (2-Port 40 Gig QSFP+ Rear Interface Card) • 8.17 ES5D21Q04Q01 (4-Port 40 Gig QSFP+ Rear Interface Card) • 8.26 S7Q02001 (2-port 40GE QSFP+ interface card) (applicable in V200R021C01 and later versions)
9	<p>Fan module slot 1</p> <p>NOTE Applicable fan module: 7.5 FAN-023A-B (Fan box(B,FAN panel side exhaust))</p>	10	<p>Fan module slot 2</p> <p>NOTE Applicable fan module: 7.5 FAN-023A-B (Fan box(B,FAN panel side exhaust))</p>
11	<p>Power module slot 1</p> <p>NOTE Applicable power module:</p> <ul style="list-style-type: none"> • 5.20 PAC600S12-CB (600 W AC Power Module) • 5.22 PAC600S12-EB (600 W AC Power Module) • 5.21 PAC600S12-DB (600 W AC Power Module) • 5.27 PDC1000S12-DB (1000 W DC Power Module) • 5.12 PAC150S12-R (150 W AC Power Module) • 5.15 PDC180S12-CR (180 W DC Power Module) 	12	<p>Power module slot 2</p> <p>NOTE Applicable power module:</p> <ul style="list-style-type: none"> • 5.20 PAC600S12-CB (600 W AC Power Module) • 5.22 PAC600S12-EB (600 W AC Power Module) • 5.21 PAC600S12-DB (600 W AC Power Module) • 5.27 PDC1000S12-DB (1000 W DC Power Module) • 5.12 PAC150S12-R (150 W AC Power Module) • 5.15 PDC180S12-CR (180 W DC Power Module)

Ports

Table 4-1746 Ports on the S5735S-H24S4XC-A

Port	Connector Type	Description	Available Components
100/1000BASE-X	SFP	A 100/1000BASE-X	• 10.4 FE

Port	Connector Type	Description	Available Components
port		port can send and receive data at 100 Mbit/s or 1000 Mbit/s.	<p>SFP/eSFP Optical Modules</p> <ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.10 GE SFP Copper Modules
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
Console port	RJ45	The console port is connected to a console for on-site configuration.	9.13 Console Cable
ETH management port	RJ45	You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely.	9.4 Ethernet Cable

Port	Connector Type	Description	Available Components
		You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port.	
USB port	USB 2.0 Type A	The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0. USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.	USB flash drive

Indicators and Buttons

The S5735S-H24S4XC-A has the same types of indicators as the S5736-S24S4XC. For details, see the S5736-S24S4XC.

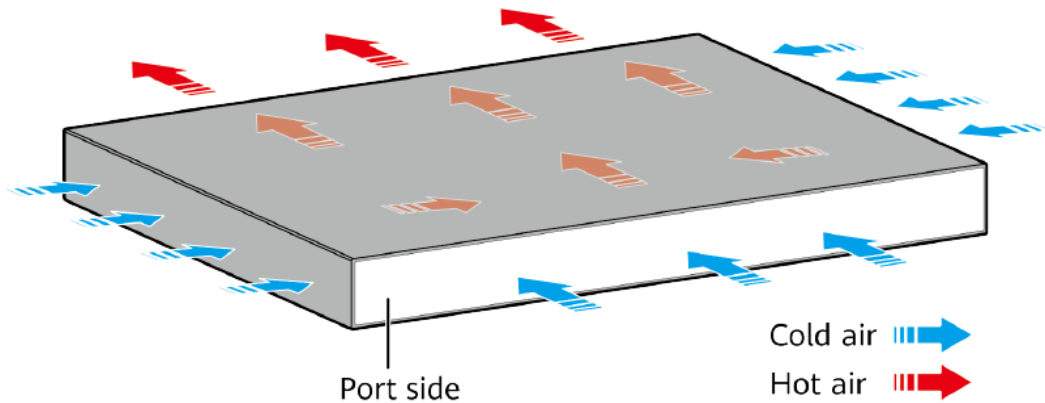
Power Supply System

The switch can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

However, the power modules with natural heat dissipation and the power modules with fan cannot be used at the same time.

Heat Dissipation System

The switch uses pluggable fan modules for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1747 Technical specifications of the S5735S-H24S4XC-A

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.40 in. x 16.54 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 444.0 mm (1.72 in. x 17.40 in. x 17.48 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	150mm × 710mm × 560mm (5.90 in. x 27.95 in. x 22.05 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	6 kg (13.23 lb)
Weight with packaging [kg(lb)]	9 kg (19.84 lb)
Typical power consumption [W]	63 W
Typical heat dissipation [BTU/hour]	214.96 BTU/hour
Maximum power consumption [W]	74 W
Maximum heat dissipation [BTU/hour]	252.5 BTU/hour

Item	Specification
MTBF [year]	65.79 year
MTTR [hour]	2 hour
Availability	>0.99999
Noise at normal temperature (acoustic power) [dB(A)]	49.9 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	37.8 dB(A)
Number of card slots	1
Number of power slots	2
Number of fans modules	2
Redundant power supply	1+1 Pluggable AC and DC power modules can be used together in the same switch, but power modules that use natural heat dissipation and power modules that use air cooling cannot be used together.
Long-term operating temperature [°C(°F)]	-5 °C to +45 °C (23 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.)
Short-term operating temperature [°C(°F)]	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800–5000 m (5906–16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>The device can work for a short period of time when the operating temperature is beyond the normal range, but the following conditions must be met:</p> <ul style="list-style-type: none">• The operating temperature can exceed 45 °C (113 °F) for a maximum of 96 consecutive hours in a year.• The total time when the operating temperature exceeds 45 °C (113 °F) in a year is less than or equal to 360 hours.• The number of times the operating temperature exceeds 45 °C (113 °F) is less than or equal to 15 in one year. <p>If any of the preceding conditions is not met, the device may be damaged or an unknown error may occur.</p> <p>Devices cannot start when the temperature is lower than 0 °C (32 °F). The maximum</p>

Item	Specification
	transmission distance of an optical module used for short-term operation cannot exceed 10 km.
Storage temperature [°C(°F)]	-40 °C to +70 °C (-40 °F to +158 °F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	Pluggable power supply
Rated input voltage [V]	<ul style="list-style-type: none">AC input: 100 V AC to 240 V AC, 50/60 HzDC input: -48 V DC to -60 V DC
Input voltage range [V]	<ul style="list-style-type: none">AC input: 90 V AC to 290 V AC; 45 Hz to 65 HzHigh-voltage DC input: 190 V DC to 290 V DCDC input: -38.4 V DC to -72 V DC
Maximum input current [A]	The current specifications depend on the pluggable power modules in use. For details, see the related power module specifications.
Memory	2 GB
Flash memory	1 GB in total. To view the available flash memory size, run the display version command.
Console port	RJ45
Eth Management port	RJ45
USB	Supported
RTC	Supported
RPS input	Not supported
Service port surge protection [kV]	-
Power supply surge protection [kV]	<ul style="list-style-type: none">Configured with AC power modules: ± 6 kV in differential mode and ± 6 kV in common modeConfigured with DC power modules: ± 2 kV in differential mode and ± 4 kV in common mode
Types of fans	Pluggable
Heat dissipation mode	Heat dissipation with fan, intelligent fan

Item	Specification
	speed adjustment
Airflow direction	Air intake from left, front and right, air exhaustion from behind
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

4.38 S5736-S

4.38.1 S5736-S24UM4XC

Overview

Table 4-1748 Basic information about the S5736-S24UM4XC

Item	Details
Description	S5736-S24UM4XC base (24*100M/1G Ethernet ports, optional RTU upgrade to 2.5/5/10G, 4*10GE SFP+ ports, 1*expansion slot, PoE++, without power module)
Part Number	98011020
Model	S5736-S24UM4XC
First supported version	V200R020C00
Other part numbers	98011020-001: S5736-S24UM4XC 2.5&10G bundle (12*100M/1G/2.5G Ethernet ports, 12*100M/1G/2.5G/5G/10G Ethernet ports, optional RTU upgrade to 5/10G, 4*10GE SFP+ ports, 1*expansion slot, PoE++, 1*1000W AC power) 98011020-004: S5736-S24UM4XC 10G bundle (24*100M/1G/2.5G/5G/10G Ethernet ports, 4*10GE SFP+ ports, 1*expansion slot, PoE++, 1*1000W AC power)

There are several S5736-S24UM4XC bundles, which consist of different power supplies and ports, as listed in Table 4-1749.

Table 4-1749 S5736-S24UM4XC bundles

Part Number	Description	Remarks
98011020	S5736-S24UM4XC Base(24*100M/1G Ethernet ports,Optional RTU upgrade to 2.5/5/10G, 4*10GE SFP+ ports, 1*expansion slot, PoE++, without power module)	By default, no power supply is configured. By default, multi-GE ports support 100 Mbit/s and 1000 Mbit/s. You can purchase an RTU license to increase the port rate to 2.5 Gbit/s, 5 Gbit/s, or 10 Gbit/s. There is a label on the rear side of the device, which contains the default rate "24*GE" supported by the multi-GE ports.
98011020-001	S5736-S24UM4XC 2.5&10G Bundle(12*100M/1G/2.5G Ethernet ports, 12*100M/1G/2.5G/5G/10G Ethernet ports, Optional RTU upgrade to 5/10G, 4*10GE SFP+ ports, 1*expansion slot, PoE++, 1*1000W AC power)	By default, one 1000 W AC power module is configured. By default, the first 12 multi-GE ports support 100 Mbit/s, 1000 Mbit/s, and 2.5 Gbit/s. You can purchase an RTU license to increase the port rate to 5 Gbit/s or 10 Gbit/s. By default, the last 12 multi-GE ports support 100 Mbit/s, 1000 Mbit/s, 2.5 Gbit/s, 5 Gbit/s, and 10 Gbit/s. There is a label on the rear side of the device, which contains the default rate "12*2.5GE+12*10GE" supported by the multi-GE ports.
98011020-004	S5736-S24UM4XC 10G Bundle(24*100M/1G/2.5G/5G/10G Ethernet ports, 4*10GE SFP+ ports, 1*expansion slot, PoE++, 1*1000W AC power)	By default, one 1000 W AC power module is configured. By default, multi-GE ports support 100 Mbit/s, 1000 Mbit/s, 2.5 Gbit/s, 5 Gbit/s, and 10 Gbit/s. There is a label on the rear side of the device, which contains the default rate "24*10GE" supported by the multi-GE ports.

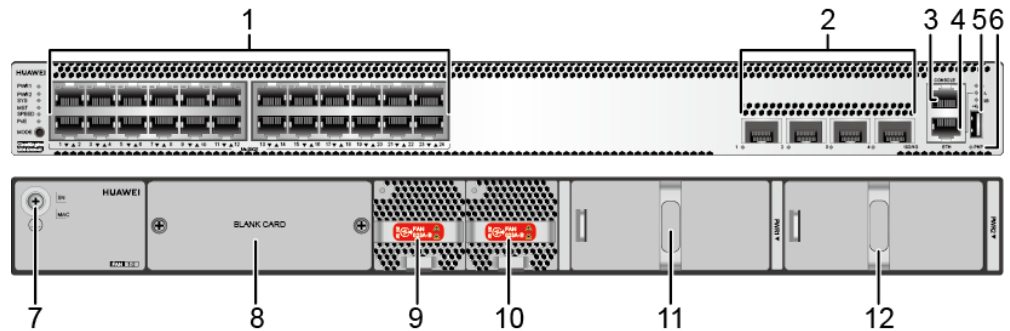
 **NOTE**

A pre-configured or loaded RTU (right to use) license of a device is bound to the device ESN and cannot be unbound or transferred to other devices.

For details about the RTU licenses supported by the device and how to load them, see the *License Usage Guide*.

Components

Figure 4-616 S5736-S24UM4XC appearance



1	Twenty-four 100M/1000M/2.5GE/5GE/10GE BASE-T PoE++ ports (multi-GE ports)	2	Four 10GE SFP+ optical ports
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw NOTE It is used with a 9.1 Ground Cable.	8	Rear card slot NOTE Applicable card: <ul style="list-style-type: none"> 8.24 S7X08000 (8-Port 10GE SFP+ or 2-Port 25GE SFP28 Optical Interface Card (Only Ports 1 and 2 Support 25GE)) (applicable in V200R020C10 and later versions) 8.15 ES5D21Q02Q00 (2-Port 40 Gig QSFP+ Rear Interface Card) 8.17 ES5D21Q04Q01 (4-Port 40 Gig QSFP+ Rear Interface Card) 8.26 S7Q02001 (2-port 40GE QSFP+ interface card) (applicable in V200R021C01 and later versions)
9	Fan module slot 1 NOTE Applicable fan module: 7.5 FAN-023A-B (Fan box(B,FAN panel side exhaust))	10	Fan module slot 2 NOTE Applicable fan module: 7.5 FAN-023A-B (Fan box(B,FAN panel side exhaust))
11	Power module slot 1	12	Power module slot 2

<p>NOTE</p> <p>Applicable power module:</p> <ul style="list-style-type: none"> • 5.24 PAC1000S56-CB (1000 W PoE AC Power Module) • 5.25 PAC1000S56-DB (1000 W PoE AC Power Module) (applicable in V200R020C10 and later versions) • 5.26 PDC1000S56-CB (1000 W PoE DC Power Module) (applicable in V200R021C00 and later versions) • 5.23 PAC600S56-CB (600 W AC&240 V DC Power Module (Back to Front, Power panel side exhaust)) (applicable in V200R021C10 and later versions) 	<p>NOTE</p> <p>Applicable power module:</p> <ul style="list-style-type: none"> • 5.24 PAC1000S56-CB (1000 W PoE AC Power Module) • 5.25 PAC1000S56-DB (1000 W PoE AC Power Module) (applicable in V200R020C10 and later versions) • 5.26 PDC1000S56-CB (1000 W PoE DC Power Module) (applicable in V200R021C00 and later versions) • 5.23 PAC600S56-CB (600 W AC&240 V DC Power Module (Back to Front, Power panel side exhaust)) (applicable in V200R021C10 and later versions)
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Ports

Table 4-1750 lists the maximum transmission distances of different cables on multi-GE ports.

Table 4-1750 Maximum transmission distances of different cables on multi-GE ports

Cable Type (6-a-1 Bundle)	Multi-GE Port (Different Rates)			
	100M/1000M	2.5GE	5GE	10GE
Category 5e unshielded twisted pair (Cat5e UTP)	100 m	100 m	<ul style="list-style-type: none"> • 55 m • 100 m (6-a-1 bundle only for the first 30 m) Not recommended due to high risk	Not supported
Category 5e shielded twisted pair (Cat5e STP)	100 m	100 m	100 m	Not supported
Category 6 unshielded twisted pair (Cat6 UTP)	100 m	100 m	100 m Not recommended due to high risk	Not supported
Category 6 shielded twisted pair (Cat6 STP)	100 m	100 m	100 m	Not supported
Category 6A unshielded twisted pair (Cat6A U/UTP)	100 m	100 m	100 m Not recommended due to high	Not supported

Cable Type (6-a-1 Bundle)	Multi-GE Port (Different Rates)			
	100M/1000M	2.5GE	5GE	10GE
			risk	
Category 6A foiled/unshielded twisted pair (Cat6A F/UTP)	100 m	100 m	100 m	100 m
Category 6A shielded twisted pair (Cat6A STP)	100 m	100 m	100 m	100 m
Category 7 twisted pair (Cat7)	100 m	100 m	100 m	100 m

 **NOTE**

6-a-1 stands for the six-around-one cable bundle mode, with one cable in the center and six cables bundled evenly around it.

Some cables pose high risks and are not recommended for the following reasons:

- 802.3bz requires that the ALSNR value for alien crosstalk between Ethernet cables be greater than 0, but the standards for Cat5e and Cat6 unshielded twisted pairs do not specify the required ALSNR value. Therefore, such cables may not meet the crosstalk requirement in 802.3bz, causing severe problems such as continuous packet loss.
- According the cabling specification TIA TSB-5021, using Cat5e and Cat6 cables for 5G poses high risks.
- Currently, no clear onsite testing or evaluation method is available for checking whether ALSNR of cables conforms to 802.3bz.

If Cat5e and Cat6 unshielded twisted pairs do not meet the 5G requirement, you are advised to replace them with shielded twisted pairs or reduce the rate of ports to 2.5G.

Table 4-1751 Ports on the S5736-S24UM4XC

Port	Connector Type	Description	Available Components
100M/1000M/2.5GE /5GE/10GE BASE-T PoE++ port (multi-GE port)	RJ45	A 100M/1000M/2.5GE /5GE/10GE BASE-T port (multi-GE port) sends and receives service data at 100 Mbit/s, 1 Gbit/s, 2.5 Gbit/s, 5 Gbit/s, or 10 Gbit/s. The port supports the PoE function.	If the 2.5 Gbit/s or 5 Gbit/s speed is required, the port must use an Ethernet cable of Cat5e or higher category. If the 10 Gbit/s speed is required, the port must use an Ethernet cable of Cat6A F/UTP or higher category.
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports	<ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM

Port	Connector Type	Description	Available Components
		auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"> eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
Console port	RJ45	The console port is connected to a console for on-site configuration.	9.13 Console Cable
ETH management port	RJ45	<p>You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely.</p> <p>You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console</p>	9.4 Ethernet Cable

Port	Connector Type	Description	Available Components
		port.	
USB port	USB 2.0 Type A	<p>The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.</p> <p>USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.</p>	USB flash drive

Indicators and Buttons

Figure 4-617 Indicators on the S5736-S24UM4XC

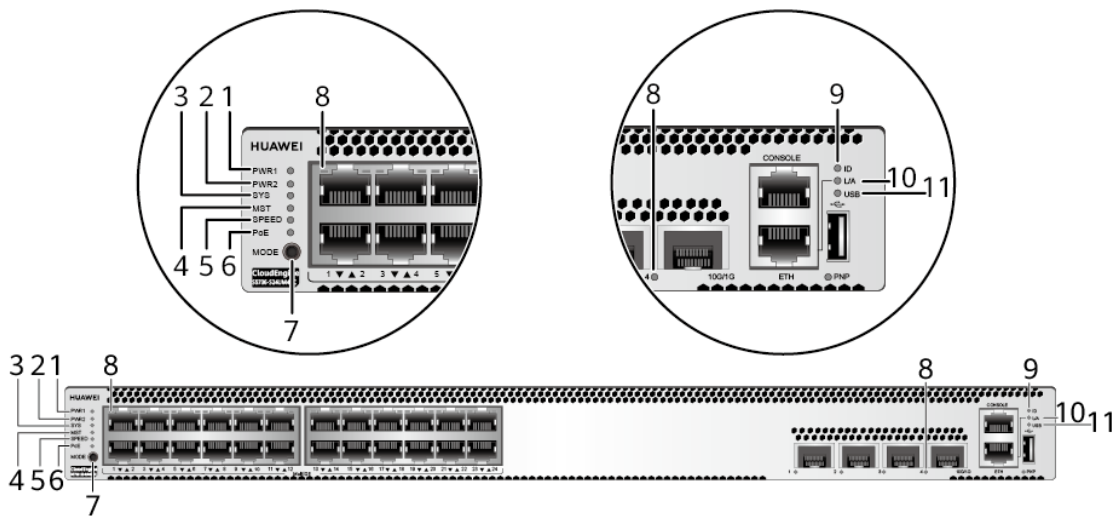


Table 4-1752 Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR 1	Power module indicator	-	Off	No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 1 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none"> A power module is available in this slot but it is not connected to a power source. The power module in this slot has failed.
2	PWR 2	Power module indicator	-	Off	No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 2 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations

No.	Indicator	Name	Color	Status	Description
					occurs in power module slot 2: <ul style="list-style-type: none">A power module is available in this slot but it is not connected to a power source.The power module in this slot has failed.
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Steady on	During the system startup preparation phase, the SYS indicator is steady green, which lasts for a maximum of 30 seconds.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or a temperature alarm has been generated.
4	MST	Stack indicator	-	Off	<ul style="list-style-type: none">If you are not changing the indicator mode (default): The switch is a standby or slave switch in a stack or the stacking function is not enabled on the switch.If you are changing the indicator mode: The stack mode is not selected.
			Green	Steady on	The stack mode is selected. The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none">If you are not changing the indicator mode (default): The switch is the master switch in a stack or a standalone switch with the stacking function enabled.If you are changing the indicator mode: The stack mode is selected. The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. After 45 seconds, the service port indicators automatically restore to the status mode.
5	SPEE	Speed	-	Off	The speed mode is not selected.

No.	Indicator	Name	Color	Status	Description
	D	indicator	Green	Steady on	The speed mode is selected, and service port indicators show the speed of each port.
6	PoE	PoE indicator	-	Off	The PoE mode is not selected.
			Green	Steady on	The PoE mode is selected, and service port indicators show the PoE status of each port.
7	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> When you press this button once, the service port indicators change to the stack mode and show the stack ID of the local switch. When you press this button a second time, the service port indicators change to the speed mode and show the speed of each service port. When you press this button a third time, the service port indicators change to the PoE mode and show the PoE status of each service port. When you press this button a fourth time, the service port indicators restore to the default mode and show the connection status and link activity of each service port. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the SPEED and PoE indicators are off.</p> <p>NOTE</p> <p>Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:</p> <ul style="list-style-type: none"> If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows: If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes. If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status. If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.
8	-	Service port	Meanings of service port indicators vary in different modes.		

No.	Indicator	Name	Color	Status	Description
		indicator	For details, see Table 4-1753.		
9	ID	ID indicator	-	Off	The ID indicator is not used (default state).
			Blue	Steady on	The indicator identifies the switch to maintain. The ID indicator can be turned on or off remotely to help field engineers find the switch to maintain.
10	L/A	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The ETH port is sending or receiving data.
11	USB	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> No USB flash drive is connected to the switch. The USB port is damaged. The indicator is damaged. The USB flash drive does not have any configuration file and cannot be used for deployment. The switch has been upgraded using the USB flash drive and is restarting.
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from a USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

Table 4-1753 Description of service port indicators in different modes

Display Mode	Color	Status	Description
Default mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.

Display Mode	Color	Status	Description
	Green	Blinking	The port is sending or receiving data.
MST stack mode	Green	Off	Port indicators do not show the stack ID of the switch.
		Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
		Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is blinking, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.
Speed mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	100M/1000M/2.5GE/5GE/10GE BASE-T port: The port is operating at 100 Mbit/s or 1000 Mbit/s. 1000M/10GE SFP+ port: The port is operating at 1000 Mbit/s.
	Green	Blinking	100M/1000M/2.5GE/5GE/10GE BASE-T port: The port is operating at 2.5 Gbit/s, 5 Gbit/s, or 10 Gbit/s. 1000M/10GE SFP+ port: The port is operating at 10 Gbit/s.
PoE mode	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.
	Yellow	Steady on	The PoE function is disabled on the port.
	Yellow	Blinking	The port stops providing PoE power because of an exception (for example, an incompatible PD is connected to the port).
	Green and yellow	Blinking green and yellow alternately	The port fails to supply power to a PD due to one of the following reasons: <ul style="list-style-type: none"> The power required by the connected PD exceeds the maximum power or the configured power threshold of the port.

Display Mode	Color	Status	Description
			<ul style="list-style-type: none"> The total power consumption of PDs has reached the maximum power of the switch. The manual power management mode is used and the port is not enabled to provide power to the PD.

Power Supply System

The switch is a PoE switch and supports two power module slots, each of which can have a 1000 W PoE or 600 W PoE power module installed. Pluggable AC and DC PoE power modules can be used together in the same switch.

Table 4-1754 Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W AC (220 V) 1000 W DC	–	841 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 24 802.3bt (60 W per port): 14 802.3bt (90 W per port): 9
1000 W AC (110 V)	–	746 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 24 802.3bt (60 W per port): 12 802.3bt (90 W per port): 8
1000 W AC (220 V) 1000 W DC	1000 W AC (220 V) 1000 W DC	1791 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 24 802.3bt (60 W per port): 24 802.3bt (90 W per port): 19
1000 W AC (110 V) 1000 W DC	1000 W AC (110 V)	1601 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 24

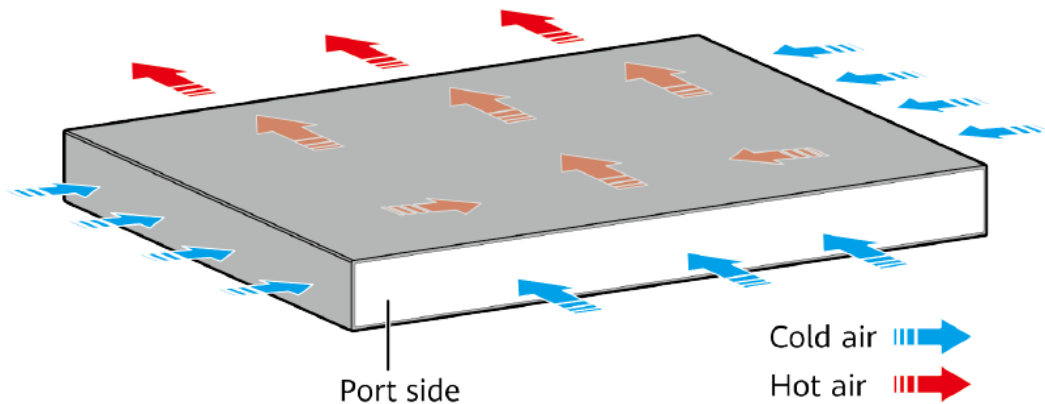
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
			<ul style="list-style-type: none"> • 802.3bt (60 W per port): 24 • 802.3bt (90 W per port): 17
600 W AC (220 V)	–	461 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 24 • 802.3at (30 W per port): 15 • 802.3bt (60 W per port): 7 • 802.3bt (90 W per port): 5
600 W AC (110 V)	–	176 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 11 • 802.3at (30 W per port): 5 • 802.3bt (60 W per port): 2 • 802.3bt (90 W per port): 1
600 W AC (220 V)	600 W AC (220 V)	1031 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 24 • 802.3at (30 W per port): 24 • 802.3bt (60 W per port): 17 • 802.3bt (90 W per port): 11
600 W AC (110 V)	600 W AC (110 V)	461 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 24 • 802.3at (30 W per port): 15 • 802.3bt (60 W per port): 7 • 802.3bt (90 W per port): 5
1000 W AC (220 V) 1000 W DC	600 W AC (220 V)	1411 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 24 • 802.3at (30 W per port): 24 • 802.3bt (60 W per port): 23 • 802.3bt (90 W per port): 15

 **NOTE**

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

Heat Dissipation System

The switch uses pluggable fan modules for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1755 Technical specifications of the S5736-S24UM4XC

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.40 in. x 16.54 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.40 in. x 17.64 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	150mm × 710mm × 560mm (5.90 in. x 27.95 in. x 22.05 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	6.7 kg (14.77 lb)
Weight with packaging [kg(lb)]	9.7 kg (21.39 lb)
Typical power consumption [W]	117 W
Typical heat dissipation [BTU/hour]	399.22 BTU/hour
Maximum power consumption [W]	<ul style="list-style-type: none"> Without PoE: 176 W (without cards) Full PoE load: 1967 W (PoE: 1791 W, without cards)
Maximum heat dissipation [BTU/hour]	<ul style="list-style-type: none"> Without PoE: 600.53 (without cards)

Item	Specification
	<ul style="list-style-type: none">Full PoE load: 6711.60 (without cards)
MTBF [year]	59.44 year
MTTR [hour]	2 hour
Availability	>0.99999
Noise at normal temperature (acoustic power) [dB(A)]	70.1 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	58.1 dB(A)
Number of card slots	1
Number of power slots	2
Number of fans modules	2
Redundant power supply	1+1 Pluggable AC and DC power modules can be used together in the same switch.
Long-term operating temperature [°C(°F)]	-5 °C to +45 °C (23 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.)
Short-term operating temperature [°C(°F)]	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>The device can work for a short period of time when the operating temperature is beyond the normal range, but the following conditions must be met:</p> <ul style="list-style-type: none">The operating temperature can exceed 45 °C (113 °F) for a maximum of 96 consecutive hours in a year.The total time when the operating temperature exceeds 45 °C (113 °F) in a year is less than or equal to 360 hours.The number of times the operating temperature exceeds 45 °C (113 °F) is less than or equal to 15 in one year. <p>If any of the preceding conditions is not met, the device may be damaged or an unknown error may occur.</p> <p>Devices cannot start when the temperature is lower than 0 °C (32 °F). The maximum transmission distance of an optical module</p>

Item	Specification
	used for short-term operation cannot exceed 10 km.
Storage temperature [°C(°F)]	-40 °C to +70 °C (-40 °F to +158 °F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	Pluggable power supply
Rated input voltage [V]	<ul style="list-style-type: none">AC input: 100 V AC to 130 V AC, 200 V AC to 240 V AC; 50/60 HzHigh-voltage DC input: 240 V DCDC input: -48 V DC to -60 V DC
Input voltage range [V]	<ul style="list-style-type: none">AC input: 90 V AC to 290 V AC; 45 Hz to 65 HzHigh-voltage DC input: 190 V DC to 290 V DCDC input: -38.4 V DC to -72 V DC
Maximum input current [A]	The current specifications are related to the pluggable power module. For details, see Pluggable Power Modules.
Memory	2 GB
Flash memory	1 GB in total. To view the available flash memory size, run the display version command.
Console port	RJ45
Eth Management port	RJ45
USB	Supported
RTC	Supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: ± 6 kV
Power supply surge protection [kV]	<ul style="list-style-type: none">Configured with AC power modules: ± 6 kV in differential mode and ± 6 kV in common modeConfigured with DC power modules: ± 2 kV in differential mode and ± 4 kV in common mode
Types of fans	Pluggable
Heat dissipation mode	Heat dissipation with fan, intelligent fan

Item	Specification
	speed adjustment
Airflow direction	Air intake from left, front and right, air exhaustion from behind
PoE	Supported
Certification	EMC certification Safety certification Manufacturing certification

4.38.2 S5736-S24S4XC

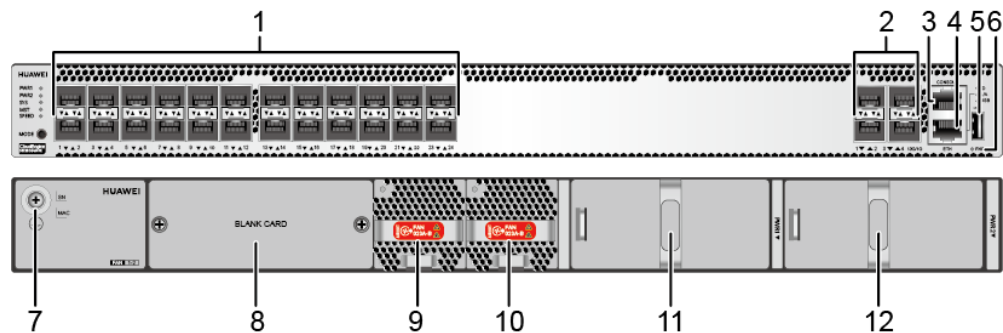
Overview

Table 4-1756 Basic information about the S5736-S24S4XC

Item	Details
Description	S5736-S24S4XC (24*GE SFP ports, 4*10GE SFP+ ports, 1*expansion slot, without power module)
Part Number	98011038
Model	S5736-S24S4XC
First supported version	V200R021C01
Remarks	Some models cannot be downgraded due to component upgrade. Therefore, you are advised to run the display system-software information command to check the software versions supported by the device before performing a downgrade. If the device does not support the display system-software information command, it can be downgraded.

Components

Figure 4-618 S5736-S24S4XC appearance



1	Twenty-four 100/1000BASE-X ports	2	Four 10GE SFP+ optical ports
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw NOTE It is used with a 9.1 Ground Cable.	8	Rear card slot NOTE Applicable card: <ul style="list-style-type: none"> 8.24 S7X08000 (8-Port 10GE SFP+ or 2-Port 25GE SFP28 Optical Interface Card (Only Ports 1 and 2 Support 25GE)) (applicable in V200R020C10 and later versions) 8.15 ES5D21Q02Q00 (2-Port 40 Gig QSFP+ Rear Interface Card) 8.17 ES5D21Q04Q01 (4-Port 40 Gig QSFP+ Rear Interface Card) 8.26 S7Q02001 (2-port 40GE QSFP+ interface card) (applicable in V200R021C01 and later versions)
9	Fan module slot 1 NOTE Applicable fan module: 7.5 FAN-023A-B (Fan box(B,FAN panel side exhaust))	10	Fan module slot 2 NOTE Applicable fan module: 7.5 FAN-023A-B (Fan box(B,FAN panel side exhaust))
11	Power module slot 1 NOTE Applicable power module:	12	Power module slot 2 NOTE Applicable power module:

<ul style="list-style-type: none"> • 5.20 PAC600S12-CB (600 W AC Power Module) • 5.22 PAC600S12-EB (600 W AC Power Module) • 5.21 PAC600S12-DB (600 W AC Power Module) • 5.27 PDC1000S12-DB (1000 W DC Power Module) • 5.12 PAC150S12-R (150 W AC Power Module) • 5.15 PDC180S12-CR (180 W DC Power Module) 	<ul style="list-style-type: none"> • 5.20 PAC600S12-CB (600 W AC Power Module) • 5.22 PAC600S12-EB (600 W AC Power Module) • 5.21 PAC600S12-DB (600 W AC Power Module) • 5.27 PDC1000S12-DB (1000 W DC Power Module) • 5.12 PAC150S12-R (150 W AC Power Module) • 5.15 PDC180S12-CR (180 W DC Power Module)
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Ports

Table 4-1757 Ports on the S5736-S24S4XC

Port	Connector Type	Description	Available Components
100/1000BASE-X port	SFP	A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s.	<ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.10 GE SFP Copper Modules
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable

Port	Connector Type	Description	Available Components
			<ul style="list-style-type: none">9.3 Optical Fiber9.14 Dedicated Stack Cable
Console port	RJ45	The console port is connected to a console for on-site configuration.	9.13 Console Cable
ETH management port	RJ45	You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port.	9.4 Ethernet Cable
USB port	USB 2.0 Type A	The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0. USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with	USB flash drive

Port	Connector Type	Description	Available Components
		another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.	

Indicators and Buttons

Figure 4-619 Indicators on the S5736-S24S4XC

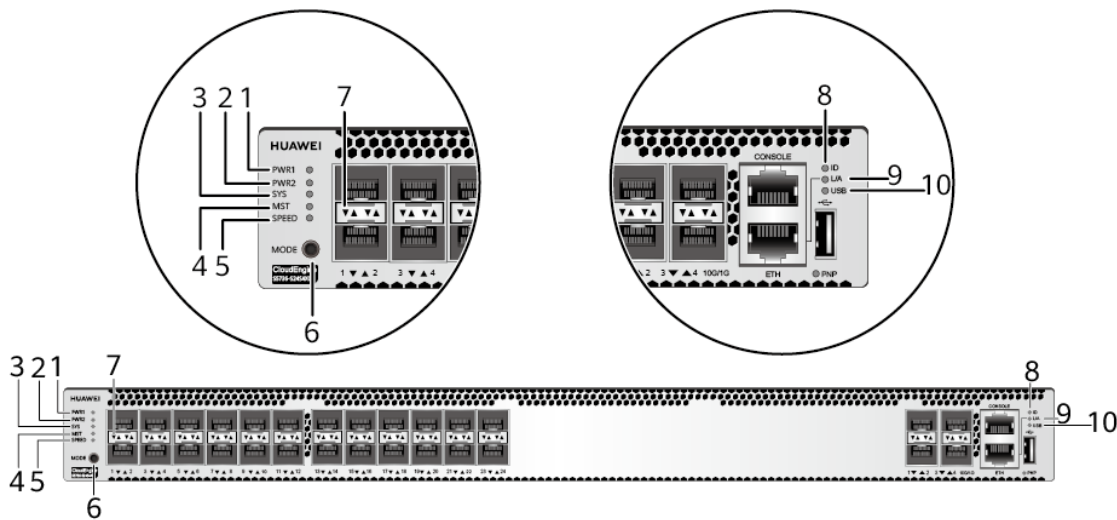


Table 4-1758 Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR1	Power module indicator	-	Off	No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 1 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none"> A power module is available in this slot but it is not connected to a power source. The power module in this slot has

No.	Indicator	Name	Color	Status	Description
					failed.
2	PWR 2	Power module indicator	-	Off	No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 2 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 2: <ul style="list-style-type: none"> A power module is available in this slot but it is not connected to a power source. The power module in this slot has failed.
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Steady on	During the system startup preparation phase, the SYS indicator is steady green, which lasts for a maximum of 30 seconds.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or a temperature alarm has been generated.
4	MST	Stack indicator	-	Off	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is a standby or slave switch in a stack or the stacking function is not enabled on the switch. If you are changing the indicator mode: The stack mode is not selected.
			Green	Steady on	The stack mode is selected. The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is the master switch in a stack or a standalone switch with the stacking function enabled.

No.	Indicator	Name	Color	Status	Description
					<ul style="list-style-type: none"> If you are changing the indicator mode: The stack mode is selected. The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. After 45 seconds, the service port indicators automatically restore to the status mode.
5	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The speed mode is selected, and service port indicators show the speed of each port.
6	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> When you press this button once, the service port indicators change to the stack mode and show the stack ID of the local switch. When you press this button a second time, the service port indicators change to the speed mode and show the speed of each service port. When you press this button a third time, the service port indicators restore to the default mode and show the connection status and link activity of each service port. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the SPEED indicator is off.</p> <p>NOTE</p> <p>Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:</p> <ul style="list-style-type: none"> If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows: If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes. If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status. If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.
7	-	Service	Meanings of service port indicators vary in different modes.		

No.	Indicator	Name	Color	Status	Description
		port indicator	For details, see Table 4-1759.		
8	ID	ID indicator	-	Off	The ID indicator is not used (default state).
			Blue	Steady on	The indicator identifies the switch to maintain. The ID indicator can be turned on or off remotely to help field engineers find the switch to maintain.
9	L/A	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The ETH port is sending or receiving data.
10	USB	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> No USB flash drive is connected to the switch. The USB port is damaged. The indicator is damaged. The USB flash drive does not have any configuration file and cannot be used for deployment. The switch has been upgraded using the USB flash drive and is restarting.
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from a USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

Table 4-1759 Description of service port indicators in different modes

Display Mode	Color	Status	Description
Default mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.

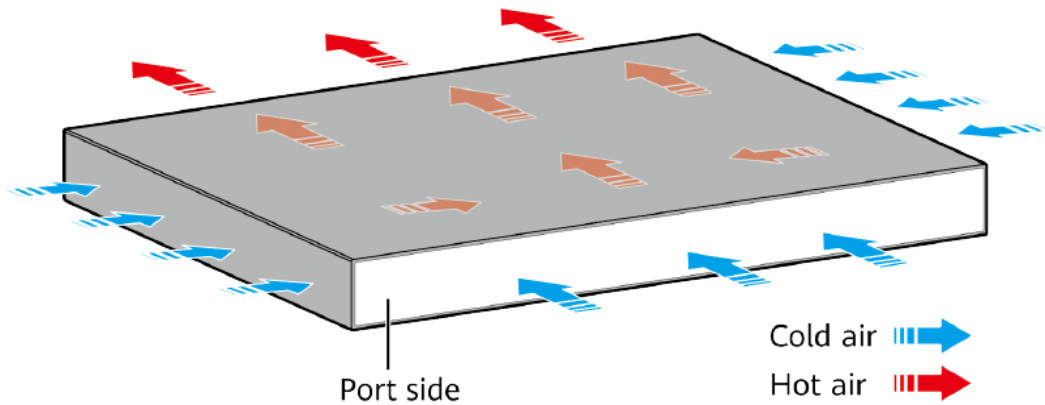
Display Mode	Color	Status	Description
	Yellow	Blinking	The port is sending or receiving data.
MST stack mode	-	Off	Port indicators do not show the stack ID of the switch.
	Green and yellow	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none">If the indicator of a port is steady on, the number of this port is the stack ID of the switch.If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
	Green and yellow	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none">If the indicator of a port is blinking, the number of this port is the stack ID of the switch.If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.
Speed mode	-	Off	The port is not connected or has been shut down.
	Green and yellow	Steady on	100M/1000M port: The port is operating at 100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green and yellow	Blinking	100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.

Power Supply System

The switch can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch. However, the power modules with natural heat dissipation and the power modules with fan cannot be used at the same time.

Heat Dissipation System

The switch uses pluggable fan modules for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1760 Technical specifications of the S5736-S24S4XC

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.40 in. x 16.54 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 444.0 mm (1.72 in. x 17.40 in. x 17.48 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	150mm × 710mm × 560mm (5.90 in. x 27.95 in. x 22.05 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	5.2 kg (11.46 lb)
Weight with packaging [kg(lb)]	8.2 kg (18.08 lb)
Typical power consumption [W]	63 W
Typical heat dissipation [BTU/hour]	214.96 BTU/hour
Maximum power consumption [W]	74 W
Maximum heat dissipation [BTU/hour]	252.5 BTU/hour
MTBF [year]	65.79 year
MTTR [hour]	2 hour
Availability	>0.99999
Noise at normal temperature (acoustic power) [dB(A)]	49.9 dB(A)

Item	Specification
Noise at normal temperature (acoustic pressure) [dB(A)]	37.8 dB(A)
Number of card slots	1
Number of power slots	2
Number of fans modules	2
Redundant power supply	1+1 Pluggable AC and DC power modules can be used together in the same switch, but power modules that use natural heat dissipation and power modules that use air cooling cannot be used together.
Long-term operating temperature [°C(°F)]	-5 °C to +45 °C (23 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.)
Short-term operating temperature [°C(°F)]	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800–5000 m (5906–16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>The device can work for a short period of time when the operating temperature is beyond the normal range, but the following conditions must be met:</p> <ul style="list-style-type: none">• The operating temperature can exceed 45 °C (113 °F) for a maximum of 96 consecutive hours in a year.• The total time when the operating temperature exceeds 45 °C (113 °F) in a year is less than or equal to 360 hours.• The number of times the operating temperature exceeds 45 °C (113 °F) is less than or equal to 15 in one year. <p>If any of the preceding conditions is not met, the device may be damaged or an unknown error may occur.</p> <p>Devices cannot start when the temperature is lower than 0 °C (32 °F). The maximum transmission distance of an optical module used for short-term operation cannot exceed 10 km.</p>
Storage temperature [°C(°F)]	-40 °C to +70 °C (-40 °F to +158 °F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing

Item	Specification
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	Pluggable power supply
Rated input voltage [V]	<ul style="list-style-type: none">AC input: 100 V AC to 240 V AC, 50/60 HzDC input: -48 V DC to -60 V DC
Input voltage range [V]	<ul style="list-style-type: none">AC input: 90 V AC to 290 V AC; 45 Hz to 65 HzHigh-voltage DC input: 190 V DC to 290 V DCDC input: -38.4 V DC to -72 V DC
Maximum input current [A]	The current specifications depend on the pluggable power modules in use. For details, see the related power module specifications.
Memory	2 GB
Flash memory	1 GB in total. To view the available flash memory size, run the display version command.
Console port	RJ45
Eth Management port	RJ45
USB	Supported
RTC	Supported
RPS input	Not supported
Service port surge protection [kV]	-
Power supply surge protection [kV]	<ul style="list-style-type: none">Configured with AC power modules: ± 6 kV in differential mode and ± 6 kV in common modeConfigured with DC power modules: ± 2 kV in differential mode and ± 4 kV in common mode
Types of fans	Pluggable
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left, front and right, air exhaustion from behind
PoE	Not supported

Item	Specification
Certification	EMC certification Safety certification Manufacturing certification

4.38.3 S5736-S48S4XC

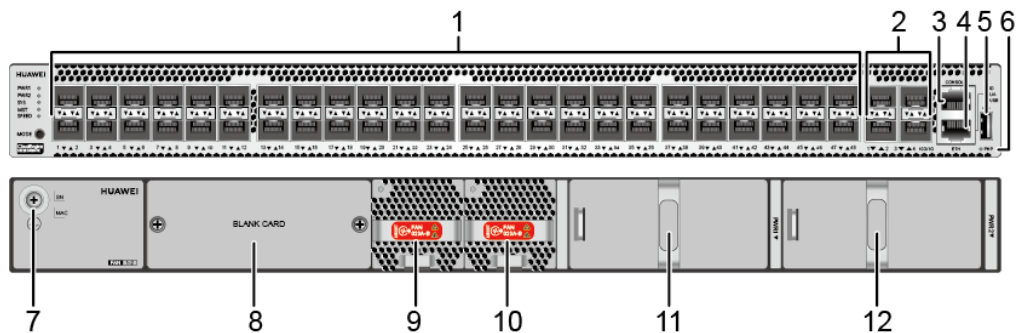
Overview

Table 4-1761 Basic information about the S5736-S48S4XC

Item	Details
Description	S5736-S48S4XC (48*GE SFP ports, 4*10GE SFP+ ports, 1*expansion slot, without power module)
Part Number	98011042
Model	S5736-S48S4XC
First supported version	V200R021C01
Remarks	Some models cannot be downgraded due to component upgrade. Therefore, you are advised to run the display system-software information command to check the software versions supported by the device before performing a downgrade. If the device does not support the display system-software information command, it can be downgraded.

Components

Figure 4-620 S5736-S48S4XC appearance



1	Forty-eight 100/1000BASE-X ports	2	Four 10GE SFP+ optical ports
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw NOTE It is used with a 9.1 Ground Cable.	8	Rear card slot NOTE Applicable card: <ul style="list-style-type: none"> • 8.24 S7X08000 (8-Port 10GE SFP+ or 2-Port 25GE SFP28 Optical Interface Card (Only Ports 1 and 2 Support 25GE)) (applicable in V200R020C10 and later versions) • 8.15 ES5D21Q02Q00 (2-Port 40 Gig QSFP+ Rear Interface Card) • 8.17 ES5D21Q04Q01 (4-Port 40 Gig QSFP+ Rear Interface Card) • 8.26 S7Q02001 (2-port 40GE QSFP+ interface card) (applicable in V200R021C01 and later versions)
9	Fan module slot 1 NOTE Applicable fan module: 7.5 FAN-023A-B (Fan box(B,FAN panel side exhaust))	10	Fan module slot 2 NOTE Applicable fan module: 7.5 FAN-023A-B (Fan box(B,FAN panel side exhaust))
11	Power module slot 1 NOTE Applicable power module: <ul style="list-style-type: none"> • 5.20 PAC600S12-CB (600 W AC Power Module) • 5.22 PAC600S12-EB (600 W AC Power Module) • 5.21 PAC600S12-DB (600 W AC Power Module) • 5.27 PDC1000S12-DB (1000 W DC Power Module) • 5.12 PAC150S12-R (150 W AC Power Module) • 5.15 PDC180S12-CR (180 W DC Power Module) 	12	Power module slot 2 NOTE Applicable power module: <ul style="list-style-type: none"> • 5.20 PAC600S12-CB (600 W AC Power Module) • 5.22 PAC600S12-EB (600 W AC Power Module) • 5.21 PAC600S12-DB (600 W AC Power Module) • 5.27 PDC1000S12-DB (1000 W DC Power Module) • 5.12 PAC150S12-R (150 W AC Power Module) • 5.15 PDC180S12-CR (180 W DC Power Module)

Ports

Table 4-1762 Ports on the S5736-S48S4XC

Port	Connector Type	Description	Available Components
100/1000BASE-X port	SFP	A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s.	<ul style="list-style-type: none"> • 10.4 FE SFP/eSFP Optical Modules • 10.5 GE eSFP Optical Modules • 10.10 GE SFP Copper Modules
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
Console port	RJ45	The console port is connected to a console for on-site configuration.	9.13 Console Cable
ETH management port	RJ45	You can connect a switch to a configuration terminal or network management	9.4 Ethernet Cable

Port	Connector Type	Description	Available Components
		<p>workstation through the ETH management port to configure the switch locally or remotely.</p> <p>You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port.</p>	
USB port	USB 2.0 Type A	<p>The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.</p> <p>USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.</p>	USB flash drive

Indicators and Buttons

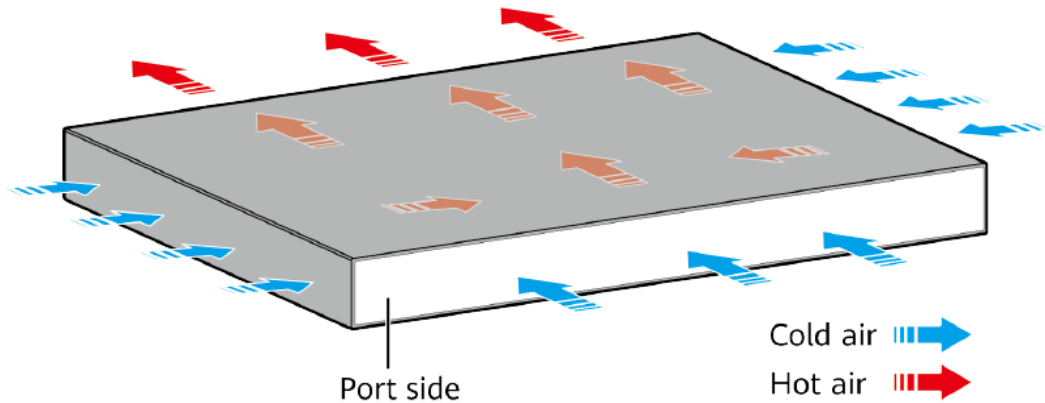
The S5736-S48S4XC has the same types of indicators as the S5736-S24S4XC. For details, see the S5736-S24S4XC.

Power Supply System

The switch can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch. However, the power modules with natural heat dissipation and the power modules with fan cannot be used at the same time.

Heat Dissipation System

The switch uses pluggable fan modules for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1763 Technical specifications of the S5736-S48S4XC

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.40 in. x 16.54 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 444.0 mm (1.72 in. x 17.40 in. x 17.48 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	150mm × 710mm × 560mm (5.90 in. x 27.95 in. x 22.05 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	5.5 kg (12.13 lb)
Weight with packaging [kg(lb)]	8.6 kg (18.96 lb)
Typical power consumption [W]	87 W

Item	Specification
Typical heat dissipation [BTU/hour]	296.85 BTU/hour
Maximum power consumption [W]	100 W
Maximum heat dissipation [BTU/hour]	341.21 BTU/hour
MTBF [year]	53.69 year
MTTR [hour]	2 hour
Availability	>0.99999
Noise at normal temperature (acoustic power) [dB(A)]	49.9 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	37.8 dB(A)
Number of card slots	1
Number of power slots	2
Number of fans modules	2
Redundant power supply	1+1 Pluggable AC and DC power modules can be used together in the same switch, but power modules that use natural heat dissipation and power modules that use air cooling cannot be used together.
Long-term operating temperature [°C(°F)]	-5 °C to +45 °C (23 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.)
Short-term operating temperature [°C(°F)]	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	When the altitude is 1800–5000 m (5906–16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.). The device can work for a short period of time when the operating temperature is beyond the normal range, but the following conditions must be met: <ul style="list-style-type: none">• The operating temperature can exceed 45 °C (113 °F) for a maximum of 96 consecutive hours in a year.• The total time when the operating temperature exceeds 45 °C (113 °F) in a year is less than or equal to 360 hours.• The number of times the operating temperature exceeds 45 °C (113 °F) is less than or equal to 15 in one year.

Item	Specification
	<p>If any of the preceding conditions is not met, the device may be damaged or an unknown error may occur.</p> <p>Devices cannot start when the temperature is lower than 0 °C (32 °F). The maximum transmission distance of an optical module used for short-term operation cannot exceed 10 km.</p>
Storage temperature [°C(°F)]	-40 °C to +70 °C (-40 °F to +158 °F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	Pluggable power supply
Rated input voltage [V]	<ul style="list-style-type: none">AC input: 100 V AC to 240 V AC, 50/60 HzDC input: -48 V DC to -60 V DC
Input voltage range [V]	<ul style="list-style-type: none">AC input: 90 V AC to 290 V AC; 45 Hz to 65 HzHigh-voltage DC input: 190 V DC to 290 V DCDC input: -38.4 V DC to -72 V DC
Maximum input current [A]	The current specifications depend on the pluggable power modules in use. For details, see the related power module specifications.
Memory	2 GB
Flash memory	1 GB in total. To view the available flash memory size, run the display version command.
Console port	RJ45
Eth Management port	RJ45
USB	Supported
RTC	Supported
RPS input	Not supported
Service port surge protection [kV]	-
Power supply surge protection [kV]	<ul style="list-style-type: none">Configured with AC power modules: ± 6 kV in differential mode and ± 6 kV in common modeConfigured with DC power modules: ± 2

Item	Specification
	kV in differential mode and ± 4 kV in common mode
Types of fans	Pluggable
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left, front and right, air exhaustion from behind
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

4.38.4 S5736-S48S4X-A

Overview

Table 4-1764 Basic information about the S5736-S48S4X-A

Item	Details
Description	S5736-S48S4X-A base (48*GE SFP ports, optional RTU upgrade to 10G, 4*10GE SFP+ ports, AC power supply, front access)
Part Number	98011606
Model	S5736-S48S4X-A
First supported version	V200R020C30

Components

Figure 4-621 S5736-S48S4X-A appearance



1	Forty-eight 1000BASE-X ports NOTE A RTU license (L-P1GUPG10G-S57S) can be loaded to increase the port rate to 10 Gbit/s.	2	Four 10GE SFP+ optical ports
3	One console port	4	One ETH management port
5	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.	6	AC socket NOTE It is used with an 9.8 AC Power Cable.
7	Ground screw NOTE It is used with a 9.1 Ground Cable.	-	-

Ports

Table 4-1765 Ports on the S5736-S48S4X-A

Port	Connector Type	Description	Available Components
1000BASE-X port	SFP	A 1000BASE-X port can send and receive data at 1000 Mbit/s. A license can be loaded to increase the port rate to 10	<ul style="list-style-type: none"> 10.5 GE eSFP Optical Modules 10.10 GE SFP Copper Modules 10.12 10GE SFP+ Optical Modules

Port	Connector Type	Description	Available Components
		Gbit/s.	<ul style="list-style-type: none">• 9.15 Copper Cable• 9.3 Optical Fiber• 9.14 Dedicated Stack Cable
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none">• 10.5 GE eSFP Optical Modules• 10.7 GE-CWDM eSFP Optical Modules• 10.9 GE-DWDM eSFP Optical Modules• 10.10 GE SFP Copper Modules• 10.12 10GE SFP+ Optical Modules• 10.13 10GE-CWDM SFP+ Optical Modules• 10.14 10GE-DWDM SFP+ Optical Modules• 9.15 Copper Cable• 9.3 Optical Fiber• 9.14 Dedicated Stack Cable
Console port	RJ45	The console port is connected to a console for on-site configuration.	9.13 Console Cable
ETH management port	RJ45	You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. You can choose to	9.4 Ethernet Cable

Port	Connector Type	Description	Available Components
		download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port.	

Indicators and Buttons

Figure 4-622 Indicators on the S5736-S48S4X-A

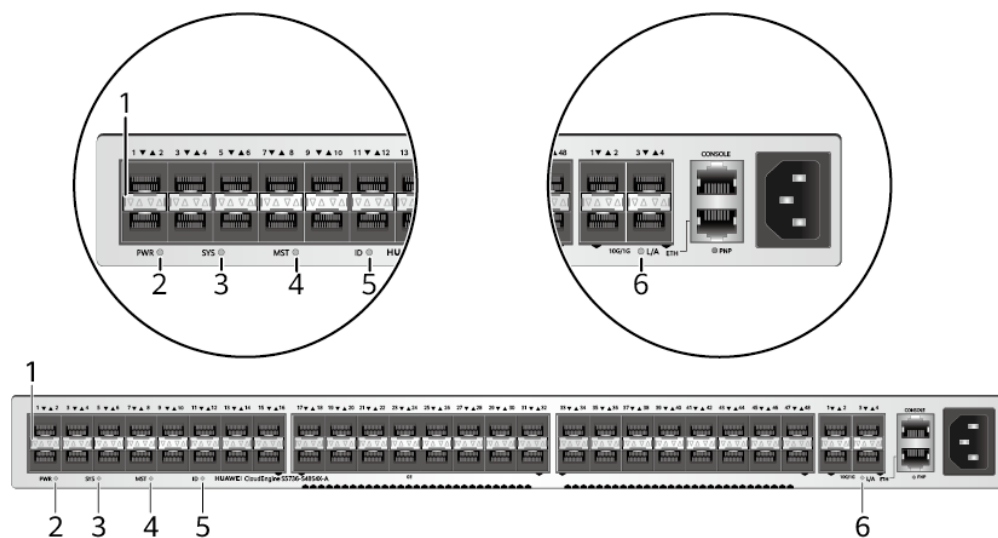


Table 4-1766 Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	-	Service port indicator	Green	Off	The port is not connected or has been shut down.
				Steady on	A link has been established on the port.
			Yellow	Off	The port is not sending or receiving data.
				Blinking	The port is sending or receiving data.

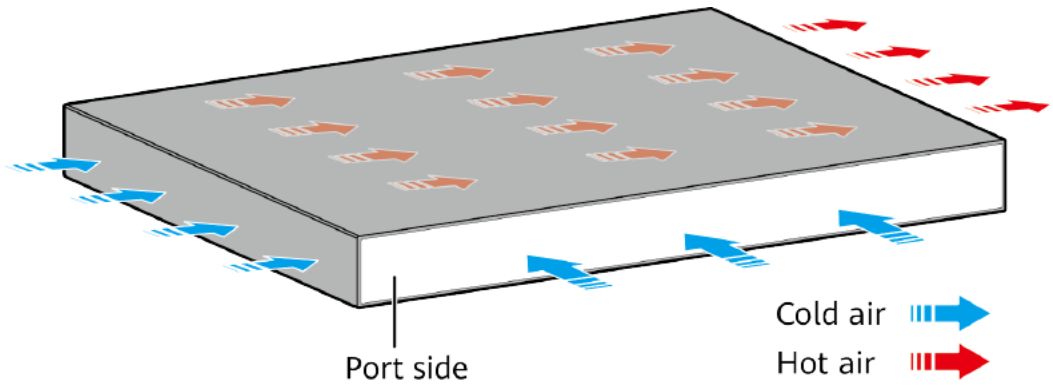
No.	Indicator	Name	Color	Status	Description
2	PWR	Power module indicator	-	Off	The switch is powered off.
			Green	Steady on	The system power supply is normal.
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Steady on	During the system startup preparation phase, the SYS indicator is steady green, which lasts for a maximum of 30 seconds.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or a temperature alarm has been generated.
4	MST	Stack indicator	-	Off	The switch is not the master switch in a stack.
			Green	Steady on	The switch is the master switch in a stack or a standalone switch.
5	ID	ID indicator	-	Off	The ID indicator is not used (default state).
			Blue	Steady on	The indicator identifies the switch to maintain. The ID indicator can be turned on or off remotely to help field engineers find the switch to maintain.
6	L/A	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The Eth port is sending or receiving data.

Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules.

Heat Dissipation System

The switch has three built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1767 Technical specifications of the S5736-S48S4X-A

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.66 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 228.0 mm (1.72 in. x 17.4 in. x 9.0 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90 mm × 555 mm × 345 mm (3.54 in. x 21.85 in. x 13.58 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	3.6 kg (7.9 lb)
Weight with packaging [kg(lb)]	4.7 kg (10.36 lb)
Typical power consumption [W]	87 W
Typical heat dissipation [BTU/hour]	296.85 BTU/hour
Maximum power consumption [W]	111 W
Maximum heat dissipation [BTU/hour]	378.74 BTU/hour
MTBF [year]	41.97 year
MTTR [hour]	2 hour
Availability	>0.99999
Noise at normal temperature (acoustic power) [dB(A)]	56.8 dB(A)

Item	Specification
Noise at normal temperature (acoustic pressure) [dB(A)]	44.8 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	3
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5 °C to +45 °C (23 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.)
Short-term operating temperature [°C(°F)]	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature [°C(°F)]	-40 °C to +70 °C (-40 °F to +158 °F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	AC built-in
Rated input voltage [V]	<ul style="list-style-type: none"> • AC input: 100 V AC to 130 V AC, 200

Item	Specification
	V AC to 240 V AC, 50/60 Hz • High-Voltage DC input: 240 V DC
Input voltage range [V]	• AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz • High-Voltage DC input: 190 V DC to 290 V DC
Maximum input current [A]	6.0 A
Memory	2 GB
Flash memory	1 GB in total. To view the available flash memory size, run the display version command.
Console port	RJ45
Eth Management port	RJ45
USB	Not supported
RTC	Supported
RPS input	Not supported
Service port surge protection [kV]	-
Power supply surge protection [kV]	±6 kV in differential mode, ±6 kV in common mode
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air flows in from the left side and front panel, and exhausts from the right side.
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

4.38.5 S5736-S48S4X-D

Overview

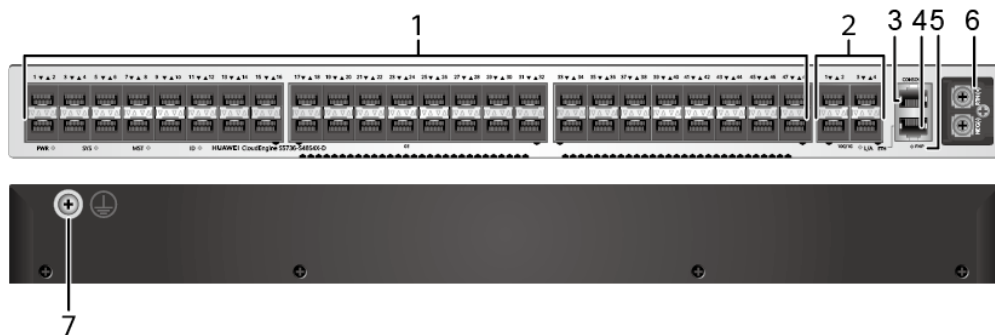
Table 4-1768 Basic information about the S5736-S48S4X-D

Item	Details
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Item	Details
Description	S5736-S48S4X-D base (48*GE SFP ports, optional RTU upgrade to 10G, 4*10GE SFP+ ports, DC power supply, front access)
Part Number	98011607
Model	S5736-S48S4X-D
First supported version	V200R020C30

Components

Figure 4-623 S5736-S48S4X-D appearance



1	Forty-eight 1000BASE-X ports NOTE A RTU license (L-P1GUPG10G-S57S) can be loaded to increase the port rate to 10 Gbit/s.	2	Four 10GE SFP+ optical ports
3	One console port	4	One ETH management port
5	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.	6	DC power terminal NOTE It is used with 9.5 DC Power Cable (with OT and Cord End Terminals).
7	Ground screw NOTE It is used with a 9.1 Ground Cable.	-	-

Ports

Table 4-1769 Ports on the S5736-S48S4X-D

Port	Connector Type	Description	Available Components
1000BASE-X port	SFP	A 1000BASE-X port can send and receive data at 1000 Mbit/s. A license can be loaded to increase the port rate to 10 Gbit/s.	<ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"> • 10.5 GE eSFP Optical Modules • 10.7 GE-CWDM eSFP Optical Modules • 10.9 GE-DWDM eSFP Optical Modules • 10.10 GE SFP Copper Modules • 10.12 10GE SFP+ Optical Modules • 10.13 10GE-CWDM SFP+ Optical Modules • 10.14 10GE-DWDM SFP+ Optical Modules • 9.15 Copper Cable • 9.3 Optical Fiber • 9.14 Dedicated Stack Cable
Console port	RJ45	The console port is connected to a console for on-site	9.13 Console Cable

Port	Connector Type	Description	Available Components
		configuration.	
ETH management port	RJ45	<p>You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely.</p> <p>You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port.</p>	9.4 Ethernet Cable

Indicators and Buttons

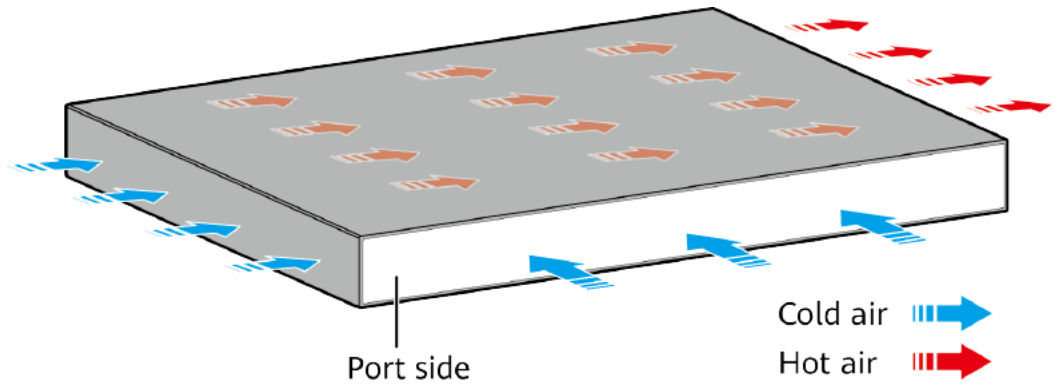
The S5736-S48S4X-D has the same types of indicators as the S5736-S48S4X-A. For details, see the S5736-S48S4X-A.

Power Supply System

The switch has a built-in DC power module and does not support pluggable power modules.

Heat Dissipation System

The switch has three built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 4-1770 Technical specifications of the S5736-S48S4X-D

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.66 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 235.8 mm (1.72 in. x 17.4 in. x 9.3 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90 mm × 555 mm × 345 mm (3.54 in. x 21.85 in. x 13.58 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	3.2 kg (7.1 lb)
Weight with packaging [kg(lb)]	4.3 kg (9.48 lb)
Typical power consumption [W]	87 W
Typical heat dissipation [BTU/hour]	296.85 BTU/hour
Maximum power consumption [W]	108 W
Maximum heat dissipation [BTU/hour]	368.51 BTU/hour
MTBF [year]	41.97 year
MTTR [hour]	2 hour
Availability	>0.99999
Noise at normal temperature (acoustic power) [dB(A)]	56.8 dB(A)

Item	Specification
Noise at normal temperature (acoustic pressure) [dB(A)]	44.8 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	3
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5 °C to +45 °C (23 °F to 113 °F) at an altitude of 0-1800 m (0-5906 ft.)
Short-term operating temperature [°C(°F)]	-5 °C to +50 °C (23 °F to 122 °F) at an altitude of 0-1800 m (0-5906 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1 °C (1.8 °F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none">• The equipment operates at a temperature of over 45 °C (113 °F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45 °C (113 °F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0 °C (32 °F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature [°C(°F)]	-40 °C to +70 °C (-40 °F to +158 °F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	DC built-in
Rated input voltage [V]	-48 V DC to -60 V DC

Item	Specification
Input voltage range [V]	-38.4 V DC to -72 V DC
Maximum input current [A]	6.0 A
Memory	2 GB
Flash memory	1 GB in total. To view the available flash memory size, run the display version command.
Console port	RJ45
Eth Management port	RJ45
USB	Not supported
RTC	Supported
RPS input	Not supported
Service port surge protection [kV]	-
Power supply surge protection [kV]	± 2 kV in differential mode, ± 4 kV in common mode
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air flows in from the left side and front panel, and exhausts from the right side.
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

5 Power Modules

NOTICE

- All power modules (except the 870 W PoE power module) are hot swappable, but it is highly recommended that you power off a switch before removing or installing a power module in the switch to protect personal and equipment safety.
- Before replacing a power module in a switch, make sure that the switch can be powered by the other power module after the power module is removed. Otherwise, services on the switches will be interrupted by a power failure when the power module is removed.
- Before powering off a switch, shut down all of its power supply units.
- A switch can only use power modules matching its chassis model. Using unsupported power modules will cause unexpected risks.
- If a switch has two power modules for 1+1 power redundancy and one of them is powered off, the indicator of this power module will not turn off immediately. This is a normal situation.
- If the total power of powered devices (PDs) connected to a PoE switch exceeds the rated PoE power of a single power module in the switch, the switch does not support 1+1 redundancy of the PoE power modules. If you need to power off one power module, limit the total power of PDs within the PoE power that one power module can provide.

- 5.1 [PAC-60WA-L \(60 W AC Power Module\)](#)
- 5.2 [LS5M100PWA00/ES0W2PSA0150 \(150 W AC Power Module\)](#)
- 5.3 [LS5M100PWD00/ES0W2PSD0150 \(150 W DC Power Module\)](#)
- 5.4 [PAC-350WA-B \(350 W AC Power Module\)](#)
- 5.5 [W0PSA2500 \(250 W AC PoE Power Module\)](#)
- 5.6 [W0PSA5000/PAC-500WA-BE \(500 W AC PoE Power Module\)](#)
- 5.7 [W2PSA0580 \(580 W AC PoE Power Module\)](#)
- 5.8 [PDC-650WA-BE \(650 W DC PoE Power Module\)](#)
- 5.9 [PAC1000D5412 \(1000 W AC PoE Power Module\)](#)
- 5.10 [W2PSA1150 \(1150 W AC PoE Power Module\)](#)

- 5.11 PAC60S12-AR (60 W AC Power Module)
- 5.12 PAC150S12-R (150 W AC Power Module)
- 5.13 W0PSA1701 (170 W AC Power Module)
- 5.14 ES5M0PSD1700 (170 W DC Power Module)
- 5.15 PDC180S12-CR (180 W DC Power Module)
- 5.16 PAC240S56-CN (240 W AC Power Module)
- 5.17 PAC-260WA-E (260 W AC Power Module)
- 5.18 PDC-350WA-B (350 W DC Power Module)
- 5.19 PAC-600WA-B (600 W AC Power Module)
- 5.20 PAC600S12-CB (600 W AC Power Module)
- 5.21 PAC600S12-DB (600 W AC Power Module)
- 5.22 PAC600S12-EB (600 W AC Power Module)
- 5.23 PAC600S56-CB (600 W AC&240 V DC Power Module (Back to Front, Power panel side exhaust))
- 5.24 PAC1000S56-CB (1000 W PoE AC Power Module)
- 5.25 PAC1000S56-DB (1000 W PoE AC Power Module)
- 5.26 PDC1000S56-CB (1000 W PoE DC Power Module)
- 5.27 PDC1000S12-DB (1000 W DC Power Module)
- 5.28 RPS1800 Redundant Power Supply (6 DC Output Ports, 12V Total Output Power 140W, 48V Total Output Power 1600W)
- 5.29 LS5W2PSA0870 (870 W PoE Power Module, Rectifier 15 A)

5.1 PAC-60WA-L (60 W AC Power Module)

Product Support

Table 5-1 lists the switch models supporting a 60 W AC power module.

Table 5-1 Product support for a 60 W AC power module

Power Module Name	Product Support
PAC-60WA-L	S5721-28X-SI-24S-AC, S5720-28P-SI-AC, S5720-52P-SI-AC, S5720-28X-SI-AC, S5720-28X-SI-DC, S5720-52X-SI-AC, S5720-52X-SI-DC

Appearance

Figure 5-1 Appearance of a 60 W AC power module



Function

Table 5-2 describes the functions of a 60 W AC power module.

Table 5-2 Functions of a 60 W AC power module

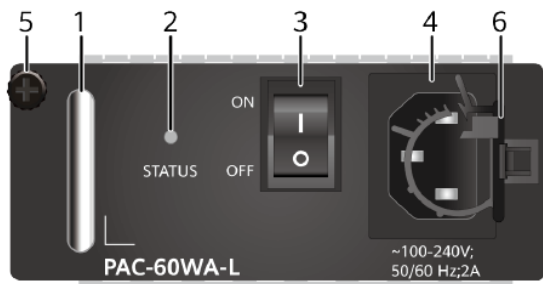
Function	Description
Input protection	Provides protection against input undervoltage condition.
Output protection	Provides protection against output undervoltage, output overvoltage, output overcurrent, and output short circuit conditions.
Overtemperature protection	When the temperature of the power module exceeds a specified threshold (70 °C or 158 °F), the power module stops supplying power. When the temperature falls into the normal range, the power module automatically resumes power supply.
Surge protection	-
Hot swapping	Supported

NOTE

When a power module enters overtemperature protection state, take measures to lower the ambient temperature. The power module can automatically start supplying power again when the temperature falls within the normal range.

Panel

Figure 5-2 Panel of a 60 W AC power module



1. Handle	2. Indicator	3. Power switch	4. AC power socket
5. Captive screw	6. AC power cable locking strap	-	-

Table 5-3 describes the indicator on the 60 W AC power module panel.

Table 5-3 Indicator on the 60 W AC power module panel

Indicator	Color	Description
STATUS	Green	Off: <ul style="list-style-type: none"> The power input is abnormal (no input, overvoltage, or undervoltage). The power output is abnormal (undervoltage or overtemperature). Steady on: The AC power input is normal.

Specifications

Table 5-4 lists technical specifications of a 60 W AC power module.

Table 5-4 Technical specifications of a 60 W AC power module

Item	Description
Dimensions (H x W x D)	40 mm x 100 mm x 205 mm (1.6 in. x 3.9 in. x 8.1 in.)
Weight	0.8 kg (1.76 lb)
Rated input voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum input voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz

Item	Description
Maximum input current	2 A
Maximum output current	5 A
Rated output voltage	12 V
Maximum output power	60 W
Part number	98010653

5.2 LS5M100PWA00/ES0W2PSA0150 (150 W AC Power Module)

Product Support

Table 5-5 lists the switch models supporting a 150 W AC power module.

Table 5-5 Product support for a 150 W AC power module

Power Module Name	Product Support
LS5M100PWA00 (purple gray)	S5700-28C-EI, S5700-28C-EI-24S, S5700-52C-EI, S5700-28C-SI, S5700-52C-SI, S5710-28C-LI, S5710-52C-LI
ES0W2PSA0150 (black)	S5700-28P-LI-BAT, S5700-28P-LI-24S-BAT, S5710-28C-EI, S5710-52C-EI, S5720-28P-SI-AC, S5720-28X-SI-AC, S5720-28X-SI-DC, S5720-52P-SI-AC, S5720-52X-SI-AC, S5720-52X-SI-DC, S5720-36C-EI-AC, S5720-36C-EI-DC, S5720-56C-EI-AC, S5720-56C-EI-DC, S5720-36C-EI-28S-AC, S5720-36C-EI-28S-DC, S5720-56C-EI-48S-AC, S5720-56C-EI-48S-DC, S5720-36PC-EI-AC, S5720-56PC-EI-AC, S5730-48C-SI-AC, S5730-68C-SI-AC, S5730S-48C-EI-AC, S5730S-68C-EI-AC, S5730-36C-HI, S5730-44C-HI, S5730-60C-HI, S5730-68C-HI, S5730-44C-HI-24S, S5730-36C-HI-24S, S5720-52X-SI-48S

Appearance

Figure 5-3 Appearance of a 150 W AC power module (LS5M100PWA00)



Figure 5-4 Appearance of a 150 W AC power module (ES0W2PSA0150)



Function

Table 5-6 describes the functions of a 150 W AC power module.

Table 5-6 Functions of a 150 W AC power module

Function	Description
Input protection	Input undervoltage and overvoltage protection is provided.
Output protection	Output undervoltage, overvoltage, overcurrent, and short-circuit protection is provided.
Overtemperature protection	When the temperature of the power module exceeds a specified threshold (70 °C), the power module stops supplying power. When the temperature falls into the normal range, the power module automatically resumes power supply.

Function	Description
Surge protection	-
Hot swapping	Supported

NOTE

When a power module enters overtemperature protection state, take measures to lower the ambient temperature. The power module can automatically start supplying power again when the temperature falls within the normal range.

Panel Description

Figure 5-5 Panel of a 150 W AC power module (LS5M100PWA00)

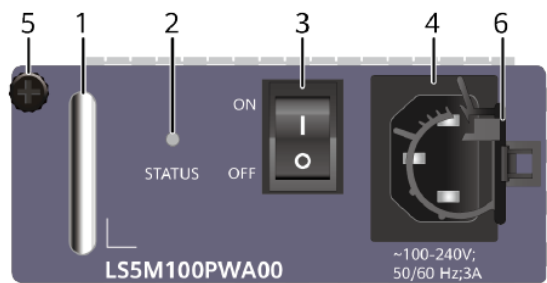
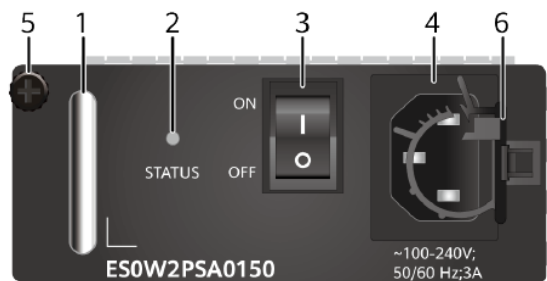


Figure 5-6 Panel of a 150 W AC power module (ES0W2PSA0150)



1. Handle	2. Power status indicator	3. Power switch	4. AC power socket
5. Captive screw	6. AC power cable locking strap	-	-

Table 5-7 describes the indicator on the 150 W AC power module panel.

Table 5-7 Description of the indicator on the 150 W AC power module panel

Indicator	Color	Description
STATUS	Green	Off:

Indicator	Color	Description
		<ul style="list-style-type: none">The input power is out of range, for example, no AC input power, AC input overvoltage, or AC input undervoltage.The output power is out of range, for example, undervoltage or overtemperature occurs. Steady on: The AC power input is in the normal range. Blinking: The output power is out of range, for example, overvoltage, overcurrent, or short circuit occurs.

Specifications

Table 5-8 describes technical specifications of a 150 W AC power module.

Table 5-8 Technical specifications of a 150 W AC power module

Item	Description
Dimensions (H x W x D)	40 mm x 100 mm x 205 mm (1.6 in. x 3.9 in. x 8.1 in.)
Weight	0.8 kg (1.76 lb)
Rated input voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum input voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum input current	3 A
Maximum output current	12.5 A
Rated output voltage	12 V
Maximum output power	150 W
Part number	LS5M100PWA00: 02316783 ES0W2PSA0150: 02310JFA

5.3 LS5M100PWD00/ES0W2PSD0150 (150 W DC Power Module)

Product Support

Table 5-9 lists switch models supporting a 150 W DC power module.

Table 5-9 Product support for a 150 W DC power module

Power Module Name	Product Support
LS5M100PWD00 (purple gray)	S5700-28C-EI, S5700-28C-EI-24S, S5700-52C-EI, S5700-28C-SI, S5700-52C-SI, S5710-28C-LI, S5710-52C-LI
ES0W2PSD0150 (black)	S5700-28P-LI-BAT, S5700-28P-LI-24S-BAT, S5710-28C-EI, S5710-52C-EI, S5720-28P-SI-AC, S5720-28X-SI-AC, S5720-28X-SI-DC, S5720-52P-SI-AC, S5720-52X-SI-AC, S5720-52X-SI-DC, S5721-28X-SI-24S-AC, S5720-36C-EI-AC, S5720-36C-EI-DC, S5720-56C-EI-AC, S5720-56C-EI-DC, S5720-36C-EI-28S-AC, S5720-36C-EI-28S-DC, S5720-56C-EI-48S-AC, S5720-56C-EI-48S-DC, S5720-36PC-EI-AC, S5720-56PC-EI-AC, S5730-48C-SI-AC, S5730-68C-SI-AC, S5730S-48C-EI-AC, S5730S-68C-EI-AC, S5730-36C-HI, S5730-44C-HI, S5730-60C-HI, S5730-68C-HI, S5730-44C-HI-24S, S5730-36C-HI-24S, S5720-52X-SI-48S

Appearance

Figure 5-7 Appearance of a 150 W DC power module (LS5M100PWD00)



Figure 5-8 Appearance of a 150 W DC power module (ES0W2PSD0150)



Function

Table 5-10 describes the functions of a 150 W DC power module.

Table 5-10 Functions of a 150 W DC power module

Function	Description
Alarm function	Alarms for various power supply events, such as no power input, air breaker status, ineffective surge protection, and input undervoltage are supported.
Short circuit	-
Surge protection	-
Hot swapping	Supported

Panel Description

Figure 5-9 Panel of a 150 W DC power module (LS5M100PWD00)

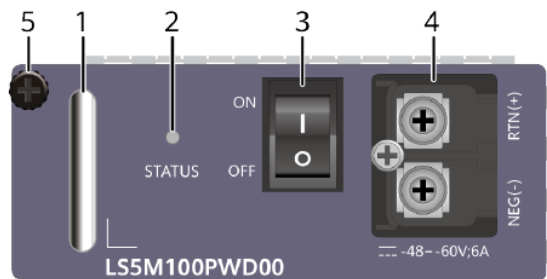
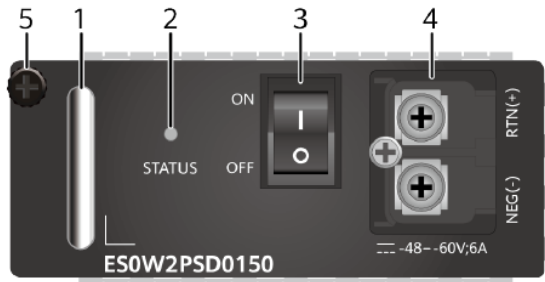


Figure 5-10 Panel of a 150 W DC power module (ES0W2PSD0150)



1. Handle	2. Power status indicator	3. Power switch	4. DC power terminal	5. Captive screw
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Table 5-11 describes indicators on a 150 W DC power module panel.

Table 5-11 Description of indicators on a 150 W DC power module panel

Indicator	Color	Description
STATUS	Green	<p>Off:</p> <ul style="list-style-type: none"> The input power is out of range, for example, no DC input power, DC input overvoltage, or DC input undervoltage. The output power is out of range, for example, undervoltage or overtemperature occurs. <p>Steady on: The DC power input is in the normal range.</p> <p>Blinking: The output power is out of range, for example, overvoltage, overcurrent, or short circuit occurs.</p>

Specifications

Table 5-12 describes technical specifications of a 150 W DC power module.

Table 5-12 Technical specifications of a 150 W DC power module

Item	Description
Dimensions (H x W x D)	40 mm x 100 mm x 205 mm (1.6 in. x 3.9 in. x 8.1 in.)
Weight	0.8 kg (1.76 lb)
Rated input voltage range	-48 V DC to -60 V DC
Maximum input voltage range	-36 V DC to -72 V DC

Item	Description
Maximum input current	6 A
Maximum output current	12.5 A
Rated output voltage	12 V
Maximum output power	150 W
Part number	LS5M100PWD00: 02316784 ES0W2PSD0150: 02310JFD

5.4 PAC-350WA-B (350 W AC Power Module)

Version Mapping

Table 5-13 lists the switch models supporting a 350 W AC power module.

Table 5-13 Product support for a 350 W AC power module

Power Module Name	Product Support
PAC-350WA-B	S5710-108C-PWR-HI

Appearance

Figure 5-11 Appearance of a 350 W AC power module



Function

Table 5-14 describes the functions of a 350 W AC power module.

Table 5-14 Functions of a 350 W AC power module

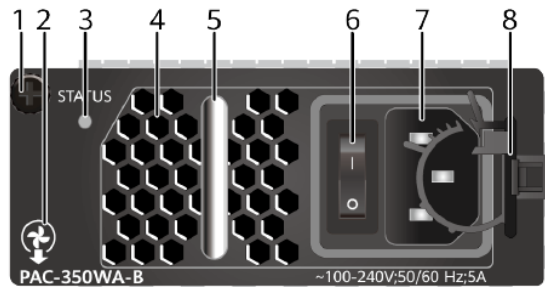
Function		Description
Input protection	Input undervoltage protection	In this protection state, the power module stops supplying power. When the input voltage restores to the normal range, the power module automatically resumes power supply.
	Input overcurrent protection	In this protection state, the power module stops supplying power and cannot automatically start supplying power again when the input current restores to the normal range.
Output protection	Output overvoltage protection	In this protection state, the power module stops supplying power intermittently. When the system recovers from output overvoltage, the power module automatically resumes power supply.
	Output overcurrent protection	In this protection state, the power module supplies power intermittently. When the output current is within a range, the power module automatically resumes power supply.
	Output short-circuit protection	In this protection state, the power module supplies power intermittently. When the short circuit is removed, the power module automatically resumes power supply.
Overtemperature protection		When the temperature of the power module exceeds a specified threshold, the power module stops supplying power. When the temperature falls into the normal range, the power module automatically resumes power supply.
Hot swapping		Supported

NOTE

When a power module enters overtemperature protection state, take measures to lower the ambient temperature. The power module can automatically start supplying power again when the temperature falls within the normal range.

Panel

Figure 5-12 Panel of a 350 W AC power module



1. Captive screw	2: Airflow flag (air out)	3. Indicator	4. Fan air vent
5. Handle	6. Power switch	7. AC power socket	8. AC power cable locking strap

Table 5-15 describes the indicator on the 350 W AC power module panel.

Table 5-15 Description of the indicator on the 350 W AC power module panel

Indicator	Color	Description
STATUS	Green	Off: The AC power input is abnormal (for example, no input, overvoltage, or undervoltage) or AC power output is abnormal (for example, overvoltage, overcurrent, short-circuit, or overtemperature). Steady on: The power module is working properly.

Specifications

Table 5-16 lists specifications of a 350 W AC power module.

Table 5-16 Specifications of a 350 W AC power module

Item	Description
Dimensions (H x W x D)	40 mm x 100 mm x 205 mm (1.6 in. x 3.9 in. x 8.1 in.)
Weight	0.918 kg (2.02 lb)
Rated input voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum input voltage	90 V AC to 290 V AC, 45 Hz to 65 Hz
Maximum input	5 A

Item	Description
current	
Maximum output current	29.17 A
Rated output voltage	12 V
Maximum output power	350 W
Part number	02130971

5.5 W0PSA2500 (250 W AC PoE Power Module)

Product Support

Table 5-17 lists the switch models supporting a 250 W AC PoE power module.

Table 5-17 Product support for a 250 W AC PoE power module

Power Module Name	Product Support
W0PSA2500	S5700-28C-PWR-EI, S5700-52C-PWR-EI, S5700-28C-PWR-SI, S5700-52C-PWR-SI, S5700-24TP-PWR-SI, S5700-48TP-PWR-SI, S5710-28C-PWR-LI, S5710-52C-PWR-LI

Appearance

Figure 5-13 Appearance of the 250 W AC PoE power module



Function

Table 5-18 describes the functions of a 250 W AC PoE power module.

Table 5-18 Functions of a 250 W AC PoE power module

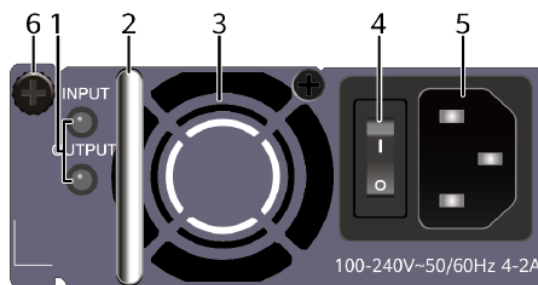
Function	Description
PoE power supply	Complying with IEEE 802.3af and IEEE 802.3at, the PoE power module is able to remotely provide power for the devices of different vendors. IEEE 802.3af supports a maximum of 15.4 W power and IEEE 802.3at supports a maximum of 30 W power.
Input protection	Input overcurrent and undervoltage protection is provided.
Output protection	Output undervoltage, overvoltage, overcurrent, and short-circuit protection is provided.
Overtemperature protection	-
Surge protection	-
Hot swapping	Supported

NOTE

When a power module enters overtemperature protection state, take measures to lower the ambient temperature. The power module can automatically start supplying power again when the temperature falls within the normal range.

Panel Description

Figure 5-14 Panel of a 250 W AC PoE power module



1. Power status indicator	2. Handle	3. Fan	4. Switch
5. AC power socket	6. Captive screw	-	-

Table 5-19 describes indicators on a 250 W AC PoE power module panel.

Table 5-19 Description of indicators on a 250 W AC PoE power module panel

Indicator	Color	Description
INPUT	-	Off: The power module receives no input power.
	Green	Steady on: The AC input power is in the normal range.
	Red	Steady on: The AC input power is out of range, for example, undervoltage or overvoltage.
OUTPUT	-	Off: The power module has no output power.
	Green	Steady on: The AC output power is in the normal range.
	Red	Steady on: The power output is out of range. <ul style="list-style-type: none">• Abnormal power fan operation• Output overvoltage• Output overcurrent• Short circuit• Overtemperature

Specifications

Table 5-20 describes technical specifications of a 250 W AC PoE power module.

Table 5-20 Technical specifications of a 250 W AC PoE power module

Item	Description
Dimensions (H x W x D)	40 mm x 100 mm x 205 mm (1.6 in. x 3.9 in. x 8.1 in.)
Weight	0.8 kg (1.76 lb)
Rated input voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum input voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Input current	4 A to 2 A
Maximum output current	<ul style="list-style-type: none">• +12 V: 10 A• -53.5 V: 2.5 A
Maximum output power	<ul style="list-style-type: none">• PoE: 130 W• Total: 250 W
Part number	02130878

5.6 W0PSA5000/PAC-500WA-BE (500 W AC PoE Power Module)

Product Support

Table 5-21 lists the switch models supporting a 500 W AC PoE power modules.

Table 5-21 Product support for a 500 W AC PoE power module

Power Module Name	Product Support
W0PSA5000 (purple gray)	S5700-28C-PWR-EI, S5700-52C-PWR-EI, S5700-28C-PWR-SI, S5700-52C-PWR-SI, S5700-24TP-PWR-SI, S5700-48TP-PWR-SI, S5710-28C-PWR-LI, S5710-52C-PWR-LI
PAC-500WA-BE (black)	S5720-28X-PWR-SI-AC, S5720-28X-PWR-SI-DC, S5720-52X-PWR-SI-AC, S5720-52X-PWR-SI-DC, S5720-36C-PWR-EI-AC, S5720-36C-PWR-EI-DC, S5720-56C-PWR-EI-DC, S5720-56C-PWR-EI-AC, S5730-48C-PWR-SI-AC, S5730S-48C-PWR-EI, S5730-68C-PWR-SI-AC, S5730-68C-PWR-SI, S5730S-68C-PWR-EI, S5730-36C-PWH-HI, S5730-44C-PWH-HI, S5730-60C-PWH-HI, S5730-68C-PWH-HI

Appearance

Figure 5-15 Appearance of a 500 W AC PoE power module (W0PSA5000)



Figure 5-16 Appearance of a 500 W AC PoE power module (PAC-500WA-BE)

Function

Table 5-22 describes the functions of a 500 W AC PoE power module.

Table 5-22 Functions of a 500 W AC PoE power module

Function	Description
PoE power supply	Complying with IEEE 802.3af and IEEE 802.3at, the PoE power module is able to remotely provide power for the devices of different vendors. IEEE 802.3af supports a maximum of 15.4 W power and IEEE 802.3at supports a maximum of 30 W power.
Input protection	Input overcurrent and undervoltage protection is provided.
Output protection	Output undervoltage, overvoltage, overcurrent, and short-circuit protection is provided.
Overtemperature protection	-
Surge protection	-
Hot swapping	Supported

NOTE

When a power module enters overtemperature protection state, take measures to lower the ambient temperature. The power module can automatically start supplying power again when the temperature falls within the normal range.

Panel Description

Figure 5-17 Panel of a 500 W AC PoE power module (W0PSA5000)

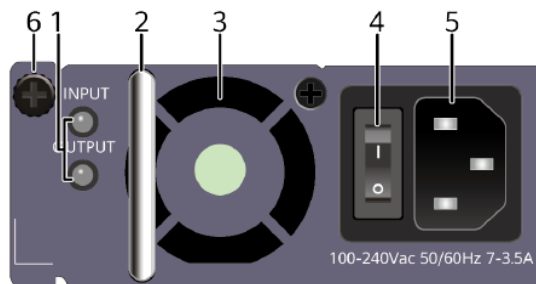
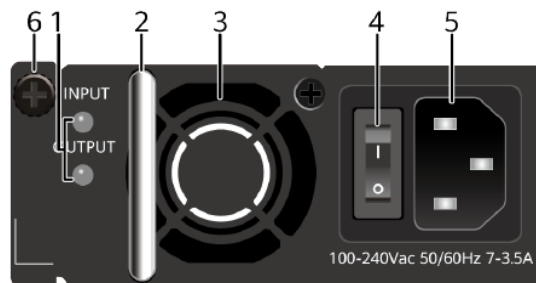


Figure 5-18 Panel of a 500 W AC PoE power module (PAC-500WA-BE)



1. Power status indicator	2. Handle	3. Fan	4. Switch
5. AC power socket	6. Captive screw	-	-

Table 5-23 describes indicators on a 500 W AC PoE power module panel.

Table 5-23 Description of indicators on a 500 W AC PoE power module panel

Indicator	Color	Description
INPUT	-	Off: The power module receives no input power.
	Green	Steady on: The AC input power is in the normal range.
	Red	Steady on: The AC input power is out of range, for example, undervoltage or overvoltage.
OUTPUT	-	Off: The power module has no output power.
	Green	Steady on: The AC output power is in the normal range.
	Red	Steady on: The power output is out of range. <ul style="list-style-type: none"> Abnormal power fan operation

Indicator	Color	Description
		<ul style="list-style-type: none"> • Output overvoltage • Output overcurrent • Short circuit • Overtemperature

Specifications

Table 5-24 describes technical specifications of a 500 W AC PoE power module.

Table 5-24 Technical specifications of a 500 W AC PoE power module

Item	Description
Dimensions (H x W x D)	40 mm x 100 mm x 205 mm (1.6 in. x 3.9 in. x 8.1 in.)
Weight	1.06 kg (2.34 lb)
Rated input voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum input voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum input current	7 A to 3.5 A
Maximum output current	<ul style="list-style-type: none"> • +12 V: 10 A • -53.5 V: 7.11 A
Maximum output power	<ul style="list-style-type: none"> • +12 V: 120 W • -53.5 V: 380 W (PoE: 369.6 W)
Part number	W0PSA5000: 02130879 PAC-500WA-BE: 02311BXV

5.7 W2PSA0580 (580 W AC PoE Power Module)

Product Support

Table 5-25 lists the switch models supporting a 580 W AC PoE power module.

Table 5-25 Product support for a 580 W AC PoE power module

Power Module Name	Product Support

Power Module Name	Product Support
W2PSA0580	S5710-52C-PWR-EI, S5710-28C-PWR-EI-AC, S5710-52C-PWR-EI-AC, S5720-56C-PWR-HI-AC1

Appearance

Figure 5-19 Appearance of the 580 W AC PoE power module



Function

Table 5-26 describes the functions of a 580 W AC PoE power module.

Table 5-26 Functions of a 580 W AC PoE power module

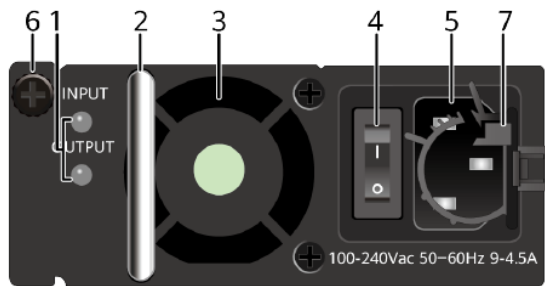
Function	Description
PoE power supply	Provides a maximum of 369.6 W PoE power.
Input protection	Input overcurrent and undervoltage protection is provided.
Output protection	Output overvoltage, overcurrent, and short-circuit protection is provided.
Overtemperature protection	When the temperature of the power module exceeds a specified threshold (75 °C), the power module stops supplying power. When the temperature falls into the normal range, the power module automatically resumes power supply.
Hot swapping	Supported

NOTE

When a power module enters overtemperature protection state, take measures to lower the ambient temperature. The power module can automatically start supplying power again when the temperature falls within the normal range.

Panel Description

Figure 5-20 Panel of a 580 W AC PoE power module



1. Power status indicator	2. Handle	3. Fan	4. Switch
5. AC power socket	6. Captive screw	7. AC power cable locking strap	-

Table 5-27 describes indicators on a 580 W AC PoE power module panel.

Table 5-27 Description of indicators on a 580 W AC PoE power module panel

Indicator	Color	Description
INPUT	-	Off: The power module receives no input power.
	Green	Steady on: The AC input power is in the normal range.
	Red	Steady on: The AC input power is out of range, for example, undervoltage or overvoltage.
OUTPUT	-	Off: The power module has no output power.
	Green	Steady on: The AC output power is in the normal range.
	Red	Steady on: The power output is out of range. <ul style="list-style-type: none"> Abnormal power fan operation Output overvoltage Output overcurrent Short circuit Overtemperature

Specifications

Table 5-28 describes technical specifications of a 580 W AC PoE power module.

Table 5-28 Technical specifications of a 580 W AC PoE power module

Item	Description
Dimensions (H x W x D)	40 mm x 100 mm x 205 mm (1.6 in. x 3.9 in. x 8.1 in.)
Weight	< 1.6 kg (3.53 lb)
Rated input voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum input voltage range	90 V AC to 290 V AC, 47 Hz to 63 Hz
Input current	9 A to 4.5 A
Maximum output current	<ul style="list-style-type: none">+12 V: 16.66 A-53.5 V: 7.11 A
Maximum output power	<ul style="list-style-type: none">PoE: 369.6 WTotal: 580 W
Part number	02130953

5.8 PDC-650WA-BE (650 W DC PoE Power Module)

Product Support

Table 5-29 lists the switch models supporting a 650 W DC PoE power module.

Table 5-29 Product support for a 650 W DC PoE power module

Power Module Name	Product Support
PDC-650WA-BE	S5720-28X-PWR-SI-AC, S5720-28X-PWR-SI-DC, S5720-52X-PWR-SI-AC, S5720-52X-PWR-SI-DC, S5720-36C-PWR-EI-AC, S5720-36C-PWR-EI-DC, S5720-56C-PWR-EI-AC, S5720-56C-PWR-EI-DC, S5730-48C-PWR-SI-AC, S5730S-48C-PWR-EI, S5730-68C-PWR-SI-AC, S5730-68C-PWR-SI, S5730S-68C-PWR-EI, S5730-36C-PWH-HI, S5730-44C-PWH-HI, S5730-60C-PWH-HI, S5730-68C-PWH-HI

Appearance

Figure 5-21 Appearance of a 650 W DC PoE power module (PDC-650WA-BE)



Function

Table 5-30 describes the functions of a 650 W DC PoE power module.

Table 5-30 Functions of a 650 W DC PoE power module

Function		Description
Input protection	Input undervoltage protection	In this protection state, the power module stops supplying power. When the input voltage restores to the normal range, the power module automatically resumes power supply.
	Input overcurrent protection	In this protection state, the power module stops supplying power and cannot automatically start supplying power again when the input current restores to the normal range.
Output protection	Output overvoltage protection	In this protection state, the power module stops supplying power intermittently. When the system recovers from output overvoltage, the power module automatically resumes power supply.
	Output overcurrent protection	In this protection state, the power module supplies power intermittently. When the output current is within a range, the power module automatically resumes power supply.
	Output short-circuit protection	In this protection state, the power module supplies power intermittently. When the short circuit is removed, the power module automatically resumes power supply.
Overtemperature protection		When the temperature of the power module exceeds a specified threshold, the power module stops supplying power. When the temperature falls into the normal range, the power module automatically resumes power supply.

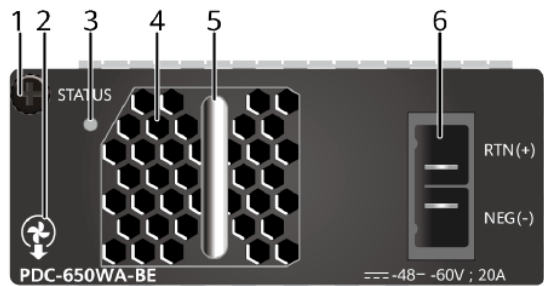
Function	Description
	supply.
Hot swapping	Supported

NOTE

When a power module enters overtemperature protection state, take measures to lower the ambient temperature. The power module can automatically start supplying power again when the temperature falls within the normal range.

Panel

Figure 5-22 Panel of a 650 W DC PoE power module (PDC-650WA-BE)



1. Captive screw	2: Airflow flag (air out)	3. Indicator	4. Fan air vent
5. Handle	6. DC power socket	-	-

Table 5-31 describes the indicator on the 650 W DC PoE power module panel.

Table 5-31 Description of indicator on the 650 W DC PoE power module panel

Indicator	Color	Description
STATUS: running status indicator	Green	<ul style="list-style-type: none"> Off: The power input is abnormal (for example, no input, overvoltage, or undervoltage) or the power output is abnormal (for example, overvoltage, overcurrent, short-circuit, or overtemperature). Steady on: The power module is working normally.

Specifications

Table 5-32 describes technical specifications of a 650 W DC PoE power module.

Table 5-32 Technical specifications of a 650 W DC PoE power module

Item	Description
Dimensions (H x W x D)	40 mm x 100 mm x 205 mm (1.6 in. x 3.9 in. x 8.1 in.)
Weight	0.83 kg (1.83 lb)
Rated input voltage range	-48 V DC to -60 V DC
Maximum input voltage	-38.4 V DC to -72 V DC
Maximum input current	20 A
Maximum output current	<ul style="list-style-type: none">• +12 V: 22.5 A• -53.5 V: 7.11 A
Rated output power	<ul style="list-style-type: none">• PoE power: 369.6 W• Total power: 650 W
Part number	02270152

5.9 PAC1000D5412 (1000 W AC PoE Power Module)

Product Support

Table 5-33 lists the switch models supporting a 1000 W AC PoE power module.

Table 5-33 Product support for a 1000 W AC PoE power module

Power Module Name	Product Support
PAC1000D5412	S5720-52X-PWR-SI-ACF, S5730-68C-PWR-SI, S5730S-68C-PWR-EI, S5720-56C-PWR-EI-AC1, S5730-36C-PWH-HI, S5730-44C-PWH-HI, S5730-60C-PWH-HI, S5730-68C-PWH-HI

Appearance

Figure 5-23 Appearance of a 1000 W AC PoE power module



Functions

Table 5-34 describes the functions of a 1000 W AC PoE power module.

Table 5-34 Functions of a 1000 W AC PoE power module

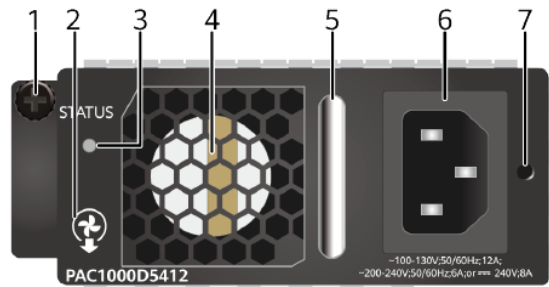
Function	Description
PoE power supply	Provides a maximum of 754.6 W PoE power.
Input protection	Provides protection against input overvoltage and input undervoltage.
Output protection	Provides protection against output overvoltage, output overcurrent, and output short-circuit.
Overtemperature protection	When the temperature of the power module exceeds a specified threshold (80 °C or 176 °F), the power module stops supplying power. When the temperature falls into the normal range, the power module automatically resumes power supply.
Hot swapping	Supported

NOTE

When a power module enters overtemperature protection state, take measures to lower the ambient temperature. The power module can automatically start supplying power again when the temperature falls within the normal range.

Panel

Figure 5-24 Panel of a 1000 W AC PoE power module



1. Captive screw	2. Airflow flag (air out)	3. Indicator	4. Fan
5. Handle	6. AC power socket	7. AC power cable locking strap	-

Table 5-35 describes indicators on a 1000 W AC PoE power module.

Table 5-35 Description of indicator on a 1000 W AC PoE power module

Indicator	Color	Description
STATUS	Green	<p>Off:</p> <ul style="list-style-type: none"> The AC power input is abnormal, for example, no AC input power, AC input overvoltage, or AC input undervoltage occurs. The AC power output is abnormal, for example, output undervoltage or overtemperature occurs. <p>Steady on: The AC power input is in normal range.</p>

Specifications

Table 5-36 lists the specifications of a 1000 W AC PoE power module.

Table 5-36 Specifications of a 1000 W AC PoE power module

Item	Description
Dimensions (H x W x D)	42 mm x 99 mm x 204 mm (1.7 in. x 3.9 in. x 8.0 in.)
Weight	1.1 kg (2.43 lb)
Rated input voltage range	100 V AC to 130 V AC, 50/60 Hz 200 V AC to 240 V AC, 50/60 Hz 240 V DC
Maximum input	90 V AC to 290 V AC, 47 Hz to 63 Hz

Item	Description
voltage range	190 V DC to 290 V DC
Input current	100 V AC to 130 V AC: 12 A 200 V AC to 240 V AC: 6 A 240 V DC: 8 A
Maximum output current	<ul style="list-style-type: none">• 12 V: 20.84 A• 53.5 V: 14.58 A• 56 V: 13.93 A
Maximum output power	100 V AC to 130 V AC input: <ul style="list-style-type: none">• PoE: 754.6 W• Total: 900 W 200 V AC to 240 V AC input and 240 V DC input: <ul style="list-style-type: none">• PoE: 754.6 W• Total: 1000 W
Operating altitude	100 V AC to 130 V AC: 0-3000 m 200 V AC to 240 V AC: 0-5000 m 240 V DC: 0-5000 m
Part number	02312EJK

5.10 W2PSA1150 (1150 W AC PoE Power Module)

Product Support

Table 5-37 lists the switch models supporting a 1150 W AC PoE power module.

Table 5-37 Product support for a 1150 W AC PoE power module

Power Module Name	Product Support
W2PSA1150	S5710-52C-PWR-EI, S5720-52X-PWR-SI-ACF, S5720-56C-PWR-HI-AC, S5710-108C-PWR-HI, S5720-56C-PWR-EI-AC1, S5730-68C-PWR-SI, S5730S-68C-PWR-EI, S5730-36C-PWH-HI, S5730-44C-PWH-HI, S5730-60C-PWH-HI, S5730-68C-PWH-HI

Appearance

Figure 5-25 Appearance of a 1150 W AC PoE power module (W2PSA1150)



Figure 5-26 shows a 1150 W AC PoE power module installed on a switch.

Figure 5-26 1150 W AC PoE power module on a switch



NOTE

If a switch uses 1150 W power modules, it is recommended that the switch be installed in an 800 mm or deeper standard cabinet. If the switch is installed in a 600 mm deep cabinet, the rear door of the cabinet cannot be closed.

Functions

Table 5-38 describes the functions of a 1150 W AC PoE power module.

Table 5-38 Functions of a 1150 W AC PoE power module

Function	Description
PoE power supply	Provides a maximum of 785.4 W PoE power.
Input protection	Provides protection against input overcurrent and input undervoltage.
Output protection	Provides protection against output overvoltage, output overcurrent, and output short-circuit.
Overtemperature protection	When the temperature of the power module exceeds a specified threshold (70 °C), the power module stops supplying power. When the temperature falls into the

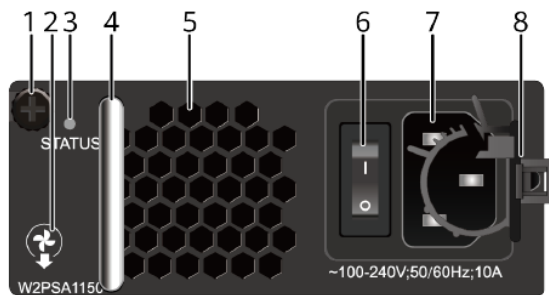
Function	Description
	normal range, the power module automatically resumes power supply.
Hot swapping	Supported

NOTE

When a power module enters overtemperature protection state, take measures to lower the ambient temperature. The power module can automatically start supplying power again when the temperature falls within the normal range.

Panel

Figure 5-27 Panel of a 1150 W AC PoE power module (W2PSA1150)



1. Captive screw	2. Airflow flag (air out)	3. Indicator	4. Handle
5. Fan	6. Power switch	7. AC power socket	8. AC power cable locking strap

Table 5-39 describes indicators on a 1150 W AC PoE power module panel.

Table 5-39 Description of indicators on a 1150 W AC PoE power module panel

Indicator	Color	Description
STATUS	Green	<p>Off:</p> <ul style="list-style-type: none"> The AC power input is abnormal, for example, no AC input power, AC input overvoltage, or AC input undervoltage occurs. The AC power output is abnormal, for example, output undervoltage or overtemperature occurs. <p>Steady on: The AC power input is in the normal range.</p> <p>Blinking: The AC power output is abnormal, for example, overvoltage, overcurrent, or short circuit occurs.</p>

Specifications

Table 5-40 lists the specifications of a 1150 W AC PoE power module.

Table 5-40 Technical specifications of a 1150 W AC PoE power module

Item	Description
Dimensions (H x W x D)	41.4 mm x 100.0 mm x 281.0 mm (1.63 in. x 3.9 in. x 11.1 in.)
Weight	< 1.6 kg (3.53 lb)
Rated input voltage	100 V AC to 240 V AC, 50/60 Hz
Maximum input voltage	90 V AC to 290 V AC, 45 Hz to 65 Hz
Input current	10 A
Maximum output current	<ul style="list-style-type: none">+12 V: 29.17 A-53.5 V: 14.95 A
Maximum output power	<ul style="list-style-type: none">PoE: 785.4 W (220 V)/446.6 W (110 V)Total: 1150 W (220 V)/800 W (110 V)
Part number	02130984

5.11 PAC60S12-AR (60 W AC Power Module)

Overview

Table 5-41 Basic information about the PAC60S12-AR

Item	Details
Description	60 W AC Power Module
Part Number	02312SLE
Model	PAC60S12-AR

Appearance

Figure 5-28 Appearance of the PAC60S12-AR



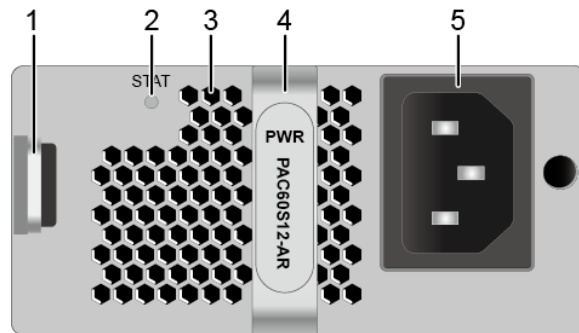
Version Mapping

Table 5-42 Mappings between PAC60S12-AR and product models

Product	Product Model	First Supported Version
S5735-S	S5735-S24T4X (98010938)	V200R019C00
S5735-S	S5735-S32ST4X (98010931)	V200R019C00
S5735-S	S5735-S48T4X (98010941)	V200R019C00
S5735S-S	S5735S-S24T4S-A (98010939)	V200R019C00
S5735S-S	S5735S-S24T4X-A (98010967)	V200R019C10
S5735S-S	S5735S-S32ST4X-A (98010932)	V200R019C00
S5735S-S	S5735S-S48T4S-A (98010942)	V200R019C00
S5735S-S	S5735S-S48T4X-A (98010968)	V200R019C10
S5735-S-I	S5735-S24T4X-I (98010960)	V200R019C10

Panel

Figure 5-29 Panel of the PAC60S12-AR



1. Lock	2. Indicator	3. Air vent	4. Handle
5. AC power socket	-	-	-

Table 5-43 Indicators on the PAC60S12-AR

Silkscreen	Name	Color	Status	Description
STAT	Running status indicator	-	Steady off	The power input is abnormal (for example, no input, overvoltage, or undervoltage) or the power output is abnormal (for example, undervoltage or overtemperature).
		Green	Steady on	The power module is working normally.
		Green	Blinking	The output power is out of range, for example, overvoltage, overcurrent, or short circuit occurs.

Functions and Features

Table 5-44 Functions of a 60 W AC power module

Function		Description
Input protection	Input undervoltage protection	In this protection state, the power module stops supplying power. When the input voltage restores to the normal range, the power module automatically resumes power supply.
	Input overcurrent protection	In this protection state, the power module stops supplying power and cannot automatically resume power supply when the input current restores to the normal range.
Output protection	Output overvoltage protection	In this protection state, the power module stops supplying power intermittently. When the output voltage restores to the normal range, the power module automatically resumes power supply.
	Output overcurrent protection	In this protection state, the power module supplies power intermittently. When the output current is within a range, the power module automatically resumes power supply.
	Output short-circuit protection	In this protection state, the power module supplies power intermittently. When the short circuit is removed, the power module automatically resumes power supply.
Overtemperature protection		When the temperature of the power module exceeds a specified threshold, the power module stops supplying power. When the temperature falls into the normal range, the power module automatically resumes power supply.
Hot swapping		Supported

 NOTE

When a power module enters overtemperature protection state, take measures to lower the ambient temperature. The power module can automatically start supplying power again when the temperature falls within the normal range.

Technical Specifications

Table 5-45 Technical specifications of the PAC60S12-AR

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	40 mm x 90 mm x 215 mm (1.6 in. x 3.5 in. x 8.5 in.)
Weight without packaging [kg(lb)]	0.68 kg (1.5 lb)
Number of inputs	1

Item	Specification
Rated input voltage [V]	100 V AC to 240 V AC, 50/60 Hz 240 V DC
Input voltage range [V]	90 V AC to 264 V AC, 47 Hz to 63 Hz 190 V DC to 290 V DC
Maximum input current [A]	100 V AC to 240 V AC: 2 A 240 V DC: 2 A
Rated output voltage [V]	12 V
Rated output current [A]	5 A
Rated output power [W]	60 W
Power dissipation Mode	Natural heat dissipation without fans
Hot swapping	Supported

5.12 PAC150S12-R (150 W AC Power Module)

Overview

Table 5-46 Basic information about the PAC150S12-R

Item	Details
Description	150 W AC Power Module
Part Number	02312DUY
Model	PAC150S12-R

Appearance

Figure 5-30 Appearance of the PAC150S12-R



Version Mapping

Table 5-47 Mappings between PAC150S12-R and product models

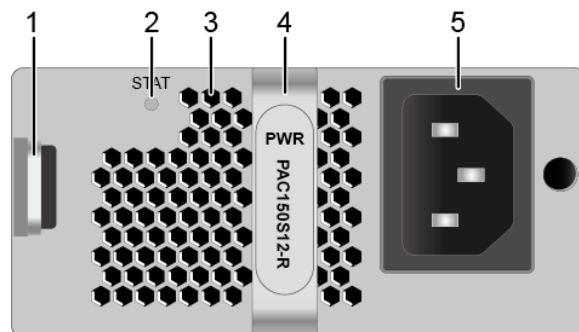
Product	Product Model	First Supported Version
S5731-S	S5731-S24T4X (02353AHU)	V200R019C00
S5731-S	S5731-S24T4X (02353AHU-001)	V200R020C10
S5731-S	S5731-S24T4X (98011851)	V200R021C10
S5731-S	S5731-S32ST4X (98011813)	V200R021C01
S5731-S	S5731-S48S4X (98011805)	V200R021C01
S5731-S	S5731-S48T4X (02353AJB)	V200R019C00
S5731-S	S5731-S48T4X (02353AJB-003)	V200R020C10
S5731-S	S5731-S48T4X (98011847)	V200R021C10
S5731S-S	S5731S-S24T4X-A (02353AHV)	V200R019C00
S5731S-S	S5731S-S24T4X-A (02353AHV-001)	V200R020C10
S5731S-S	S5731S-S24T4X-A	V200R021C10

Product	Product Model	First Supported Version
	(98011852)	
S5731S-S	S5731S-S32ST4X-A (98011814)	V200R021C01
S5731S-S	S5731S-S48S4X-A (98011806)	V200R021C01
S5731S-S	S5731S-S48T4X-A (02353AJC)	V200R019C00
S5731S-S	S5731S-S48T4X-A (02353AJC-003)	V200R020C10
S5731S-S	S5731S-S48T4X-A (98011848)	V200R021C10
S5731-H	S5731-H24T4XC (02352QPP)	V200R019C00
S5731-H	S5731-H24T4XC (02352QPP-001)	V200R020C10
S5731-H	S5731-H48T4XC (02352QPT)	V200R019C00
S5731-H	S5731-H48T4XC (02352QPT-003)	V200R020C10
S5731-H	S5731-H48T4XC-B (02353VAD)	V200R020C00
S5731-H	S5731-H48T4XC-B (02353VAD-003)	V200R020C10
S5731S-H	S5731S-H24T4S-A (02353DJE)	V200R019C00
S5731S-H	S5731S-H24T4S-A (02353DJE-001)	V200R020C10
S5731S-H	S5731S-H24T4X-A (02353HVH)	V200R019C10
S5731S-H	S5731S-H24T4X-A (02353HVH-001)	V200R020C10
S5731S-H	S5731S-H24T4XC-A (02352YRG)	V200R019C00
S5731S-H	S5731S-H24T4XC-A (02352YRG-001)	V200R020C10
S5731S-H	S5731S-H48T4S-A (02353DJG)	V200R019C00
S5731S-H	S5731S-H48T4S-A (02353DJG-003)	V200R020C10

Product	Product Model	First Supported Version
S5731S-H	S5731S-H48T4X-A (02353HVJ)	V200R019C10
S5731S-H	S5731S-H48T4X-A (02353HVJ-003)	V200R020C10
S5731S-H	S5731S-H48T4XC-A (02352YRF)	V200R019C00
S5731S-H	S5731S-H48T4XC-A (02352YRF-003)	V200R020C10
S5735-S	S5735-S48S4X (98010947)	V200R019C00
S5735S-H	S5735S-H24S4XC-A (98011041)	V200R021C01
S5735S-H	S5735S-H24T4XC-A (98011025)	V200R020C00
S5735S-H	S5735S-H48T4XC-A (98011029)	V200R020C00
S5736-S	S5736-S24S4XC (98011038)	V200R021C01
S5736-S	S5736-S24T4XC (98011022)	V200R020C00
S5736-S	S5736-S48S4XC (98011042)	V200R021C01
S5736-S	S5736-S48T4XC (98011026)	V200R020C00

Panel

Figure 5-31 Panel of the PAC150S12-R



1. Lock	2. Indicator	3. Air vent	4. Handle
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5. AC power socket	-	-	-
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Table 5-48 Indicators on the PAC150S12-R

Silkscreen	Name	Color	Status	Description
STAT	Running status indicator	-	Steady off	The power input is abnormal (for example, no input, overvoltage, or undervoltage) or the power output is abnormal (for example, undervoltage or overtemperature).
		Green	Steady on	The power module is working normally.
		Green	Blinking	The output power is out of range, for example, overvoltage, overcurrent, or short circuit occurs.

Functions and Features

Table 5-49 Functions of a 150 W AC power module

Function		Description
Input protection	Input undervoltage protection	In this protection state, the power module stops supplying power. When the input voltage restores to the normal range, the power module automatically resumes power supply.
	Input overcurrent protection	In this protection state, the power module stops supplying power and cannot automatically resume power supply when the input current restores to the normal range.
Output	Output	In this protection state, the power module stops supplying

Function		Description
protection	overvoltage protection	power intermittently. When the output voltage restores to the normal range, the power module automatically resumes power supply.
	Output overcurrent protection	In this protection state, the power module supplies power intermittently. When the output current is within a range, the power module automatically resumes power supply.
	Output short-circuit protection	In this protection state, the power module supplies power intermittently. When the short circuit is removed, the power module automatically resumes power supply.
Overtemperature protection		When the temperature of the power module exceeds a specified threshold, the power module stops supplying power. When the temperature falls into the normal range, the power module automatically resumes power supply.
Hot swapping		Supported

 **NOTE**

When a power module enters overtemperature protection state, take measures to lower the ambient temperature. The power module can automatically start supplying power again when the temperature falls within the normal range.

Technical Specifications

Table 5-50 Technical specifications of the PAC150S12-R

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	40 mm x 90 mm x 215 mm (1.6 in. x 3.5 in. x 8.5 in.)
Weight without packaging [kg(lb)]	0.8 kg (1.76 lb)
Number of inputs	1
Rated input voltage [V]	100 V AC to 240 V AC, 50/60 Hz
Input voltage range [V]	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum input current [A]	3 A
Rated output voltage [V]	12 V
Rated output current [A]	12.5 A
Rated output power [W]	150 W
Power dissipation Mode	Natural heat dissipation without fans
Hot swapping	Supported

5.13 W0PSA1701 (170 W AC Power Module)

Overview

Table 5-51 Basic information about the W0PSA1701

Item	Details
Description	170 W AC Power Module
Part Number	02130966
Model	W0PSA1701

Appearance

Figure 5-32 Appearance of the W0PSA1701



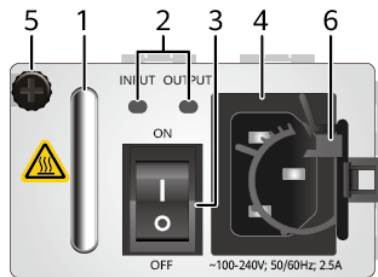
Version Mapping

Table 5-52 Mappings between W0PSA1701 and product models

Product	Product Model	First Supported Version
S5700-HI	S5700-28C-HI (02353630)	V100R006C01
S5700-HI	S5700-28C-HI-24S (02353631)	V100R006C01

Panel

Figure 5-33 Panel of the W0PSA1701



1. Handle	2. Power status indicator	3. Power switch	4. AC power socket
5. Captive screw	6. AC power cable locking strap	-	-

Table 5-53 Indicators on the W0PSA1701

Silkscreen	Name	Color	Status	Description
INPUT	Power input indicator	-	Steady off	The AC input power is out of range.
		Green	Steady on	The AC power input is in the normal range.
OUTPUT	Power output indicator	-	Steady off	The AC output power is out of range.
		Green	Steady on	The AC output power is in the normal range.
		Green	Blinking	The output power is out of range, for example, overvoltage, overcurrent, or short circuit occurs.

Functions and Features

Table 5-54 Functions of a 170 W AC power module

Function	Description
Input protection	Input overcurrent and undervoltage protection is provided.
Output protection	Output overvoltage and short-circuit protection is provided.
Alarm function	Various alarms such as the alarm triggered when there is no power input and the alarm triggered when there is no power output are supported.
Overtemperature protection	When the temperature of the power module exceeds a specified threshold (75 °C), the power module stops supplying power. When the temperature falls into the normal range, the power module automatically resumes power supply.
Surge protection	-
Hot swapping	Supported

 NOTE

When a power module enters overtemperature protection state, take measures to lower the ambient temperature. The power module can automatically start supplying power again when the temperature falls within the normal range.

Technical Specifications

Table 5-55 Technical specifications of the WOPSA1701

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	40 mm x 70 mm x 205 mm (1.6 in. x 2.8 in. x 8.1 in.)
Weight without packaging [kg(lb)]	1.0 kg (2.2 lb)
Number of inputs	1
Rated input voltage [V]	100 V AC to 240 V AC, 50/60 Hz
Input voltage range [V]	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum input current [A]	2.5 A
Rated output voltage [V]	12 V
Rated output current [A]	14.2 A
Rated output power [W]	170 W
Power dissipation Mode	Natural heat dissipation without fans

Item	Specification
Hot swapping	Supported

5.14 ES5M0PSD1700 (170 W DC Power Module)

Overview

Table 5-56 Basic information about the ES5M0PSD1700

Item	Details
Description	170 W DC Power Module
Part Number	02310GBM
Model	ES5M0PSD1700

Appearance

Figure 5-34 Appearance of the ES5M0PSD1700



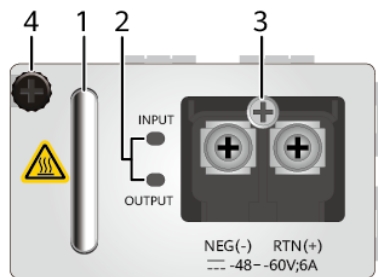
Version Mapping

Table 5-57 Mappings between ES5M0PSD1700 and product models

Product	Product Model	First Supported Version
S5700-HI	S5700-28C-HI (02353630)	V100R006C01
S5700-HI	S5700-28C-HI-24S (02353631)	V100R006C01

Panel

Figure 5-35 Panel of the ES5M0PSD1700



1. Handle	2. Power status indicator	3. DC power terminal	4. Captive screw
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Table 5-58 Indicators on the ES5M0PSD1700

Silkscreen	Name	Color	Status	Description
INPUT	Power input indicator	-	Steady off	The DC input power is out of range.
		Green	Steady on	The DC power input is in the normal range.
OUTPUT	Power output indicator	-	Steady off	The DC output power is out of range.
		Green	Steady on	The DC output power is in the normal range.
		Green	Blinking	The output power is out of range, for example,

Silkscreen	Name	Color	Status	Description
				overvoltage, overcurrent, or short circuit occurs.

Functions and Features

Table 5-59 Functions of a 170 W DC power module

Function	Description
Input protection	Input overcurrent and undervoltage protection is provided.
Output protection	Output overvoltage and short-circuit protection is provided.
Alarm function	Various alarms such as the alarm triggered when there is no power input and the alarm triggered when there is no power output are supported.
Reversed connection protection	-
Overtemperature protection	When the temperature of the power module exceeds a specified threshold (75 °C), the power module stops supplying power. When the temperature falls into the normal range, the power module automatically resumes power supply.
Surge protection	-
Hot swapping	Supported

NOTE

When a power module enters overtemperature protection state, take measures to lower the ambient temperature. The power module can automatically start supplying power again when the temperature falls within the normal range.

Technical Specifications

Table 5-60 Technical specifications of the ES5M0PSD1700

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	40 mm x 70 mm x 205 mm (1.6 in. x 2.8 in. x 8.1 in.)
Weight without packaging [kg(lb)]	1.0 kg (2.2 lb)
Number of inputs	1
Rated input voltage [V]	-48 V DC to -60 V DC

Item	Specification
Input voltage range [V]	-36 V DC to -72 V DC
Maximum input current [A]	6 A
Rated output voltage [V]	12 V
Rated output current [A]	14.2 A
Rated output power [W]	170 W
Power dissipation Mode	Natural heat dissipation without fans
Hot swapping	Supported

5.15 PDC180S12-CR (180 W DC Power Module)

Overview

Table 5-61 Basic information about the PDC180S12-CR

Item	Details
Description	180 W DC Power Module
Part Number	02312VRE
Model	PDC180S12-CR

Appearance

Figure 5-36 Appearance of the PDC180S12-CR



Version Mapping

Table 5-62 Mappings between PDC180S12-CR and product models

Product	Product Model	First Supported Version
S5731-S	S5731-S24T4X (02353AHU)	V200R020C00
S5731-S	S5731-S24T4X (02353AHU-001)	V200R020C10
S5731-S	S5731-S24T4X (98011851)	V200R021C10
S5731-S	S5731-S32ST4X (98011813)	V200R021C01
S5731-S	S5731-S48S4X (98011805)	V200R021C01
S5731-S	S5731-S48T4X (02353AJB)	V200R020C00
S5731-S	S5731-S48T4X (02353AJB-003)	V200R020C10
S5731-S	S5731-S48T4X (98011847)	V200R021C10
S5731S-S	S5731S-S24T4X-A (02353AHV)	V200R020C00
S5731S-S	S5731S-S24T4X-A (02353AHV-001)	V200R020C10
S5731S-S	S5731S-S24T4X-A	V200R021C10

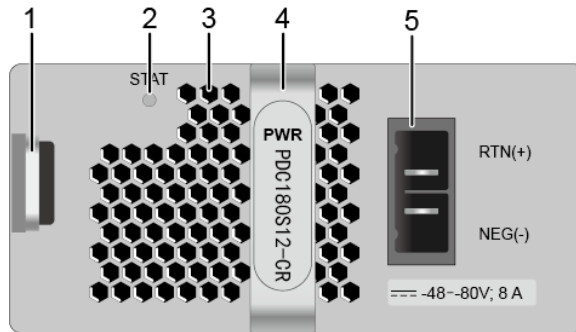
Product	Product Model	First Supported Version
	(98011852)	
S5731S-S	S5731S-S32ST4X-A (98011814)	V200R021C01
S5731S-S	S5731S-S48S4X-A (98011806)	V200R021C01
S5731S-S	S5731S-S48T4X-A (02353AJC)	V200R020C00
S5731S-S	S5731S-S48T4X-A (02353AJC-003)	V200R020C10
S5731S-S	S5731S-S48T4X-A (98011848)	V200R021C10
S5731-H	S5731-H24T4XC (02352QPP)	V200R020C00
S5731-H	S5731-H24T4XC (02352QPP-001)	V200R020C10
S5731-H	S5731-H48T4XC (02352QPT)	V200R020C00
S5731-H	S5731-H48T4XC (02352QPT-003)	V200R020C10
S5731-H	S5731-H48T4XC-B (02353VAD)	V200R020C00
S5731-H	S5731-H48T4XC-B (02353VAD-003)	V200R020C10
S5731S-H	S5731S-H24T4S-A (02353DJE)	V200R020C00
S5731S-H	S5731S-H24T4S-A (02353DJE-001)	V200R020C10
S5731S-H	S5731S-H24T4X-A (02353HVH)	V200R020C00
S5731S-H	S5731S-H24T4X-A (02353HVH-001)	V200R020C10
S5731S-H	S5731S-H24T4XC-A (02352YRG)	V200R020C00
S5731S-H	S5731S-H24T4XC-A (02352YRG-001)	V200R020C10
S5731S-H	S5731S-H48T4S-A (02353DJG)	V200R020C00
S5731S-H	S5731S-H48T4S-A (02353DJG-003)	V200R020C10

Product	Product Model	First Supported Version
S5731S-H	S5731S-H48T4X-A (02353HVJ)	V200R020C00
S5731S-H	S5731S-H48T4X-A (02353HVJ-003)	V200R020C10
S5731S-H	S5731S-H48T4XC-A (02352YRF)	V200R020C00
S5731S-H	S5731S-H48T4XC-A (02352YRF-003)	V200R020C10
S5735-S	S5735-S24T4X (98010938)	V200R020C00
S5735-S	S5735-S32ST4X (98010931)	V200R020C00
S5735-S	S5735-S48S4X (98010947)	V200R020C00
S5735-S	S5735-S48T4X (98010941)	V200R020C00
S5735S-S	S5735S-S24T4S-A (98010939)	V200R020C00
S5735S-S	S5735S-S24T4X-A (98010967)	V200R020C00
S5735S-S	S5735S-S32ST4X-A (98010932)	V200R020C00
S5735S-S	S5735S-S48T4S-A (98010942)	V200R020C00
S5735S-S	S5735S-S48T4X-A (98010968)	V200R020C00
S5735-S-I	S5735-S24T4X-I (98010960)	V200R020C00
S5735S-H	S5735S-H24S4XC-A (98011041)	V200R021C01
S5735S-H	S5735S-H24T4XC-A (98011025)	V200R020C00
S5735S-H	S5735S-H48T4XC-A (98011029)	V200R020C00
S5736-S	S5736-S24S4XC (98011038)	V200R021C01
S5736-S	S5736-S24T4XC (98011022)	V200R020C00
S5736-S	S5736-S48S4XC (98011042)	V200R021C01
S5736-S	S5736-S48T4XC	V200R020C00

Product	Product Model	First Supported Version
	(98011026)	

Panel

Figure 5-37 Panel of the PDC180S12-CR



1. Lock	2. Indicator	3. Air vent	4. Handle
5. DC power socket	-	-	-

Table 5-63 Indicators on the PDC180S12-CR

Silkscreen	Name	Color	Status	Description
STAT	Running status indicator	-	Steady off	The power input is abnormal (for example, no input, overvoltage, or undervoltage) or the power output is abnormal (for example, undervoltage or overtemperature).
		Green	Steady on	The power module is working normally.
		Green	Blinking	The output power is out of range, for

Silkscreen	Name	Color	Status	Description
				example, overvoltage, overcurrent, or short circuit occurs.

Functions and Features

Table 5-64 Functions of a 180 W DC power module

Function		Description
Input protection	Input undervoltage protection	In this protection state, the power module stops supplying power. When the input voltage restores to the normal range, the power module automatically resumes power supply.
	Input overcurrent protection	In this protection state, the power module stops supplying power and cannot automatically resume power supply when the input current restores to the normal range.
Output protection	Output overvoltage protection	In this protection state, the power module stops supplying power intermittently. When the output voltage restores to the normal range, the power module automatically resumes power supply.
	Output overcurrent protection	In this protection state, the power module supplies power intermittently. When the output current is within a range, the power module automatically resumes power supply.
	Output short-circuit protection	In this protection state, the power module supplies power intermittently. When the short circuit is removed, the power module automatically resumes power supply.
Overtemperature protection		When the temperature of the power module exceeds a specified threshold, the power module stops supplying power. When the temperature falls into the normal range, the power module automatically resumes power supply.
Hot swapping		Supported

NOTE

When a power module enters overtemperature protection state, take measures to lower the ambient temperature. The power module can automatically start supplying power again when the temperature falls within the normal range.

Technical Specifications

Table 5-65 Technical specifications of the PDC180S12-CR

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	40 mm x 90 mm x 215 mm (1.6 in. x 3.5 in. x 8.5 in.)
Weight without packaging [kg(lb)]	0.62 kg (1.37 lb)
Number of inputs	1
Rated input voltage [V]	-48 V DC to -60 V DC
Input voltage range [V]	-38.4 V DC to -72 V DC
Maximum input current [A]	6 A
Rated output voltage [V]	12 V
Rated output current [A]	15 A
Rated output power [W]	180 W
Power dissipation Mode	Natural heat dissipation without fans
Hot swapping	Supported

5.16 PAC240S56-CN (240 W AC Power Module)

Overview

Table 5-66 Basic information about the PAC240S56-CN

Item	Details
Description	240 W AC Power Module
Part Number	02131265
Model	PAC240S56-CN

Appearance

Figure 5-38 Appearance of the PAC240S56-CN



Version Mapping

Table 5-67 Mappings between PAC240S56-CN and product models

Product	Product Model	First Supported Version
S5720I-SI	S5720I-12X-PWH-SI-DC (98010795)	V200R012C00

Panel

Figure 5-39 Panel of the PAC240S56-CN

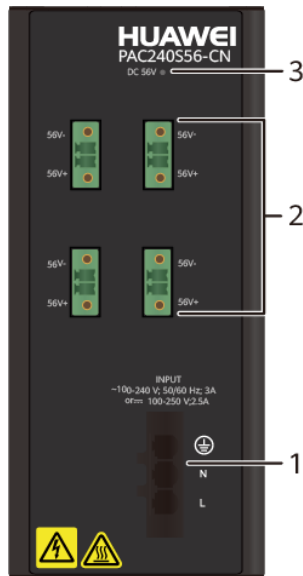


Table 5-68 Description of the panel of a 240 W AC power module

No.	Name	Description
1	3-pin AC/DC input power socket	Connects the power module to an external power supply system using a power cable with a 3-pin plug. NOTE The customer needs to prepare the power cable. The recommended conductor diameter of the power cable is 1.0 mm ² .
2	Four 2-pin DC output power sockets	Connects the power module to a switch using a power cable with a 2-pin plug. NOTE The customer needs to prepare the power cable. The recommended conductor diameter of the power cable is 1.0 mm ² .
3	DC 56 V	Power output indicator

Table 5-69 Indicators on the PAC240S56-CN

Silkscreen	Name	Color	Status	Description
DC 56V	Power output indicator	-	Steady off	The power output is abnormal or the power module

Silkscreen	Name	Color	Status	Description
				is faulty.
		Green	Steady on	The power output is normal.
		Green	Blinking	The power module is in the output overvoltage or overcurrent protection state.

Functions and Features

Table 5-70 Functions of a 240 W AC power module

Function	Description
System power supply and PoE power supply	The power module supports a maximum of 20 W system power and 220 W PoE power.
Input protection	The power module provides protection against input overvoltage, input undervoltage, and input overcurrent.
Output protection	The power module provides protection against output overvoltage, overcurrent, and short-circuit.
Overtemperature protection	When the temperature of the power module exceeds a specified threshold, the power module stops supplying power. When the temperature falls into the normal range, the power module automatically resumes power supply.

Technical Specifications

Table 5-71 Technical specifications of the PAC240S56-CN

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	150 mm x 60 mm x 133 mm (6.14 in. x 2.36 in. x 5.24 in.)
Weight without packaging [kg(lb)]	1.47 kg (3.24 lb)
Number of inputs	1
Rated input voltage [V]	100 V AC to 240 V AC, 50/60 Hz 100 V DC to 250 V DC
Input voltage range [V]	90 V AC to 290 V AC, 45 to 66 Hz

Item	Specification
	77 V DC to 300 V DC
Maximum input current [A]	100 V AC to 240 V AC: 3 A 100 V DC to 138 V DC: 2.5 A 138 V DC to 250 V DC: 2 A
Rated output voltage [V]	56 V DC
Rated output power [W]	PoE power: 220 W Total power: 240 W
Power dissipation Mode	Natural heat dissipation without fans

5.17 PAC-260WA-E (260 W AC Power Module)

Overview

Table 5-72 Basic information about the PAC-260WA-E

Item	Details
Description	260 W AC Power Module
Part Number	98010808
Model	PAC-260WA-E

Appearance

Figure 5-40 Appearance of the PAC-260WA-E



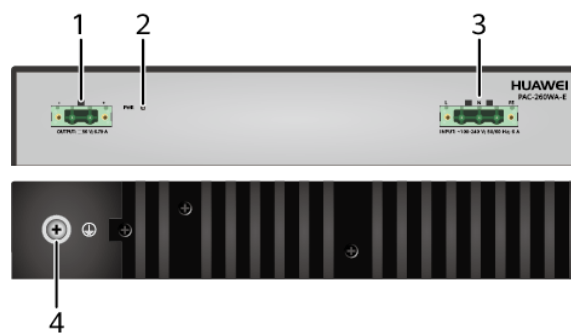
Version Mapping

Table 5-73 Mappings between PAC-260WA-E and product models

Product	Product Model	First Supported Version
S5720I-SI	S5720I-12X-PWH-SI-DC (98010795)	V200R012C00

Panel

Figure 5-41 Panel of the PAC-260WA-E



<p>1. DC output power socket</p> <p>NOTE</p> <p>It must be used with the Phoenix connector, which is included in the installation accessory package.</p>	<p>2. PWR power supply indicator</p>	<p>3. AC input power socket</p> <p>NOTE</p> <p>It must be used with the Phoenix connector, which is included in the installation accessory package.</p>	<p>4. Ground screw</p> <p>NOTE</p> <p>It is used with a 9.1 Ground Cable.</p>
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Table 5-74 Indicators on the PAC-260WA-E

Silkscreen	Name	Color	Status	Description
PWR	Power supply indicator	-	Steady off	The power module has no output power or the output power is out of range.
		Green	Steady on	The output power of the power module is in the normal range.

Functions and Features

Table 5-75 Functions of a 260 W AC power module

Function	Description
System power supply and PoE power supply	The power module supports a maximum of 20 W system power and 240 W PoE power.
Input protection	The power module provides protection against input overvoltage, input undervoltage, and input overcurrent.
Output protection	The power module provides protection against output overvoltage, output overcurrent, and output short-circuit.
Overtemperature protection	When the temperature of the power module is high, the power module stops supplying power. When the temperature falls into the normal range, the power module automatically resumes power supply.

Technical Specifications

Table 5-76 Technical specifications of the PAC-260WA-E

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	43.6 mm x 250.0 mm x 180.0 mm (1.72 in. x 9.84 in. x 7.09 in.)
Weight without packaging [kg(lb)]	2.5 kg (5.51 lb)
Number of inputs	1
Rated input voltage [V]	100 V AC to 240 V AC, 50/60 Hz
Input voltage range [V]	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum input current [A]	6 A
Rated output voltage [V]	56 V DC
Rated output current [A]	6.79 A
Rated output power [W]	PoE power: 240 W Total power: 260 W
Power dissipation Mode	Natural heat dissipation without fans

5.18 PDC-350WA-B (350 W DC Power Module)

Overview

Table 5-77 Basic information about the PDC-350WA-B

Item	Details
Description	350 W DC Power Module
Part Number	02310PQN
Model	PDC-350WA-B

Appearance

Figure 5-42 Appearance of the PDC-350WA-B



Version Mapping

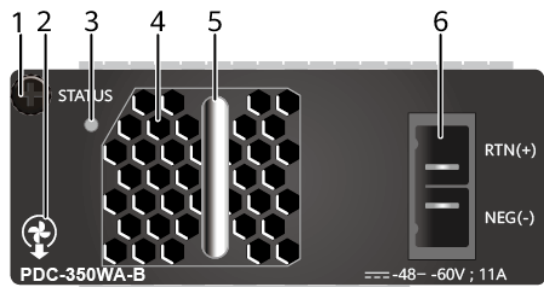
Table 5-78 Mappings between PDC-350WA-B and product models

Product	Product Model	First Supported Version
S5720-HI	S5720-56C-HI-AC (02358598)	V200R006C00
S5720-HI	S5720-32C-HI-24S-AC (02358600)	V200R006C00
S5730-HI	S5730-60C-HI-48S	V200R013C00

Product	Product Model	First Supported Version
	(02351XFS)	
S5730-HI	S5730-68C-HI-48S (02351XFT)	V200R013C00

Panel

Figure 5-43 Panel of the PDC-350WA-B



1. Captive screw	2. Airflow flag (air out)	3. Indicator	4. Fan air vent
5. Handle	6. DC power socket	-	-

Table 5-79 Indicators on the PDC-350WA-B

Silkscreen	Name	Color	Status	Description
STAT	Running status indicator	-	Steady off	The power input is abnormal (for example, no input, overvoltage, or undervoltage) or the power output is abnormal (for example, overvoltage, overcurrent, short-circuit, or overtemperature).
		Green	Steady on	The power module is working normally.

Functions and Features

Table 5-80 Functions of a 350 W DC power module

Function		Description
Input protection	Input undervoltage protection	In this protection state, the power module stops supplying power. When the input voltage restores to the normal range, the power module automatically resumes power supply.
	Input overcurrent protection	In this protection state, the power module stops supplying power and cannot automatically start supplying power again when the input current restores to the normal range.
Output protection	Output overvoltage protection	In this protection state, the power module stops supplying power intermittently. When the system recovers from output overvoltage, the power module automatically resumes power supply.
	Output overcurrent protection	In this protection state, the power module supplies power intermittently. When the output current is within a range, the power module automatically resumes power supply.
	Output short-circuit protection	In this protection state, the power module supplies power intermittently. When the short circuit is removed, the power module automatically resumes power supply.
Overtemperature protection		When the temperature of the power module exceeds a specified threshold, the power module stops supplying power. When the temperature falls into the normal range, the power module automatically resumes power supply.
Hot swapping		Supported

 NOTE

When a power module enters overtemperature protection state, take measures to lower the ambient temperature. The power module can automatically start supplying power again when the temperature falls within the normal range.

Technical Specifications

Table 5-81 Technical specifications of the PDC-350WA-B

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	40 mm x 100 mm x 205 mm (1.6 in. x 3.9 in. x 8.1 in.)

Item	Specification
Weight without packaging [kg(lb)]	0.72 kg (1.59 lb)
Number of inputs	1
Rated input voltage [V]	-48 V DC to -60 V DC
Input voltage range [V]	-38.4 V DC to -72 V DC
Maximum input current [A]	11 A
Rated output voltage [V]	12 V
Rated output current [A]	29.17 A
Rated output power [W]	350 W
Power dissipation Mode	Heat dissipation with fan
Hot swapping	Supported

5.19 PAC-600WA-B (600 W AC Power Module)

Overview

Table 5-82 Basic information about the PAC-600WA-B

Item	Details
Description	600 W AC Power Module
Part Number	02310PMH
Model	PAC-600WA-B

Appearance

Figure 5-44 Appearance of the PAC-600WA-B



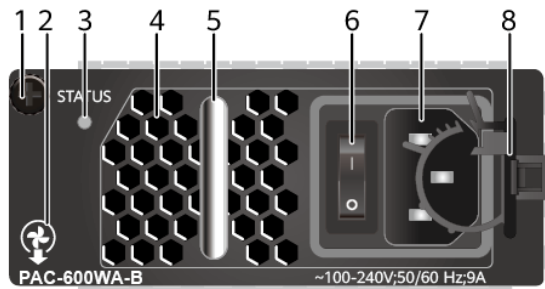
Version Mapping

Table 5-83 Mappings between PAC-600WA-B and product models

Product	Product Model	First Supported Version
S5720-HI	S5720-56C-HI-AC (02358598)	V200R006C00
S5720-HI	S5720-32C-HI-24S-AC (02358600)	V200R006C00
S5730-HI	S5730-60C-HI-48S (02351XFS)	V200R013C00
S5730-HI	S5730-68C-HI-48S (02351XFT)	V200R013C00

Panel

Figure 5-45 Panel of the PAC-600WA-B



1. Captive screw	2. Airflow flag (air out)	3. Indicator	4. Fan air vent
5. Handle	6. Power switch	7. AC power socket	8. AC power cable locking strap

Table 5-84 Indicators on the PAC-600WA-B

Silkscreen	Name	Color	Status	Description
STAT	Running status indicator	-	Steady off	The power input is abnormal (for example, no input, overvoltage, or undervoltage) or the power output is abnormal (for example, overvoltage, overcurrent, short-circuit, or overtemperature).
		Green	Steady on	The power module is working normally.

Functions and Features

Table 5-85 Functions of a 600 W AC power module

Function		Description
Input protection	Input undervoltage protection	In this protection state, the power module stops supplying power. When the input voltage restores to the normal range, the power module automatically resumes power supply.
	Input overcurrent protection	In this protection state, the power module stops supplying power and cannot automatically start supplying power again when the input current restores to the normal range.
Output protection	Output overvoltage protection	In this protection state, the power module stops supplying power intermittently. When the system recovers from output overvoltage, the power module automatically resumes power supply.
	Output overcurrent protection	In this protection state, the power module supplies power intermittently. When the output current is within a range, the power module automatically resumes power supply.
	Output short-circuit protection	In this protection state, the power module supplies power intermittently. When the short circuit is removed, the power module automatically resumes power supply.
Overtemperature protection		When the temperature of the power module exceeds a specified threshold, the power module stops supplying power. When the temperature falls into the normal range, the power module automatically resumes power supply.
Hot swapping		Supported

NOTE

When a power module enters overtemperature protection state, take measures to lower the ambient temperature. The power module can automatically start supplying power again when the temperature falls within the normal range.

Technical Specifications

Table 5-86 Technical specifications of the PAC-600WA-B

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	40 mm x 100 mm x 205 mm (1.6 in. x 3.9 in. x 8.1 in.)
Weight without packaging [kg(lb)]	1 kg (2.20 lb)
Number of inputs	1
Rated input voltage [V]	100 V AC to 240 V AC, 50/60 Hz

Item	Specification
Input voltage range [V]	90 V AC to 290 V AC, 45 Hz to 65 Hz
Maximum input current [A]	9 A
Rated output voltage [V]	12 V
Rated output current [A]	50 A
Rated output power [W]	600 W
Power dissipation Mode	Heat dissipation with fan
Hot swapping	Supported

5.20 PAC600S12-CB (600 W AC Power Module)

Overview

Table 5-87 Basic information about the PAC600S12-CB

Item	Details
Description	600 W AC Power Module
Part Number	02312FFU
Model	PAC600S12-CB

Appearance

Figure 5-46 Appearance of the PAC600S12-CB



Version Mapping

Table 5-88 Mappings between PAC600S12-CB and product models

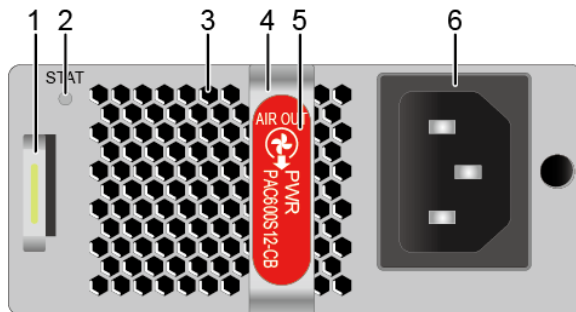
Product	Product Model	First Supported Version
S5731-S	S5731-S24T4X (02353AHU)	V200R019C00
S5731-S	S5731-S24T4X (02353AHU-001)	V200R020C10
S5731-S	S5731-S24T4X (98011851)	V200R021C10
S5731-S	S5731-S48T4X (02353AJB)	V200R019C00
S5731-S	S5731-S48T4X (02353AJB-003)	V200R020C10
S5731-S	S5731-S48T4X (98011847)	V200R021C10
S5731S-S	S5731S-S24T4X-A (02353AHV)	V200R019C00
S5731S-S	S5731S-S24T4X-A (02353AHV-001)	V200R020C10
S5731S-S	S5731S-S24T4X-A (98011852)	V200R021C10
S5731S-S	S5731S-S48T4X-A (02353AJC)	V200R019C00

Product	Product Model	First Supported Version
S5731S-S	S5731S-S48T4X-A (02353AJC-003)	V200R020C10
S5731S-S	S5731S-S48T4X-A (98011848)	V200R021C10
S5731-H	S5731-H24T4XC (02352QPP)	V200R013C02
S5731-H	S5731-H24T4XC (02352QPP-001)	V200R020C10
S5731-H	S5731-H48T4XC (02352QPT)	V200R013C02
S5731-H	S5731-H48T4XC (02352QPT-003)	V200R020C10
S5731S-H	S5731S-H24T4S-A (02353DJE)	V200R019C00
S5731S-H	S5731S-H24T4S-A (02353DJE-001)	V200R020C10
S5731S-H	S5731S-H24T4X-A (02353HVVH)	V200R019C10
S5731S-H	S5731S-H24T4X-A (02353HVVH-001)	V200R020C10
S5731S-H	S5731S-H24T4XC-A (02352YRG)	V200R019C00
S5731S-H	S5731S-H24T4XC-A (02352YRG-001)	V200R020C10
S5731S-H	S5731S-H48T4S-A (02353DJG)	V200R019C00
S5731S-H	S5731S-H48T4S-A (02353DJG-003)	V200R020C10
S5731S-H	S5731S-H48T4X-A (02353HVJ)	V200R019C10
S5731S-H	S5731S-H48T4X-A (02353HVJ-003)	V200R020C10
S5731S-H	S5731S-H48T4XC-A (02352YRF)	V200R019C00
S5731S-H	S5731S-H48T4XC-A (02352YRF-003)	V200R020C10
S5732-H	S5732-H24S6Q (02353AJS)	V200R019C00
S5732-H	S5732-H24S6Q (02353AJS-001)	V200R020C10

Product	Product Model	First Supported Version
S5732-H	S5732-H24S6Q (02353AJS-003)	V200R021C10
S5732-H	S5732-H48S6Q (02353AJU)	V200R019C00
S5732-H	S5732-H48S6Q (02353AJU-001)	V200R020C10
S5732-H	S5732-H48S6Q (02353AJU-003)	V200R021C10
S5735S-H	S5735S-H24S4XC-A (98011041)	V200R021C01
S5736-S	S5736-S24S4XC (98011038)	V200R021C01
S5736-S	S5736-S48S4XC (98011042)	V200R021C01

Panel

Figure 5-47 Panel of the PAC600S12-CB



1. Lock	2. Indicator	3. Fan air vent	4. Handle
5. Airflow flag (air out)	6. AC power socket	-	-

Table 5-89 Indicators on the PAC600S12-CB

Silkscreen	Name	Color	Status	Description
STAT	Running status indicator	-	Steady off	The power input is abnormal (for example, no input,

Silkscreen	Name	Color	Status	Description
				overvoltage, or undervoltage) or the power output is abnormal (for example, overcurrent, overvoltage, short circuit, or overtemperature).
		Green	Steady on	The power module is working normally.

Functions and Features

Table 5-90 Functions of a 600 W AC power module

Function		Description
Input protection	Input undervoltage protection	In this protection state, the power module stops supplying power. When the input voltage restores to the normal range, the power module automatically resumes power supply.
	Input overcurrent protection	In this protection state, the power module stops supplying power and cannot automatically resume power supply when the input current restores to the normal range.
Output protection	Output overvoltage protection	In this protection state, the power module stops supplying power intermittently. When the output voltage restores to the normal range, the power module automatically resumes power supply.
	Output overcurrent protection	In this protection state, the power module supplies power intermittently. When the output current is within a range, the power module automatically resumes power supply.
	Output short-circuit protection	In this protection state, the power module supplies power intermittently. When the short circuit is removed, the power module automatically resumes power supply.
Overtemperature protection		When the temperature of the power module exceeds a specified threshold, the power module stops supplying power. When the temperature falls into the normal range, the power module automatically resumes power supply.
Hot swapping		Supported

NOTE

When a power module enters overtemperature protection state, take measures to lower the ambient temperature. The power module can automatically start supplying power again when the temperature falls within the normal range.

Technical Specifications

Table 5-91 Technical specifications of the PAC600S12-CB

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	40 mm x 90 mm x 215 mm (1.6 in. x 3.5 in. x 8.5 in.)
Weight without packaging [kg(lb)]	0.95 kg (2.09 lb)
Number of inputs	1
Rated input voltage [V]	100 V AC to 240 V AC, 50/60 Hz 240 V DC
Input voltage range [V]	90 V AC to 290 V AC, 45 Hz to 65 Hz 190 V DC to 290 V DC
Maximum input current [A]	100 V AC to 240 V AC: 8 A 240 V DC: 4 A
Rated output voltage [V]	12 V
Rated output current [A]	50 A
Rated output power [W]	600 W
Power dissipation Mode	Heat dissipation with fan
Hot swapping	Supported

5.21 PAC600S12-DB (600 W AC Power Module)

Overview

Table 5-92 Basic information about the PAC600S12-DB

Item	Details
Description	600 W AC Power Module
Part Number	02131740
Model	PAC600S12-DB

Appearance

Figure 5-48 Appearance of the PAC600S12-DB



Version Mapping

Table 5-93 Mappings between PAC600S12-DB and product models

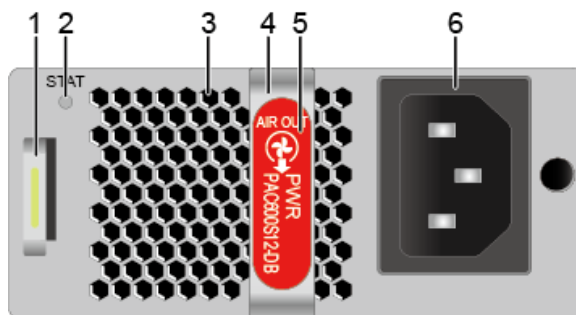
Product	Product Model	First Supported Version
S5731-S	S5731-S24T4X (02353AHU)	V200R020C10
S5731-S	S5731-S24T4X (02353AHU-001)	V200R020C10
S5731-S	S5731-S24T4X (98011851)	V200R021C10
S5731-S	S5731-S32ST4X (98011813)	V200R021C01
S5731-S	S5731-S48S4X (98011805)	V200R021C01
S5731-S	S5731-S48T4X (02353AJB)	V200R020C10
S5731-S	S5731-S48T4X (02353AJB-003)	V200R020C10
S5731-S	S5731-S48T4X (98011847)	V200R021C10
S5731S-S	S5731S-S24T4X-A (02353AHV)	V200R020C10
S5731S-S	S5731S-S24T4X-A (02353AHV-001)	V200R020C10
S5731S-S	S5731S-S24T4X-A	V200R021C10

Product	Product Model	First Supported Version
	(98011852)	
S5731S-S	S5731S-S32ST4X-A (98011814)	V200R021C01
S5731S-S	S5731S-S48S4X-A (98011806)	V200R021C01
S5731S-S	S5731S-S48T4X-A (02353AJC)	V200R020C10
S5731S-S	S5731S-S48T4X-A (02353AJC-003)	V200R020C10
S5731S-S	S5731S-S48T4X-A (98011848)	V200R021C10
S5731-H	S5731-H24T4XC (02352QPP)	V200R020C10
S5731-H	S5731-H24T4XC (02352QPP-001)	V200R020C10
S5731-H	S5731-H48T4XC (02352QPT)	V200R020C10
S5731-H	S5731-H48T4XC (02352QPT-003)	V200R020C10
S5731S-H	S5731S-H24T4S-A (02353DJE)	V200R020C10
S5731S-H	S5731S-H24T4S-A (02353DJE-001)	V200R020C10
S5731S-H	S5731S-H24T4X-A (02353HVH)	V200R020C10
S5731S-H	S5731S-H24T4X-A (02353HVH-001)	V200R020C10
S5731S-H	S5731S-H24T4XC-A (02352YRG)	V200R020C10
S5731S-H	S5731S-H24T4XC-A (02352YRG-001)	V200R020C10
S5731S-H	S5731S-H48T4S-A (02353DJG)	V200R020C10
S5731S-H	S5731S-H48T4S-A (02353DJG-003)	V200R020C10
S5731S-H	S5731S-H48T4X-A (02353HVJ)	V200R020C10
S5731S-H	S5731S-H48T4X-A (02353HVJ-003)	V200R020C10

Product	Product Model	First Supported Version
S5731S-H	S5731S-H48T4XC-A (02352YRF)	V200R020C10
S5731S-H	S5731S-H48T4XC-A (02352YRF-003)	V200R020C10
S5732-H	S5732-H24S6Q (02353AJS)	V200R020C10
S5732-H	S5732-H24S6Q (02353AJS-001)	V200R020C10
S5732-H	S5732-H24S6Q (02353AJS-003)	V200R021C10
S5732-H	S5732-H48S6Q (02353AJU)	V200R020C10
S5732-H	S5732-H48S6Q (02353AJU-001)	V200R020C10
S5732-H	S5732-H48S6Q (02353AJU-003)	V200R021C10
S5735S-H	S5735S-H24S4XC-A (98011041)	V200R021C01
S5736-S	S5736-S24S4XC (98011038)	V200R021C01
S5736-S	S5736-S48S4XC (98011042)	V200R021C01

Panel

Figure 5-49 Panel of the PAC600S12-DB



1. Lock	2. Indicator	3. Fan air vent	4. Handle
5. Airflow flag (air out)	6. AC power socket	-	-

Table 5-94 Indicators on the PAC600S12-DB

Silkscreen	Name	Color	Status	Description
STAT	Running status indicator	-	Steady off	The power input is abnormal (for example, no input, overvoltage, or undervoltage) or the power output is abnormal (for example, overcurrent, overvoltage, short circuit, or overtemperature).
		Green	Steady on	The power module is working normally.

Functions and Features

Table 5-95 Functions of a 600 W AC power module

Function		Description
Input protection	Input undervoltage protection	In this protection state, the power module stops supplying power. When the input voltage restores to the normal range, the power module automatically resumes power supply.
	Input overcurrent protection	In this protection state, the power module stops supplying power and cannot automatically resume power supply when the input current restores to the normal range.
Output protection	Output overvoltage protection	In this protection state, the power module stops supplying power intermittently. When the output voltage restores to the normal range, the power module automatically resumes power supply.
	Output overcurrent protection	In this protection state, the power module supplies power intermittently. When the output current is within a range, the power module automatically resumes power supply.
	Output short-circuit protection	In this protection state, the power module supplies power intermittently. When the short circuit is removed, the power module automatically resumes power supply.

Function	Description
Overtemperature protection	When the temperature of the power module exceeds a specified threshold, the power module stops supplying power. When the temperature falls into the normal range, the power module automatically resumes power supply.
Hot swapping	Supported

 **NOTE**

When a power module enters overtemperature protection state, take measures to lower the ambient temperature. The power module can automatically start supplying power again when the temperature falls within the normal range.

Technical Specifications

Table 5-96 Technical specifications of the PAC600S12-DB

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	40 mm x 90 mm x 215 mm (1.6 in. x 3.5 in. x 8.5 in.)
Weight without packaging [kg(lb)]	0.95 kg (2.09 lb)
Number of inputs	1
Rated input voltage [V]	100 V AC to 240 V AC, 50/60 Hz 240 V DC
Input voltage range [V]	90 V AC to 290 V AC, 45 Hz to 65 Hz 190 V DC to 290 V DC
Maximum input current [A]	100 V AC to 240 V AC: 8 A 240 V DC: 4 A
Rated output voltage [V]	12 V
Rated output current [A]	50 A
Rated output power [W]	600 W
Power dissipation Mode	Heat dissipation with fan
Hot swapping	Supported

5.22 PAC600S12-EB (600 W AC Power Module)

Overview

Table 5-97 Basic information about the PAC600S12-EB

Item	Details
Description	600 W AC Power Module
Part Number	02312FFU-002
Model	PAC600S12-EB

Appearance

Figure 5-50 Appearance of the PAC600S12-EB



Version Mapping

Table 5-98 Mappings between PAC600S12-EB and product models

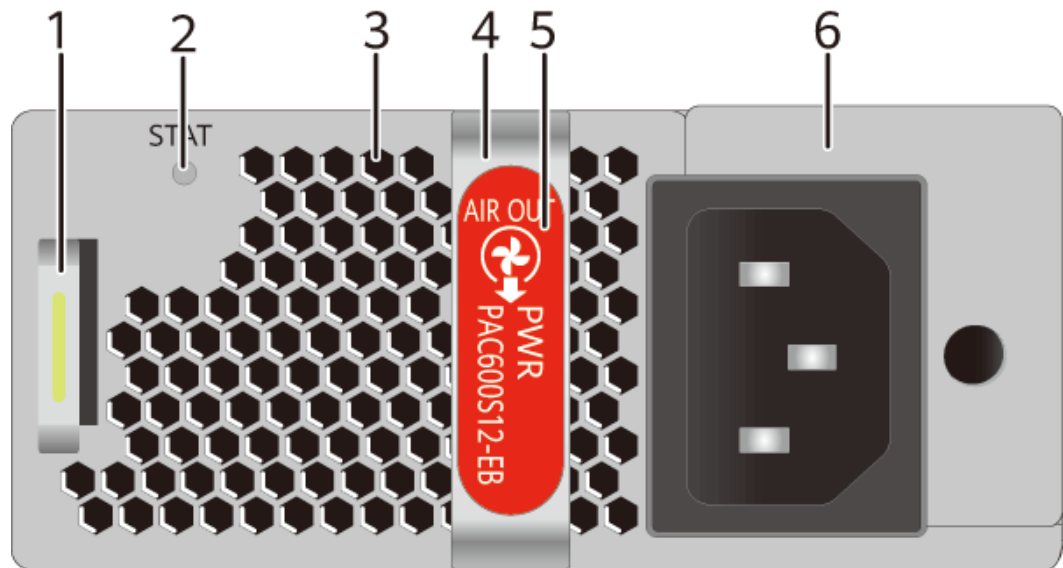
Product	Product Model	First Supported Version
S5731-S	S5731-S24T4X (02353AHU)	V200R019C10
S5731-S	S5731-S24T4X (02353AHU-001)	V200R020C10
S5731-S	S5731-S24T4X (98011851)	V200R021C10

Product	Product Model	First Supported Version
S5731-S	S5731-S32ST4X (98011813)	V200R021C01
S5731-S	S5731-S48S4X (98011805)	V200R021C01
S5731-S	S5731-S48T4X (02353AJB)	V200R019C10
S5731-S	S5731-S48T4X (02353AJB-003)	V200R020C10
S5731-S	S5731-S48T4X (98011847)	V200R021C10
S5731S-S	S5731S-S24T4X-A (02353AHV)	V200R019C10
S5731S-S	S5731S-S24T4X-A (02353AHV-001)	V200R020C10
S5731S-S	S5731S-S24T4X-A (98011852)	V200R021C10
S5731S-S	S5731S-S32ST4X-A (98011814)	V200R021C01
S5731S-S	S5731S-S48S4X-A (98011806)	V200R021C01
S5731S-S	S5731S-S48T4X-A (02353AJC)	V200R019C10
S5731S-S	S5731S-S48T4X-A (02353AJC-003)	V200R020C10
S5731S-S	S5731S-S48T4X-A (98011848)	V200R021C10
S5731-H	S5731-H24T4XC (02352QPP)	V200R019C10
S5731-H	S5731-H24T4XC (02352QPP-001)	V200R020C10
S5731-H	S5731-H48T4XC (02352QPT)	V200R019C10
S5731-H	S5731-H48T4XC (02352QPT-003)	V200R020C10
S5731S-H	S5731S-H24T4S-A (02353DJE)	V200R019C10
S5731S-H	S5731S-H24T4S-A (02353DJE-001)	V200R020C10
S5731S-H	S5731S-H24T4X-A (02353HVV)	V200R019C10
S5731S-H	S5731S-H24T4X-A	V200R020C10

Product	Product Model	First Supported Version
	(02353HVVH-001)	
S5731S-H	S5731S-H24T4XC-A (02352YRG)	V200R019C10
S5731S-H	S5731S-H24T4XC-A (02352YRG-001)	V200R020C10
S5731S-H	S5731S-H48T4S-A (02353DJG)	V200R019C10
S5731S-H	S5731S-H48T4S-A (02353DJG-003)	V200R020C10
S5731S-H	S5731S-H48T4X-A (02353HVJ)	V200R019C10
S5731S-H	S5731S-H48T4X-A (02353HVJ-003)	V200R020C10
S5731S-H	S5731S-H48T4XC-A (02352YRF)	V200R019C10
S5731S-H	S5731S-H48T4XC-A (02352YRF-003)	V200R020C10
S5732-H	S5732-H24S6Q (02353AJS)	V200R019C10
S5732-H	S5732-H24S6Q (02353AJS-001)	V200R020C10
S5732-H	S5732-H24S6Q (02353AJS-003)	V200R021C10
S5732-H	S5732-H48S6Q (02353AJU)	V200R019C10
S5732-H	S5732-H48S6Q (02353AJU-001)	V200R020C10
S5732-H	S5732-H48S6Q (02353AJU-003)	V200R021C10
S5735S-H	S5735S-H24S4XC-A (98011041)	V200R021C01
S5736-S	S5736-S24S4XC (98011038)	V200R021C01
S5736-S	S5736-S48S4XC (98011042)	V200R021C01

Panel

Figure 5-51 Panel of the PAC600S12-EB



1. Lock	2. Indicator	3. Fan air vent	4. Handle
5. Airflow flag (air out)	6. AC power socket	-	-

Table 5-99 Indicators on the PAC600S12-EB

Silkscreen	Name	Color	Status	Description
STAT	Running status indicator	-	Steady off	The power input is abnormal (for example, no input, overvoltage, or undervoltage) or the power output is abnormal (for example, overcurrent, overvoltage, short circuit, or overtemperature).
		Green	Steady on	The power module is working normally.

Functions and Features

Table 5-100 Functions of a 600 W AC power module

Function		Description
Input protection	Input undervoltage protection	In this protection state, the power module stops supplying power. When the input voltage restores to the normal range, the power module automatically resumes power supply.
	Input overcurrent protection	In this protection state, the power module stops supplying power and cannot automatically resume power supply when the input current restores to the normal range.
Output protection	Output overvoltage protection	In this protection state, the power module stops supplying power intermittently. When the output voltage restores to the normal range, the power module automatically resumes power supply.
	Output overcurrent protection	In this protection state, the power module supplies power intermittently. When the output current is within a range, the power module automatically resumes power supply.
	Output short-circuit protection	In this protection state, the power module supplies power intermittently. When the short circuit is removed, the power module automatically resumes power supply.
Overtemperature protection		When the temperature of the power module exceeds a specified threshold, the power module stops supplying power. When the temperature falls into the normal range, the power module automatically resumes power supply.
Hot swapping		Supported

 NOTE

When a power module enters overtemperature protection state, take measures to lower the ambient temperature. The power module can automatically start supplying power again when the temperature falls within the normal range.

Technical Specifications

Table 5-101 Technical specifications of the PAC600S12-EB

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	40 mm x 90 mm x 215 mm (1.6 in. x 3.5 in. x 8.5 in.)
Weight without packaging [kg(lb)]	0.985 kg (2.17 lb)
Number of inputs	1

Item	Specification
Rated input voltage [V]	100 V AC to 240 V AC, 50 Hz/60 Hz 240 V DC
Input voltage range [V]	90 V AC to 290 V AC; 45 Hz to 65 Hz 190 V DC to 290 V DC
Maximum input current [A]	100 V AC to 240 V AC: 8 A 240 V DC: 4 A
Rated output voltage [V]	12 V
Rated output current [A]	50 A
Rated output power [W]	600 W
Power dissipation Mode	Heat dissipation with fan
Hot swapping	Supported

5.23 PAC600S56-CB (600 W AC&240 V DC Power Module (Back to Front, Power panel side exhaust))

Overview

Table 5-102 Basic information about the PAC600S56-CB

Item	Details
Description	600 W AC&240 V DC Power Module (Back to Front, Power panel side exhaust)
Part Number	02313PAC
Model	PAC600S56-CB

Appearance

Figure 5-52 Appearance of the PAC600S56-CB



Version Mapping

Table 5-103 Mappings between PAC600S56-CB and product models

Product	Product Model	First Supported Version
S5731-S	S5731-S24P4X (02353AHX)	V200R021C10
S5731-S	S5731-S24P4X (02353AHX-001)	V200R021C10
S5731-S	S5731-S24P4X (02353AHX-003)	V200R021C10
S5731-S	S5731-S48P4X (02353AJH)	V200R021C10
S5731-S	S5731-S48P4X (02353AJH-001)	V200R021C10
S5731-S	S5731-S48P4X (02353AJH-003)	V200R021C10
S5731S-S	S5731S-S24P4X-A (02353AHY)	V200R021C10
S5731S-S	S5731S-S24P4X-A (02353AHY-001)	V200R021C10
S5731S-S	S5731S-S24P4X-A (02353AHY-003)	V200R021C10
S5731S-S	S5731S-S48P4X-A	V200R021C10

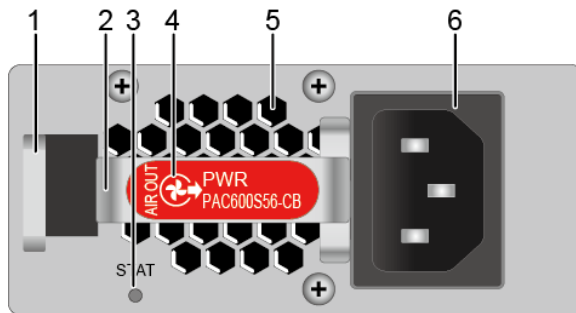
Product	Product Model	First Supported Version
	(02353AJJ)	
S5731S-S	S5731S-S48P4X-A (02353AJJ-001)	V200R021C10
S5731S-S	S5731S-S48P4X-A (02353AJJ-003)	V200R021C10
S5731-H	S5731-H24HB4XZ (02354QXD)	V200R021C10
S5731-H	S5731-H24P4XC (02352QPV)	V200R021C10
S5731-H	S5731-H24P4XC (02352QPV-001)	V200R021C10
S5731-H	S5731-H48HB4XZ (02354QXB)	V200R021C10
S5731-H	S5731-H48P4XC (02352SVD)	V200R021C10
S5731-H	S5731-H48P4XC (02352SVD-001)	V200R021C10
S5731S-H	S5731S-H24HB4XZ-A (02354QXE)	V200R021C10
S5731S-H	S5731S-H48HB4XZ-A (02354QXC)	V200R021C10
S5732-H	S5732-H24UM2CC (02353HUC)	V200R021C10
S5732-H	S5732-H24UM2CC (02353HUC-003)	V200R021C10
S5732-H	S5732-H24UM2CC (02353SJY)	V200R021C10
S5732-H	S5732-H24UM2CC (02353SJY-001)	V200R021C10
S5732-H	S5732-H24UM2CC (02353SJY-004)	V200R021C10
S5732-H	S5732-H24UM2CC (02353SJY-010)	V200R021C10
S5732-H	S5732-H24UM2CC (02353SJY-011)	V200R021C10
S5732-H	S5732-H24UM2CC (02353SJY-014)	V200R021C10
S5732-H	S5732-H48UM2CC (02353HUB)	V200R021C10

Product	Product Model	First Supported Version
S5732-H	S5732-H48UM2CC (02353HUB-002)	V200R021C10
S5732-H	S5732-H48UM2CC (02353SJT)	V200R021C10
S5732-H	S5732-H48UM2CC (02353SJT-001)	V200R021C10
S5732-H	S5732-H48UM2CC (02353SJT-003)	V200R021C10
S5732-H	S5732-H48UM2CC (02353SJT-004)	V200R021C10
S5732-H	S5732-H48UM2CC (02353SJT-010)	V200R021C10
S5732-H	S5732-H48UM2CC (02353SJT-011)	V200R021C10
S5732-H	S5732-H48UM2CC (02353SJT-013)	V200R021C10
S5732-H	S5732-H48UM2CC (02353SJT-014)	V200R021C10
S5732-H	S5732-H48XUM2CC (02353MLH)	V200R021C10
S5732-H	S5732-H48XUM2CC (02353MLH-001)	V200R021C10
S5735-L	S5735-L48P4X-A (98010944)	V200R021C10
S5735S-L	S5735S-L48P4S-A (98010946)	V200R021C10
S5735S-L	S5735S-L48P4X-A (98010945)	V200R021C10
S5735-S	S5735-S24P4X (98010940)	V200R021C10
S5735-S	S5735-S48P4X (98010943)	V200R021C10
S5735S-S	S5735S-S24P4X-A (98010969)	V200R021C10
S5735S-S	S5735S-S48P4X-A (98010970)	V200R021C10
S5735S-H	S5735S-H24U4XC-A (98011033)	V200R021C10
S5735S-H	S5735S-H48U4XC-A (98011037)	V200R021C10

Product	Product Model	First Supported Version
S5736-S	S5736-S24U4XC (98011030)	V200R021C10
S5736-S	S5736-S24UM4XC (98011020)	V200R021C10
S5736-S	S5736-S48U4XC (98011034)	V200R021C10

Panel

Figure 5-53 Panel of the PAC600S56-CB



1. Lock	2. Handle	3. Indicator	4. Airflow flag (air out)
5. Fan air vent	6. AC power socket	-	-

Table 5-104 Indicators on the PAC600S56-CB

Silkscreen	Name	Color	Status	Description
STAT	Running status indicator	-	Steady off	The power input is abnormal (for example, no input, overvoltage, or undervoltage) or the power output is abnormal (for example, overvoltage or overtemperature).
		Green	Steady on	The power

Silkscreen	Name	Color	Status	Description
				module output is normal.

Functions and Features

Table 5-105 Functions of a 600 W AC PoE power module

Function	Description
PoE power supply	Provides PoE power.
Input protection	Provides protection against input overvoltage, input undervoltage, and input overcurrent.
Output protection	Provides protection against output overvoltage, output overcurrent, and output short circuits.
Overtemperature protection	When the temperature of the power module exceeds a specified threshold, the power module stops supplying power. When the temperature falls into the normal range, the power module automatically resumes power supply.
Hot swapping	Supported

NOTE

When a power module enters overtemperature protection state, take measures to lower the ambient temperature. The power module can automatically start supplying power again when the temperature falls within the normal range.

Technical Specifications

Table 5-106 Technical specifications of the PAC600S56-CB

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	40 mm x 90 mm x 215 mm (1.6 in. x 3.5 in. x 8.5 in.)
Weight without packaging [kg(lb)]	1.1 kg (2.43 lb)
Number of inputs	1
Rated input voltage [V]	100 V AC to 130 V AC; 50/60 Hz 200 V AC to 240 V AC; 50/60 Hz 240 V DC
Input voltage range [V]	90 V AC to 290 V AC; 45 Hz~66 Hz 190 V DC to 290 V DC
Maximum input current [A]	100 V AC to 130 V AC: 8 A

Item	Specification
	200 V AC to 240 V AC: 8 A 240 V DC: 4 A
Rated output voltage [V]	56 V
Rated output current [A]	100 V AC to 130 V AC input: 5.36 A 200–240 V AC and 240 V DC input: 10.72 A
Rated output power [W]	100 V AC to 130 V AC input: ·Total power: 300 W 200 V AC to 240 V AC input and 240 V DC input: ·Total power: 600 W
Power dissipation Mode	Heat dissipation with fan
Hot swapping	Supported

5.24 PAC1000S56-CB (1000 W PoE AC Power Module)

Overview

Table 5-107 Basic information about the PAC1000S56-CB

Item	Details
Description	1000 W PoE AC Power Module
Part Number	02312KND
Model	PAC1000S56-CB

Appearance

Figure 5-54 Appearance of the PAC1000S56-CB



Version Mapping

Table 5-108 Mappings between PAC1000S56-CB and product models

Product	Product Model	First Supported Version
S5731-S	S5731-S24P4X (02353AHX)	V200R019C00
S5731-S	S5731-S24P4X (02353AHX-001)	V200R020C10
S5731-S	S5731-S24P4X (02353AHX-003)	V200R021C10
S5731-S	S5731-S48P4X (02353AJH)	V200R019C00
S5731-S	S5731-S48P4X (02353AJH-001)	V200R020C10
S5731-S	S5731-S48P4X (02353AJH-003)	V200R021C10
S5731S-S	S5731S-S24P4X-A (02353AHY)	V200R019C00
S5731S-S	S5731S-S24P4X-A (02353AHY-001)	V200R020C10
S5731S-S	S5731S-S24P4X-A (02353AHY-003)	V200R021C10
S5731S-S	S5731S-S48P4X-A	V200R019C00

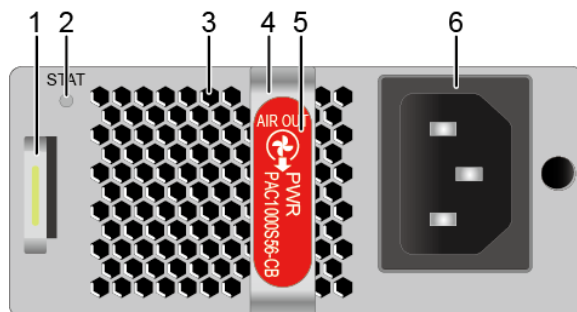
Product	Product Model	First Supported Version
	(02353AJJ)	
S5731S-S	S5731S-S48P4X-A (02353AJJ-001)	V200R020C10
S5731S-S	S5731S-S48P4X-A (02353AJJ-003)	V200R021C10
S5731-H	S5731-H24HB4XZ (02354QXD)	V200R021C10
S5731-H	S5731-H24P4XC (02352QPV)	V200R013C02
S5731-H	S5731-H24P4XC (02352QPV-001)	V200R020C10
S5731-H	S5731-H48HB4XZ (02354QXB)	V200R021C10
S5731-H	S5731-H48P4XC (02352SVD)	V200R013C02
S5731-H	S5731-H48P4XC (02352SVD-001)	V200R020C10
S5731S-H	S5731S-H24HB4XZ-A (02354QXE)	V200R021C10
S5731S-H	S5731S-H48HB4XZ-A (02354QXC)	V200R021C10
S5732-H	S5732-H24UM2CC (02353HUC)	V200R019C10
S5732-H	S5732-H24UM2CC (02353HUC-003)	V200R021C10
S5732-H	S5732-H24UM2CC (02353SJY)	V200R019C10
S5732-H	S5732-H24UM2CC (02353SJY-001)	V200R019C10
S5732-H	S5732-H24UM2CC (02353SJY-004)	V200R019C10
S5732-H	S5732-H24UM2CC (02353SJY-010)	V200R021C10
S5732-H	S5732-H24UM2CC (02353SJY-011)	V200R021C10
S5732-H	S5732-H24UM2CC (02353SJY-014)	V200R021C10
S5732-H	S5732-H48UM2CC (02353HUB)	V200R019C10

Product	Product Model	First Supported Version
S5732-H	S5732-H48UM2CC (02353HUB-002)	V200R021C10
S5732-H	S5732-H48UM2CC (02353SJT)	V200R019C10
S5732-H	S5732-H48UM2CC (02353SJT-001)	V200R019C10
S5732-H	S5732-H48UM2CC (02353SJT-003)	V200R019C10
S5732-H	S5732-H48UM2CC (02353SJT-004)	V200R019C10
S5732-H	S5732-H48UM2CC (02353SJT-010)	V200R021C10
S5732-H	S5732-H48UM2CC (02353SJT-011)	V200R021C10
S5732-H	S5732-H48UM2CC (02353SJT-013)	V200R021C10
S5732-H	S5732-H48UM2CC (02353SJT-014)	V200R021C10
S5732-H	S5732-H48XUM2CC (02353MLH)	V200R019C20
S5732-H	S5732-H48XUM2CC (02353MLH-001)	V200R021C10
S5735-L	S5735-L48P4X-A (98010944)	V200R019C00
S5735S-L	S5735S-L48P4S-A (98010946)	V200R019C00
S5735S-L	S5735S-L48P4X-A (98010945)	V200R019C00
S5735-S	S5735-S24P4X (98010940)	V200R019C00
S5735-S	S5735-S48P4X (98010943)	V200R019C00
S5735S-S	S5735S-S24P4X-A (98010969)	V200R019C10
S5735S-S	S5735S-S48P4X-A (98010970)	V200R019C10
S5735S-H	S5735S-H24U4XC-A (98011033)	V200R020C00
S5735S-H	S5735S-H48U4XC-A (98011037)	V200R020C00

Product	Product Model	First Supported Version
S5736-S	S5736-S24U4XC (98011030)	V200R020C00
S5736-S	S5736-S24UM4XC (98011020)	V200R020C00
S5736-S	S5736-S48U4XC (98011034)	V200R020C00

Panel

Figure 5-55 Panel of the PAC1000S56-CB



1. Lock	2. Indicator	3. Fan air vent	4. Handle
5. Airflow flag (air out)	6. AC power socket	-	-

Table 5-109 Indicators on the PAC1000S56-CB

Silkscreen	Name	Color	Status	Description
STAT	Running status indicator	-	Steady off	The power input is abnormal (for example, no input, overvoltage, or undervoltage) or the power output is abnormal (for example, overvoltage or overtemperature).
		Green	Steady on	The power

Silkscreen	Name	Color	Status	Description
				module output is normal.

Functions and Features

Table 5-110 Functions of a 1000 W AC PoE power module

Function	Description
PoE power supply	Provides PoE power.
Input protection	Provides protection against input overvoltage, input undervoltage, and input overcurrent.
Output protection	Provides protection against output overvoltage, output overcurrent, and output short circuits.
Overtemperature protection	When the temperature of the power module exceeds a specified threshold, the power module stops supplying power. When the temperature falls into the normal range, the power module automatically resumes power supply.
Hot swapping	Supported

NOTE

When a power module enters overtemperature protection state, take measures to lower the ambient temperature. The power module can automatically start supplying power again when the temperature falls within the normal range.

Technical Specifications

Table 5-111 Technical specifications of the PAC1000S56-CB

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	40 mm x 90 mm x 215 mm (1.6 in. x 3.5 in. x 8.5 in.)
Weight without packaging [kg(lb)]	1.1 kg (2.43 lb)
Number of inputs	1
Rated input voltage [V]	100 V AC to 130 V AC, 50/60 Hz 200 V AC to 240 V AC, 50/60 Hz 240 V DC
Input voltage range [V]	90 V AC to 290 V AC, 45 Hz to 65 Hz 190 V DC to 290 V DC
Maximum input current [A]	100 V AC to 130 V AC: 12 A

Item	Specification
	200 V AC to 240 V AC: 8 A 240 V DC: 8 A
Rated output voltage [V]	56 V
Rated output current [A]	100 V AC to 130 V AC input: 16.08 A 200 V AC to 240 V AC input and 240 V DC input: 17.86 A
Rated output power [W]	100 V AC to 130 V AC input: •Total: 900 W 200 V AC to 240 V AC input and 240 V DC input: •Total: 1000 W
Power dissipation Mode	Heat dissipation with fan
Hot swapping	Supported

5.25 PAC1000S56-DB (1000 W PoE AC Power Module)

Overview

Table 5-112 Basic information about the PAC1000S56-DB

Item	Details
Description	1000 W PoE AC Power Module
Part Number	02131727
Model	PAC1000S56-DB

Appearance

Figure 5-56 Appearance of the PAC1000S56-DB



Version Mapping

Table 5-113 Mappings between PAC1000S56-DB and product models

Product	Product Model	First Supported Version
S5731-S	S5731-S24P4X (02353AHX)	V200R020C10
S5731-S	S5731-S24P4X (02353AHX-001)	V200R020C10
S5731-S	S5731-S24P4X (02353AHX-003)	V200R021C10
S5731-S	S5731-S48P4X (02353AJH)	V200R020C10
S5731-S	S5731-S48P4X (02353AJH-001)	V200R020C10
S5731-S	S5731-S48P4X (02353AJH-003)	V200R021C10
S5731S-S	S5731S-S24P4X-A (02353AHY)	V200R020C10
S5731S-S	S5731S-S24P4X-A (02353AHY-001)	V200R020C10
S5731S-S	S5731S-S24P4X-A (02353AHY-003)	V200R021C10
S5731S-S	S5731S-S48P4X-A	V200R020C10

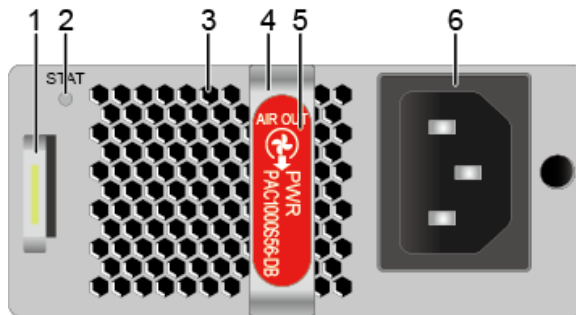
Product	Product Model	First Supported Version
	(02353AJJ)	
S5731S-S	S5731S-S48P4X-A (02353AJJ-001)	V200R020C10
S5731S-S	S5731S-S48P4X-A (02353AJJ-003)	V200R021C10
S5731-H	S5731-H24HB4XZ (02354QXD)	V200R021C10
S5731-H	S5731-H24P4XC (02352QPV)	V200R020C10
S5731-H	S5731-H24P4XC (02352QPV-001)	V200R020C10
S5731-H	S5731-H48HB4XZ (02354QXB)	V200R021C10
S5731-H	S5731-H48P4XC (02352SVD)	V200R020C10
S5731-H	S5731-H48P4XC (02352SVD-001)	V200R020C10
S5731S-H	S5731S-H24HB4XZ-A (02354QXE)	V200R021C10
S5731S-H	S5731S-H48HB4XZ-A (02354QXC)	V200R021C10
S5732-H	S5732-H24UM2CC (02353HUC)	V200R020C10
S5732-H	S5732-H24UM2CC (02353HUC-003)	V200R021C10
S5732-H	S5732-H24UM2CC (02353SJY)	V200R020C10
S5732-H	S5732-H24UM2CC (02353SJY-001)	V200R020C10
S5732-H	S5732-H24UM2CC (02353SJY-004)	V200R020C10
S5732-H	S5732-H24UM2CC (02353SJY-010)	V200R021C10
S5732-H	S5732-H24UM2CC (02353SJY-011)	V200R021C10
S5732-H	S5732-H24UM2CC (02353SJY-014)	V200R021C10
S5732-H	S5732-H48UM2CC (02353HUB)	V200R020C10

Product	Product Model	First Supported Version
S5732-H	S5732-H48UM2CC (02353HUB-002)	V200R021C10
S5732-H	S5732-H48UM2CC (02353SJT)	V200R020C10
S5732-H	S5732-H48UM2CC (02353SJT-001)	V200R020C10
S5732-H	S5732-H48UM2CC (02353SJT-003)	V200R020C10
S5732-H	S5732-H48UM2CC (02353SJT-004)	V200R020C10
S5732-H	S5732-H48UM2CC (02353SJT-010)	V200R021C10
S5732-H	S5732-H48UM2CC (02353SJT-011)	V200R021C10
S5732-H	S5732-H48UM2CC (02353SJT-013)	V200R021C10
S5732-H	S5732-H48UM2CC (02353SJT-014)	V200R021C10
S5732-H	S5732-H48XUM2CC (02353MLH)	V200R020C10
S5732-H	S5732-H48XUM2CC (02353MLH-001)	V200R021C10
S5735-L	S5735-L48P4X-A (98010944)	V200R020C10
S5735S-L	S5735S-L48P4S-A (98010946)	V200R020C10
S5735S-L	S5735S-L48P4X-A (98010945)	V200R020C10
S5735-S	S5735-S24P4X (98010940)	V200R020C10
S5735-S	S5735-S48P4X (98010943)	V200R020C10
S5735S-S	S5735S-S24P4X-A (98010969)	V200R020C10
S5735S-S	S5735S-S48P4X-A (98010970)	V200R020C10
S5735S-H	S5735S-H24U4XC-A (98011033)	V200R020C10
S5735S-H	S5735S-H48U4XC-A (98011037)	V200R020C10

Product	Product Model	First Supported Version
S5736-S	S5736-S24U4XC (98011030)	V200R020C10
S5736-S	S5736-S24UM4XC (98011020)	V200R020C10
S5736-S	S5736-S48U4XC (98011034)	V200R020C10

Panel

Figure 5-57 Panel of the PAC1000S56-DB



1. Lock	2. Indicator	3. Fan air vent	4. Handle
5. Airflow flag (air out)	6. AC power socket	-	-

Table 5-114 Indicators on the PAC1000S56-DB

Silkscreen	Name	Color	Status	Description
STAT	Running status indicator	-	Steady off	The power input is abnormal (for example, no input, overvoltage, or undervoltage) or the power output is abnormal (for example, overvoltage or overtemperature).
		Green	Steady on	The power

Silkscreen	Name	Color	Status	Description
				module output is normal.

Functions and Features

Table 5-115 Functions of a 1000 W AC PoE power module

Function	Description
PoE power supply	Provides PoE power.
Input protection	Provides protection against input overvoltage, input undervoltage, and input overcurrent.
Output protection	Provides protection against output overvoltage, output overcurrent, and output short circuits.
Overtemperature protection	When the temperature of the power module exceeds a specified threshold, the power module stops supplying power. When the temperature falls into the normal range, the power module automatically resumes power supply.
Hot swapping	Supported

NOTE

When a power module enters overtemperature protection state, take measures to lower the ambient temperature. The power module can automatically start supplying power again when the temperature falls within the normal range.

Technical Specifications

Table 5-116 Technical specifications of the PAC1000S56-DB

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	40 mm x 90 mm x 215 mm (1.6 in. x 3.5 in. x 8.5 in.)
Weight without packaging [kg(lb)]	1.1 kg (2.43 lb)
Number of inputs	1
Rated input voltage [V]	100 V AC to 130 V AC, 50/60 Hz 200 V AC to 240 V AC, 50/60 Hz 240 V DC
Input voltage range [V]	90 V AC to 290 V AC, 45 Hz to 65 Hz 190 V DC to 290 V DC
Maximum input current [A]	100 V AC to 130 V AC: 12 A

Item	Specification
	200 V AC to 240 V AC: 8 A 240 V DC: 8 A
Rated output voltage [V]	56 V
Rated output current [A]	100 V AC to 130 V AC input: 16.08 A 200 V AC to 240 V AC input and 240 V DC input: 17.86 A
Rated output power [W]	100 V AC to 130 V AC input: •Total: 900 W 200 V AC to 240 V AC input and 240 V DC input: •Total: 1000 W
Power dissipation Mode	Heat dissipation with fan
Hot swapping	Supported

5.26 PDC1000S56-CB (1000 W PoE DC Power Module)

Overview

Table 5-117 Basic information about the PDC1000S56-CB

Item	Details
Description	1000 W PoE DC Power Module
Part Number	02313EXT
Model	PDC1000S56-CB

Appearance

Figure 5-58 Appearance of the PDC1000S56-CB



Version Mapping

Table 5-118 Mappings between PDC1000S56-CB and product models

Product	Product Model	First Supported Version
S5731-S	S5731-S24P4X (02353AHX)	V200R021C00
S5731-S	S5731-S24P4X (02353AHX-001)	V200R021C00
S5731-S	S5731-S24P4X (02353AHX-003)	V200R021C10
S5731-S	S5731-S48P4X (02353AJH)	V200R021C00
S5731-S	S5731-S48P4X (02353AJH-001)	V200R021C00
S5731-S	S5731-S48P4X (02353AJH-003)	V200R021C10
S5731S-S	S5731S-S24P4X-A (02353AHY)	V200R021C00
S5731S-S	S5731S-S24P4X-A (02353AHY-001)	V200R021C00
S5731S-S	S5731S-S24P4X-A (02353AHY-003)	V200R021C10

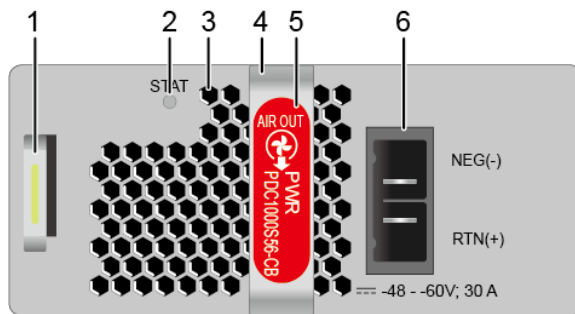
Product	Product Model	First Supported Version
S5731S-S	S5731S-S48P4X-A (02353AJJ)	V200R021C00
S5731S-S	S5731S-S48P4X-A (02353AJJ-001)	V200R021C00
S5731S-S	S5731S-S48P4X-A (02353AJJ-003)	V200R021C10
S5731-H	S5731-H24HB4XZ (02354QXD)	V200R021C10
S5731-H	S5731-H24P4XC (02352QPV)	V200R021C00
S5731-H	S5731-H24P4XC (02352QPV-001)	V200R021C00
S5731-H	S5731-H48HB4XZ (02354QXB)	V200R021C10
S5731-H	S5731-H48P4XC (02352SVD)	V200R021C00
S5731-H	S5731-H48P4XC (02352SVD-001)	V200R021C00
S5731S-H	S5731S-H24HB4XZ-A (02354QXE)	V200R021C10
S5731S-H	S5731S-H48HB4XZ-A (02354QXC)	V200R021C10
S5732-H	S5732-H24UM2CC (02353HUC)	V200R021C00
S5732-H	S5732-H24UM2CC (02353HUC-003)	V200R021C10
S5732-H	S5732-H24UM2CC (02353SJY)	V200R021C00
S5732-H	S5732-H24UM2CC (02353SJY-001)	V200R021C00
S5732-H	S5732-H24UM2CC (02353SJY-004)	V200R021C00
S5732-H	S5732-H24UM2CC (02353SJY-010)	V200R021C10
S5732-H	S5732-H24UM2CC (02353SJY-011)	V200R021C10
S5732-H	S5732-H24UM2CC (02353SJY-014)	V200R021C10
S5732-H	S5732-H48UM2CC	V200R021C00

Product	Product Model	First Supported Version
	(02353HUB)	
S5732-H	S5732-H48UM2CC (02353HUB-002)	V200R021C10
S5732-H	S5732-H48UM2CC (02353SJT)	V200R021C00
S5732-H	S5732-H48UM2CC (02353SJT-001)	V200R021C00
S5732-H	S5732-H48UM2CC (02353SJT-003)	V200R021C00
S5732-H	S5732-H48UM2CC (02353SJT-004)	V200R021C00
S5732-H	S5732-H48UM2CC (02353SJT-010)	V200R021C10
S5732-H	S5732-H48UM2CC (02353SJT-011)	V200R021C10
S5732-H	S5732-H48UM2CC (02353SJT-013)	V200R021C10
S5732-H	S5732-H48UM2CC (02353SJT-014)	V200R021C10
S5732-H	S5732-H48XUM2CC (02353MLH)	V200R021C00
S5732-H	S5732-H48XUM2CC (02353MLH-001)	V200R021C10
S5735-L	S5735-L48P4X-A (98010944)	V200R021C00
S5735S-L	S5735S-L48P4S-A (98010946)	V200R021C00
S5735S-L	S5735S-L48P4X-A (98010945)	V200R021C00
S5735-S	S5735-S24P4X (98010940)	V200R021C00
S5735-S	S5735-S48P4X (98010943)	V200R021C00
S5735S-S	S5735S-S24P4X-A (98010969)	V200R021C00
S5735S-S	S5735S-S48P4X-A (98010970)	V200R021C00
S5736-S	S5736-S24U4XC (98011030)	V200R021C00
S5736-S	S5736-S24UM4XC	V200R021C00

Product	Product Model	First Supported Version
	(98011020)	
S5736-S	S5736-S48U4XC (98011034)	V200R021C00

Panel

Figure 5-59 Panel of the PDC1000S56-CB



1. Lock	2. Indicator	3. Fan air vent	4. Handle
5. Airflow flag (air out)	6. DC power socket	-	-

Table 5-119 Indicators on the PDC1000S56-CB

Silkscreen	Name	Color	Status	Description
STAT	Running status indicator	-	Steady off	The power input is abnormal (for example, no input, overvoltage, or undervoltage) or the power output is abnormal (for example, overcurrent, overvoltage, short circuit, or overtemperature).
		Green	Steady on	The power module is working

Silkscreen	Name	Color	Status	Description
				normally.

Functions and Features

Table 5-120 Functions of a 1000 W DC PoE power module

Function	Description
PoE power supply	Provides PoE power.
Input protection	Provides protection against input undervoltage and input overcurrent.
Output protection	Provides protection against output overvoltage, output overcurrent, and output short circuits.
Overtemperature protection	When the temperature of the power module exceeds a specified threshold, the power module stops supplying power. When the temperature falls into the normal range, the power module automatically resumes power supply.
Hot swapping	Supported

NOTE

When a power module enters overtemperature protection state, take measures to lower the ambient temperature. The power module can automatically start supplying power again when the temperature falls within the normal range.

Technical Specifications

Table 5-121 Technical specifications of the PDC1000S56-CB

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	40 mm x 90 mm x 215 mm (1.6 in. x 3.5 in. x 8.5 in.)
Weight without packaging [kg(lb)]	2.0 kg (4.41 lb)
Number of inputs	1
Rated input voltage [V]	-48 V DC to -60 V DC
Input voltage range [V]	-38.4 V DC to -72 V DC
Maximum input current [A]	30 A
Rated output voltage [V]	56 V
Rated output current [A]	17.86 A

Item	Specification
Rated output power [W]	1000 W
Power dissipation Mode	Heat dissipation with fan
Hot swapping	Supported

5.27 PDC1000S12-DB (1000 W DC Power Module)

Overview

Table 5-122 Basic information about the PDC1000S12-DB

Item	Details
Description	1000 W DC Power Module
Part Number	02312QJK
Model	PDC1000S12-DB

Appearance

Figure 5-60 Appearance of the PDC1000S12-DB



Version Mapping

Table 5-123 Mappings between PDC1000S12-DB and product models

Product	Product Model	First Supported Version
S5731-S	S5731-S24T4X	V200R019C00

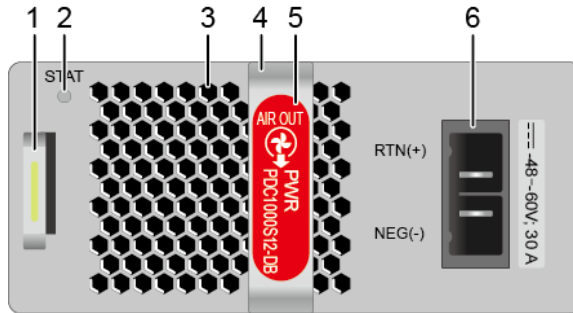
Product	Product Model	First Supported Version
	(02353AHU)	
S5731-S	S5731-S24T4X (02353AHU-001)	V200R020C10
S5731-S	S5731-S48T4X (02353AJB)	V200R019C00
S5731-S	S5731-S48T4X (02353AJB-003)	V200R020C10
S5731S-S	S5731S-S24T4X-A (02353AHV)	V200R019C00
S5731S-S	S5731S-S24T4X-A (02353AHV-001)	V200R020C10
S5731S-S	S5731S-S48T4X-A (02353AJC)	V200R019C00
S5731S-S	S5731S-S48T4X-A (02353AJC-003)	V200R020C10
S5731-H	S5731-H24T4XC (02352QPP)	V200R019C00
S5731-H	S5731-H24T4XC (02352QPP-001)	V200R020C10
S5731-H	S5731-H48T4XC (02352QPT)	V200R019C00
S5731-H	S5731-H48T4XC (02352QPT-003)	V200R020C10
S5731S-H	S5731S-H24T4S-A (02353DJE)	V200R019C00
S5731S-H	S5731S-H24T4S-A (02353DJE-001)	V200R020C10
S5731S-H	S5731S-H24T4X-A (02353HVV)	V200R019C10
S5731S-H	S5731S-H24T4X-A (02353HVV-001)	V200R020C10
S5731S-H	S5731S-H24T4XC-A (02352YRG)	V200R019C00
S5731S-H	S5731S-H24T4XC-A (02352YRG-001)	V200R020C10
S5731S-H	S5731S-H48T4S-A (02353DJG)	V200R019C00
S5731S-H	S5731S-H48T4S-A (02353DJG-003)	V200R020C10

Product	Product Model	First Supported Version
S5731S-H	S5731S-H48T4X-A (02353HVJ)	V200R019C10
S5731S-H	S5731S-H48T4X-A (02353HVJ-003)	V200R020C10
S5731S-H	S5731S-H48T4XC-A (02352YRF)	V200R019C00
S5731S-H	S5731S-H48T4XC-A (02352YRF-003)	V200R020C10
S5732-H	S5732-H24S6Q (02353AJS)	V200R019C00
S5732-H	S5732-H24S6Q (02353AJS-001)	V200R020C10
S5732-H	S5732-H24S6Q (02353AJS-003)	V200R021C10
S5732-H	S5732-H48S6Q (02353AJU)	V200R019C00
S5732-H	S5732-H48S6Q (02353AJU-001)	V200R020C10
S5732-H	S5732-H48S6Q (02353AJU-003)	V200R021C10
S5735-S	S5735-S24T4X (98010938)	V200R019C00
S5735-S	S5735-S32ST4X (98010931)	V200R019C00
S5735-S	S5735-S48S4X (98010947)	V200R019C00
S5735-S	S5735-S48T4X (98010941)	V200R019C00
S5735S-S	S5735S-S24T4S-A (98010939)	V200R019C00
S5735S-S	S5735S-S24T4X-A (98010967)	V200R019C10
S5735S-S	S5735S-S32ST4X-A (98010932)	V200R019C00
S5735S-S	S5735S-S48T4S-A (98010942)	V200R019C00
S5735S-S	S5735S-S48T4X-A (98010968)	V200R019C10
S5735S-H	S5735S-H24S4XC-A (98011041)	V200R021C01
S5736-S	S5736-S24S4XC (98011038)	V200R021C01

Product	Product Model	First Supported Version
S5736-S	S5736-S48S4XC (98011042)	V200R021C01

Panel

Figure 5-61 Panel of the PDC1000S12-DB



1. Lock	2. Indicator	3. Fan air vent	4. Handle
5. Airflow flag (air out)	6. DC power socket	-	-

Table 5-124 Indicators on the PDC1000S12-DB

Silkscreen	Name	Color	Status	Description
STAT	Running status indicator	-	Steady off	The power input is abnormal (for example, no input, overvoltage, or undervoltage) or the power output is abnormal (for example, overvoltage or overtemperature).
		Green	Steady on	The power module output is normal.

Functions and Features

Table 5-125 Functions of a 1000 W DC power module

Function	Description
Input protection	Provides protection against input overvoltage, input undervoltage, and input overcurrent.
Output protection	Provides protection against output overvoltage, output overcurrent, and output short circuits.
Overtemperature protection	When the temperature of the power module exceeds a specified threshold, the power module stops supplying power. When the temperature falls into the normal range, the power module automatically resumes power supply.
Hot swapping	Supported

NOTE

When a power module enters overtemperature protection state, take measures to lower the ambient temperature. The power module can automatically start supplying power again when the temperature falls within the normal range.

Technical Specifications

Table 5-126 Technical specifications of the PDC1000S12-DB

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	40 mm x 90 mm x 215 mm (1.6 in. x 3.5 in. x 8.5 in.)
Weight without packaging [kg(lb)]	1.02 kg (2.25 lb)
Number of inputs	1
Rated input voltage [V]	-48 V DC to -60 V DC
Input voltage range [V]	-38.4 V DC to -72 V DC
Maximum input current [A]	30 A
Rated output voltage [V]	12 V
Rated output current [A]	83.3 A
Rated output power [W]	1000 W
Power dissipation Mode	Heat dissipation with fan
Hot swapping	Supported

5.28 RPS1800 Redundant Power Supply (6 DC Output Ports, 12V Total Output Power 140W, 48V Total Output Power 1600W)

Overview

Table 5-127 Basic information about the RPS1800

Item	Details
Description	RPS1800 Redundant Power Supply (6 DC Output Ports, 12V Total Output Power 140W, 48V Total Output Power 1600W)
Part Number	02353857
Model	RPS1800

Appearance

Figure 5-62 Appearance of an RPS1800 power supply



Product Mapping

Table 5-128 Mapping between switch models and the RPS1800 power supply

Power Module Name	Product Support
RPS1800 power supply	<p>S5700-LI, S5700S-LI, S5710-X-LI, S5720-X-LI, S5720-P-LI, S5720S-SI, S5720-X-EI, S5720-P-EI, S5720S-28X-LI-24S-AC, S5720-28X-SI-24S-AC, S5720-28X-SI-24S-DC, and S5700-26X-SI-12S-AC</p> <p>NOTE The S5720-16X-PWH-LI-AC, S5700-10P-PWR-LI-AC, and S5700-10P-LI-AC do not support the RPS.</p>

Panel

Figure 5-63 Front view of an RPS1800 power supply

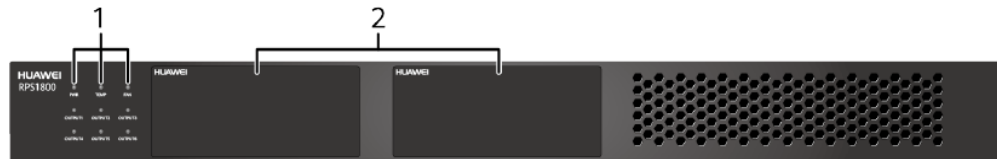
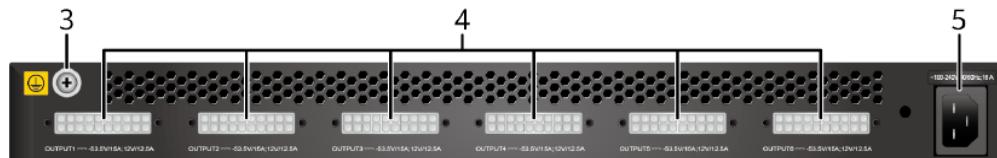


Figure 5-64 Rear view of an RPS1800 power supply



<p>1. RPS power indicators</p>	<p>2. Two swappable power module slots</p> <p>NOTE 5.29 LS5W2PSA0870 (870 W PoE Power Module, Rectifier 15 A) can be installed in the slots.</p>	<p>3. Ground screw</p>	<p>4. Six DC output ports</p> <p>NOTE The DC output ports connect to switches through 9.12 RPS Cable.</p>	<p>5. AC power socket</p> <p>NOTE The AC power socket connects to an AC power source through an 9.11 RPS1800 Power Cable.</p>
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Table 5-129 Indicators on the panel of an RPS1800 power supply

Indicator	Color	Description
PWR	Green	Steady on: The power input is in normal range.
	-	Off: The switch is powered off.
TEMP	Green	Steady on: The temperature is in normal range.
	Red	Steady on: The temperature is out of range.
	-	Off: The switch is powered off.
FAN	Green	Steady on: The fan module runs properly.
	-	Off: The switch is powered off.
OUTPUT	Green	Steady on: The RPS power supply is in cold backup state. Blinking: The RPS power supply is providing power.
	Orange	Steady on: The RPS power supply is providing power for one or more switches and is therefore unavailable

Indicator	Color	Description
		to supply power for more switches.
	-	Off: The switch is powered off.

Functions and Features

The RPS1800 is a redundant power supply that ensures seamless failover if the internal power module of a switch fails. The RPS1800 can detect the failure of the internal power module on a connected switch and immediately supply power to this switch. The switch can continue operating without a restart.

The RPS1800 has the following features:

- For non-PoE switches, the RPS1800 can provide 6:1 power redundancy without an 870 W PoE power module:
 - The RPS1800 can connect to a maximum of six switches and ensure seamless failover for at most one switch if the internal power module of the switch fails.
 - When the internal power module of the switch powered by the RPS1800 recovers, the RPS1800 immediately returns to the backup state.
 - Among the six DC output ports, port 1 has the highest priority, and the other ports have the same priority. When the RPS1800 connects to six switches, the switch connected to port 1 preferentially receives power from the RPS1800.
- For S5700-LI and S5700S-LI PoE switches, the RPS1800 supports the forcible PoE power supply mode (default) and the 6:1 power cold redundancy mode.

Forcible PoE power supply mode:

- The RPS1800 must be configured with one or two 870 W PoE power modules.
- The forcible PoE power supply mode is the default mode for the PoE switches connected to the RPS1800. In this mode, the RPS1800 provides PoE power supply to the PoE switches. When configured with one 870 W PoE power module, the RPS1800 can provide PoE power supply for only one PoE switch. When configured with two 870 W PoE power modules, the RPS1800 can provide PoE power supply for two PoE switches, 800 W PoE power for each switch.
- The PoE power provided by the RPS1800 and the PoE power of a switch's internal power modules do not accumulate. That is, when a PoE switch is connected to the RPS1800, its maximum PoE power is 800 W.
- When using 110 V power input, each 870 W PoE power module can provide only 400 W of PoE power. In this case, an RPS1800 must be configured with two 870 W PoE power modules if it is used to provide PoE power supply. Additionally, only one port of the RPS1800 can provide PoE power supply for a switch.
- The RPS1800 provides power redundancy for system and PoE power modules of the connected PoE switches. However, it can provide power redundancy for only two PoE switches at the same time.
- The six DC output ports have the same priority.
- You can use the **rps cold-backup** command to switch to the 6:1 power cold redundancy mode. The S5700-28P-PWR-LI-AC and S5700-52P-PWR-LI-AC do not support the 6:1 power cold redundancy mode.

6:1 power cold redundancy mode:

- If the RPS1800 has no 870 W PoE power module, it provides the same functions for PoE switches as it does for non-PoE switches.
- If the RPS1800 has 870 W PoE power modules installed, it provides power redundancy for the system and PoE power modules of PoE switches but does not provide forcible PoE power supply for the switches.
- The RPS1800 can provide PoE power redundancy for only one switch at a time. It requires only one 870 W PoE power module when using 220 V power input and requires two 870 W PoE power module when using 110 V power input.
- For S5720-LI PoE switches, the RPS1800 supports the 6:1 power cold redundancy mode.

6:1 power cold redundancy mode:

- If the RPS1800 has no 870 W PoE power module, it provides the same functions for PoE switches as it does for non-PoE switches.
- If the RPS1800 has 870 W PoE power modules installed, it provides power redundancy for the system and PoE power modules of PoE switches but does not provide forcible PoE power supply for the switches.
- The RPS1800 can provide PoE power redundancy for only one switch at a time. It requires only one 870 W PoE power module when using 220 V power input and requires two 870 W PoE power module when using 110 V power input.

 **NOTE**

The 870 W PoE power modules and RPS cables are not hot swappable.

The RPS1800 only provides power redundancy for switches and cannot power on a switch directly.

The RPS1800 can be deployed on various networks to ensure non-stop operation of the networks. Figure 5-65 and Figure 5-66 show different deployments of the RPS1800.

When an RPS1800 uses the same external power supply system as the connected switches, it can prevent service interruption caused by failures of the switches' internal power modules. When an RPS1800 uses a different external power supply system than the connected switches, it can prevent service interruption caused by failures of switches' internal power modules and external power supply system. Therefore, this deployment is more reliable.

Figure 5-65 Same external power supply system for RPS1800 and connected switches

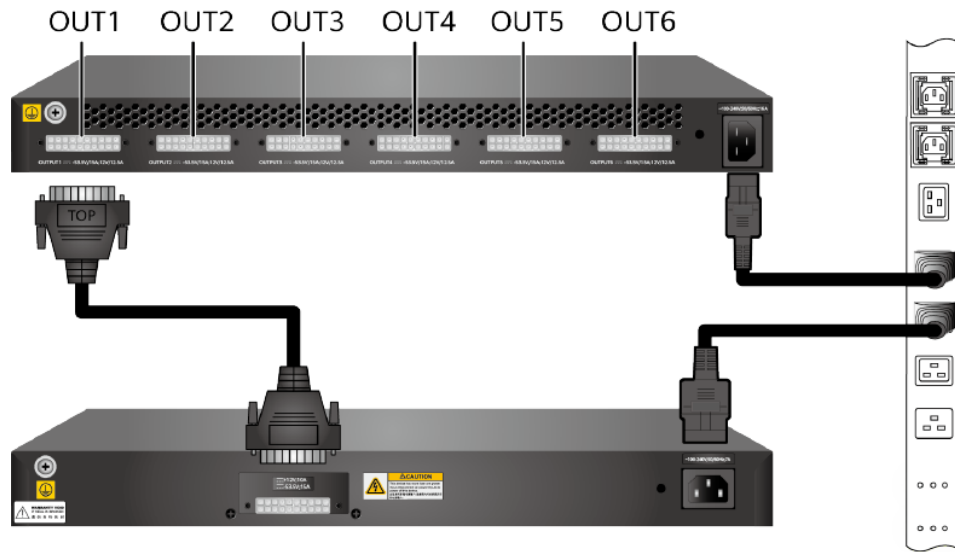
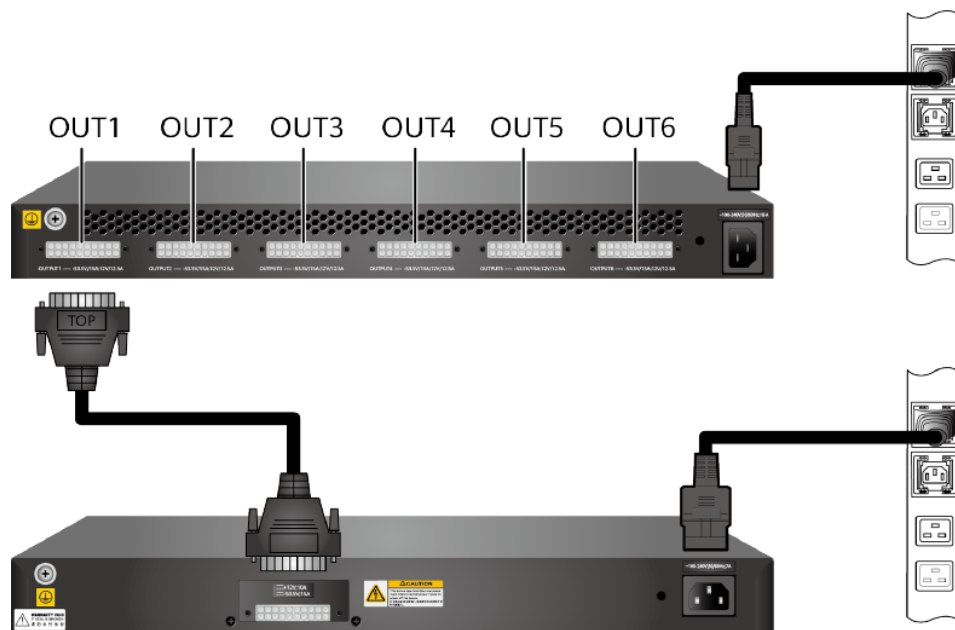


Figure 5-66 Different external power supply systems for RPS1800 and connected switches

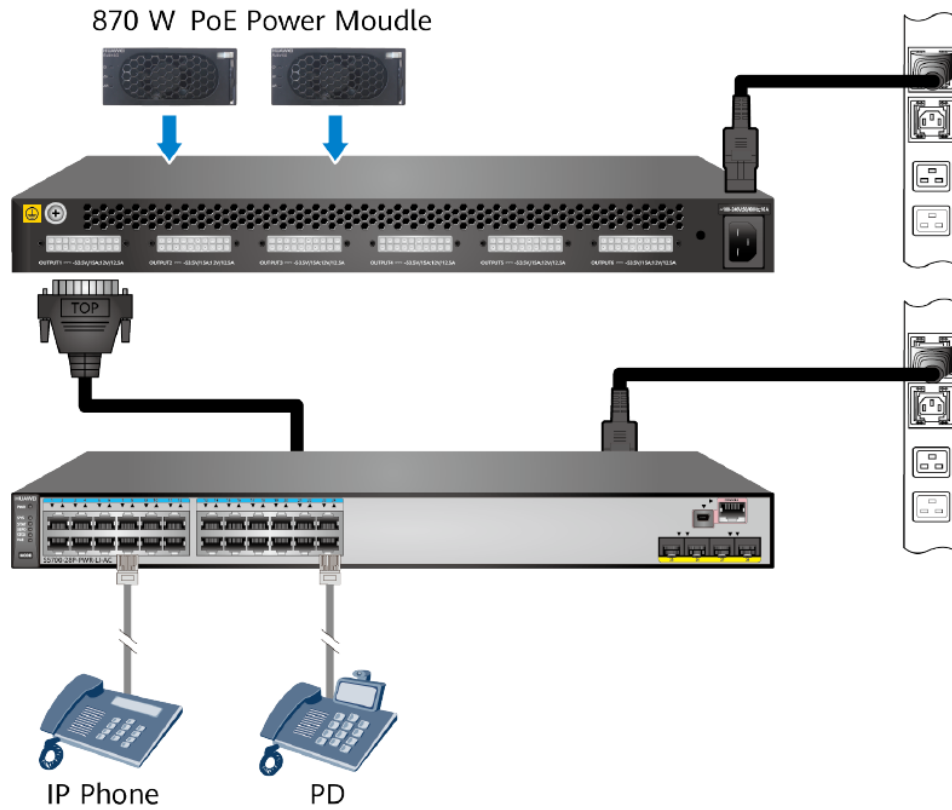


If one of switches connected to the RPS1800 encounters an internal power module failure, the RPS1800 provides seamless failover for the switch. Then the RPS1800 does not provide power backup for the other switches connected until the internal power module of the faulty switch is recovered or replaced.

If more than one connected switch has an internal power module failure, the RPS1800 preferentially provides power for the switch connected to port 1. If the switch connected to port 1 has an internal power module failure when the RPS1800 is providing power for a switch connected to another port, the RPS1800 immediately stops supplying power for this switch and starts providing power to the switch connected to port 1.

If the RPS1800 has 870 W PoE power modules installed, it can provide PoE power for PoE switches, as shown in Figure 5-67.

Figure 5-67 PoE power supply for connected switches



Technical Specifications

Table 5-130 Technical specifications of the RPS1800

Item	Description (Without Power Modules Installed)	Description (with One Power Module Installed)	Description (with Two Power Modules Installed)
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 310.0 mm (1.72 in. x 17.4 in. x 12.2 in.)		
Weight	4.0 kg	5.5 kg	7.0 kg
Operating temperature	0 °C to 50 °C (at 0-2000 m altitude)		
Storage temperature	-40 °C to +70 °C		
Relative	5% RH to 95% RH, noncondensing		

Item	Description (Without Power Modules Installed)	Description (with One Power Module Installed)	Description (with Two Power Modules Installed)
humidity			
Airflow direction	Air flows in through the DC output ports side and flows out through the power module side.		
Rated input voltage	220/110 V AC, 50/60 Hz		
Input voltage range	200 V AC to 240 V AC (220 V rated voltage input)/100 V AC to 120 V AC (110 V rated voltage input), 50/60 Hz		
Input current	12 A		
Maximum output current	12 V: 11.5 A	<ul style="list-style-type: none"> 12 V: 11.5 A -53.5 V: 15 A (input voltage range: 200 V AC to 240 V AC) 	<ul style="list-style-type: none"> 12 V: 11.5 A -53.5 V: 15 A output per port (input voltage range: 200 V AC to 240 V AC) -53.5 V: 15 A output per port (input voltage range: 100 V AC to 120 V AC, two 870 W PoE power modules required)
Maximum output power	12 V: 140 W	<ul style="list-style-type: none"> 12 V: 140 W -53.5 V: 800 W (input voltage range: 200 V AC to 240 V AC) 	<ul style="list-style-type: none"> 12 V: 140 W -53.5 V: 1600 W (input voltage range: 200 V AC to 240 V AC) -53.5 V: 800 W (input voltage range: 100 V AC to 120 V AC, two 870 W PoE power modules required)

 **NOTE**

Each interface of the RPS provides a maximum of 140 W power for the device and 800 W PoE power for PDs.

5.29 LS5W2PSA0870 (870 W PoE Power Module, Rectifier 15 A)

Overview

Table 5-131 Basic information about the LS5W2PSA0870

Item	Details
Description	870 W PoE Power Module, Rectifier 15 A
Part Number	02310LGV
Model	LS5W2PSA0870

Product Mapping

Table 5-132 RPS1800 matching an 870 W PoE power module

Power Module Name	Product Support
LS5W2PSA0870	Supported only in the RPS1800

Appearance

Figure 5-68 Appearance of an 870 W PoE power module



Functions and Features

An 870 W PoE power module can be configured on the RPS1800 to convert 100 V AC to 240 V AC power input into -53.5 V DC default power output. The functions of the power module are described in Table 5-133. When the RPS1800 is configured with one 870 W PoE power module, it provides 800 W of PoE power for connected devices. It can be configured with a

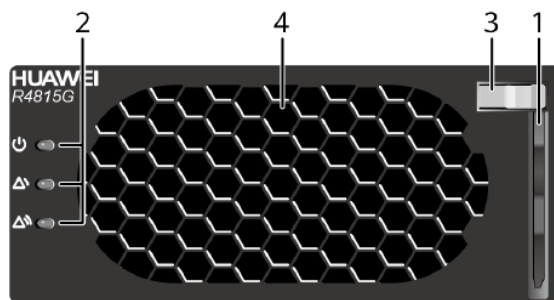
maximum of two 870 W PoE power modules to provide 1600 W of PoE power for connected devices.

Table 5-133 Functions of an 870 W PoE power module

Function	Description
Input protection	Input undervoltage and overvoltage protection is provided.
Output protection	Output overvoltage, overcurrent, and short-circuit protection is provided.
Overtemperature protection	-
Hot swapping	Not supported

Panel Description



Figure 5-69 Panel of an 870 W PoE power module




1. Extensible handle	2. Power status indicator	3. Slide pinch	4. Fan
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Table 5-134 describes indicators on an 870 W PoE power module panel.

Table 5-134 Description of indicators on an 870 W PoE power module panel

Indicator	Color	Description
	Green	Off: No AC input power is provided or the power module is faulty. Steady on: AC input power is provided. Slow blinking: The power module is in manual query state. Fast blinking: Applications are being loaded on the power module.
	Yellow	Off: No alarm has been triggered on the power module. Steady on: <ul style="list-style-type: none"> A power alarm has been generated due to ambient

Indicator	Color	Description
		overtemperature. <ul style="list-style-type: none">• A power-off alarm has been triggered by high or low ambient temperature.• Input undervoltage and overvoltage occur.• The power module is in dormant state. Blinking: The power module disconnects from the RPS1800.
Fault indicator 	Red	Off: No fault exists on the power module. Steady on: The power output is locked because of output overvoltage or no power output is provided because the power module is faulty.

Technical Specifications

Table 5-135 Technical specifications of the LS5W2PSA0870

Item	Description
Dimensions (H x W x D)	40.8 mm x 95.5 mm x 208.0 mm (1.61 in. x 3.76 in. x 8.19 in.)
Weight	< 1.5 kg
Rated input voltage	220/110 V AC, 50/60 Hz
Maximum input voltage range	200 V AC to 240 V AC (220 V rated voltage input)/100 V AC to 120 V AC (110 V rated voltage input), 47 Hz to 63 Hz
Input current	4.7 A
Maximum output power	<ul style="list-style-type: none">• 870 W (voltage range: 200 V to 240 V)• 435 W (voltage range: 100 V to 120 V)

6 Battery Modules

- 6.1 BAT-4AHA (Chargeable Lithium Battery)
- 6.2 BAT-8AHA (Chargeable Lithium Battery)
- 6.3 PBB-12AHA (12AH Lead-Acid Battery Charger Module)

6.1 BAT-4AHA (Chargeable Lithium Battery)

Product Support

Table 6-1 provides the product support for the BAT-4AHA battery.

Table 6-1 Product support for the BAT-4AHA battery

Battery Name	Product Support
BAT-4AHA	S5700-LI-BAT Series

Appearance

Figure 6-1 shows a BAT-4AHA battery.

Figure 6-1 BAT-4AHA battery



Function

Table 6-2 describes the functions of a BAT-4AHA battery.

Table 6-2 Functions of a BAT-4AHA battery

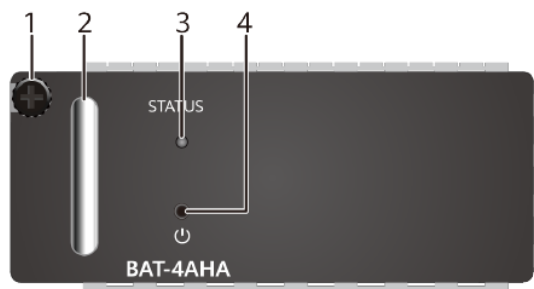
Function	Description
Power redundancy	The BAT-4AHA battery can be installed in the battery slot at the rear of an S5700-LI-BAT switch to provide power redundancy. When the external power supply system fails, the battery powers the switch to ensure uninterrupted services.
Protection	The BAT-4AHA battery provides various protection functions, including charge overvoltage protection, charge overcurrent protection, discharge overcurrent protection, undervoltage protection, and short-circuit protection.
Alarm reporting	The BAT-4AHA battery can report alarms on low-power state, low/high temperature, battery failures, and power supply time.
Command line configuration	You can configure the power supply time alarm threshold for the BAT-4AHA battery and turn off the battery using commands.
Overtemperature protection	The battery enters the overtemperature protection state when the charge temperature is out of the range of -5 °C to +55 °C or when the discharge temperature is out of the range of -10 °C to +65 °C. The battery restores to the operation state when the charge temperature restores to the range of 0 °C to 50 °C or the discharge temperature restores to the range of -5 °C to +60 °C.

Function	Description
Visualized management	You can use the web-based management system to check the battery status and manage the battery.
In-service software upgrade	In V200R005C00 to V200R010C00 versions, the lithium battery software can be upgraded using the upgrade battery-app command.
Hot swapping	The battery is hot swappable.

Panel

Figure 6-2 shows the panel of a BAT-4AHA battery.

Figure 6-2 BAT-4AHA battery panel



1. Captive screw	2. Handle	3. Battery indicator	4: Battery switch button NOTE <ul style="list-style-type: none"> The switch button is invalid when the battery is not installed in the switch. If the switch is powered by an AC power supply system, you do not need to turn on the lithium battery by holding down this button after installing the battery in the switch. The lithium battery works in backup mode automatically after it is installed. If the switch is not connected to an AC power supply system, install the lithium battery, and then hold down this button for 1s to turn on the battery so that the battery starts to power the switch. You can hold down this button for 1s to turn off the lithium battery only when the switch has no AC power input.
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Table 6-3 describes the indicator on the BAT-4AHA battery panel.

Table 6-3 Description of the BAT-4AHA battery indicator

Indicator	Color	Description
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Indicator	Color	Description
STATUS	Off	<ul style="list-style-type: none">The lithium battery is not connected to the switch.The lithium battery is faulty or its temperature is abnormal.
	Green	<ul style="list-style-type: none">Steady on: The lithium battery has been fully charged and is working in backup state.Fast blinking: The lithium battery is supplying power to the switch.Slow blinking: The switch is charging the lithium battery.

Specifications

Table 6-4 lists specifications of a BAT-4AHA battery.

Table 6-4 Specifications of a BAT-4AHA battery

Item	Description
Dimensions (H x W x D)	40 mm x 100 mm x 205 mm (1.6 in. x 3.9 in. x 8.1 in.)
Weight	0.8 kg (1.76 lb)
Charge voltage range	10.8 V DC to 14 V DC
Discharge voltage range	9 V DC to 12.45 V DC
Maximum charge current	1.25 A
Maximum discharge power	50 W; typical: 40 W
Charge environment temperature	0 °C to 45 °C (32 °F to 113 °F)
Discharge environment temperature	-5 °C to +50 °C (23 °F to 122 °F)
Storage temperature	-20 °C to +60 °C (-4 °F to 140 °F)
Relative humidity	5% RH to 95% RH, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Maximum storage time (fully charged, no charging)	6 months: < 40 °C (104 °F); recommended temperature: 20 °C to 30 °C (68 °F to 86 °F)

Item	Description
Storage requirements	NOTICE A lithium battery must be charged after the maximum storage time; otherwise, the battery service life decreases or the battery is damaged. <ul style="list-style-type: none">• The storage environment must comply with ETS 300 029-1-1 and CLASS 1.2.• The storage environment must be free from acidic, alkaline, or other corrosive gases.• Keep a lithium battery away from direct sunlight and more than 2 m from heat sources.• Do not place a battery upside down and avoid collision or stress on the battery.
Rated capacity	4 AH
Life time	> 4 years NOTE The battery life time is obtained under the following condition: The temperature is 20 °C to 30 °C, and the discharge capacity of the battery exceeds 50% for no more than once a day.
EMC	<ul style="list-style-type: none">• EN55022• EN55024
Environmental standards	RoHS
Safety	<ul style="list-style-type: none">• EN 60950-1: 2006• EN 62133: 2003
Transportation	UN38.3
Part number	24021354

6.2 BAT-8AHA (Chargeable Lithium Battery)

Product Support

Table 6-5 provides the product support for the BAT-8AHA battery.

Table 6-5 Product support for the BAT-8AHA battery

Battery Name	Product Support
BAT-8AHA	S5700-LI-BAT Series

Appearance

Figure 6-3 shows a BAT-8AHA battery.

Figure 6-3 BAT-8AHA battery



Function

Table 6-6 describes the functions of a BAT-8AHA battery.

Table 6-6 Functions of a BAT-8AHA battery

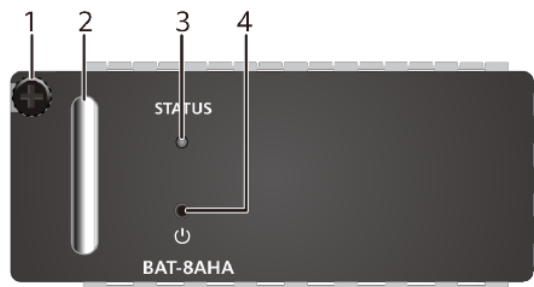
Function	Description
Power redundancy	The BAT-8AHA battery can be installed in the battery slot at the rear of an S5700-LI-BAT switch to provide power redundancy. When the external power supply system fails, the battery powers the switch to ensure uninterrupted services.
Protection	The BAT-8AHA battery provides various protection functions, including charge overvoltage protection, charge overcurrent protection, discharge overcurrent protection, undervoltage protection, and short-circuit protection.
Alarm reporting	The BAT-8AHA battery can report alarms on low-power state, low/high temperature, battery failures, and power supply time.
Command line configuration	You can configure the power supply time alarm threshold for the BAT-8AHA battery and turn off the battery using commands.
Overtemperature protection	The battery enters the overtemperature protection state when the charge temperature is out of the range of -5 °C to +55 °C or when the discharge temperature is out of the range of -10 °C to +65 °C. The

Function	Description
	battery restores to the operation state when the charge temperature restores to the range of 0 °C to 50 °C or the discharge temperature restores to the range of -5 °C to +60 °C.
Visualized management	You can use the web-based management system to check the battery status and manage the battery.
In-service software upgrade	In V200R005C00 to V200R010C00 versions, the lithium battery software can be upgraded using the upgrade battery-app command.
Hot swapping	The battery is hot swappable.

Panel

Figure 6-4 shows the panel of a BAT-8AHA battery.

Figure 6-4 BAT-8AHA battery panel



1. Captive screw	2. Handle	3. Battery indicator	4: Battery switch button NOTE <ul style="list-style-type: none"> The switch button is invalid when the battery is not installed in the switch. If the switch is powered by an AC power supply system, you do not need to turn on the lithium battery by holding down this button after installing the battery in the switch. The lithium battery works in backup mode automatically after it is installed. If the switch is not connected to an AC power supply system, install the lithium battery, and then hold down this button for 1s to turn on the battery so that the battery starts to power the switch. You can hold down this button for 1s to turn off the lithium battery only when the switch has no AC power input.
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Table 6-7 describes the indicator on the BAT-8AHA battery panel.

Table 6-7 Description of the BAT-8AHA battery indicator

Indicator	Color	Description
STATUS	Off	<ul style="list-style-type: none"> The lithium battery is not connected to the switch. The lithium battery is faulty or its temperature is abnormal.
	Green	<ul style="list-style-type: none"> Steady on: The lithium battery has been fully charged and is working in backup state. Fast blinking: The lithium battery is supplying power to the switch. Slow blinking: The switch is charging the lithium battery.

Specifications

Table 6-8 lists specifications of a BAT-8AHA battery.

Table 6-8 Specifications of a BAT-8AHA battery

Item	Description
Dimensions (H x W x D)	40 mm x 100 mm x 205 mm (1.6 in. x 3.9 in. x 8.1 in.)
Weight	1.1 kg (2.43 lb)
Charge voltage range	10.8 V DC to 14 V DC
Discharge voltage range	9 V DC to 12.45 V DC
Maximum charge current	1.25 A
Maximum discharge power	80 W; typical: 45 W
Charge environment temperature	0 °C to 45 °C (32 °F to 113 °F)
Discharge environment temperature	-5 °C to +50 °C (23 °F to 122 °F)
Storage temperature	-20 °C to +60 °C (-4 °F to 140 °F)
Relative humidity	5% RH to 95% RH, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Maximum storage time (full power, no	6 months < 40 °C (104 °F); recommended temperature: 20 °C to 30 °C (68 °F to 86 °F)

Item	Description
charging)	
Storage requirements	NOTICE A lithium battery must be charged after the maximum storage time; otherwise, the battery service life decreases or the battery is damaged. <ul style="list-style-type: none">• The storage environment must comply with ETS 300 029-1-1 and CLASS 1.2.• The storage environment must be free from acidic, alkaline, or other corrosive gases.• Keep a lithium battery away from direct sunlight and more than 2 m from heat sources.• Do not place a battery upside down and avoid collision or stress on the battery.
Rated capacity	8 AH
Life time	> 4 years NOTE The battery life time is obtained under the following condition: The temperature is 20 °C to 30 °C, and the discharge capacity of the battery exceeds 50% for no more than once a day.
EMC	<ul style="list-style-type: none">• EN55022• EN55024
Environmental standards	RoHS
Safety	<ul style="list-style-type: none">• EN 60950-1: 2006• EN 62133: 2003
Transportation	UN38.3
Part number	24021356

6.3 PBB-12AHA (12AH Lead-Acid Battery Charger Module)

Product Support

Table 6-9 provides the product support for the PBB-12AHA lead-acid battery charger module.

Table 6-9 Product support for the PBB-12AHA lead-acid battery charger module

Module Name	Product Support
PBB-12AHA	S5700-LI-BAT Series

Appearance

Figure 6-5 shows a PBB-12AHA lead-acid battery charger module.

Figure 6-5 PBB-12AHA lead-acid battery charger module



Function

Table 6-10 describes the functions of a PBB-12AHA lead-acid battery charger module.

Table 6-10 Functions of a PBB-12AHA lead-acid battery charger module

Function	Description
Connecting to an external lead-acid battery	<p>The PBB-12AHA can be installed in the battery slot at the rear of an S5700-LI-BAT switch. It connects to a lead-acid battery to provide power redundancy.</p> <p>The PBB-12AHA has a BAT port on the panel, which can connect to a lead-acid battery to supply power to the switch.</p> <p>A switch can be powered on using a lead-acid battery charger module and a lead-acid battery. Install the lead-acid battery charger module in the switch, and then connect the lead-acid battery to the charger module.</p>
Alarm reporting	<p>The PBB-12AHA module supports alarms about the lead-acid-battery, including low-power alarm, low-power clear alarm, and full-power alarm.</p>
Protection	<p>The BAT port can prevent the power cable connector from being reversely inserted.</p>
Temperature compensation	<p>The PBB-12AHA has a sensor port on the panel, which can connect to a sensor for</p>

Function	Description
	temperature compensation during charging of a lead-acid battery.
Charging	The PBB-12AHA can charge the lead-acid battery connected to it.
Hot swapping	The PBB-12AHA is hot swappable.

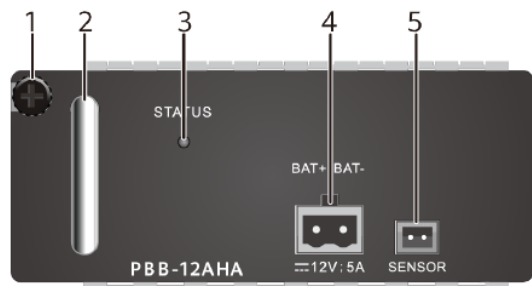
The lead-acid battery (separately purchased) connected to the PBB-12AHA lead-acid battery charger module must meet the following requirements:

- The input voltage is 12 V.
- The rated capacity of the lead-acid battery is 12 ampere-hour.

Panel

Figure 6-6 shows the panel of a PBB-12AHA lead-acid battery charger module.

Figure 6-6 PBB-12AHA lead-acid battery charger module panel



1. Captive screw	2. Handle	3. Indicator
4. Lead-acid battery input port NOTE Power cables of the lead-acid battery are connected to this port through a connector (delivered with the PBB-12AHA). You need to purchase power cables with a diameter of 14 AWG to 12 AWG.	5. Temperature sensor port NOTE A lead-acid battery temperature sensor can connect to this port to monitor temperature of the lead-acid battery. The lead-acid battery temperature sensor can be purchased from Huawei if needed.	-

Table 6-11 describes the indicator on a PBB-12AHA lead-acid battery charger module.

Table 6-11 Description of the indicator on a PBB-12AHA lead-acid battery charger module

Indicator	Color	Description
STATUS	Green	<ul style="list-style-type: none"> • Off: No lead-acid battery is connected to the PBB-12AHA module. • Steady on: A lead-acid battery is connected to the

Indicator	Color	Description
		PBB-12AHA module.

Specifications

Table 6-12 lists specifications of a PBB-12AHA lead-acid battery charger module.

Table 6-12 Specifications of a PBB-12AHA lead-acid battery charger module

Item	Description
Dimensions (H x W x D)	40 mm x 100 mm x 205 mm (1.6 in. x 3.9 in. x 8.1 in.)
Weight	0.48 kg (1.06 lb)
Charge voltage range	10.8 V DC to 13.8 V DC
Discharge voltage range	10.8 V DC to 13.6 V DC
Charge current	<ul style="list-style-type: none">• S5700-28P-LI-BAT: maximum value 1.25 A; typical value 1.0 A• S5700-28P-LI-24S-BAT: maximum value 2.0 A; typical value 1.8 A
Maximum discharge power	80 W; typical: 60 W
Part number	98010517

7 Fan Modules

- 7.1 CX7E1FANA Fan Module
- 7.2 FAN-40EA-B Fan Module
- 7.3 FAN-028A-B Fan Module
- 7.4 FAN-060B-B (Fan box (B, FAN panel side exhaust))
- 7.5 FAN-023A-B (Fan box(B,FAN panel side exhaust))
- 7.6 FAN-031A-B (Fan box(B,FAN panel side exhaust))
- 7.7 FAN-031A-F (Fan box (F, FAN panel side intake))

7.1 CX7E1FANA Fan Module

Product Support

Table 7-1 lists the switch chassis matching a CX7E1FANA fan module.

Table 7-1 Switch chassis matching a CX7E1FANA fan module

Fan Module Name	Product Support
CX7E1FANA fan module	S5700-28C-SI, S5700-52C-SI, S5700-28C-PWR-SI, S5700-52C-PWR-SI, S5700-24TP-PWR-SI, S5700-48TP-PWR-SI, S5700-EI, and S5710-C-LI

Appearance

Figure 7-1 shows the appearance of a CX7E1FANA fan module.

Figure 7-1 Appearance of a CX7E1FANA fan module



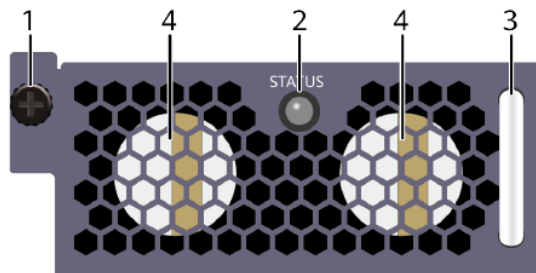
Function

A CX7E1FANA fan module has two fans to cool the chassis. A CX7E1FANA fan module is hot swappable.

Panel Description

Figure 7-2 shows the panel of a CX7E1FANA fan module.

Figure 7-2 Panel of a CX7E1FANA fan module



1. Captive screw	2. Fan module indicator	3. Handle	4. Two fans NOTE Air is exhausted from air vents on the panel.
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Table 7-2 shows indicators on the CX7E1FANA fan module panel.

Table 7-2 Description of indicators on the CX7E1FANA fan module panel

Indicator	Color	Description
STATUS	Off	The fan module is not running.
	Green	<ul style="list-style-type: none"> Slow blinking: The fan module is working properly and its communication is normal. Fast blinking: The fan module is working properly but its communication is abnormal.
	Red	<ul style="list-style-type: none"> Steady on: The fan module has a hardware fault

Indicator	Color	Description
		and needs to be replaced. <ul style="list-style-type: none">• Slow blinking: An alarm has been generated and needs to be handled. Common causes of this alarm include errors of dual in-line package (DIP) switches, short-circuit, fan blades blocked, and other fan module faults.

Specifications

Table 7-3 describes technical specifications of a CX7E1FANA fan module.

Table 7-3 Technical specifications of a CX7E1FANA fan module

Item	Description
Dimensions (H x W x D)	39.6 mm x 103 mm x 99.2 mm
Weight	250±20 g
Maximum power consumption	12 W
Maximum wind pressure	375 Pa
Maximum airflow	40 CFM
Operating voltage range	12 V DC
Part number	02351651

7.2 FAN-40EA-B Fan Module

Product Support

Table 7-4 lists the switch chassis matching a FAN-40EA-B fan module.

Table 7-4 Mapping between device models and the FAN-40EA-B module

Fan Module Name	Product Support
FAN-40EA-B	S5710-108C-PWR-HI

Appearance

Figure 7-3 shows the appearance of a FAN-40EA-B fan module.

Figure 7-3 Appearance of a FAN-40EA-B fan module



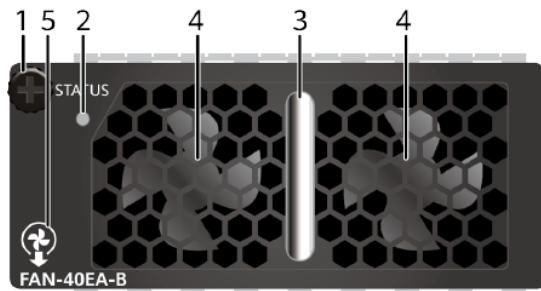
Function

A FAN-40EA-B fan module has two fans to cool the chassis. A FAN-40EA-B fan module is hot swappable.

Panel

Figure 7-4 shows the panel of a FAN-40EA-B fan module.

Figure 7-4 Panel of a FAN-40EA-B fan module



1. Captive screw	2. Indicator	3. Handle	4. Two fans	5: Airflow flag (air out)
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Table 7-5 describes the indicators on the FAN-40EA-B fan module panel.

Table 7-5 Description of indicators on the FAN-40EA-B fan module panel

Indicator	Color	Description
STATUS	Off	The fan module is not running.
	Green	<ul style="list-style-type: none"> Slow blinking: The fan module is working and communicating normally with the system.

Indicator	Color	Description
		<ul style="list-style-type: none"> Fast blinking: The fan module is working but is not communicating normally with the system.
	Red	<ul style="list-style-type: none"> Steady on: The fan module has a hardware fault and needs to be replaced. Slow blinking: An alarm has been generated and needs to be handled. Common causes of this alarm include errors of dual in-line package (DIP) switches, short-circuit, fan blades blocked, and other fan module faults.

Specifications

Table 7-6 lists technical specifications of a FAN-40EA-B fan module.

Table 7-6 Technical specifications of a FAN-40EA-B fan module

Item	Description
Dimensions (H x W x D)	40.0 mm x 94.5 mm x 183.1 mm
Number of fans	2
Weight	0.325 kg
Maximum power consumption	12.71 W
Maximum speed	18500±10% revolutions per minute (RPM)
Maximum airflow	46 cubic feet per minute (CFM)
Part number	02355338

7.3 FAN-028A-B Fan Module

Product Support

Table 7-7 lists the switch chassis matching a FAN-028A-B fan module.

Table 7-7 Switch chassis matching a FAN-028A-B fan module

Fan Module Name	Product Support
FAN-028A-B	S5720-C-EI, S5720-PC-EI, S5730-SI, S5730S-EI series, and S5730-36C-HI, S5730-36C-PWH-HI, S5730-60C-HI, S5730-60C-PWH-HI, S5730-36C-HI-24S

Appearance

Figure 7-5 Appearance of a FAN-028A-B fan module

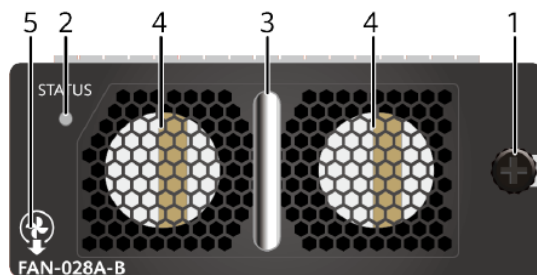


Function

A FAN-028A-B fan module has two fans to cool the chassis. It is hot swappable.

Panel

Figure 7-6 Panel of a FAN-028A-B fan module



1. Captive screw	2. Indicator	3. Handle	4. Two fans	5: Airflow flag (air out)
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Table 7-8 describes the indicator on a FAN-028A-B fan module panel.

Table 7-8 Description of the indicator on a FAN-028A-B fan module panel

Indicator	Color	Description
STATUS: running status indicator	Off	The fan module is not running.
	Green	Slow blinking: Fans are working properly.
	Red	Steady on: The fan module has a hardware fault and needs to be replaced.

Specifications

Table 7-9 describes technical specifications of a FAN-028A-B fan module.

Table 7-9 Technical specifications of a FAN-028A-B fan module

Item	Description
Dimensions (H x W x D)	40 mm x 100 mm x 220 mm (1.57 in. x 3.94 in. x 8.66 in.)
Number of fans	2
Weight	0.34 kg
Maximum power consumption	12 W
Rated fan speed	16000±10% revolutions per minute (RPM)
Maximum airflow	28 cubic feet per minute (CFM)
Part number	02359595

7.4 FAN-060B-B (Fan box (B, FAN panel side exhaust))

Overview

Table 7-10 Basic information about the FAN-060B-B

Item	Details
Description	Fan box (B, FAN panel side exhaust)

Item	Details
Part Number	02350DNQ
Model	FAN-060B-B

Appearance

Figure 7-7 Appearance of the FAN-060B-B



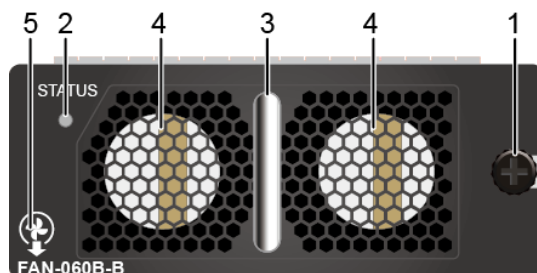
Version Mapping

Table 7-11 Mappings between FAN-060B-B and product models

Product	Product Model	First Supported Version
S5730-HI	S5730-60C-HI-48S (02351XFS)	V200R013C00

Panel

Figure 7-8 Panel of the FAN-060B-B



1. Captive screw	2. Indicator	3. Handle	4. Two fans	5. Airflow flag (air out)
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Table 7-12 Indicators on the FAN-060B-B

Silkscreen	Name	Color	Status	Description
STATUS	Fan status indicator	-	Off	The fan module is not running.
		Green	Slow blinking	The fan module is working properly.
		Red	Steady on	The fan module has a hardware fault and must be replaced.

Functions and Features

Table 7-13 Functions and features of the FAN-060B-B

Functions and Features	Description
Basic function	The fan module has two fans to cool the chassis.
Hot swapping	Supported

Technical Specifications

Table 7-14 Technical specifications of the FAN-060B-B

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	40 mm x 100 mm x 220 mm (1.57 in. x 3.94 in. x 8.66 in.)
Weight without packaging [kg(lb)]	0.4 kg (0.88 lb)
Number of fans	2
Maximum power consumption [W]	32.6 W
Maximum heat dissipation [BTU/hour]	111.23 BTU/hour
Maximum fan speed [RPM]	19000±10%
Maximum airflow [CFM]	64 CFM

Item	Specification
Airflow direction	FAN panel side exhaust

7.5 FAN-023A-B (Fan box(B,FAN panel side exhaust))

Overview

Table 7-15 Basic information about the FAN-023A-B

Item	Details
Description	Fan box(B,FAN panel side exhaust)
Part Number	02312DKW
Model	FAN-023A-B

Appearance

Figure 7-9 Appearance of the FAN-023A-B



Version Mapping

Table 7-16 Mappings between FAN-023A-B and product models

Product	Product Model	First Supported Version
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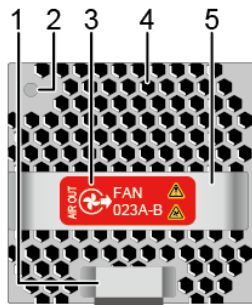
Product	Product Model	First Supported Version
S5731-S	S5731-S24P4X (02353AHX)	V200R019C00
S5731-S	S5731-S24P4X (02353AHX-001)	V200R020C10
S5731-S	S5731-S24P4X (02353AHX-003)	V200R021C10
S5731-S	S5731-S24T4X (02353AHU)	V200R019C00
S5731-S	S5731-S24T4X (02353AHU-001)	V200R020C10
S5731-S	S5731-S48P4X (02353AJH)	V200R019C00
S5731-S	S5731-S48P4X (02353AJH-001)	V200R020C10
S5731-S	S5731-S48P4X (02353AJH-003)	V200R021C10
S5731-S	S5731-S48T4X (02353AJB)	V200R019C00
S5731-S	S5731-S48T4X (02353AJB-003)	V200R020C10
S5731S-S	S5731S-S24P4X-A (02353AHY)	V200R019C00
S5731S-S	S5731S-S24P4X-A (02353AHY-001)	V200R020C10
S5731S-S	S5731S-S24P4X-A (02353AHY-003)	V200R021C10
S5731S-S	S5731S-S24T4X-A (02353AHV)	V200R019C00
S5731S-S	S5731S-S24T4X-A (02353AHV-001)	V200R020C10
S5731S-S	S5731S-S48P4X-A (02353AJJ)	V200R019C00
S5731S-S	S5731S-S48P4X-A (02353AJJ-001)	V200R020C10
S5731S-S	S5731S-S48P4X-A (02353AJJ-003)	V200R021C10
S5731S-S	S5731S-S48T4X-A (02353AJC)	V200R019C00
S5731S-S	S5731S-S48T4X-A (02353AJC-003)	V200R020C10

Product	Product Model	First Supported Version
S5731-H	S5731-H24HB4XZ (02354QXD)	V200R021C10
S5731-H	S5731-H24P4XC (02352QPV)	V200R013C02
S5731-H	S5731-H24P4XC (02352QPV-001)	V200R020C10
S5731-H	S5731-H24T4XC (02352QPP)	V200R013C02
S5731-H	S5731-H24T4XC (02352QPP-001)	V200R020C10
S5731-H	S5731-H48HB4XZ (02354QXB)	V200R021C10
S5731-H	S5731-H48P4XC (02352SVD)	V200R013C02
S5731-H	S5731-H48P4XC (02352SVD-001)	V200R020C10
S5731-H	S5731-H48T4XC (02352QPT)	V200R013C02
S5731-H	S5731-H48T4XC (02352QPT-003)	V200R020C10
S5731S-H	S5731S-H24HB4XZ-A (02354QXE)	V200R021C10
S5731S-H	S5731S-H24T4S-A (02353DJE)	V200R019C00
S5731S-H	S5731S-H24T4S-A (02353DJE-001)	V200R020C10
S5731S-H	S5731S-H24T4X-A (02353HVH)	V200R019C10
S5731S-H	S5731S-H24T4X-A (02353HVH-001)	V200R020C10
S5731S-H	S5731S-H24T4XC-A (02352YRG)	V200R019C00
S5731S-H	S5731S-H24T4XC-A (02352YRG-001)	V200R020C10
S5731S-H	S5731S-H48HB4XZ-A (02354QXC)	V200R021C10
S5731S-H	S5731S-H48T4S-A (02353DJG)	V200R019C00
S5731S-H	S5731S-H48T4S-A	V200R020C10

Product	Product Model	First Supported Version
	(02353DJG-003)	
S5731S-H	S5731S-H48T4X-A (02353HVJ)	V200R019C10
S5731S-H	S5731S-H48T4X-A (02353HVJ-003)	V200R020C10
S5731S-H	S5731S-H48T4XC-A (02352YRF)	V200R019C00
S5731S-H	S5731S-H48T4XC-A (02352YRF-003)	V200R020C10
S5735S-H	S5735S-H24S4XC-A (98011041)	V200R021C01
S5735S-H	S5735S-H24T4XC-A (98011025)	V200R020C00
S5735S-H	S5735S-H24U4XC-A (98011033)	V200R020C00
S5735S-H	S5735S-H48T4XC-A (98011029)	V200R020C00
S5735S-H	S5735S-H48U4XC-A (98011037)	V200R020C00
S5736-S	S5736-S24S4XC (98011038)	V200R021C01
S5736-S	S5736-S24T4XC (98011022)	V200R020C00
S5736-S	S5736-S24U4XC (98011030)	V200R020C00
S5736-S	S5736-S24UM4XC (98011020)	V200R020C00
S5736-S	S5736-S48S4XC (98011042)	V200R021C01
S5736-S	S5736-S48T4XC (98011026)	V200R020C00
S5736-S	S5736-S48U4XC (98011034)	V200R020C00

Panel

Figure 7-10 Panel of the FAN-023A-B



1. Lock	2. Indicator	3: Airflow flag (air out)	4. Fan air vent	5. Handle
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Table 7-17 Indicators on the FAN-023A-B

Silkscreen	Name	Color	Status	Description
-	Fan status indicator	-	Off	The fan module is not running.
		Green	Steady on	The fan module is starting.
		Green	Slow blinking	The fan module is working properly.
		Red	Steady on	The fan module has a hardware fault and must be replaced. Common causes include short circuits, fan blades blocked, and faults of the fan module.

Functions and Features

Table 7-18 Functions and features of the FAN-023A-B

Functions and Features	Description
Basic function	The fan module has one only fan to cool the

Functions and Features	Description
	chassis.
Hot swapping	Supported

Technical Specifications

Table 7-19 Technical specifications of the FAN-023A-B

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	40 mm x 40 mm x 100.3 mm (1.57 in. x 1.57 in. x 3.95 in.)
Weight without packaging [kg(lb)]	0.1 kg (0.22 lb)
Number of fans	1
Maximum power consumption [W]	7.2 W
Maximum heat dissipation [BTU/hour]	24.57 BTU/hour
Maximum fan speed [RPM]	18500±10%
Maximum airflow [CFM]	23 CFM
Airflow direction	FAN panel side exhaust

7.6 FAN-031A-B (Fan box(B,FAN panel side exhaust))

Overview

Table 7-20 Basic information about the FAN-031A-B

Item	Details
Description	Fan box(B,FAN panel side exhaust)
Part Number	02352CAB
Model	FAN-031A-B

Appearance

Figure 7-11 Appearance of the FAN-031A-B



Version Mapping

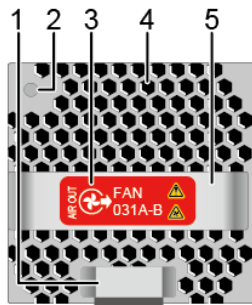
Table 7-21 Mappings between FAN-031A-B and product models

Product	Product Model	First Supported Version
S5732-H	S5732-H24S6Q (02353AJS)	V200R019C00
S5732-H	S5732-H24S6Q (02353AJS-001)	V200R020C10
S5732-H	S5732-H24S6Q (02353AJS-003)	V200R021C10
S5732-H	S5732-H24UM2CC (02353HUC)	V200R019C10
S5732-H	S5732-H24UM2CC (02353HUC-003)	V200R021C10
S5732-H	S5732-H24UM2CC (02353SJY)	V200R019C10
S5732-H	S5732-H24UM2CC (02353SJY-001)	V200R019C10
S5732-H	S5732-H24UM2CC (02353SJY-004)	V200R019C10
S5732-H	S5732-H24UM2CC (02353SJY-010)	V200R021C10
S5732-H	S5732-H24UM2CC (02353SJY-011)	V200R021C10

Product	Product Model	First Supported Version
S5732-H	S5732-H24UM2CC (02353SJY-014)	V200R021C10
S5732-H	S5732-H48S6Q (02353AJU)	V200R019C00
S5732-H	S5732-H48S6Q (02353AJU-001)	V200R020C10
S5732-H	S5732-H48S6Q (02353AJU-003)	V200R021C10
S5732-H	S5732-H48UM2CC (02353HUB)	V200R019C10
S5732-H	S5732-H48UM2CC (02353HUB-002)	V200R021C10
S5732-H	S5732-H48UM2CC (02353SJT)	V200R019C10
S5732-H	S5732-H48UM2CC (02353SJT-001)	V200R019C10
S5732-H	S5732-H48UM2CC (02353SJT-003)	V200R019C10
S5732-H	S5732-H48UM2CC (02353SJT-004)	V200R019C10
S5732-H	S5732-H48UM2CC (02353SJT-010)	V200R021C10
S5732-H	S5732-H48UM2CC (02353SJT-011)	V200R021C10
S5732-H	S5732-H48UM2CC (02353SJT-013)	V200R021C10
S5732-H	S5732-H48UM2CC (02353SJT-014)	V200R021C10
S5732-H	S5732-H48XUM2CC (02353MLH)	V200R019C20
S5732-H	S5732-H48XUM2CC (02353MLH-001)	V200R021C10

Panel

Figure 7-12 Panel of the FAN-031A-B



1. Lock	2. Indicator	3: Airflow flag (air out)	4. Fan air vent	5. Handle
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Table 7-22 Indicators on the FAN-031A-B

Silkscreen	Name	Color	Status	Description
-	Fan status indicator	-	Off	The fan module is not running.
		Green	Steady on	The fan module is starting.
		Green	Slow blinking	The fan module is working properly.
		Red	Steady on	The fan module has a hardware fault and must be replaced. Common causes include short circuits, fan blades blocked, and faults of the fan module.

Functions and Features

Table 7-23 Functions and features of the FAN-031A-B

Functions and Features	Description
Basic function	The fan module has one only fan to cool the

Functions and Features	Description
	chassis.
Hot swapping	Supported

Technical Specifications

Table 7-24 Technical specifications of the FAN-031A-B

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	40 mm x 40 mm x 100.3 mm (1.57 in. x 1.57 in. x 3.95 in.)
Weight without packaging [kg(lb)]	0.1 kg (0.22 lb)
Number of fans	1
Maximum power consumption [W]	21.6 W
Maximum heat dissipation [BTU/hour]	73.7 BTU/hour
Maximum fan speed [RPM]	24500±10%
Maximum airflow [CFM]	31 CFM
Airflow direction	FAN panel side exhaust

7.7 FAN-031A-F (Fan box (F, FAN panel side intake))

Overview

Table 7-25 Basic information about the FAN-031A-F

Item	Details
Description	Fan box (F, FAN panel side intake)
Part Number	02352CAA
Model	FAN-031A-F

Appearance

Figure 7-13 Appearance of the FAN-031A-F



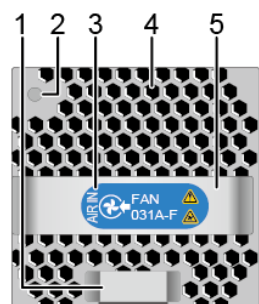
Version Mapping

Table 7-26 Mappings between FAN-031A-F and product models

Product	Product Model	First Supported Version
S5731-H	S5731-H48T4XC-B (02353VAD)	V200R020C00
S5731-H	S5731-H48T4XC-B (02353VAD-003)	V200R020C10

Panel

Figure 7-14 Panel of the FAN-031A-F



1. Lock	2. Indicator	3: Airflow flag (air in)	4. Fan air vent	5. Handle
---------	--------------	--------------------------	-----------------	-----------

Table 7-27 Indicators on the FAN-031A-F

Silkscreen	Name	Color	Status	Description
-	Fan status indicator	-	Off	The fan module is not running.
		Green	Steady on	The fan module is starting.
		Green	Slow blinking	The fan module is working properly.
		Red	Steady on	The fan module has a hardware fault and must be replaced. Common causes include short circuits, fan blades blocked, and faults of the fan module.

Functions and Features

Table 7-28 Functions and features of the FAN-031A-F

Functions and Features	Description
Basic function	The fan module has one only fan to cool the chassis.
Hot swapping	Supported

Technical Specifications

Table 7-29 Technical specifications of the FAN-031A-F

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	40 mm x 40 mm x 100.3 mm (1.57 in. x 1.57 in. x 3.95 in.)
Weight without packaging [kg(lb)]	0.1 kg (0.22 lb)

Item	Specification
Number of fans	1
Maximum power consumption [W]	21.6 W
Maximum heat dissipation [BTU/hour]	73.7 BTU/hour
Maximum fan speed [RPM]	24500±10%
Maximum airflow [CFM]	31 CFM
Airflow direction	FAN panel side intake

8 Cards

- 8.1 Card Classification
- 8.2 Card Structure and Dimensions
- 8.3 ES5D000X2S00 (2-Port 10GE SFP+ Front Optical Interface Card)
- 8.4 ES5D000X4S01 (4-Port 10GE SFP+ Front Optical Interface Card)
- 8.5 ES5D000G4S01 (4-Port GE SFP Front Optical Interface Card)
- 8.6 ES5D00G4SA01 (4-Port GE SFP Front Optical Interface Card)
- 8.7 ES5D00X2SA00 (2-Port GE SFP/10GE SFP+ Front Optical Interface Card)
- 8.8 ES5D00X4SA00 (4-Port GE SFP/10GE SFP+ Front Optical Interface Card)
- 8.9 ES5D00G4SC00 (4-Port GE SFP Front Optical Interface Card)
- 8.10 ES5D21G08S00 (8-Port GE SFP Rear Optical Interface Card)
- 8.11 ES5D21G08T00 (8-Port GE Rear Electrical Interface Card)
- 8.12 ES5D21X02S00 (2-Port GE SFP/10GE SFP+ Rear Optical Interface Card)
- 8.13 ES5D21G16S00 (16-Port GE SFP Front Optical Interface Card)
- 8.14 ES5D21G16T00 (16-Port GE Front Electrical Interface Card)
- 8.15 ES5D21Q02Q00 (2-Port 40 Gig QSFP+ Rear Interface Card)
- 8.16 ES5D21L04Q00 (4-Port 40GE QSFP+ Optical Interface Card)
- 8.17 ES5D21Q04Q01 (4-Port 40 Gig QSFP+ Rear Interface Card)
- 8.18 ES5D21X04S00 (4-Port 10GE SFP+ Rear Optical Interface Card)
- 8.19 ES5D21X04S01 (4-Port 10 GE SFP+ Rear Interface Card)
- 8.20 ES5D21X02S01 (2-Port 10 Gig SFP+ Rear Interface Card, Used in S5720-EI Series)
- 8.21 ES5D21X02T01 (2-Port 10 Gig RJ45 Rear Interface Card, Used in S5720-EI Series)
- 8.22 ES5D21X08S00 (8-Port 10GE SFP+ Rear Optical Interface Card)
- 8.23 ES5D21X08T00 (8-Port 10GBASE-T RJ45 Rear Interface Card)

- 8.24 S7X08000 (8-Port 10GE SFP+ or 2-Port 25GE SFP28 Optical Interface Card (Only Ports 1 and 2 Support 25GE))
- 8.25 S7Y08000 (8-Port 25GE SFP28 Optical Interface Card)
- 8.26 S7Q02001 (2-port 40GE QSFP+ interface card)
- 8.27 ES5D21VST000 (Dedicated Stack Card with 2*QSFP+ Interface)
- 8.28 ES5D00ETPC00 (Stack Rear Card)
- 8.29 ES5D00ETPB00 (Extended Rear Card)

8.1 Card Classification

Table 8-1 lists the cards supported by the S5700.

Table 8-1 Cards supported by the S5700

Card Type	Card Name	Card Description	Hot swapping
Front card	ES5D000X2S00	2-port 10GE SFP+ optical interface card	Not supported
Front card	ES5D000X4S01	4-port 10GE SFP+ optical interface card	Not supported
Front card	ES5D000G4S01	4-port GE optical interface card	Not supported
Front card	ES5D00G4SA01	4-port GE optical interface card	Not supported
Front card	ES5D00X2SA00	2-port GE SFP or 10GE SFP+ optical interface card	Supported
Front card	ES5D00X4SA00	4-port GE SFP or 10GE SFP+ optical interface card	Supported
Front card	ES5D00G4SC00	4-port GE SFP optical interface card	Supported
Front card	ES5D21G16S00	16-port GE SFP optical interface card	Supported
Front card	ES5D21G16T00	16-port GE RJ45 interface card	Supported
Rear card	ES5D21G08S00	8-port GE SFP optical interface card	Supported
Rear card	ES5D21G08T00	8-port GE RJ45 interface card	Supported
Rear card	ES5D21X02S00	2-port GE SFP or 10GE SFP+ optical interface card	Supported
Rear card	ES5D00ETPC00	Stack card	Not supported
Rear card	ES5D00ETPB00	Extended channel card	Not supported

Card Type	Card Name	Card Description	Hot swapping
Rear card	ES5D21L04Q00	4-port 40GE QSFP+ optical interface card	Supported
Rear card	ES5D21Q02Q00	2-port 40GE QSFP+ optical interface card	Supported
Rear card	ES5D21Q04Q01	4-port 40GE QSFP+ optical interface card	Supported
Rear card	ES5D21X04S00	4-port 10GE SFP+ optical interface card	Supported
Rear card	ES5D21X04S01	4-port 10GE SFP+ optical interface card	Supported
Rear card	ES5D21X02S01	2-port 10GE SFP+ optical interface card	Supported
Rear card	ES5D21X02T01	2-port 10GBASE-T RJ45 interface card	Supported
Rear card	ES5D21X08T00	8-port 10GBASE-T RJ45 interface card	Supported
Rear card	ES5D21X08S00	8-port 10GE SFP+ optical interface card	Supported
Rear card	ES5D21VST000	Dedicated stack card with 2*QSFP+ interface	Supported
Rear card	S7X08000	8-port 10GE SFP+ or 2-port 25GE SFP28 optical interface card (only ports 1 and 2 support 25GE)	Supported
Rear card	S7Y08000	8-port 25GE SFP28 optical interface card	Supported
Rear card	S7Q02001	2-port 40GE QSFP+ optical interface card	Supported

 NOTE

Some cards are sold with other cards, for example, front card ES5D000X4S01 is sold with rear card ES5D000ETPB00. When a card is faulty, provide the bar code of the card for technical support personnel to fix the problem.

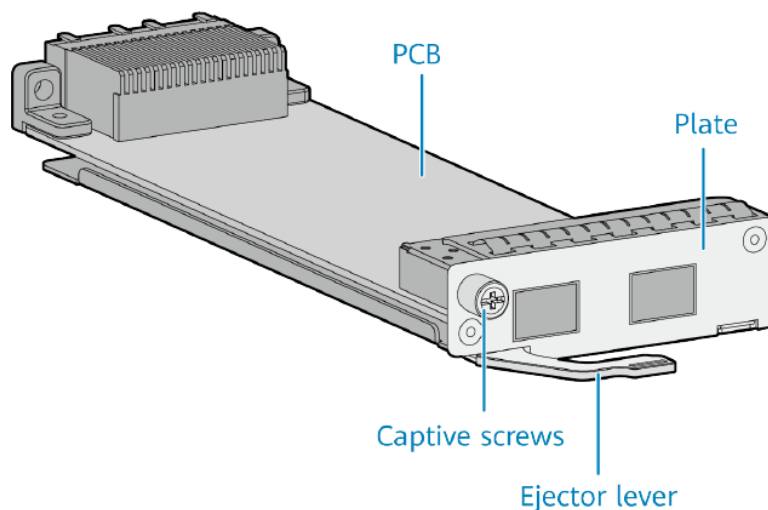
The cards supported by a switch depend on the software version. For details, see [Hardware Query](#).

8.2 Card Structure and Dimensions

Card Structure

Figure 8-1 shows card appearance.

Figure 8-1 Card appearance



A card consists of the following components:

- Printed circuit board (PCB)
The PCB contains all the functional chips of the card and is the core of the card. The PCB provides indicators and ports on the front panel.

NOTE

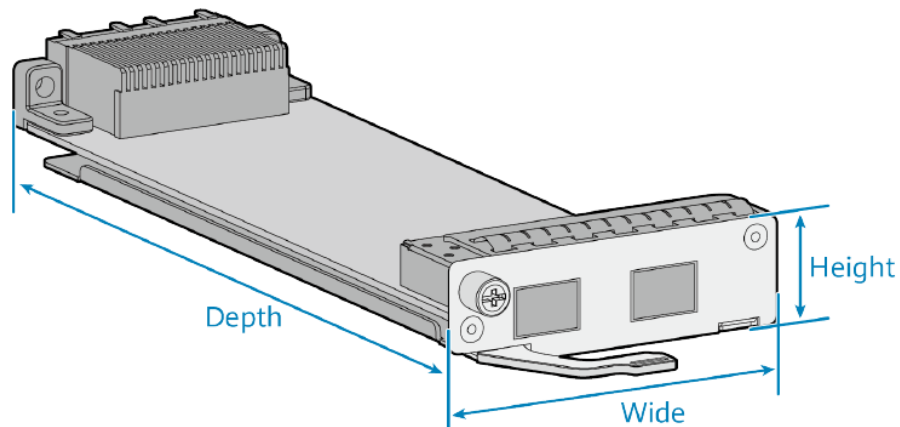
Different cards provide different indicators and ports. For details, see the description of specific cards.

- Front panel, consisting of the captive screws, ejector levers, and plate
 - Captive screws: fix the card into the chassis.
 - Ejector lever: allows you to insert and remove the card.
 - Plate: joins the ejector levers and the PCB.

Card Dimension

Figure 8-2 shows the definitions of width, height, and depth of a card.

Figure 8-2 Card dimensions



NOTE

The card dimensions are defined as follows:

- Width: the longest distance between the tops of two ejector levers
- Depth: the distance between a plate and the end of PCB
- Height: the height of the front panel

8.3 ES5D000X2S00 (2-Port 10GE SFP+ Front Optical Interface Card)

Version Mapping

Table 8-2 lists the mapping between the ES5D000X2S00 card and software versions.

Table 8-2 Version mapping

Card Model	Software Version
ES5D000X2S00 NOTE After the display device command is executed, the PCB model of the card is displayed as ES510X2S.	V100R005C01 to V200R005C03 NOTE This module is not supported in V200R003C02 or V200R003C10.

Card Overview

The ES5D000X2S00 provides two 10GE SFP+ optical ports for data access and line-rate switching. It can be installed in a front card slot of the switch models listed in Table 8-3.

Table 8-3 Applicable switch models

Card	Switch Model
------	--------------

Card	Switch Model
ES5D000X2S00	<ul style="list-style-type: none"> • S5700-28C-SI • S5700-52C-SI • S5700-28C-PWR-SI • S5700-52C-PWR-SI • S5700-28C-EI • S5700-52C-EI • S5700-28C-EI-24S • S5700-28C-PWR-EI • S5700-52C-PWR-EI • S5710-28C-LI • S5710-52C-LI • S5710-28C-PWR-LI • S5710-52C-PWR-LI

Figure 8-3 shows the appearance of the ES5D000X2S00.

Figure 8-3 ES5D000X2S00



Functions

Table 8-4 describes functions of the ES5D000X2S00.

Table 8-4 Functions

Function	Description
Basic function	Provides two 10GE SFP+ optical ports for data access and line-rate switching.

Function	Description
10GE port	A 10GE port is often used as an uplink aggregation port on high-bandwidth and high-speed MANs or backbone networks. When an enterprise needs high-quality triple-play service, use the ES5D000X2S00 to provide access ports for downlink devices or networks. Different transmission distances can be supported by using SFP+ optical modules.

Usage Constraints

NOTICE

The ES5D000X2S00 is not hot swappable.

Indicators and Ports

Figure 8-4 shows indicators on the ES5D000X2S00.

Figure 8-4 Indicators on the ES5D000X2S00

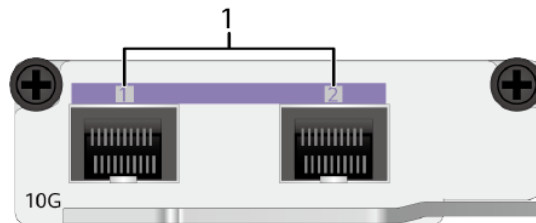


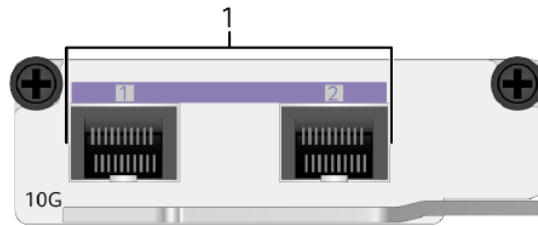
Table 8-5 shows indicators on the ES5D000X2S00.

Table 8-5 Indicator description

Number	Indicator	Color	Description
1	ACT/LINK	Green	<ul style="list-style-type: none"> Steady on: A link is established on the port. Blinking: The port is sending or receiving data.
		Off	No link is established on the port.

shows the ports on the ES5D000X2S00.

Figure 8-5 Ports on the ES5D000X2S00



1. Two 10GE SFP+ ports

10GE SFP+ port

The ES5D000X2S00 provides two 10GE optical ports to transmit and receive Ethernet service data at 1 Gbit/s or 10 Gbit/s. Table 8-6 describes attributes of a 10GE SFP+ optical port.

NOTE

When used on the S5710-C-LI, the 10GE SFP+ ports support the 10GE SFP+ and GE SFP optical modules. When used on the S5700-SI, the 10GE SFP+ ports support 10GE SFP+ optical modules, GE optical modules, and GE copper modules (applicable in V200R002C00 and later versions and used with shielded Ethernet cables), SFP+ copper cables (applicable in V200R002C00 and later versions), and AOC cables (applicable in V200R003C00 and later versions). When used on the S5700-EI, the 10GE SFP+ ports support 10GE SFP+ optical modules, SFP+ copper cables (applicable in V200R002C00 and later versions), and AOC cables (applicable in V200R003C00 and later versions).

Table 8-6 Attributes of a 10GE SFP+ optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used (see 10.5 GE eSFP Optical Modules, 10.7 GE-CWDM eSFP Optical Modules, 10.9 GE-DWDM eSFP Optical Modules, 10.10 GE SFP Copper Modules, 10.12 10GE SFP+ Optical Modules, and 10.13 10GE-CWDM SFP+ Optical Modules)
Standards compliance	IEEE 802.3ae

Technical Specifications

Table 8-7 describes the technical specifications of the ES5D000X2S00.

Table 8-7 Technical specifications

Item	Description
Physical specifications	<ul style="list-style-type: none"> Dimensions (H x W x D): 22 mm x 70 mm x 197 mm (0.87 in. x 2.8 in. x 7.8 in.)

Item	Description
	<ul style="list-style-type: none">Weight: 0.2 kg (0.44 lb)Maximum power consumption: 6.5 W

Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

Table 8-8 provides the ES5D000X2S00 ordering information.

Table 8-8 Ordering information

Card Description	Card Name	Part Number
2-port 10GE SFP+ optical interface card (front card)	ES5D000X2S00	03020XEV

8.4 ES5D000X4S01 (4-Port 10GE SFP+ Front Optical Interface Card)

Version Mapping

Table 8-9 lists the mapping between the ES5D000X4S01 card and software versions.

Table 8-9 Version mapping

Card Model	Software Version
ES5D000X4S01 NOTE After the display device command is executed, the PCB model of the card is displayed as ES510X4S.	V100R005C01 to V200R005C03 NOTE This module is not supported in V200R003C02 or V200R003C10.

Card Overview

The ES5D000X4S01 provides four 10GE SFP+ optical ports for data access and line-rate switching. It can be installed in a front card slot of the switch models listed in Table 8-10.

Table 8-10 Applicable switch models

Card	Switch Model
ES5D000X4S01	<ul style="list-style-type: none"> • S5700-28C-SI • S5700-52C-SI • S5700-28C-PWR-SI • S5700-52C-PWR-SI • S5700-28C-EI • S5700-52C-EI • S5700-28C-EI-24S • S5700-28C-PWR-EI (PCB version: VB) • S5700-52C-PWR-EI (PCB version: VB) • S5710-28C-LI • S5710-52C-LI • S5710-28C-PWR-LI • S5710-52C-PWR-LI

Figure 8-6 shows the appearance of the ES5D000X4S01.

Figure 8-6 ES5D000X4S01



Functions

Table 8-11 describes functions of the ES5D000X4S01.

Table 8-11 Functions

Function	Description
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Function	Description
Basic function	Provides two/four 10GE SFP+ optical ports for data access and line-rate switching.
10GE port	A 10GE port is often used as an uplink aggregation port on high-bandwidth and high-speed MANs or backbone networks. When an enterprise needs high-quality triple-play service, use the ES5D000X4S01 to provide access ports for downlink devices or networks. Different transmission distances can be supported by using SFP+ optical modules.

Usage Constraints

NOTICE

- The ES5D000X4S01 front card can provide four ports only if it is used with an ES5D00ETPB00 extended rear card. If no ES5D00ETPB00 extended rear card is used, only ports 1 and 3 on the ES5D000X4S01 front card are available. The names of ports 1 and 3 are respectively XGigabitEthernet */1/1 and XGigabitEthernet */1/2, where * indicates the slot ID.
- The ES5D000X4S01 front card must be used with an ES5D00ETPB00 card whose PCB version is VC.
- The ES5D000X4S01 front card must be used with PCB of VB or later versions on S5700-EI switches (VC on S5700-52C-EI). Use the **display version** command to check the PCB version of a switch.
- The ES5D000X4S01 is not hot swappable.

Indicators and Ports

Figure 8-7 shows indicators on the ES5D000X4S01/

Figure 8-7 Indicators on the ES5D000X4S01



Table 8-12 describes indicators on the ES5D000X4S01.

Table 8-12 Indicator description

Number	Indicator	Color	Description
1	ACT/LINK	Green	<ul style="list-style-type: none"> Steady on: A link is established on the port. Blinking: The port is sending or receiving data.
		Off	No link is established on the port.

Figure 8-8 shows the ports on the ES5D000X4S01.

Figure 8-8 Ports on the ES5D000X4S01



1. Four 10GE SFP+ optical ports

10GE SFP+ optical port

The ES5D000X4S01 provides four 10GE optical ports to transmit and receive Ethernet service data at 1 Gbit/s or 10 Gbit/s. Table 8-13 describes attributes of a 10GE SFP+ optical port.

NOTE

When used on the S5710-C-LI, the 10GE SFP+ ports support the 10GE SFP+ and GE SFP optical modules. When used on the S5700-SI, the 10GE SFP+ ports support 10GE SFP+ optical modules, GE optical modules, and GE copper modules (applicable in V200R002C00 and later versions and used with shielded Ethernet cables), SFP+ copper cables (applicable in V200R002C00 and later versions), and AOC cables (applicable in V200R003C00 and later versions). When used on the S5700-EI, the 10GE SFP+ ports support 10GE SFP+ optical modules, SFP+ copper cables (applicable in V200R002C00 and later versions), and AOC cables (applicable in V200R003C00 and later versions).

Table 8-13 Attributes of a 10GE SFP+ optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used (see 10.5 GE eSFP Optical Modules, 10.7 GE-CWDM eSFP Optical Modules, 10.9 GE-DWDM eSFP Optical Modules, 10.10 GE SFP Copper Modules, 10.12 10GE SFP+ Optical Modules, and 10.13 10GE-CWDM SFP+ Optical Modules)

Attribute	Description
Standards compliance	IEEE 802.3ae

Technical Specifications

Table 8-14 lists technical specifications of the ES5D000X4S01.

Table 8-14 Technical specifications

Item	Description
Physical specifications	<ul style="list-style-type: none">• Dimensions (H x W x D): 22 mm x 70 mm x 197 mm (0.87 in. x 2.8 in. x 7.8 in.)• Weight: 0.3 kg (0.66 lb)• Maximum power consumption: 13 W

Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

Table 8-15 provides the ES5D000X4S01 ordering information.

Table 8-15 Ordering information

Card Description	Card Name	Part Number
4-port 10GE SFP+ optical interface card (consisting of an ES5D000X4S01 4-port 10GE front card and an ES5D00ETPB00 extended channel rear card)	ES5D000X4S00 NOTE The ES5D000X4S01 front card must work with the ES5D00ETPB00 rear card, so the two cards are sold together. ES5D000X4S00 is the name of the combination of the two cards.	02319956

8.5 ES5D000G4S01 (4-Port GE SFP Front Optical Interface Card)

Version Mapping

Table 8-16 lists the mapping between the ES5D000G4S01 card and software versions.

Table 8-16 Version mapping

Card Model	Software Version
ES5D000G4S01 NOTE After the display device command is executed, the PCB model of the card is displayed as ES510G4S.	V100R005C01 to V200R005C03 NOTE This module is not supported in V200R003C02 or V200R003C10.

Card Overview

The ES5D000G4S01 provides four GE SFP optical ports for data access and line-rate switching. It can be installed in a front card slot of the switch models listed in Table 8-17.

Table 8-17 Applicable switch models

Card	Switch Model
ES5D000G4S01	<ul style="list-style-type: none"> • S5700-28C-EI • S5700-52C-EI • S5700-28C-EI-24S • S5700-28C-PWR-EI • S5700-52C-PWR-EI

Figure 8-9 shows the appearance of the ES5D000G4S01.

Figure 8-9 ES5D000G4S01



Functions

Table 8-18 describes functions of the ES5D000G4S01.

Table 8-18 Functions

Function	Description
Basic function	Provides four GE SFP optical ports for data access and line-rate switching.
GE port	A GE port is often used as an uplink aggregation port on high-bandwidth and high-speed MANs or backbone networks. When an enterprise needs high-quality triple-play service, use the ES5D000G4S01 to provide access ports for downlink devices or networks.

Usage Constraints

NOTICE

- If the ES5D000G4S01 is installed on the S5700-SI or S5710-C-LI, the front card cannot register.
- The ES5D000G4S01 front card can provide four ports only if it is used with an ES5D000ETPB00 extended rear card. If no ES5D000ETPB00 extended rear card is used, only the first two ports on the ES5D000G4S01 front card are available.
- When an S5700-EI is equipped with the ES5D000ETPC00 stack rear card, only ports 1 and 2 are available if the ES5D000G4S01 front card is used.
- The ES5D000G4S01 is not hot swappable.

Indicators and Ports

Figure 8-10 shows indicators on the ES5D000G4S01.

Figure 8-10 Indicators on the ES5D000G4S01

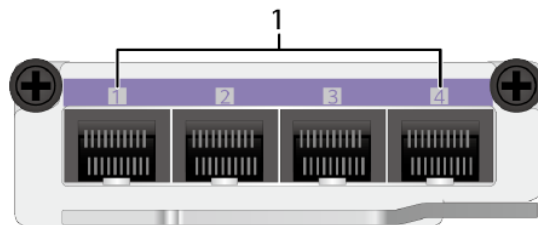


Table 8-19 describes indicator status on the ES5D000G4S01.

Table 8-19 Indicator description

Number	Indicator	Color	Description
1	ACT/LINK	Green	<ul style="list-style-type: none"> Steady on: A link is established on the port. Blinking: The port is sending or receiving data.
		Off	No link is established on the port.

Figure 8-11 shows the ports on the ES5D000G4S01.

Figure 8-11 Ports on the ES5D000G4S01



1. Four GE SFP optical ports

GE SFP port

The ES5D000G4S01 provides four GE optical ports to transmit and receive Ethernet service data at 1000 Mbit/s. Table 8-20 describes attributes of an SFP optical port.

NOTE

The GE SFP ports support GE optical and copper modules (used with shielded Ethernet cables).

A GE SFP port can go Up after a GE copper module is installed. However, electrical attributes, such as the rate, duplex mode, auto-negotiation, MDI, flow control, and virtual cable test, are not configurable in this case.

Table 8-20 Attributes of an SFP optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used (see 10.5 GE eSFP Optical Modules, 10.7 GE-CWDM eSFP Optical Modules, 10.9 GE-DWDM eSFP Optical Modules, and 10.10 GE SFP Copper Modules)
Standards compliance	IEEE 802.3z

Technical Specifications

Table 8-21 lists technical specifications of the ES5D000G4S01.

Table 8-21 Technical specifications

Item	Description
Physical specifications	<ul style="list-style-type: none">• Dimensions (H x W x D): 22 mm x 70 mm x 197 mm (0.87 in. x 2.8 in. x 7.8 in.)• Weight: 0.2 kg (0.44 lb)• Maximum power consumption: 6 W

Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

Table 8-22 provides the ES5D000G4S01 ordering information.

Table 8-22 Ordering information

Card Description	Card Name	Part Number
4-port GE SFP optical interface card (consisting of an ES5D000G4S01 4-port GE front card and an ES5D00ETPB00 extended channel rear card) This card is applicable to the EI series.	ES5D000G4S00 NOTE The ES5D000G4S01 front card must work with the ES5D00ETPB00 rear card, so the two cards are sold together. ES5D000G4S00 is the name of the combination of the two cards.	02319957

8.6 ES5D00G4SA01 (4-Port GE SFP Front Optical Interface Card)

Version Mapping

Table 8-23 lists the mapping between the ES5D00G4SA01 card and software versions.

Table 8-23 Version mapping

Card Model	Software Version
ES5D00G4SA01	V100R005C01 to V200R005C02
NOTE	NOTE

Card Model	Software Version
After the display device command is executed, the PCB model of the card is displayed as ES510G4SA.	This module is not supported in V200R001C01, V200R003C02, V200R003C10, or V200R005C01.

Card Overview

The ES5D00G4SA01 provides four GE SFP optical ports for data access and line-rate switching. It can be installed in a front card slot of the switch models listed in Table 8-24.

Table 8-24 Applicable switch models

Card	Switch Model
ES5D00G4SA01	<ul style="list-style-type: none"> • S5700-28C-SI • S5700-52C-SI • S5700-28C-PWR-SI • S5700-52C-PWR-SI • S5710-28C-LI • S5710-52C-LI • S5710-28C-PWR-LI • S5710-52C-PWR-LI

Figure 8-12 shows the appearance of the ES5D00G4SA01.

Figure 8-12 ES5D00G4SA01



Functions

Table 8-25 describes functions of the ES5D00G4SA01.

Table 8-25 Functions

Function	Description
Basic function	Provides four GE SFP optical ports for data access and line-rate switching.
GE port	A GE port is often used as an uplink aggregation port on high-bandwidth and high-speed MANs or backbone networks. When an enterprise needs high-quality triple-play service, use the ES5D00G4SA01 to provide access ports for downlink devices or networks.

Usage Constraints

NOTICE

- If the ES5D00G4SA01 is installed on the S5700-EI, the front card cannot register.
- The ES5D00G4SA01 front card can provide four ports only if it is used with an ES5D00ETPB00 extended rear card. If no ES5D00ETPB00 extended rear card is used, only the first two ports on the ES5D00G4SA01 front card are available.
- When an S5700-SI/S5710-C-LI is equipped with the ES5D00ETPC00 stack rear card, only ports 1 and 2 are available if the ES5D00G4SA01 front card is used.
- The ES5D00G4SA01 is not hot swappable.

Indicators and Ports

Figure 8-13 shows indicators on the ES5D00G4SA01.

Figure 8-13 Indicators on the ES5D00G4SA01

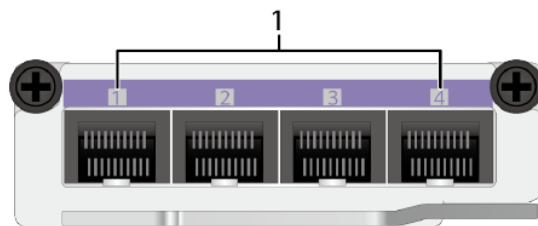


Table 8-26 describes indicator status on the ES5D00G4SA01.

Table 8-26 Indicator description

Number	Indicator	Color	Description
1	ACT/LINK	Green	<ul style="list-style-type: none"> • Steady on: A link is established on the port. • Blinking: The port is sending or

Number	Indicator	Color	Description
			receiving data.
		Off	No link is established on the port.

Figure 8-14 shows the ports on the ES5D00G4SA01.

Figure 8-14 Ports on the ES5D00G4SA01



1. Four GE SFP optical ports

GE SFP optical port

The ES5D00G4SA01 provides four GE optical ports to transmit and receive Ethernet service data at 1000 Mbit/s. Table 8-27 describes attributes of an SFP optical port.

NOTE

The GE SFP ports support GE optical and copper modules (used with shielded Ethernet cables).

A GE SFP port can go Up after a GE copper module is installed. However, electrical attributes, such as the rate, duplex mode, auto-negotiation, MDI, flow control, and virtual cable test, are not configurable in this case.

Table 8-27 Attributes of an SFP optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used (see 10.5 GE eSFP Optical Modules, 10.7 GE-CWDM eSFP Optical Modules, 10.9 GE-DWDM eSFP Optical Modules, and 10.10 GE SFP Copper Modules)
Standards compliance	IEEE 802.3z

Technical Specifications

Table 8-28 lists technical specifications of the ES5D00G4SA01.

Table 8-28 Technical specifications

Item	Description
Physical specifications	<ul style="list-style-type: none"> • Dimensions (H x W x D): 22 mm x 70 mm x 197 mm (0.87 in. x 2.8 in. x 7.8 in.) • Weight: 0.2 kg (0.44 lb) • Maximum power consumption: 4.5 W

Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

Table 8-29 provides the ES5D00G4SA01 ordering information.

Table 8-29 Ordering information

Card Description	Card Name	Part Number
4-port GE SFP optical interface card (consisting of an ES5D00G4SA01 4-port GE front card and an ES5D00ETPB00 extended channel rear card) This card is applicable to the SI series.	ES5D00G4SA00 NOTE The ES5D00G4SA01 front card must work with the ES5D00ETPB00 rear card, so the two cards are sold together. ES5D00G4SA00 is the name of the combination of the two cards.	02319958

8.7 ES5D00X2SA00 (2-Port GE SFP/10GE SFP+ Front Optical Interface Card)

Version Mapping

Table 8-30 lists the mapping between the ES5D00X2SA00 card and software versions.

Table 8-30 Version mapping

Card Model	Software Version
ES5D00X2SA00 NOTE After the display device command is executed, the PCB model of the card is displayed as ES510X2SA.	V100R006C01 to V200R005C02 NOTE This module is not supported in V200R003C02 or V200R003C10.

Card Overview

The ES5D00X2SA00 provides two 10GE SFP+ optical ports for data access and line-rate switching. It can be installed in a card slot of the switch models listed in Table 8-31.

Table 8-31 Applicable switch models

Card	Switch Model
ES5D00X2SA00	<ul style="list-style-type: none">• S5700-28C-HI• S5700-28C-HI-24S

Figure 8-15 shows the appearance of the ES5D00X2SA00.

Figure 8-15 ES5D00X2SA00



Functions

Table 8-32 describes functions of the ES5D00X2SA00.

Table 8-32 Functions

Function	Description
Basic function	Provides two 10GE SFP+ optical ports respectively for data access and line-rate switching.
Enhanced service	The S5700-HI powers on or off the ES5D00X2SA00, detects whether the ES5D00X2SA00 is installed or not, and manages PHY chips and optical ports on the ES5D00X2SA00. They provide hardware-based OAM and BFD for the switch.
Hot swapping	Supported

Function	Description
Service ports for stacking	<p>The service ports on the ES5D00X2SA00 can be used as stack ports on an S5700-HI switch.</p> <p>NOTE The S5700-HI has supported service port-based stacking since V200R003C00.</p>

Indicators and Ports

Figure 8-16 shows indicators on the ES5D00X2SA00.

Figure 8-16 Indicators on the ES5D00X2SA00

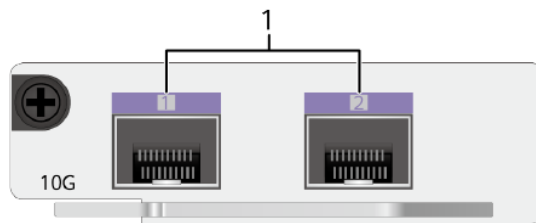


Table 8-33 shows indicators on the ES5D00X2SA00.

Table 8-33 Indicator description

Number	Indicator	Color	Description
1	ACT/LINK	Green	<ul style="list-style-type: none"> Steady on: A link is established on the port. Blinking: The port is sending or receiving data.
		Off	No link is established on the port.

Figure 8-17 shows ports on the ES5D00X2SA00.

Figure 8-17 Ports on the ES5D00X2SA00



1. Two/Four 10GE SFP+ optical ports

10GE SFP+ optical port

The ES5D00X2SA00 provides two 10GE optical ports (GE/10GE auto-sensing) respectively to transmit and receive Ethernet service data at 1 Gbit/s or 10 Gbit/s. Table 8-34 describes attributes of an SFP+ optical port.

NOTE

The 10GE SFP+ optical ports support 10GE SFP+ optical modules, GE optical modules, GE copper modules (in V200R002C00 and later versions, used with shielded twisted pair cables), SFP+ cables (in V200R002C00 and later versions), and AOC cables (in V200R003C00 and later versions).

Table 8-34 Attributes of a 10GE SFP+ optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used (see 10.5 GE eSFP Optical Modules, 10.7 GE-CWDM eSFP Optical Modules, 10.9 GE-DWDM eSFP Optical Modules, 10.10 GE SFP Copper Modules, 10.12 10GE SFP+ Optical Modules, and 10.13 10GE-CWDM SFP+ Optical Modules)
Standards compliance	IEEE 802.3ae

Technical Specifications

Table 8-35 lists technical specifications of the ES5D00X2SA00.

Table 8-35 Technical specifications

Item	Description
Physical specifications	<ul style="list-style-type: none">• Dimensions (H x W x D): 23 mm x 77 mm x 207 mm (0.9 in. x 3.0 in. x 8.1 in.)• Weight: 0.5 kg (1.10 lb)• Maximum power consumption: 7 W

Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

Table 8-36 provides the ES5D00X2SA00 ordering information.

Table 8-36 Ordering information

Card Description	Card Name	Part Number
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Card Description	Card Name	Part Number
2-port GE SFP or 10GE SFP+ optical interface card (front card)	ES5D00X2SA00	03021JYN

8.8 ES5D00X4SA00 (4-Port GE SFP/10GE SFP+ Front Optical Interface Card)

Version Mapping

Table 8-37 lists the mapping between the ES5D00X4SA00 card and software versions.

Table 8-37 Version mapping

Card Model	Software Version
ES5D00X4SA00 NOTE After the display device command is executed, the PCB model of the card is displayed as ES510X4SA.	V100R006C01 to V200R005C02 NOTE This module is not supported in V200R003C02 or V200R003C10.

Card Overview

The ES5D00X4SA00 provides four 10GE SFP+ optical ports for data access and line-rate switching. It can be installed in a card slot of the switch models listed in Table 8-38.

Table 8-38 Applicable switch models

Card	Switch Model
ES5D00X4SA00	<ul style="list-style-type: none">S5700-28C-HIS5700-28C-HI-24S

Figure 8-18 shows the appearance of the ES5D00X4SA00.

Figure 8-18 ES5D00X4SA00



Functions

Table 8-39 describes of the ES5D00X4SA00.

Table 8-39 Functions

Function	Description
Basic function	Provides four 10GE SFP+ optical ports respectively for data access and line-rate switching.
Enhanced service	The S5700-HI powers on or off the ES5D00X4SA00, detects whether the ES5D00X4SA00 is installed or not, and manages PHY chips and optical ports on the ES5D00X4SA00. They provide hardware-based OAM and BFD for the switch.
Hot swapping	Supported
Service ports for stacking	The service ports on the ES5D00X4SA00 can be used as stack ports on an S5700-HI switch. NOTE The S5700-HI has supported service port-based stacking since V200R003C00.

Indicators and Ports

Figure 8-19 shows indicators on the ES5D00X4SA00.

Figure 8-19 Indicators on the ES5D00X4SA00

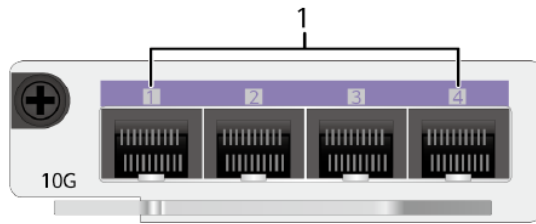


Table 8-40 shows indicators on the ES5D00X4SA00.

Table 8-40 Indicator description

Number	Indicator	Color	Description
1	ACT/LINK	Green	<ul style="list-style-type: none"> Steady on: A link is established on the port. Blinking: The port is sending or receiving data.
		Off	No link is established on the port.

Figure 8-20 shows ports on the ES5D00X4SA00.

Figure 8-20 Ports on the ES5D00X4SA00



1. Four 10GE SFP+ optical ports

10GE SFP+ optical port

The ES5D00X4SA00 provides four 10GE optical ports (GE/10GE auto-sensing) respectively to transmit and receive Ethernet service data at 1 Gbit/s or 10 Gbit/s. Table 8-41 describes attributes of an SFP+ optical port.

NOTE

The 10GE SFP+ optical ports support 10GE SFP+ optical modules, GE optical modules, GE copper modules (in V200R002C00 and later versions, used with shielded twisted pair cables), SFP+ cables (in V200R002C00 and later versions), and AOC cables (in V200R003C00 and later versions).

Table 8-41 Attributes of a 10GE SFP+ optical port

Attribute	Description
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Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used (see 10.5 GE eSFP Optical Modules, 10.7 GE-CWDM eSFP Optical Modules, 10.9 GE-DWDM eSFP Optical Modules, 10.10 GE SFP Copper Modules, 10.12 10GE SFP+ Optical Modules, and 10.13 10GE-CWDM SFP+ Optical Modules)
Standards compliance	IEEE 802.3ae

Technical Specifications

Table 8-42 lists technical specifications of the ES5D00X4SA00.

Table 8-42 Specifications of the ES5D00X4SA00

Item	Description
Physical specifications	<ul style="list-style-type: none"> • Dimensions (H x W x D): 23 mm x 77 mm x 207 mm (0.9 in. x 3.0 in. x 8.1 in.) • Weight: 0.5 kg (1.10 lb) • Maximum power consumption: 10 W

Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

Table 8-43 provides the ES5D00X4SA00 ordering information.

Table 8-43 Ordering information

Card Description	Card Name	Part Number
4-port GE SFP or 10GE SFP+ optical interface card (front card)	ES5D00X4SA00	03021JYM

8.9 ES5D00G4SC00 (4-Port GE SFP Front Optical Interface Card)

Version Mapping

Table 8-44 lists the mapping between the ES5D00G4SC00 card and software versions.

Table 8-44 Version mapping

Card Model	Software Version
ES5D00G4SC00 NOTE After the display device command is executed, the PCB model of the card is displayed as ES510G4SC.	V100R006C01 to V200R005C02 NOTE This module is not supported in V200R003C02 or V200R003C10.

Card Overview

The ES5D00G4SC00 provides four 1000M SFP optical ports for data access and line-rate switching for upstream services. It can be installed in a front card slot of the switch models listed in Table 8-45.

Table 8-45 Applicable switch models

Card	Switch Model
ES5D00G4SC00	<ul style="list-style-type: none">S5700-28C-HIS5700-28C-HI-24S

Figure 8-21 shows the appearance of the ES5D00G4SC00.

Figure 8-21 ES5D00G4SC00



Functions

Table 8-46 describes functions of the ES5D00G4SC00.

Table 8-46 Functions

Function	Description
Basic function	Provides four 1000M SFP optical ports for data access and line-rate switching for upstream services.
Enhanced service	The S5700-HI powers on or off the ES5D00G4SC00, detects whether the ES5D00G4SC00 is installed or not, and manages PHY chips and optical ports on the ES5D00G4SC00. The ES5D00G4SC00 provides hardware-based OAM and BFD for the switch.
Hot swapping	Supported

Indicators and Ports

Figure 8-22 shows indicators on the ES5D00G4SC00.

Figure 8-22 Indicators on the ES5D00G4SC00

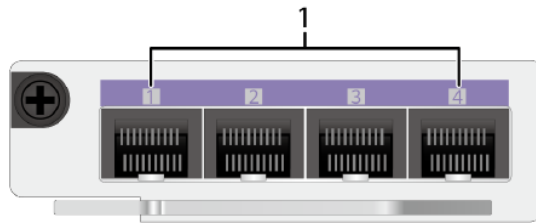


Table 8-47 describes indicator status on the ES5D00G4SC00.

Table 8-47 Indicator description

Number	Indicator	Color	Description
1	ACT/LINK	Green	<ul style="list-style-type: none"> Steady on: A link is established on the port. Blinking: The port is sending or receiving data.
		Off	No link is established on the port.

Figure 8-23 shows ports on the ES5D00G4SC00.

Figure 8-23 Ports on the ES5D00G4SC00



1. Four GE SFP optical ports

GE SFP optical port

The ES5D00G4SC00 provides four GE optical ports to transmit and receive Ethernet service data at 1000 Mbit/s. Table 8-48 describes attributes of an SFP optical port.

NOTE

The GE SFP ports support GE optical and copper modules (used with shielded Ethernet cables).

A GE SFP port can go Up after a GE copper module is installed. However, electrical attributes, such as the rate, duplex mode, auto-negotiation, MDI, flow control, and virtual cable test, are not configurable in this case.

Table 8-48 Attributes of an SFP optical port

Attribute	Description
-----------	-------------

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used (see 10.5 GE eSFP Optical Modules, 10.7 GE-CWDM eSFP Optical Modules, 10.9 GE-DWDM eSFP Optical Modules, 10.10 GE SFP Copper Modules)
Standards compliance	IEEE 802.3z

Technical Specifications

Table 8-49 lists technical specifications of the ES5D00G4SC00.

Table 8-49 Technical specifications

Item	Description
Physical specifications	<ul style="list-style-type: none">• Dimensions (H x W x D): 23 mm x 77 mm x 207 mm (0.9 in. x 3.0 in. x 8.1 in.)• Weight: 0.3 kg (0.66 lb)• Maximum power consumption: 4 W

Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

Table 8-50 provides the ES5D00G4SC00 ordering information.

Table 8-50 Ordering information

Card Description	Card Name	Part Number
4-port GE SFP optical interface card (front card)	ES5D00G4SC00	03021JYP

8.10 ES5D21G08S00 (8-Port GE SFP Rear Optical Interface Card)

Version Mapping

Table 8-51 lists the mapping between the ES5D21G08S00 card and software versions.

Table 8-51 Version mapping

Card Model	Software Version
ES5D21G08S00	V200R001C00 to V200R005C02 NOTE This module is not supported in V200R001C01, V200R003C02, V200R003C10, or V200R005C01.

Card Overview

The ES5D21G08S00 provides eight GE SFP optical ports for data access and line-rate switching.

The ES5D21G08S00 can be installed in a rear card slot of the switch models listed in Table 8-52.

Table 8-52 Applicable switch models

Card	Switch Model
ES5D21G08S00	<ul style="list-style-type: none"> • S5710-52C-PWR-EI • S5710-52C-PWR-EI-AC • S5710-28C-PWR-EI-AC • S5710-52C-EI • S5710-28C-EI

Figure 8-24 shows the appearance of the ES5D21G08S00.

Figure 8-24 ES5D21G08S00



Functions

Table 8-53 describes functions of the ES5D21G08S00.

Table 8-53 Functions

Function	Description
Basic function	Provides eight 1000M SFP optical ports for data access and line-rate switching for GE services.
Hot swapping	Supported

Indicators and Ports

Figure 8-25 shows indicators on the ES5D21G08S00.

Figure 8-25 Indicators on the ES5D21G08S00

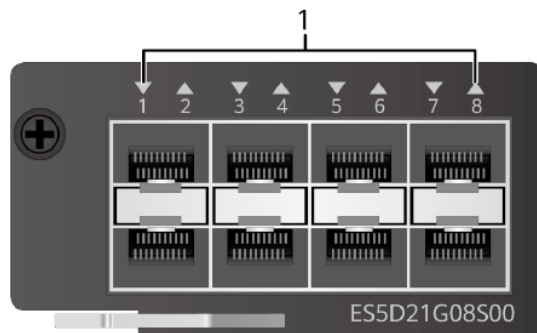


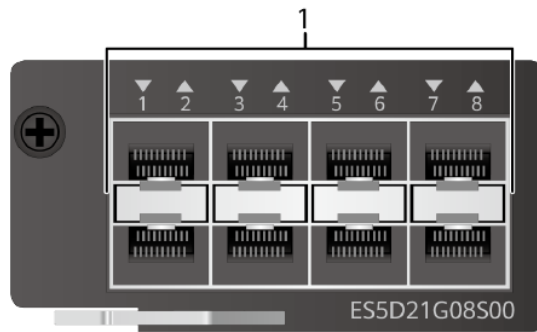
Table 8-54 describes indicator status on the ES5D21G08S00.

Table 8-54 Indicator description

Number	Indicator	Color	Description
1	ACT/LINK	Green	<ul style="list-style-type: none"> Steady on: A link is established on the port. Blinking: The port is sending or receiving data.
		Off	No link is established on the port.

Figure 8-26 shows ports on the ES5D21G08S00.

Figure 8-26 Ports on the ES5D21G08S00



1. Eight GE SFP optical ports

GE SFP optical port

The ES5D21G08S00 provides eight GE optical ports to transmit and receive services at 1000 Mbit/s. Table 8-55 describes attributes of an SFP optical port.

NOTE

The optical ports on the ES5D21G08S00 support GE optical modules.

Table 8-55 Attributes of an SFP optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used (see 10.5 GE eSFP Optical Modules, 10.7 GE-CWDM eSFP Optical Modules, and 10.9 GE-DWDM eSFP Optical Modules)
Standards compliance	IEEE 802.3z

Technical Specifications

Table 8-56 lists technical specifications of the ES5D21G08S00.

Table 8-56 Technical specifications

Item	Description
Physical specifications	<ul style="list-style-type: none"> Dimensions (H x W x D): 42 mm x 77 mm x 207 mm (1.7 in. x 3.0 in. x 8.1 in.) Weight: 0.3 kg (0.66 lb) Maximum power consumption: 12.4 W

Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

Table 8-57 provides the ES5D21G08S00 ordering information.

Table 8-57 Ordering information

Card Description	Card Name	Part Number
8-port GE SFP optical interface card (rear card)	ES5D21G08S00	03021ESM

8.11 ES5D21G08T00 (8-Port GE Rear Electrical Interface Card)

Version Mapping

Table 8-58 lists the mapping between the ES5D21G08T00 card and software versions.

Table 8-58 Version mapping

Card Model	Software Version
ES5D21G08T00	V200R001C00 to V200R005C02 NOTE This module is not supported in V200R001C01, V200R003C02, V200R003C10, or V200R005C01.

Card Overview

The ES5D21G08T00 provides eight 10M/100M/1000M electrical ports for data access and line-rate switching.

The ES5D21G08T00 can be installed in a rear card slot of the switch models listed in Table 8-59.

Table 8-59 Applicable switch models

Card	Switch Model
ES5D21G08T00	<ul style="list-style-type: none">• S5710-52C-PWR-EI• S5710-52C-PWR-EI-AC• S5710-28C-PWR-EI-AC• S5710-52C-EI

Card	Switch Model
	<ul style="list-style-type: none"> S5710-28C-EI

Figure 8-27 shows the appearance of the ES5D21G08T00.

Figure 8-27 ES5D21G08T00



Functions

Table 8-60 describes functions of the ES5D21G08T00.

Table 8-60 Functions

Function	Description
Basic function	Provides eight 10M/100M/1000M electrical ports for data access and line-rate switching.
Hot swapping	Supported

Indicators and Ports

Figure 8-28 shows indicators on the ES5D21G08T00.

Figure 8-28 Indicators on the ES5D21G08T00

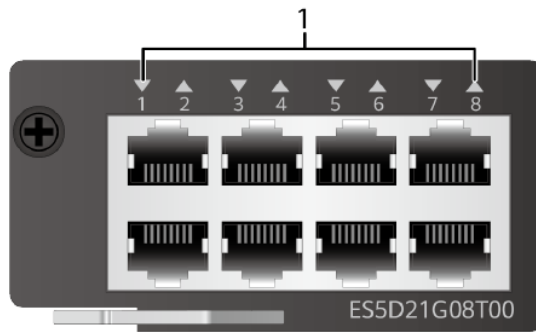


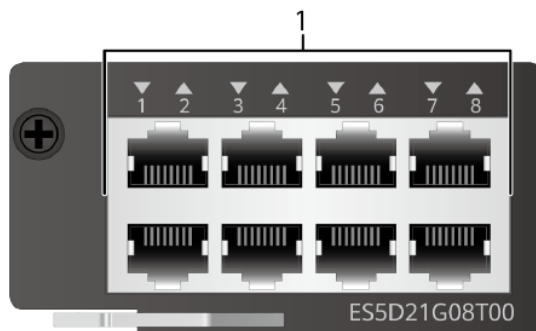
Table 8-61 describes indicator status on the ES5D21G08T00.

Table 8-61 Indicator description

Number	Indicator	Color	Description
1	ACT/LINK	Green	<ul style="list-style-type: none"> Steady on: A link is established on the port. Blinking: The port is sending or receiving data.
		Off	No link is established on the port.

Figure 8-29 shows ports on the ES5D21G08T00.

Figure 8-29 Ports on the ES5D21G08T00



1. Eight 10/100/1000BASE-T electrical ports

10/100/1000BASE-T electrical port

The ES5D21G08T00 provides eight 10M/100M/1000M Ethernet electrical ports to transmit and receive Ethernet service data. The eight 10/100/1000BASE-T Ethernet electrical ports must be used with 9.4 Ethernet Cable. Table 8-62 describes attributes of the 10/100/1000BASE-T electrical port.

Table 8-62 Attributes of the 10/100/1000BASE-T electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, and IEEE802.3ab

Technical Specifications

Table 8-63 lists technical specifications of the ES5D21G08T00.

Table 8-63 Technical specifications

Item	Description
Physical specifications	<ul style="list-style-type: none"> Dimensions (H x W x D): 42 mm x 77 mm x 207 mm (1.7 in. x 3.0 in. x 8.1 in.) Weight: 0.3 kg (0.66 lb) Maximum power consumption: 8.3 W

Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

Table 8-64 provides the ES5D21G08T00 ordering information.

Table 8-64 Ordering information

Card Description	Card Name	Part Number
8-port GE electrical interface card (rear card)	ES5D21G08T00	03021ESN

8.12 ES5D21X02S00 (2-Port GE SFP/10GE SFP+ Rear Optical Interface Card)

Version Mapping

Table 8-65 lists the mapping between the ES5D21X02S00 card and software versions.

Table 8-65 Version mapping

Card Model	Software Version
------------	------------------

Card Model	Software Version
ES5D21X02S00	V200R001C00 to V200R005C02 NOTE This module is not supported in V200R001C01, V200R003C02, V200R003C10, or V200R005C01.

Card Overview

The ES5D21X02S00 provides two 10GE SFP+ optical ports for data access and line-rate switching. It can be installed in a card slot of the switch models listed in Table 8-66.

Table 8-66 Applicable switch models

Card	Switch Model
ES5D21X02S00	<ul style="list-style-type: none"> • S5710-52C-PWR-EI • S5710-52C-PWR-EI-AC • S5710-28C-PWR-EI-AC • S5710-52C-EI • S5710-28C-EI

Figure 8-30 shows the appearance of the ES5D21X02S00.

Figure 8-30 ES5D21X02S00



Functions

Table 8-67 describes functions of the ES5D21X02S00.

Table 8-67 Functions

Function	Description
Basic function	Provides two 10GE SFP+ optical ports for data access and line-rate switching.
Hot swapping	Supported
Service port supporting the stack function	The ES5D21X02S00 can be used on the stack port of the switch.

Indicators and Ports

Figure 8-31 shows indicators on the ES5D21X02S00.

Figure 8-31 Indicators on the ES5D21X02S00

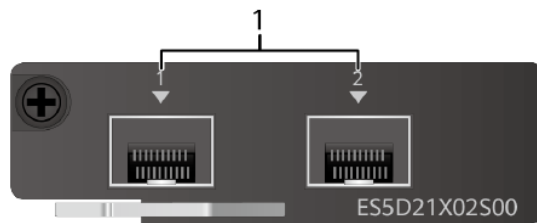


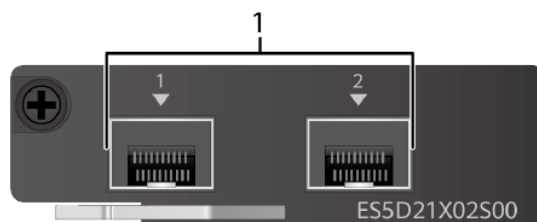
Table 8-68 describes indicators on the ES5D21X02S00.

Table 8-68 Indicator description

Number	Indicator	Color	Description
1	ACT/LINK	Green	<ul style="list-style-type: none"> Steady on: A link is established on the port. Blinking: The port is sending or receiving data.
		Off	No link is established on the port.

Figure 8-32 shows ports on the ES5D21X02S00.

Figure 8-32 Ports on the ES5D21X02S00



1. Two 10GE SFP+ optical ports

10GE SFP+ optical port

The ES5D21X02S00 provides two 10GE optical ports (auto-sensing GE ports) to transmit and receive Ethernet service data at 1 Gbit/s or 10 Gbit/s. Table 8-69 describes attributes of an SFP+ optical port.

NOTE

The optical ports on the ES5D21X02S00 support 10GE SFP+ optical modules, GE SFP optical modules, GE copper modules (in V200R002C00 and later versions, used with shielded twisted pair cables), SFP+ copper cables (in V200R002C00 and later versions), and AOC cables (in V200R003C00 and later versions).

Table 8-69 Attributes of a 10GE SFP+ optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used (see 10.5 GE eSFP Optical Modules, 10.7 GE-CWDM eSFP Optical Modules, 10.9 GE-DWDM eSFP Optical Modules, 10.10 GE SFP Copper Modules, 10.12 10GE SFP+ Optical Modules, and 10.13 10GE-CWDM SFP+ Optical Modules)
Standards compliance	IEEE 802.3ae

Technical Specifications

Table 8-70 lists technical specifications of the ES5D21X02S00.

Table 8-70 Technical specifications

Item	Description
Physical specifications	<ul style="list-style-type: none"> Dimensions (H x W x D): 23 mm x 77 mm x 207 mm (0.9 in. x 3.0 in. x 8.1 in.) Weight: 0.5 kg (1.10 lb) Maximum power consumption: 7 W

Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

Table 8-71 provides the ES5D21X02S00 ordering information.

Table 8-71 Ordering information

Card Description	Card Name	Part Number
2-port GE SFP or 10GE SFP+ optical interface card (rear card)	ES5D21X02S00	03021NTU

8.13 ES5D21G16S00 (16-Port GE SFP Front Optical Interface Card)

Version Mapping

Table 8-72 lists the mapping between the ES5D21G16S00 card and software versions.

Table 8-72 Version mapping

Card Model	Software Version
ES5D21G16S00	V200R003C00 to V200R005C03 NOTE This module is not supported in V200R003C02, V200R003C10, or V200R005C01.

Card Overview

The ES5D21G16S00 provides sixteen GE SFP optical ports for data access and line-rate switching.

The ES5D21G16S00 can be installed in the front card slot of the switch models listed in Table 8-73.

Table 8-73 Applicable switch models

Card	Switch Model
ES5D21G16S00	S5710-108C-PWR-HI

Figure 8-33 shows the appearance of the ES5D21G16S00.

Figure 8-33 ES5D21G16S00



Functions

Table 8-74 describes functions of the ES5D21G16S00.

Table 8-74 Functions

Function	Description
Basic function	Provides sixteen GE SFP optical ports for data access and line-rate switching.
Hot swapping	Supported

Indicators and Ports

Figure 8-34 shows indicators on the ES5D21G16S00.

Figure 8-34 Indicators on the ES5D21G16S00

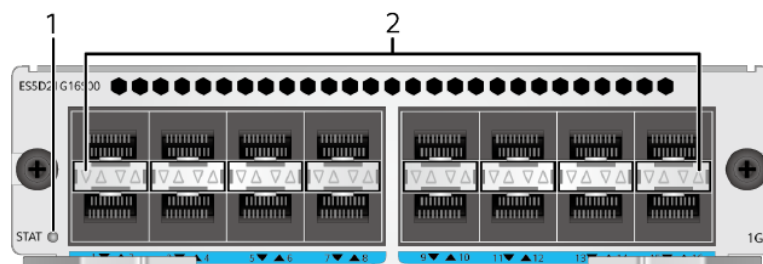


Table 8-75 describes indicator status on the ES5D21G16S00.

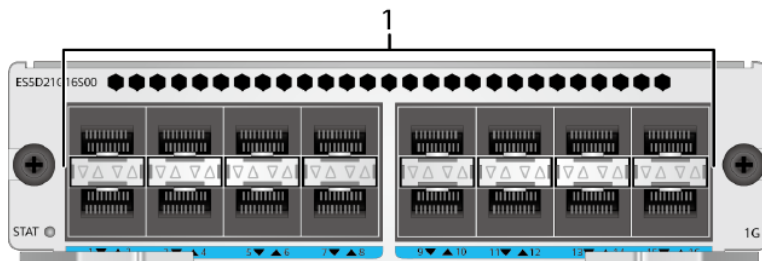
Table 8-75 Description of indicators on the ES5D21G16S00

Number	Indicator	Color	Description
1	STAT	Off	The system software is not running.

Number	Indicator	Color	Description
		Green	<ul style="list-style-type: none"> Steady on: The system is starting. Blinking: The system is running properly.
		Red	A fault that affects services has occurred. The fault cannot be rectified automatically and requires manual intervention.
2	Two single-color indicators for each port <ul style="list-style-type: none"> Steady green: LINK indicator Blinking amber: ACT indicator NOTE Arrowheads show the positions of ports. A down arrowhead indicates a port at the bottom, and an up arrowhead indicates a port at the top.	Green	<ul style="list-style-type: none"> Steady on: The link on the port is connected. Off: The link on the port is disconnected.
		Yellow	<ul style="list-style-type: none"> Blinking: The port is transmitting or receiving data. Off: The port is not transmitting or receiving data.

Figure 8-35 shows the ports on the ES5D21G16S00.

Figure 8-35 Ports on the ES5D21G16S00



1. Sixteen GE SFP optical ports

GE SFP optical port

The ES5D21G16S00 provides sixteen GE SFP optical ports to transmit and receive service data at 1 Gbit/s. Table 8-76 lists the attributes of a GE SFP optical port.

NOTE

The optical ports on the ES5D21G16S00 support GE optical modules.

Table 8-76 Attributes of a GE SFP optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used (see 10.5 GE eSFP Optical Modules, 10.7 GE-CWDM eSFP Optical Modules, and 10.9 GE-DWDM eSFP Optical Modules)
Standards compliance	IEEE 802.3z

Technical Specifications

Table 8-77 lists specifications of the ES5D21G16S00.

Table 8-77 Specifications of the ES5D21G16S00

Item	Description
Physical specifications	<ul style="list-style-type: none">• Dimensions (H x W x D): 39.6 mm x 145.0 mm x 233 mm (1.6 in. x 5.7 in. x 9.2 in.)• Weight: 0.7 kg (1.54 lb)• Maximum power consumption: 11.7 W

Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

Table 8-78 provides ES5D21G16S00 ordering information.

Table 8-78 Ordering information

Card Description	Card Name	Part Number
16-port GE SFP optical interface card (front card)	ES5D21G16S00	03021PED

8.14 ES5D21G16T00 (16-Port GE Front Electrical Interface Card)

Version Mapping

Table 8-79 lists the mapping between the ES5D21G16T00 card and software versions.

Table 8-79 Version mapping

Card Model	Software Version
ES5D21G16T00	V200R003C00 to V200R005C03 NOTE This module is not supported in V200R003C02, V200R003C10, or V200R005C01.

Card Overview

The ES5D21G16T00 provides sixteen GE electrical ports for data access and line-rate switching.

The ES5D21G16T00 can be installed in the front card slot of the S5710-108C-PWR-HI.

Figure 8-36 shows the appearance of the ES5D21G16T00.

Figure 8-36 ES5D21G16T00



Functions

Table 8-80 describes functions of the ES5D21G16T00.

Table 8-80 Functions

Function	Description
Basic function	Provides sixteen GE electrical ports for data access and line-rate switching.

Function	Description
Hot swapping	Supported

Indicators and Ports

Figure 8-37 shows indicators on the ES5D21G16T00.

Figure 8-37 Indicators on the ES5D21G16T00

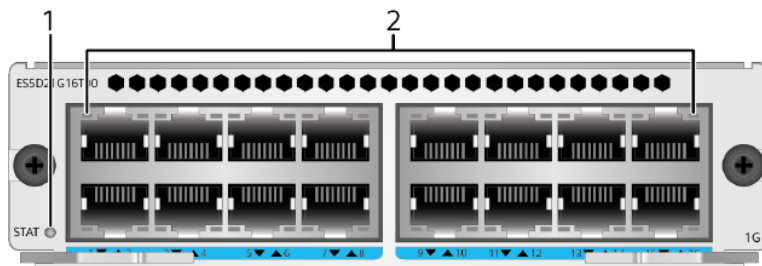


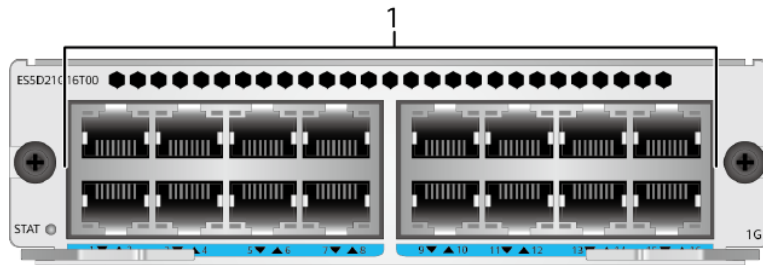
Table 8-81 describes indicator status on the ES5D21G16T00.

Table 8-81 Description of indicators on the ES5D21G16T00

Number	Indicator	Color	Description
1	STAT	Off	The system software is not running.
		Green	<ul style="list-style-type: none"> Steady on: The system is starting. Blinking: The system is running properly.
		Red	A fault that affects services has occurred. The fault cannot be rectified automatically and requires manual intervention.
2	One single-color indicator for each port NOTE The indicator on the left indicates the port at the top, and the indicator on the right indicates the port at the bottom.	Green	<ul style="list-style-type: none"> Steady on: A link is established on the port. Blinking: The port is transmitting or receiving data.
		Off	No link is established on the port.

Figure 8-38 shows the ports on the ES5D21G16T00.

Figure 8-38 Ports on the ES5D21G16T00



1. Sixteen 10M/100M/1000M BASE-T ports

10M/100M/1000M BASE-T port

The ES5D21G16T00 provides sixteen 10M/100M/1000M BASE-T ports to transmit and receive Ethernet service data. Table 8-82 lists the attributes of a 10M/100M/1000M BASE-T port.

Table 8-82 Attributes of a 10M/100M/1000M BASE-T port

Attribute	Description
Connector type	RJ45
Electrical port attributes	MDI/MDIX
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab

Technical Specifications

Table 8-83 lists technical specifications of the ES5D21G16T00.

Table 8-83 Technical specifications

Item	Description
Physical specifications	<ul style="list-style-type: none"> Dimensions (H x W x D): 39.6 mm x 145.0 mm x 233 mm (1.6 in. x 5.7 in. x 9.2 in.) Weight: 0.7 kg (1.54 lb) Maximum power consumption: 9.5 W

Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

Table 8-84 provides ES5D21G16T00 ordering information.

Table 8-84 Ordering information

Card Description	Card Name	Part Number
16-port GE RJ45 interface card (front card)	ES5D21G16T00	03021NXB

8.15 ES5D21Q02Q00 (2-Port 40 Gig QSFP+ Rear Interface Card)

Version Mapping

Table 8-85 lists the mapping between the ES5D21Q02Q00 and software versions.

Table 8-85 Version mapping

Card Model	Software Version
ES5D21Q02Q00	S5730-HI: V200R012C00 to V200R019C10 versions S5731-H and S5731S-H: V200R019C00 and later versions S5736-S: V200R020C00 and later versions

Card Overview

The ES5D21Q02Q00 provides two 40GE QSFP+ optical ports for data access and line-rate switching.

The ES5D21Q02Q00 can be installed in a rear card slot of the switch models listed in Table 8-86.

Table 8-86 Applicable switch models

Card	Switch Model
ES5D21Q02Q00	<ul style="list-style-type: none"> • S5730-36C-HI • S5730-36C-PWH-HI • S5730-44C-HI (can be installed only in slot 1) • S5730-44C-PWH-HI (can be installed only in slot 1) • S5730-60C-HI • S5730-60C-PWH-HI • S5730-68C-HI (can be installed only in

Card	Switch Model
	<p>slot 1)</p> <ul style="list-style-type: none"> • S5730-68C-PWH-HI (can be installed only in slot 1) • S5730-44C-HI-24S (can be installed only in slot 1) • S5730-36C-HI-24S • S5730-60C-HI-48S • S5730-68C-HI-48S (can be installed only in slot 1) • S5731-H24T4XC • S5731-H24P4XC • S5731-H48T4XC • S5731-H48P4XC • S5731S-H24T4XC-A • S5731S-H48T4XC-A • S5731-H24HB4XZ • S5731-H48HB4XZ • S5731S-H24HB4XZ-A • S5731S-H48HB4XZ-A • S5735S-H24S4XC-A • S5736-S24UM4XC • S5736-S24S4XC • S5736-S48S4XC

Figure 8-39 ES5D21Q02Q00 (old)



Figure 8-40 ES5D21Q02Q00 (new)



Functions

Table 8-87 describes functions of the ES5D21Q02Q00.

Table 8-87 Functions

Function	Description
Basic functions	Provides two 40GE QSFP+ optical ports for data access and line-rate switching. Each 40GE port can be split into four 10GE ports.
Hot swapping	Supported
Service port stacking	Ports on the card can be used as stack ports. NOTE A 40GE port cannot be used as a stack port after it is split into four 10GE ports.

Indicators and Ports

Figure 8-41 Indicators on the ES5D21Q02Q00 (old)

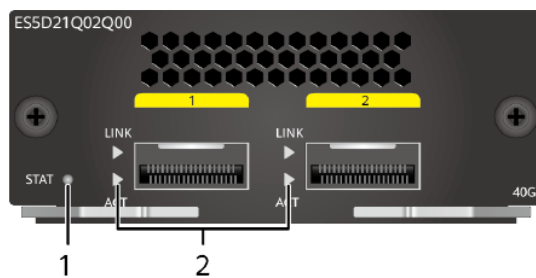


Figure 8-42 Indicators on the ES5D21Q02Q00 (new)

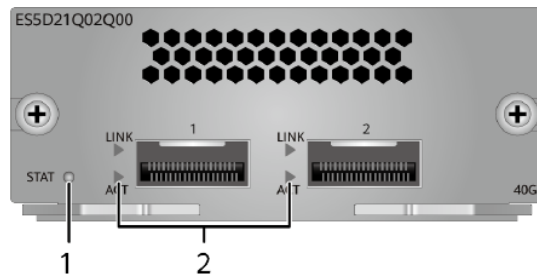


Table 8-88 describes indicators on the ES5D21Q02Q00.

Table 8-88 Indicator description

Number	Indicator	Color	Description
1	STAT	Off	The system software is not running.
		Green	<ul style="list-style-type: none"> Fast blinking: The system is starting. Slow blinking: The system is running normally.
		Red	A fault that affects services has occurred. The fault cannot be rectified automatically and requires manual intervention.
2	LINK	Off	No link is established on the port.
		Green	Steady on: A link is established on the port.
	ACT	Off	The port is not transmitting or receiving data.
		Yellow	Blinking: The port is transmitting or receiving data.

Figure 8-43 Ports on the ES5D21Q02Q00 (old)

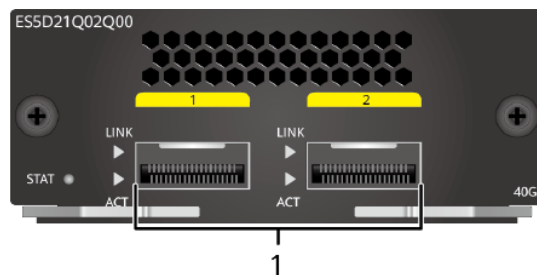
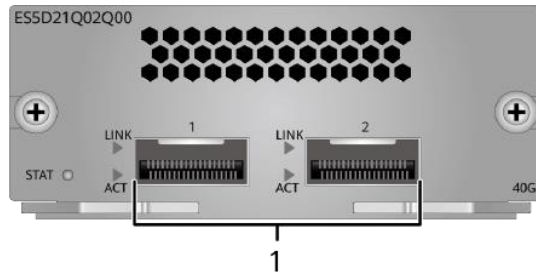


Figure 8-44 Ports on the ES5D21Q02Q00 (new)



1. Two 40GE QSFP+ optical ports

40GE QSFP+ optical port

A 40GE QSFP+ optical port sends and receives service traffic at 40 Gbit/s and can be split into four 10GE ports. After a split, the 40GE QSFP+ optical port needs to be connected to a remote device using a 1-to-4 QSFP+ fiber (with matching optical modules), a 1-to-4 QSFP+ AOC cable, or a 1-to-4 QSFP+ copper cable. Table 8-89 lists the attributes of a 40GE QSFP+ optical port.

NOTE

Both optical ports on the ES5D21Q02Q00 support only QSFP+ optical modules, QSFP+ AOC cables (10 m; QSFP+ to QSFP+ or QSFP+ to 4*SFP+), and QSFP+ copper cables (1 m, 3 m, and 5 m; QSFP+ to QSFP+ or QSFP+ to 4*SFP+).

Table 8-89 Attributes of a QSFP+ optical port

Attribute	Description
Connector type	LC/MPO
Optical attributes	Depend on the optical module used (see 10.16 40GE QSFP+ Optical Modules)
Standards compliance	IEEE 802.3ba

Technical Specifications

Table 8-90 lists technical specifications of the ES5D21Q02Q00.

Table 8-90 Technical specifications

Item	Description
Physical specifications	<ul style="list-style-type: none"> • Dimensions (H x W x D): 40 mm x 100 mm x 208 mm (1.6 in. x 3.9 in. x 8.2 in.) • Weight: 0.92 kg (2.03 lb) • Maximum power consumption: 9 W

Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

Table 8-91 provides the ES5D21Q02Q00 ordering information.

Table 8-91 Ordering information

Card Description	Card Model	Part Number
2-port 40 Gig QSFP+ rear interface card	ES5D21Q02Q00	03024EHT

8.16 ES5D21L04Q00 (4-Port 40GE QSFP+ Optical Interface Card)

Version Mapping

Table 8-92 lists the mapping between the ES5D21L04Q00 card and software versions.

Table 8-92 Version mapping

Card Model	Software Version
ES5D21L04Q00	V200R003C00 to V200R005C03 NOTE This module is not supported in V200R003C02, V200R003C10, or V200R005C01.

Card Overview

The ES5D21L04Q00 provides four 40GE QSFP+ optical ports for data access and line-rate switching.

The ES5D21L04Q00 can be installed in the front card slot of the S5710-108C-PWR-HI.

Figure 8-45 shows the appearance of the ES5D21L04Q00.

Figure 8-45 ES5D21L04Q00



Functions

Table 8-93 describes functions of the ES5D21L04Q00.

Table 8-93 Functions

Function	Description
Basic function	Provides four 40GE QSFP+ optical ports for data access and line-rate switching.
Hot swapping	Supported

Indicators and Ports

Figure 8-46 shows indicators on the ES5D21L04Q00.

Figure 8-46 Indicators on the ES5D21L04Q00

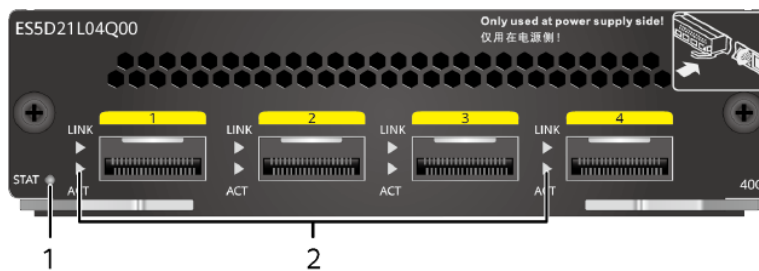


Table 8-94 describes indicator status on the ES5D21L04Q00.

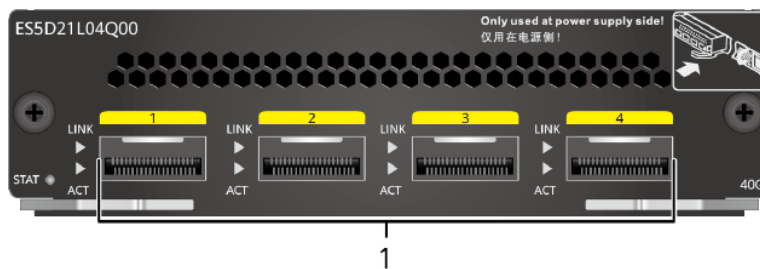
Table 8-94 Description of indicators on the ES5D21L04Q00

Number	Indicator	Color	Description
1	STAT	Off	The system software is not running.

Number	Indicator	Color	Description
		Green	<ul style="list-style-type: none"> Steady on: The system is starting. Blinking: The system is running properly.
		Red	A fault that affects services has occurred. The fault cannot be rectified automatically and requires manual intervention.
2	LINK	Green	Steady on: A link is established on the port.
		Off	No link is established on the port.
	ACT	Yellow	Blinking: The port is transmitting or receiving data.
		Off	No data is transmitting or receiving on the port.

Figure 8-47 shows the ports on the ES5D21L04Q00.

Figure 8-47 Ports on the ES5D21L04Q00



1. Four 40GE QSFP+ optical ports

40GE QSFP+ optical port

The ES5D21L04Q00 provides four 40GE QSFP+ optical ports to transmit and receive service data at 40 Gbit/s. Table 8-95 lists the attributes of a 40GE QSFP+ optical port.

NOTE

All the optical ports on the E5D21L04Q00 support only QSFP+ optical modules and QSFP+ copper cables.

Table 8-95 Attributes of a 40GE QSFP+ optical port

Attribute	Description
Connector type	LC/MPO
Optical port attributes	Depend on the optical module used (see

Attribute	Description
	10.16 40GE QSFP+ Optical Modules)
Standards compliance	IEEE 802.3ba

Technical Specifications

Table 8-96 lists technical specifications of the ES5D21L04Q00.

Table 8-96 Technical specifications

Item	Description
Physical specifications	<ul style="list-style-type: none">• Dimensions (H x W x D): 39.6 mm x 145.0 mm x 233 mm (1.6 in. x 5.7 in. x 9.2 in.)• Weight: 0.7 kg (1.54 lb)• Maximum power consumption: 25.7 W

Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

Table 8-97 provides ES5D21L04Q00 ordering information.

Table 8-97 Ordering information

Card Description	Card Name	Part Number
4-port 40GE QSFP+ optical interface card (rear card)	ES5D21L04Q00	03021NKW

8.17 ES5D21Q04Q01 (4-Port 40 Gig QSFP+ Rear Interface Card)

Version Mapping

Table 8-98 lists the mapping between the ES5D21Q04Q01 card and software versions.

Table 8-98 Version mapping

Card Model	Software Version
ES5D21Q04Q01	S5730-SI and S5730S-EI: V200R011C10 to

Card Model	Software Version
	V200R019C10 versions S5736-S: V200R020C00 and later versions

Card Overview

The ES5D21Q04Q01 provides four 40GE QSFP+ optical ports for data access and line-rate switching.

The ES5D21Q04Q01 can be installed in a rear card slot of the switch models listed in Table 8-99.

Table 8-99 Applicable switch models

Card	Switch Model
ES5D21Q04Q01	<ul style="list-style-type: none"> • S5730-48C-SI-AC • S5730-48C-PWR-SI-AC • S5730S-48C-EI-AC • S5730S-48C-PWR-EI • S5730-68C-SI-AC • S5730S-68C-EI-AC • S5730-68C-PWR-SI-AC • S5730-68C-PWR-SI • S5730S-68C-PWR-EI • S5736-S24UM4XC

Figure 8-48 ES5D21Q04Q01 (old)



Figure 8-49 ES5D21Q04Q01 (new)



Functions

Table 8-100 describes functions of the card.

Table 8-100 Functions

Function	Description
Basic functions	Provides four 40GE QSFP+ optical ports for data access and line-rate switching. Each 40GE port can be split into four 10GE ports.
Hot swapping	Supported
Service port stacking	Ports on the card can be used as stack ports. NOTE A 40GE port cannot be used as a stack port after it is split into four 10GE ports.

Indicators and Ports

Figure 8-50 Indicators on the ES5D21Q04Q01 (old)

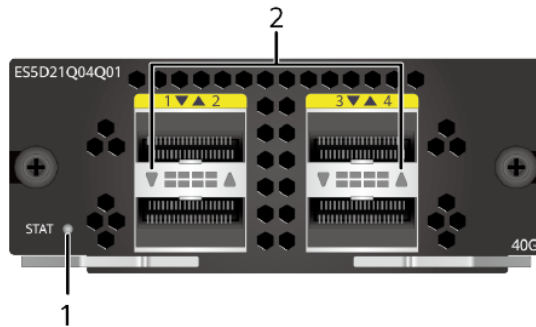


Figure 8-51 Indicators on the ES5D21Q04Q01 (new)

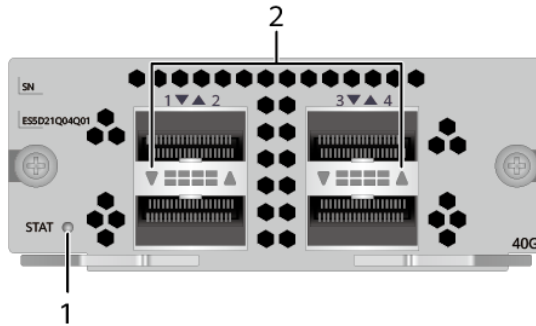


Table 8-101 Description of indicators on the card

Number	Indicator	Color	Description
1	STAT	Off	The system software is not running.
		Green	<ul style="list-style-type: none"> Fast blinking: The system is starting. Slow blinking: The system is running normally.
		Red	A fault that affects services has occurred. The fault cannot be rectified automatically and requires manual intervention.
2	ACT/LINK	Green	<ul style="list-style-type: none"> Steady on: A link has been established on the port. Blinking: The port is transmitting or receiving data.
		Off	No link is established on the port.

Figure 8-52 Ports on the ES5D21Q04Q01 (old)

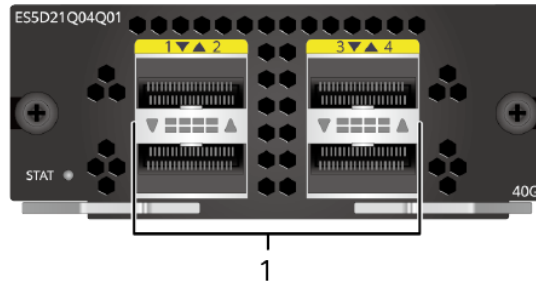
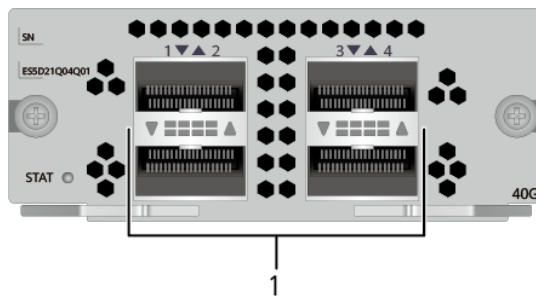


Figure 8-53 Ports on the ES5D21Q04Q01 (new)



1. Four 40GE QSFP+ optical ports

40GE QSFP+ optical port

A 40GE QSFP+ optical port sends and receives service traffic at 40 Gbit/s and can be split into four 10GE ports. After a split, the 40GE QSFP+ optical port needs to be connected to a remote device using a 1-to-4 QSFP+ fiber (with matching optical modules), a 1-to-4 QSFP+ AOC cable (applicable in V200R009C00 and later versions), or a 1-to-4 QSFP+ copper cable. Table 8-102 lists the attributes of a 40GE QSFP+ optical port.

NOTE

All the optical ports on the card support only QSFP+ optical modules, QSFP+ AOC cables (applicable in V200R009C00 and later versions; 10 m; QSFP+ to QSFP+ or QSFP+ to 4*SFP+), and QSFP+ copper cables (1 m, 3 m, and 5 m; QSFP+ to QSFP+ or QSFP+ to 4*SFP+).

Table 8-102 Attributes of a QSFP+ optical port

Attribute	Description
Connector type	LC/MPO
Optical port attributes	Depend on the optical module used (see 10.16 40GE QSFP+ Optical Modules)
Standards compliance	IEEE 802.3ba

Technical Specifications

Table 8-103 Technical specifications

Item	Description
Physical specifications	<ul style="list-style-type: none"> Dimensions (H x W x D): 40 mm x 100 mm x 208 mm (1.6 in. x 3.9 in. x 8.2 in.) Weight: 0.5 kg (1.10 lb) Maximum power consumption: 18.83 W
Environment specifications	<ul style="list-style-type: none"> Operating temperature: 0 °C to 45 °C (32 °F to 113 °F) Relative humidity: 5% RH to 95% RH Storage temperature: -40 °C to +70 °C (-40 °F to +158 °F) <p>NOTE When an ES5D21Q04Q01 card on the S5730-SI or S5730S-EI has a 40 km QSFP+ optical module installed, the operating temperature must be in the range of 0 °C to 40 °C.</p>

Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

Table 8-104 Ordering information

Card Description	Card Name	Part Number
4-port 40 Gig QSFP+ interface card	ES5D21Q04Q01	03022RRP

8.18 ES5D21X04S00 (4-Port 10GE SFP+ Rear Optical Interface Card)

Version Mapping

Table 8-105 lists the mapping between the ES5D21X04S00 card and software versions.

Table 8-105 Version mapping

Card Model	Software Version
ES5D21X04S00	V200R003C00 to V200R005C03
	<p>NOTE This module is not supported in V200R003C02,</p>

Card Model	Software Version
	V200R003C10, or V200R005C01.

Card Overview

The ES5D21X04S00 provides four 10GE SFP+ optical ports for data access and line-rate switching. It can be installed in the rear card slot of the S5710-108C-PWR-HI.

Figure 8-54 shows the appearance of the ES5D21X04S00.

Figure 8-54 ES5D21X04S00



Functions

Table 8-106 describes functions of the ES5D21X04S00.

Table 8-106 Functions

Function	Description
Basic function	Provides four 10GE SFP+ optical ports for data access and line-rate switching.
Hot swapping	Supported

Indicators and Ports

Figure 8-55 shows indicators on the ES5D21X04S00.

Figure 8-55 Indicators on the ES5D21X04S00

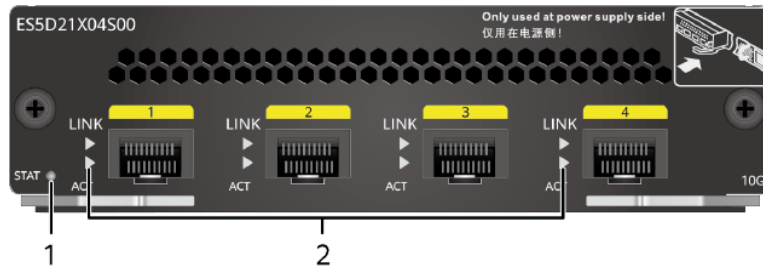


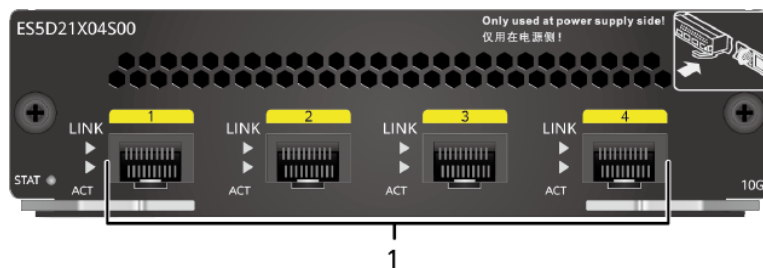
Table 8-107 describes indicator status on the ES5D21X04S00.

Table 8-107 Description of indicators on the ES5D21X04S00

Number	Indicator	Color	Description
1	STAT	Off	The system software is not running.
		Green	<ul style="list-style-type: none"> Steady on: The system is starting. Blinking: The system is running properly.
		Red	A fault that affects services has occurred. The fault cannot be rectified automatically and requires manual intervention.
2	LINK	Green	Steady on: A link is established on the port.
		Off	No link is established on the port.
	ACT	Yellow	Blinking: The port is transmitting or receiving data.
		Off	No data is transmitting or receiving on the port.

Figure 8-56 shows the ports on the ES5D21X04S00.

Figure 8-56 Ports on the ES5D21X04S00



1. Four 10GE SFP+ optical ports

10GE SFP+ optical port

The ES5D21X04S00 provides four 10GE SFP+ optical ports to transmit and receive service data at 10 Gbit/s. Table 8-108 lists the attributes of a 10GE SFP+ optical port.

NOTE

The four optical ports on the ES5D21X04S00 support only 10GE SFP+ optical modules, SFP+ copper cables, and AOC cables.

Table 8-108 Attributes of a 10GE SFP+ optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used (see 10.12 10GE SFP+ Optical Modules and 10.13 10GE-CWDM SFP+ Optical Modules)
Standards compliance	IEEE 802.3ae

Technical Specifications

Table 8-109 lists technical specifications of the ES5D21X04S00.

Table 8-109 Technical specifications

Item	Description
Physical specifications	<ul style="list-style-type: none">• Dimensions (H x W x D): 39.6 mm x 145.0 mm x 233 mm (1.6 in. x 5.7 in. x 9.2 in.)• Weight: 0.7 kg (1.54 lb)• Maximum power consumption: 11.23 W

Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

Table 8-110 provides the ES5D21X04S00 ordering information.

Table 8-110 Ordering information

Card Description	Card Name	Part Number
4-port 10GE SFP+ optical interface card (rear card)	ES5D21X04S00	03021PHQ

8.19 ES5D21X04S01 (4-Port 10 GE SFP+ Rear Interface Card)

Version Mapping

Table 8-111 lists the mapping between the card and software versions.

Table 8-111 Version mapping

Card Model	Software Version
ES5D21X04S01	V200R006C00 to V200R019C10 versions

Card Overview

The ES5D21X04S01 provides four 10GE SFP+ optical ports for data access and line-rate switching.

The ES5D21X04S01 can be installed in rear card slot 2 of the S5720-HI.

Table 8-112 Applicable switch models

Card	Switch Model
ES5D21X04S01	<ul style="list-style-type: none">S5720-32C-HI-24S-ACS5720-56C-HI-ACS5720-56C-PWR-HI-ACS5720-56C-PWR-HI-AC1

Figure 8-57 ES5D21X04S01



Functions

Table 8-113 Functions

Function	Item
Basic function	Provides four 10GE SFP+ optical ports for data access and line-rate switching.
Hot swapping	Supported
Service ports for stacking	The service ports on the card can be used as stack ports. NOTE The S5720-HI has supported service port-based stacking since V200R009C00.

Indicators and Ports

Figure 8-58 Indicators on the ES5D21X04S01

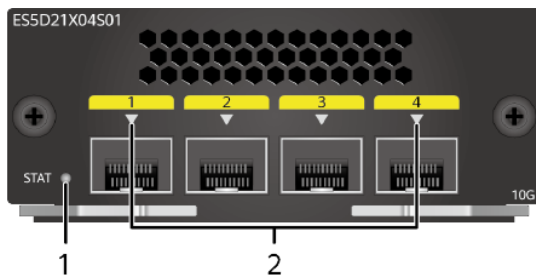
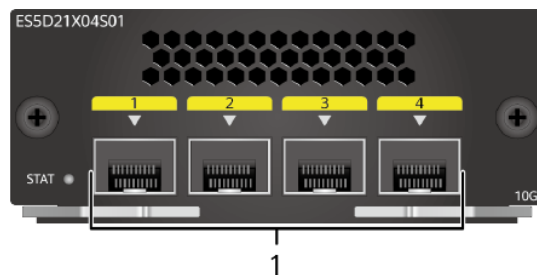


Table 8-114 Description of indicators

Number	Indicator	Color	Description
1	STAT	Off	The system software is not running.
		Green	<ul style="list-style-type: none"> Fast blinking: The system is starting. Slow blinking: The system is running properly.
		Red	A fault that affects services has occurred. The fault cannot be rectified automatically and requires manual intervention.
2	ACT/LINK	Green	<ul style="list-style-type: none"> Steady on: A link is established on the port. Blinking: The port is transmitting or receiving data.
		Off	No link is established on the port.

Figure 8-59 Ports on the ES5D21X04S01



1. Four 10GE SFP+ optical ports

10GE SFP+ optical port

The card provides four 10GE SFP+ optical ports to transmit and receive service data at 10 Gbit/s. Table 8-115 lists the attributes of a 10GE SFP+ optical port.

NOTE

When the card is installed on the S5720-HI, the four 10GE SFP+ optical ports support only 10GE SFP+ optical modules, SFP+ cables (1 m, 3 m, 5 m, and 10 m; SFP+ to SFP+), and AOC cables (3 m and 10 m; SFP+ to SFP+).

Table 8-115 Attributes of a 10GE SFP+ optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used (see 10.12 10GE SFP+ Optical Modules, 10.13

Attribute	Description
	10GE-CWDM SFP+ Optical Modules, and 10.14 10GE-DWDM SFP+ Optical Modules)
Standards compliance	IEEE 802.3ae

Technical Specifications

Table 8-116 Technical specifications

Item	Description
Physical specifications	<ul style="list-style-type: none">• Dimensions (H x W x D): 40 mm x 100 mm x 208 mm (1.6 in. x 3.9 in. x 8.2 in.)• Weight: 0.76 kg (1.68 lb)• Maximum power consumption: 9.95 W

Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

Table 8-117 provides ordering information of the card.

Table 8-117 Ordering information

Card Description	Card Name	Part number
4-port 10 GE SFP+ rear interface card	ES5D21X04S01	03022MDR

8.20 ES5D21X02S01 (2-Port 10 Gig SFP+ Rear Interface Card, Used in S5720-EI Series)

Version Mapping

Table 8-118 lists the mapping between the ES5D21X02S01 card and software versions.

Table 8-118 Version mapping

Card Model	Software Version
------------	------------------

Card Model	Software Version
ES5D21X02S01	V200R007C00 to V200R019C10 versions NOTE This module is not supported in V200R007C10.

Card Overview

The ES5D21X02S01 provides two 10GE SFP+ optical ports for data access and line-rate switching. It can be installed in a rear card slot of the switch models listed in Table 8-119.

Table 8-119 Applicable switch models

Card	Switch Model
ES5D21X02S01	S5720-C-EI and S5720-PC-EI series

Figure 8-60 shows the appearance of the ES5D21X02S01.

Figure 8-60 ES5D21X02S01



Functions

Table 8-120 describes functions of the ES5D21X02S01.

Table 8-120 Functions

Function	Item
Basic function	Provides two 10GE SFP+ optical ports for data access and line-rate switching.
Hot swapping	Supported
Service port stacking	Ports on the card can be used as stack ports.

Indicators and Ports

Figure 8-61 shows indicators on the ES5D21X02S01.

Figure 8-61 Indicators on the ES5D21X02S01

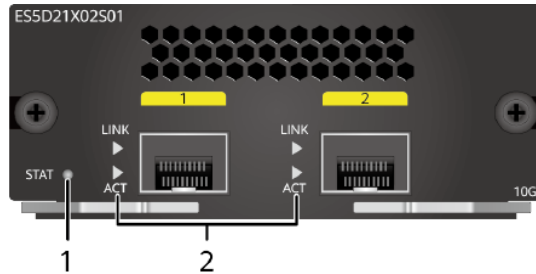


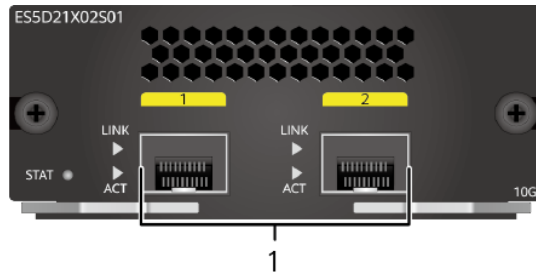
Table 8-121 describes indicators on the ES5D21X02S01.

Table 8-121 Description of indicators on the ES5D21X02S01

Number	Indicator	Color	Description
1	STAT	Off	The system software is not running.
		Green	<ul style="list-style-type: none"> Fast blinking: The system is starting. Slow blinking: The system is running normally.
		Red	A fault that affects services has occurred. The fault cannot be rectified automatically and requires manual intervention.
2	LINK	Off	No link is established on the port.
		Green	Steady on: A link is established on the port.
	ACT	Off	The port is not transmitting or receiving data.
		Yellow	Blinking: The port is transmitting or receiving data.

Figure 8-62 shows the ports on the ES5D21X02S01.

Figure 8-62 Ports on the ES5D21X02S01



1. Two 10GE SFP+ optical ports

10GE SFP+ optical port

10GE SFP+ optical ports on the ES5D21X02S01 can only transmit and receive service data at 10 Gbit/s. Table 8-122 lists the attributes of a 10GE SFP+ optical port.

NOTE

The two optical ports on the ES5D21X02S01 support only 10GE SFP+ optical modules, SFP+ copper cables (1 m, 3 m, 5 m, and 10 m; SFP+ to SFP+), and AOC cables (3 m and 10 m; SFP+ to SFP+).

Table 8-122 Attributes of a 10GE SFP+ optical port

Attribute	Item
Connector type	LC/PC
Optical port attributes	Depend on the optical module used (see 10.12 10GE SFP+ Optical Modules , 10.13 10GE-CWDM SFP+ Optical Modules, and 10.14 10GE-DWDM SFP+ Optical Modules)
Standards compliance	IEEE 802.3ae

Technical Specifications

Table 8-123 lists technical specifications of the ES5D21X02S01.

Table 8-123 Technical specifications

Item	Description
Physical specifications	<ul style="list-style-type: none"> • Dimensions (H x W x D): 40 mm x 100 mm x 208 mm (1.6 in. x 3.9 in. x 8.2 in.) • Weight: 0.78 kg (1.72 lb) • Maximum power consumption: 8 W

Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

Table 8-124 provides the ES5D21X02S01 ordering information.

Table 8-124 Ordering information

Card Description	Card Name	Part Number
2-port 10 Gig SFP+ interface card, used in S5720-EI series (rear card)	ES5D21X02S01	03022RMH

8.21 ES5D21X02T01 (2-Port 10 Gig RJ45 Rear Interface Card, Used in S5720-EI Series)

Version Mapping

Table 8-125 lists the mapping between the ES5D21X02T01 card and software versions.

Table 8-125 Version mapping

Card Model	Software Version
ES5D21X02T01	V200R007C00 to V200R019C10 versions NOTE This module is not supported in V200R007C10.

Card Overview

The ES5D21X02T01 provides two 10GBASE-T RJ45 electrical ports for data access and line-rate switching. It can be installed in a rear card slot of the switch models listed in Table 8-126.

Table 8-126 Applicable switch models

Card	Switch Model
ES5D21X02T01	S5720-C-EI and S5720-PC-EI series

Figure 8-63 shows the appearance of the ES5D21X02T01.

Figure 8-63 ES5D21X02T01



Functions

Table 8-127 describes functions of the ES5D21X02T01.

Table 8-127 Functions

Function	Item
Basic function	Provides two 10GE RJ45 electrical ports for data access and line-rate switching.
Hot swapping	Supported
Service port stacking	Ports on the card can be used as stack ports.

Indicators and Ports

Figure 8-64 shows indicators on the ES5D21X02T01.

Figure 8-64 Indicators on the ES5D21X02T01

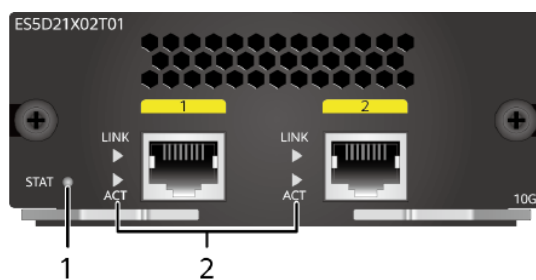


Table 8-128 describes indicators on the ES5D21X02T01.

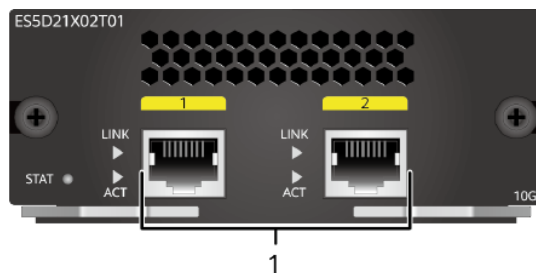
Table 8-128 Description of indicators on the ES5D21X02T01

Number	Indicator	Color	Description
1	STAT	Off	The system software is not running.

Number	Indicator	Color	Description
		Green	<ul style="list-style-type: none"> Fast blinking: The system is starting. Slow blinking: The system is running normally.
		Red	A fault that affects services has occurred. The fault cannot be rectified automatically and requires manual intervention.
2	LINK	Off	No link is established on the port.
		Green	Steady on: A link is established on the port.
	ACT	Off	The port is not transmitting or receiving data.
		Yellow	Blinking: The port is transmitting or receiving data.

Figure 8-65 shows the ports on the ES5D21X02T01.

Figure 8-65 Ports on the ES5D21X02T01



1. Two 10GBASE-T RJ45 electrical ports

10GBASE-T RJ45 electrical port

The two 10GBASE-T RJ45 electrical ports on the ES5D21X02T01 can only transmit services at 10 Gbit/s and cannot work at 100 Mbit/s or 1000 Mbit/s. Category 6A shielded twisted pair (STP) cables are recommended for the ports. Table 8-129 lists the attributes of a 10GBASE-T RJ45 electrical port.

Table 8-129 Attributes of a 10GBASE-T RJ45 electrical port

Attribute	Item
Connector type	RJ45
Working Mode	10 Gbit/s
Standards compliance	IEEE802.3an, IEEE802.3az

Table 8-130 lists the maximum transmission distances of different cables on 10GBASE-T RJ45 ports.

Table 8-130 Maximum transmission distances of different cables on 10GBASE-T RJ45 ports

Cable Type (6-a-1 Bundle)	10GBASE-T RJ45 Port
Cat6A U/UTP	Not supported
Cat6A F/UTP	100 m
Cat6A STP	100 m
Cat7	100 m

 **NOTE**

6-a-1 stands for the six-around-one cable bundle mode, with one cable in the center and six cables bundled evenly around it.

Technical Specifications

Table 8-131 lists technical specifications of the ES5D21X02T01.

Table 8-131 Technical Specifications

Item	Description
Physical specifications	<ul style="list-style-type: none"> Dimensions (H x W x D): 40 mm x 100 mm x 208 mm (1.57 in. x 3.9 in. x 8.2 in.) Weight: 0.78 kg (1.72 lb) Maximum power consumption: 16 W

Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

Table 8-132 provides the ES5D21X02T01 ordering information.

Table 8-132 Ordering information

Card Description	Card Name	Part Number
2-port 10GBASE-T RJ45 interface card, used in S5720-EI series (rear card)	ES5D21X02T01	03022RMK

8.22 ES5D21X08S00 (8-Port 10GE SFP+ Rear Optical Interface Card)

Version Mapping

Table 8-133 lists the mapping between the ES5D21X08S00 card and software versions.

Table 8-133 Version mapping

Card Model	Software Version
ES5D21X08S00	S5730-HI: V200R012C00 to V200R019C10 versions

Card Overview

The ES5D21X08S00 provides eight 10GE SFP+ optical ports for data access and line-rate switching.

The ES5D21X08S00 can be installed in a rear card slot of the switch models listed in Table 8-134.

Table 8-134 Applicable switch models

Card	Switch Model
ES5D21X08S00	<ul style="list-style-type: none"> • S5730-36C-HI • S5730-36C-PWH-HI • S5730-44C-HI (can be installed only in slot 1) • S5730-44C-PWH-HI (can be installed only in slot 1) • S5730-60C-HI • S5730-60C-PWH-HI • S5730-68C-HI (can be installed only in slot 1) • S5730-68C-PWH-HI (can be installed only in slot 1) • S5730-44C-HI-24S (can be installed only in slot 1) • S5730-36C-HI-24S • S5730-60C-HI-48S • S5730-68C-HI-48S (can be installed only in slot 1)

Figure 8-66 ES5D21X08S00



Functions

Table 8-135 Functions

Function	Description
Basic function	Provides eight 10GE SFP+ optical ports for data access and line-rate switching.
Hot swapping	Supported
Service ports for stacking	The service ports on the card can be used as stack ports. NOTE Only supported on the S5730-HI.

Indicators and Ports

Figure 8-67 Indicators on the ES5D21X08S00

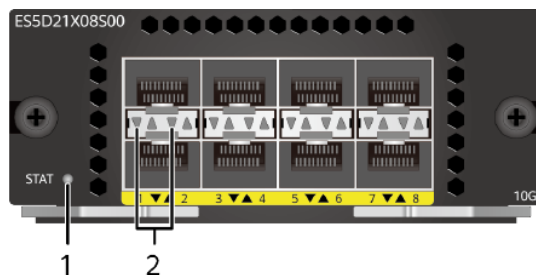
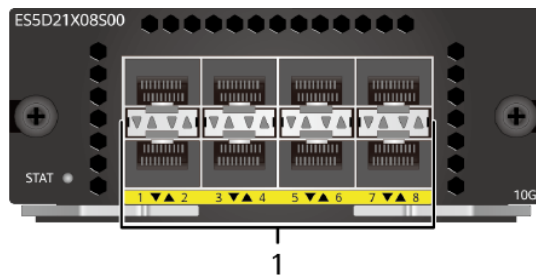


Table 8-136 Indicator description

No.	Indicator	Color	Description
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No.	Indicator	Color	Description
1	STAT	Off	The system software is not running.
		Green	<ul style="list-style-type: none"> Fast blinking: The system is starting. Slow blinking: The system is running properly.
		Red	A fault that affects services has occurred. The fault cannot be rectified automatically and requires manual intervention.
2	Two single-color indicators for each port <ul style="list-style-type: none"> Steady green: LINK indicator Blinking yellow: ACT indicator NOTE Arrowheads show the positions of ports. A down arrowhead indicates a port at the bottom, and an up arrowhead indicates a port at the top.	Green	<ul style="list-style-type: none"> Steady on: A link is established on the port. Off: No link is established on the port.
		Yellow	<ul style="list-style-type: none"> Blinking: The port is transmitting or receiving data. Off: No data is transmitting or receiving on the port.

Figure 8-68 Ports on the ES5D21X08S00



1. Eight 10GE SFP+ optical ports

10GE SFP+ optical port

The ES5D21X08S00 provides 10GE SFP+ optical ports to transmit and receive service data at 1 Gbit/s or 10 Gbit/s. Table 8-137 lists the attributes of a 10GE SFP+ optical port.

NOTE

When the card is installed on the S5730-60C-HI, S5730-60C-PWH-HI, S5730-68C-HI, S5730-68C-PWH-HI, S5730-60C-HI-48S, or S5730-68C-HI-48S, ports 1 to 4 on the card only support the rate of 10 Gbit/s, and ports 5 to 8 support 1 Gbit/s and 10 Gbit/s.

When the card is installed on the S5730-36C-HI, S5730-36C-PWH-HI, S5730-44C-HI, S5730-44C-PWH-HI, S5730-36C-HI-24S, or S5730-44C-HI-24S, all ports on the card support 1 Gbit/s and 10 Gbit/s.

The 10GE SFP+ optical ports support GE optical modules (a maximum transmission distance of 40 km), GE copper modules, 10GE SFP+ optical modules (a maximum transmission distance of 10 km), SFP+ cables (1 m, 3 m, 5 m, and 10 m; SFP+ to SFP+), and AOC cables (3 m and 10 m; SFP+ to SFP+).

Table 8-137 Attributes of a 10GE SFP+ optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module. For details, see 10.5 GE eSFP Optical Modules (a maximum transmission distance of 40 km), 10.10 GE SFP Copper Modules, and 10.12 10GE SFP+ Optical Modules (a maximum transmission distance of 10 km).
Standards compliance	IEEE 802.3ae

Technical Specifications

Table 8-138 Technical specifications

Item	Description
Physical specifications	<ul style="list-style-type: none"> Dimensions (H x W x D): 40 mm x 100 mm x 208 mm (1.57 in. x 3.94 in. x 8.19 in.) Weight: 0.26 kg (0.57 lb) Maximum power consumption: 35.8 W

Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

Table 8-139 provides the ES5D21X08S00 ordering information.

Table 8-139 Ordering information

Card Description	Card Model	Part Number
8-port 10GE SFP+ rear optical interface card	ES5D21X08S00	98010738

8.23 ES5D21X08T00 (8-Port 10GBASE-T RJ45 Rear Interface Card)

Version Mapping

Table 8-140 lists the mapping between the ES5D21X08T00 and software versions.

Table 8-140 Version mapping

Card Model	Software Version
ES5D21X08T00	S5730-HI: V200R012C00 to V200R019C10 versions S5731-H and S5731S-H: V200R019C00 and later versions

Card Overview

The ES5D21X08T00 provides eight 10GBASE-T RJ45 ports for data access and line-rate switching. It can be installed in a rear card slot of the switch models listed in Table 8-141.

Table 8-141 Applicable switch models

Card	Switch Model
ES5D21X08T00	<ul style="list-style-type: none">• S5730-36C-HI• S5730-44C-HI (can be installed only in slot 1)• S5730-36C-PWH-HI• S5730-44C-PWH-HI (can be installed only in slot 1)• S5730-60C-HI• S5730-68C-HI (can be installed only in slot 1)• S5730-60C-PWH-HI• S5730-68C-PWH-HI (can be installed only in slot 1)• S5730-44C-HI-24S (can be installed only in slot 1)• S5730-36C-HI-24S• S5730-60C-HI-48S

Card	Switch Model
	<ul style="list-style-type: none"> • S5730-68C-HI-48S (can be installed only in slot 1) • S5731-H24T4XC • S5731-H24P4XC • S5731-H48T4XC • S5731-H48P4XC • S5731S-H24T4XC-A • S5731S-H48T4XC-A • S5731-H24HB4XZ • S5731-H48HB4XZ • S5731S-H24HB4XZ-A • S5731S-H48HB4XZ-A

Figure 8-69 ES5D21X08T00 (old)



Figure 8-70 ES5D21X08T00 (new)



Functions

Table 8-142 describes functions of the ES5D21X08T00.

Table 8-142 Functions

Function	Description
Basic function	Provides eight 10GE RJ45 ports for data access and line-rate switching.
Hot swapping	Supported
Service ports for stacking	The service ports on the card can be used as stack ports.

Indicators and Ports

Figure 8-71 Indicators on the ES5D21X08T00 (old)

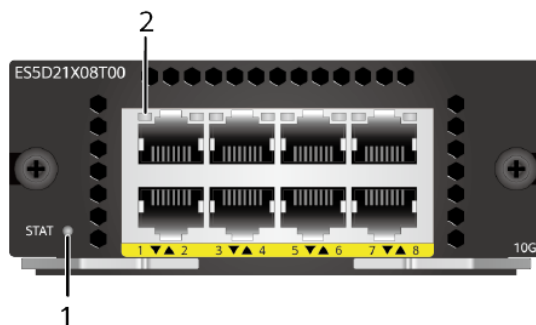


Figure 8-72 Indicators on the ES5D21X08T00 (new)

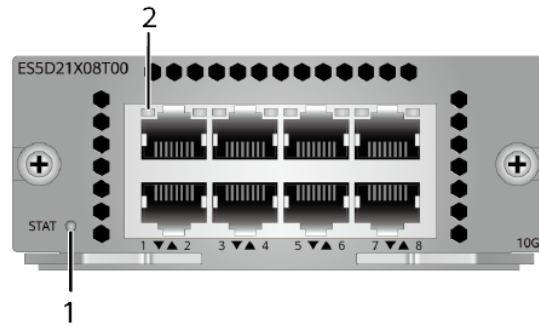


Table 8-143 shows indicators on the ES5D21X08T00.

Table 8-143 Indicator description

No.	Indicator	Color	Description
1	STAT	Off	The system software is not running.
		Green	<ul style="list-style-type: none"> Fast blinking: The system is starting. Slow blinking: The system is running properly.
		Red	A fault that affects services has occurred. The fault cannot be rectified automatically and requires manual intervention.
2	ACT/LINK	Off	No link is established on the port.
		Green	Steady on: A link has been established on the port. Blinking: The port is transmitting or receiving data.

Figure 8-73 Ports on the ES5D21X08T00 (old)

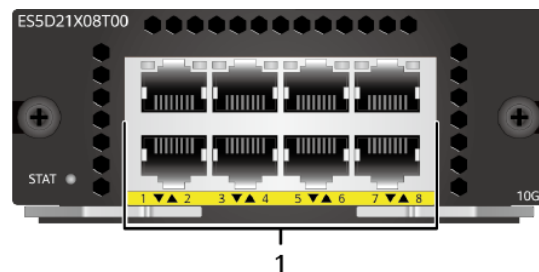
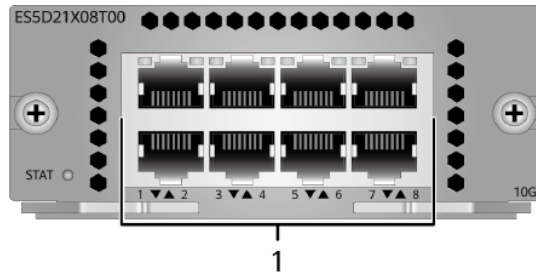


Figure 8-74 Ports on the ES5D21X08T00 (new)



1. Eight 10GBASE-T RJ45 ports

10GBASE-T RJ45 port

The ES5D21X08T00 provides eight 10GBASE-T RJ-45 electrical ports. The first four electrical ports support only 10 Gbit/s. The last four electrical ports support only 10 Gbit/s in versions earlier than V200R019C00, and also support 100 Mbit/s and 1000 Mbit/s in auto-negotiation mode in V200R019C00 and later versions. When the ports work at 10 Gbit/s, Category 6A shielded Ethernet cables are recommended. Table 8-144 lists the attributes of a 10GBASE-T RJ45 port.

Table 8-144 Attributes of a 10GBASE-T RJ45 port

Attribute	Item
Connector type	RJ45
Standards compliance	IEEE802.3an, IEEE802.3az

Table 8-145 lists the maximum transmission distances of different cables on 10GBASE-T RJ45 ports.

Table 8-145 Maximum transmission distances of different cables on 10GBASE-T RJ45 ports

Cable Type (6-a-1 Bundle)	10GBASE-T RJ45 Port
Cat6A U/UTP	Not supported
Cat6A F/UTP	100 m
Cat6A STP	100 m
Cat7	100 m

NOTE

6-a-1 stands for the six-around-one cable bundle mode, with one cable in the center and six cables bundled evenly around it.

Technical Specifications

Table 8-146 lists technical specifications of the ES5D21X08T00.

Table 8-146 Technical specifications

Item	Description
Physical specifications	<ul style="list-style-type: none">• Dimensions (H x W x D): 40 mm x 100 mm x 208 mm (1.6 in. x 3.9 in. x 8.2 in.)• Weight: 0.26 kg (0.57 lb)• Maximum power consumption: 22.1 W

Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

Table 8-147 provides the ES5D21X08T00 ordering information.

Table 8-147 Ordering information

Card Description	Card Model	Part Number
8-port 10GBASE-T RJ45 rear interface card	ES5D21X08T00	98010736

8.24 S7X08000 (8-Port 10GE SFP+ or 2-Port 25GE SFP28 Optical Interface Card (Only Ports 1 and 2 Support 25GE))

Version Mapping

Table 8-148 lists the mapping between the S7X08000 card and software versions.

Table 8-148 Version mapping

Card Model	Software Version
S7X08000	S5731-H, S5731S-H, and S5732-H: V200R019C10 and later versions S5736-S: V200R020C10 and later versions

Card Overview

The S7X08000 provides eight 10GE SFP+ optical ports for data access and line-rate switching by default. The port mode can be changed. After the change, the first two ports are 25GE ports, and the last six ports become unavailable.

The S7X08000 can be installed in a rear card slot of the switch models listed in Table 8-149.

Table 8-149 Applicable switch models

Card	Switch Model
S7X08000	<ul style="list-style-type: none">• S5731-H24T4XC• S5731-H24P4XC• S5731-H48T4XC• S5731-H48P4XC• S5731S-H24T4XC-A• S5731S-H48T4XC-A• S5731-H24HB4XZ• S5731-H48HB4XZ• S5731S-H24HB4XZ-A• S5731S-H48HB4XZ-A• S5732-H24UM2CC• S5732-H48UM2CC• S5732-H48XUM2CC• S5735S-H24S4XC-A• S5736-S24UM4XC• S5736-S24S4XC• S5736-S48S4XC

Figure 8-75 S7X08000



Functions

Table 8-150 Functions

Function	Description
Basic function	Provides eight 10GE SFP+ optical ports for data access and line-rate switching by default. You can run the set card port-config-mode 25g-port enable command to change the port mode. After this command is configured, the first two ports are 25GE ports and the last six ports become unavailable.
Hot swapping	Supported
Service ports for stacking	The service ports on the card can be used as stack ports.

Indicators and Ports

Figure 8-76 Indicators on the S7X08000

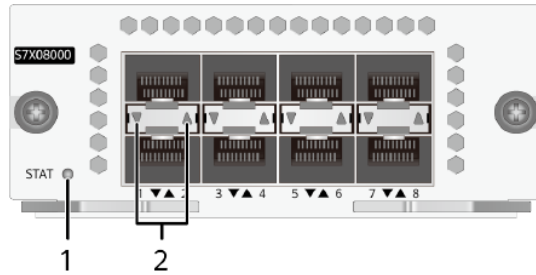
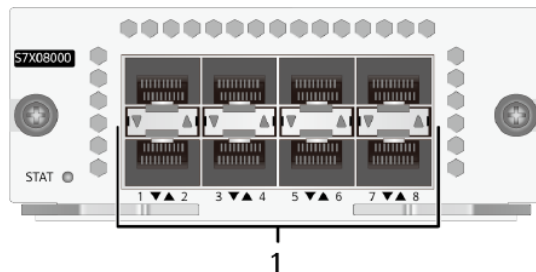


Table 8-151 Indicator description

No.	Indicator	Color	Description
1	STAT	Off	The system software is not running.
		Green	<ul style="list-style-type: none"> Fast blinking: The system is starting. Slow blinking: The system is running properly.
		Red	A fault that affects services has occurred. The fault cannot be rectified automatically and requires manual intervention.
2	ACT/LINK	Green	<ul style="list-style-type: none"> Steady on: A link is established on the port. Blinking: The port is sending or receiving data.
		Off	No link is established on the port.

Figure 8-77 Ports on the S7X08000



1. Eight 10GE SFP+ optical ports, supporting 10GE/GE

You can run the **set card port-config-mode 25g-port enable** command to change the port mode. After this command is configured, the first two ports are 25GE SFP28 optical ports,

and the last six ports become unavailable.

10GE SFP+ optical port

The S7X08000 provides 10GE SFP+ optical ports to transmit and receive service data at 10 Gbit/s or 1 Gbit/s. Table 8-152 lists the attributes of a 10GE SFP+ optical port.

NOTE

When the card is installed on the S5731-H, S5731S-H, and S5732-H, the 10GE SFP+ optical ports support GE optical modules, GE copper modules, 10GE SFP+ optical modules, SFP+ copper cables (1 m, 3 m, 5 m, and 10 m; SFP+ to SFP+), AOC cables (3 m and 10 m; SFP+ to SFP+), and SFP+ dedicated stack cables (supported only on the S5732-H24UM2CC and S5732-H48UM2CC).

When the card is installed on the S5735S-H and S5736-S, the 10GE SFP+ optical ports support GE optical modules, GE copper modules, 10GE SFP+ optical modules (the maximum transmission distance cannot exceed 10 km), SFP+ copper cables (1 m, 3 m, 5 m, and 10 m; SFP+ to SFP+), and AOC cables (3 m and 10 m; SFP+ to SFP+).

Table 8-152 Attributes of a 10GE SFP+ optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module. For details, see 10.5 GE eSFP Optical Modules, 10.7 GE-CWDM eSFP Optical Modules, 10.9 GE-DWDM eSFP Optical Modules, 10.10 GE SFP Copper Modules, 10.12 10GE SFP+ Optical Modules, 10.13 10GE-CWDM SFP+ Optical Modules, and 10.14 10GE-DWDM SFP+ Optical Modules.

25GE SFP28 optical port

The S7X08000 provides 25GE SFP28 optical ports to transmit and receive service data at 25 Gbit/s, 10 Gbit/s, or 1 Gbit/s. Table 8-153 lists the attributes of a 25GE SFP28 optical port.

NOTE

- When the card is installed on the S5731-H, S5731S-H, and S5732-H, the 25GE SFP28 optical ports support 25GE optical modules, SFP28 copper cables (1 m, 3 m, and 5 m; SFP28 to SFP28), SFP28 AOC cables (3 m, 5 m, 7 m, and 10 m; SFP28 to SFP28), GE optical modules, GE copper modules, 10GE SFP+ optical modules, SFP+ copper cables (1 m, 3 m, 5 m, and 10 m; SFP+ to SFP+), and AOC cables (3 m and 10 m; SFP+ to SFP+).
- When the card is installed on the S5735S-H and S5736-S, the 25GE SFP28 optical ports support 25GE optical modules, SFP28 copper cables (1 m, 3 m, and 5 m; SFP28 to SFP28), SFP28 AOC cables (3 m, 5 m, 7 m, and 10 m; SFP28 to SFP28), GE optical modules, GE copper modules, 10GE SFP+ optical modules (the maximum transmission distance cannot exceed 10 km), SFP+ copper cables (1 m, 3 m, 5 m, and 10 m; SFP+ to SFP+), and AOC cables (3 m and 10 m; SFP+ to SFP+).
- When a 25GE optical module or cable is connected to a 25GE SFP28 optical port, the port can automatically adjust its rate to 25 Gbit/s.
- When a 10GE optical module or cable is connected to a 25GE SFP28 optical port, the port can automatically adjust its rate to 10 Gbit/s.
- Before installing a GE optical module or copper module on a 25GE SFP28 optical port, run the **port mode ge** command to configure the port to work at 1 Gbit/s.

Table 8-153 Attributes of a 25GE SFP28 optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module. For details, see 10.15 25GE SFP28 Optical Modules, 10.5 GE eSFP Optical Modules, 10.7 GE-CWDM eSFP Optical Modules, 10.9 GE-DWDM eSFP Optical Modules, 10.10 GE SFP Copper Modules, 10.12 10GE SFP+ Optical Modules, 10.13 10GE-CWDM SFP+ Optical Modules, and 10.14 10GE-DWDM SFP+ Optical Modules.

Technical Specifications

Table 8-154 Technical specifications

Item	Description
Physical specifications	<ul style="list-style-type: none"> • Dimensions (H x W x D): 40 mm x 100 mm x 208 mm (1.57 in. x 3.94 in. x 8.19 in.) • Weight: 0.44 kg (0.97 lb) • Maximum power consumption: 33 W

Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

Table 8-155 provides the S7X08000 ordering information.

Table 8-155 Ordering information

Card Description	Card Model	Part Number
8-port 10GE SFP+ or 2-port 25GE SFP28 optical interface card (only ports 1 and 2 support 25GE)	S7X08000	02312URW

8.25 S7Y08000 (8-Port 25GE SFP28 Optical Interface Card)

Version Mapping

Table 8-156 lists the mapping between the S7Y08000 card and software versions.

Table 8-156 Version mapping

Card Model	Software Version
S7Y08000	V200R019C10SPC500 and later versions

Card Overview

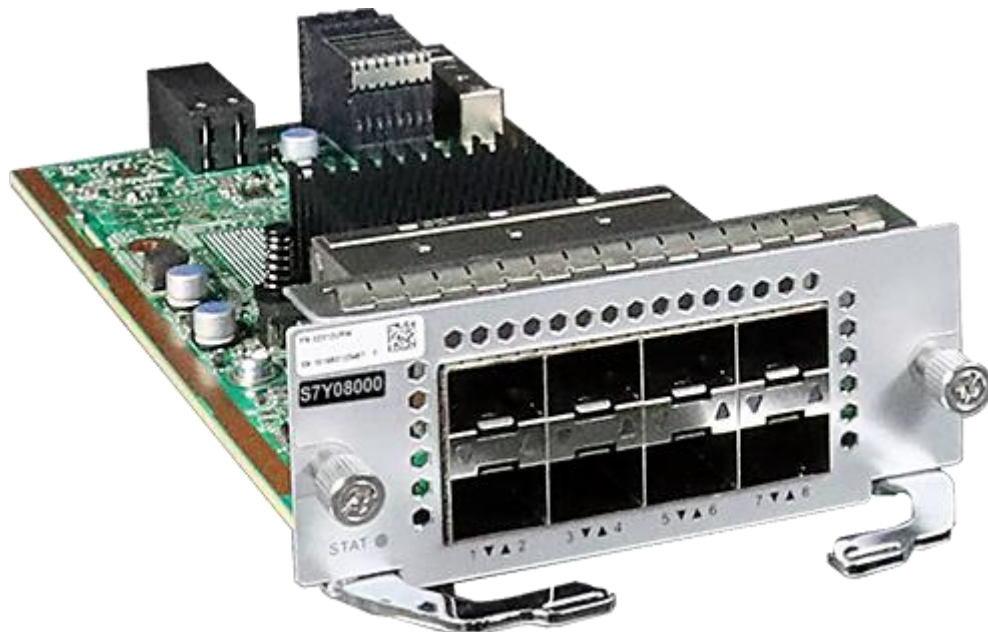
The S7Y08000 provides eight 25GE SFP28 optical ports for data access and switching by default.

The S7Y08000 can be installed in a rear card slot of the switch models listed in Table 8-157.

Table 8-157 Applicable switch models

Card	Switch Model
S7Y08000	<ul style="list-style-type: none"> • S5732-H24UM2CC • S5732-H48UM2CC • S5732-H48XUM2CC

Figure 8-78 S7Y08000



Functions

Table 8-158 Functions

Function	Description
Basic function	Provides eight 25GE SFP28 optical ports for data access and switching by default.
Hot swapping	Supported
Service ports for stacking	The service ports on the card can be used as stack ports.

Indicators and Ports

Figure 8-79 Indicators on the S7Y08000

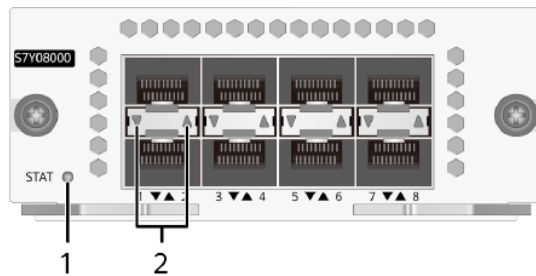
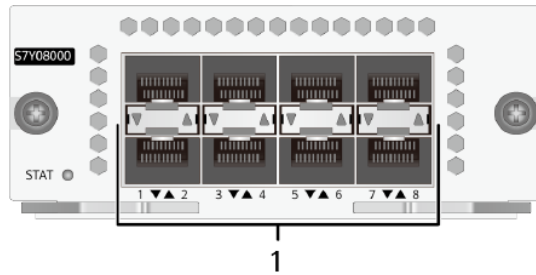


Table 8-159 Indicator description

No.	Indicator	Color	Description
1	STAT	Off	The system software is not running.
		Green	<ul style="list-style-type: none"> Fast blinking: The system is starting. Slow blinking: The system is running properly.
		Red	A fault that affects services has occurred. The fault cannot be rectified automatically and requires manual intervention.
2	ACT/LINK	Green	<ul style="list-style-type: none"> Steady on: A link is established on the port. Blinking: The port is sending or receiving data.
		Off	No link is established on the port.

Figure 8-80 Ports on the S7Y08000



1. Eight 25GE SFP28 optical ports, supporting 25GE/10GE/GE.

25GE SFP28 optical port

The S7Y08000 provides 25GE SFP28 optical ports to transmit and receive service data at 25 Gbit/s, 10 Gbit/s, or 1 Gbit/s. Table 8-160 lists the attributes of a 25GE SFP28 optical port.

NOTE

- The 25GE SFP28 optical ports support 25GE optical modules, SFP28 copper cables (1 m, 3 m, and 5 m; SFP28 to SFP28), SFP28 AOC cables (3 m, 5 m, 7 m, and 10 m; SFP28 to SFP28), GE optical modules, GE copper modules, 10GE SFP+ optical modules, SFP+ copper cables (1 m, 3 m, 5 m, and 10 m; SFP+ to SFP+), and AOC cables (3 m and 10 m; SFP+ to SFP+).
- When a 25GE optical module or cable is connected to a 25GE SFP28 optical port, the port can automatically adjust its rate to 25 Gbit/s.
- When a 10GE optical module or cable is connected to a 25GE SFP28 optical port, the port can automatically adjust its rate to 10 Gbit/s.
- Before installing a GE optical module or copper module on a 25GE SFP28 optical port, run the **port mode ge** command to configure the port to work at 1 Gbit/s.

Table 8-160 Attributes of a 25GE SFP28 optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module. For details, see 10.15 25GE SFP28 Optical Modules, 10.5 GE eSFP Optical Modules, 10.7 GE-CWDM eSFP Optical Modules, 10.9 GE-DWDM eSFP Optical Modules, 10.10 GE SFP Copper Modules, 10.12 10GE SFP+ Optical Modules, 10.13 10GE-CWDM SFP+ Optical Modules, and 10.14 10GE-DWDM SFP+ Optical Modules.

Technical Specifications

Table 8-161 Technical specifications

Item	Description
Physical specifications	<ul style="list-style-type: none">• Dimensions (H x W x D): 40 mm x 100 mm x 208 mm (1.57 in. x 3.94 in. x 8.19 in.)• Weight: 0.44 kg (0.97 lb)• Maximum power consumption: 33 W

Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

Table 8-162 provides the S7Y08000 ordering information.

Table 8-162 Ordering information

Card Description	Card Model	Part Number
8-port 25GE SFP28 optical interface card	S7Y08000	02312URV

8.26 S7Q02001 (2-port 40GE QSFP+ interface card)

Overview

Table 8-163 Basic information about the S7Q02001

Item	Details
Description	2-port 40GE QSFP+ interface card
Part Number	02313UBW
Model	S7Q02001

Appearance

Figure 8-81 Appearance of the S7Q02001



Version Mapping

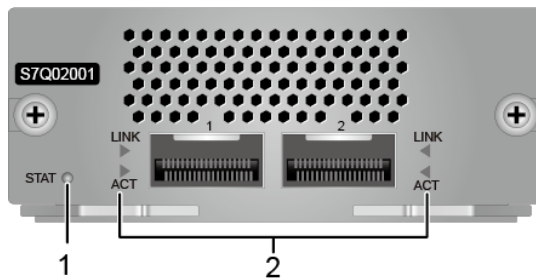
Table 8-164 Mappings between S7Q02001 and product models

Product	Product Model	First Supported Version	Limitations
S5731-H	S5731-H24P4XC (02352QPV)	V200R021C01	-
S5731-H	S5731-H24P4XC (02352QPV-001)	V200R021C01	-
S5731-H	S5731-H24T4XC (02352QPP)	V200R021C01	-
S5731-H	S5731-H24T4XC (02352QPP-001)	V200R021C01	-
S5731-H	S5731-H48P4XC (02352SVD)	V200R021C01	-
S5731-H	S5731-H48P4XC (02352SVD-001)	V200R021C01	-
S5731-H	S5731-H48T4XC (02352QPT)	V200R021C01	-
S5731-H	S5731-H48T4XC (02352QPT-003)	V200R021C01	-
S5731S-H	S5731S-H24T4XC- A (02352YRG)	V200R021C01	-
S5731S-H	S5731S-H24T4XC- A (02352YRG-001)	V200R021C01	-
S5731S-H	S5731S-H48T4XC- A (02352YRF)	V200R021C01	-
S5731S-H	S5731S-H48T4XC- A (02352YRF-003)	V200R021C01	-
S5736-S	S5736-S24S4XC (98011038)	V200R021C01	-

Product	Product Model	First Supported Version	Limitations
S5736-S	S5736-S24T4XC (98011022)	V200R021C01	-
S5736-S	S5736-S24U4XC (98011030)	V200R021C01	-
S5736-S	S5736-S24UM4XC (98011020)	V200R021C01	-
S5736-S	S5736-S48S4XC (98011042)	V200R021C01	-
S5736-S	S5736-S48T4XC (98011026)	V200R021C01	-
S5736-S	S5736-S48U4XC (98011034)	V200R021C01	-

Indicators

Figure 8-82 Indicators on the S7Q02001



1. STAT: running status indicator	2. LINK/ACT indicators of ports
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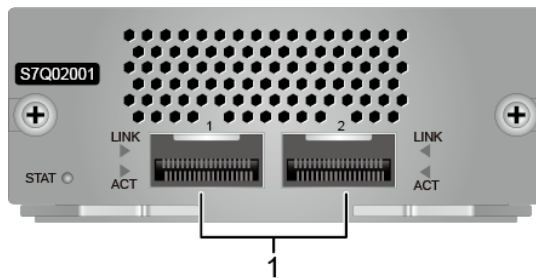
Table 8-165 Indicators on the S7Q02001

Silkscreen	Name	Color	Status	Description
STAT	Running status indicator	-	Off	The system software is not running.
		Green	Fast blinking	The system is starting.
		Green	Slow blinking	The system is running normally.

Silkscreen	Name	Color	Status	Description
		Red	Steady on	A fault that affects services has occurred. The fault cannot be rectified automatically and requires manual intervention.
LINK	LINK indicators of ports	-	Off	No link is established on the port.
		Green	Steady on	A link is established on the port.
ACT	ACT indicators of ports	-	Off	The port is not transmitting or receiving data.
		Yellow	Blinking	The port is transmitting or receiving data.

Ports

Figure 8-83 Ports on the S7Q02001



1. Two 40GE QSFP+ optical ports

Table 8-166 Ports on the S7Q02001

Port	Connector Type	Description	Available Components
------	----------------	-------------	----------------------

Port	Connector Type	Description	Available Components
40GE QSFP+ optical port	QSFP+	40GE optical ports to transmit and receive service traffic at 40 Gbit/s	<ul style="list-style-type: none">• 10.16 40GE QSFP+ Optical Modules• 9.15 Copper Cable• 9.3 Optical Fiber

Functions and Features

Table 8-167 Functions and features of the S7Q02001

Function	Description
Basic functions	Provides two 40GE QSFP+ optical ports for data access and line-rate switching. Each 40GE port can be split into four 10GE ports.
Hot swapping	Supported
Service port stacking	Ports on the card can be used as stack ports. NOTE A 40GE port cannot be used as a stack port after it is split into four 10GE ports.

Technical Specifications

Table 8-168 Technical specifications of the S7Q02001

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	40 mm x 100 mm x 208 mm (1.6 in. x 3.9 in. x 8.2 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	80 mm x 160 mm x 305 mm (3.15 in. x 6.30 in. x 12.01 in.)
Weight without packaging [kg(lb)]	0.40 kg (0.88 lb)
Weight with packaging [kg(lb)]	0.6 kg (1.32 lb)
Typical power consumption [W]	24 W
Typical heat dissipation [BTU/hour]	81.89 BTU/hour
Maximum power consumption [W]	27 W
Maximum heat dissipation [BTU/hour]	92.13 BTU/hour

8.27 ES5D21VST000 (Dedicated Stack Card with 2*QSFP+ Interface)

Version Mapping

Table 8-169 lists the mapping between the ES5D21VST000 card and software versions.

Table 8-169 Version mapping

Card Model	Software Version
ES5D21VST000	<p>S5720-C-EI and S5720-PC-EI: V200R007C00 to V200R019C10 versions</p> <p>NOTE This module is not supported in V200R007C10.</p> <p>S5730-SI and S5730S-EI: V200R012C00 to V200R019C10 versions</p>

Card Overview

The ES5D21VST000 is a stack card that provides two QSFP+ optical ports for stack connection. It can be installed in a rear card slot of the switch models listed in Table 8-170.

Table 8-170 Applicable switch models

Card	Switch Model
ES5D21VST000	S5720-C-EI, S5720-PC-EI, S5730-SI, and S5730S-EI series

Figure 8-84 ES5D21VST000



Functions

Table 8-171 describes functions of the ES5D21VST000.

Table 8-171 Functions

Function	Description
Basic function	Provides two QSFP+ optical ports for setting up a stack system among multiple switches. The QSFP+ optical port cannot be split into four 10GE ports.
Hot swapping	Supported

Indicators and Ports

Figure 8-85 Indicators on the ES5D21VST000

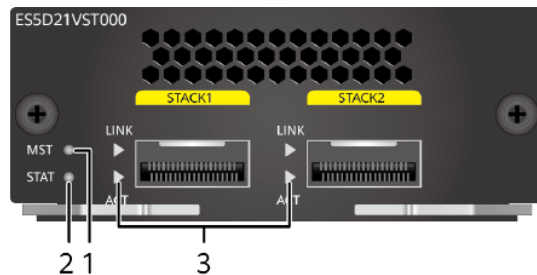
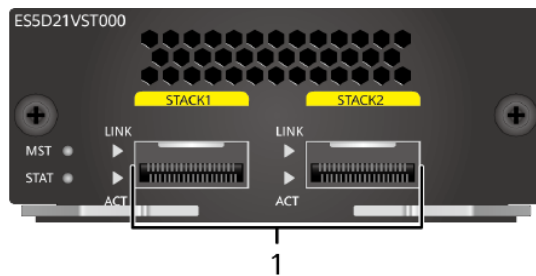


Table 8-172 Description of indicators on the ES5D21VST000

Number	Indicator	Color	Description
1	MST	Off	Off: The switch is the standby or slave switch in a stack or a standalone switch with the stacking function disabled.
		Green	Blinking: The switch is the master switch in a stack or a standalone switch with the stacking function enabled.
2	STAT	Off	The system software is not running.
		Green	<ul style="list-style-type: none"> Fast blinking: The system is starting. Slow blinking: The system is running properly.
		Red	Steady on: A fault that affects services has occurred. The fault cannot be rectified automatically and requires manual intervention.
3	LINK	Off	No link is established on the port.

Number	Indicator	Color	Description
		Green	Steady on: A link is established on the port.
	ACT	Off	The port is not transmitting or receiving data.
		Yellow	Blinking: The port is transmitting or receiving data.

Figure 8-86 Ports on the ES5D21VST000



1. Two QSFP+ optical ports

QSFP+ optical ports

QSFP+ optical ports on the ES5D21VST000 are used for setting up a stack system among multiple switches. Table 8-173 lists the attributes of a QSFP+ optical port.

NOTE

When the card is installed on the S5720-EI, the two optical ports on the card can work with QSFP+ optical modules (only QSFP-40G-SR4 and QSFP-40G-iSR4 supported) and QSFP+ cables (1 m, 3 m, and 5 m; QSFP+ to QSFP+). When the card is installed on the S5730-SI or S5730S-EI, the optical ports on the card can work with QSFP+ optical modules (excluding the QSFP-40G-SR-BD), QSFP+ AOC cables (10 m; QSFP+ to QSFP+), and QSFP+ cables (1 m, 3 m, and 5 m; QSFP+ to QSFP+).

Table 8-173 Attributes of a QSFP+ optical port

Attribute	Description
Connector type	MPO
Optical port attributes	Depend on the optical module used (see 10.16 40GE QSFP+ Optical Modules)
Standards compliance	IEEE 802.3ba

Technical Specifications

Table 8-174 Technical specifications

Item	Description
Physical specifications	<ul style="list-style-type: none">• Dimensions (H x W x D): 40 mm x 100 mm x 208 mm (1.6 in. x 3.9 in. x 8.2 in.)• Weight: 0.92 kg (2.03 lb)• Maximum power consumption: 9 W

Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

Table 8-175 Ordering information

Card Description	Card Name	Part Number
Dedicated stack card with 2*QSFP+ interface (including one PCS of 1 m QSFP+ cable)	ES5D21VST000	02310YXY

8.28 ES5D00ETPC00 (Stack Rear Card)

Version Mapping

Table 8-176 lists the mapping between the ES5D00ETPC00 card and software versions.

Table 8-176 Version mapping

Card Model	Software Version
ES5D00ETPC00	V100R005C01 to V200R005C03
NOTE After the display device command is executed, the PCB model of the card is displayed as CX22ETPC.	NOTE This module is not supported in V200R003C02 or V200R003C10.

Card Overview

Intelligent Stack (iStack) technology enables multiple stacking-capable devices to function as a logical device.

Before a stack is set up, each switch is an independent entity that has its own IP address and MAC address. You need to manage the switches separately. After a stack is set up, switches in the stack form a logical entity that can be managed and maintained using a single IP address. Stack technology improves forwarding performance and network reliability, and simplifies network management.

Switches can be connected as a stack using service ports or stack cards (ES5D00ETPC00).

The ES5D00ETPC00 stack card can be installed in a rear card slot of the switch models listed in Table 8-177.

Table 8-177 Applicable switch models

Card	Switch Model
ES5D00ETPC00	<ul style="list-style-type: none"> • S5700-24TP-SI-AC • S5700-24TP-SI-DC • S5700-48TP-SI-AC • S5700-48TP-SI-DC • S5700-24TP-PWR-SI • S5700-48TP-PWR-SI • S5700-28C-SI • S5700-52C-SI • S5700-28C-PWR-SI • S5700-52C-PWR-SI • S5700-28C-EI • S5700-52C-EI • S5700-28C-EI-24S • S5700-28C-PWR-EI • S5700-52C-PWR-EI • S5710-28C-LI • S5710-52C-LI • S5710-28C-PWR-LI • S5710-52C-PWR-LI

Figure 8-87 shows the appearance of the ES5D00ETPC00.

Figure 8-87 ES5D00ETPC00



Functions

Table 8-178 describes functions of the ES5D00ETPC00.

Table 8-178 Functions

Function	Description
Basic function	Provides two 12 Gbit/s electrical ports for stacking. The 12 Gbit/s electrical ports on multiple switches are connected using PCIe cables to set up a stack.
Topology	Switches in a stack can be connected in a chain or ring topology. A link failure in the chain topology causes the stack to split. In contrast, the ring topology changes into a chain topology upon a link failure so that services in the stack are not affected. Therefore, the ring topology is more reliable than the chain topology. Figure 8-88 and Figure 8-89 show the chain and ring topologies. NOTE When connecting stack cables, connect stack1 port of one switch to stack2 port of another switch.

Figure 8-88 Chain topology of a stack



Figure 8-89 Ring topology of a stack



Usage Constraints

NOTICE

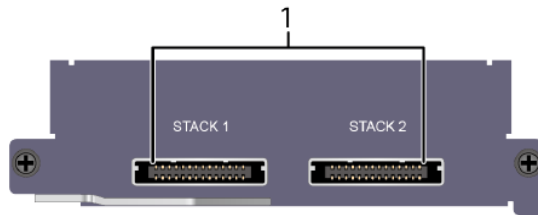
The following requirements must be met to set up a stack:

- All the member switches belong to the same series. The EI series and SI series cannot form a stack.
- All switches have stack cards installed and are connected using PCIe cables.
- The ES5D00ETPC00 is not hot swappable, but PCIe cables are hot swappable.

Port Description

Figure 8-90 shows ports on the ES5D00ETPC00.

Figure 8-90 Ports on the ES5D00ETPC00



1. Two stack electrical ports

Stack electrical port

The ES5D00ETPC00 provides two 12 Gbit/s electrical ports for stacking. The two 12 Gbit/s electrical ports must be used with 9.2 PCIe Cables. Table 8-179 describes attributes of the 12 Gbit/s electrical port.

Table 8-179 Attributes of a stack electrical port

Attribute	Description
Connector type	PCIe
Standards compliance	IEEE 802.3ae
Frame format	Ethernet_II, Ethernet_SAP, Ethernet_SNAP
Network protocol	IP

Technical Specifications

Table 8-180 lists technical specifications of the ES5D00ETPC00.

Table 8-180 Technical specifications

Item	Description
Physical specifications	<ul style="list-style-type: none"> • Dimensions (H x W x D): 43 mm x 143 mm x 126 mm (1.69 in. x 5.63 in. x 4.96 in.) • Weight: 0.2 kg (0.44 lb) • Maximum power consumption: 0.5 W

Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

Table 8-181 provides the card ordering information.

Table 8-181 Ordering information

Card Description	Card Name	Part Number
Ethernet Stack Interface Card (Including Stack Card, 100 cm Stack Cable)	ES5D001VST00	02319959
Ethernet Stack Interface Card (Including Stack Card, 300 cm Stack Cable)	ES5D2VS02000	02310QPL

8.29 ES5D00ETPB00 (Extended Rear Card)

Version Mapping

Table 8-182 lists the mapping between the ES5D00ETPB00 card and software versions.

Table 8-182 Version mapping

Card Model	Software Version
ES5D00ETPB00 NOTE After the display device command is executed, the PCB model of the card is displayed as CX22ETPB.	V100R005C01 to V200R005C03 NOTE This module is not supported in V200R003C02 or V200R003C10.

Card Overview

The ES5D00ETPB00 can be installed in a rear card slot of the switch models listed in Table 8-183.

Table 8-183 Applicable switch models

Card	Switch Model
ES5D00ETPB00	<ul style="list-style-type: none"> • S5700-28C-SI • S5700-52C-SI

Card	Switch Model
	<ul style="list-style-type: none"> • S5700-28C-PWR-SI • S5700-52C-PWR-SI • S5700-28C-EI • S5700-52C-EI • S5700-28C-EI-24S • S5700-28C-PWR-EI • S5700-52C-PWR-EI • S5710-28C-LI • S5710-52C-LI • S5710-28C-PWR-LI • S5710-52C-PWR-LI

Figure 8-91 shows the appearance of the ES5D00ETPB00.

Figure 8-91 ES5D00ETPB00



Functions

Table 8-184 describes functions of the ES5D00ETPB00.

Table 8-184 Functions

Function	Description
Basic function	The ES5D00ETPB00 extended rear card must be used together with the ES5D000X4S01/ES5D000G4S01/ES5D00G4SA01 front card to provide four GE SFP ports or four 10GE SFP+ ports.

Usage Constraints

NOTICE

An ES5D000X4S01/ES5D000G4S01/ES5D00G4SA01 front card must be used with an ES5D00ETPB00 rear card.

The ES5D00ETPB00 is not hot swappable.

Technical Specifications

Table 8-185 lists technical specifications of the ES5D00ETPB00.

Table 8-185 Technical specifications

Item	Description
Physical specifications	<ul style="list-style-type: none">• Dimensions (H x W x D): 43 mm x 143 mm x 126 mm (1.69 in. x 5.63 in. x 4.96 in.)• Weight: 0.2 kg (0.44 lb)• Maximum power consumption: 0.1 W

Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

Table 8-186 provides the ES5D00ETPB00 ordering information.

Table 8-186 Ordering information

Card Description	Card Name	Part Number
Extended channel card	ES5D00ETPB00	03020MLA

9 Cables

- 9.1 Ground Cable
- 9.2 PCIe Cables
- 9.3 Optical Fiber
- 9.4 Ethernet Cable
- 9.5 DC Power Cable (with OT and Cord End Terminals)
- 9.6 DC Power Cable (Quick-Connect Cord End Terminal)
- 9.7 2-Pin DC Power Cable (Phoenix Connector)
- 9.8 AC Power Cable
- 9.9 3-Pin AC Power Cable (Phoenix Connector)
- 9.10 Monitoring Port Cable (Phoenix Connector)
- 9.11 RPS1800 Power Cable
- 9.12 RPS Cable
- 9.13 Console Cable
- 9.14 Dedicated Stack Cable
- 9.15 Copper Cable
- 9.16 Lead-Acid Battery Temperature Sensor
- 9.17 Hybrid Cable

9.1 Ground Cable

Appearance and Structure

Figure 9-1 shows the appearance of a typical ground cable.

NOTE

Other types of ground cables are similar to the example shown in the figure, except for their cross-sectional area, size of the cable lugs, and cable length.

Figure 9-1 Appearance of a ground cable

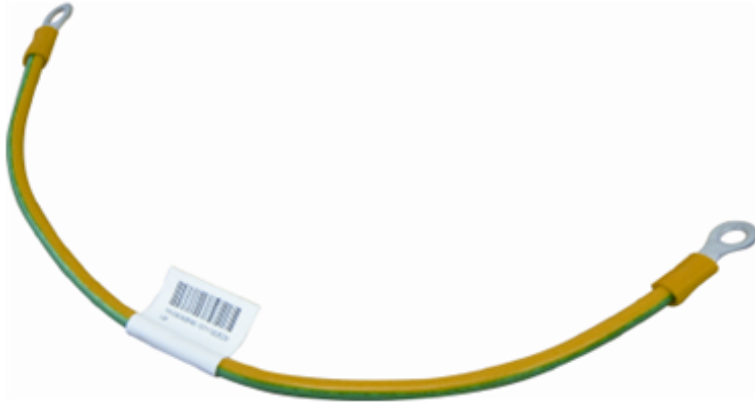
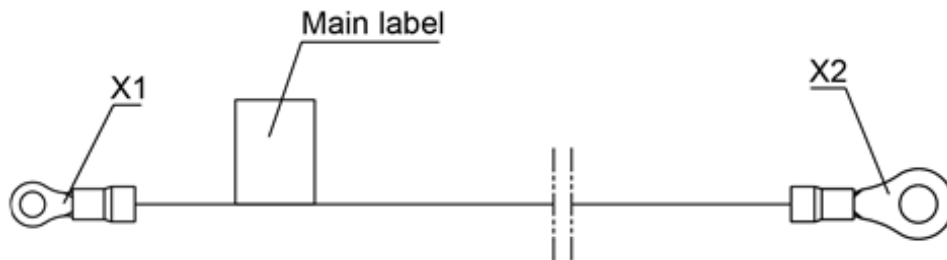


Figure 9-2 shows the structure of a ground cable.

Figure 9-2 Structure of a ground cable



Pin Assignments

Table 9-1 lists the pin assignments of a ground cable.

Table 9-1 Pin assignments of a ground cable

X1	X2	Wire Color	Conductor Cross-Sectional Area	Length
OT-4	OT-6	Green-yellow	4 mm ²	0.4 m

Connection

A ground cable grounds a device to protect it from lightning and electromagnetic interference. A ground cable is connected to a chassis in the following way:

- The OT-4 naked crimping connector connects to the ground point on the chassis.
- The OT-6 naked crimping connector connects to the ground point on the cabinet.

9.2 PCIe Cables

Appearance and Structure

The S5700 series switches can use PCIe cables as stack cables to connect stack ports on rear stack cards. Switches connected using stack cables form a logical switch to forward packets.

Figure 9-3 shows the appearance of a PCIe cable.

Figure 9-3 PCIe cable



NOTE

Both ends of a PCIe cable must be covered by an ESD cap.

Specifications

Table 9-2 Specifications of a PCIe cable

Attribute	Description	
Cable mode 1	1 m PCIe cable	3 m PCIe cable NOTE This cable is available in V200R002C00 and later versions.
Connector	PCIe	

Attribute	Description	
type		
Standards compliance	PCIe 8X	
Length	1.0 m	3.0 m
Applicable device models	<ul style="list-style-type: none"> • S5700-SI • S5700-EI • S5710-C-LI 	<ul style="list-style-type: none"> • V200R002C00: S5700-52C-EI and S5700-28C-EI-24S • V200R003C00 and later versions: <ul style="list-style-type: none"> – S5700-SI – S5700-EI

9.3 Optical Fiber

Active Optical Cable

An active optical cable (AOC) is an optical fiber with optical modules at both ends, making it easy to use.

Figure 9-4 SFP+ to SFP+ or SFP28 to SFP28 AOC cable



Figure 9-5 QSFP+ to QSFP+ or QSFP28 to QSFP28 AOC cable



Figure 9-6 QSFP+ to 4*SFP+ AOC cable



Table 9-3 lists the models and attributes of AOC cables.

Table 9-3 Attributes of AOC cables

Model	Length	Bend Radius	Connector Type	Part Number	Operating Temperature
SFP-10G-AOC 3M	3 m	30 mm	SFP+ connectors at both ends	02310QWG	0 °C to 70 °C
SFP-10G-AOC 10M	10 m	30 mm	SFP+ connectors at both ends	02310QWH	0 °C to 70 °C
QSFP-H40G-AOC10M	10 m	25 mm	QSFP+ connectors at both ends	02310SSH	0 °C to 70 °C
QSFP-4SFP10-AOC10M	10 m	25 mm	QSFP+ connector at one end and four SFP+ connectors at the other end	02310SSJ	0 °C to 70 °C
QSFP-100G-AOC-10M	10 m	25 mm	QSFP28 connectors at both ends	02311KNQ	0 °C to 70 °C

Model	Length	Bend Radius	Connector Type	Part Number	Operating Temperature
SFP-25G-AOC-3M	3 m	30 mm	SFP28 connectors at both ends	02311MPE	0 °C to 70 °C
SFP-25G-AOC-5M	5 m	30 mm	SFP28 connectors at both ends	02311MPD	0 °C to 70 °C
SFP-25G-AOC-7M	7 m	30 mm	SFP28 connectors at both ends	02311MPC	0 °C to 70 °C
SFP-25G-AOC-10M	10 m	30 mm	SFP28 connectors at both ends	02311KNT	0 °C to 70 °C

Fiber Jumper

A fiber jumper consists of one or more fibers of a certain length and the optical connectors at both ends. A fiber jumper connects an optical module to a fiber terminal box.

NOTE

- The MPO-MPO and MPO-2*MPO fibers have similar appearances except for the number of MPO connectors at the other end. The following figures show an MPO-MPO fiber for example.
- The MPO-4*DLC and MPO-10*DLC fibers have similar appearances except for the number of DLC connectors at the other end.
- The MPO-MPO fibers for S series switches use type B connectors (key Up/key Up).

Figure 9-7 shows a single-mode LC/PC fiber jumper.

Figure 9-7 Single-mode LC/PC fiber jumper



Figure 9-8 shows a multimode LC/PC fiber jumper.

Figure 9-8 Multimode LC/PC fiber jumper



Figure 9-9 shows a single-mode SC/PC fiber jumper.

Figure 9-9 Single-mode SC/PC fiber jumper



Figure 9-10 shows an MPO-MPO fiber jumper.

Figure 9-10 MPO-MPO fiber jumper



Figure 9-11 shows an MPO-4*DLC fiber jumper.

Figure 9-11 MPO-4*DLC fiber jumper



Figure 9-12 shows an MPO-10*DLC fiber jumper.

Figure 9-12 MPO-10*DLC fiber jumper



Comply with the following rules when selecting fiber jumpers:

1. Determine the length of fiber jumpers based on the onsite cabling distance.
2. Determine the fiber type based on the optical module type.
 - Use a multimode fiber jumper for a multimode optical module.
 - Use a single-mode fiber jumper for a single-mode optical module.
3. Determine the optical connector type based on the interface type.
Ensure that the optical connector at each end of a fiber jumper is the same type as the interface to which it will be connected.

Figure 9-13 shows the structure of an 8-strand MPO-MPO fiber jumper.

Figure 9-13 Structure of an 8-strand MPO-MPO fiber jumper

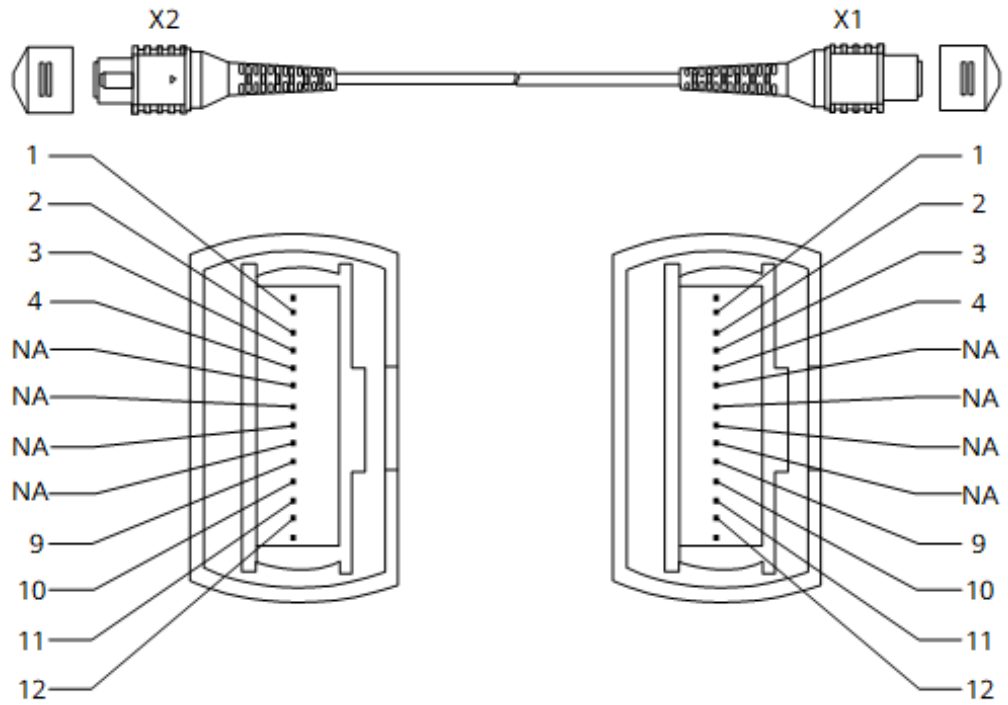


Figure 9-14 shows the structure of a 12-strand MPO-MPO fiber jumper.

Figure 9-14 Structure of a 12-strand MPO-MPO fiber jumper

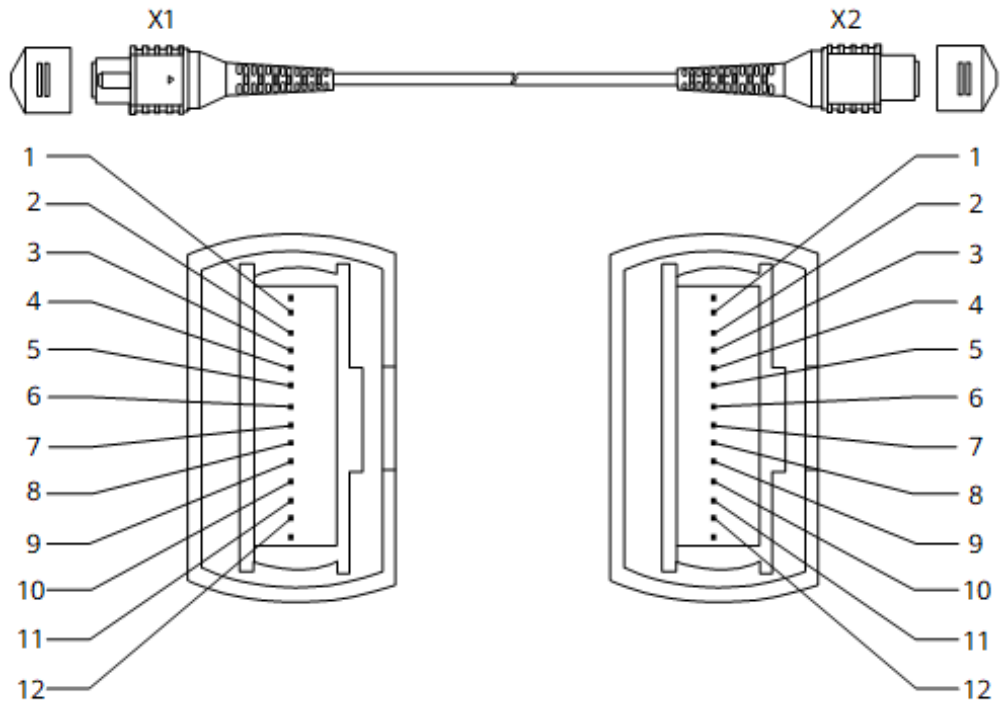


Figure 9-15 shows the structure of a 24-strand MPO-MPO fiber jumper.

Figure 9-15 Structure of a 24-strand MPO-MPO fiber jumper

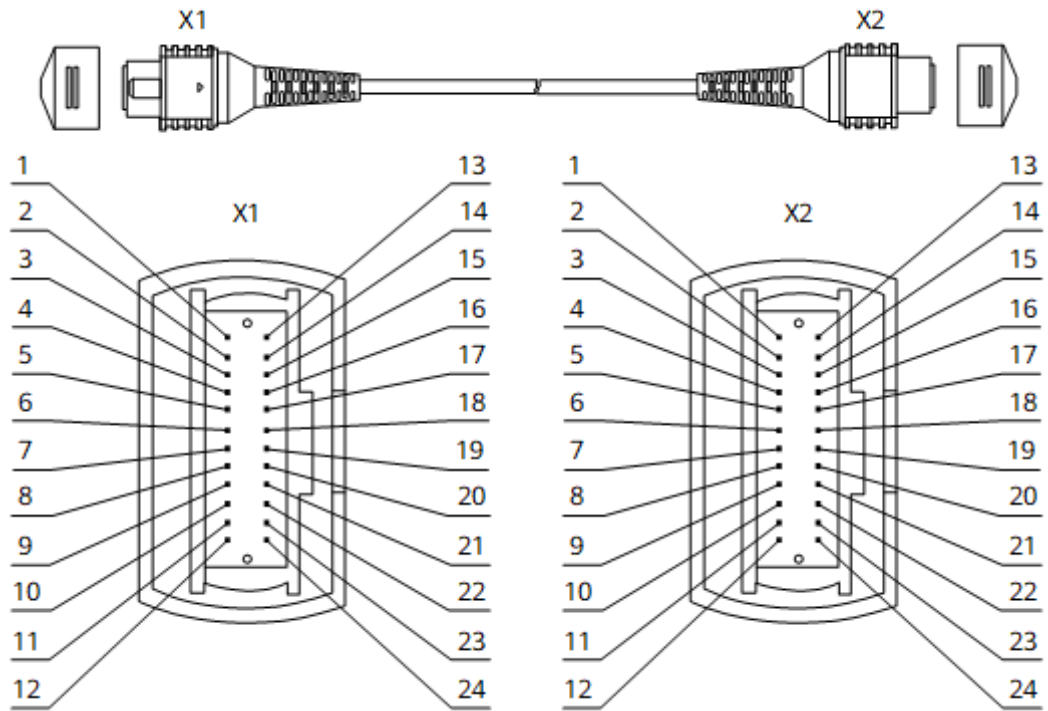


Figure 9-16 shows the structure of an MPO-4*DLC fiber jumper.

Figure 9-16 Structure of an MPO-4*DLC fiber jumper

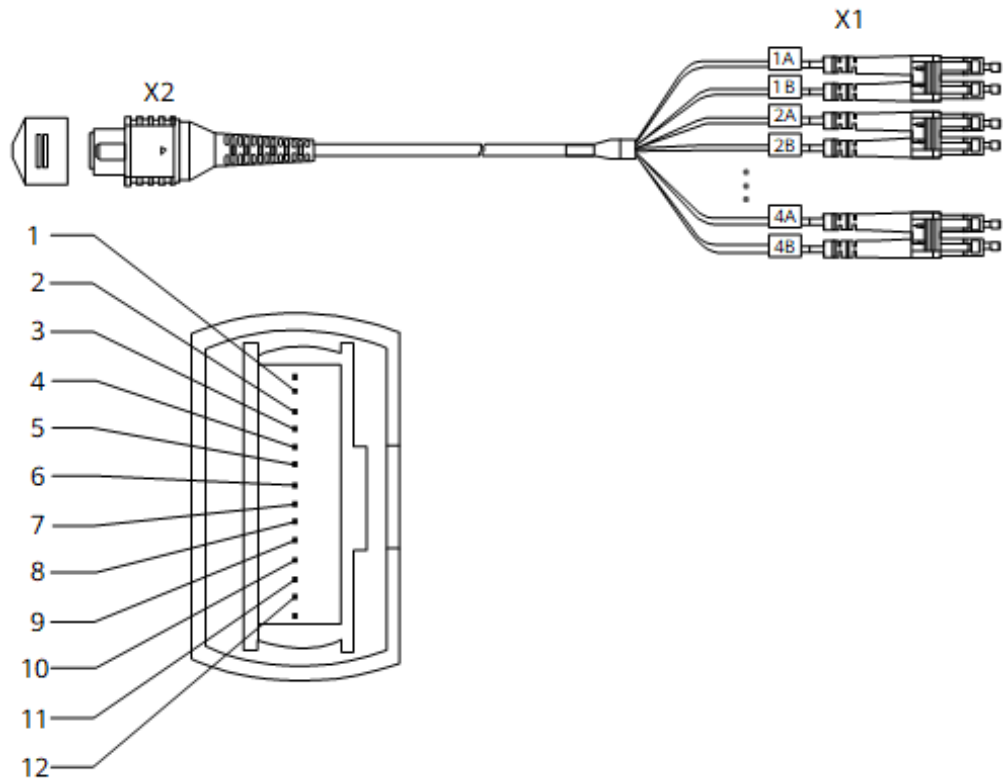


Figure 9-17 shows the structure of an MPO-2*MPO fiber jumper.

Figure 9-17 Structure of an MPO-2*MPO fiber jumper

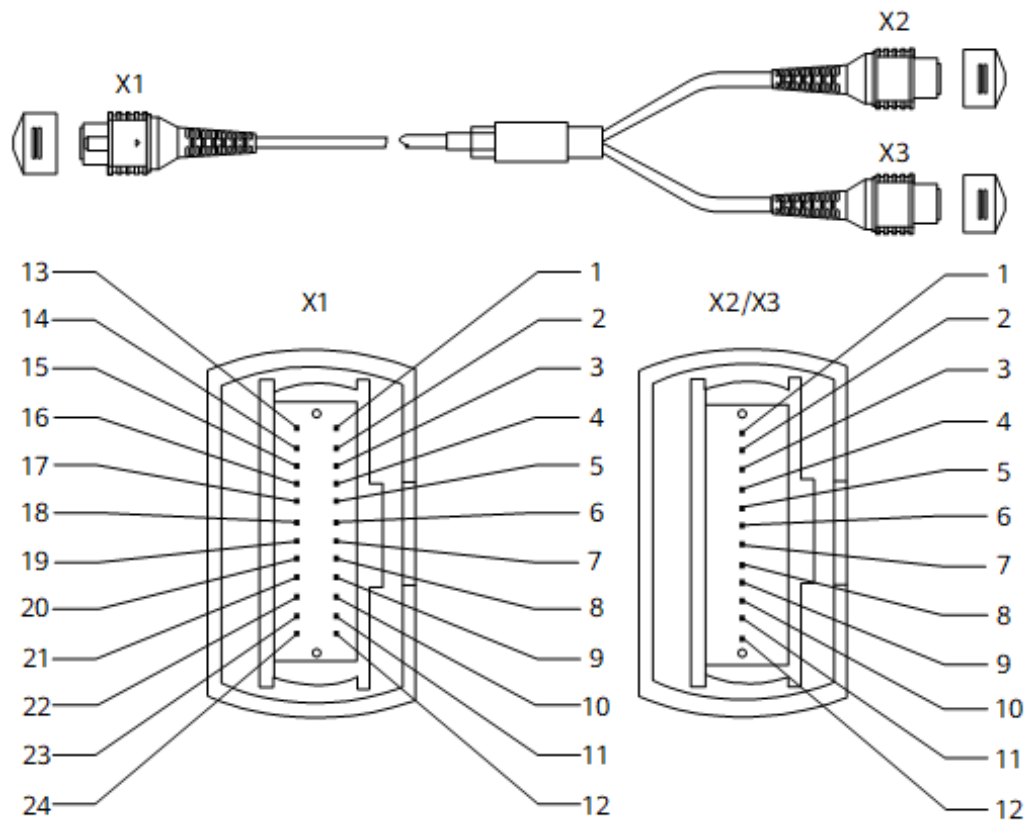


Figure 9-18 shows the structure of an MPO-10*DLC fiber jumper.

Figure 9-18 Structure of an MPO-10*DLC fiber jumper

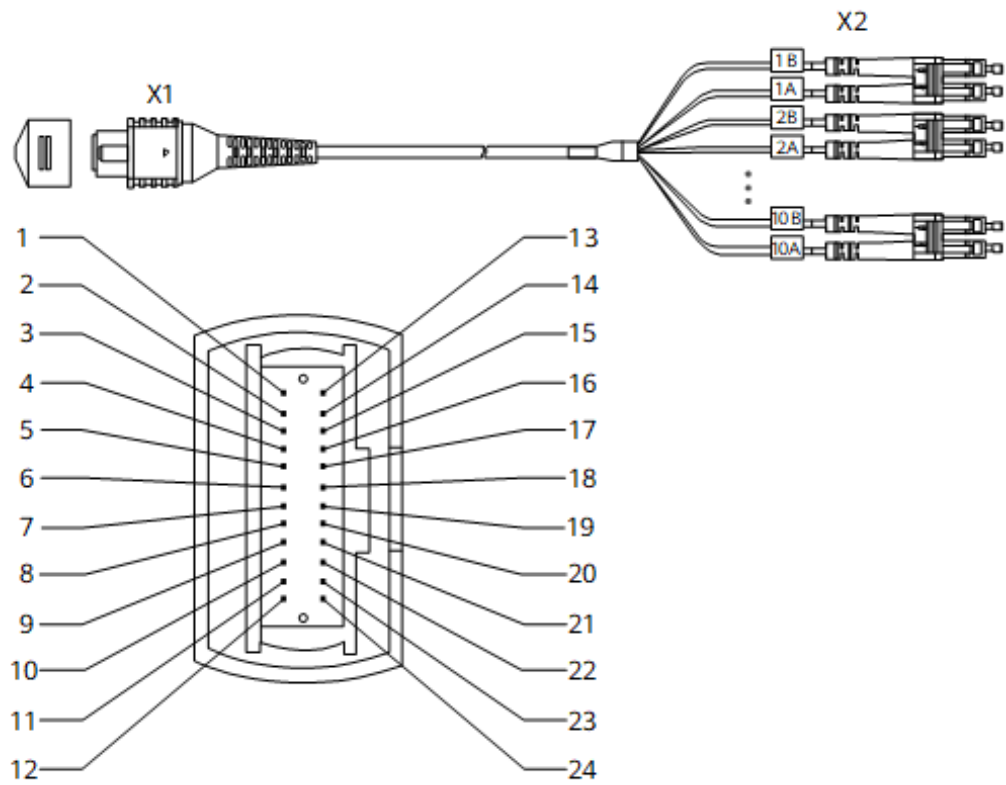


Table 9-4 lists the pin assignments of an 8-strand MPO-MPO fiber jumper.

Table 9-4 Pin assignments of an 8-strand MPO-MPO fiber jumper

X1 Pin	X2 Pin
1	12
2	11
3	10
4	9
NA	NA
NA	NA
NA	NA
NA	NA
9	4
10	3
11	2
12	1

Table 9-5 lists the pin assignments of a 12-strand MPO-MPO fiber jumper.

Table 9-5 Pin assignments of a 12-strand MPO-MPO fiber jumper

X1 Pin	X2 Pin
1	12
2	11
3	10
4	9
5	8
6	7
7	6
8	5
9	4
10	3
11	2
12	1

Table 9-6 lists the pin assignments of a 24-strand MPO-MPO fiber jumper.

Table 9-6 Pin assignments of a 24-strand MPO-MPO fiber jumper

X1 Pin	X2 Pin	X1 Pin	X2 Pin
1	24	13	12
2	23	14	11
3	22	15	10
4	21	16	9
5	20	17	8
6	19	18	7
7	18	19	6
8	17	20	5
9	16	21	4
10	15	22	3
11	14	23	2

X1 Pin	X2 Pin	X1 Pin	X2 Pin
12	13	24	1

Table 9-7 lists the pin assignments of an MPO-4*DLC fiber jumper.

Table 9-7 Pin assignments of an MPO-4*DLC fiber jumper

X2 Pin	X1 Pin
1	1A
2	2A
3	3A
4	4A
9	4B
10	3B
11	2B
12	1B

Table 9-8 lists the pin assignments of an MPO-2*MPO fiber jumper.

Table 9-8 Pin assignments of an MPO-2*MPO fiber jumper

X1 Pin	X2 Pin	X3 Pin
2	12	NA
3	11	NA
4	10	NA
5	9	NA
7	NA	12
8	NA	11
9	NA	10
10	NA	9
14	1	NA
15	2	NA
16	3	NA
17	4	NA
19	NA	1

X1 Pin	X2 Pin	X3 Pin
20	NA	2
21	NA	3
22	NA	4

Table 9-9 lists the pin assignments of an MPO-10*DLC fiber jumper.

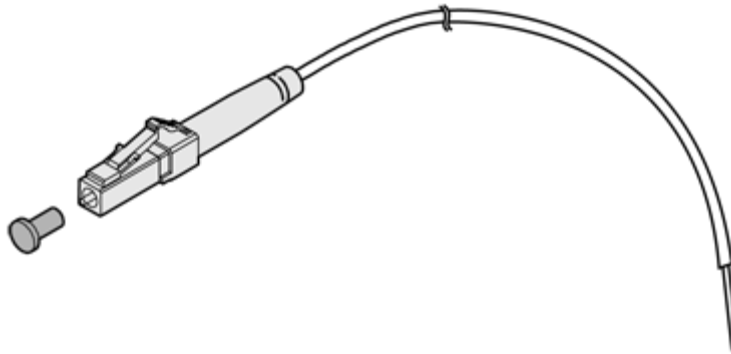
Table 9-9 Pin assignments of an MPO-10*DLC fiber jumper

X1 Pin	X2 Pin	X1 Pin	X2 Pin
2	1A	14	1B
3	2A	15	2B
4	3A	16	3B
5	4A	17	4B
6	5A	18	5B
7	6A	19	6B
8	7A	20	7B
9	8A	21	8B
10	9A	22	9B
11	10A	23	10B

Fiber Pigtail

A fiber pigtail is an optical fiber that has an optical connector on one end and a piece of exposed fiber at the other end. The exposed fiber can be fused to another optical fiber. Fiber pigtails are commonly used to connect optical fibers to optical modules in fiber terminal boxes (couplers and jumpers are also used). Figure 9-19 shows the structure of a fiber pigtail.

Figure 9-19 Structure of a fiber pigtail



Fiber pigtails are classified into single-mode and multimode fiber pigtails and are used for short-distance connections.

Optical Fiber, Optical Connector, and Fiber Adapter

Optical Fibers

Optical fibers are classified into single-mode fibers and multimode fibers.

- Single-mode fibers have a diameter of 5-10 μm and transmit laser in one mode under a specified wavelength. These fibers support a wide frequency band and a large transmission capacity, so they are used for long-distance transmission. Most single-mode fibers are yellow, as shown in Figure 9-7.
- Multimode fibers have a diameter of 50 μm or 62.5 μm and transmit laser light in multiple modes under a specified wavelength. These fibers have a lower transmission capacity than single-mode fibers and are used for short-distance transmission. Modal dispersion occurs during transmission over multimode fibers.

In the latest cabling infrastructure of ISO/IEC 11801, multimode fibers are classified into four categories: OM1, OM2, OM3, and OM4.

- OM1: traditional 62.5/125 μm multimode fibers. OM1 fibers have a large core diameter and numerical aperture, and provide high light gathering ability and bending resistance.
- OM2: traditional 50/125 μm multimode fibers. OM2 fibers have a small core diameter and numerical aperture. Compared with OM1 fibers, OM2 fibers provide higher bandwidth because they significantly reduce the modal dispersion. When transmitting data at 1 Gbit/s with 850 nm wavelength, OM1 and OM2 fibers support maximum link lengths of 220 m and 550 m, respectively. OM1 and OM2 fibers can provide sufficient bandwidth within a distance of 300 m. Generally, OM1 and OM2 fibers are orange, as shown in Figure 9-8.
- OM3: new-generation multimode fibers, with longer transmission distances than OM1 and OM2 fibers.
- OM4: laser optimized multimode fibers with 50 μm core diameter. OM4 is an improvement to OM3 and only increases the modal bandwidth. OM4 fibers provide 4700 MHz*km of modal bandwidth, whereas OM3 fibers provide only 2000 MHz*km of modal bandwidth. Generally, OM3 and OM4 fibers are light green. You can identify OM3 and OM4 fibers by their labels or printed marks.

MPO fibers are used for 40G and 100G optical modules. An MPO fiber consists of multiple multi-mode fiber strands, and each multi-mode fiber strand provides one laser transmission channel. Some fiber suppliers produce 8-strand MPO optical fibers, while some suppliers produce 12-strand or 24-strand MPO fibers.

- A 40G optical module uses four channels to transmit laser and four channels to receive laser. That is, a total of eight channels are required for a 40G optical module. 8-strand and 12-strand MPO fibers use the same definition of fiber channels. Therefore, they are equivalent in functionality when connecting to 40G optical modules.
- When 100G optical modules are used, choose MPO fibers according to the following rules:
 - For CFP optical modules, choose 24-strand fibers for the CFP-100G-SR10 module and 8-strand or 12-strand fibers for other modules.
 - Choose 8-strand or 12-strand fibers for QSFP28 modules.

Optical Connector

Optical connectors are used to connect optical fibers of the same type. Table 9-10 lists common optical connectors.

Table 9-10 Common optical connectors







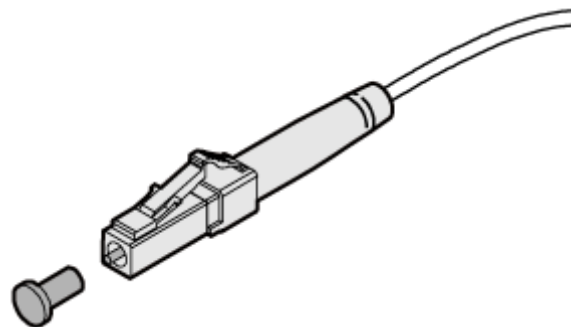
Connect or Type	Optical Connector			
Square connector	SC/PC connector 	LC/PC connector 	MTRJ/PC connector 	MPO connector 
Round connector	FC/PC connector 	ST/PC connector 	-	-

Figure 9-20 shows an LC/PC optical connector.

Figure 9-20 LC/PC optical connector



NOTICE

When connecting or removing an LC/PC optical connector, align the connector with the optical port and do not rotate the fiber. Pay attention to the following points:

- To connect a fiber, align the optical connector with the optical port and gently insert the optical fiber into the port.
- To remove a fiber, press the clip on the connector and pull the fiber out.

Fiber Adapter

A fiber adapter (also called a flange) is a fiber connection component. Two fiber connectors need to be connected using a fiber adapter. Fiber adapters are widely used in optical distribution frames (ODFs), fiber transmission equipment, and optical instruments.

9.4 Ethernet Cable

Types of Ethernet Cables

An Ethernet cable connects a maintenance terminal to the console port on the device for local or remote maintenance.

Ethernet cables are classified into straight-through cables and crossover cables.

- Straight-through cable: The twisted pairs in the RJ45 connectors at both ends are crimped in the same sequence. A straight-through cable connects two devices of different types, for example, a PC and a switch.
- Crossover cable: The twisted pairs in the RJ45 connectors at two ends are crimped in different sequences. A crossover cable connects two devices or interfaces of the same type, for example, two PCs.

Crossover and straight cables only differ in wire sequences, and function the same when transmitting data.

Huawei switches support both straight-through and crossover cables and their ports are adaptive to the cable types.

Use shielded Ethernet cables when switches complying with EN 50121-4 are used in environments that meet EN 50121-4 requirements.

Appearance and Structure

NOTE

The straight-through cable and the crossover cable have the same appearance and use the RJ45 connector.

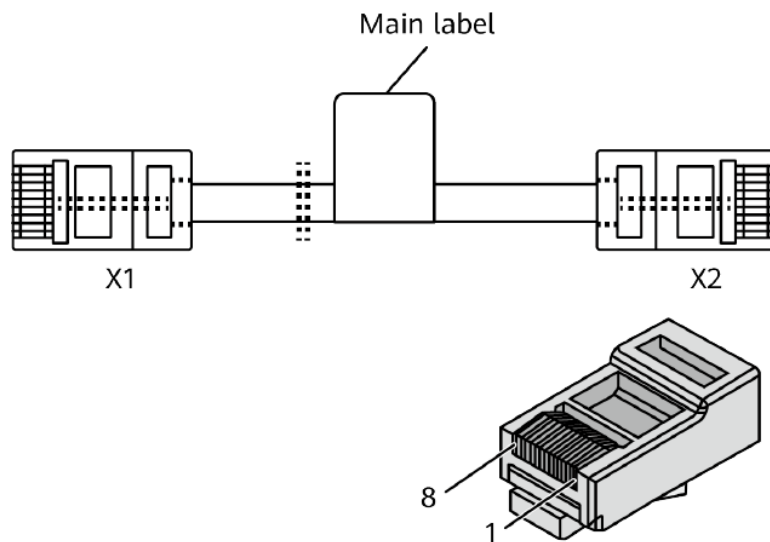
Figure 9-21 shows the appearance of an Ethernet cable.

Figure 9-21 Appearance of an Ethernet cable



Figure 9-22 shows the structure of an Ethernet cable.

Figure 9-22 Structure of an Ethernet cable



Pin Assignments

Table 9-11 lists pin assignments of a straight-through cable.

Table 9-11 Pin assignments of a straight-through cable

Connector X1	Connector X2	Color	Relationship
X1.2	X2.2	Orange	Twisted pair
X1.1	X2.1	White/Orange	
X1.6	X2.6	Green	Twisted pair
X1.3	X2.3	White/Green	
X1.4	X2.4	Blue	Twisted pair
X1.5	X2.5	White/Blue	
X1.8	X2.8	Brown	Twisted pair
X1.7	X2.7	White/Brown	

Table 9-12 lists pin assignments of a crossover cable.

Table 9-12 Pin assignments of a crossover cable

Connector X1	Connector X2	Color	Relationship
X1.6	X2.2	Orange	Twisted pair
X1.3	X2.1	White/Orange	
X1.2	X2.6	Green	Twisted pair
X1.1	X2.3	White/Green	
X1.4	X2.4	Blue	Twisted pair
X1.5	X2.5	White/Blue	
X1.8	X2.8	Brown	Twisted pair
X1.7	X2.7	White/Brown	

 NOTE

To achieve the best electrical transmission performance, ensure that the wires connected to pins 1 and 2 and to pins 3 and 6 are twisted pairs.

9.5 DC Power Cable (with OT and Cord End Terminals)

Types of DC Power Cables

DC power cables include a -48 V power return cable and a -48 V power cable. The -48 V power return cable is connected to a terminal marked RTN (+), and the -48 V power cable is connected to a terminal marked NEG (-).

Appearance and Structure

Figure 9-23 and Figure 9-24 show the appearance and structure of the -48 V power return cable and -48 V power cable.

Figure 9-23 Appearance of a -48 V power return cable



Figure 9-24 Appearance of a -48 V power cable



NOTE

A -48 V power return cable is black and is connected to the RTN(+) terminal of the DC power supply. A -48 V power cable is blue and is connected to the NEG(-) terminal of the DC power supply.

Connection

A DC power cable (with OT and cord end terminals) is connected to a DC power module with OT terminals as follows:

- The OT terminal is connected to the input port on the DC power module of the device.
- The cord end terminal is connected to an external power module.

9.6 DC Power Cable (Quick-Connect Cord End Terminal)

Appearance and Structure

DC power cables consist of the power cable for a 350 W/650 W DC power module and the power cable for a 1000 W DC power module.

Figure 9-25 shows the appearance of the power cable for a 350 W/650 W DC power module.

Figure 9-25 Appearance of the power cable for a 350 W/650 W DC power module



Figure 9-26 shows the structure of the power cable for a 350 W/650 W DC power module.

Figure 9-26 Structure of the power cable for a 350 W/650 W DC power module

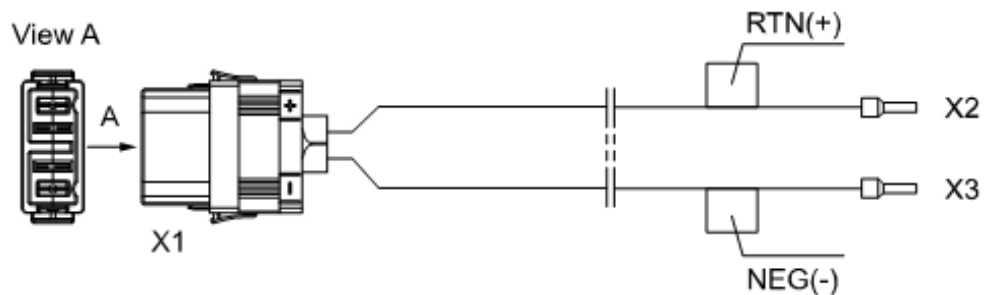


Figure 9-27 shows the appearance of the power cable for a 1000 W DC power module.

Figure 9-27 Appearance of the power cable for a 1000 W DC power module

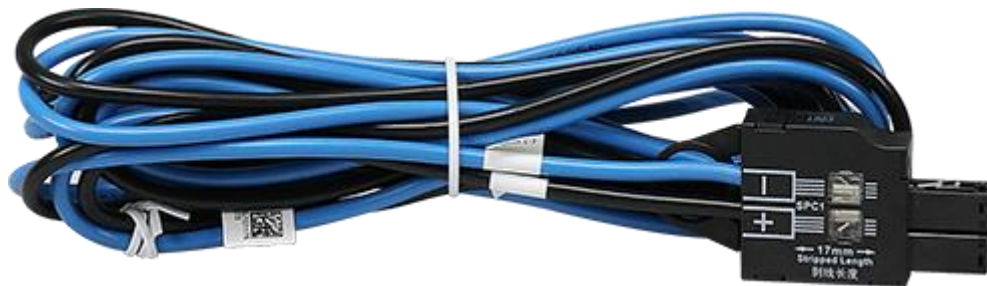
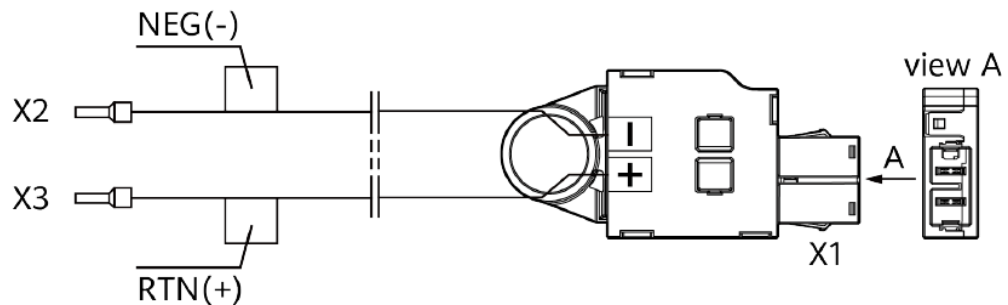


Figure 9-28 shows the structure of the power cable for a 1000 W DC power module.

Figure 9-28 Structure of the power cable for a 1000 W DC power module



Pin Assignments

Table 9-13 lists the pin assignments of the power cable for a 350 W/650 W DC power module.

Table 9-13 Pin assignments of the power cable for a 350 W/650 W DC power module

X1	X2	X3	Length	Conductor Cross-Sectional Area
2 female	Cord end terminal 4 ² gray	Cord end terminal 4 ² gray	3 m	3.332 mm ² (12AWG)

Table 9-14 lists the pin assignments of the power cable for a 1000 W DC power module.

Table 9-14 Pin assignments of the power cable for a 1000 W DC power module

X1	X2	X3	Length	Conductor Cross-Sectional Area
2 female	Cord end terminal 4 ² gray	Cord end terminal 4 ² gray	3 m	4 mm ² (14AWG)

Connection

A DC power cable connects to the DC power module of the device:

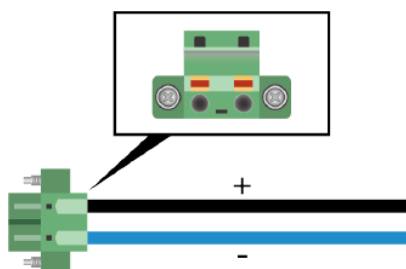
- X1 connector connects to the input port on the DC power module.
- X2/X3 cord end terminal connects to an external power module.

9.7 2-Pin DC Power Cable (Phoenix Connector)

Appearance and Structure

Figure 9-29 shows the appearance and structure of the 2-pin DC power cable and the Phoenix connector.

Figure 9-29 Structure of a 2-pin DC power cable and Phoenix connector



Specifications

Table 9-15 lists the specifications of the 2-pin DC power cable.

Table 9-15 Specifications of a 2-pin DC power cable

Minimum Conductor Cross-Sectional Area (for the Power Cable Delivered with the Switch)	Maximum Conductor Cross-Sectional Area
0.75 mm ² or 18 AWG	3 mm ² or 12 AWG

Connection

One end of the 2-pin DC power cable is used with the Phoenix connector and connected to the DC input port of the S5720I-SI. The other end needs to be made onsite. You can make the power cables according to site requirements and connect the cables to the DC power supply system.

9.8 AC Power Cable

Appearance and Structure

Figure 9-30 C13 straight female to PI straight male AC power cable (used in China)



Figure 9-31 C7 straight female to PG curving male AC power cable (used in Britain)



Figure 9-32 C13 straight female to C14 straight male AC power cable (China)



Figure 9-33 Power adapter (audio connector to C7 straight female)



NOTE

The AC power cables used in different countries and regions have different connector types. Figure 9-30 and Figure 9-31 use Chinese and Britain AC power cables as examples. The power cable and plug delivered with the chassis can only be used on this chassis, and cannot be used on other devices.

Types of AC Power Cables

Select AC power cables based on the power supply system in your equipment room. Standard and country-specific AC power cables can be directly connected to power modules.

- Standard power cables: used to transmit power from a PDU. Figure 9-34 shows the structure of a C14 straight male to C13 straight female AC power cable.
- Country-specific power cables: used to transmit power from a country-specific power strip. The cables are delivered in compliance with standards of the destination country or region. For example, PI straight male to C13 straight female AC power cable (Figure 9-35) is used in China.
- The AC power cables connected to a power distribution box must have cord end terminals. Figure 9-36 shows the structure of a cord end to C13 straight female AC power cable.

Figure 9-34 Structure of a C14 straight male to C13 straight female AC power cable

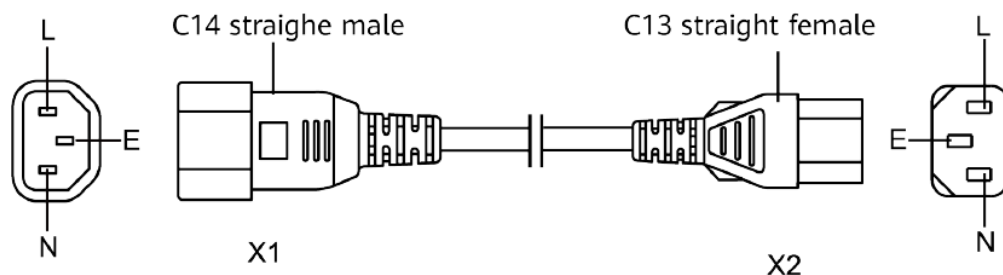


Figure 9-35 Structure of a PI straight male to C13 straight female AC power cable (used in China)

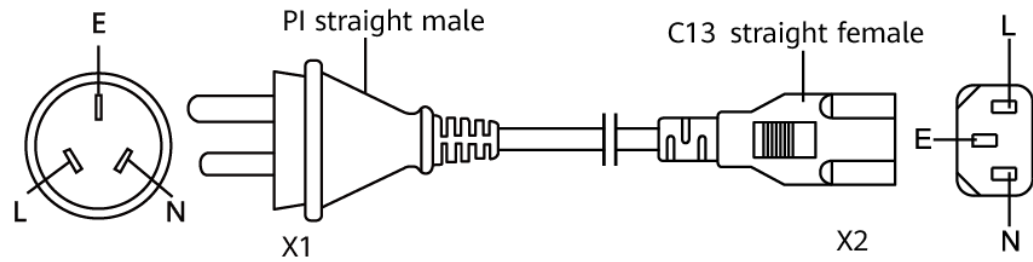
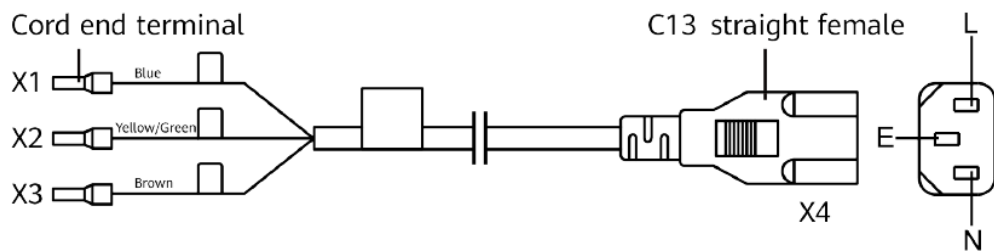


Figure 9-36 Structure of a Cord end to C13 straight female AC power cable (used in China)



Connection

Table 9-16 shows connections of various AC power cables.

Table 9-16 Connections of AC power cables

Power Cable Type	Connector Type and Connection	
C14 straight male to C13 straight female AC power cable	C14 straight male connector: connected to a PDU	C13 straight female connector: connected to the AC power socket on the switch.
PI straight male to C13 straight female AC power cable (used in China)	PI straight male connector: connected to a country-specific power strip	The current rating of the power cable is 10 A.
Cord end to C13 straight female AC power cable (used in China)	Cord end terminal: connected to a power distribution box or power distribution frame. Connect the brown wire to the L terminal,	

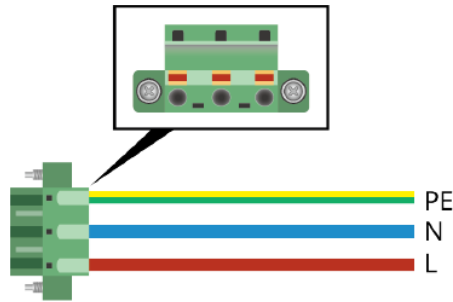
Power Cable Type	Connector Type and Connection	
	blue wire to the N terminal, and the yellow/green wire to the ground terminal. Different AC power cables may be delivered in compliance with local regulations or customer requirements.	
C7 straight female to PG curving male AC power cable (used in Britain)	PG curving male connector: connected to a country-specific power strip	C7 straight female connector: connected to the power input port on the power adapter. NOTE The power adapters of the S5735-L8P4S-Q A1, S5731-L-RU, and S5731S-L-RU use C7 straight female AC power cables.

9.9 3-Pin AC Power Cable (Phoenix Connector)

Appearance and Structure

Figure 9-37 shows the appearance and structure of the 3-pin AC power cable and the Phoenix connector.

Figure 9-37 Structure of a 3-pin AC power cable and Phoenix connector



⚠ DANGER

There is a risk of electric shock when handling the Phoenix connector. To avoid electric shock, ensure that wires are connected in the following sequences: red wire (live wire) connects to L; blue wire (neutral wire) connects to N; yellow/green wire (ground cable) connects to PE. In special circumstances, comply with local regulations or customer requirements.

The power cable and Phoenix connector need to be connected onsite. Ensure that there are no exposed metal parts after the power cable is connected to the Phoenix connector.

Specifications

Table 9-17 lists the specifications of the 3-pin AC power cable.

Table 9-17 Specifications of a 3-pin AC power cable

Minimum Conductor Cross-Sectional Area (for the Power Cable Delivered with the Switch)	Maximum Conductor Cross-Sectional Area
0.75 mm ² or 18 AWG	3 mm ² or 12 AWG
<p>NOTE</p> <p>The minimum conductor cross-sectional area for the S5720I-28X-PWH-SI-AC series switches is 1.25 mm² or 16 AWG.</p>	

Connection

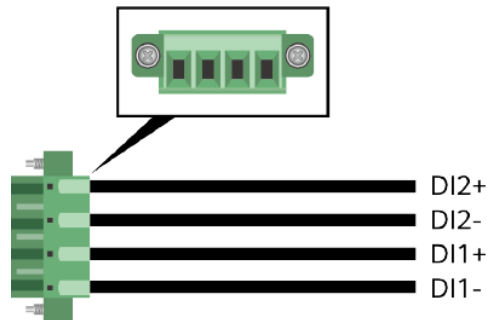
One end of the 3-pin AC power cable is used with the Phoenix connector and connected to the AC input port of the S5720I-SI. The other end needs to be made onsite. You can make the power cables according to site requirements and connect the cables to the AC power supply system.

9.10 Monitoring Port Cable (Phoenix Connector)

Appearance and Structure

Figure 9-38 shows the structure of the monitoring port cable and the Phoenix connector.

Figure 9-38 Structure of a monitoring port cable and Phoenix connector



The monitoring ports provide two input lines, which can be used to monitor two types of devices that support output voltage monitoring. DI1+ is the input high level of line 1 and DI1- is the input low level of line 1. Similarly, DI2+ is the input high level of line 2 and DI2- is the input low level of line 2.

Specifications

The monitoring port must be used with the Phoenix connector (included in the installation accessory package) and the monitoring port cable (purchased separately). The monitoring port cable must be a conductive cable. Table 9-18 lists the specifications of the monitoring port cable.

Table 9-18 Specifications of a monitoring port cable

Minimum Conductor Cross-Sectional Area	Maximum Conductor Cross-Sectional Area
0.08 mm ² or 28 AWG	1.5 mm ² or 16 AWG

Connection

One end of the monitoring port cable is used with the Phoenix connector and connected to the monitoring port of the S5720I-SI. The other end needs to be made onsite. You can make the power cables according to site requirements and connect the cables to external devices to be monitored.

9.11 RPS1800 Power Cable

Appearance and Structure

Figure 9-39 shows the appearance of the RPS1800 AC power cable.

Figure 9-39 Appearance of the RPS1800 AC power cable



NOTE

The PRS AC power cable used by the RPS1800 has the same appearance as a common AC power cable. However, the RPS AC power cable and common AC power cable connect to different connectors.

Connection

An RPS1800 AC power cable connects to the following:

- An AC power input port on the RPS1800 chassis
- The mains supply

9.12 RPS Cable

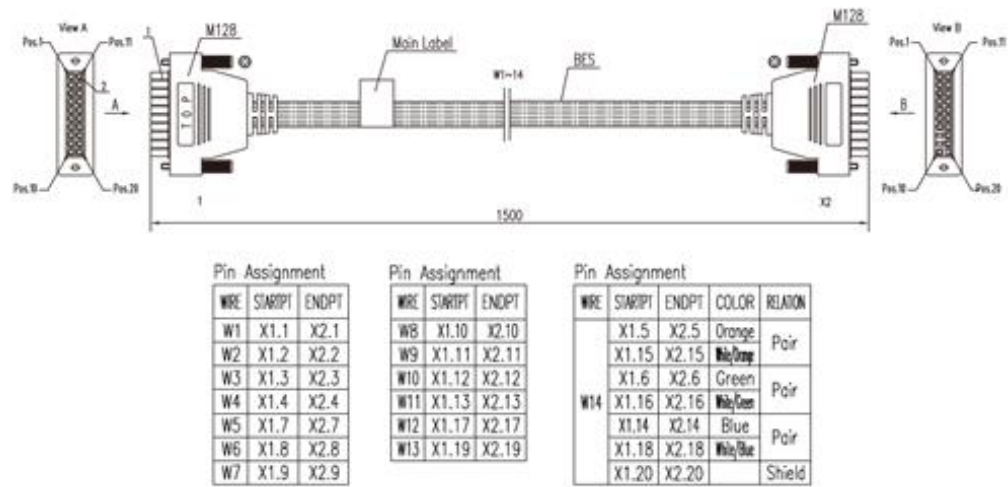
Appearance and Structure

Figure 9-40 and Figure 9-41 show the appearance and structure of an RPS cable.

Figure 9-40 Appearance of an RPS cable



Figure 9-41 Structure of an RPS cable



Connection

An RPS cable connects an RPS1800 power module to a switch so that the RPS1800 provides power to the switch. An RPS power cable connects to the following:

- A DC power output port on the RPS1800 chassis
- A switch to which power is provided

9.13 Console Cable

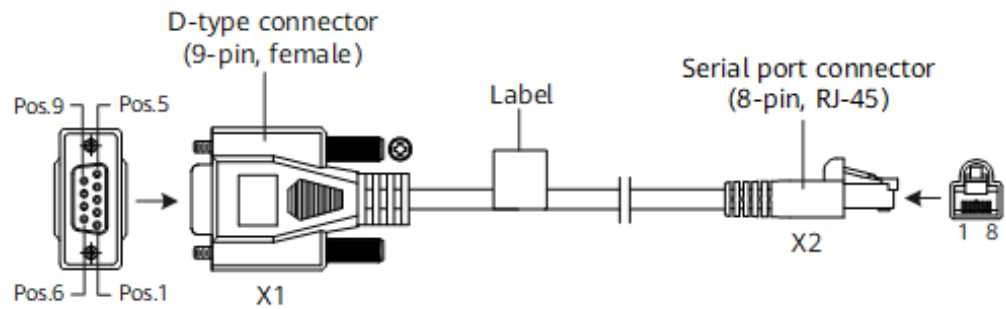
Appearance and Structure

Figure 9-42 and Figure 9-43 show the appearance and structure of a console cable.

Figure 9-42 Appearance of a console cable



Figure 9-43 Structure of a console cable



Pin Assignments

Table 9-19 lists the pin assignments of console cable connectors.

Table 9-19 Pin assignments of console cable connectors

Connector	X1 (DB9)	X2 (RJ45)
Pin assignment	2	3
	3	6
	5	5

Connection

A console cable connects the console port of the device to the serial port of an operation terminal to transmit configuration data. A shielded cable or an unshielded cable can be used according to the onsite situation.

A console cable connects the device and terminal as follows:

- The 8-pin RJ45 connector is inserted into the console port of the device.
- The DB9 connector is inserted into the terminal serial port.

9.14 Dedicated Stack Cable

Types of Dedicated Stack Cables

Table 9-20 lists the applicable dedicated stack cables.

Table 9-20 Dedicated stack cables

Model	Length	Electrical Attribute	Bend Radius	Connector Type	Part Number
-------	--------	----------------------	-------------	----------------	-------------

Model	Length	Electrical Attribute	Bend Radius	Connector Type	Part Number
SFP-10G-CU0 M5	0.5 m	Passive	25 mm	SFP+ to SFP+	02311VGK
SFP-10G-CU1 M5	1.5 m	Passive	25 mm	SFP+ to SFP+	02311VGN
QSFP-100G-CU 2M	2 m	Passive	45 mm	QSFP28 to QSFP28	02313HVK

Appearance and Structure

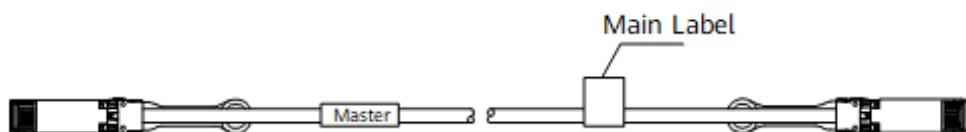
Figure 9-44 Dedicated stack cable appearance



The two ends of a dedicated stack cable are the master end with the Master tag and the slave end without any tag. The device connected to the master end of a dedicated stack cable assumes the master role and the device connected to the slave end assumes the slave role only after you perform operations as required.

Figure 9-45 shows the structure of a dedicated stack cable.

Figure 9-45 Dedicated stack cable structure



Stack Setup

Dedicated stack cables can only be used to connect the same sub-series switch models, enabling them to set up a stack without manual configuration.

Before setting up a stack, confirm the stack connection mode supported by the member switches, as well as the hardware and software requirements. For details, see "Determining the Stack Connection Support and Mode" under "Typical Stack Configuration of Fixed Switches" in the *Typical Configuration Examples*.

9.15 Copper Cable

Types of Copper Cables

Table 9-21 shows the types of copper cables.

Table 9-21 Types of copper cables

Model	Length	Electrical attribute	Bend Radius	Connector Type	Part Number
SFP-10G-CU1M	1 m	Passive	25 mm	SFP+ to SFP+	02310MUN
SFP-10G-CU2M	2 m	Passive	25 mm	SFP+ to SFP+	02311JFJ
SFP-10G-CU3M	3 m	Passive	25 mm	SFP+ to SFP+	02310MUP
SFP-10G-CU5M	5 m	Passive	30 mm	SFP+ to SFP+	02310QPR
SFP-10G-AC10M	10 m	Active	25 mm	SFP+ to SFP+	02310MUQ
QSFP-40G-CU1M	1 m	Passive	35 mm	QSFP+ to QSFP+	02310MUG
QSFP-40G-CU3M	3 m	Passive	40 mm	QSFP+ to QSFP+	02310MUH
QSFP-40G-CU5M	5 m	Passive	45 mm	QSFP+ to QSFP+	02310MUJ
QSFP-4SFP10G-CU1M	1 m	Passive	25 mm	QSFP+ to 4*SFP+	02310MUK
QSFP-4SFP10G-CU3M	3 m	Passive	25 mm	QSFP+ to 4*SFP+	02310MUL
QSFP-4SFP10G-CU5M	5 m	Passive	30 mm	QSFP+ to 4*SFP+	02310MUM
QSFP28-100G-CU1M	1 m	Passive	70 mm	QSFP28 to QSFP28	02311KNW

Model	Length	Electrical attribute	Bend Radius	Connector Type	Part Number
QSFP28-100G-CU3M	3 m	Passive	70 mm	QSFP28 to QSFP28	02311KNX
QSFP28-100G-CU5M	5 m	Passive	70 mm	QSFP28 to QSFP28	02311KNY
SFP-25G-CU1M	1 m	Passive	35 mm	SFP28 to SFP28	02311NKS
SFP-25G-CU3M	3 m	Passive	35 mm	SFP28 to SFP28	02311NKV
SFP-25G-CU3M-N	3 m	Passive	40 mm	SFP28 to SFP28	02311MNV
SFP-25G-CU5M	5 m	Passive	40 mm	SFP28 to SFP28	02311MNW

NOTICE

The two ends of a copper cable must be covered by electrostatic discharge (ESD) caps.

When used for data transmission between service ports, copper cables can only connect Huawei switches of the same subseries. These copper cables cannot be used between Huawei switches of different subseries or between Huawei switches and other devices such as PCs, hosts, servers, or routers. For example, the S5735-L subseries can connect to the S5735-L subseries, but cannot connect to the S5735-S subseries.

Particularly:

- The SFP-10G-CU1M and SFP-10G-CU2M copper cable can connect the S6730-H28Y4C or S6730-H24X4Y4C to the S5700-28C-HI-24S (used the LS5D00X4SA00 card), S5720-28X-LI-AC, S5720-28X-LI-24S-AC, S5720-28X-LI-24S-DC, S5700-28X-LI-24S-AC, S5700-28X-LI-24S-DC, S5700-28X-LI-AC, and S5701-28X-LI-24S-AC.
- The SFP-10G-CU2M can only be used for interconnection between the preceding devices.

Appearance and Structure

Figure 9-46 shows the appearance of an SFP/SFP+/SFP28 copper cable.

Figure 9-46 Appearance of an SFP/SFP+/SFP28 copper cable



Figure 9-47 shows the appearance of a QSFP+/QSFP28 copper cable.

Figure 9-47 Appearance of a QSFP+/QSFP28 copper cable



Figure 9-48 shows the appearance of a QSFP+ to 4*SFP+ copper cable.

Figure 9-48 Appearance of a QSFP+ to 4*SFP+ copper cable



Figure 9-49 shows the structure of an SFP/SFP+/SFP28 copper cable.

Figure 9-49 Structure of an SFP/SFP+/SFP28 copper cable

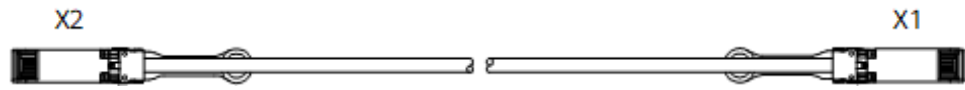
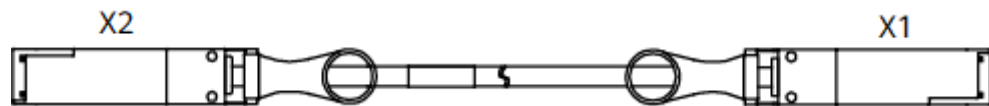


Figure 9-50 shows the structure of a QSFP+/QSFP28 copper cable.

Figure 9-50 Structure of a QSFP+/QSFP28 copper cable

Front view:



Rear view:

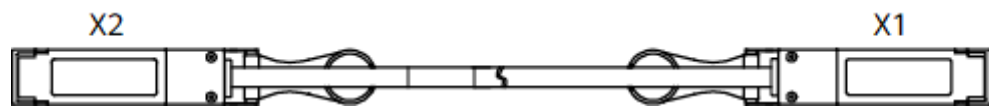
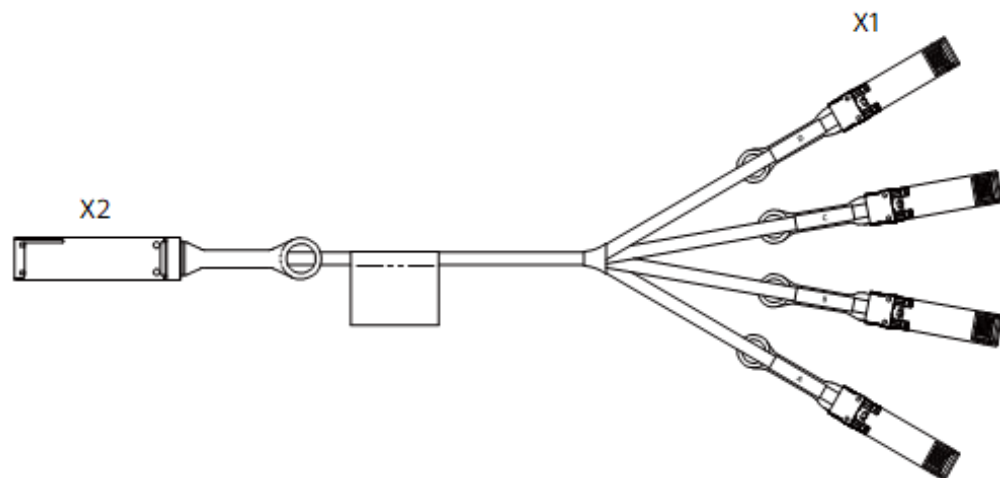


Figure 9-51 shows the structure of a QSFP+ to 4*SFP+ copper cable.

Figure 9-51 Structure of a QSFP+ to 4*SFP+ copper cable



Stack Description

In addition to data transmission, copper cables can be used for stack connection.

Before setting up a stack, familiarize yourself with the device-supported stack connection modes and software and hardware requirements. For details, see "Determining the Stack Connection Support and Mode" under "Typical Stack Configuration of Fixed Switches" in the *Typical Configuration Examples*.

9.16 Lead-Acid Battery Temperature Sensor

A lead-acid battery temperature sensor monitors ambient temperature of a lead-acid battery in real time to provide charge temperature compensation.

NOTE

Due to the negative temperature feature of a lead-acid battery, the charge voltage must be adjusted based on the ambient temperature. The battery charger must provide higher charge voltage when the temperature is low and provide lower charge voltage when the temperature is high, so that the lead-acid battery can be fully charged. The PBB-12AHA module can control the charge voltage for the lead-acid battery based on the temperature collected by the temperature sensor. Using a temperature sensor can prolong the life time of the lead-acid battery.

Appearance and Structure

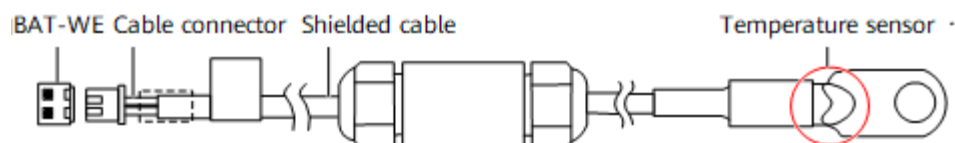
Figure 9-52 shows the appearance of a lead-acid battery temperature sensor.

Figure 9-52 Appearance of a lead-acid battery temperature sensor



Figure 9-53 shows the structure of a lead-acid battery temperature sensor.

Figure 9-53 Structure of a lead-acid battery temperature sensor



Connection

Follow these instructions when using a lead-acid battery temperature sensor:

- Connect the cable connector to the SENSOR port on the PBB-12AHA lead-acid battery charger module.

- Place the temperature probe (with an OT terminal) where it can collect the most accurate ambient temperature of the lead-acid battery. You are advised to place the temperature probe near the lead-acid battery and bind the sensor cable with the power cables of the lead-acid battery. Do not connect the temperature probe to any other heating device. Hang the temperature probe in air and keep it away from any heating device.

9.17 Hybrid Cable

Overview

A hybrid cable is composed of optical fibers and copper cores. It is mainly used to connect an S5732-H48XUM2CC switch to an AP so that the switch can provide PoE power and transmit data for the AP.

Hybrid cables must be made onsite using the purchased bare wires, auxiliary material packages that contain RJ45 connectors, and auxiliary material packages used for mechanical or fusion splicing of optical fibers. Table 9-22 lists the bare wires and auxiliary material packages.

Table 9-22 Bare wires and auxiliary material packages

Type	Description	Applicable Country/Region	Optical Fiber/Connector Type	Part Number
Bare wire	hybrid cable,1.5mm ² ,2mm*1.6mm, Indoor,GDVV-2G.657A2(Bow-type) +2x1.5mm ² (RV),500V,Blue, Black,2 cores,Single mode,9/125	Southeast Asia, Africa, and other countries or regions	Single-mode, G.657A2	25090017
Bare wire	hybrid cable,1.5mm ² ,2mm*1.6mm, Indoor,GDVV-2G.657A2(Bow-type) +2x1.5mm ² (RV),500V,Red,Blue,2 cores,Single mode,9/125	China	Single-mode, G.657A2	25090017-001
Bare wire	hybrid cable,1.5mm ² ,2mm*1.6mm, Indoor,LSZH,GDHH-2G.657A2(Bow-type)+2x1.5mm ² (H07Z-K),450V,Red,Blue,2 cores,Single mode,9/125	China	Single-mode, G.657A2	25090018-002
Bare wire	hybrid cable,1.5mm ² ,2mm*1.6mm, Indoor,LSZH,For Europe,GDHH-2G.657A2(Bow-type) +2x1.5mm ² (H07Z-K),450V,Brown, Blue,2 cores,Single mode,9/125	Europe	Single-mode, G.657A2	25090018
Auxiliary material package containing	MPE Site Materials Kit,Photoelectric Hybrid Cable installation Material Package about DC PoE RJ45	Worldwide, used to terminate	RJ45	02233FKX

Type	Description	Applicable Country/Region	Optical Fiber/Connector Type	Part Number
RJ45 connectors		copper cores		
Auxiliary material package for mechanical splicing of optical fibers	MPE Site Materials Kit,Photoelectric Hybrid Cable installation Material Package about LC mechanical splicing at both side,Fast Mountable-Mechanical-LC/UPC	Worldwide, used to terminate optical fibers	LC/UPC	02233FKY
Auxiliary material package for mechanical or fusion splicing of optical fibers	MPE Site Materials Kit,Photoelectric Hybrid Cable installation Material Package about LC mechanical splicing and Fiber splicing	Worldwide, used to terminate optical fibers	LC/UPC	02233FLA
Auxiliary material package for fusion splicing of optical fibers	MPE Site Materials Kit,Photoelectric Hybrid Cable installation Material Package about Fiber splicing at both side	Worldwide, used to terminate optical fibers	-	02233FLB

⚠ CAUTION

Bare wires are delivered by country or region where hybrid cables are used. The difference predominantly lies in the color of copper cores.

Hybrid cables can only be used indoors and cannot be connected to outdoor APs.

Hybrid cables cannot be connected through a distribution frame.

Copper cores in a hybrid cable must be directly connected to a switch and an AP.

The connected ports cannot go up if a switch and an AP are connected only through copper cores in a hybrid cable.

It is recommended that optical fibers in hybrid cables be fusion spliced onsite. If you assemble optical fibers in hybrid cables in mechanical splicing mode, only SFP-10G-iLR-S optical modules are supported.

Appearance and Structure

Figure 9-54, Figure 9-55, and Figure 9-56 show the appearance and structure of a hybrid cable.

Figure 9-54 Cross section of a hybrid cable

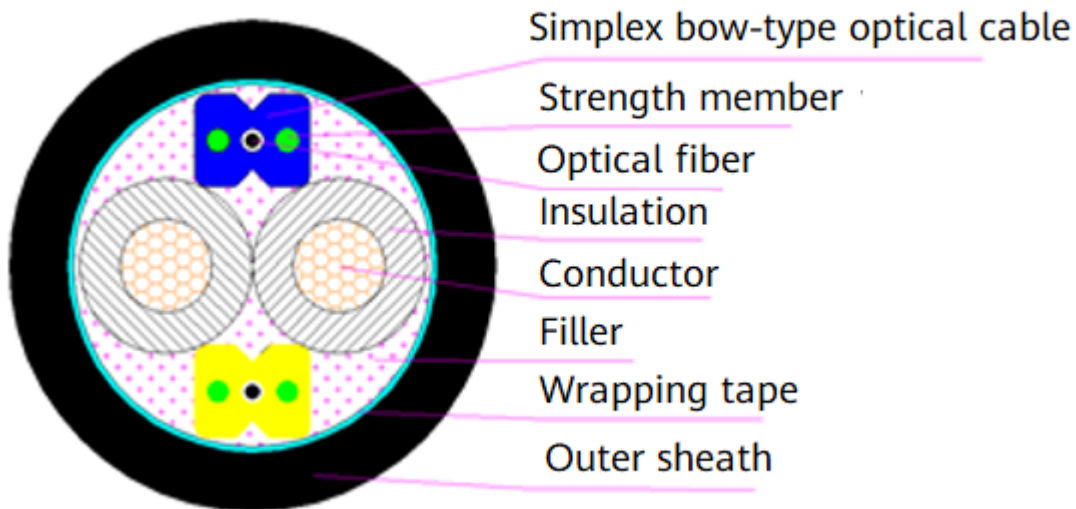
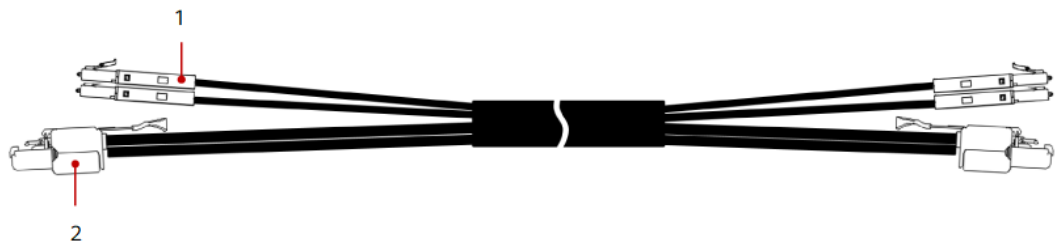


Figure 9-55 Structure of a hybrid cable



1. LC connector	2. RJ45 connector
-----------------	-------------------

Figure 9-56 Appearance of a hybrid cable



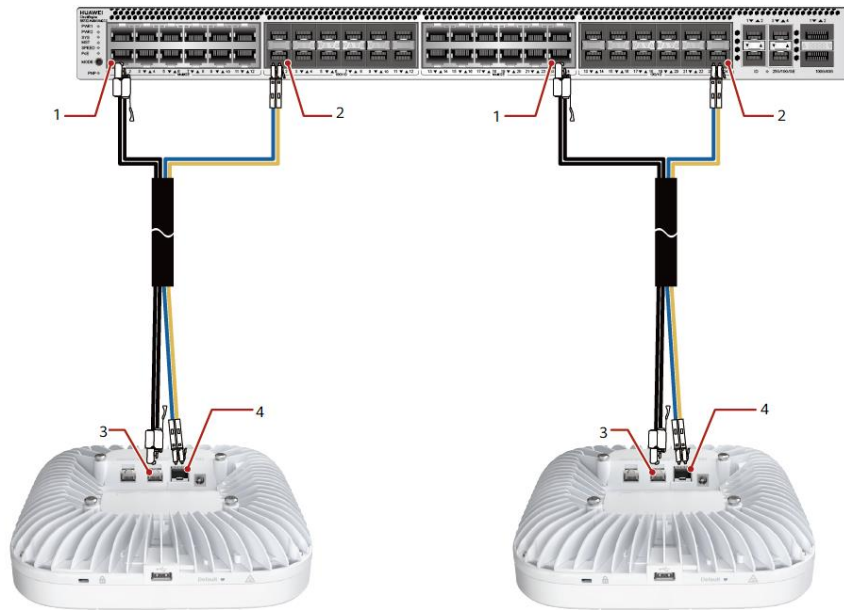
Cable Connection

A hybrid cable is typically used in the following scenario:

- The copper cores connect a multi-GE port of a switch to a PoE_IN port of an AP to allow the switch to supply power to the AP while no data is transmitted over this cable.
- The optical fibers connect a SFP+ optical port on the switch to a SFP+ optical port of the AP to transmit data.

Figure 9-57 shows how a hybrid cable connects a switch to an AP.

Figure 9-57 Connections of a hybrid cable



1. Multi-GE port on a switch	2. 10GE/GE SFP+ port on a switch
3. PoE_IN port on an AP	4. Uplink 10GE/GE SFP+ port on an AP

NOTE

Connectors at two ends of each optical fiber in a hybrid cable must be connected to the TX and RX ports on optical modules, one end to a TX port and the other end to an RX port.

Optical fibers in all hybrid cables must be connected according to the same rules. Table 9-23 provides the recommended connection rules.

Table 9-23 Recommended optical fiber connections

Optical Fiber Color	Optical Module on a Switch	Optical Module on an AP
Blue	TX	RX
Yellow	RX	TX

10 Pluggable Modules for Interfaces

- 10.1 Important Notes About Using Optical Modules Certified for Huawei Switches
- 10.2 Understanding Optical Modules
- 10.3 Understanding Copper Modules
- 10.4 FE SFP/eSFP Optical Modules
- 10.5 GE eSFP Optical Modules
- 10.6 GE CSFP Optical Modules
- 10.7 GE-CWDM eSFP Optical Modules
- 10.8 GE-CWDM eSFP Optical Modules (Used Only in the OADM scenario)
- 10.9 GE-DWDM eSFP Optical Modules
- 10.10 GE SFP Copper Modules
- 10.11 SFP Stack Optical Modules
- 10.12 10GE SFP+ Optical Modules
- 10.13 10GE-CWDM SFP+ Optical Modules
- 10.14 10GE-DWDM SFP+ Optical Modules
- 10.15 25GE SFP28 Optical Modules
- 10.16 40GE QSFP+ Optical Modules
- 10.17 Industrial Optical Modules
- 10.18 100GE QSFP28 Optical Modules
- 10.19 GPON Optical Modules
- 10.20 Optical Modules Dedicated for Hybrid Cables

10.1 Important Notes About Using Optical Modules Certified for Huawei Switches

10.1.1 How to Identify Huawei-Certified Switch Optical Modules

NOTICE

- A switch must use optical or copper modules that have been certified for use on Huawei S switches. Non-certified optical or copper modules cannot ensure transmission reliability and may affect service stability. Huawei is not liable for any problem caused by the use of non-certified optical or copper modules and will not fix such problems.
- The methods provided here are only for reference. To confirm whether optical modules you are using have been certified for use on Huawei S switches, contact Huawei technical support.

10GE or Lower Speed Optical Modules

Huawei started certification on 10GE or lower speed optical modules for S switch products on July 1, 2013.

To determine whether optical modules delivered for Huawei S switches before July 1, 2013 are certified ones, contact Huawei technical support.

If your optical modules are delivered after July 1, 2013, use either of the following methods to determine whether they have been certified by Huawei.

Method 1: Check for "HUAWEI" on the label

If an optical module has been certified by Huawei, its label contains "HUAWEI", as shown in Figure 10-1.

Figure 10-1 "HUAWEI" on the label of a Huawei-certified S switch optical module



Method 2: Run the display transceiver command

An optical module has received Huawei S switch certification if it meets the following conditions:

- In the **display elabel** command output, the **Manufactured** field displays a date later than 2013-07-01.
- In the **display version** command output, the displayed version is V200R001C00 or later.
- In the **display transceiver** command output, the **Vendor Name** field displays **HUAWEI**.

NOTE

The SFP-FE-SX-MM1310 (part number: 02315233) is a Huawei-certified 100M optical module. However, the **Vendor Name** field displays the original manufacturer name, instead of **HUAWEI**.

For copper modules, the **Vendor Name** field also displays the original manufacturer name, instead of **HUAWEI**.

25GE, 40GE, and 100GE Optical Modules

Huawei started certification on 25GE, 40GE, and 100GE optical modules for S switch products on January 1, 2016.

To determine whether optical modules delivered for Huawei S switches before January 1, 2016 are certified ones, contact Huawei technical support.

If your optical modules are delivered after January 1, 2016, use either of the following methods to determine whether they have been certified by Huawei.

Method 1: Check for "HUAWEI" on the label

If an optical module has been certified by Huawei, its label contains "HUAWEI", as shown in Figure 10-1.

Method 2: Run the display transceiver command

A 25GE, 40GE, or 100GE optical module has received Huawei S switch certification if it meets the following conditions:

- In the **display elabel** command output, the **Manufactured** field displays a date later than 2016-01-01.
- In the **display version** command output, the displayed version is V200R008 or later.
- In the **display transceiver** command output, the **Vendor Name** field displays **HUAWEI**.

NOTE

For the optical modules connected to high-speed cables or AOC cables, the **Vendor Name** field displays the original manufacturer name, instead of **HUAWEI**. For the methods of checking whether such an optical module has been certified by Huawei, contact Huawei technical support personnel.

10.1.2 Risks of Using Non-Huawei-Certified Switch Optical Modules

During certification of optical modules for Huawei switches, Huawei completes comprehensive functionality verification to ensure quality of optical modules. The verified items include optical module plug/unplug, transmit optical power, receive optical power, signal transmission quality, data reading, error tolerance, compatibility, electromagnetic compatibility (EMC), and environmental parameters.

Non-Huawei-certified switch optical modules may cause the following problems:

- Non-standard structure and size cause failures to install optical modules on adjacent optical interfaces.
Structures or sizes of some non-Huawei-certified optical modules do not comply with the Multi-Source Agreement (MSA). When such an optical module is installed on an optical interface, the size of this optical module hinders optical module installation on adjacent optical interfaces.
- Data bus defects cause suspension of a switch's data bus.
Some non-Huawei-certified optical modules have defects in data bus designs. Using such an optical module on a switch causes suspension of the connected data bus on the switch. As a result, data on the suspended bus cannot be read.
- Improper edge connector size damages electronic devices of optical interfaces.
If a non-Huawei-certified switch optical module with improper edge connector size is used on an optical interface, electronic devices of the optical interface will be damaged by short circuits.

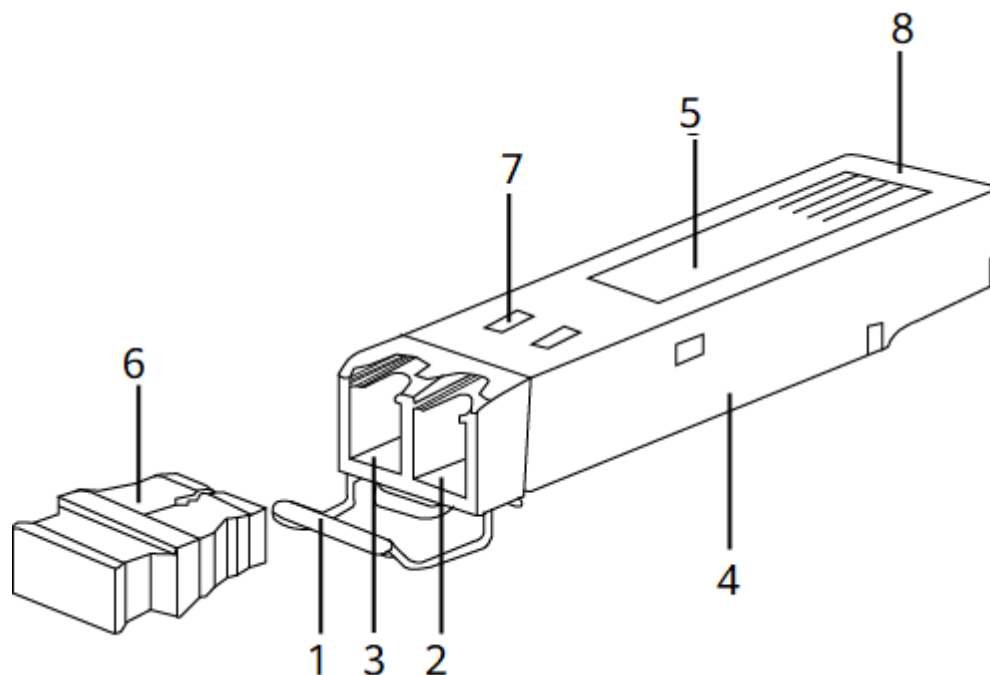
- Unnormalized temperature monitoring causes incorrect alarms.
The temperature monitoring systems of some non-Huawei-certified switch optical modules do not comply with industry standards and report temperature values higher than the real temperature. When such optical modules are used on a switch, the system will report incorrect temperature alarms.
- Improper register settings cause errors or failures in reading parameters or diagnostic information.
Some non-Huawei-certified switch optical modules have improper register values on page A0, which can cause errors or failures when the system attempts to read parameters or diagnostic information from a data bus.
- Some non-Huawei-certified switch optical modules are not designed in compliance with EMC standards and have low anti-interference capability. Additionally, they bring electromagnetic interference to nearby devices.
- The operating temperature ranges of non-Huawei-certified switch optical modules cannot meet service requirements. When they are used under relatively high temperature, the optical power decreases, resulting in service interruption.

10.2 Understanding Optical Modules

10.2.1 What Is an Optical Module

On an optical network, a sender needs to convert electrical signals into optical signals before sending them to a receiver, and the receiver needs to convert received optical signals into electrical signals. An optical module is a component that completes electrical/optical conversion on an optical network. Figure 10-2 shows the structure of an optical module.

Figure 10-2 Structure of an optical module (using an SFP/eSFP optical module as an example)



1. Handle	2. Receiver	3. Transmitter
4. Shell	5. Label	6. Dust plug
7. Spring	8. Connector	-

Figure 10-3 shows an SFP/eSFP optical module.

Figure 10-3 SFP/eSFP optical module



Figure 10-4 shows the appearance of an SFP+ optical module.

Figure 10-4 Appearance of an SFP+ optical module



Figure 10-5 shows the appearance of an SFP28 optical module.

Figure 10-5 SFP28 optical module



Figure 10-6 and Figure 10-7 show the appearance of a QSFP+ optical module.

Figure 10-6 Appearance of a QSFP+ optical module (for LC optical fibers)

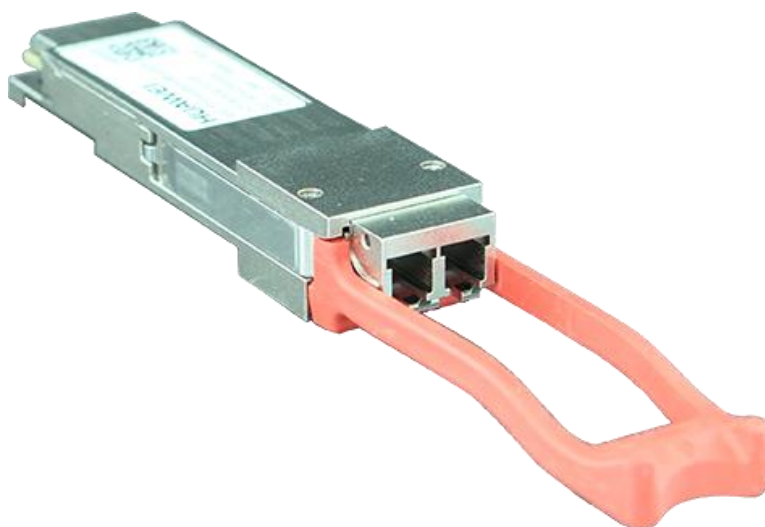
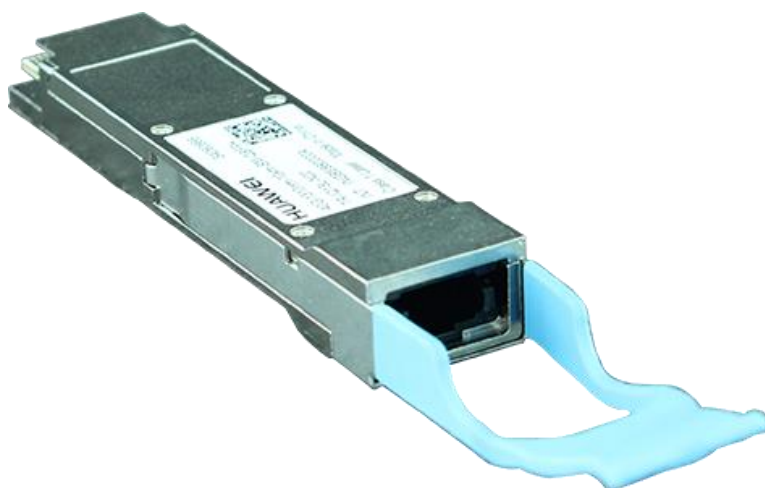


Figure 10-7 Appearance of a QSFP+ optical module (for MPO optical fibers)



NOTICE

The side with an L-shaped notch close to the connector is the top of a QSFP+ optical module, as shown in Figure 10-6. When connecting a QSFP+ optical module to a port, keep the top side upward. Do not insert the QSFP+ optical module upside down.

Currently, there is no formal standard for 40G Ethernet. Therefore, a device may not display complete diagnostic information about 40GE optical modules. This is an acceptable fact in the telecommunications industry and does not affect functions of 40GE optical modules.

Figure 10-8 shows the appearance of a CSFP optical module.

Figure 10-8 Appearance of a CSFP optical module



Figure 10-9 shows the appearance of an XFP module.

Figure 10-9 Appearance of an XFP optical module



 **NOTE**

The SFP+ and XFP optical modules are 10GE hot-swappable optical modules. Compared with the SFP+ optical modules, the XFP optical modules have a larger caliber.

Figure 10-10 and Figure 10-11 show CFP optical modules for different optical fibers.

Figure 10-10 CFP 100GE optical module (for LC optical fibers)



Figure 10-11 CFP 100GE optical module (for MPO optical fibers)



Figure 10-12 and Figure 10-13 show the appearance of a QSFP28 optical module.

Figure 10-12 Appearance of a QSFP28 optical module (for MPO optical fibers)

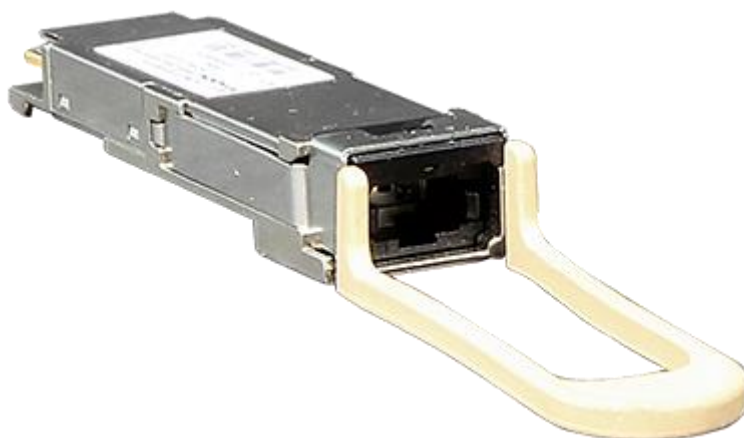


Figure 10-13 Appearance of a QSFP28 optical module (for LC optical fibers)



10.2.2 Types of Optical Modules

Optical modules are available in various types to meet diversified requirements.

- **Classified by transmission rates**

Depending on transmission rates, optical modules are classified into 100GE, 40GE, 25GE, 10GE, FE, and GE optical modules.

- **Classified by encapsulation types**

The higher transmission rate an optical module provides, the more complex structure it has. Optical modules are encapsulated in different modes to provide different structures. Huawei switches support optical modules of the following encapsulation types: CFP, QSFP+, QSFP28, XFP, SFP, eSFP, and SFP+. All optical modules are hot swappable.

- SFP: small form-factor pluggable. SFP optical modules support LC fiber connectors.
- eSFP: enhanced small form-factor pluggable. An eSFP module is an SFP module that supports monitoring of voltage, temperature, bias current, transmit optical power, and receive optical power. Therefore, eSFP is also called SFP sometimes.
- SFP+: small form-factor pluggable plus, SFP with a higher rate.
- XFP: 10 Gigabit small form-factor pluggable. X is the Roman numeral 10, meaning that all XFP optical modules provide a 10 Gbit/s transmission rate. XFP optical modules support LC fiber connectors. They are wider and longer than SFP+ optical modules.
- SFP28: with the same interface size as an SFP+ module. An SFP28 interface can use a 25GE SFP28 optical module.
- QSFP+: quad small form-factor pluggable. QSFP+ optical modules support MPO fiber connectors and are larger than SFP+ optical modules.

- CFP: centum form-factor pluggable. The dimensions of a CFP optical module are 144.75 mm x 82 mm x 13.6 mm (L x W x H). CFP is a new optical module standard that can be used in data communication and telecommunications fields.
- QSFP28: with the same interface size as a QSFP+ module. A QSFP28 interface can use a 100GE QSFP28 optical module or a 40GE QSFP+ optical module.
- **Classified by physical layer standards**

Different physical layer standards are defined to allow data transmission in different modes. Therefore, different types of optical modules are produced to comply with these standards. For details, see **Standards compliance** of the specific optical module.
- **Classified by modes**

Optical fibers are classified into single-mode and multimode fibers. Therefore, optical modules are also classified into single-mode and multimode modules to support different optical fibers.

 - Single-mode optical modules are used with single-mode fibers. Single-mode fibers support a wide band and large transmission capacity, and are used for long-distance transmission.
 - Multimode optical modules are used with multimode fibers. Multimode fibers have lower transmission performance than single-mode fibers because of modal dispersion, but their costs are also lower. They are used for small-capacity, short-distance transmission.

Wavelength division multiplexing modules differ from other optical modules in center wavelengths. A common optical module has a center wavelength of 850 nm, 1310 nm, or 1550 nm, whereas a wavelength division multiplexing module transmits lights with different center wavelengths. Wavelength division multiplexing modules are classified into two types: coarse wavelength division multiplexing (CWDM) and dense wavelength division multiplexing (DWDM). Within the same band, DWDM modules are available in more types and use wavelength resources more efficiently than CWDM modules. DWDM and CWDM modules allow lights with different center wavelengths to be transmitted on one fiber without interfering each other. Therefore, a passive multiplexer can be used to combine the lights into one channel, which is then split into multiple channels by a demultiplexer on the remote end. This reduces the optical fibers required. DWDM and CWDM modules are used for long-distance transmission.

The transmit power of a long-distance optical module is often larger than its overload power. Therefore, when using such optical modules, select optical fibers of an appropriate length to ensure that the actual receive power is smaller than the overload power. If the optical fibers connected to a long-distance optical module are too short, use an optical attenuator to reduce the receive power on the remote optical module. Otherwise, the remote optical module may be burnt. Generally, an optical attenuator is required if an optical module supporting a transmission distance longer than 10 km is used together with short optical fibers.

10.2.3 Parameter Description

Transmit optical power	Output optical power of an optical module when it is working properly. When two optical modules are connected, the transmit optical power of one end must be within the range of receive optical power on the other end.
Receive optical power	Average input optical power that the receiver of an optical module can receive within a range of bit error rate (BER = 10^{-12}). The upper limit of this parameter is the overload optical power and the lower limit is the maximum receiver sensitivity. When two optical modules

are connected, the receive optical power on one end determines the range of transmit optical power on the other end.

Maximum receiver sensitivity	Minimum average input optical power that the receiver of an optical module can receive within a range of bit error rate (BER = 10^{-12}). When two optical modules are connected, the maximum receiver sensitivity on one end determines the minimum value of transmit optical power on the other end.
Overload optical power	Maximum average input optical power that the receiver of an optical module can receive within a range of bit error rate (BER = 10^{-12}). When two optical modules are connected, the overload optical power on one end determines the maximum transmit optical power on the other end.
Extinction ratio	Minimum ratio of the average optical power with signals transmitted against the average optical power without signals transmitted in complete modulation mode. The extinction ratio indicates the capability of an optical module to identify signal 0 and signal 1. This parameter is a quality indicator for optical modules. Optical modules with a large extinction ratio may not have good quality. Qualified optical modules should have an extinction ratio complying with IEEE 802.3.
Fiber mode	Mode of optical fibers defined based on core diameters and features of optical fibers. Optical fibers are classified into single-mode and multimode fibers. Generally, multimode fibers have large core diameters and severe dispersion, so they transmit optical signals over short distances. Single-mode fibers have low dispersion and can transmit optical signals over long distances.
Modal bandwidth	Bandwidth measured at a point with transmit power several dB lower than that of the point with the peak center wavelength. Modal bandwidth reflects spectrum characteristics of multimode fibers. The higher modal bandwidth a multimode fiber has, the longer transmission distance the fiber supports.
Fiber diameter	Diameter of the core of a fiber. According to international standards for optical fibers, the diameter of a multimode fiber is 62.5 μm or 50 μm , and the diameter of a single-mode fiber is 9 μm . Select optical fibers with diameters supported by the optical modules.
Fiber class	Optical signals with different wavelengths have their best working windows in different optical fibers. To help efficiently adjust wavelengths or dispersion features of optical fibers and change their refractive indexes, the following fiber classes are defined: multimode fiber (G.651), common single-mode fiber (G.652), shifted dispersion fiber (G.653), and non-zero shifted dispersion fiber (G.655). G.651 and G.652 are commonly used fiber classes. Optical fibers of higher classes support longer transmission distances. When selecting optical fibers for optical modules, determine the classes of fibers based on the required transmission distances.
Connector type	Type of the interface on an optical module to accommodate a fiber. Commonly used connector types are LC (applicable to all the SFP, SFP+, and XFP modules), SC, and MPO (applicable to 150 m QSFP+ and CXP modules). Select optical fibers with connectors supported by the optical modules.

Transmission distance	Maximum distance over which optical signals can transmit. Optical signals sent from different types of sources can transmit over different distances due to negative effects of optical fibers, such as dispersion and attenuation. When connecting optical interfaces, select optical modules and fibers based on the maximum signal transmission distance.
Interface rate	Maximum rate of electrical signals that an optical component can transmit without bit errors. The interface rates defined in Ethernet standards include 125 Mbit/s, 1.25 Gbit/s, 10.3125 Gbit/s, and 41.25 Gbit/s. When connecting optical interfaces, select optical modules and fibers based on the maximum signal transmission rate.
Center wavelength	Wavelength measured at the midpoint of the half-amplitude line in the transmit spectrum. Two connected optical modules must have the same center wavelength.
MSA	Multi-Source Agreement, a non-profit organization jointly established by optical module manufacturers. This agreement defines the structure and dimensions of optical transceivers by referring to Optical Internetworking Forum (OIF) and International Telecommunication Union (ITU) standards.

10.2.4 How to View Optical Module Parameters

Viewing the Hardware Description

If you know the model or type of an optical module, you can view the section "Pluggable Modules for Interfaces" in the *Hardware Description* to look up parameters of the optical module, including the center wavelength, transmission distance, fiber types supported, receive optical power, and transmit optical power.

Using a Command

If an optical module is installed in a running switch, you can run the **display transceiver** command to view parameters of the optical module, including the center wavelength, transmission distance, fiber types supported, receive optical power, and transmit optical power.

10.2.5 Rules for Optical Module Interoperation

Interoperation Rules

Optical modules with the same standards can interoperate with each other. The standards define the rate, wavelength, and transmission distance of optical modules, but not their encapsulation modes (two interoperated optical modules can have different encapsulation modes).

If you need to achieve interoperability between optical modules with different standards, contact technical support personnel.

When S series switches are connected to other products such as routers, comply with the preceding optical module interoperation rules.

Standards Description

The following describes the standards, using 1000BASE-LX10 as an example:

- 1000 indicates the rate (1000 Mbit/s, in this case). Other rates include 10 Mbit/s, 100 Mbit/s, 10 Gbit/s, 40 Gbit/s, and 100 Gbit/s.
- BASE indicates baseband transmission.
- L represents a center wavelength of the laser. Currently, the following center wavelengths are available: S (short wavelength: 850 nm), L (long wavelength: 1310 nm), E (extra long wavelength: 1550 nm), and B (single-fiber bidirectional long wavelength).
- X represents the encoding format. The encoding formats include T (twisted pair), X (8B/10B), R (64B/66B), and W (WIS).
- 10 indicates the number of channels. Currently, the value can be 4 or 10. If there is no number, the value is 1.

NOTE

This example provides the definitions in IEEE standards, which are not applicable to all optical modules, for example, non-standard optical modules.

The following organizations or agreements define standards related to optical modules:

- IEEE 802.3, which defines MAC and PHY standards
- Small Form Factor (SFF) committee or Multi-Source Agreements (MSAs), which define optical module hardware, software, and structure standards

Interoperability of 40GE and 100GE Optical Modules

S series switches support the following types of 40GE and 100GE optical modules:

- 40GE QSFP+ optical modules
- 40GE CFP optical modules
- 100GE CFP optical modules
- 100GE QSFP28 optical modules

Figure 10-14 Interoperability of 40GE optical modules in different encapsulation modes

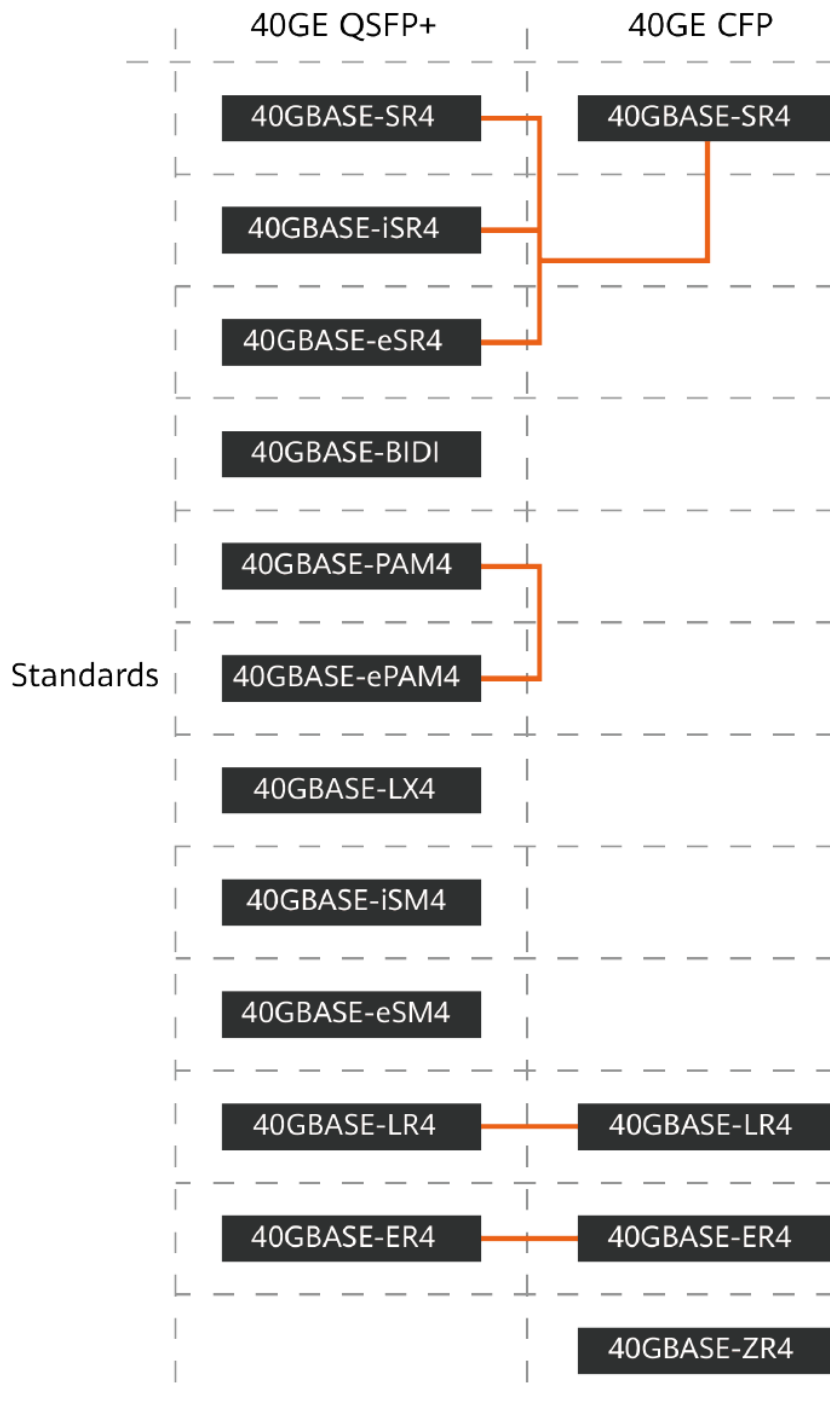
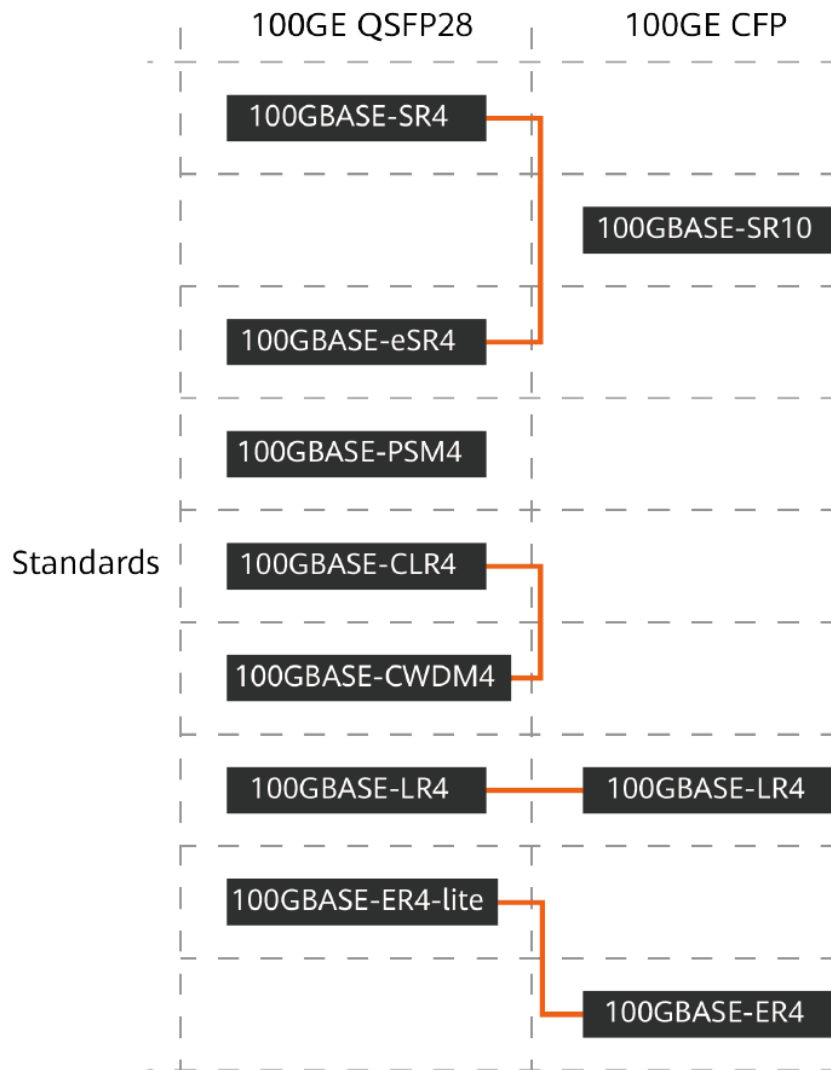


Figure 10-15 Interoperability of 100GE optical modules in different encapsulation modes



NOTE

Optical modules complying with the standards connected in the preceding figures can interoperate with each other.

iSR4 and eSR4 are non-standard formats derived from SR4, and support interoperation with SR4.

A 40GBASE-PAM4 optical module can interoperate with a 40GBASE-ePAM4 optical module.

A 100GBASE-CLR4 optical module can interoperate with a 100GBASE-CWDM4 optical module.

A 100GBASE-ER4-lite optical module can interoperate with a 100GBASE-ER4 optical module, at a maximum distance of 30 km.

10.3 Understanding Copper Modules

Copper modules are also called RJ45 modules. Unlike optical modules, copper modules do not perform electrical-optical conversion. When two optical interfaces have copper modules installed, the interfaces can be connected using a copper cable. Currently, Huawei offers only GE copper modules with RJ45 interfaces. GE copper modules work with Category 5 network

cables, comply with 1000BASE-T (IEEE 802.3ab), and support a maximum transmission distance of 100 m.

Figure 10-16 shows a GE SFP copper module.

Figure 10-16 Appearance of a GE SFP copper module



10.4 FE SFP/eSFP Optical Modules

10.4.1 S-SFP-FE-LH40-SM1310

Table 10-1 S-SFP-FE-LH40-SM1310 specifications

Item	Value
Basic Information	
Module name	S-SFP-FE-LH40-SM1310
Part Number	02317344
Model	S-SFP-FE-LH40-SM1310
Form factor	eSFP
Application standard	Non-standard
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0 °C to 70 °C (32 °F to 158 °F)
Transmission rate [bit/s]	100 Mbit/s
Target transmission distance [km]	Single-mode fiber: 40 km

Item	Value
Transmitter Optical Characteristics	
Center wavelength [nm]	1310 nm
Maximum Tx optical power [dBm]	0 dBm
Minimum Tx optical power [dBm]	-5.0 dBm
Minimum extinction ratio [dB]	10.5 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-37.0 dBm
Overload power [dBm]	-10.0 dBm

10.4.2 S-SFP-FE-LH80-SM1550

Table 10-2 S-SFP-FE-LH80-SM1550 specifications

Item	Value
Basic Information	
Module name	S-SFP-FE-LH80-SM1550
Part Number	02317345
Model	S-SFP-FE-LH80-SM1550
Form factor	eSFP
Application standard	Non-standard
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0 °C to 70 °C (32 °F to 158 °F)
Transmission rate [bit/s]	100 Mbit/s
Target transmission distance [km]	Single-mode fiber: 80 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1550 nm
Maximum Tx optical power [dBm]	0 dBm
Minimum Tx optical power [dBm]	-5.0 dBm
Minimum extinction ratio [dB]	10.5 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-37.0 dBm

Item	Value
Overload power [dBm]	-10.0 dBm

10.4.3 SFP-FE-LX-SM1310-BIDI

Table 10-3 SFP-FE-LX-SM1310-BIDI specifications

Item	Value
Basic Information	
Module name	SFP-FE-LX-SM1310-BIDI
Part Number	02315203
Model	SFP-FE-LX-SM1310-BIDI
Form factor	eSFP
Application standard	100BASE-BX
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0 °C to 70 °C (32 °F to 158 °F)
Transmission rate [bit/s]	100 Mbit/s
Target transmission distance [km]	Single-mode fiber: 15 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1550 nm (RX) 1310 nm (TX)
Maximum Tx optical power [dBm]	-8.0 dBm
Minimum Tx optical power [dBm]	-15.0 dBm
Minimum extinction ratio [dB]	8.5 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-32.0 dBm
Overload power [dBm]	-8.0 dBm
NOTE Supports the single-fiber bidirectional function. BIDI optical modules must be used in pairs. For example, SFP-FE-LX-SM1310-BIDI must be used with SFP-FE-LX-SM1550-BIDI.	

10.4.4 SFP-FE-LX-SM1550-BIDI

Table 10-4 SFP-FE-LX-SM1550-BIDI specifications

Item	Value
Basic Information	
Module name	SFP-FE-LX-SM1550-BIDI
Part Number	02315202
Model	SFP-FE-LX-SM1550-BIDI
Form factor	eSFP
Application standard	100BASE-BX
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0 °C to 70 °C (32 °F to 158 °F)
Transmission rate [bit/s]	100 Mbit/s
Target transmission distance [km]	Single-mode fiber: 15 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1310 nm (RX) 1550 nm (TX)
Maximum Tx optical power [dBm]	-8.0 dBm
Minimum Tx optical power [dBm]	-15.0 dBm
Minimum extinction ratio [dB]	8.5 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-32.0 dBm
Overload power [dBm]	-8.0 dBm
NOTE Supports the single-fiber bidirectional function. BIDI optical modules must be used in pairs. For example, SFP-FE-LX-SM1550-BIDI must be used with SFP-FE-LX-SM1310-BIDI.	

10.4.5 SFP-FE-SX-MM1310

Table 10-5 SFP-FE-SX-MM1310 specifications

Item	Value
Basic Information	

Item	Value
Module name	SFP-FE-SX-MM1310
Part Number	02315233
Model	SFP-FE-SX-MM1310
Form factor	SFP
Application standard	100BASE-FX
Connector type	LC
Optical fiber type	MMF
Working case temperature [°C(°F)]	0 °C to 70 °C (32 °F to 158 °F)
Transmission rate [bit/s]	100 Mbit/s
Target transmission distance [km]	Multimode fiber (50 μm or 62.5 μm diameter): 2 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1310 nm
Maximum Tx optical power [dBm]	-14.0 dBm
Minimum Tx optical power [dBm]	-19.0 dBm
Minimum extinction ratio [dB]	10 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-30.0 dBm
Overload power [dBm]	-14.0 dBm

10.4.6 eSFP-FE-LX-SM1310

Table 10-6 eSFP-FE-LX-SM1310 specifications

Item	Value
Basic Information	
Module name	eSFP-FE-LX-SM1310
Part Number	02315205
Model	eSFP-FE-LX-SM1310
Form factor	eSFP
Application standard	Non-standard
Connector type	LC

Item	Value
Optical fiber type	SMF
Working case temperature [°C(°F)]	0 °C to 70 °C (32 °F to 158 °F)
Transmission rate [bit/s]	100 Mbit/s
Target transmission distance [km]	Single-mode fiber: 15 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1310 nm
Maximum Tx optical power [dBm]	-8.0 dBm
Minimum Tx optical power [dBm]	-15.0 dBm
Minimum extinction ratio [dB]	8.2 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-28.0 dBm
Overload power [dBm]	-8.0 dBm

10.5 GE eSFP Optical Modules

10.5.1 LE2MGSC40DE0

Table 10-7 LE2MGSC40DE0 specifications

Item	Value
Basic Information	
Module name	LE2MGSC40DE0
Part Number	02310KVV
Model	LE2MGSC40DE0
Form factor	eSFP
Application standard	1000BASE-BX
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0 °C to 70 °C (32 °F to 158 °F)
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 40 km

Item	Value
Transmitter Optical Characteristics	
Center wavelength [nm]	1490 nm (RX) 1310 nm (TX)
Maximum Tx optical power [dBm]	3.0 dBm
Minimum Tx optical power [dBm]	-2.0 dBm
Minimum extinction ratio [dB]	9 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-23 dBm
Overload power [dBm]	-3.0 dBm
NOTE	
Supports the single-wire bidirectional function.	
Single-fiber bidirectional (BIDI) optical modules must be used in pairs. For example, LE2MGSC40DE0 must be used with LE2MGSC40ED0.	

10.5.2 LE2MGSC40ED0

Table 10-8 LE2MGSC40ED0 specifications

Item	Value
Basic Information	
Module name	LE2MGSC40ED0
Part Number	02310KVU
Model	LE2MGSC40ED0
Form factor	eSFP
Application standard	1000BASE-BX
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0 °C to 70 °C (32 °F to 158 °F)
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 40 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1310 nm (RX) 1490 nm (TX)

Item	Value
Maximum Tx optical power [dBm]	3.0 dBm
Minimum Tx optical power [dBm]	-2.0 dBm
Minimum extinction ratio [dB]	9 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-23 dBm
Overload power [dBm]	-3.0 dBm
NOTE	
Supports the single-fiber bidirectional function.	
Single-fiber bidirectional (BIDI) optical modules must be used in pairs. For example, LE2MGSC40ED0 must be used with LE2MGSC40DE0.	

10.5.3 S-SFP-GE-LH40-SM1310

Table 10-9 S-SFP-GE-LH40-SM1310 specifications

Item	Value
Basic Information	
Module name	S-SFP-GE-LH40-SM1310
Part Number	02317346
Model	S-SFP-GE-LH40-SM1310
Form factor	eSFP
Application standard	1000BASE-EX (non-standard)
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C (°F)]	0 °C to 70 °C (32 °F to 158 °F)
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 40 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1310 nm
Maximum Tx optical power [dBm]	0 dBm
Minimum Tx optical power [dBm]	-5.0 dBm
Minimum extinction ratio [dB]	9 dB
Receiver Optical Characteristics	

Item	Value
Rx sensitivity [dBm]	-23 dBm
Overload power [dBm]	-3.0 dBm

10.5.4 S-SFP-GE-LH40-SM1550

Table 10-10 S-SFP-GE-LH40-SM1550 specifications

Item	Value
Basic Information	
Module name	S-SFP-GE-LH40-SM1550
Part Number	02317347
Model	S-SFP-GE-LH40-SM1550
Form factor	eSFP
Application standard	Non-standard
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0 °C to 70 °C (32 °F to 158 °F)
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 40 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1550 nm
Maximum Tx optical power [dBm]	0 dBm
Minimum Tx optical power [dBm]	-5.0 dBm
Minimum extinction ratio [dB]	9 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-22 dBm
Overload power [dBm]	-3.0 dBm

10.5.5 S-SFP-GE-LH80-SM1550

Table 10-11 S-SFP-GE-LH80-SM1550 specifications

Item	Value
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Item	Value
Basic Information	
Module name	S-SFP-GE-LH80-SM1550
Part Number	02317348
Model	S-SFP-GE-LH80-SM1550
Form factor	eSFP
Application standard	1000BASE-ZX
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0 °C to 70 °C (32 °F to 158 °F)
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 80 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1550 nm
Maximum Tx optical power [dBm]	5.0 dBm
Minimum Tx optical power [dBm]	-2.0 dBm
Minimum extinction ratio [dB]	9 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-23 dBm
Overload power [dBm]	-3.0 dBm

10.5.6 SFP-GE-BXU1-SC

Table 10-12 SFP-GE-BXU1-SC specifications

Item	Value
Basic Information	
Module name	SFP-GE-BXU1-SC
Part Number	02310TQH
Model	SFP-GE-BXU1-SC
Form factor	eSFP
Application standard	Non-standard
Connector type	SC

Item	Value
Optical fiber type	SMF
Working case temperature [°C(°F)]	0 °C to 70 °C (32 °F to 158 °F)
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 10 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1310 nm (RX) 1490 nm (TX)
Maximum Tx optical power [dBm]	-3.0 dBm
Minimum Tx optical power [dBm]	-9.0 dBm
Minimum extinction ratio [dB]	9 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-19.5 dBm
Overload power [dBm]	-3.0 dBm
NOTE This module supports the single-fiber bidirectional function.	

10.5.7 SFP-GE-EX-C

Table 10-13 SFP-GE-EX-C specifications

Item	Value
Basic Information	
Module name	SFP-GE-EX-C
Part Number	02312UUD
Model	SFP-GE-EX-C
Form factor	eSFP
Application standard	1000BASE-EX (non-standard)
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0 °C to 70 °C (32 °F to 158 °F)
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 40 km

Item	Value
Transmitter Optical Characteristics	
Center wavelength [nm]	1310 nm
Maximum Tx optical power [dBm]	0 dBm
Minimum Tx optical power [dBm]	-5.0 dBm
Minimum extinction ratio [dB]	9 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-23 dBm
Overload power [dBm]	-3.0 dBm

10.5.8 SFP-GE-LX-SM1310

Table 10-14 SFP-GE-LX-SM1310 specifications

Item	Value
Basic Information	
Module name	SFP-GE-LX-SM1310
Part Number	02315200
Model	SFP-GE-LX-SM1310
Form factor	eSFP
Application standard	1000BASE-LX10/LH
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0 °C to 70 °C (32 °F to 158 °F)
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 10 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1310 nm
Maximum Tx optical power [dBm]	-3.0 dBm
Minimum Tx optical power [dBm]	-9.0 dBm
Minimum extinction ratio [dB]	9 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-20.0 dBm

Item	Value
Overload power [dBm]	-3.0 dBm

10.5.9 SFP-GE-LX-SM1310-BIDI

Table 10-15 SFP-GE-LX-SM1310-BIDI specifications

Item	Value
Basic Information	
Module name	SFP-GE-LX-SM1310-BIDI
Part Number	02315285
Model	SFP-GE-LX-SM1310-BIDI
Form factor	eSFP
Application standard	1000BASE-BX10
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0 °C to 70 °C (32 °F to 158 °F)
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 10 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1490 nm (RX) 1310 nm (TX)
Maximum Tx optical power [dBm]	-3.0 dBm
Minimum Tx optical power [dBm]	-9.0 dBm
Minimum extinction ratio [dB]	6 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-19.5 dBm
Overload power [dBm]	-3.0 dBm
NOTE Supports the single-fiber bidirectional function. Single-fiber bidirectional (BIDI) optical modules must be used in pairs. For example, SFP-GE-LX-SM1310-BIDI must be used with SFP-GE-LX-SM1490-BIDI.	

10.5.10 SFP-GE-LX-SM1490-BIDI

Table 10-16 SFP-GE-LX-SM1490-BIDI specifications

Item	Value
Basic Information	
Module name	SFP-GE-LX-SM1490-BIDI
Part Number	02315286
Model	SFP-GE-LX-SM1490-BIDI
Form factor	eSFP
Application standard	1000BASE-BX10
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0 °C to 70 °C (32 °F to 158 °F)
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 10 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1310 nm (RX) 1490 nm (TX)
Maximum Tx optical power [dBm]	-3.0 dBm
Minimum Tx optical power [dBm]	-9.0 dBm
Minimum extinction ratio [dB]	6 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-19.5 dBm
Overload power [dBm]	-3.0 dBm
NOTE Supports the single-fiber bidirectional function. Single-fiber bidirectional (BIDI) optical modules must be used in pairs. For example, SFP-GE-LX-SM1490-BIDI must be used with SFP-GE-LX-SM1310-BIDI.	

10.5.11 SFP-GE-LX10-C

Table 10-17 SFP-GE-LX10-C specifications

Item	Value
Basic Information	

Item	Value
Module name	SFP-GE-LX10-C
Part Number	02312UUC
Model	SFP-GE-LX10-C
Form factor	eSFP
Application standard	1000BASE-LX10/LH
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0 °C to 70 °C (32 °F to 158 °F)
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 10 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1310 nm
Maximum Tx optical power [dBm]	-3.0 dBm
Minimum Tx optical power [dBm]	-9.0 dBm
Minimum extinction ratio [dB]	9 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-20.0 dBm
Overload power [dBm]	-3.0 dBm

10.5.12 SFP-GE-SX-C

Table 10-18 SFP-GE-SX-C specifications

Item	Value
Basic Information	
Module name	SFP-GE-SX-C
Part Number	02312UUB
Model	SFP-GE-SX-C
Form factor	eSFP
Application standard	1000BASE-SX
Connector type	LC
Optical fiber type	MMF

Item	Value
Working case temperature [°C(°F)]	0 °C to 70 °C (32 °F to 158 °F)
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Multimode optical fiber (modal bandwidth: 160 MHz*km; diameter: 62.5 μm): 0.22 km Multimode optical fiber (OM1): 0.275 km Multimode optical fiber (modal bandwidth: 400 MHz*km; diameter: 50 μm): 0.5 km Multimode optical fiber (OM2): 0.55 km Multimode optical fiber (OM3): 1 km
Transmitter Optical Characteristics	
Center wavelength [nm]	850 nm
Maximum Tx optical power [dBm]	-2.5 dBm
Minimum Tx optical power [dBm]	-9.5 dBm
Minimum extinction ratio [dB]	9 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-17.0 dBm
Overload power [dBm]	0 dBm

10.5.13 SFP-GE-ZBXD1

Table 10-19 SFP-GE-ZBXD1 specifications

Item	Value
Basic Information	
Module name	SFP-GE-ZBXD1
Part Number	02311DDB
Model	SFP-GE-ZBXD1
Form factor	eSFP
Application standard	Non-standard
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0 °C to 70 °C (32 °F to 158 °F)
Transmission rate [bit/s]	1 Gbit/s

Item	Value
Target transmission distance [km]	Single-mode fiber: 80 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1490 nm (RX) 1570 nm (TX)
Maximum Tx optical power [dBm]	4.0 dBm
Minimum Tx optical power [dBm]	-2.0 dBm
Minimum extinction ratio [dB]	9 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-26 dBm
Overload power [dBm]	-3.0 dBm
NOTE Supports the single-fiber bidirectional function. This module can only be used on a device running V200R008C00 or a later version. A device running a version earlier than V200R008C00 may fail to obtain information about this module. Single-fiber bidirectional (BIDI) optical modules must be used in pairs. For example, SFP-GE-ZBXD1 must be used with SFP-GE-ZBXU1.	

10.5.14 SFP-GE-ZBXU1

Table 10-20 SFP-GE-ZBXU1 specifications

Item	Value
Basic Information	
Module name	SFP-GE-ZBXU1
Part Number	02311DDC
Model	SFP-GE-ZBXU1
Form factor	eSFP
Application standard	Non-standard
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C (°F)]	0 °C to 70 °C (32 °F to 158 °F)
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 80 km
Transmitter Optical Characteristics	

Item	Value
Center wavelength [nm]	1570 nm (RX) 1490 nm (TX)
Maximum Tx optical power [dBm]	4.0 dBm
Minimum Tx optical power [dBm]	-2.0 dBm
Minimum extinction ratio [dB]	9 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-26 dBm
Overload power [dBm]	-3.0 dBm
NOTE	
Supports the single-fiber bidirectional function.	
This module can only be used on a device running V200R008C00 or a later version. A device running a version earlier than V200R008C00 may fail to obtain information about this module.	
Single-fiber bidirectional (BIDI) optical modules must be used in pairs. For example, SFP-GE-ZBXU1 must be used with SFP-GE-ZBXD1.	

10.5.15 eSFP-GE-SX-MM850

Table 10-21 eSFP-GE-SX-MM850 specifications

Item	Value
Basic Information	
Module name	eSFP-GE-SX-MM850
Part Number	02315204
Model	eSFP-GE-SX-MM850
Form factor	eSFP
Application standard	1000BASE-SX
Connector type	LC
Optical fiber type	MMF
Working case temperature [°C (°F)]	0 °C to 70 °C (32 °F to 158 °F)
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Multimode optical fiber (modal bandwidth: 160 MHz*km; diameter: 62.5 μm): 0.22 km Multimode optical fiber (OM1): 0.275 km Multimode optical fiber (modal bandwidth: 400 MHz*km; diameter: 50 μm): 0.5 km Multimode optical fiber (OM2): 0.55 km

Item	Value
	Multimode optical fiber (OM3): 1 km
Transmitter Optical Characteristics	
Center wavelength [nm]	850 nm
Maximum Tx optical power [dBm]	-2.5 dBm
Minimum Tx optical power [dBm]	-9.5 dBm
Minimum extinction ratio [dB]	9 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-17.0 dBm
Overload power [dBm]	0 dBm

10.5.16 eSFP-GE-ZX100-SM1550

Table 10-22 eSFP-GE-ZX100-SM1550 specifications

Item	Value
Basic Information	
Module name	eSFP-GE-ZX100-SM1550
Part Number	02315206
Model	eSFP-GE-ZX100-SM1550
Form factor	eSFP
Application standard	1000BASE-ZX
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C (°F)]	0 °C to 70 °C (32 °F to 158 °F)
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 100 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1550 nm
Maximum Tx optical power [dBm]	5 dBm
Minimum Tx optical power [dBm]	0 dBm
Minimum extinction ratio [dB]	9.5 dB
Receiver Optical Characteristics	

Item	Value
Rx sensitivity [dBm]	-30.0 dBm
Overload power [dBm]	-9.0 dBm

10.5.17 OGSC10DD0

Table 10-23 OGSC10DD0 specifications

Item	Value
Basic Information	
Module name	OGSC10DD0
Part Number	02310LJH
Model	OGSC10DD0
Form factor	eSFP
Application standard	1000BASE-LX10/LH
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	-40 °C to +85 °C (-40 °F to +185 °F)
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 10 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1310 nm
Maximum Tx optical power [dBm]	-3.0 dBm
Minimum Tx optical power [dBm]	-9.0 dBm
Minimum extinction ratio [dB]	9.5 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-19 dBm
Overload power [dBm]	-3.0 dBm

10.5.18 OGSC40DD0

Table 10-24 OGSC40DD0 specifications

Item	Value
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Item	Value
Basic Information	
Module name	OGSC40DD0
Part Number	02310LJJ
Model	OGSC40DD0
Form factor	eSFP
Application standard	Non-standard
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	-40 °C to +85 °C (-40 °F to +185 °F)
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 40 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1310 nm
Maximum Tx optical power [dBm]	0 dBm
Minimum Tx optical power [dBm]	-5.0 dBm
Minimum extinction ratio [dB]	9 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-22.5 dBm
Overload power [dBm]	-3.0 dBm

10.5.19 OGSM01880

Table 10-25 OGSM01880 specifications

Item	Value
Basic Information	
Module name	OGSM01880
Part Number	02310LJG
Model	OGSM01880
Form factor	eSFP
Application standard	1000BASE-SX
Connector type	LC

Item	Value
Optical fiber type	MMF
Working case temperature [°C(°F)]	-40 °C to +85 °C (-40 °F to +185 °F)
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Multimode fiber (with modal bandwidth of 160 MHz*km and diameter of 62.5 μm): 0.22 km Multimode fiber (OM1): 0.275 km Multimode fiber (with modal bandwidth of 400 MHz*km and diameter of 50 μm): 0.5 km Multimode fiber (OM2): 0.55 km
Transmitter Optical Characteristics	
Center wavelength [nm]	850 nm
Maximum Tx optical power [dBm]	-2.5 dBm
Minimum Tx optical power [dBm]	-10 dBm
Minimum extinction ratio [dB]	9 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-17.0 dBm
Overload power [dBm]	0 dBm

10.5.20 SFP-GE-BX-D1-I

Table 10-26 SFP-GE-BX-D1-I specifications

Item	Value
Basic Information	
Module name	SFP-GE-BX-D1-I
Part Number	02311DMA
Model	SFP-GE-BX-D1-I
Form factor	SFP
Application standard	1000BASE-BX
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	-40 °C to +85 °C (-40 °F to +185 °F)

Item	Value
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 10 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1310 nm (RX) 1490 nm (TX)
Maximum Tx optical power [dBm]	-3 dBm
Minimum Tx optical power [dBm]	-9 dBm
Minimum extinction ratio [dB]	9 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-19.5 dBm
Overload power [dBm]	-3 dBm
NOTE This module supports the single-fiber bidirectional function. This module can only be used on a switch running V200R012C00 or a later version. Single-fiber bidirectional (BIDI) optical modules must be used in pairs. For example, SFP-GE-BX-D1-I must be used with SFP-GE-BX-U1-I.	

10.5.21 SFP-GE-BX-U1-I

Table 10-27 SFP-GE-BX-U1-I specifications

Item	Value
Basic Information	
Module name	SFP-GE-BX-U1-I
Part Number	02311DMF
Model	SFP-GE-BX-U1-I
Form factor	SFP
Application standard	1000BASE-BX
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	-40 °C to +85 °C (-40 °F to +185 °F)
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 10 km

Item	Value
Transmitter Optical Characteristics	
Center wavelength [nm]	1490 nm (RX) 1310 nm (TX)
Maximum Tx optical power [dBm]	-3 dBm
Minimum Tx optical power [dBm]	-9 dBm
Minimum extinction ratio [dB]	9 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-19.5 dBm
Overload power [dBm]	-3 dBm
NOTE This module supports the single-fiber bidirectional function. This module can only be used on a switch running V200R012C00 or a later version. Single-fiber bidirectional (BIDI) optical modules must be used in pairs. For example, SFP-GE-BX-D1-I must be used with SFP-GE-BX-U1-I.	

10.5.22 SFP-GE-BX40-D-I

Table 10-28 SFP-GE-BX40-D-I specifications

Item	Value
Basic Information	
Module name	SFP-GE-BX40-D-I
Part Number	02312TMC
Model	SFP-GE-BX40-D-I
Form factor	SFP
Application standard	1000BASE-BX
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	-40 °C to +85 °C (-40 °F to +185 °F)
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 40 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1310 nm (RX) 1490 nm (TX)

Item	Value
Maximum Tx optical power [dBm]	6.5 dBm
Minimum Tx optical power [dBm]	1.5 dBm
Minimum extinction ratio [dB]	8.2 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-26 dBm
Overload power [dBm]	-7 dBm
NOTE This module supports the single-fiber bidirectional function. This module can only be used on a switch running V200R019C00 or a later version. Single-fiber bidirectional (BIDI) optical modules must be used in pairs. For example, SFP-GE-BX40-D-I must be used with SFP-GE-BX40-U-I.	

10.5.23 SFP-GE-BX40-U-I

Table 10-29 SFP-GE-BX40-U-I specifications

Item	Value
Basic Information	
Module name	SFP-GE-BX40-U-I
Part Number	02312TMB
Model	SFP-GE-BX40-U-I
Form factor	SFP
Application standard	1000BASE-BX
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	-40 °C to +85 °C (-40 °F to +185 °F)
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 40 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1490 nm (RX) 1310 nm (TX)
Maximum Tx optical power [dBm]	6.5 dBm
Minimum Tx optical power [dBm]	1.5 dBm

Item	Value
Minimum extinction ratio [dB]	8.2 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-26 dBm
Overload power [dBm]	-7 dBm
NOTE This module supports the single-fiber bidirectional function. This module can only be used on a switch running V200R019C00 or a later version. Single-fiber bidirectional (BIDI) optical modules must be used in pairs. For example, SFP-GE-BX40-U-I must be used with SFP-GE-BX40-D-I.	

10.6 GE CSFP Optical Modules

10.6.1 CSFP-GE-FE-BIDI2

Table 10-30 CSFP-GE-FE-BIDI2 specifications

Item	Value
Basic Information	
Module name	CSFP-GE-FE-BIDI2
Part Number	02310WRR
Model	CSFP-GE-FE-BIDI2
Form factor	CSFP
Application standard	Non-standard
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C (°F)]	0 °C to 70 °C (32 °F to 158 °F)
Transmission rate [bit/s]	100 Mbit/s 1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 20 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1310 nm (RX) 1490 nm (TX)
Maximum Tx optical power [dBm]	-3.0 dBm

Item	Value
Minimum Tx optical power [dBm]	-9.0 dBm
Minimum extinction ratio [dB]	6.6 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-23 dBm
Overload power [dBm]	-3.0 dBm
NOTE If a CSFP optical module is installed on a switch that does not support it, the switch cannot detect whether the optical module is present.	

10.6.2 CSFP-GE-FE-BIDI4

Table 10-31 CSFP-GE-FE-BIDI4 specifications

Item	Value
Basic Information	
Module name	CSFP-GE-FE-BIDI4
Part Number	02310XQV
Model	CSFP-GE-FE-BIDI4
Form factor	CSFP
Application standard	1000BASE-BX
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	-40 °C to +85 °C (-40 °F to +185 °F)
Transmission rate [bit/s]	100 Mbit/s 1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 40 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1310 nm (RX) 1490 nm (TX)
Maximum Tx optical power [dBm]	0 dBm
Minimum Tx optical power [dBm]	-5.0 dBm
Minimum extinction ratio [dB]	6.6 dB
Receiver Optical Characteristics	

Item	Value
Rx sensitivity [dBm]	-25 dBm
Overload power [dBm]	0 dBm
NOTE If a CSFP optical module is installed on a switch that does not support it, the switch cannot detect whether the optical module is present.	

10.6.3 CSFP-GE-FE-BXD1

Table 10-32 CSFP-GE-FE-BXD1 specifications

Item	Value
Basic Information	
Module name	CSFP-GE-FE-BXD1
Part Number	02310TEE
Model	CSFP-GE-FE-BXD1
Form factor	CSFP
Application standard	1000BASE-BX10
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0 °C to 70 °C (32 °F to 158 °F)
Transmission rate [bit/s]	100 Mbit/s 1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 10 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1310 nm (RX) 1490 nm (TX)
Maximum Tx optical power [dBm]	-3.0 dBm
Minimum Tx optical power [dBm]	-9.0 dBm
Minimum extinction ratio [dB]	6.6 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-23 dBm
Overload power [dBm]	-3.0 dBm

Item	Value
NOTE If a CSFP optical module is installed on a switch that does not support it, the switch cannot detect whether the optical module is present.	

10.7 GE-CWDM eSFP Optical Modules

10.7.1 CWDM-SFPGE-1471

Table 10-33 CWDM-SFPGE-1471 specifications

Item	Value
Basic Information	
Module name	CWDM-SFPGE-1471
Part Number	02310LPN
Model	CWDM-SFPGE-1471
Form factor	eSFP
Application standard	GE-CWDM
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0 °C to 70 °C (32 °F to 158 °F)
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 80 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1471 nm
Maximum Tx optical power [dBm]	5.0 dBm
Minimum Tx optical power [dBm]	0 dBm
Minimum extinction ratio [dB]	8.5 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-28.0 dBm
Overload power [dBm]	-9.0 dBm

10.7.2 CWDM-SFPGE-1491

Table 10-34 CWDM-SFPGE-1491 specifications

Item	Value
Basic Information	
Module name	CWDM-SFPGE-1491
Part Number	02310LPK
Model	CWDM-SFPGE-1491
Form factor	eSFP
Application standard	GE-CWDM
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0 °C to 70 °C (32 °F to 158 °F)
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 80 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1491 nm
Maximum Tx optical power [dBm]	5.0 dBm
Minimum Tx optical power [dBm]	0 dBm
Minimum extinction ratio [dB]	8.5 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-28.0 dBm
Overload power [dBm]	-9.0 dBm

10.7.3 CWDM-SFPGE-1511

Table 10-35 CWDM-SFPGE-1511 specifications

Item	Value
Basic Information	
Module name	CWDM-SFPGE-1511
Part Number	02310LPH
Model	CWDM-SFPGE-1511

Item	Value
Form factor	eSFP
Application standard	GE-CWDM
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0 °C to 70 °C (32 °F to 158 °F)
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 80 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1511 nm
Maximum Tx optical power [dBm]	5.0 dBm
Minimum Tx optical power [dBm]	0 dBm
Minimum extinction ratio [dB]	8.5 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-28.0 dBm
Overload power [dBm]	-9.0 dBm

10.7.4 CWDM-SFPGE-1531

Table 10-36 CWDM-SFPGE-1531 specifications

Item	Value
Basic Information	
Module name	CWDM-SFPGE-1531
Part Number	02310LPL
Model	CWDM-SFPGE-1531
Form factor	eSFP
Application standard	GE-CWDM
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0 °C to 70 °C (32 °F to 158 °F)
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 80 km

Item	Value
Transmitter Optical Characteristics	
Center wavelength [nm]	1531 nm
Maximum Tx optical power [dBm]	5.0 dBm
Minimum Tx optical power [dBm]	0 dBm
Minimum extinction ratio [dB]	8.5 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-28.0 dBm
Overload power [dBm]	-9.0 dBm

10.7.5 CWDM-SFPGE-1551

Table 10-37 CWDM-SFPGE-1551 specifications

Item	Value
Basic Information	
Module name	CWDM-SFPGE-1551
Part Number	02312AXN
Model	CWDM-SFPGE-1551
Form factor	eSFP
Application standard	GE-CWDM
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0 °C to 70 °C (32 °F to 158 °F)
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 80 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1551 nm
Maximum Tx optical power [dBm]	5.0 dBm
Minimum Tx optical power [dBm]	0 dBm
Minimum extinction ratio [dB]	8.5 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-28.0 dBm

Item	Value
Overload power [dBm]	-9.0 dBm

10.7.6 CWDM-SFPGE-1571

Table 10-38 CWDM-SFPGE-1571 specifications

Item	Value
Basic Information	
Module name	CWDM-SFPGE-1571
Part Number	02312AXM
Model	CWDM-SFPGE-1571
Form factor	eSFP
Application standard	GE-CWDM
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0 °C to 70 °C (32 °F to 158 °F)
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 80 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1571 nm
Maximum Tx optical power [dBm]	5.0 dBm
Minimum Tx optical power [dBm]	0 dBm
Minimum extinction ratio [dB]	8.5 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-28.0 dBm
Overload power [dBm]	-9.0 dBm

10.7.7 CWDM-SFPGE-1591

Table 10-39 CWDM-SFPGE-1591 specifications

Item	Value
Basic Information	

Item	Value
Module name	CWDM-SFPGE-1591
Part Number	02312AXK
Model	CWDM-SFPGE-1591
Form factor	eSFP
Application standard	GE-CWDM
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0 °C to 70 °C (32 °F to 158 °F)
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 80 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1591 nm
Maximum Tx optical power [dBm]	5.0 dBm
Minimum Tx optical power [dBm]	0 dBm
Minimum extinction ratio [dB]	8.5 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-28.0 dBm
Overload power [dBm]	-9.0 dBm

10.7.8 CWDM-SFPGE-1611

Table 10-40 CWDM-SFPGE-1611 specifications

Item	Value
Basic Information	
Module name	CWDM-SFPGE-1611
Part Number	02310LPJ
Model	CWDM-SFPGE-1611
Form factor	eSFP
Application standard	GE-CWDM
Connector type	LC
Optical fiber type	SMF

Item	Value
Working case temperature [°C(°F)]	0 °C to 70 °C (32 °F to 158 °F)
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 80 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1611 nm
Maximum Tx optical power [dBm]	5.0 dBm
Minimum Tx optical power [dBm]	0 dBm
Minimum extinction ratio [dB]	8.5 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-28.0 dBm
Overload power [dBm]	-9.0 dBm

10.8 GE-CWDM eSFP Optical Modules (Used Only in the OADM scenario)

10.8.1 CWDM-SFPGE-1271

Table 10-41 CWDM-SFPGE-1271 specifications

Item	Value
Basic Information	
Module name	CWDM-SFPGE-1271
Part Number	02312AXC
Model	CWDM-SFPGE-1271
Form factor	eSFP
Application standard	GE-CWDM
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	-5 °C to +75 °C (23 °F to 167 °F)
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 80 km

Item	Value
Transmitter Optical Characteristics	
Center wavelength [nm]	1271 nm
Maximum Tx optical power [dBm]	5.0 dBm
Minimum Tx optical power [dBm]	0 dBm
Minimum extinction ratio [dB]	8.5 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-28.0 dBm
Overload power [dBm]	-9.0 dBm

10.8.2 CWDM-SFPGE-1291

Table 10-42 CWDM-SFPGE-1291 specifications

Item	Value
Basic Information	
Module name	CWDM-SFPGE-1291
Part Number	02312AXB
Model	CWDM-SFPGE-1291
Form factor	eSFP
Application standard	GE-CWDM
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	-5 °C to +75 °C (23 °F to 167 °F)
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 80 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1291 nm
Maximum Tx optical power [dBm]	5.0 dBm
Minimum Tx optical power [dBm]	0 dBm
Minimum extinction ratio [dB]	8.5 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-28.0 dBm

Item	Value
Overload power [dBm]	-9.0 dBm

10.8.3 CWDM-SFPGE-1311

Table 10-43 CWDM-SFPGE-1311 specifications

Item	Value
Basic Information	
Module name	CWDM-SFPGE-1311
Part Number	02312AXA
Model	CWDM-SFPGE-1311
Form factor	eSFP
Application standard	GE-CWDM
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	-5 °C to +75 °C (23 °F to 167 °F)
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 80 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1311 nm
Maximum Tx optical power [dBm]	5.0 dBm
Minimum Tx optical power [dBm]	0 dBm
Minimum extinction ratio [dB]	8.5 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-28.0 dBm
Overload power [dBm]	-9.0 dBm

10.8.4 CWDM-SFPGE-1331

Table 10-44 CWDM-SFPGE-1331 specifications

Item	Value
Basic Information	

Item	Value
Module name	CWDM-SFPGE-1331
Part Number	02312AWY
Model	CWDM-SFPGE-1331
Form factor	eSFP
Application standard	GE-CWDM
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	-5 °C to +75 °C (23 °F to 167 °F)
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 80 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1331 nm
Maximum Tx optical power [dBm]	5.0 dBm
Minimum Tx optical power [dBm]	0 dBm
Minimum extinction ratio [dB]	8.5 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-28.0 dBm
Overload power [dBm]	-9.0 dBm

10.8.5 CWDM-SFPGE-1351

Table 10-45 CWDM-SFPGE-1351 specifications

Item	Value
Basic Information	
Module name	CWDM-SFPGE-1351
Part Number	02312AWX
Model	CWDM-SFPGE-1351
Form factor	eSFP
Application standard	GE-CWDM
Connector type	LC
Optical fiber type	SMF

Item	Value
Working case temperature [°C(°F)]	-5 °C to +75 °C (23 °F to 167 °F)
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 80 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1351 nm
Maximum Tx optical power [dBm]	5.0 dBm
Minimum Tx optical power [dBm]	0 dBm
Minimum extinction ratio [dB]	8.5 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-28.0 dBm
Overload power [dBm]	-9.0 dBm

10.8.6 CWDM-SFPGE-1371

Table 10-46 CWDM-SFPGE-1371 specifications

Item	Value
Basic Information	
Module name	CWDM-SFPGE-1371
Part Number	02312AWW
Model	CWDM-SFPGE-1371
Form factor	eSFP
Application standard	GE-CWDM
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	-5 °C to +75 °C (23 °F to 167 °F)
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 80 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1371 nm
Maximum Tx optical power [dBm]	5.0 dBm
Minimum Tx optical power [dBm]	0 dBm

Item	Value
Minimum extinction ratio [dB]	8.5 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-28.0 dBm
Overload power [dBm]	-9.0 dBm

10.8.7 CWDM-SFPGE-1391

Table 10-47 CWDM-SFPGE-1391 specifications

Item	Value
Basic Information	
Module name	CWDM-SFPGE-1391
Part Number	02312AWV
Model	CWDM-SFPGE-1391
Form factor	eSFP
Application standard	GE-CWDM
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	-5 °C to +75 °C (23 °F to 167 °F)
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 80 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1391 nm
Maximum Tx optical power [dBm]	5.0 dBm
Minimum Tx optical power [dBm]	0 dBm
Minimum extinction ratio [dB]	8.5 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-28.0 dBm
Overload power [dBm]	-9.0 dBm

10.8.8 CWDM-SFPGE-1411

Table 10-48 CWDM-SFPGE-1411 specifications

Item	Value
Basic Information	
Module name	CWDM-SFPGE-1411
Part Number	02312AWU
Model	CWDM-SFPGE-1411
Form factor	eSFP
Application standard	GE-CWDM
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	-5 °C to +75 °C (23 °F to 167 °F)
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 80 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1411 nm
Maximum Tx optical power [dBm]	5.0 dBm
Minimum Tx optical power [dBm]	0 dBm
Minimum extinction ratio [dB]	8.5 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-28.0 dBm
Overload power [dBm]	-9.0 dBm

10.8.9 CWDM-SFPGE-1431

Table 10-49 CWDM-SFPGE-1431 specifications

Item	Value
Basic Information	
Module name	CWDM-SFPGE-1431
Part Number	02312AWT
Model	CWDM-SFPGE-1431

Item	Value
Form factor	eSFP
Application standard	GE-CWDM
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	-5 °C to +75 °C (23 °F to 167 °F)
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 80 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1431 nm
Maximum Tx optical power [dBm]	5.0 dBm
Minimum Tx optical power [dBm]	0 dBm
Minimum extinction ratio [dB]	8.5 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-28.0 dBm
Overload power [dBm]	-9.0 dBm

10.8.10 CWDM-SFPGE-1451

Table 10-50 CWDM-SFPGE-1451 specifications

Item	Value
Basic Information	
Module name	CWDM-SFPGE-1451
Part Number	02312AWS
Model	CWDM-SFPGE-1451
Form factor	eSFP
Application standard	GE-CWDM
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	-5 °C to +75 °C (23 °F to 167 °F)
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 80 km

Item	Value
Transmitter Optical Characteristics	
Center wavelength [nm]	1451 nm
Maximum Tx optical power [dBm]	5.0 dBm
Minimum Tx optical power [dBm]	0 dBm
Minimum extinction ratio [dB]	8.5 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-28.0 dBm
Overload power [dBm]	-9.0 dBm

10.9 GE-DWDM eSFP Optical Modules

10.9.1 DWDM-SFPGE-1560-61

Table 10-51 DWDM-SFPGE-1560-61 specifications

Item	Value
Basic Information	
Module name	DWDM-SFPGE-1560-61
Part Number	02310LLE
Model	DWDM-SFPGE-1560-61
Form factor	eSFP
Application standard	GE-DWDM
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0 °C to 70 °C (32 °F to 158 °F)
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 120 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1560.61 nm
Maximum Tx optical power [dBm]	4.0 dBm
Minimum Tx optical power [dBm]	0 dBm

Item	Value
Minimum extinction ratio [dB]	8.2 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-28.0 dBm
Overload power [dBm]	-8.0 dBm

10.10 GE SFP Copper Modules

10.10.1 SFP-1000BaseT

Table 10-52 SFP-1000BaseT specifications

Item	Value
Basic Information	
Module name	SFP-1000BaseT
Part Number	02314171
Model	SFP-1000BaseT
Form factor	SFP
Application standard	1000BASE-T
Connector type	RJ45
Optical fiber type	-
Transmission rate [bit/s]	10 Mbit/s 100 Mbit/s 1 Gbit/s
Target transmission distance [km]	Ethernet cable: 0.1 km
Transmitter Optical Characteristics	
Center wavelength [nm]	-
Maximum Tx optical power [dBm]	-
Minimum Tx optical power [dBm]	-
Minimum extinction ratio [dB]	-
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-
Overload power [dBm]	-

Item	Value
NOTE	
The supported rate depends on the interface.	
Surge protection specifications: ± 1 kV in common mode	

10.11 SFP Stack Optical Modules

10.11.1 SFP-6GE-LR

Table 10-53 SFP-6GE-LR specifications

Item	Value
Basic Information	
Module name	SFP-6GE-LR
Part Number	02310SRD
Model	SFP-6GE-LR
Form factor	SFP+
Application standard	6GBASE-LR (non-standard)
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C (°F)]	-40 °C to +85 °C (-40 °F to +185 °F)
Transmission rate [bit/s]	6 Gbit/s
Target transmission distance [km]	Single-mode fiber: 2 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1310 nm
Maximum Tx optical power [dBm]	0.5 dBm
Minimum Tx optical power [dBm]	-8.4 dBm
Minimum extinction ratio [dB]	3.5 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-13.8 dBm
Overload power [dBm]	0.5 dBm

10.12 10GE SFP+ Optical Modules

10.12.1 OMXD30000

Table 10-54 OMXD30000 specifications

Item	Value
Basic Information	
Module name	OMXD30000
Part Number	02318169
Model	OMXD30000
Form factor	SFP+
Application standard	10GBASE-SR
Connector type	LC
Optical fiber type	MMF
Working case temperature [°C(°F)]	0 °C to 70 °C (32 °F to 158 °F)
Transmission rate [bit/s]	10 Gbit/s
Target transmission distance [km]	Multimode fiber (with modal bandwidth of 160 MHz*km and diameter of 62.5 μm): 0.026 km Multimode fiber (OM1): 0.033 km Multimode fiber (with modal bandwidth of 400 MHz*km and diameter of 50 μm): 0.066 km Multimode fiber (OM2): 0.082 km Multimode fiber (OM3): 0.3 km Multimode fiber (OM4): 0.4 km
Transmitter Optical Characteristics	
Center wavelength [nm]	850 nm
Maximum Tx optical power [dBm]	-1.0 dBm
Minimum Tx optical power [dBm]	-7.3 dBm
Minimum extinction ratio [dB]	3.0 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-11.1 dBm
Overload power [dBm]	-1.0 dBm

10.12.2 OSX010000

Table 10-55 OSX010000 specifications

Item	Value
Basic Information	
Module name	OSX010000
Part Number	02318170
Model	OSX010000
Form factor	SFP+
Application standard	10GBASE-LR
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0 °C to 70 °C (32 °F to 158 °F)
Transmission rate [bit/s]	10 Gbit/s
Target transmission distance [km]	Single-mode fiber: 10 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1310 nm
Maximum Tx optical power [dBm]	0.5 dBm
Minimum Tx optical power [dBm]	-8.2 dBm
Minimum extinction ratio [dB]	3.5 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-12.6 dBm
Overload power [dBm]	0.5 dBm

10.12.3 OSX040N01

Table 10-56 OSX040N01 specifications

Item	Value
Basic Information	
Module name	OSX040N01
Part Number	02310CNF
Model	OSX040N01

Item	Value
Form factor	SFP+
Application standard	10GBASE-ER
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0 °C to 70 °C (32 °F to 158 °F)
Transmission rate [bit/s]	10 Gbit/s
Target transmission distance [km]	Single-mode fiber: 40 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1550 nm
Maximum Tx optical power [dBm]	4.0 dBm
Minimum Tx optical power [dBm]	-4.7 dBm
Minimum extinction ratio [dB]	3.0 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-14.1 dBm
Overload power [dBm]	-1.0 dBm

10.12.4 OSXD22N00

Table 10-57 OSXD22N00 specifications

Item	Value
Basic Information	
Module name	OSXD22N00
Part Number	02310CRM
Model	OSXD22N00
Form factor	SFP+
Application standard	10GBASE-LRM
Connector type	LC
Optical fiber type	MMF
Working case temperature [°C(°F)]	0 °C to 70 °C (32 °F to 158 °F)
Transmission rate [bit/s]	10 Gbit/s
Target transmission distance [km]	Multimode fiber (with modal bandwidth of

Item	Value
	400 MHz*km and diameter of 50 μm): 0.1 km Multimode fiber (with modal bandwidth of 500 MHz*km and diameter of 62.5 μm): 0.22 km Multimode fiber (OM1, OM2, OM3): 0.22 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1310 nm
Maximum Tx optical power [dBm]	0.5 dBm
Minimum Tx optical power [dBm]	-6.5 dBm
Minimum extinction ratio [dB]	3.5 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-6.5 dBm
Overload power [dBm]	1.5 dBm

10.12.5 SFP-10G-BXD1

Table 10-58 SFP-10G-BXD1 specifications

Item	Value
Basic Information	
Module name	SFP-10G-BXD1
Part Number	02310QDT
Model	SFP-10G-BXD1
Form factor	SFP+
Application standard	10GBASE-BX
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	-40 °C to +85 °C (-40 °F to +185 °F)
Transmission rate [bit/s]	10 Gbit/s
Target transmission distance [km]	Single-mode fiber: 10 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1270 nm (RX)

Item	Value
	1330 nm (TX)
Maximum Tx optical power [dBm]	0.5 dBm
Minimum Tx optical power [dBm]	-8.2 dBm
Minimum extinction ratio [dB]	3.5 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-14.4 dBm
Overload power [dBm]	0.5 dBm
NOTE This module supports the single-fiber bidirectional function. Single-fiber bidirectional (BIDI) optical modules must be used in pairs. For example, SFP-10G-BXD1 must be used with SFP-10G-BXU1.	

10.12.6 SFP-10G-BXU1

Table 10-59 SFP-10G-BXU1 specifications

Item	Value
Basic Information	
Module name	SFP-10G-BXU1
Part Number	02310QBJ
Model	SFP-10G-BXU1
Form factor	SFP+
Application standard	10GBASE-BX
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	-40 °C to +85 °C (-40 °F to +185 °F)
Transmission rate [bit/s]	10 Gbit/s
Target transmission distance [km]	Single-mode fiber: 10 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1330 nm (RX) 1270 nm (TX)
Maximum Tx optical power [dBm]	0.5 dBm
Minimum Tx optical power [dBm]	-8.2 dBm

Item	Value
Minimum extinction ratio [dB]	3.5 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-14.4 dBm
Overload power [dBm]	0.5 dBm
NOTE This module supports the single-fiber bidirectional function. Single-fiber bidirectional (BIDI) optical modules must be used in pairs. For example, SFP-10G-BXU1 must be used with SFP-10G-BXD1.	

10.12.7 SFP-10G-ER-1310

Table 10-60 SFP-10G-ER-1310 specifications

Item	Value
Basic Information	
Module name	SFP-10G-ER-1310
Part Number	02311RLX
Model	SFP-10G-ER-1310
Form factor	SFP+
Application standard	Non-standard and compatible with the 10Gbase-ER
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0 °C to 70 °C (32 °F to 158 °F)
Transmission rate [bit/s]	10 Gbit/s
Target transmission distance [km]	Single-mode fiber: 40 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1310 nm
Maximum Tx optical power [dBm]	4.0 dBm
Minimum Tx optical power [dBm]	-2.0 dBm
Minimum extinction ratio [dB]	3.5 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-20 dBm

Item	Value
Overload power [dBm]	-7.0 dBm
<p>NOTE</p> <p>If the SFP-10G-ER-1310 is connected to a 10Gbase-ER standard optical module (1550nm, 10GE, 40km), the maximum transmission distance is only 20km due to different specifications such as wavelength and receiving sensitivity.</p> <p>This module can only be used on a switch running V200R010C00 or a later version.</p>	

10.12.8 SFP-10G-ER-C

Table 10-61 SFP-10G-ER-C specifications

Item	Value
Basic Information	
Module name	SFP-10G-ER-C
Part Number	02312UUH
Model	SFP-10G-ER-C
Form factor	SFP+
Application standard	10GBASE-ER
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0 °C to 70 °C (32 °F to 158 °F)
Transmission rate [bit/s]	10 Gbit/s
Target transmission distance [km]	Single-mode fiber: 40 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1550 nm
Maximum Tx optical power [dBm]	4.0 dBm
Minimum Tx optical power [dBm]	-4.7 dBm
Minimum extinction ratio [dB]	3.0 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-14.1 dBm
Overload power [dBm]	-1.0 dBm

10.12.9 SFP-10G-ER-SM1270-BIDI

Table 10-62 SFP-10G-ER-SM1270-BIDI specifications

Item	Value
Basic Information	
Module name	SFP-10G-ER-SM1270-BIDI
Part Number	02311BJC
Model	SFP-10G-ER-SM1270-BIDI
Form factor	SFP+
Application standard	10GBASE-BX
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0 °C to 70 °C (32 °F to 158 °F)
Transmission rate [bit/s]	10 Gbit/s
Target transmission distance [km]	Single-mode fiber: 40 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1330 nm (RX) 1270 nm (TX)
Maximum Tx optical power [dBm]	5 dBm
Minimum Tx optical power [dBm]	0 dBm
Minimum extinction ratio [dB]	3.5 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-18 dBm
Overload power [dBm]	-9 dBm
NOTE This module supports the single-fiber bidirectional function. This module can only be used on a switch running V200R009C00 or a later version. A switch running an earlier version may fail to obtain information about this module. Single-fiber bidirectional (BIDI) optical modules must be used in pairs. For example, SFP-10G-ER-SM1270-BIDI must be used with SFP-10G-ER-SM1330-BIDI.	

10.12.10 SFP-10G-ER-SM1330-BIDI

Table 10-63 SFP-10G-ER-SM1330-BIDI specifications

Item	Value
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Item	Value
Basic Information	
Module name	SFP-10G-ER-SM1330-BIDI
Part Number	02311BJB
Model	SFP-10G-ER-SM1330-BIDI
Form factor	SFP+
Application standard	10GBASE-BX
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0 °C to 70 °C (32 °F to 158 °F)
Transmission rate [bit/s]	10 Gbit/s
Target transmission distance [km]	Single-mode fiber: 40 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1270 nm (RX) 1330 nm (TX)
Maximum Tx optical power [dBm]	5 dBm
Minimum Tx optical power [dBm]	0 dBm
Minimum extinction ratio [dB]	3.5 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-18 dBm
Overload power [dBm]	-9 dBm
NOTE This module supports the single-fiber bidirectional function. This module can only be used on a switch running V200R009C00 or a later version. A switch running an earlier version may fail to obtain information about this module. Single-fiber bidirectional (BIDI) optical modules must be used in pairs. For example, SFP-10G-ER-SM1330-BIDI must be used with SFP-10G-ER-SM1270-BIDI.	

10.12.11 SFP-10G-LR-C

Table 10-64 SFP-10G-LR-C specifications

Item	Value
Basic Information	
Module name	SFP-10G-LR-C

Item	Value
Part Number	02312UUG
Model	SFP-10G-LR-C
Form factor	SFP+
Application standard	10GBASE-LR
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0 °C to 70 °C (32 °F to 158 °F)
Transmission rate [bit/s]	10 Gbit/s
Target transmission distance [km]	Single-mode fiber: 10 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1310 nm
Maximum Tx optical power [dBm]	0.5 dBm
Minimum Tx optical power [dBm]	-8.2 dBm
Minimum extinction ratio [dB]	3.5 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-12.6 dBm
Overload power [dBm]	0.5 dBm

10.12.12 SFP-10G-SR-C

Table 10-65 SFP-10G-SR-C specifications

Item	Value
Basic Information	
Module name	SFP-10G-SR-C
Part Number	02312UUE
Model	SFP-10G-SR-C
Form factor	SFP+
Application standard	10GBASE-SR
Connector type	LC
Optical fiber type	MMF
Working case temperature [°C(°F)]	0 °C to 70 °C (32 °F to 158 °F)

Item	Value
Transmission rate [bit/s]	10 Gbit/s
Target transmission distance [km]	Multimode fiber (with modal bandwidth of 160 MHz*km and diameter of 62.5 μm): 0.026 km Multimode fiber (OM1): 0.033 km Multimode fiber (with modal bandwidth of 400 MHz*km and diameter of 50 μm): 0.066 km Multimode fiber (OM2): 0.082 km Multimode fiber (OM3): 0.3 km Multimode fiber (OM4): 0.4 km
Transmitter Optical Characteristics	
Center wavelength [nm]	850 nm
Maximum Tx optical power [dBm]	-1.0 dBm
Minimum Tx optical power [dBm]	-7.3 dBm
Minimum extinction ratio [dB]	3.0 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-11.1 dBm
Overload power [dBm]	-1.0 dBm

10.12.13 SFP-10G-USR

Table 10-66 SFP-10G-USR specifications

Item	Value
Basic Information	
Module name	SFP-10G-USR
Part Number	02310MNW
Model	SFP-10G-USR
Form factor	SFP+
Application standard	10GBASE-USR (non-standard)
Connector type	LC
Optical fiber type	MMF
Working case temperature [°C(°F)]	0 °C to 70 °C (32 °F to 158 °F)
Transmission rate [bit/s]	10 Gbit/s

Item	Value
Target transmission distance [km]	Multimode fiber (OM3): 0.1 km
Transmitter Optical Characteristics	
Center wavelength [nm]	850 nm
Maximum Tx optical power [dBm]	-1.0 dBm
Minimum Tx optical power [dBm]	-7.3 dBm
Minimum extinction ratio [dB]	3.0 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-10.7 dBm
Overload power [dBm]	0.5 dBm

10.12.14 SFP-10G-ZR

Table 10-67 SFP-10G-ZR specifications

Item	Value
Basic Information	
Module name	SFP-10G-ZR
Part Number	02310SNN
Model	SFP-10G-ZR
Form factor	SFP+
Application standard	10GBASE-ZR
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0 °C to 70 °C (32 °F to 158 °F)
Transmission rate [bit/s]	10 Gbit/s
Target transmission distance [km]	Single-mode fiber: 80 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1550 nm
Maximum Tx optical power [dBm]	4.0 dBm
Minimum Tx optical power [dBm]	0 dBm
Minimum extinction ratio [dB]	9 dB
Receiver Optical Characteristics	

Item	Value
Rx sensitivity [dBm]	-24.0 dBm
Overload power [dBm]	-7.0 dBm

10.12.15 SFP-10G-iLR

Table 10-68 SFP-10G-iLR specifications

Item	Value
Basic Information	
Module name	SFP-10G-iLR
Part Number	02311BJJ
Model	SFP-10G-iLR
Form factor	SFP+
Application standard	10GBASE-iLR (non-standard)
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	-40 °C to +85 °C (-40 °F to +185 °F)
Transmission rate [bit/s]	10 Gbit/s
Target transmission distance [km]	Single-mode fiber: 1.4 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1310 nm
Maximum Tx optical power [dBm]	0.5 dBm
Minimum Tx optical power [dBm]	-8.2 dBm
Minimum extinction ratio [dB]	3.5 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-14.4 dBm
Overload power [dBm]	0.5 dBm
NOTE This module can only be used on a switch running V200R008C00 or a later version. A switch running an earlier version may fail to obtain information about this module.	

10.12.16 SFP-10G-iLR-C

Table 10-69 SFP-10G-iLR-C specifications

Item	Value
Basic Information	
Module name	SFP-10G-iLR-C
Part Number	02312UUF
Model	SFP-10G-iLR-C
Form factor	SFP+
Application standard	10GBASE-iLR (non-standard)
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	-40 °C to +85 °C (-40 °F to +185 °F)
Transmission rate [bit/s]	10 Gbit/s
Target transmission distance [km]	Single-mode fiber: 1.4 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1310 nm
Maximum Tx optical power [dBm]	0.5 dBm
Minimum Tx optical power [dBm]	-8.2 dBm
Minimum extinction ratio [dB]	3.5 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-14.4 dBm
Overload power [dBm]	0.5 dBm
NOTE This module can only be used on a switch running V200R008C00 or a later version. A switch running an earlier version may fail to obtain information about this module.	

10.12.17 SFP+10GE-LH10-SM1310

Table 10-70 SFP+10GE-LH10-SM1310 specifications

Item	Value
Basic Information	
Module name	SFP+10GE-LH10-SM1310

Item	Value
Part Number	02311MUU
Model	SFP+10GE-LH10-SM1310
Form factor	SFP+
Application standard	10GBASE-LR
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	-40 °C to +85 °C (-40 °F to +185 °F)
Transmission rate [bit/s]	10 Gbit/s
Target transmission distance [km]	Single-mode fiber: 10 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1310 nm
Maximum Tx optical power [dBm]	0.5 dBm
Minimum Tx optical power [dBm]	-8.2 dBm
Minimum extinction ratio [dB]	3.5 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-14.4 dBm
Overload power [dBm]	0.5 dBm

10.12.18 SFP-10G-SR

Table 10-71 SFP-10G-SR specifications

Item	Value
Basic Information	
Module name	SFP-10G-SR
Part Number	02311SKW
Model	SFP-10G-SR
Form factor	SFP+
Application standard	10GBASE-SR
Connector type	LC
Optical fiber type	MMF
Working case temperature [°C(°F)]	0 °C to 85 °C (32 °F to 185 °F)

Item	Value
Transmission rate [bit/s]	10 Gbit/s
Target transmission distance [km]	Multimode fiber (OM3): 0.3 km
Transmitter Optical Characteristics	
Center wavelength [nm]	850 nm
Maximum Tx optical power [dBm]	-1.0 dBm
Minimum Tx optical power [dBm]	-7.3 dBm
Minimum extinction ratio [dB]	3.0 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-11.1 dBm
Overload power [dBm]	-1.0 dBm

10.13 10GE-CWDM SFP+ Optical Modules

10.13.1 SFP-10G-ZCW1471

Table 10-72 SFP-10G-ZCW1471 specifications

Item	Value
Basic Information	
Module name	SFP-10G-ZCW1471
Part Number	02310SSG
Model	SFP-10G-ZCW1471
Form factor	SFP+
Application standard	10G-CWDM
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0 °C to 70 °C (32 °F to 158 °F)
Transmission rate [bit/s]	10 Gbit/s
Target transmission distance [km]	Single-mode fiber: 70 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1471 nm

Item	Value
Maximum Tx optical power [dBm]	4.0 dBm
Minimum Tx optical power [dBm]	0 dBm
Minimum extinction ratio [dB]	8.2 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-23.0 dBm
Overload power [dBm]	-7.0 dBm

10.13.2 SFP-10G-ZCW1491

Table 10-73 SFP-10G-ZCW1491 specifications

Item	Value
Basic Information	
Module name	SFP-10G-ZCW1491
Part Number	02310SSF
Model	SFP-10G-ZCW1491
Form factor	SFP+
Application standard	10G-CWDM
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0 °C to 70 °C (32 °F to 158 °F)
Transmission rate [bit/s]	10 Gbit/s
Target transmission distance [km]	Single-mode fiber: 70 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1491 nm
Maximum Tx optical power [dBm]	4.0 dBm
Minimum Tx optical power [dBm]	0 dBm
Minimum extinction ratio [dB]	8.2 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-23.0 dBm
Overload power [dBm]	-7.0 dBm

10.13.3 SFP-10G-ZCW1511

Table 10-74 SFP-10G-ZCW1511 specifications

Item	Value
Basic Information	
Module name	SFP-10G-ZCW1511
Part Number	02310SSE
Model	SFP-10G-ZCW1511
Form factor	SFP+
Application standard	10G-CWDM
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0 °C to 70 °C (32 °F to 158 °F)
Transmission rate [bit/s]	10 Gbit/s
Target transmission distance [km]	Single-mode fiber: 70 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1511 nm
Maximum Tx optical power [dBm]	4.0 dBm
Minimum Tx optical power [dBm]	0 dBm
Minimum extinction ratio [dB]	8.2 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-23.0 dBm
Overload power [dBm]	-7.0 dBm

10.13.4 SFP-10G-ZCW1531

Table 10-75 SFP-10G-ZCW1531 specifications

Item	Value
Basic Information	
Module name	SFP-10G-ZCW1531
Part Number	02310SSD
Model	SFP-10G-ZCW1531

Item	Value
Form factor	SFP+
Application standard	10G-CWDM
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0 °C to 70 °C (32 °F to 158 °F)
Transmission rate [bit/s]	10 Gbit/s
Target transmission distance [km]	Single-mode fiber: 70 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1531 nm
Maximum Tx optical power [dBm]	4.0 dBm
Minimum Tx optical power [dBm]	0 dBm
Minimum extinction ratio [dB]	8.2 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-23.0 dBm
Overload power [dBm]	-7.0 dBm

10.13.5 SFP-10G-ZCW1551

Table 10-76 SFP-10G-ZCW1551 specifications

Item	Value
Basic Information	
Module name	SFP-10G-ZCW1551
Part Number	02310SSC
Model	SFP-10G-ZCW1551
Form factor	SFP+
Application standard	10G-CWDM
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0 °C to 70 °C (32 °F to 158 °F)
Transmission rate [bit/s]	10 Gbit/s
Target transmission distance [km]	Single-mode fiber: 70 km

Item	Value
Transmitter Optical Characteristics	
Center wavelength [nm]	1551 nm
Maximum Tx optical power [dBm]	4.0 dBm
Minimum Tx optical power [dBm]	0 dBm
Minimum extinction ratio [dB]	8.2 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-23.0 dBm
Overload power [dBm]	-7.0 dBm

10.13.6 SFP-10G-ZCW1571

Table 10-77 SFP-10G-ZCW1571 specifications

Item	Value
Basic Information	
Module name	SFP-10G-ZCW1571
Part Number	02310SSB
Model	SFP-10G-ZCW1571
Form factor	SFP+
Application standard	10G-CWDM
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0 °C to 70 °C (32 °F to 158 °F)
Transmission rate [bit/s]	10 Gbit/s
Target transmission distance [km]	Single-mode fiber: 70 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1571 nm
Maximum Tx optical power [dBm]	4.0 dBm
Minimum Tx optical power [dBm]	0 dBm
Minimum extinction ratio [dB]	8.2 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-23.0 dBm

Item	Value
Overload power [dBm]	-7.0 dBm

10.13.7 SFP-10G-ZCW1591

Table 10-78 SFP-10G-ZCW1591 specifications

Item	Value
Basic Information	
Module name	SFP-10G-ZCW1591
Part Number	02310SSA
Model	SFP-10G-ZCW1591
Form factor	SFP+
Application standard	10G-CWDM
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0 °C to 70 °C (32 °F to 158 °F)
Transmission rate [bit/s]	10 Gbit/s
Target transmission distance [km]	Single-mode fiber: 70 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1591 nm
Maximum Tx optical power [dBm]	4.0 dBm
Minimum Tx optical power [dBm]	0 dBm
Minimum extinction ratio [dB]	8.2 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-23.0 dBm
Overload power [dBm]	-7.0 dBm

10.13.8 SFP-10G-ZCW1611

Table 10-79 SFP-10G-ZCW1611 specifications

Item	Value
Basic Information	

Item	Value
Module name	SFP-10G-ZCW1611
Part Number	02310SR Y
Model	SFP-10G-ZCW1611
Form factor	SFP+
Application standard	10G-CWDM
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0 °C to 70 °C (32 °F to 158 °F)
Transmission rate [bit/s]	10 Gbit/s
Target transmission distance [km]	Single-mode fiber: 70 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1611 nm
Maximum Tx optical power [dBm]	4.0 dBm
Minimum Tx optical power [dBm]	0 dBm
Minimum extinction ratio [dB]	8.2 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-23.0 dBm
Overload power [dBm]	-7.0 dBm

10.14 10GE-DWDM SFP+ Optical Modules

10.14.1 SFP-10G-ZDWT

Table 10-80 SFP-10G-ZDWT specifications

Item	Value
Basic Information	
Module name	SFP-10G-ZDWT
Part Number	02310YUT
Model	SFP-10G-ZDWT
Form factor	SFP+

Item	Value
Application standard	10GBASE-DWDM
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0 °C to 70 °C (32 °F to 158 °F)
Transmission rate [bit/s]	10 Gbit/s
Target transmission distance [km]	Single-mode fiber: 60 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1529.16 nm - 1560.61 nm
Maximum Tx optical power [dBm]	3 dBm
Minimum Tx optical power [dBm]	-1 dBm
Minimum extinction ratio [dB]	8.2 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-24 dBm
Overload power [dBm]	-1 dBm
NOTE	
This module can only be used on a switch running V200R009C00 or a later version. A switch running an earlier version may fail to obtain information about this module.	
The optical module takes a long time to start. Therefore, a low optical power alarm may be generated when such an optical module is installed on a switch.	

10.15 25GE SFP28 Optical Modules

10.15.1 SFP-25G-LR

Table 10-81 SFP-25G-LR specifications

Item	Value
Basic Information	
Module name	SFP-25G-LR
Part Number	02312LSE
Model	SFP-25G-LR
Form factor	SFP28
Application standard	25GBASE-LR

Item	Value
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	-40 °C to +85 °C (-40 °F to +185 °F)
Transmission rate [bit/s]	25 Gbit/s
Target transmission distance [km]	Single-mode fiber: 10 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1310 nm
Maximum Tx optical power [dBm]	2 dBm
Minimum Tx optical power [dBm]	-7 dBm
Minimum extinction ratio [dB]	3.5 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-11.3 dBm
Overload power [dBm]	2 dBm

10.15.2 SFP-25G-SR

Table 10-82 SFP-25G-SR specifications

Item	Value
Basic Information	
Module name	SFP-25G-SR
Part Number	02311KNR
Model	SFP-25G-SR
Form factor	SFP28
Application standard	25GBASE-SR
Connector type	LC
Optical fiber type	MMF
Working case temperature [°C(°F)]	0 °C to 70 °C (32 °F to 158 °F)
Transmission rate [bit/s]	25 Gbit/s
Target transmission distance [km]	Multimode fiber (OM3): - Disables the RS-FEC function: 0.03 km - Enables the RS-FEC function: 0.07 km

Item	Value
	Multimode fiber (OM4): - Disables the RS-FEC function: 0.04 km - Enables the RS-FEC function: 0.1 km
Transmitter Optical Characteristics	
Center wavelength [nm]	850 nm
Maximum Tx optical power [dBm]	2.4 dBm
Minimum Tx optical power [dBm]	-8.4 dBm
Minimum extinction ratio [dB]	2 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-10.3 dBm
Overload power [dBm]	2.4 dBm

10.15.3 SFP-25G-ESR

Table 10-83 SFP-25G-ESR specifications

Item	Value
Basic Information	
Module name	SFP-25G-ESR
Part Number	02313JFQ
Model	SFP-25G-ESR
Form factor	SFP28
Application standard	25GBASE-ESR (non-standard)
Connector type	LC
Optical fiber type	MMF
Working case temperature [°C(°F)]	0 °C to 70 °C (32 °F to 158 °F)
Transmission rate [bit/s]	10/25 Gbit/s
Target transmission distance [km]	Multimode fiber (OM3): 0.3 km Multimode fiber (OM4): 0.4 km
Transmitter Optical Characteristics	
Center wavelength [nm]	850 nm
Maximum Tx optical power [dBm]	2.4 dBm
Minimum Tx optical power [dBm]	-6.4 dBm

Item	Value
Minimum extinction ratio [dB]	2 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-10.3 dBm
Overload power [dBm]	2.4 dBm
NOTE This module can only be used on a switch running V200R020C10 or a later version. When the optical module works on a 25GE port, the rate can be set to 10GE using commands. When the optical module works at the rate of 25 Gbit/s, the maximum transmission distance of the optical module depends on the quality of the optical fiber.	

10.16 40GE QSFP+ Optical Modules

10.16.1 QSFP-40G-ER4

Table 10-84 QSFP-40G-ER4 specifications

Item	Value
Basic Information	
Module name	QSFP-40G-ER4
Part Number	02311BKT
Model	QSFP-40G-ER4
Form factor	QSFP+
Application standard	40GBASE-ER4
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0 °C to 70 °C (32 °F to 158 °F)
Transmission rate [bit/s]	40 Gbit/s
Target transmission distance [km]	Single-mode fiber: 40 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1271 nm, 1291 nm, 1311 nm, 1331 nm
Maximum Tx optical power [dBm]	4.5 dBm
Minimum Tx optical power [dBm]	-2.7 dBm
Minimum extinction ratio [dB]	5.5 dB

Item	Value
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-19.5 dBm
Overload power [dBm]	-4.5 dBm
NOTE This module can only be used on a switch running V200R008C00 or a later version. A switch running an earlier version may fail to obtain information about this module.	

10.16.2 QSFP-40G-LR4

Table 10-85 QSFP-40G-LR4 specifications

Item	Value
Basic Information	
Module name	QSFP-40G-LR4
Part Number	02310MHS
Model	QSFP-40G-LR4
Form factor	QSFP+
Application standard	40GBASE-LR4
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0 °C to 70 °C (32 °F to 158 °F)
Transmission rate [bit/s]	40 Gbit/s
Target transmission distance [km]	Single-mode fiber: 10 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1271 nm, 1291 nm, 1311 nm, 1331 nm
Maximum Tx optical power [dBm]	2.3 dBm
Minimum Tx optical power [dBm]	-7.0 dBm
Minimum extinction ratio [dB]	3.5 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-11.5 dBm
Overload power [dBm]	3.3 dBm

10.16.3 QSFP-40G-LX4

Table 10-86 QSFP-40G-LX4 specifications

Item	Value
Basic Information	
Module name	QSFP-40G-LX4
Part Number	02311HNP
Model	QSFP-40G-LX4
Form factor	QSFP+
Application standard	40GBASE-LX4
Connector type	LC
Optical fiber type	<ul style="list-style-type: none">• SMF• MMF
Working case temperature [°C(°F)]	0 °C to 70 °C (32 °F to 158 °F)
Transmission rate [bit/s]	40 Gbit/s
Target transmission distance [km]	Single-mode fiber: 2 km Multimode fiber (OM3): 0.15 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1271 nm, 1291 nm, 1311 nm, 1331 nm
Maximum Tx optical power [dBm]	2.3 dBm
Minimum Tx optical power [dBm]	-7.0 dBm
Minimum extinction ratio [dB]	3.5 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-11.5 dBm
Overload power [dBm]	2.3 dBm
NOTE When QSFP-40G-LX4 optical modules use multimode fibers, the fibers cannot be connected through multiple optical distribution frames (ODFs). This module can only be used on a switch running V200R009C00 or a later version. A switch running an earlier version may fail to obtain information about this module.	

10.16.4 QSFP-40G-SDLC-PAM

Table 10-87 QSFP-40G-SDLC-PAM specifications

Item	Value
Basic Information	
Module name	QSFP-40G-SDLC-PAM
Part Number	02311PUU
Model	QSFP-40G-SDLC-PAM
Form factor	QSFP+
Application standard	40GBASE-PAM4 (non-standard)
Connector type	LC
Optical fiber type	MMF
Working case temperature [°C(°F)]	0 °C to 70 °C (32 °F to 158 °F)
Transmission rate [bit/s]	40 Gbit/s
Target transmission distance [km]	Multimode fiber (OM3): 100 m Multimode fiber (OM4): 150 m
Transmitter Optical Characteristics	
Center wavelength [nm]	850 nm
Maximum Tx optical power [dBm]	2.4 dBm
Minimum Tx optical power [dBm]	-2.5 dBm
Minimum extinction ratio [dB]	3 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-8.0 dBm
Overload power [dBm]	2.4 dBm
NOTE This module can only be used on a switch running V200R011C10 or a later version. This module does not support unidirectional single-fiber communication.	

10.16.5 QSFP-40G-SR-BD

Table 10-88 QSFP-40G-SR-BD specifications

Item	Value
Basic Information	

Item	Value
Module name	QSFP-40G-SR-BD
Part Number	02311FPA
Model	QSFP-40G-SR-BD
Form factor	QSFP+
Application standard	40GBASE-BIDI (non-standard)
Connector type	LC
Optical fiber type	MMF
Working case temperature [°C(°F)]	10 °C to 70 °C (50 °F to 158 °F) NOTICE: Temporary interruption or packet loss may occur on ports of the switch if the operating temperature is below 10 °C (50 °F).
Transmission rate [bit/s]	40 Gbit/s
Target transmission distance [km]	Multimode fiber (OM3): 0.1 km Multimode fiber (OM4): 0.15 km
Transmitter Optical Characteristics	
Center wavelength [nm]	850 nm, 900 nm
Maximum Tx optical power [dBm]	5 dBm
Minimum Tx optical power [dBm]	-4 dBm
Minimum extinction ratio [dB]	4.5 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-4.5 dBm
Overload power [dBm]	5 dBm
NOTE This module cannot be used for CSS or stack connection before the V200R019C10SPC500 version. This module does not support some digital diagnostic monitoring (DDM) function. This module does not support unidirectional single-fiber communication. This module can only be used on a switch running V200R009C00 or a later version. A switch running an earlier version may fail to obtain information about this module.	

10.16.6 QSFP-40G-SR4

Table 10-89 QSFP-40G-SR4 specifications

Item	Value
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Item	Value
Basic Information	
Module name	QSFP-40G-SR4
Part Number	02310MHQ
Model	QSFP-40G-SR4
Form factor	QSFP+
Application standard	40GBASE-SR4
Connector type	MPO/PC (8-strand or 12-strand, type B, female connector)
Optical fiber type	MMF
Working case temperature [°C(°F)]	0 °C to 70 °C (32 °F to 158 °F)
Transmission rate [bit/s]	40 Gbit/s
Target transmission distance [km]	Multimode fiber (OM3): 0.1 km Multimode fiber (OM4): 0.15 km
Transmitter Optical Characteristics	
Center wavelength [nm]	850 nm
Maximum Tx optical power [dBm]	2.4 dBm
Minimum Tx optical power [dBm]	-7.6 dBm
Minimum extinction ratio [dB]	3.0 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-5.4 dBm
Overload power [dBm]	2.4 dBm

10.16.7 QSFP-40G-eSDLC-PAM

Table 10-90 QSFP-40G-eSDLC-PAM specifications

Item	Value
Basic Information	
Module name	QSFP-40G-eSDLC-PAM
Part Number	02311QTR
Model	QSFP-40G-eSDLC-PAM
Form factor	QSFP+

Item	Value
Application standard	40GBASE-ePAM4 (non-standard)
Connector type	LC
Optical fiber type	MMF
Working case temperature [°C(°F)]	0 °C to 70 °C (32 °F to 158 °F)
Transmission rate [bit/s]	40 Gbit/s
Target transmission distance [km]	Multimode fiber (OM3): 100 m Multimode fiber (OM4): 300 m
Transmitter Optical Characteristics	
Center wavelength [nm]	850 nm
Maximum Tx optical power [dBm]	2.4 dBm
Minimum Tx optical power [dBm]	-2 dBm
Minimum extinction ratio [dB]	3 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-8.0 dBm
Overload power [dBm]	2.4 dBm
NOTE This module can only be used on a switch running V200R011C10 or a later version. This module does not support unidirectional single-fiber communication.	

10.16.8 QSFP-40G-eSM4

Table 10-91 QSFP-40G-eSM4 specifications

Item	Value
Basic Information	
Module name	QSFP-40G-eSM4
Part Number	02311DTR
Model	QSFP-40G-eSM4
Form factor	QSFP+
Application standard	40GBASE-eSM4 (non-standard)
Connector type	MPO/APC (8-strand or 12-strand, type B, female connector)
Optical fiber type	SMF

Item	Value
Working case temperature [°C(°F)]	0 °C to 70 °C
Transmission rate [bit/s]	40 Gbit/s
Target transmission distance [km]	Single-mode fiber: 10 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1310 nm
Maximum Tx optical power [dBm]	0.5 dBm
Minimum Tx optical power [dBm]	-8.2 dBm
Minimum extinction ratio [dB]	3.5 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-12.6 dBm
Overload power [dBm]	0.5 dBm
NOTE	
This module can connect a 40GE port to four 10GE ports using a 1-to-4 cable.	
This module can only be used on a switch running V200R010C00 or a later version. A switch running an earlier version may fail to obtain information about this module.	

10.16.9 QSFP-40G-eSR4

Table 10-92 QSFP-40G-eSR4 specifications

Item	Value
Basic Information	
Module name	QSFP-40G-eSR4
Part Number	02310RMB
Model	QSFP-40G-eSR4
Form factor	QSFP+
Application standard	40GBASE-eSR4 (non-standard)
Connector type	MPO/PC (8-strand or 12-strand, type B, female connector)
Optical fiber type	MMF
Working case temperature [°C(°F)]	0 °C to 70 °C (32 °F to 158 °F)
Transmission rate [bit/s]	40 Gbit/s
Target transmission distance [km]	Multimode fiber (with modal bandwidth of 160 MHz*km and diameter of 62.5 μm):

Item	Value
	0.026 km Multimode fiber (OM1): 0.033 km Multimode fiber (with modal bandwidth of 400 MHz*km and diameter of 50 μm): 0.066 km Multimode fiber (OM2): 0.082 km Multimode fiber (OM3): 0.3 km Multimode fiber (OM4): 0.4 km
Transmitter Optical Characteristics	
Center wavelength [nm]	850 nm
Maximum Tx optical power [dBm]	0.5 dBm
Minimum Tx optical power [dBm]	-7.6 dBm
Minimum extinction ratio [dB]	3.0 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-5.4 dBm
Overload power [dBm]	2.4 dBm
NOTE This module can connect a 40GE port to four 10GE ports using a 1-to-4 cable.	

10.16.10 QSFP-40G-iSM4

Table 10-93 QSFP-40G-iSM4 specifications

Item	Value
Basic Information	
Module name	QSFP-40G-iSM4
Part Number	02311DRW
Model	QSFP-40G-iSM4
Form factor	QSFP+
Application standard	40GBASE-iSM4 (non-standard)
Connector type	MPO/APC (8-strand or 12-strand, type B, female connector)
Optical fiber type	SMF
Working case temperature [°C (°F)]	0 °C to 70 °C (32 °F to 158 °F)
Transmission rate [bit/s]	40 Gbit/s

Item	Value
Target transmission distance [km]	Single-mode fiber: 1.4 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1310 nm
Maximum Tx optical power [dBm]	0.5 dBm
Minimum Tx optical power [dBm]	-8.2 dBm
Minimum extinction ratio [dB]	3.5 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-11.5 dBm
Overload power [dBm]	0.5 dBm
NOTE	
This module can connect a 40GE port to four 10GE ports using a 1-to-4 cable.	
This module can only be used on a switch running V200R009C00 or a later version. A switch running an earlier version may fail to obtain information about this module.	

10.16.11 QSFP-40G-iSR4

Table 10-94 QSFP-40G-iSR4 specifications

Item	Value
Basic Information	
Module name	QSFP-40G-iSR4
Part Number	02310MHR
Model	QSFP-40G-iSR4
Form factor	QSFP+
Application standard	40GBASE-SR4 40GBASE-iSR4 (non-standard)
Connector type	MPO/PC (8-strand or 12-strand, type B, female connector)
Optical fiber type	MMF
Working case temperature [°C (°F)]	0 °C to 70 °C (32 °F to 158 °F)
Transmission rate [bit/s]	40 Gbit/s
Target transmission distance [km]	Multimode fiber (OM3): 0.1 km Multimode fiber (OM4): 0.15 km
Transmitter Optical Characteristics	

Item	Value
Center wavelength [nm]	850 nm
Maximum Tx optical power [dBm]	0.5 dBm
Minimum Tx optical power [dBm]	-7.6 dBm
Minimum extinction ratio [dB]	3.0 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-9.5 dBm
Overload power [dBm]	2.4 dBm
NOTE This module can connect a 40GE port to four 10GE ports using a 1-to-4 cable.	

10.17 Industrial Optical Modules

10.17.1 SFP+10GE-LH10-SM1310

Table 10-95 SFP+10GE-LH10-SM1310 specifications

Item	Value
Basic Information	
Module name	SFP+10GE-LH10-SM1310
Part Number	02311MUU
Model	SFP+10GE-LH10-SM1310
Form factor	SFP+
Application standard	10GBASE-LR
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	-40 °C to +85 °C (-40 °F to +185 °F)
Transmission rate [bit/s]	10 Gbit/s
Target transmission distance [km]	Single-mode fiber: 10 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1310 nm
Maximum Tx optical power [dBm]	0.5 dBm
Minimum Tx optical power [dBm]	-8.2 dBm

Item	Value
Minimum extinction ratio [dB]	3.5 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-14.4 dBm
Overload power [dBm]	0.5 dBm

10.17.2 SFP-10G-BXD1

Table 10-96 SFP-10G-BXD1 specifications

Item	Value
Basic Information	
Module name	SFP-10G-BXD1
Part Number	02310QDT
Model	SFP-10G-BXD1
Form factor	SFP+
Application standard	10GBASE-BX
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	-40 °C to +85 °C (-40 °F to +185 °F)
Transmission rate [bit/s]	10 Gbit/s
Target transmission distance [km]	Single-mode fiber: 10 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1270 nm (RX) 1330 nm (TX)
Maximum Tx optical power [dBm]	0.5 dBm
Minimum Tx optical power [dBm]	-8.2 dBm
Minimum extinction ratio [dB]	3.5 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-14.4 dBm
Overload power [dBm]	0.5 dBm

Item	Value
NOTE This module supports the single-fiber bidirectional function. Single-fiber bidirectional (BIDI) optical modules must be used in pairs. For example, SFP-10G-BXD1 must be used with SFP-10G-BXU1.	

10.17.3 SFP-10G-BXU1

Table 10-97 SFP-10G-BXU1 specifications

Item	Value
Basic Information	
Module name	SFP-10G-BXU1
Part Number	02310QBJ
Model	SFP-10G-BXU1
Form factor	SFP+
Application standard	10GBASE-BX
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	-40 °C to +85 °C (-40 °F to +185 °F)
Transmission rate [bit/s]	10 Gbit/s
Target transmission distance [km]	Single-mode fiber: 10 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1330 nm (RX) 1270 nm (TX)
Maximum Tx optical power [dBm]	0.5 dBm
Minimum Tx optical power [dBm]	-8.2 dBm
Minimum extinction ratio [dB]	3.5 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-14.4 dBm
Overload power [dBm]	0.5 dBm

Item	Value
NOTE This module supports the single-fiber bidirectional function. Single-fiber bidirectional (BIDI) optical modules must be used in pairs. For example, SFP-10G-BXU1 must be used with SFP-10G-BXD1.	

10.17.4 SFP-10G-SR

Table 10-98 SFP-10G-SR specifications

Item	Value
Basic Information	
Module name	SFP-10G-SR
Part Number	02311SKW
Model	SFP-10G-SR
Form factor	SFP+
Application standard	10GBASE-SR
Connector type	LC
Optical fiber type	MMF
Working case temperature [°C(°F)]	0 °C to 85 °C (32 °F to 185 °F)
Transmission rate [bit/s]	10 Gbit/s
Target transmission distance [km]	Multimode fiber (OM3): 0.3 km
Transmitter Optical Characteristics	
Center wavelength [nm]	850 nm
Maximum Tx optical power [dBm]	-1.0 dBm
Minimum Tx optical power [dBm]	-7.3 dBm
Minimum extinction ratio [dB]	3.0 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-11.1 dBm
Overload power [dBm]	-1.0 dBm

10.17.5 SFP-10G-iLR

Table 10-99 SFP-10G-iLR specifications

Item	Value
Basic Information	
Module name	SFP-10G-iLR
Part Number	02311BJJ
Model	SFP-10G-iLR
Form factor	SFP+
Application standard	10GBASE-iLR (non-standard)
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	-40 °C to +85 °C (-40 °F to +185 °F)
Transmission rate [bit/s]	10 Gbit/s
Target transmission distance [km]	Single-mode fiber: 1.4 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1310 nm
Maximum Tx optical power [dBm]	0.5 dBm
Minimum Tx optical power [dBm]	-8.2 dBm
Minimum extinction ratio [dB]	3.5 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-14.4 dBm
Overload power [dBm]	0.5 dBm
NOTE This module can only be used on a switch running V200R008C00 or a later version. A switch running an earlier version may fail to obtain information about this module.	

10.17.6 SFP-10G-iLR-C

Table 10-100 SFP-10G-iLR-C specifications

Item	Value
Basic Information	
Module name	SFP-10G-iLR-C

Item	Value
Part Number	02312UUF
Model	SFP-10G-iLR-C
Form factor	SFP+
Application standard	10GBASE-iLR (non-standard)
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	-40 °C to +85 °C (-40 °F to +185 °F)
Transmission rate [bit/s]	10 Gbit/s
Target transmission distance [km]	Single-mode fiber: 1.4 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1310 nm
Maximum Tx optical power [dBm]	0.5 dBm
Minimum Tx optical power [dBm]	-8.2 dBm
Minimum extinction ratio [dB]	3.5 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-14.4 dBm
Overload power [dBm]	0.5 dBm
NOTE This module can only be used on a switch running V200R008C00 or a later version. A switch running an earlier version may fail to obtain information about this module.	

10.17.7 OGSC10DD0

Table 10-101 OGSC10DD0 specifications

Item	Value
Basic Information	
Module name	OGSC10DD0
Part Number	02310LJH
Model	OGSC10DD0
Form factor	eSFP
Application standard	1000BASE-LX10/LH
Connector type	LC

Item	Value
Optical fiber type	SMF
Working case temperature [°C(°F)]	-40 °C to +85 °C (-40 °F to +185 °F)
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 10 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1310 nm
Maximum Tx optical power [dBm]	-3.0 dBm
Minimum Tx optical power [dBm]	-9.0 dBm
Minimum extinction ratio [dB]	9.5 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-19 dBm
Overload power [dBm]	-3.0 dBm

10.17.8 OGSC40DD0

Table 10-102 OGSC40DD0 specifications

Item	Value
Basic Information	
Module name	OGSC40DD0
Part Number	02310LJJ
Model	OGSC40DD0
Form factor	eSFP
Application standard	Non-standard
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	-40 °C to +85 °C (-40 °F to +185 °F)
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 40 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1310 nm
Maximum Tx optical power [dBm]	0 dBm

Item	Value
Minimum Tx optical power [dBm]	-5.0 dBm
Minimum extinction ratio [dB]	9 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-22.5 dBm
Overload power [dBm]	-3.0 dBm

10.17.9 OGSM01880

Table 10-103 OGSM01880 specifications

Item	Value
Basic Information	
Module name	OGSM01880
Part Number	02310LJG
Model	OGSM01880
Form factor	eSFP
Application standard	1000BASE-SX
Connector type	LC
Optical fiber type	MMF
Working case temperature [°C(°F)]	-40 °C to +85 °C (-40 °F to +185 °F)
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Multimode fiber (with modal bandwidth of 160 MHz*km and diameter of 62.5 μm): 0.22 km Multimode fiber (OM1): 0.275 km Multimode fiber (with modal bandwidth of 400 MHz*km and diameter of 50 μm): 0.5 km Multimode fiber (OM2): 0.55 km
Transmitter Optical Characteristics	
Center wavelength [nm]	850 nm
Maximum Tx optical power [dBm]	-2.5 dBm
Minimum Tx optical power [dBm]	-10 dBm
Minimum extinction ratio [dB]	9 dB

Item	Value
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-17.0 dBm
Overload power [dBm]	0 dBm

10.17.10 SFP-GE-BX-D1-I

Table 10-104 SFP-GE-BX-D1-I specifications

Item	Value
Basic Information	
Module name	SFP-GE-BX-D1-I
Part Number	02311DMA
Model	SFP-GE-BX-D1-I
Form factor	SFP
Application standard	1000BASE-BX
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	-40 °C to +85 °C (-40 °F to +185 °F)
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 10 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1310 nm (RX) 1490 nm (TX)
Maximum Tx optical power [dBm]	-3 dBm
Minimum Tx optical power [dBm]	-9 dBm
Minimum extinction ratio [dB]	9 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-19.5 dBm
Overload power [dBm]	-3 dBm

Item	Value
NOTE This module supports the single-fiber bidirectional function. This module can only be used on a switch running V200R012C00 or a later version. Single-fiber bidirectional (BIDI) optical modules must be used in pairs. For example, SFP-GE-BX-D1-I must be used with SFP-GE-BX-U1-I.	

10.17.11 SFP-GE-BX-U1-I

Table 10-105 SFP-GE-BX-U1-I specifications

Item	Value
Basic Information	
Module name	SFP-GE-BX-U1-I
Part Number	02311DMF
Model	SFP-GE-BX-U1-I
Form factor	SFP
Application standard	1000BASE-BX
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	-40 °C to +85 °C (-40 °F to +185 °F)
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 10 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1490 nm (RX) 1310 nm (TX)
Maximum Tx optical power [dBm]	-3 dBm
Minimum Tx optical power [dBm]	-9 dBm
Minimum extinction ratio [dB]	9 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-19.5 dBm
Overload power [dBm]	-3 dBm

Item	Value
NOTE This module supports the single-fiber bidirectional function. This module can only be used on a switch running V200R012C00 or a later version. Single-fiber bidirectional (BIDI) optical modules must be used in pairs. For example, SFP-GE-BX-D1-I must be used with SFP-GE-BX-U1-I.	

10.17.12 SFP-GE-BX40-D-I

Table 10-106 SFP-GE-BX40-D-I specifications

Item	Value
Basic Information	
Module name	SFP-GE-BX40-D-I
Part Number	02312TMC
Model	SFP-GE-BX40-D-I
Form factor	SFP
Application standard	1000BASE-BX
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	-40 °C to +85 °C (-40 °F to +185 °F)
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 40 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1310 nm (RX) 1490 nm (TX)
Maximum Tx optical power [dBm]	6.5 dBm
Minimum Tx optical power [dBm]	1.5 dBm
Minimum extinction ratio [dB]	8.2 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-26 dBm
Overload power [dBm]	-7 dBm

Item	Value
NOTE	
This module supports the single-fiber bidirectional function.	
This module can only be used on a switch running V200R019C00 or a later version.	
Single-fiber bidirectional (BIDI) optical modules must be used in pairs. For example, SFP-GE-BX40-D-I must be used with SFP-GE-BX40-U-I.	

10.17.13 SFP-GE-BX40-U-I

Table 10-107 SFP-GE-BX40-U-I specifications

Item	Value
Basic Information	
Module name	SFP-GE-BX40-U-I
Part Number	02312TMB
Model	SFP-GE-BX40-U-I
Form factor	SFP
Application standard	1000BASE-BX
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	-40 °C to +85 °C (-40 °F to +185 °F)
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 40 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1490 nm (RX) 1310 nm (TX)
Maximum Tx optical power [dBm]	6.5 dBm
Minimum Tx optical power [dBm]	1.5 dBm
Minimum extinction ratio [dB]	8.2 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-26 dBm
Overload power [dBm]	-7 dBm

Item	Value
NOTE This module supports the single-fiber bidirectional function. This module can only be used on a switch running V200R019C00 or a later version. Single-fiber bidirectional (BIDI) optical modules must be used in pairs. For example, SFP-GE-BX40-U-I must be used with SFP-GE-BX40-D-I.	

10.18 100GE QSFP28 Optical Modules

10.18.1 QSFP-100G-CLR4

Table 10-108 QSFP-100G-CLR4 specifications

Item	Value
Basic Information	
Module name	QSFP-100G-CLR4
Part Number	02311MNP
Model	QSFP-100G-CLR4
Form factor	QSFP28
Application standard	100GBASE-CLR4 (non-standard)
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0 °C to 70 °C (32 °F to 158 °F)
Transmission rate [bit/s]	100 Gbit/s
Target transmission distance [km]	Single-mode fiber (G.652): 2 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1271 nm, 1291 nm, 1311 nm, 1331 nm
Maximum Tx optical power [dBm]	2.5 dBm
Minimum Tx optical power [dBm]	-6.5 dBm
Minimum extinction ratio [dB]	3.5 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-10.7 dBm
Overload power [dBm]	2.5 dBm

10.18.2 QSFP-100G-CWDM4

Table 10-109 QSFP-100G-CWDM4 specifications

Item	Value
Basic Information	
Module name	QSFP-100G-CWDM4
Part Number	02311MNN
Model	QSFP-100G-CWDM4
Form factor	QSFP28
Application standard	100GBASE-CWDM4 (non-standard)
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0 °C to 70 °C (32 °F to 158 °F)
Transmission rate [bit/s]	100 Gbit/s
Target transmission distance [km]	Single-mode fiber (G.652): 2 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1271 nm, 1291 nm, 1311 nm, 1331 nm
Maximum Tx optical power [dBm]	2.5 dBm
Minimum Tx optical power [dBm]	-6.5 dBm
Minimum extinction ratio [dB]	3.5 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-9.8 dBm
Overload power [dBm]	2.5 dBm

10.18.3 QSFP-100G-ER4-Lite

Table 10-110 QSFP-100G-ER4-Lite specifications

Item	Value
Basic Information	
Module name	QSFP-100G-ER4-Lite
Part Number	02311YXR
Model	QSFP-100G-ER4-Lite

Item	Value
Form factor	QSFP28
Application standard	Non-standard and compatible with the 100GBASE-ER4
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0 °C to 70 °C (32 °F to 158 °F)
Transmission rate [bit/s]	100 Gbit/s
Target transmission distance [km]	Single-mode fiber (G.652): Disables the RS-FEC function: 30 km Enables the RS-FEC function: 40 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1295 nm, 1300 nm, 1304 nm, 1309 nm
Maximum Tx optical power [dBm]	2.9 dBm
Minimum Tx optical power [dBm]	-2.5 dBm
Minimum extinction ratio [dB]	8 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-18.4 dBm
Overload power [dBm]	-3.5 dBm
NOTE This module can only be used on a switch running V200R012C00 or a later version. The RS-FEC function can be enabled on this module in V200R019C00 or a later version.	

10.18.4 QSFP-100G-eSR4

Table 10-111 QSFP-100G-eSR4 specifications

Item	Value
Basic Information	
Module name	QSFP-100G-eSR4
Part Number	02311PSH
Model	QSFP-100G-eSR4
Form factor	QSFP28
Application standard	100GBase-eSR4 (non-standard)

Item	Value
Connector type	MPO/PC (8-strand or 12-strand, type B, female connector)
Optical fiber type	MMF
Working case temperature [°C(°F)]	0 °C to 70 °C (32 °F to 158 °F)
Transmission rate [bit/s]	100 Gbit/s
Target transmission distance [km]	Multimode fiber (OM3): 200 m Multimode fiber (OM4): 300 m
Transmitter Optical Characteristics	
Center wavelength [nm]	850 nm
Maximum Tx optical power [dBm]	2.4 dBm
Minimum Tx optical power [dBm]	-8.4 dBm
Minimum extinction ratio [dB]	2 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-9.2 dBm
Overload power [dBm]	2.4 dBm
NOTE This module can only be used on a switch running V200R011C10 or a later version. A switch running an earlier version may fail to obtain information about this module.	

10.18.5 QSFP28-100G-LR4

Table 10-112 QSFP28-100G-LR4 specifications

Item	Value
Basic Information	
Module name	QSFP28-100G-LR4
Part Number	02311KNU
Model	QSFP28-100G-LR4
Form factor	QSFP28
Application standard	100GBASE-LR4
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0 °C to 70 °C (32 °F to 158 °F)

Item	Value
Transmission rate [bit/s]	100 Gbit/s
Target transmission distance [km]	Single-mode fiber (G.652): 10 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1295 nm, 1300 nm, 1304 nm, 1309 nm
Maximum Tx optical power [dBm]	4.5 dBm
Minimum Tx optical power [dBm]	-4.3 dBm
Minimum extinction ratio [dB]	4 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-8.6 dBm
Overload power [dBm]	4.5 dBm

10.18.6 QSFP28-100G-PSM4

Table 10-113 QSFP28-100G-PSM4 specifications

Item	Value
Basic Information	
Module name	QSFP28-100G-PSM4
Part Number	02311MNM
Model	QSFP28-100G-PSM4
Form factor	QSFP28
Application standard	100GBASE-PSM4 (non-standard)
Connector type	MPO/APC (8-strand or 12-strand, type B, female connector)
Optical fiber type	SMF
Working case temperature [°C(°F)]	0 °C to 70 °C (32 °F to 158 °F)
Transmission rate [bit/s]	100 Gbit/s
Target transmission distance [km]	Single-mode fiber (G.652): 500 m
Transmitter Optical Characteristics	
Center wavelength [nm]	1310 nm
Maximum Tx optical power [dBm]	2 dBm
Minimum Tx optical power [dBm]	-9.4 dBm

Item	Value
Minimum extinction ratio [dB]	3.5 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-11.35 dBm
Overload power [dBm]	2.2 dBm

10.18.7 QSFP28-100G-SR4

Table 10-114 QSFP28-100G-SR4 specifications

Item	Value
Basic Information	
Module name	QSFP28-100G-SR4
Part Number	02311GBW
Model	QSFP28-100G-SR4
Form factor	QSFP28
Application standard	100GBASE-SR4
Connector type	MPO/PC (8-strand or 12-strand, type B, female connector)
Optical fiber type	MMF
Working case temperature [°C (°F)]	0 °C to 70 °C (32 °F to 158 °F)
Transmission rate [bit/s]	100 Gbit/s
Target transmission distance [km]	Multimode fiber (OM3): 70 m Multimode fiber (OM4): 100 m
Transmitter Optical Characteristics	
Center wavelength [nm]	850 nm
Maximum Tx optical power [dBm]	2.4 dBm
Minimum Tx optical power [dBm]	-8.4 dBm
Minimum extinction ratio [dB]	2 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-10.3 dBm
Overload power [dBm]	2.4 dBm

10.18.8 QSFP-100G-ER4

Table 10-115 QSFP-100G-ER4 specifications

Item	Value
Basic Information	
Module name	QSFP-100G-ER4
Part Number	02313HLU
Model	QSFP-100G-ER4
Form factor	QSFP28
Application standard	100GBASE-ER4
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0 °C to 70 °C (32 °F to 158 °F)
Transmission rate [bit/s]	100 Gbit/s
Target transmission distance [km]	Single-mode fiber (G.652): 40 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1295 nm, 1300 nm, 1304 nm, 1309 nm
Maximum Tx optical power [dBm]	2.9 dBm
Minimum Tx optical power [dBm]	-2.9 dBm
Minimum extinction ratio [dB]	8 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-20.9 dBm
Overload power [dBm]	-3.5 dBm
NOTE The RS-FEC function can be enabled on this module.	

10.19 GPON Optical Modules

10.19.1 H87MMA5671A2

Table 10-116 H87MMA5671A2 specifications

Item	Value
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Item	Value
Basic Information	
Module name	H87MMA5671A2
Part Number	03031QHU
Model	H87MMA5671A2
Form factor	eSFP
Application standard	GPON CLASS B+
Connector type	SC
Optical fiber type	SMF
Working case temperature [°C(°F)]	-40 °C to +85 °C (-40 °F to +185 °F)
Transmission rate [bit/s]	Rx: 2.488 Gbit/s Tx: 1.244 Gbit/s
Target transmission distance [km]	Single-mode fiber: 20 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1490 nm (RX) 1310 nm (TX)
Maximum Tx optical power [dBm]	5.0 dBm
Minimum Tx optical power [dBm]	0.5 dBm
Minimum extinction ratio [dB]	10 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-27 dBm
Overload power [dBm]	-8.0 dBm
NOTE Ensure that the optical power is not overloaded. Otherwise, the optical module may be burnt. This module can only be used on a switch running V200R012C00 or a later version. In practice, the maximum upstream service bandwidth is 1.1 Gbit/s and downlink service bandwidth is 2.3 Gbit/s.	

10.20 Optical Modules Dedicated for Hybrid Cables

10.20.1 SFP-10G-iLR-S

Table 10-117 SFP-10G-iLR-S specifications

Item	Value
Basic Information	
Module name	SFP-10G-iLR-S
Part Number	02313CBJ
Model	SFP-10G-iLR-S
Form factor	SFP+
Application standard	10GBASE-iLR (non-standard)
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	-40 °C to +85 °C (-40 °F to +185 °F)
Transmission rate [bit/s]	10 Gbit/s
Target transmission distance [km]	Single-mode fiber: 1.4 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1310 nm
Maximum Tx optical power [dBm]	0.5 dBm
Minimum Tx optical power [dBm]	-8.2 dBm
Minimum extinction ratio [dB]	3.5 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-14.4 dBm
Overload power [dBm]	0.5 dBm
NOTE This optical module can be used together only with a hybrid cable.	

10.20.2 SFP-10G-Hybrid

Table 10-118 SFP-10G-Hybrid specifications

Item	Value
Basic Information	

Item	Value
Module name	SFP-10G-Hybrid
Part Number	02313SGK
Model	SFP-10G-Hybrid
Form factor	SFP+,Hybrid
Application standard	10GBASE-LR
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0 °C to 70 °C (32 °F to 158 °F)
Transmission rate [bit/s]	10 Gbit/s
Target transmission distance [km]	Single-mode fiber: 10 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1310 nm
Maximum Tx optical power [dBm]	0.5 dBm
Minimum Tx optical power [dBm]	-8.2 dBm
Minimum extinction ratio [dB]	3.5 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-14.4 dBm
Overload power [dBm]	0.5 dBm

10.20.3 SFP-GE-Hybrid

Table 10-119 SFP-GE-Hybrid specifications

Item	Value
Basic Information	
Module name	SFP-GE-Hybrid
Part Number	02313SGL
Model	SFP-GE-Hybrid
Form factor	eSFP, Hybrid
Application standard	10GBASE-LR
Connector type	LC
Optical fiber type	SMF

Item	Value
Working case temperature [°C(°F)]	0 °C to 70 °C (32 °F to 158 °F)
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 10 km
Transmitter Optical Characteristics	
Center wavelength [nm]	1310 nm
Maximum Tx optical power [dBm]	-3 dBm
Minimum Tx optical power [dBm]	-9 dBm
Minimum extinction ratio [dB]	6 dB
Receiver Optical Characteristics	
Rx sensitivity [dBm]	-19.5 dBm
Overload power [dBm]	-3 dBm

11 Accessories

- 11.1 [SSD-240GB \(240 GB SSD Card\)](#)
- 11.2 [WLA220W01-20 kA Surge Protector](#)
- 11.3 [OADM Combiner and Circulator](#)

11.1 SSD-240GB (240 GB SSD Card)

Version Mapping

Table 11-1 lists the mapping between the SSD-240GB card and software versions.

Table 11-1 Version mapping

Card Model	Software Version
SSD-240GB	V200R012C00 to V200R019C10 versions

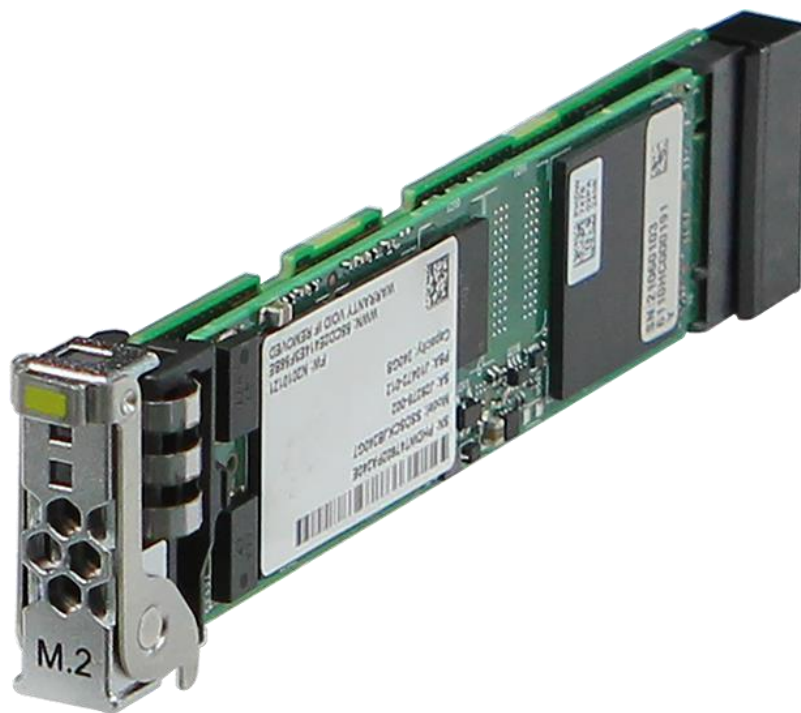
Card Overview

The SSD-240GB can be installed in the SSD card slot at the rear of the S5730-HI.

Table 11-2 Applicable switch models

Card	Switch Model
SSD-240GB	<ul style="list-style-type: none">• S5730-36C-HI• S5730-36C-PWH-HI• S5730-60C-HI• S5730-60C-PWH-HI• S5730-36C-HI-24S• S5730-60C-HI-48S

Figure 11-1 SSD-240GB appearance



Functions

Table 11-3 Functions

Function	Description
Storage space	240 GB NOTE You can only use the display version command to view the storage space of a solid-state drive (SSD), and use the format ssd command to format the SSD.
Hot swapping	Not supported

Indicator Description

Figure 11-2 Indicators on the SSD-240GB

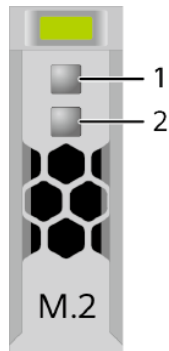


Table 11-4 Indicator description

No.	Indicator	Color	Description
1	Fault indicator	Off	The SSD card is running properly.
		Yellow	Steady on: The SSD card cannot be detected or fails.
2	Active indicator	Off	The SSD card is not in position or fails.
		Green	<ul style="list-style-type: none"> Steady on: The SSD card is in inactive state. Blinking: The SSD card is being read, written to, or synchronized with.

Technical Specifications

Table 11-5 Technical specifications

Item	Description
Physical specifications	<ul style="list-style-type: none"> Dimensions (H x W x D): 25 mm x 8 mm x 110 mm (0.98 in. x 0.31 in. x 4.33 in.) Weight: 0.1 kg (0.22 lb) Maximum power consumption: 3.5 W
Environment specifications	<ul style="list-style-type: none"> Operating temperature: 0 °C to 45 °C (32 °F to 113 °F) Relative humidity: 5% RH to 95% RH Storage temperature: -40 °C to +70 °C (-40 °F to +158 °F)

Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

Table 11-6 provides the SSD-240GB ordering information.

Table 11-6 Ordering information

Card Description	Card Name	Part Number
240 GB SSD card	SSD-240GB	03032TXD

11.2 WLA220W01-20 kA Surge Protector

Overview

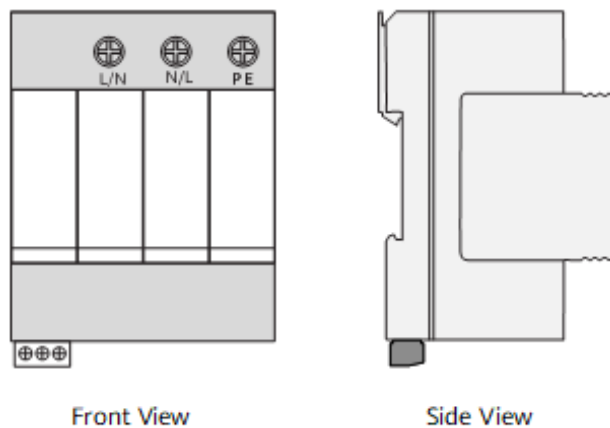
A 20 kA surge protector (model: WLA220W01) protects the 220 V single-phase power system and powered devices against the surge voltage caused by lightning strikes.

Appearance

A 20 kA surge protector uses an integrated base to facilitate installation and maintenance, and provides an alarm port (dry contact point) for remote monitoring.

Figure 11-3 shows the appearance of a 20 kA surge protector.

Figure 11-3 Appearance of a 20 kA surge protector



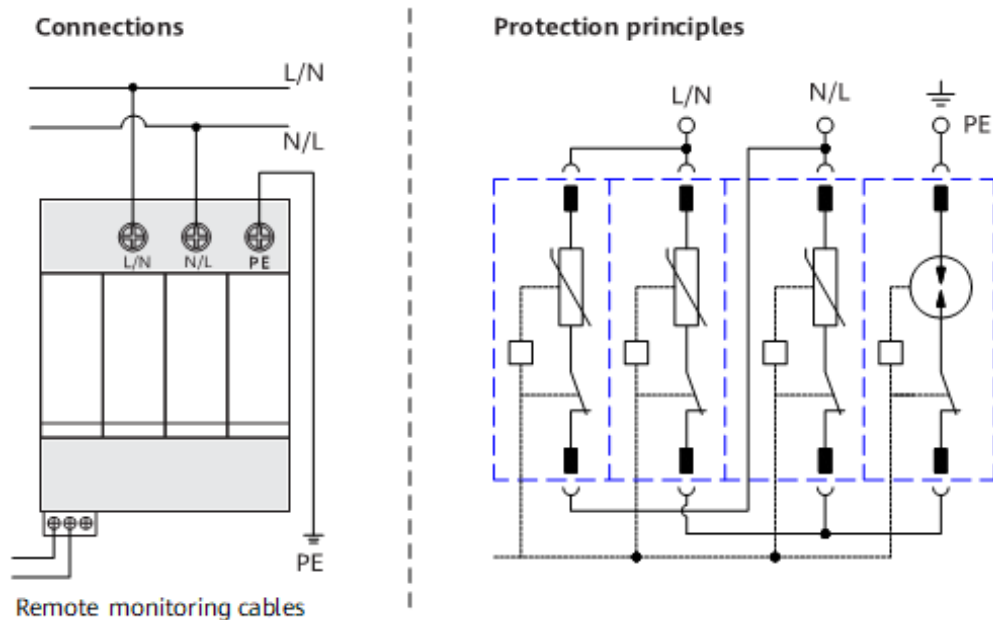
Principles

A 20 kA surge protector uses the 3+1 protection circuit and provides overheat and overcurrent protection. When the surge protector fails, it is automatically disconnected from the power grid to avoid fire caused by a short circuit.

When the status indication window of a surge protector is red, the surge protector fails and must be replaced immediately. If a remote alarm buzzer is connected to the surge protector, the alarm buzzer will generate alarm signals.

Figure 11-4 shows the protection principles of a 20 kA surge protector.

Figure 11-4 Protection principles of a 20 kA surge protector



Application Scenario

When the S5720I-SI series switches are installed in outdoor cabinets, 20 kA surge protectors must be used in some scenarios. Ensure that the following requirements are met:

- AC switch:
 - If the 220 V mains supply is used, install a 20 kA surge protector between the power port of the switch and the mains.
 - If power is supplied by an isolated inverter near the outdoor cabinet, no surge protector needs to be installed between the power port of the switch and the inverter.
- DC switch: An isolated power supply must be used and placed in the same outdoor cabinet as the switch. Surge protection is required for the power input of the outdoor cabinet. The surge protector, power supply, and switch must be equipotential. The outdoor cabinet must be properly grounded and the grounding impedance must be less than or equal to 10 ohms. If a DC switch is connected to the PAC-260WA-E or PAC240S56-CN power module that is powered by the 220 V mains, install a 20 kA surge protector between the power input port of the PAC-260WA-E or PAC240S56-CN and the mains.

The 20 kA surge protector and S5720I-SI switch can be decoupled using 5-10 m power cables or decoupling inductors, as shown in Figure 11-5 and Figure 11-6.

Figure 11-5 Using 5-10 m power cables for decoupling

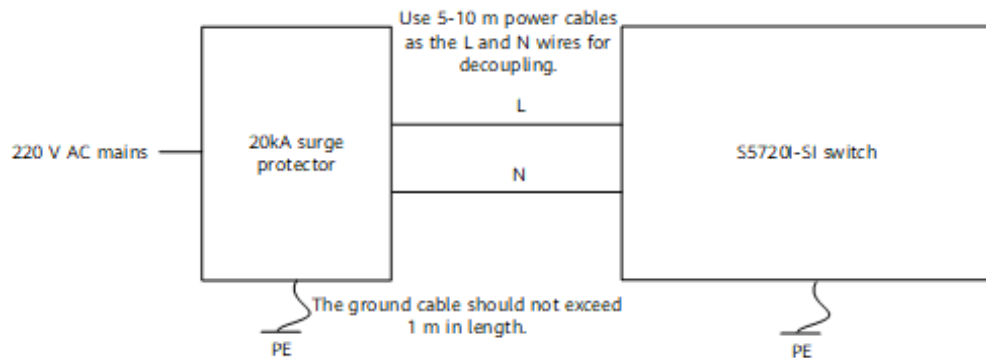
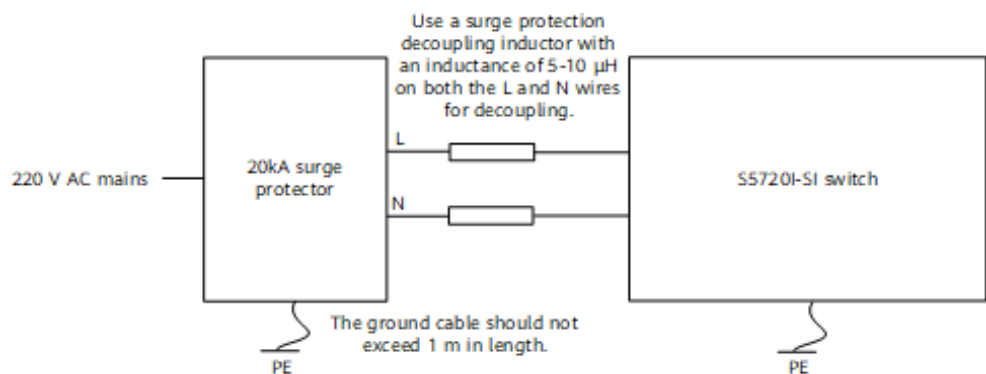


Figure 11-6 Using decoupling inductors for decoupling



NOTE

- The recommended cross-sectional area of a live wire/neutral wire (L/N) power cable for decoupling is 1.25 mm².
- The cross-sectional area of a PE ground cable must be greater than or equal to 16 mm².
- If there is no space for placing 5-10 m power cables in the cabinet for decoupling, install a hollow-core surge protection decoupling inductor with an inductance of 5-10 μH on both the L and N wires. The decoupling inductors need to be purchased separately.

Specifications

Table 11-7 lists the specifications of a 20 kA surge protector.

Table 11-7 Specifications of a 20 kA surge protector

Item	Description
Dimensions (H x W x D)	72 mm x 90 mm x 65 mm (2.83 in. x 3.54 in. x 2.56 in.)
Nominal voltage	220 V AC
Maximum continuous operating voltage (U _c)	385 V AC

Item	Description
Maximum discharge current (I_{max})	40 kA (8/20 μ s)
Nominal discharge current (I_n)	20 kA (8/20 μ s)
Protection level (U_p)	1.8 kV
Status indication window (four red/green bi-color windows)	<ul style="list-style-type: none">Green: normal stateRed: failure
Part number	19020062

11.3 OADM Combiner and Circulator

Overview

The optical add/drop multiplexer (OADM) combiner can be logically divided into a transmit device and a receive device, which work together to add/drop fixed wavelengths to/from the multiplexed signals. The OADM combiner features low insertion loss, flexible capacity expansion, and low cost, reducing the usage of long-distance optical fibers.

A circulator is used with an OADM combiner. The circulator can separate signals from each other by implementing unidirectional transmission of high-frequency signals and controlling the transmission of optical waves along a certain ring.

The OADM combiner and circulator are passive devices (can be used without power supply). Table 11-8 lists the models of OADM combiners and circulators.

Table 11-8 OADM combiner and circulator

Type	Model	Description
OADM combiner	OADM-OC-00	OADM module - 18 channels - indoor - integrated circulator
OADM combiner	OADM-00-00	OADM module - 18 channels - outdoor
Circulator	OC-1270-1380-00	Optical circulator - 1270 nm - 1380 nm
Circulator	OC-1381-1500-00	Optical circulator - 1381 nm - 1500 nm
Circulator	OC-1501-1620-00	Optical circulator - 1501 nm - 1620 nm

Appearance

Figure 11-7 and Figure 11-8 shows the appearances of the OADM combiner.

Figure 11-7 Appearance of the OADM combiner (OADM-OC-00)



Figure 11-8 Appearance of the OADM combiner (OADM-00-00)



Figure 11-9 shows the appearance of a circulator.

Figure 11-9 Appearance of the circulator



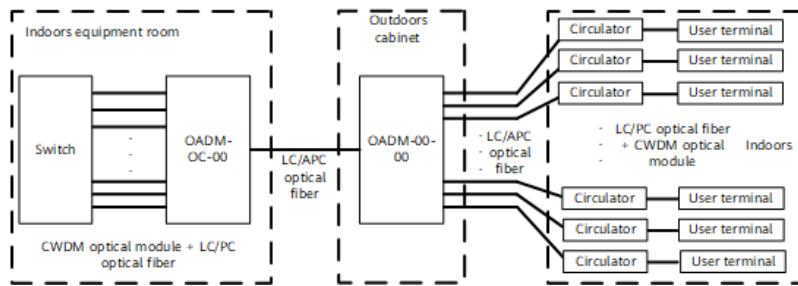
NOTE

Except for having different nameplates on the bottom surface, the three types of circulators have the same appearance.

Application Scenario

The OADM combiner and circulator are mainly used between switches and end users. They are used with GE-CWDM eSFP Optical Modules (Used Only in the OADM scenario) to implement GE fiber to the home (FTTH).

Figure 11-10 Typical application scenario of OADM combiners and circulators

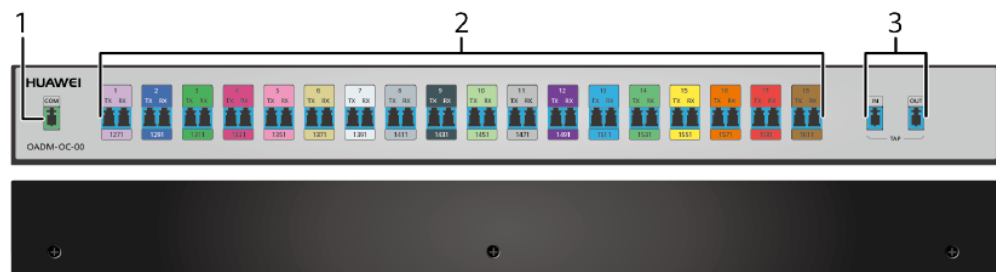


The following lists the cable requirements for connections of devices and components:

- The switch and OADM-OC-00 are installed in the indoor equipment room: The switch is connected to the combiner using the CWDM optical module, and the LC/PC optical fiber is used.
- The OADM-00-00 is installed in an outdoor cabinet near the user side: The OADM-00-00 and OADM-OC-00 are connected through a long-distance LC/APC optical fiber, reducing the number of long-distance optical fibers.
- The circulators are installed indoors: The circulators are connected to the OADM-00-00 using LC/APC optical fibers.
- The CWDM optical modules are installed on the user terminals: The CWDM optical modules are connected to circulators using LC/PC optical fibers.

Port Description

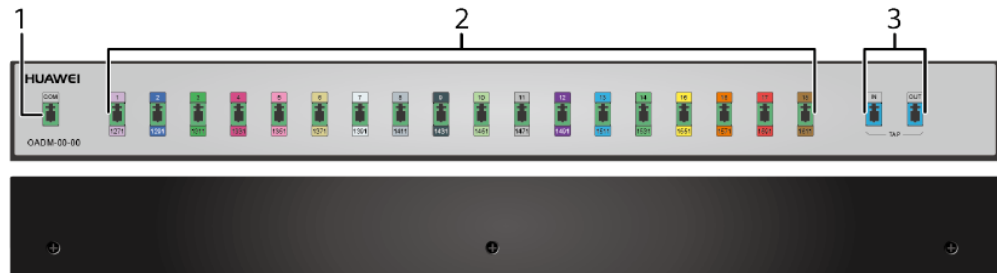
Figure 11-11 Ports on the OADM-OC-00



1	<p>COM port</p> <p>NOTE The combination port of the OADM-OC-00 is connected to that of the OADM-00-00 using the LC/APC optical fiber.</p>	2	<p>18-channel optical ports with different wavelengths</p> <p>NOTE The 18-channel optical ports are connected to CWDM optical modules on the switches using the LC/PC optical fibers. The wavelength ID on the interface must match that of the optical module. The TX port is connected to the RX port on the CWDM optical module, and the RX port is connected to the TX port on the CWDM optical module.</p>
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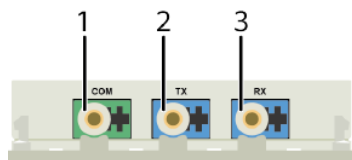
3	<p>TAP port</p> <p>NOTE</p> <p>The detection ports are connected using the LC/PC optical fibers. The IN port is used to detect 18-channel CWDM optical paths, and the OUT port is used to detect the optical path on the COM port.</p>	-	-
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Figure 11-12 Ports on the OADM-00-00



1	<p>COM port</p> <p>NOTE</p> <p>The combination port of the OADM-00-00 is connected to that of the OADM-OC-00 using the LC/APC optical fiber.</p>	2	<p>18-channel optical ports with different wavelengths</p> <p>NOTE</p> <p>The optical ports are connected to the user-side circulators using LC/APC optical fibers.</p> <p>The wavelength ID on the interface must match that of the circulator.</p>
3	<p>TAP port</p> <p>NOTE</p> <p>The detection ports are connected using the LC/PC optical fibers. The IN port is used to detect 18-channel CWDM optical paths, and the OUT port is used to detect the optical path on the COM port.</p>	-	-

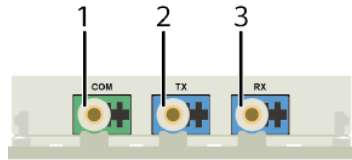
Figure 11-13 Ports on the OC-1270-1380-00



1	<p>COM port</p> <p>NOTE</p> <p>This port can be connected to the 1271, 1291, 1311, 1331, 1351, and 1371 ports of the OADM-00-00 using the LC/APC optical fibers.</p>	2	<p>TX port</p> <p>NOTE</p> <p>This port is connected to the RX port of the CWDM optical module using the LC/PC optical fiber.</p>
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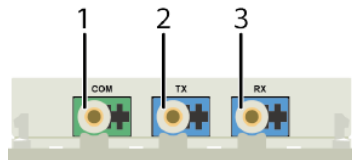
3	<p>RX port</p> <p>NOTE</p> <p>This port is connected to the TX port of the CWDM optical module using the LC/PC optical fiber.</p>	-	-
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Figure 11-14 Ports on the OC-1381-1500-00



1	<p>COM port</p> <p>NOTE</p> <p>This port can be connected to the 1391, 1411, 1431, 1451, 1471, and 1491 ports of the OADM-00-00 using the LC/APC optical fibers.</p>	2	<p>TX port</p> <p>NOTE</p> <p>This port is connected to the RX port of the CWDM optical module using the LC/PC optical fiber.</p>
3	<p>RX port</p> <p>NOTE</p> <p>This port is connected to the TX port of the CWDM optical module using the LC/PC optical fiber.</p>	-	-

Figure 11-15 Ports on the OC-1501-1620-00



1	<p>COM port</p> <p>NOTE</p> <p>This port can be connected to the 1511, 1531, 1551, 1571, 1591, and 1611 ports of the OADM-00-00 using the LC/APC optical fibers.</p>	2	<p>TX port</p> <p>NOTE</p> <p>This port is connected to the RX port of the CWDM optical module using the LC/PC optical fiber.</p>
3	<p>RX port</p> <p>NOTE</p> <p>This port is connected to the TX port of the CWDM optical module using the LC/PC optical fiber.</p>	-	-

NOTE

If no port is used, cover ports with dust plugs.

Technical Specifications

Table 11-9 lists technical specifications of OADM combiners and circulators.

Table 11-9 Technical specifications

Item	Description
Dimensions (H x W x D)	<ul style="list-style-type: none"> • OADM-OC-00: 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.66 in.) • OADM-00-00: 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.66 in.) • OC-1270-1380-00: 14 mm x 60.0 mm x 115.0 mm (0.55 in. x 2.36 in. x 4.53 in.) • OC-1381-1500-00: 14 mm x 60.0 mm x 115.0 mm (0.55 in. x 2.36 in. x 4.53 in.) • OC-1501-1620-00: 14 mm x 60.0 mm x 115.0 mm (0.55 in. x 2.36 in. x 4.53 in.)
Operating temperature	<ul style="list-style-type: none"> • OADM-OC-00: -5 °C to +55 °C (23 °F to 131 °F) at an altitude of 0-2000 m (0-6562 ft.) • OADM-00-00: -40 °C to +70 °C (-40 °F to +158 °F) at an altitude of 0-2000 m (0-6562 ft.) • OC-1270-1380-00: -5 °C to +55 °C (23 °F to 131 °F) at an altitude of 0-2000 m (0-6562 ft.) • OC-1381-1500-00: -5 °C to +55 °C (23 °F to 131 °F) at an altitude of 0-2000 m (0-6562 ft.) • OC-1501-1620-00: -5 °C to +55 °C (23 °F to 131 °F) at an altitude of 0-2000 m (0-6562 ft.)
Storage temperature	-40 °C to +85 °C (-40 °F to +185 °F)
Relative humidity	5% to 95%, noncondensing
Device attribute	Passive
Supported CWDM wavelength (nm)	<ul style="list-style-type: none"> • OADM-OC-00: 1271/1291/1311/1331/1351/1371/1391/1411/1431/1451/1471/1491/1511/1531/1551/1571/1591/1611 • OADM-00-00: 1271/1291/1311/1331/1351/1371/1391/1411/1431/1451/1471/1491/1511/1531/1551/1571/1591/1611 • OC-1270-1380-00: 1271/1291/1311/1331/1351/1371 • OC-1381-1500-00: 1391/1411/1431/1451/1471/1491 • OC-1501-1620-00: 1511/1531/1551/1571/1591/1611
Part number	<ul style="list-style-type: none"> • OADM-OC-00: 45020427 • OADM-00-00: 45020428 • OC-1270-1380-00: 45090008 • OC-1381-1500-00: 45090009

Item	Description
	<ul style="list-style-type: none"><li>• OC-1501-1620-00: 45090010