

CloudEngine S5731-S Series Switches Datasheet

CloudEngine S5731-S series switches are next-generation standard gigabit switches that provide GE electrical/optical downlink ports and 10GE uplink ports.




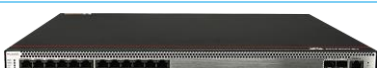
Introduction

The CloudEngine S5731-S series switches were developed based on next-generation high-performing hardware and the Huawei Versatile Routing Platform (VRP). The CloudEngine S5731-S supports simplified operations and maintenance (O&M), intelligent stack (iStack), flexible Ethernet networking. It also provides enhanced Layer 3 features and mature IPv6 features. The CloudEngine S5731-S can be used in various scenarios. For example, it can be used as an access or aggregation switch on a campus network or as an access switch for Metropolitan Area Network.

Product Overview

Models and Appearances

The following models are available in the CloudEngine S5731-S series.

| Models and Appearances | Description |
|---|--|
|  CloudEngine S5731-S24T4X | <ul style="list-style-type: none"> • 24 x 10/100/1000Base-T Ethernet ports, 4 x 10GE SFP+ ports • 1+1 power backup • Forwarding performance: 96 Mpps • Switching capacity: 128 Gbps/672 Gbps |
|  CloudEngine S5731-S24T4X-A | <ul style="list-style-type: none"> • 24 x 10/100/1000Base-T Ethernet ports, 4 x 10GE SFP+ ports • AC power supply • Forwarding performance: 96 Mpps • Switching capacity: 128 Gbps/672 Gbps |
|  CloudEngine S5731-S24T4X-D | <ul style="list-style-type: none"> • 24 x 10/100/1000Base-T Ethernet ports, 4 x 10GE SFP+ ports • DC power supply • Forwarding performance: 96 Mpps • Switching capacity: 128 Gbps/672 Gbps |
|  CloudEngine S5731-S24P4X | <ul style="list-style-type: none"> • 24 x 10/100/1000Base-T Ethernet ports, 4 x 10GE SFP+ ports • 1+1 power backup • PoE+ • Forwarding performance: 96 Mpps • Switching capacity: 128 Gbps/672 Gbps |

| Models and Appearances | Description |
|---|---|
|  CloudEngine S5731-S32ST4X | <ul style="list-style-type: none"> • 24 x GE SFP ports, 8 x 10/100/1000Base-T Ethernet ports, 4 x 10GE SFP+ ports • 1+1 power backup • Forwarding performance: 108 Mpps • Switching capacity: 144 Gbps/672 Gbps |
|  CloudEngine S5731-S32ST4X-A | <ul style="list-style-type: none"> • 24 x GE SFP ports, 8 x 10/100/1000Base-T Ethernet ports, 4 x 10GE SFP+ ports • AC power supply • Forwarding performance: 108 Mpps • Switching capacity: 144 Gbps/672 Gbps |
|  CloudEngine S5731-S32ST4X-D | <ul style="list-style-type: none"> • 24 x GE SFP ports, 8 x 10/100/1000Base-T Ethernet ports, 4 x 10GE SFP+ ports • DC power supply • Forwarding performance: 108 Mpps • Switching capacity: 144 Gbps/672 Gbps |
|  CloudEngine S5731-S48T4X | <ul style="list-style-type: none"> • 48 x 10/100/1000Base-T Ethernet ports, 4 x 10GE SFP+ ports • 1+1 power backup • Forwarding performance: 125 Mpps • Switching capacity: 176 Gbps/672 Gbps |
|  CloudEngine S5731-S48T4X-A | <ul style="list-style-type: none"> • 48 x 10/100/1000Base-T Ethernet ports, 4 x 10GE SFP+ ports • AC power supply • Forwarding performance: 125 Mpps • Switching capacity: 176 Gbps/672 Gbps |
|  CloudEngine S5731-S48P4X | <ul style="list-style-type: none"> • 48 x 10/100/1000Base-T Ethernet ports, 4 x 10GE SFP+ ports • 1+1 power backup • PoE+ • Forwarding performance: 125 Mpps • Switching capacity: 176 Gbps/672 Gbps |
|  CloudEngine S5731-S48S4X | <ul style="list-style-type: none"> • 48 x GE SFP, 4 x 10GE SFP+ ports • 1+1 power backup • Forwarding performance: 125 Mpps • Switching capacity: 176 Gbps/672 Gbps |
|  CloudEngine S5731-S48S4X-A | <ul style="list-style-type: none"> • 48 x GE SFP, 4 x 10GE SFP+ ports • AC power supply • Forwarding performance: 125 Mpps • Switching capacity: 176 Gbps/672 Gbps |


Note: The value before the slash (/) refers to the device's switching capability, while the value after the slash (/) means the system's switching capability.

Fan Models

The following table lists the fan module applicable to the CloudEngine S5731-S.

[Technical specifications of the fan module applicable to the CloudEngine S5731-S series](#)



| Fan Module | Technical Specifications | Applied Switch Model |
|------------|--------------------------|----------------------|
|------------|--------------------------|----------------------|



| Fan Module | Technical Specifications | Applied Switch Model |
|---|--|--|
|  <p>FAN-023A-B</p> | <ul style="list-style-type: none"> • Dimensions (W x D x H): 40 mm x 100.3 mm x 40 mm • Number of fans: 1 • Weight: 0.1 kg • Maximum power consumption: 7.2 W • Maximum fan speed: 18500±10% revolutions per minute (RPM) • Maximum wind rate: 23 cubic feet per minute (CFM) • Hot swap: Supported | <ul style="list-style-type: none"> • CloudEngine S5731-S24P4X • CloudEngine S5731-S48P4X |


Power Supply

The following table lists the power supplies applicable to the CloudEngine S5731-S.

Technical specifications of the power supplies applicable to the CloudEngine S5731-S series

| Power Module | Technical Specifications | Applied Switch Model |
|--|--|--|
|  <p>PAC600S12-CB/DB/EB</p> | <ul style="list-style-type: none"> • Dimensions (H x W x D): 40 mm x 90 mm x 215 mm (1.6 in. x 3.5 in. x 8.5 in.) • Weight: 0.95 kg (2.09 lb) • Rated input voltage range: <ul style="list-style-type: none"> – 100 V AC to 240 V AC, 50/60 Hz – 240 V DC • Maximum input voltage range: <ul style="list-style-type: none"> – 90 V AC to 290 V AC, 45 Hz to 65 Hz – 190 V DC to 290 V DC • Maximum input current: <ul style="list-style-type: none"> – 100 V AC to 240 V AC: 8 A – 240 V DC: 4 A • Maximum output current: 50 A • Rated output voltage: 12 V • Maximum output power: 600 W • Hot swap: Supported | <ul style="list-style-type: none"> • CloudEngine S5731-S24T4X • CloudEngine S5731-S48T4X |
|  <p>PAC600S56-CB</p> | <ul style="list-style-type: none"> • Dimensions (H x W x D): 40 mm x 90 mm x 215 mm (1.6 in. x 3.5 in. x 8.5 in.) • Weight: 1.1 kg (2.43 lb) • Rated input voltage range: <ul style="list-style-type: none"> – 100 V AC to 130 V AC; 50/60 Hz – 100 V AC to 240 V AC, 50/60 Hz – 240 V DC • Maximum input voltage range: <ul style="list-style-type: none"> – 90 V AC to 290 V AC, 45 Hz to 66 Hz – 190 V DC to 290 V DC • Maximum input current: <ul style="list-style-type: none"> – 100 V AC to 130 V AC: 8 A – 100 V AC to 240 V AC: 8 A | <ul style="list-style-type: none"> • CloudEngine S5731-S24P4X • CloudEngine S5731-S48P4X |

| Power Module | Technical Specifications | Applied Switch Model |
|--|---|---|
| | <ul style="list-style-type: none"> - 240 V DC: 4 A • Rated output current: <ul style="list-style-type: none"> - 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 voltage: 56 V • Rated output power: <ul style="list-style-type: none"> - 100 V AC to 130 V AC input: <ul style="list-style-type: none"> · Total power: 300 W - 200 V AC to 240 V AC input and 240 V DC input: <ul style="list-style-type: none"> · Total power: 600 W • Hot swap: Supported | |
|  <p>PAC1000S56-CB</p> | <ul style="list-style-type: none"> • Dimensions (H x W x D): 40 mm x 90 mm x 215 mm (1.6 in. x 3.5 in. x 8.5 in.) • Weight: 1.1 kg (2.43 lb) • Rated input voltage range: <ul style="list-style-type: none"> - 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 voltage range: <ul style="list-style-type: none"> - 90 V AC to 290 V AC, 45 Hz to 65 Hz - 190 V DC to 290 V DC • Input current: <ul style="list-style-type: none"> - 100 V AC to 130 V AC: 12 A - 200 V AC to 240 V AC: 8 A - 240 V DC: 8 A • Maximum output current: <ul style="list-style-type: none"> - 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 • Maximum output power: <ul style="list-style-type: none"> - Total power: 900 W (100 V AC to 130 V AC input)/1000 W (200 V AC to 240 V AC input and 240 V DC input) • Hot swap: Supported | <ul style="list-style-type: none"> • CloudEngine S5731-S24P4X • CloudEngine S5731-S48P4X <p>Note: Only V200R021C01 and later versions</p> |
|  <p>PDC1000S56-CB</p> | <ul style="list-style-type: none"> • Dimensions (H x W x D): 40 mm x 90 mm x 215 mm (1.6 in. x 3.5 in. x 8.5 in.) • Weight: 1.02 kg (2.25 lb) • Rated input voltage range: -48 V DC to -60 V DC • Maximum input voltage range: -38.4 V DC to -72 V DC • Maximum input current: 30 A • Maximum output current: 83.3 A • Maximum output power: 1000 W • Hot swap: Supported | <ul style="list-style-type: none"> • CloudEngine S5731-S24P4X • CloudEngine S5731-S48P4X |

| Power Module | Technical Specifications | Applied Switch Model |
|--|---|---|
|  <p>PAC150S12-R</p> | <ul style="list-style-type: none"> • Dimensions (H x W x D): 40 mm x 90 mm x 215 mm (1.6 in. x 3.5 in. x 8.5 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 • Maximum output power: 150 W • Hot swap: Supported | <ul style="list-style-type: none"> • CloudEngine S5731-S24T4X • CloudEngine S5731-S32ST4X • CloudEngine S5731-S48T4X • CloudEngine S5731-S48S4X |
|  <p>PDC180S12-CR</p> | <ul style="list-style-type: none"> • Dimensions (H x W x D): 40 mm x 90 mm x 215 mm (1.6 in. x 3.5 in. x 8.5 in.) • Weight: 0.62 kg (1.37 lb) • Rated input voltage range: -48 V DC to -60 V DC • Maximum input voltage range: -38.4 V DC to -72 V DC • Maximum input current: 6 A • Maximum output current: 15 A • Maximum output power: 180 W • Hot swap: Supported | <ul style="list-style-type: none"> • CloudEngine S5731-S24T4X • CloudEngine S5731-S32ST4X • CloudEngine S5731-S48T4X • CloudEngine S5731-S48S4X |
|  <p>PDC1000S12-DB</p> | <ul style="list-style-type: none"> • Dimensions (H x W x D): 40 mm x 90 mm x 215 mm (1.6 in. x 3.5 in. x 8.5 in.) • Weight: 1.02 kg (2.25 lb) • Rated input voltage range: -48 V DC to -60 V DC • Maximum input voltage range: -38.4 V DC to -72 V DC • Maximum input current: 30 A • Maximum output current: 83.3 A • Maximum output power: 1000 W • Hot swap: Supported | <ul style="list-style-type: none"> • CloudEngine S5731-S24T4X • CloudEngine S5731-S48T4X |

CloudEngine S5731-S series switches support PoE. They have two power module slots, each of which can have a 1000 W PoE power module installed.

The following table lists its power supply configurations.

Power supply configurations of CloudEngine S5731-S

| Model | Power Module 1 | Power Module 2 | Available PoE Power | Maximum Number of Ports (Fully Loaded) |
|--------------|--------------------------------|--------------------------------|---------------------|--|
| S5731-S24P4X | 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 |

| Model | 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) | Versions earlier than V200R021C10: 1330 W V200R021C10 and later versions: 1520 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 |
| S5731-S48P4X | 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) | Versions earlier than V200R021C10: 1330 W V200R021C10 and later versions: 1520 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) | – | 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 |

Product Features and Highlights

Powerful Service Processing Capability and Multiple Security Control Mechanisms

- The CloudEngine S5731-S supports many Layer 2/Layer 3 multicast protocols such as PIM SM, PIM DM, PIM SSM, MLD, and IGMP snooping, to support multi-terminal high-definition video backhaul and video conferencing services.
- The CloudEngine S5731-S supports multiple Layer 3 features including OSPF, IS-IS, BGP, and VRRP, meeting enterprises' requirements on access and aggregation service bearing, and enabling a variety of voice, video, and data applications.
- The CloudEngine S5731-S supports MAC address authentication, 802.1x authentication, and Portal authentication, and implements dynamic delivery of policies (VLAN, QoS, and ACL) to users.
- The CloudEngine S5731-S provides a series of mechanisms to defend against DoS and user-targeted attacks. DoS attacks are targeted at switches and include SYN flood, Land, Smurf, and ICMP flood attacks. User-targeted attacks include bogus DHCP server attacks, IP/MAC address spoofing, DHCP request flood, and change of the DHCP CHADDR value.
- The CloudEngine S5731-S sets up and maintains a DHCP snooping binding table, and discards the packets that do not match the table entries. You can specify DHCP snooping trusted and untrusted ports to ensure that users connect only to the authorized DHCP server.
- The CloudEngine S5731-S supports strict ARP learning, which protects a network against ARP spoofing attacks to ensure normal network access.

Easy O&M

- The CloudEngine S5731-S supports Super Virtual Fabric (SVF), which virtualizes the "Core/aggregation + Access switch + AP" structure into a logical device. The CloudEngine S5731-S provides the innovative network management solution in the industry to simplify device management. It allows plug-and-play access switches and APs. In addition, the CloudEngine S5731-S supports service configuration templates. The templates are configured on core devices and automatically delivered to access devices, enabling centralized control, simplified service configuration, and flexible configuration modification. The CloudEngine S5731-S functions as a client in an SVF system.
- The CloudEngine S5731-S supports zero-touch deployment, replacement of faulty devices without additional configuration, USB-based deployment, batch configuration, and batch remote upgrade. The capabilities facilitate device deployment, upgrade, service provisioning, and other management and maintenance operations, and also greatly reduce O&M costs. The CloudEngine S5731-S can be managed using SNMP v1/v2c/v3, CLI, web-based network management system, or SSH v2.0. Additionally, it supports RMON, multiple log hosts, port traffic statistics collection, and network quality analysis, which facilitate network optimization and reconstruction.

Multiple Reliability Mechanisms

- The CloudEngine S5731-S supports iStack. This technology can virtualize up to nine physical switches into one logical switch. Member switches in a stack implement redundancy backup to improve device reliability and use inter-device link aggregation to improve link reliability. iStack provides high network scalability. You can increase a stack's ports, bandwidth, and processing capacity by simply adding member switches. iStack also simplifies device configuration and management. After a stack is set up, multiple physical switches are virtualized into one logical device. You can log in to any member switch in the stack to manage all the member switches in the stack.
- The CloudEngine S5731-S is equipped with two removable power modules that can work in 1+1 redundancy backup mode.
- In addition to traditional STP, RSTP, and MSTP, the CloudEngine S5731-S supports Huawei-developed Smart Ethernet Protection (SEP) technology and the latest Ethernet Ring Protection Switching (ERPS) standard. SEP is a ring protection protocol specific to the Ethernet link layer, and applies to various ring network topologies, such as open ring topology, closed ring topology, and cascading ring topology. This protocol is reliable, easy to maintain, and implements fast protection switching within 50 ms. ERPS is defined in ITU-T G.8032. It implements millisecond-level protection switching based on traditional Ethernet MAC and bridging functions.
- The CloudEngine S5731-S supports Smart Link. One CloudEngine S5731-S switch can connect to multiple aggregation switches through multiple links, implementing backup of uplinks and significantly improving reliability of access devices.
- The CloudEngine S5731-S supports Ethernet OAM (IEEE 802.3ah/802.1ag) to detect link faults quickly.

Mature IPv6 Technologies

- The CloudEngine S5731-S uses the mature, stable VRP platform and supports IPv4/IPv6 dual stack, IPv6 RIPng, and IPv6 over IPv4 tunnels (including manual, 6-to-4, and ISATAP tunnels). With these IPv6 features, the CloudEngine S5731-S can be deployed on a pure IPv4 network, a pure IPv6 network, or a shared IPv4/IPv6 network, helping achieve IPv4-to-IPv6 transition.

PoE Power Supply

- Perpetual PoE: When a PoE switch is rebooted after the software version is upgraded, the power supply to PDs is not interrupted. This capability ensures that PDs are not powered off during the switch reboot.
- Fast PoE: PoE switches can supply power to PDs within 10s after they are powered on. This is different from common switches that generally take 1 to 3 minutes to start to supply power to PDs. When a PoE switch reboots due to a power failure, the PoE switch continues to supply power to the PDs immediately after being powered on without waiting until it finishes reboot. This greatly shortens the power failure time of PDs.

NOTE

For more information about PoE, visit

<https://e.huawei.com/en/material/onLineView?materialid=e28cc3ad158140e8af1547bc510ecd34>

Intelligent O&M

- The CloudEngine S5731-S provides telemetry technology to collect device data in real time and send the data to Huawei campus network analyzer CampusInsight. The CampusInsight analyzes network data based on the intelligent fault identification algorithm, accurately displays the real-time network status, effectively demarcates and locates faults in a timely manner, and identifies network problems that affect user experience, accurately guaranteeing user experience.
- The CloudEngine S5731-S supports a variety of intelligent O&M features for audio and video services, including the enhanced Media Delivery Index (eMDI). With this eMDI function, the switch can function as a monitored node to periodically conduct statistics and report audio and video service indicators to the CampusInsight platform. In this way, the CampusInsight platform can quickly demarcate audio and video service quality faults based on the results of multiple monitored nodes.

Intelligent Upgrade

- Switches support the intelligent upgrade feature. Specifically, switches obtain the version upgrade path and download the newest version for upgrade from the Huawei Online Upgrade Platform (HOUP). The entire upgrade process is highly automated and achieves one-click upgrade. In addition, preloading the version is supported, which greatly shortens the upgrade time and service interruption time.
- The intelligent upgrade feature greatly simplifies device upgrade operations and makes it possible for the customer to upgrade the version independently. This greatly reduces the customer's maintenance costs. In addition, the upgrade policies on the HOUP platform standardize the upgrade operations, which greatly reduces the risk of upgrade failures.

Big Data Security Collaboration

- The CloudEngine S5731-S switches can collaborate with the Huawei HiSec Insight. The purposes of doing so are to detect network security threats, display the security posture across the entire network, and enable automated or manual response to security threats. The HiSec Insight delivers the security policies to the iMaster NCE-Campus. The iMaster NCE-Campus then delivers such policies to switches that will handle security events accordingly. All these ensure campus network security.
- The CloudEngine S5731-S supports Encrypted Communication Analytics(ECA). It uses built-in ECA probes to extract characteristics of encrypted streams based on NetStream sampling and Service Awareness(SA), generates metadata, and reports the metadata to HiSec Insight. The HiSec Insight uses the AI algorithm to train the traffic model and compare characteristics of extracted encrypted traffic to identify malicious traffic. The HiSec Insight displays detection results on the GUI, provides threat handling suggestions, and automatically isolates threats with the iMaster NCE-Campus to ensure campus network security.
- The CloudEngine S5731-S supports deception. It functions as a sensor to detect threats such as IP address scanning and port scanning on a network and lures threat traffic to the honeypot for further checks. The honeypot performs in-depth interaction with the initiator of the threat traffic, records various application-layer attack methods of the initiator, and reports security logs to the HiSec Insight. The HiSec Insight analyzes security logs. If the HiSec Insight determines that the suspicious traffic is an attack, it generates an alarm and provides handling suggestions. After the administrator confirms the alarm, the HiSec Insight delivers a policy to the iMaster NCE-Campus. The iMaster NCE-Campus delivers the policy to the switch for security event processing, ensuring campus network security.

OPS

- Open Programmability System (OPS) is an open programmable system based on the Python language. IT administrators can program the O&M functions of a switch through Python scripts to quickly innovate functions and implement intelligent O&M.

Licensing

CloudEngine S5731-S supports both the traditional feature-based licensing mode and the latest Huawei IDN One Software (N1 mode for short) licensing mode. The N1 mode is ideal for campus network deployments in enterprise private cloud mode, and greatly enhances the customer experiences in purchasing and upgrading software services with simplicity.

Software Package Features in N1 Mode

| Switch Functions | N1 Basic Software | N1 Foundation Software Package | N1 Advanced Software Package |
|---|-------------------|--------------------------------|------------------------------|
| Basic network functions: Layer 2 functions, IPv4, IPv6, SVF, and others Note: For details, see the Service Features | √ | √ | √ |
| Basic network automation based on the iMaster NCE-Campus: <ul style="list-style-type: none"> • Basic automation: Plug-and-play • Basic monitoring: Application visualization • NE management: Image and topology management and discovery • User access authentication | x | √ | √ |
| Advanced network automation and intelligent O&M: VxLAN, free mobility, and CampusInsight basic functions | x | x | √ |

Note: Only V200R019C00 and later versions can support N1 mode

Product Specifications

Functions and Features

Except for special instructions, the following features are supported by CloudEngine S5731-S with N1 basic software.

Function and feature metrics for the CloudEngine S5731-S series

| Function and Feature | | Description | CloudEngine S5731-S |
|----------------------|-----------------|--|---------------------|
| Ethernet features | Ethernet basics | Full-duplex, half-duplex, and auto-negotiation | Yes |
| | | Rate auto-negotiation on an interface | Yes |
| | | Auto MDI and MDI-X | Yes |
| | | Flow control on an interface | Yes |
| | | Jumbo frames | Yes |
| | | Link aggregation | Yes |
| | | Load balancing among links of a trunk | Yes |

| Function and Feature | | Description | CloudEngine S5731-S |
|--------------------------|--|---|---------------------|
| | | Transparent transmission of Layer 2 protocol packets | Yes |
| | | Device Link Detection Protocol (DLDP) | Yes |
| | | Link Layer Discovery Protocol (LLDP) | Yes |
| | | Link Layer Discovery Protocol-Media Endpoint Discovery (LLDP-MED) | Yes |
| | | Interface isolation | Yes |
| | | Broadcast traffic suppression on an interface | Yes |
| | | Multicast traffic suppression on an interface | Yes |
| | | Unknown unicast traffic suppression on an interface | Yes |
| | | VLAN broadcast traffic suppression | Yes |
| | | VLAN multicast traffic suppression | Yes |
| | | VLAN unknown unicast traffic suppression | Yes |
| | | VLAN | VLAN specification |
| | VLANIF interface specification | 1024 | |
| | Access mode | Yes | |
| | Trunk mode | Yes | |
| | Hybrid mode | Yes | |
| | QinQ mode | Yes | |
| | Default VLAN | Yes | |
| | VLAN assignment based on interfaces | Yes | |
| | VLAN assignment based on protocols | Yes | |
| | VLAN assignment based on IP subnets | Yes | |
| | VLAN assignment based on MAC addresses | Yes | |
| | VLAN assignment based on MAC address + IP address | Yes | |
| | VLAN assignment based on MAC address + IP address + interface number | Yes | |
| | Adding double VLAN tags to packets based on interfaces | Yes | |
| Super-VLAN | Yes | | |
| Super-VLAN specification | 256 | | |
| Sub-VLAN | Yes | | |
| Sub-VLAN specification | 1K | | |
| VLAN mapping | Yes | | |

| Function and Feature | Description | CloudEngine S5731-S | |
|----------------------------|----------------|--|-----|
| | Selective QinQ | Yes | |
| | MUX VLAN | Yes | |
| | Voice VLAN | Yes | |
| | Guest VLAN | Yes | |
| | GVRP | GARP | Yes |
| | | GVRP | Yes |
| | VCMP | VCMP | Yes |
| | MAC | MAC address | 64K |
| | | Automatic learning of MAC addresses | Yes |
| | | Automatic aging of MAC addresses | Yes |
| | | Static, dynamic, and blackhole MAC address entries | Yes |
| | | Interface-based MAC address learning limiting | Yes |
| | | Sticky MAC | Yes |
| | | MAC address flapping detection | Yes |
| | | Configuring MAC address learning priorities for interfaces | Yes |
| | | MAC address spoofing defense | Yes |
| | | Port bridge | Yes |
| | ARP | Static ARP | Yes |
| | | Dynamic ARP | Yes |
| | | ARP entry | 16K |
| | | ARP aging detection | Yes |
| Intra-VLAN proxy ARP | | Yes | |
| Inter-VLAN proxy ARP | | Yes | |
| Routed proxy ARP | | Yes | |
| Multi-egress-interface ARP | | Yes | |
| Ethernet loop protection | MSTP | STP | Yes |
| | | RSTP | Yes |
| | | MSTP | Yes |
| | | VBST | Yes |
| | | BPDU protection | Yes |
| | | Root protection | Yes |
| | | Loop protection | Yes |
| | | Defense against TC BPDU attacks | Yes |

| Function and Feature | | Description | CloudEngine S5731-S | |
|----------------------------|----------------------|---|---------------------|-----|
| | Loopback detection | Loop detection on an interface | Yes | |
| | SEP | SEP | Yes | |
| | Smart Link | Smart Link | Yes | |
| | | Smart Link multi-instance | Yes | |
| | | Monitor Link | Yes | |
| | RRPP | RRPP | Yes | |
| | | Single RRPP ring | Yes | |
| | | Tangent RRPP ring | Yes | |
| | | Intersecting RRPP ring | Yes | |
| | | Hybrid networking of RRPP rings and other ring networks | Yes | |
| | ERPS | G.8032 v1 | Yes | |
| | | G.8032 v2 | Yes | |
| | | ERPS semi-ring topology | Yes | |
| | | ERPS closed-ring topology | Yes | |
| | IPv4/IPv6 forwarding | IPv4 and unicast routing | IPv4 static routing | Yes |
| | | | VRF | Yes |
| DHCP client | | | Yes | |
| DHCP server | | | Yes | |
| DHCP relay | | | Yes | |
| DHCP policy VLAN | | | Yes | |
| URPF check | | | Yes | |
| Routing policies | | | Yes | |
| IPv4 routes | | | 16K | |
| RIPv1 | | | Yes | |
| RIPv2 | | | Yes | |
| OSPF | | | Yes | |
| BGP | | | Yes | |
| MBGP | | | Yes | |
| IS-IS | | | Yes | |
| Policy-based routing (PBR) | | | Yes | |
| Multicast routing features | | IGMPv1/v2/v3 | Yes | |
| | | PIM-DM | Yes | |
| | | PIM-SM | Yes | |

| Function and Feature | Description | CloudEngine S5731-S | |
|----------------------------|----------------------------|----------------------------------|-----|
| | MSDP | Yes | |
| | IPv4 multicast routes | 1K | |
| | IPv6 multicast routes | 1K | |
| | Multicast routing policies | Yes | |
| | RPF | Yes | |
| | IPv6 features | IPv6 protocol stack | Yes |
| | | ND | Yes |
| | | ND entry | 8K |
| | | ND snooping | Yes |
| | | DHCPv6 snooping | Yes |
| | | RIPng | Yes |
| | | DHCPv6 server | Yes |
| | | DHCPv6 relay | Yes |
| | | OSPFv3 | Yes |
| | | BGP4+ | Yes |
| | | IS-IS for IPv6 | Yes |
| | | IPv6 routes | 8K |
| | | VRRP6 | Yes |
| | | MLDv1/v2 | Yes |
| | PIM-DM for IPv6 | Yes | |
| | PIM-SM for IPv6 | Yes | |
| IPv6 transition technology | IPv6 manual tunneling | Yes | |
| Layer 2 multicast features | - | IGMPv1/v2/v3 snooping | Yes |
| | - | IGMP snooping proxy | Yes |
| | - | MLD snooping | Yes |
| | - | Multicast traffic suppression | Yes |
| | - | Inter-VLAN multicast replication | Yes |
| Device reliability | BFD | Single-hop BFD | Yes |
| | | BFD for static routes | Yes |
| | | BFD for OSPF | Yes |
| | | BFD for IS-IS | Yes |
| | | BFD for BGP | Yes |
| | | BFD for PIM | Yes |
| | | BFD for VRRP | Yes |

| Function and Feature | | Description | CloudEngine S5731-S |
|----------------------------|---|--|---------------------|
| | Stacking | Service interface-based stacking | Yes |
| | | Maximum number of stacked devices | 9 |
| | | Stack bandwidth (Bidirectional) | 80Gbps(MAX) |
| | VRRP | VRRP standard protocol | Yes |
| Ethernet OAM | EFM (802.3ah) | Automatic discovery of links | Yes |
| | | Link fault detection | Yes |
| | | Link troubleshooting | Yes |
| | | Remote loopback | Yes |
| | CFM (802.1ag) | Software-level CCM | Yes |
| | | 802.1ag MAC ping | Yes |
| | | 802.1ag MAC trace | Yes |
| | OAM association | Association between 802.1ag and 802.3ah | Yes |
| Y.1731 | Unidirectional delay and jitter measurement | Yes | |
| | Bidirectional delay and jitter measurement | Yes | |
| QoS features | Traffic classification | Traffic classification based on ACLs | Yes |
| | | Matching the simple domains of packets | Yes |
| | Traffic behavior | Traffic filtering | Yes |
| | | Traffic policing (CAR) | Yes |
| | | Modifying the packet priorities | Yes |
| | | Modifying the simple domains of packets | Yes |
| | | Modifying the packet VLANs | Yes |
| | Traffic shaping | Traffic shaping on an egress interface | Yes |
| | | Traffic shaping on queues on an interface | Yes |
| | Congestion avoidance | Weighted Random Early Detection (WRED) on queues | Yes |
| | | Tail drop | Yes |
| | Congestion management | Priority Queuing (PQ) | Yes |
| | | Weighted Deficit Round Robin (WDRR) | Yes |
| | | PQ+WDRR | Yes |
| Weighted Round Robin (WRR) | | Yes | |
| PQ+WRR | | Yes | |
| ACL | Packet filtering at Layer 2 to Layer 4 | Basic IPv4 ACL | Yes |
| | | Advanced IPv4 ACL | Yes |
| | | Basic IPv6 ACL | Yes |
| | | Advanced IPv6 ACL | Yes |

| Function and Feature | | Description | CloudEngine S5731-S |
|-------------------------------|------------------------------------|--|-------------------------------|
| | | Layer 2 ACL | Yes |
| | | User group ACL | Yes |
| | | User-defined ACL | Yes |
| Configuration and maintenance | Login and configuration management | Command line interface (CLI)-based configuration | Yes |
| | | Console terminal service | Yes |
| | | Telnet terminal service | Yes |
| | | SSH v1.5 | Yes |
| | | SSH v2.0 | Yes |
| | | SNMP-based NMS for unified configuration | Yes |
| | | Web page-based configuration and management | Yes |
| | | EasyDeploy (client) | Yes |
| | | EasyDeploy (commander) | Yes |
| | | SVF | Yes |
| | | Cloud management | Yes |
| | | OPS | Yes |
| | | File system | Directory and file management |
| | File upload and download | | Yes |
| | Monitoring and maintenance | Deception | Yes |
| | | ECA | Yes |
| | | eMDI | Yes |
| | | Hardware monitoring | Yes |
| | | Log information output | Yes |
| | | Alarm information output | Yes |
| | | Debugging information output | Yes |
| | | Port mirroring | Yes |
| Flow mirroring | | Yes | |
| Remote mirroring | | Yes | |
| Energy saving | | Yes | |
| Version upgrade | Version upgrade | Yes | |
| | Version rollback | Yes | |
| Security | ARP security | ARP packet rate limiting | Yes |
| | | ARP anti-spoofing | Yes |
| | | Association between ARP and STP | Yes |

| Function and Feature | Description | CloudEngine S5731-S | |
|-------------------------|--------------------------------|--|----------------------|
| | ARP gateway anti-collision | Yes | |
| | Dynamic ARP Inspection (DAI) | Yes | |
| | Static ARP Inspection (SAI) | Yes | |
| | Egress ARP Inspection (EAI) | Yes | |
| | IP security | ICMP attack defense | Yes |
| | | IPSG for IPv4 | Yes |
| | | IPSG user capacity | 3000 |
| | | IPSG for IPv6 | Yes |
| | | IPSGv6 user capacity | 1500 |
| | Local attack defense | CPU attack defense | Yes |
| | MFF | MFF | Yes |
| | DHCP snooping | DHCP snooping | Yes |
| | | Option 82 function | Yes |
| | | Dynamic rate limiting for DHCP packets | Yes |
| | Attack defense | Defense against malformed packet attacks | Yes |
| | | Defense against UDP flood attacks | Yes |
| | | Defense against TCP SYN flood attacks | Yes |
| | | Defense against ICMP flood attacks | Yes |
| | | Defense against packet fragment attacks | Yes |
| | | Local URPF | Yes |
| | User access and authentication | AAA | Local authentication |
| Local authorization | | | Yes |
| RADIUS authentication | | | Yes |
| RADIUS authorization | | | Yes |
| RADIUS accounting | | | Yes |
| HWTACACS authentication | | | Yes |
| HWTACACS authorization | | | Yes |
| HWTACACS accounting | | | Yes |
| NAC | | 802.1X authentication | Yes |
| | | MAC address authentication | Yes |
| | | Portal authentication | Yes |
| | | Hybrid authentication | Yes |
| Policy association | | Functioning as the control device | Yes |
| Network | | - | Ping |

| Function and Feature | | Description | CloudEngine S5731-S |
|----------------------|---|---|---------------------------------|
| management | | Tracert | Yes |
| | | NQA | Yes |
| | | NTP | Yes |
| | | iPCA | Yes |
| | | Smart Application Control (SAC) | Yes |
| | | NetStream | Yes |
| | | SNMP v1 | Yes |
| | | SNMP v2c | Yes |
| | | SNMP v3 | Yes |
| | | HTTP | Yes |
| | | HTTPS | Yes |
| | | RMON | Yes |
| | | RMON2 | Yes |
| | | NETCONF/YANG | Yes |
| VXLAN | - | VXLAN Layer 2 gateway | Yes, require additional license |
| | | VXLAN Layer 3 gateway | Yes, require additional license |
| | | Centralized gateway | Yes, require additional license |
| | | Distributed gateway | Yes, require additional license |
| | | BGP-EVPN | Yes, require additional license |
| | | BGP-EVPN neighbor capacity | 256, require additional license |
| Interoperability | - | VLAN-based Spanning Tree (VBST) | Yes |
| | | Link-type Negotiation Protocol (LNP) | Yes |
| | | VLAN Central Management Protocol (VCMP) | Yes |

NOTE

This content is applicable only to regions outside mainland China. Huawei reserves the right to interpret this content.

Hardware Specifications

The following table lists the hardware specifications of the CloudEngine S5731-S.

Hardware specifications of CloudEngine S5731-S models

| Item | | CloudEngine S5731-S24T4X | CloudEngine S5731-S24P4X | CloudEngine S5731-S48T4X | CloudEngine S5731-S48P4X |
|-------------------------|----------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Physical specifications | Dimensions (H x W x D, mm) | 43.6 x 442 x 420 | 43.6 x 442 x 420 | 43.6 x 442 x 420 | 43.6 x 442 x 420 |
| | Chassis height | 1 U | 1 U | 1 U | 1 U |
| | Chassis weight (including | 8.4 kg | 8.6 kg | 8.55 kg | 8.9 kg |

| Item | | CloudEngine S5731-S24T4X | CloudEngine S5731-S24P4X | CloudEngine S5731-S48T4X | CloudEngine S5731-S48P4X |
|---------------------|----------------------------|---|--|---|--|
| | packaging) | | | | |
| Fixed port | GE port | 24 | 24 | 48 | 48 |
| | 10GE port | 4 | 4 | 4 | 4 |
| Management port | ETH port | Supported | Supported | Supported | Supported |
| | Console port (RJ45) | Supported | Supported | Supported | Supported |
| | USB port | USB 2.0 | USB 2.0 | USB 2.0 | USB 2.0 |
| CPU | Frequency | 1.4 GHz | 1.4 GHz | 1.4 GHz | 1.4 GHz |
| | Cores | 4 | 4 | 4 | 4 |
| Storage | Memory (RAM) | 2 GB | 2 GB | 2 GB | 2 GB |
| | Flash memory | 1 GB | 1 GB | 1 GB | 1 GB |
| Power supply system | Power supply type | <ul style="list-style-type: none"> 150 W AC (pluggable) 600 W AC (pluggable) 180 W DC (pluggable) 1000 W DC (pluggable) | <ul style="list-style-type: none"> 600 W PoE AC (pluggable) 1000 W PoE AC (pluggable) 1000 W PoE DC (pluggable) | <ul style="list-style-type: none"> 150 W AC (pluggable) 600 W AC (pluggable) 180 W DC (pluggable) 1000 W DC (pluggable) | <ul style="list-style-type: none"> 600 W PoE AC (pluggable) 1000 W PoE AC (pluggable) 1000 W PoE DC (pluggable) |
| | Power supply specification | For details about power supplies, see the section Power Supply . | For details about power supplies, see the section Power Supply . | For details about power supplies, see the section Power Supply . | For details about power supplies, see the section Power Supply . |
| | Rated voltage range | <ul style="list-style-type: none"> AC input (150 W AC): 100 V AC to 240 V AC, 50/60 Hz AC input (600 W AC): 100 V AC to 240 V AC, 50/60 Hz DC input (180/1000 W DC): -48 VDC to -60 V DC | <ul style="list-style-type: none"> AC input(600 /1000W AC PoE): 100 V AC to 130 V AC, 200 V AC to 240 V AC, 50/60 Hz High-Voltage DC input(600 /1000W AC PoE): 240 V DC DC input(1000 W DC PoE): -48 V DC to -60 V DC | <ul style="list-style-type: none"> AC input (150 W AC): 100 V AC to 240 V AC, 50/60 Hz AC input (600 W AC): 100 V AC to 240 V AC, 50/60 Hz DC input (180/1000 W DC): -48 VDC to -60 V DC | <ul style="list-style-type: none"> AC input(600 /1000W AC PoE): 100 V AC to 130 V AC, 200 V AC to 240 V AC, 50/60 Hz High-Voltage DC input(600 /1000W AC PoE): 240 V DC DC input(1000 W DC PoE): -48 V DC to -60 V DC |
| | Maximum voltage range | <ul style="list-style-type: none"> AC input (150 W AC): 90 V AC to 264 V AC, 47 Hz to 63 Hz AC input (600 W AC): 90 V AC to 290 V AC | <ul style="list-style-type: none"> AC input(600 /1000W AC PoE): 90 V AC to 290 V AC, 45 Hz to 65 Hz High-Voltage DC input(600 /1000W AC | <ul style="list-style-type: none"> AC input (150 W AC): 90 V AC to 264 V AC, 47 Hz to 63 Hz AC input (600 W AC): 90 V AC to 290 V AC | <ul style="list-style-type: none"> AC input(600 /1000W AC PoE): 90 V AC to 290 V AC, 45 Hz to 65 Hz High-Voltage DC input(600 /1000W AC |

| Item | | CloudEngine S5731-S24T4X | CloudEngine S5731-S24P4X | CloudEngine S5731-S48T4X | CloudEngine S5731-S48P4X |
|-------------------------|---|--|--|--|--|
| | | AC, 45 Hz to 65 Hz <ul style="list-style-type: none"> High-voltage DC input (600 W AC): 190 V DC to 290 V DC (meeting 240 V high-voltage DC certification) DC input (180/1000 W DC): -38.4 V DC to -72V DC | PoE): 190 V DC to 290 V DC <ul style="list-style-type: none"> DC input(1000 W DC PoE): -38.4 V DC to -72 V DC | AC, 45 Hz to 65 Hz <ul style="list-style-type: none"> High-voltage DC input (600 W AC): 190 V DC to 290 V DC (meeting 240 V high-voltage DC certification) DC input (180/1000 W DC): -38.4 V DC to -72V DC | PoE): 190 V DC to 290 V DC <ul style="list-style-type: none"> DC input(1000 W DC PoE): -38.4 V DC to -72 V DC |
| | Maximum power consumption | 114 W | <ul style="list-style-type: none"> 121 W (without PD) 977 W (with PD, PD power consumption of 720 W) | 124 W | <ul style="list-style-type: none"> 132 W (without PD) 1750 W (with PD, PD power consumption of 1440 W) |
| | Power consumption in the case of 30% traffic load ¹ | 88 W | 95 W | 101 W | 108 W |
| | Power consumption in the case of 100% traffic load ¹ | 91 W | 97 W | 104 W | 113 W |
| | Minimum power consumption | 74 W | 82 W | 77 W | 86 W |
| Heat dissipation system | Heat dissipation mode | Air-cooled heat dissipation and intelligent fan speed adjustment | Air-cooled heat dissipation and intelligent fan speed adjustment | Air-cooled heat dissipation and intelligent fan speed adjustment | Air-cooled heat dissipation and intelligent fan speed adjustment |
| | Number of fan modules | Built-in dual fans | Pluggable dual fans | Built-in dual fans | Pluggable dual fans |
| | Airflow | Air flows in from the front side and exhausts from the rear panel. | Air flows in from the front side and exhausts from the rear panel. | Air flows in from the front side and exhausts from the rear panel. | Air flows in from the front side and exhausts from the rear panel. |
| | Maximum heat dissipation of the device (BTU/hour) | 389 | <ul style="list-style-type: none"> 413 (without PDs) 3334 (with PDs) | 423 | <ul style="list-style-type: none"> 451 (without PDs) 5973 (with PDs) |
| Environment parameters | Long-term operating temperature | <ul style="list-style-type: none"> 0-1800 m: -5°C to 45°C 1800-5000 m: The operating temperature decreases 1°C | <ul style="list-style-type: none"> 0-1800 m: -5°C to 45°C 1800-5000 m: The operating temperature decreases 1°C | <ul style="list-style-type: none"> 0-1800 m: -5°C to 45°C 1800-5000 m: The operating temperature decreases 1°C | <ul style="list-style-type: none"> 0-1800 m: -5°C to 45°C 1800-5000 m: The operating temperature decreases 1°C |

| Item | | CloudEngine S5731-S24T4X | CloudEngine S5731-S24P4X | CloudEngine S5731-S48T4X | CloudEngine S5731-S48P4X |
|---------------|--|---|---|---|---|
| | | every time the altitude increases 220 m. | every time the altitude increases 220 m. | every time the altitude increases 220 m. | every time the altitude increases 220 m. |
| | Storage temperature | -40°C to +70°C | -40°C to +70°C | -40°C to +70°C | -40°C to +70°C |
| | Relative humidity | 5%–95% (non-condensing) | 5%–95% (non-condensing) | 5%–95% (non-condensing) | 5%–95% (non-condensing) |
| | Operating altitude | 5000 m | 5000 m | 5000 m | 5000 m |
| | Noise under normal temperature (sound power) | 57.5 dB (A) | 62.3 dB (A) | 57.5 dB (A) | 62.3 dB (A) |
| | Noise under high temperature (sound power) | 70.9 dB (A) | 71.8 dB (A) | 70.9 dB (A) | 71.8 dB (A) |
| | Noise under normal temperature (sound pressure) | 47.5 dB (A) | 52.8 dB (A) | 47.5 dB (A) | 52.8 dB (A) |
| | Surge protection specification (RJ45 service port) | Common mode: ±6 kV | Common mode: ±6 kV | Common mode: ±6 kV | Common mode: ±6 kV |
| | Surge protection specification (power port) | <ul style="list-style-type: none"> AC power port: ±6 kV in differential mode, ±6 kV in common mode DC power port: ±2 kV in differential mode, ±4 kV in common mode | <ul style="list-style-type: none"> AC power port: ±6 kV in differential mode, ±6 kV in common mode DC power port: ±2 kV in differential mode, ±4 kV in common mode | <ul style="list-style-type: none"> AC power port: ±6 kV in differential mode, ±6 kV in common mode DC power port: ±2 kV in differential mode, ±4 kV in common mode | <ul style="list-style-type: none"> AC power port: ±6 kV in differential mode, ±6 kV in common mode DC power port: ±2 kV in differential mode, ±4 kV in common mode |
| Reliability | MTBF (year) ² | 57.73 | 57.21 | 55.31 | 54.96 |
| | MTTR (hour) | 2 | 2 | 2 | 2 |
| | Availability | > 0.99999 | > 0.99999 | > 0.99999 | > 0.99999 |
| Certification | | <ul style="list-style-type: none"> EMC certification Safety certification Manufacturing certification <p>For details about certifications, see the section Safety and Regulatory Compliance.</p> | <ul style="list-style-type: none"> EMC certification Safety certification Manufacturing certification <p>For details about certifications, see the section Safety and Regulatory Compliance.</p> | <ul style="list-style-type: none"> EMC certification Safety certification Manufacturing certification <p>For details about certifications, see the section Safety and Regulatory Compliance.</p> | <ul style="list-style-type: none"> EMC certification Safety certification Manufacturing certification <p>For details about certifications, see the section Safety and Regulatory Compliance.</p> |

Hardware specifications of CloudEngine S5731-S models

| Item | | CloudEngine S5731-S32ST4X | CloudEngine S5731-S32ST4X-A/D | CloudEngine S5731-S48S4X | CloudEngine S5731-S48S4X-A |
|-------------------------|--------------------------------------|---|--|---|---|
| Physical specifications | Dimensions (H x W x D, mm) | 43.6 x 442 x 420 | 43.6 x 442 x 220 | 43.6 x 442 x 420 | 43.6 x 442 x 220 |
| | Chassis height | 1 U | 1 U | 1 U | 1 U |
| | Chassis weight (including packaging) | 7.35 kg | 4.02/3.87 kg | 7.51 kg | 4.69 kg |
| Fixed port | GE port | 32 | 32 | 48 | 48 |
| | 10GE port | 4 | 4 | 4 | 4 |
| Management port | ETH port | Supported | Supported | Supported | Supported |
| | Console port (RJ45) | Supported | Supported | Supported | Supported |
| | USB port | USB 2.0 | USB 2.0 | USB 2.0 | USB 2.0 |
| CPU | Frequency | 1.4 GHz | 1.4 GHz | 1.4 GHz | 1.4 GHz |
| | Cores | 4 | 4 | 4 | 4 |
| Storage | Memory (RAM) | 2 GB | 2 GB | 2 GB | 2 GB |
| | Flash memory | 1 GB | 1 GB | 1 GB | 1 GB |
| Power supply system | Power supply type | <ul style="list-style-type: none"> 150 W AC (pluggable) 600 W AC (pluggable) 180 W DC (pluggable) 1000 W DC (pluggable) | Built-in AC/DC | <ul style="list-style-type: none"> 150 W AC (pluggable) 600 W AC (pluggable) 180 W DC (pluggable) 1000 W DC (pluggable) | Built-in AC |
| | Power supply specification | For details about power supplies, see the section Power Supply . | For details about power supplies, see the section Power Supply . | For details about power supplies, see the section Power Supply . | For details about power supplies, see the section Power Supply . |
| | Rated voltage range | <ul style="list-style-type: none"> AC input (150 W AC): 100 V AC to 240 V AC, 50/60 Hz AC input (600 W AC): 100 V AC to 240 V AC, 50/60 Hz DC input (180/1000 W DC): -48 VDC to -60 V DC | AC model: <ul style="list-style-type: none"> AC input : 100 V AC to 240 V AC, 50/60 Hz DC input: 240V DC DC model: <ul style="list-style-type: none"> -48 VDC to -60 V DC | <ul style="list-style-type: none"> AC input (150 W AC): 100 V AC to 240 V AC, 50/60 Hz AC input (600 W AC): 100 V AC to 240 V AC, 50/60 Hz DC input (180/1000 W DC): -48 VDC to -60 V DC | <ul style="list-style-type: none"> AC input: 100 V AC to 240 V AC, 50/60 Hz DC input: 240V DC |
| | Maximum voltage | <ul style="list-style-type: none"> AC input (150 | AC model: | <ul style="list-style-type: none"> AC input (150 | <ul style="list-style-type: none"> AC input : 90 |

| Item | | CloudEngine S5731-S32ST4X | CloudEngine S5731-S32ST4X-A/D | CloudEngine S5731-S48S4X | CloudEngine S5731-S48S4X-A |
|-------------------------|---|---|---|---|---|
| | range | <p>W AC): 90 V AC to 264 V AC, 47 Hz to 63 Hz</p> <ul style="list-style-type: none"> AC input (600 W AC): 90 V AC to 290 V AC, 45 Hz to 65 Hz High-voltage DC input (600 W AC): 190 V DC to 290 V DC (meeting 240 V high-voltage DC certification) DC input (180/1000 W DC): -38.4 V DC to -72V DC | <ul style="list-style-type: none"> AC input: 90 V AC to 290 V AC, 47 Hz to 63 Hz High-voltage DC input: 190 V DC to 290 V DC (meeting 240 V high-voltage DC certification) <p>DC model: -38.4 V DC to -72V DC</p> | <p>W AC): 90 V AC to 264 V AC, 47 Hz to 63 Hz</p> <ul style="list-style-type: none"> AC input (600 W AC): 90 V AC to 290 V AC, 45 Hz to 65 Hz High-voltage DC input (600 W AC): 190 V DC to 290 V DC (meeting 240 V high-voltage DC certification) DC input (180/1000 W DC): -38.4 V DC to -72V DC | <p>V AC to 290 V AC, 47 Hz to 63 Hz</p> <ul style="list-style-type: none"> High-voltage DC input: 190 V DC to 290 V DC (meeting 240 V high-voltage DC certification) |
| | Maximum power consumption | 120 W | 94 W | 142 W | 121 W |
| | Power consumption in the case of 30% traffic load ¹ | 73.6 W | 66.9 W/69.5 W | 93.7 W | 87.9 W |
| | Power consumption in the case of 100% traffic load ¹ | 76.74 W | 67.8 W/70.4 W | 95.2 W | 89.5 W |
| | Minimum power consumption | 44.5 W | 41.8 W/41.5 W | 50.5 W | 47.3 W |
| Heat dissipation system | Heat dissipation mode | Air-cooled heat dissipation and intelligent fan speed adjustment | Air-cooled heat dissipation and intelligent fan speed adjustment | Air-cooled heat dissipation and intelligent fan speed adjustment | Air-cooled heat dissipation and intelligent fan speed adjustment |
| | Number of fan modules | Built-in tripple fans | Built-in dual fans | Built-in tripple fans | Built-in dual fans |
| | Airflow | Air flows in from the front side and left, exhausts from the rear panel. | Air flows in from the front and left sides,exhausts from the right side. | Air flows in from the front side and left, exhausts from the rear panel. | Air flows in from the front and left sides,exhausts from the right side. |
| | Maximum heat dissipation of the device (BTU/hour) | 406.82 | <ul style="list-style-type: none"> 320.46 (AC model) 318.66 (DC model) | 484.38 | 413 |
| Environment | Long-term operating | <ul style="list-style-type: none"> 0-1800 m: - | <ul style="list-style-type: none"> 0-1800 m: - | <ul style="list-style-type: none"> 0-1800 m: - | <ul style="list-style-type: none"> 0-1800 m: - |

| Item | | CloudEngine S5731-S32ST4X | CloudEngine S5731-S32ST4X-A/D | CloudEngine S5731-S48S4X | CloudEngine S5731-S48S4X-A |
|---------------|--|--|--|--|---|
| parameters | temperature | 5°C to 45°C <ul style="list-style-type: none"> 1800-5000 m: The operating temperature decreases 1°C every time the altitude increases 220 m. | 5°C to 45°C <ul style="list-style-type: none"> 1800-5000 m: The operating temperature decreases 1°C every time the altitude increases 220 m. | 5°C to 45°C <ul style="list-style-type: none"> 1800-5000 m: The operating temperature decreases 1°C every time the altitude increases 220 m. | 5°C to 45°C <ul style="list-style-type: none"> 1800-5000 m: The operating temperature decreases 1°C every time the altitude increases 220 m. |
| | Storage temperature | -40°C to +70°C | -40°C to +70°C | -40°C to +70°C | -40°C to +70°C |
| | Relative humidity | 5%–95% (non-condensing) | 5%–95% (non-condensing) | 5%–95% (non-condensing) | 5%–95% (non-condensing) |
| | Operating altitude | 5000 m | 5000 m | 5000 m | 5000 m |
| | Noise under normal temperature (sound power) | 45.47 dB(A) | 46.8dB(A) | 61dB(A) | 56.8dB(A) |
| | Noise under high temperature (sound power) | 73.74 dB(A) | 73.2dB(A) | 75.7dB(A) | 73.9dB(A) |
| | Noise under normal temperature (sound pressure) | 31.79 dB(A) | 35dB(A) | 46dB(A) | 44.8dB(A) |
| | Surge protection specification (RJ45 service port) | ±7 kV | ±7 kV | NA | NA |
| | Surge protection specification (power port) | <ul style="list-style-type: none"> AC power port: ±6 kV in differential mode, ±6 kV in common mode DC power port: ±2 kV in differential mode, ±4 kV in common mode | <ul style="list-style-type: none"> AC power port: ±6 kV in differential mode, ±6 kV in common mode DC power port: ±2 kV in differential mode, ±4 kV in common mode | <ul style="list-style-type: none"> AC power port: ±6 kV in differential mode, ±6 kV in common mode DC power port: ±2 kV in differential mode, ±4 kV in common mode | <ul style="list-style-type: none"> Differential mode: ±6 kV Common mode: ±6 kV |
| Reliability | MTBF (year) ² | 71.54 | 32.56 | 64.97 | 31.39 |
| | MTTR (hour) | 2 | 2 | 2 | 2 |
| | Availability | > 0.99999 | > 0.99999 | > 0.99999 | > 0.99999 |
| Certification | | <ul style="list-style-type: none"> EMC certification Safety certification Manufacturing | <ul style="list-style-type: none"> EMC certification Safety certification Manufacturing | <ul style="list-style-type: none"> EMC certification Safety certification Manufacturing | <ul style="list-style-type: none"> EMC certification Safety certification Manufacturing |

| Item | CloudEngine S5731-S32ST4X | CloudEngine S5731-S32ST4X-A/D | CloudEngine S5731-S48S4X | CloudEngine S5731-S48S4X-A |
|------|---|---|---|---|
| | certification For details about certifications, see the section Safety and Regulatory Compliance . | certification For details about certifications, see the section Safety and Regulatory Compliance . | certification For details about certifications, see the section Safety and Regulatory Compliance . | certification For details about certifications, see the section Safety and Regulatory Compliance . |

Hardware specifications of CloudEngine S5731-S models

| Item | | CloudEngine S5731-S24T4X-A | CloudEngine S5731-S24T4X-D | CloudEngine S5731-S48T4X-A |
|-------------------------|--|--|--|--|
| Physical specifications | Dimensions (H x W x D, mm) | 43.6 x 442 x 220 | 43.6 x 442 x 220 | 43.6 x 442 x 220 |
| | Chassis height | 1 U | 1 U | 1 U |
| | Chassis weight (including packaging) | 4.40 kg | 4.62 kg | 4.57 kg |
| Fixed port | GE port | 24 | 24 | 48 |
| | 10GE port | 4 | 4 | 4 |
| Management port | ETH port | Supported | Supported | Supported |
| | Console port (RJ45) | Supported | Supported | Supported |
| | USB port | USB 2.0 | USB 2.0 | USB 2.0 |
| CPU | Frequency | 1.4 GHz | 1.4 GHz | 1.4 GHz |
| | Cores | 4 | 4 | 4 |
| Storage | Memory (RAM) | 2 GB | 2 GB | 2 GB |
| | Flash memory | 1 GB | 1 GB | 1 GB |
| Power supply system | Power supply type | Built-in AC | Built-in DC | Built-in AC |
| | Power supply specification | For details about power supplies, see the section Power Supply . | For details about power supplies, see the section Power Supply . | For details about power supplies, see the section Power Supply . |
| | Rated voltage range | <ul style="list-style-type: none"> AC input : 100 V AC to 240 V AC, 50/60 Hz | <ul style="list-style-type: none"> DC input : -48 VDC to -60 V DC | <ul style="list-style-type: none"> AC input : 100 V AC to 240 V AC, 50/60 Hz |
| | Maximum voltage range | <ul style="list-style-type: none"> AC input : 90 V AC to 290 V AC, 45 Hz to 65 Hz | <ul style="list-style-type: none"> DC input : -38.4 V DC to -72V DC | <ul style="list-style-type: none"> AC input : 90 V AC to 290 V AC, 45 Hz to 65 Hz |
| | Maximum power consumption | 80 W | 76 W | 102 W |
| | Power consumption in the case of 30% traffic load ¹ | 63W | 57W | 76W |

| Item | | CloudEngine S5731-S24T4X-A | CloudEngine S5731-S24T4X-D | CloudEngine S5731-S48T4X-A |
|-------------------------|---|---|---|---|
| | Power consumption in the case of 100% traffic load ¹ | 67W | 61W | 82W |
| | Minimum power consumption | 48W | 42W | 48W |
| Heat dissipation system | Heat dissipation mode | Air-cooled heat dissipation and intelligent fan speed adjustment | Air-cooled heat dissipation and intelligent fan speed adjustment | Air-cooled heat dissipation and intelligent fan speed adjustment |
| | Number of fan modules | Pluggable dual fans | Pluggable dual fans | Pluggable dual fans |
| | Airflow | Air flows in from the front side and exhausts from the rear panel. | Air flows in from the front side and exhausts from the rear panel. | Air flows in from the front side and exhausts from the rear panel. |
| | Maximum heat dissipation of the device (BTU/hour) | 273 | 259 | 348 |
| Environment parameters | Long-term operating temperature | <ul style="list-style-type: none"> 0-1800 m: -5°C to 45°C 1800-5000 m: The operating temperature decreases 1°C every time the altitude increases 220 m. | <ul style="list-style-type: none"> 0-1800 m: -5°C to 45°C 1800-5000 m: The operating temperature decreases 1°C every time the altitude increases 220 m. | <ul style="list-style-type: none"> 0-1800 m: -5°C to 45°C 1800-5000 m: The operating temperature decreases 1°C every time the altitude increases 220 m. |
| | Storage temperature | -40°C to +70°C | -40°C to +70°C | -40°C to +70°C |
| | Relative humidity | 5%–95% (non-condensing) | 5%–95% (non-condensing) | 5%–95% (non-condensing) |
| | Operating altitude | 5000 m | 5000 m | 5000 m |
| | Noise under normal temperature (sound power) | 44.90 dB (A) | 44.90 dB (A) | 44.90 dB (A) |
| | Noise under high temperature (sound power) | 73.80 dB (A) | 73.80 dB (A) | 73.80 dB (A) |
| | Noise under normal temperature (sound pressure) | 31.21 dB (A) | 31.21 dB (A) | 31.21 dB (A) |
| | Surge protection specification (RJ45 service port) | Common mode: ±7 kV | Common mode: ±7 kV | Common mode: ±7 kV |
| | Surge protection specification (power port) | ±6 kV in differential mode, ±6 kV in common mode | ±2 kV in differential mode, ±4 kV in common mode | ±6 kV in differential mode, ±6 kV in common mode |
| Reliability | MTBF (year) ² | 47.34 | 47.34 | 43.17 |

| Item | | CloudEngine S5731-S24T4X-A | CloudEngine S5731-S24T4X-D | CloudEngine S5731-S48T4X-A |
|---------------|--------------|---|---|---|
| | MTTR (hour) | 2 | 2 | 2 |
| | Availability | > 0.99999 | > 0.99999 | > 0.99999 |
| Certification | | <ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification <p>For details about certifications, see the section Safety and Regulatory Compliance.</p> | <ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification <p>For details about certifications, see the section Safety and Regulatory Compliance.</p> | <ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification <p>For details about certifications, see the section Safety and Regulatory Compliance.</p> |

NOTE

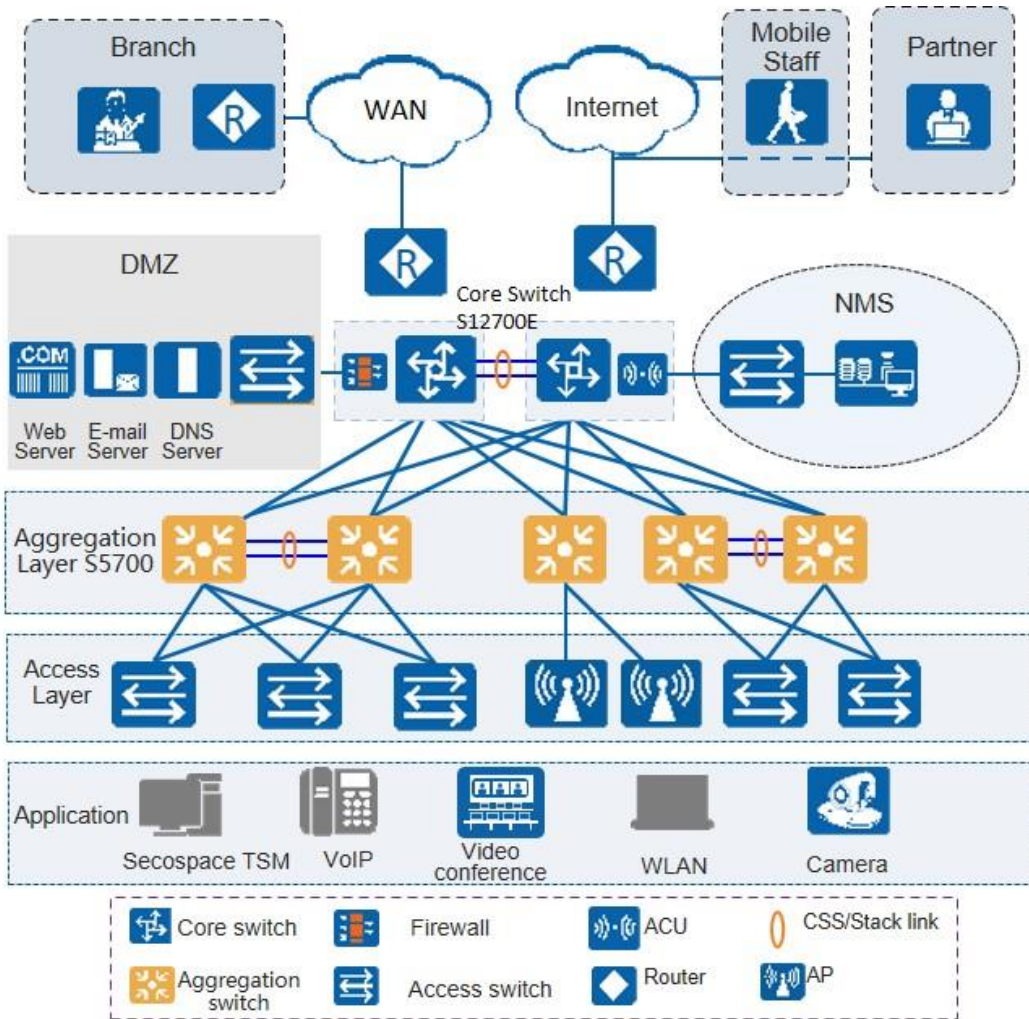
1: The power consumption under different load conditions is calculated according to the ATIS standard. Additionally, the EEE function is enabled and there is no PoE power output.

2: The reliability parameter values are calculated based on the typical configuration of the device. The parameter values vary according to the modules configured by the customer.

Networking and Applications

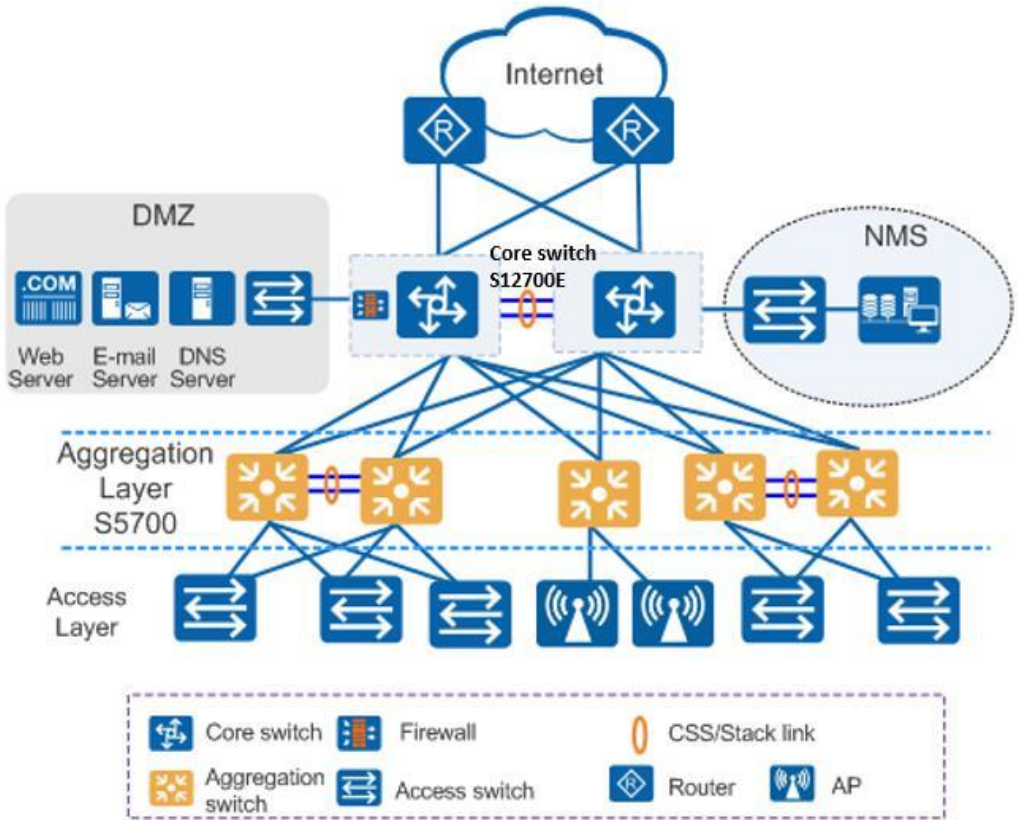
Large-Scale Enterprise Campus Network

CloudEngine S5731-S series switches can be deployed at the access layer of a campus network to build a high-performance and highly reliable enterprise network.



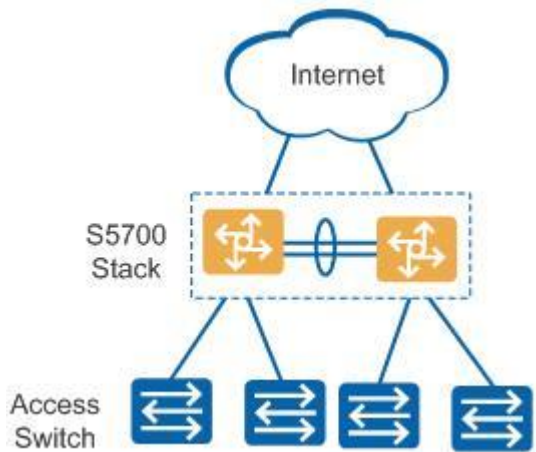
Small- or Medium-scale Enterprise Campus Network

CloudEngine S5731-S series switches can be deployed at the aggregation layer of a campus network to build a high-performance, multi-service, and highly reliable enterprise network.



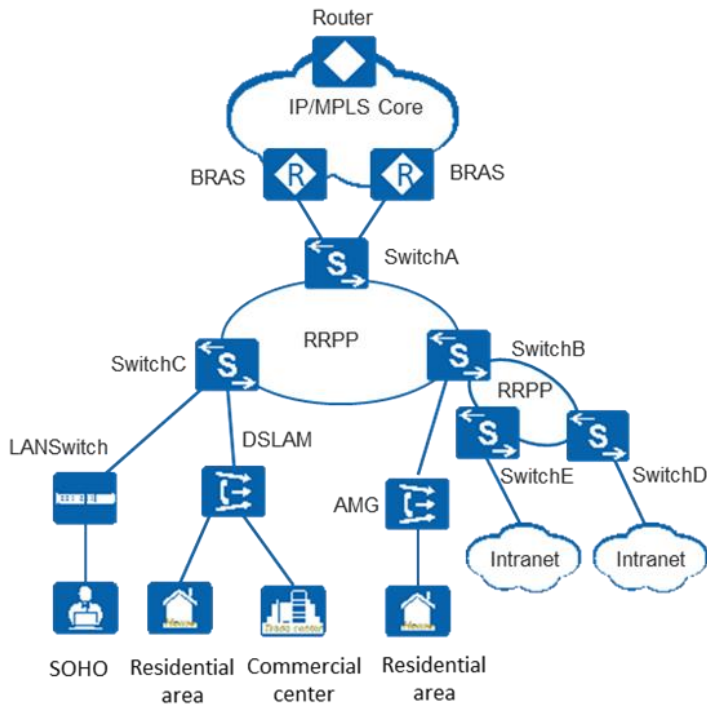
Small-scale Enterprise Campus Network

With powerful aggregation and routing capabilities of CloudEngine S5731-S series switches make them suitable for use as core switches in a small-scale enterprise network. Two or more S5731-S switches use iStack technology to ensure high reliability. They provide a variety of access control policies to achieve centralized management and simplify configuration.



Application on a MAN

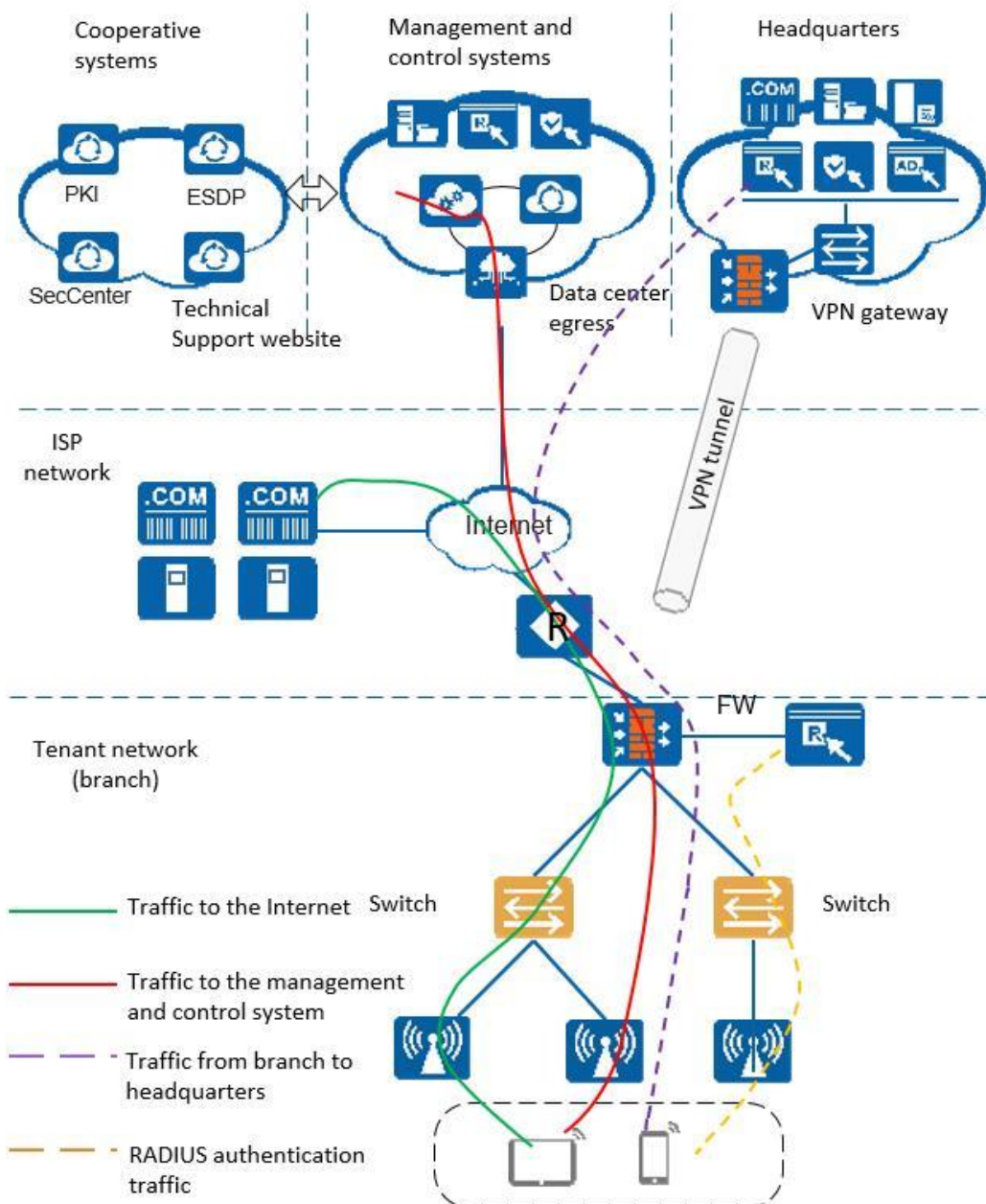
CloudEngine S5731-S series switches can be deployed at the access layer of a MAN(Metropolitan Area Network) to build a high-performance, multi-service, and highly reliable ISP MAN network.



Application in Public Cloud

CloudCampus Solution is a network solution suite based on Huawei public cloud. CloudEngine S5731-S series switches can be located at the access layer.

The switches are plug-and-play. They go online automatically after being powered on and connected with network cables, without the need for complex configurations. The switches can connect to the management and control system (CloudCampus@AC-Campus for switches running V200R019C00 and earlier versions; iMaster NCE-Campus for switches running V200R019C10 and later versions), and use bidirectional certificate authentication to ensure management channel security. The switches provide the NETCONF and YANG interfaces, through which the management and control system delivers configurations to them. In addition, remote maintenance and fault diagnosis can be performed on the management and control system.



Safety and Regulatory Compliance

The following table lists the safety and regulatory compliance of the CloudEngine S5731-S.

Safety and regulatory compliance of the CloudEngine S5731-S series

| Certification Category | Description |
|------------------------|--|
| Safety | <ul style="list-style-type: none"> • IEC 60950-1 • EN 60950-1/A11/A12 • UL 60950-1 • CSA C22.2 No 60950-1 • AS/NZS 60950.1 • CNS 14336-1 • IEC60825-1 • IEC60825-2 |

| Certification Category | Description |
|-------------------------------------|---|
| | <ul style="list-style-type: none"> • EN60825-1 • EN60825-2 |
| Electromagnetic Compatibility (EMC) | <ul style="list-style-type: none"> • CISPR22 Class A • CISPR24 • EN55022 Class A • EN55024 • ETSI EN 300 386 Class A • CFR 47 FCC Part 15 Class A • ICES 003 Class A • AS/NZS CISPR22 Class A • VCCI Class A • IEC61000-4-2 • ITU-T K 20 • ITU-T K 21 • ITU-T K 44 • CNS13438 |
| Environment | <ul style="list-style-type: none"> • RoHS • REACH • WEEE |

NOTE

- EMC: electromagnetic compatibility
- CISPR: International Special Committee on Radio Interference
- EN: European Standard
- ETSI: European Telecommunications Standards Institute
- CFR: Code of Federal Regulations
- FCC: Federal Communication Commission
- IEC: International Electrotechnical Commission
- AS/NZS: Australian/New Zealand Standard
- VCCI: Voluntary Control Council for Interference
- UL: Underwriters Laboratories
- CSA: Canadian Standards Association
- IEEE: Institute of Electrical and Electronics Engineers
- RoHS: restriction of the use of certain hazardous substances
- REACH: Registration Evaluation Authorization and Restriction of Chemicals
- WEEE: Waste Electrical and Electronic Equipment

MIB and Standards Compliance

Supported MIBs

The following table lists the MIBs supported by the CloudEngine S5731-S.

MIBs supported by the CloudEngine S5731-S series

| Category | MIB |
|------------|--|
| Public MIB | <ul style="list-style-type: none"> • BRIDGE-MIB |

| Category | MIB |
|------------------------|--|
| | <ul style="list-style-type: none"> • DISMAN-NSLOOKUP-MIB • DISMAN-PING-MIB • DISMAN-TRACEROUTE-MIB • ENTITY-MIB • EtherLike-MIB • IF-MIB • IP-FORWARD-MIB • IPv6-MIB • LAG-MIB • LLDP-EXT-DOT1-MIB • LLDP-EXT-DOT3-MIB • LLDP-MIB • NOTIFICATION-LOG-MIB • NQA-MIB • OSPF-TRAP-MIB • P-BRIDGE-MIB • Q-BRIDGE-MIB • RFC1213-MIB • RIPv2-MIB • RMON2-MIB • RMON-MIB • SAVI-MIB • SNMP-FRAMEWORK-MIB • SNMP-MPD-MIB • SNMP-NOTIFICATION-MIB • SNMP-TARGET-MIB • SNMP-USER-BASED-SM-MIB • SNMPv2-MIB • TCP-MIB • UDP-MIB |
| Huawei-proprietary MIB | <ul style="list-style-type: none"> • HUAWEI-AAA-MIB • HUAWEI-ACL-MIB • HUAWEI-ALARM-MIB • HUAWEI-ALARM-RELIABILITY-MIB • HUAWEI-BASE-TRAP-MIB • HUAWEI-BRAS-RADIUS-MIB • HUAWEI-BRAS-SRVCFG-EAP-MIB • HUAWEI-BRAS-SRVCFG-STATICUSER-MIB • HUAWEI-CBQOS-MIB • HUAWEI-CDP-COMPLIANCE-MIB • HUAWEI-CONFIG-MAN-MIB • HUAWEI-CPU-MIB • HUAWEI-DAD-TRAP-MIB • HUAWEI-DC-MIB |

| Category | MIB |
|----------|--|
| | <ul style="list-style-type: none"> • HUAWEI-DATASYNC-MIB • HUAWEI-DEVICE-MIB • HUAWEI-DHCPR-MIB • HUAWEI-DHCPS-MIB • HUAWEI-DHCP-SNOOPING-MIB • HUAWEI-DIE-MIB • HUAWEI-DNS-MIB • HUAWEI-DLDP-MIB • HUAWEI-ELMI-MIB • HUAWEI-ERPS-MIB • HUAWEI-ERRORDOWN-MIB • HUAWEI-ENERGYMNGT-MIB • HUAWEI-EASY-OPERATION-MIB • HUAWEI-ENTITY-EXTENT-MIB • HUAWEI-ENTITY-TRAP-MIB • HUAWEI-ETHARP-MIB • HUAWEI-ETHOAM-MIB • HUAWEI-FLASH-MAN-MIB • HUAWEI-FWD-RES-TRAP-MIB • HUAWEI-GARP-APP-MIB • HUAWEI-GTSM-MIB • HUAWEI-HGMP-MIB • HUAWEI-HWTACACS-MIB • HUAWEI-IF-EXT-MIB • HUAWEI-INFOCENTER-MIB • HUAWEI-IPPOOL-MIB • HUAWEI-IPV6-MIB • HUAWEI-ISOLATE-MIB • HUAWEI-L2IF-MIB • HUAWEI-L2MAM-MIB • HUAWEI-L2VLAN-MIB • HUAWEI_LDT-MIB • HUAWEI-LLDP-MIB • HUAWEI-MAC-AUTHEN-MIB • HUAWEI-MEMORY-MIB • HUAWEI-MFF-MIB • HUAWEI-MFLP-MIB • HUAWEI-MSTP-MIB • HUAWEI-BGP-VPN-MIB • HUAWEI-CCC-MIB • HUAWEI-MULTICAST-MIB • HUAWEI-NAP-MIB • HUAWEI-NTPV3-MIB • HUAWEI-PERFORMANCE-MIB • HUAWEI-PORT-MIB |

| Category | MIB |
|----------|---|
| | <ul style="list-style-type: none"> • HUAWEI-PORTAL-MIB • HUAWEI-QINQ-MIB • HUAWEI-RIPv2-EXT-MIB • HUAWEI-RM-EXT-MIB • HUAWEI-RRPP-MIB • HUAWEI-SECURITY-MIB • HUAWEI-SEP-MIB • HUAWEI-SNMP-EXT-MIB • HUAWEI-SSH-MIB • HUAWEI-STACK-MIB • HUAWEI-SWITCH-L2MAM-EXT-MIB • HUAWEI-SWITCH-SRV-TRAP-MIB • HUAWEI-SYS-MAN-MIB • HUAWEI-TCP-MIB • HUAWEI-TFTPC-MIB • HUAWEI-TRNG-MIB • HUAWEI-XQOS-MIB |

Standard Compliance

The following table lists the standards that the CloudEngine S5731-S complies with.

[Standard compliance list of the CloudEngine S5731-S series](#)

| Standard Organization | Standard or Protocol |
|-----------------------|---|
| IETF | <ul style="list-style-type: none"> • RFC 768 User Datagram Protocol (UDP) • RFC 792 Internet Control Message Protocol (ICMP) • RFC 793 Transmission Control Protocol (TCP) • RFC 826 Ethernet Address Resolution Protocol (ARP) • RFC 854 Telnet Protocol Specification • RFC 951 Bootstrap Protocol (BOOTP) • RFC 959 File Transfer Protocol (FTP) • RFC 1058 Routing Information Protocol (RIP) • RFC 1112 Host extensions for IP multicasting • RFC 1157 A Simple Network Management Protocol (SNMP) • RFC 1256 ICMP Router Discovery • RFC 1305 Network Time Protocol Version 3 (NTP) • RFC 1349 Internet Protocol (IP) • RFC 1493 Definitions of Managed Objects for Bridges • RFC 1542 Clarifications and Extensions for the Bootstrap Protocol • RFC 1643 Ethernet Interface MIB • RFC 1757 Remote Network Monitoring (RMON) • RFC 1901 Introduction to Community-based SNMPv2 • RFC 1902-1907 SNMP v2 • RFC 1981 Path MTU Discovery for IP version 6 • RFC 2131 Dynamic Host Configuration Protocol (DHCP) |

| Standard Organization | Standard or Protocol |
|-----------------------|--|
| | <ul style="list-style-type: none"> • RFC 2328 OSPF Version 2 • RFC 2453 RIP Version 2 • RFC 2460 Internet Protocol, Version 6 Specification (IPv6) • RFC 2461 Neighbor Discovery for IP Version 6 (IPv6) • RFC 2462 IPv6 Stateless Address Auto configuration • RFC 2463 Internet Control Message Protocol for IPv6 (ICMPv6) • RFC 2474 Differentiated Services Field (DS Field) • RFC 2740 OSPF for IPv6 (OSPFv3) • RFC 2863 The Interfaces Group MIB • RFC 2597 Assured Forwarding PHB Group • RFC 2598 An Expedited Forwarding PHB • RFC 2571 SNMP Management Frameworks • RFC 2865 Remote Authentication Dial In User Service (RADIUS) • RFC 3046 DHCP Option82 • RFC 3376 Internet Group Management Protocol, Version 3 (IGMPv3) • RFC 3513 IP Version 6 Addressing Architecture • RFC 3579 RADIUS Support For EAP • RFC 4271 A Border Gateway Protocol 4 (BGP-4) • RFC 4760 Multiprotocol Extensions for BGP-4 • draft-grant-tacacs-02 TACACS+ • RFC 6241 Network Configuration Protocol (NETCONF) • RFC 6020 YANG - A Data Modeling Language for the Network Configuration Protocol (NETCONF) |
| IEEE | <ul style="list-style-type: none"> • IEEE 802.1D Media Access Control (MAC) Bridges • IEEE 802.1p Traffic Class Expediting and Dynamic Multicast Filtering • IEEE 802.1Q Virtual Bridged Local Area Networks • IEEE 802.1ad Provider Bridges • IEEE 802.2 Logical Link Control • IEEE Std 802.3 CSMA/CD • IEEE Std 802.3ab 1000BASE-T specification • IEEE Std 802.3ad Aggregation of Multiple Link Segments • IEEE Std 802.3ae 10GE WEN/LAN Standard • IEEE Std 802.3x Full Duplex and flow control • IEEE Std 802.3z Gigabit Ethernet Standard • IEEE802.1ax/IEEE802.3ad Link Aggregation • IEEE 802.3ah Ethernet in the First Mile. • IEEE 802.1ag Connectivity Fault Management • IEEE 802.1ab Link Layer Discovery Protocol • IEEE 802.1D Spanning Tree Protocol • IEEE 802.1w Rapid Spanning Tree Protocol • IEEE 802.1s Multiple Spanning Tree Protocol • IEEE 802.1x Port based network access control protocol • IEEE 802.3af DTE Power via MIDI • IEEE 802.3at DTE Power via the MDI Enhancements |

| Standard Organization | Standard or Protocol |
|-----------------------|---|
| | <ul style="list-style-type: none"> IEEE 802.3az Energy Efficient Ethernet |
| ITU | <ul style="list-style-type: none"> ITU SG13 Y.17ethoam ITU SG13 QoS control Ethernet-Based IP Access ITU-T Y.1731 ETH OAM performance monit |
| ISO | <ul style="list-style-type: none"> ISO 10589 IS-IS Routing Protocol |
| MEF | <ul style="list-style-type: none"> MEF 2 Requirements and Framework for Ethernet Service Protection MEF 9 Abstract Test Suite for Ethernet Services at the UNI MEF 10.2 Ethernet Services Attributes Phase 2 MEF 11 UNI Requirements and Framework MEF 13 UNI Type 1 Implementation Agreement MEF 15 Requirements for Management of Metro Ethernet Phase 1 Network Elements MEF 17 Service OAM Framework and Requirements MEF 20 UNI Type 2 Implementation Agreement MEF 23 Class of Service Phase 1 Implementation Agreement Xmodem XMODEM/YMODEM Protocol Reference |

Ordering Information

The following table lists ordering information of the CloudEngine S5731-S series switches.

| Model | Product Description |
|-----------------------------|--|
| CloudEngine S5731-S24T4X | CloudEngine S5731-S24T4X (24 x 10/100/1000BASE-T ports, 4 x 10GE SFP+ ports, without power module) |
| CloudEngine S5731-S24T4X-A | CloudEngine S5731-S24T4X (24 x 10/100/1000BASE-T ports, 4 x 10GE SFP+ ports, AC power) |
| CloudEngine S5731-S24T4X-D | CloudEngine S5731-S24T4X (24 x 10/100/1000BASE-T ports, 4 x 10GE SFP+ ports, DC power) |
| CloudEngine S5731-S24P4X | CloudEngine S5731-S24P4X (24 x 10/100/1000BASE-T ports, 4 x 10GE SFP+ ports, PoE+, without power module) |
| CloudEngine S5731-S32ST4X | CloudEngine S5731-S32ST4X(8*10/100/1000BASE-T ports, 24*GE SFP ports, 4*10GE SFP+ ports, without power module) |
| CloudEngine S5731-S32ST4X-A | CloudEngine S5731-S32ST4X-A(8*10/100/1000BASE-T ports, 24*GE SFP ports, 4*10GE SFP+ ports, AC power, front access) |
| CloudEngine S5731-S32ST4X-D | CloudEngine S5731-S32ST4X-D(8*10/100/1000BASE-T ports, 24*GE SFP ports, 4*10GE SFP+ ports, DC power, front access) |
| CloudEngine S5731-S48T4X | CloudEngine S5731-S48T4X (48 x 10/100/1000BASE-T ports, 4 x 10GE SFP+ ports, without power module) |
| CloudEngine S5731-S48T4X-A | CloudEngine S5731-S48T4X (48 x 10/100/1000BASE-T ports, 4 x 10GE SFP+ ports, AC power) |
| CloudEngine S5731-S48P4X | CloudEngine S5731-S48P4X (48 x 10/100/1000BASE-T ports, 4 x 10GE SFP+ ports, PoE+, without power module) |
| CloudEngine S5731-S48S4X | CloudEngine S5731-S48S4X(48*GE SFP ports, 4*10GE SFP+ ports, without power module) |

| Model | Product Description |
|----------------------------|--|
| CloudEngine S5731-S48S4X-A | CloudEngine S5731-S48S4X-A(48*GE SFP ports, 4*10GE SFP+ ports, AC power, front access) |
| PAC150S12-R | 150 W AC power module |
| PAC600S12-CB | 600 W AC power module |
| PAC600S12-DB | 600 W AC power module |
| PAC600S12-EB | 600 W AC power module |
| PAC600S56-CB | 600 W AC PoE power module |
| PDC180S12-CR | 180 W DC power module |
| PDC1000S12-DB | 1000 W DC power module |
| PAC1000S56-DB | 1000 W AC PoE power module |
| PDC1000S56-CB | 1000 W DC PoE power module |
| FAN-023A-B | Fan module |
| L-VxLAN-S57 | S57 Series, VxLAN License, Per Device |
| N1-S57S-M-Lic | S57XX-S Series Basic SW,Per Device |
| N1-S57S-M-SnS1Y | S57XX-S Series Basic SW,SnS,Per Device,1Year |
| N1-S57S-F-Lic | N1-CloudCampus,Foundation,S57XX-S Series,Per Device |
| N1-S57S-F-SnS1Y | N1-CloudCampus,Foundation,S57XX-S Series,SnS,Per Device,1Year |
| N1-S57S-A-Lic | N1-CloudCampus,Advanced,S57XX-S Series,Per Device |
| N1-S57S-A-SnS1Y | N1-CloudCampus,Advanced,S57XX-S Series,SnS,Per Device,1Year |
| N1-S57S-FToA-Lic | N1-Upgrade-Foundation to Advanced,S57XX-S,Per Device |
| N1-S57S-FToA-SnS1Y | N1-Upgrade-Foundation to Advanced,S57XX-S,SnS,Per Device,1Year |

More Information


For more information about Huawei Campus Switches, visit <http://e.huawei.com> or contact us in the following ways:

- Global service hotline: <http://e.huawei.com/en/service-hotline>
- Logging in to the Huawei Enterprise technical support website: <http://support.huawei.com/enterprise/>
- Sending an email to the customer service mailbox: support_e@huawei.com

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