Huawei S5730-HI Series Switches
Product Datasheet

HUAWEI TECHNOLOGIES CO., LTD.

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S5730-HI Series Enterprise Switches

Product Overview

Huawei S5730-HI gigabit Ethernet switches (hereinafter referred to as the S5730-HI) are Huawei-developed next-generation agile switches that provide fixed full gigabit access and 10GE uplink interfaces as well as one or two slots for uplink interface extension.

The switches are developed based on Huawei Versatile Routing Platform (VRP), and use the fully programmable structure to implement software definition and service change on demand. With services and network convergence as the core, the switches provide the free mobility function to ensure consistent user experience.

The Super Virtual Fabric (SVF) function virtualizes the entire network into one device. In addition, the switches support flexible Ethernet networking, comprehensive VPN tunnel solutions, various security control methods, intelligent deployment, and simple operations & maintenance (O&M).

The S5730-HI series switches are the best choices for the access or aggregation layers of large- and middle-sized campus networks, and the core layer of branch or small campus networks.

Product Appearance

Models and Appearances

S5730-36C-HI

- 24 10/100/1000Base-T Ethernet ports,4 10 Gig SFP+
- One extended slot
- 1+1 power backup, with AC, DC, or AC+DC power supply
- Switching capacity: 758 Gbit/s

S5730-36C-PWH-HI

- 24 10/100/1000Base-T Ethernet ports,4 10 Gig SFP+
- One extended slot
- 1+1 power backup, with AC, DC, or AC+DC power supply
- PoE++
- Switching capacity: 758 Gbit/s

S5730-44C-HI

- 24 10/100/1000Base-T Ethernet ports,4 10 Gig SFP+
- Two extended slots
- 1+1 power backup, with AC, DC, or AC+DC power supply
- Switching capacity: 758 Gbit/s

S5730-44C-PWH-HI

- 24 10/100/1000Base-T Ethernet ports,4 10 Gig SFP+
- Two extended slots
- 1+1 power backup, with AC, DC, or AC+DC power supply
- PoE++
- Switching capacity: 758 Gbit/s

S5730-60C-HI

- 48 10/100/1000Base-T Ethernet ports,4 10 Gig SFP+
- One extended slot
- 1+1 power backup, with AC, DC, or AC+DC power supply
- Switching capacity: 758 Gbit/s

S5730-60C-PWH-HI

- 48 10/100/1000Base-T Ethernet ports,4 10 Gig SFP+
- One extended slot
- 1+1 power backup, with AC, DC, or AC+DC power supply
- PoE++
- Switching capacity: 758 Gbit/s

S5730-68C-HI

- 48 10/100/1000Base-T Ethernet ports,4 10 Gig SFP+
- Two extended slots
- 1+1 power backup, with AC, DC, or AC+DC power supply
- Switching capacity: 758 Gbit/s

S5730-68C-PWH-HI

- 48 10/100/1000Base-T Ethernet ports,4 10 Gig SFP+
- Two extended slots
- 1+1 power backup, with AC, DC, or AC+DC power supply
- PoE++
- Switching capacity: 758 Gbit/s

Subcard Types

The S5730-HI provides one or two slots for eight 10GE Base-T interface card ,eight 10GE SFP+ interface card or two 40GE QSFP+ interface card for upstream connections.

Fan Tray

Table 2-3 lists the fan module on the S5730-HI. A FAN-028A-B fan module has two fans to cool the chassis. It is hot swappable.

Fan Model	Description	Applied Switch Model
FAN-028A-B	Number of fans: 1 Max power consumption: 12 W Maximum fan speed: 16000 ± 10% rounds per minute (RPM) Maximum wind rate: 28 cubic feet per minute (CFM)	S5730-36C-HI S5730-36C-PWH-HI S5730-60C-HI S5730-60C-PWH-HI

The S5730-44C/68C-HI series switches (PoE and Non-PoE models) have a built-in heat dissipation system. Customers do not need to purchase fan module

Power Supply

lists the power supplies on the S5730-HI.

S5730-HI power supplies

Power Model	Name	Applied Switch Model (S5730-HI)
ES0W2PSA0150	150W AC	S5730-36C-HI S5730-44C-HI S5730-60C-HI S5730-68C-HI
ES0W2PSD0150	150W DC	S5730-36C-HI S5730-44C-HI S5730-60C-HI S5730-68C-HI
PAC-500WA-BE	500 W AC PoE	S5730-36C-PWH-HI S5730-44C-PWH-HI S5730-60C-PWH-HI S5730-68C-PWH-HI
PDC-650WA-BE	650 W DC PoE	S5730-36C-PWH-HI S5730-44C-PWH-HI S5730-60C-PWH-HI S5730-68C-PWH-HI
W2PSA1150	1150 W AC PoE	S5730-36C-PWH-HI S5730-44C-PWH-HI S5730-60C-PWH-HI S5730-68C-PWH-HI

The S5730-HI has no power supplies by default. The customer can purchase one or two AC/DC power supplies when or after purchasing the switch.

The S5730-HI supports multiple power supply options, including dual-power and PoE.

Dual-Power (Non-PoE)

The dual-power model (non-PoE) uses pluggable power supplies and provides two power slots. When a switch has two power supplies installed, the power supplies work in 1+1 backup mode to power the switch itself. The switch supports dual AC, dual DC, as well as AC and DC mixing.

lists the power supply options supported by S5730-HI.

S5730-HI dual-power (non-PoE)

Model	Power 1	Power 2
S5730-36C-HI	ES0W2PSA0150 (150W-AC) or ES0W2PSD0150 (150W-DC)	ES0W2PSA0150 (150W-AC) or ES0W2PSD0150 (150W-DC)
S5730-44C-HI	ES0W2PSA0150 (150W-AC) or ES0W2PSD0150 (150W-DC)	ES0W2PSA0150 (150W-AC) or ES0W2PSD0150 (150W-DC)
S5730-60C-HI	ES0W2PSA0150 (150W-AC) or ES0W2PSD0150 (150W-DC)	ES0W2PSA0150 (150W-AC) or ES0W2PSD0150 (150W-DC)
S5730-68C-HI	ES0W2PSA0150 (150W-AC) or ES0W2PSD0150 (150W-DC)	ES0W2PSA0150 (150W-AC) or ES0W2PSD0150 (150W-DC)

PoE/PoE+

PWH in the model name indicates a PoE-capable switch, which supports IEEE 802.3af-compliant PoE, 802.3at-compliant PoE+, and 802.3bt-compliant PoE++. Each port delivers 15.4 W PoE ,30 W PoE+ or 60 W PoE++ power capacity.

Each PoE-capable S5730-HI switch has two power slots for pluggable PoE power modules. Table 3-3 lists the power supply options supported by PoE-capable S5730-HI.

Model	Power 1	Power 2	PoE Power	Number of PoE Ports
S5730-36C-PWH-HI	500W/600W	—	369.6 W	POE(15.4W)：24 POE+(30W)：12 PoE++(60W)：6
	500W/600W	500W/600W	739.2 W	POE(15.4W)：24 POE+(30W)：24 PoE++(60W)：12
	1150W(220V)	—	785.4 W	POE(15.4W)：24 POE+(30W)：24 PoE++(60W)：13
	1150W(220V)	1150W(220V)	1440 W	POE(15.4W)：24 POE+(30W)：24 PoE++(60W)：24
	1150W(110V)	—	446.6W	POE(15.4W)：24 POE+(30W)：14 PoE++(60W)：7
	1150W(110V)	1150W(110V)	893.2W	POE(15.4W)：24 POE+(30W)：24 PoE++(60W)：14
S5730-44C-PWH-HI	500W	—	369.6 W	POE(15.4W)：24 POE+(30W)：12 PoE++(60W)：6
	500W	500W	739.2 W	POE(15.4W)：24 POE+(30W)：24 PoE++(60W)：12
	650W	—	350 W	POE(15.4W)：22 POE+(30W)：11 PoE++(60W)：5
	650W	500W/650W	700 W	POE(15.4W)：24 POE+(30W)：23 PoE++(60W)：11
	500W/650W	650W		
	1150W(220V)	—	785.4 W	POE(15.4W)：24 POE+(30W)：24 PoE++(60W)：13
	1150W(220V)	1150W(220V)	1440 W	POE(15.4W)：24 POE+(30W)：24 PoE++(60W)：24

Model	Power 1	Power 2	PoE Power	Number of PoE Ports
	1150W(110V)	—	446.6 W	POE(15.4W)：24 POE+(30W)：14 PoE++(60W)：7
	1150W(110V)	1150W(110V)	893.2 W	POE(15.4W)：24 POE+(30W)：24 PoE++(60W)：14
S5730-60C-PWH-HI	500W/600W	—	369.6 W	POE(15.4W)：24 POE+(30W)：12 PoE++(60W)：6
	500W/600W	500W/600W	739.2 W	POE(15.4W)：48 POE+(30W)：24 PoE++(60W)：12
	1150W(220V)	—	785.4 W	POE(15.4W)：48 POE+(30W)：26 PoE++(60W)：13
	1150W(220V)	1150W(220V)	1440 W	POE(15.4W)：48 POE+(30W)：48 PoE++(60W)：24
	1150W(110V)	—	446.6 W	POE(15.4W)：29 POE+(30W)：14 PoE++(60W)：7
	1150W(110V)	1150W(110V)	893.2 W	POE(15.4W)：48 POE+(30W)：29 PoE++(60W)：14
S5730-68C-PWH-HI	500W	—	369.6 W	POE(15.4W)：24 POE+(30W)：12 PoE++(60W)：6
	500W	500W	739.2 W	POE(15.4W)：48 POE+(30W)：24 PoE++(60W)：12
	650W	—	350 W	POE(15.4W)：22 POE+(30W)：11 PoE++(60W)：5
	650W	500W/650W	700 W	POE(15.4W)：48 POE+(30W)：23 PoE++(60W)：11
	500W/650W	650W		
	1150W(220V)	—	785.4 W	POE(15.4W)：48 POE+(30W)：26 PoE++(60W)：13
	1150W(220V)	1150W(220V)	1440 W	POE(15.4W)：48 POE+(30W)：48 PoE++(60W)：24
	1150W(110V)	—	446.6 W	POE(15.4W)：29 POE+(30W)：14 PoE++(60W)：7
	1150W(110V)	1150W(110V)	893.2 W	POE(15.4W)：48 POE+(30W)：29 PoE++(60W)：14

NOTE

When a switch has two power supplies installed, the two power supplies work in redundancy mode to provide power for the switch itself and in load balancing mode to provide power for powered devices (PDs).

Product Characteristics and Advantages

Huawei S5730-HI series have the following characteristics

Enabling networks to be more agile for services

- The high-speed Ethernet Network Processor (ENP) embedded in the S5730-HI is tailored for Ethernet. The chip's flexible packet processing and traffic control capabilities can meet current and future service requirements, helping build a highly scalable network.
- In addition to capabilities of traditional switches, the S5730-HI provides fully programmable open interfaces and supports user-defined forwarding behavior. Enterprises can use the open interfaces to develop new protocols and functions independently or jointly with equipment vendors to build campus networks meeting their own needs.
- The ENP has a fully programmable architecture, on which enterprises can define their own forwarding models, forwarding behavior, and lookup algorithms. Microcode programmability makes it possible to provide new services within six months, without the need of replacing the hardware. In contrast, traditional ASIC chips use a fixed forwarding architecture and follow
  a fixed forwarding process. For this reason, new services cannot be provisioned until new hardware is developed to support the services one to three years later.

Delivering abundant services more agilely

- The S5730-HI integrates the AC function, so customers do not need to buy independent AC devices or hardware components. An S5730-HI switch can manage a maximum of 1K APs, adapting to the fast growth of wireless services.
- With the unified user management function, the S5730-HI authenticates both wired and wireless users, ensuring a consistent user experience no matter whether they are connected to the network through wired or wireless access devices. The unified user management function supports various authentication methods, including 802.1x, MAC address, and Portal authentication, and is capable of managing users based on user groups, domains, and time ranges. These functions visualize user and service management and boost the transformation from device-centric management to user-centric management.
- The S5730-HI provides excellent quality of service (QoS) capabilities and supports queue scheduling and congestion control algorithms. Additionally, it adopts innovative priority queuing and multi-level scheduling mechanisms to implement fine-grained scheduling of data flows, meeting service quality requirements of different user terminals and services.

Providing fine granular network management more agilely

- The S5730-HI uses the Packet Conservation Algorithm for Internet (iPCA) technology that changes the traditional method of using simulated traffic for fault location. iPCA technology can monitor network quality for any service flow anywhere and anytime, without extra costs. It can detect temporary service interruptions in a very short time and can identify faulty ports accurately. This cutting-edge fault detection technology turns "extensive management" to "fine granular management."
- The S5730-HI supports Two-Way Active Measurement Protocol (TWAMP) to accurately check any IP link and obtain the entire network's IP performance. This protocol eliminates the need of using a dedicated probe or a proprietary protocol.
- The S5730-HI supports SVF and functions as a parent switch. With this virtualization technology, a physical network with the "Small-sized core/aggregation switches + Access switches + APs" structure can be virtualized into a "super switch", offering the industry's simplest network management solution.

- With the Easy Deploy function, the S5730-HI manages access switches in a similar way an AC manages APs. In deployment, access switches and APs can go online with zero-touch configuration. In the Easy Deploy solution, the Commander collects topology information about the connected clients and stores the clients' startup information based on the topology. Clients can be replaced with zero-touch configuration. The Commander can deliver configurations and scripts to clients in batches and query the delivery results. In addition, the Commander can collect and display information about power consumption on the entire network.

Comprehensive VPN technologies

- The S5730-HI supports the MPLS function, and can be used as access devices of high-quality enterprise leased line. The S5730-HI allows users in different VPNs to connect to the same switch and isolates users through multi-instance routing. Users in multiple VPNs connect to a provider edge (PE) device through the same physical port on the switch, which reduces the cost on VPN network deployment.

Flexible Ethernet networking

- In addition to traditional Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), and Multiple Spanning Tree Protocol (MSTP), the S5730-HI 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 S5730-HI supports Smart Link and Virtual Router Redundancy Protocol (VRRP), which implement backup of uplinks. One S5730-HI switch can connect to multiple aggregation switches through multiple links, significantly improving reliability of access devices.
- The S5730-HI has large entry sizes and 512MB buffers, coping with the fast growth of data volume in the big data era. With the support for 256K MAC addresses, 512K FIB entries, the S5730-HI meets the requirements of educational networks and metro area networks and allows the access of a large number of terminals. The S5730-HI is the best choice in cloud computing era.

Various security control methods

- The S5730-HI supports 802.1x authentication, MAC address authentication, Portal authentication, and hybrid authentication, and can dynamically delivery user policies such as VLANs, QoS policies, and access control lists (ACL). It also supports user management based on user groups.
- The S5730-HI 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 S5730-HI 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 S5730-HI supports strict ARP learning, which prevents ARP spoofing attackers from exhausting ARP entries.

Mature IPv6 features

- The S5730-HI is developed based on the mature, stable VRP and supports IPv4/IPv6 dual stacks, IPv6 routing protocols (RIPng, OSPFv3, BGP4+, and IS-IS for IPv6). With these IPv6 features, the S5730-HI can be deployed on a pure IPv4 network, a pure IPv6 network, or a shared IPv4/IPv6 network, helping achieve IPv4-to-IPv6 transition.

Intelligent stack (iStack)

- The S5730-HI supports the iStack function that combines multiple switches into a 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, up to nine physical switches can be 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.

PoE++ power supply

- The S5730-HI series PoE switches provide a maximum of 60 W PoE output power on a single interface, and can provide power for high-power terminals such as APs and surveillance cameras. This solves the problem of power supply in specific scenarios.

Perpetual PoE

- Huawei switches support the perpetual PoE technology to deliver uninterrupted PoE power supply. A Huawei switch does not stop supply power to PDs even when a switch card is reset by running the reboot command. This capability ensures that PDs are not powered off during the switch reboot, eliminating the fault-triggered interruption accordingly. Huawei modular switches currently do not support perpetual PoE.

Fast PoE

- S5730-HI PoE models support the fast PoE technology to ensure fast power supply. Huawei 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. Huawei's fast PoE capability greatly shortens the service interruption time caused by power supply interruption, and enables the switch and PD to start almost at the same time. That is, after the switch is fully started, PDs can immediately get powered and function properly.

VxLAN features

- VXLAN is used to construct a Unified Virtual Fabric (UVF). As such, multiple service networks or tenant networks can be deployed on the same physical network, and service and tenant networks are isolated from each other. This capability truly achieves 'one network for multiple purposes'. The resulting benefits include enabling data transmission of different services or customers, reducing the network construction costs, and improving network resource utilization. The S5730-HI series switches are VXLAN-capable and allow centralized and distributed VXLAN gateway deployment modes. These switches also support the BGP EVPN protocol for dynamically establishing VXLAN tunnels and can be configured using NETCONF/YANG.

Big Data security collaboration

- Agile switches use NetStream to collect campus network data and then report such data to the Huawei Cybersecurity Intelligence System (CIS). 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 CIS delivers the security policies to the Agile Controller. The Agile Controller then delivers such policies to agile switches that will handle security events accordingly. All these ensure campus network security.

Open Programmability System (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.

Adapting to network evolution

- The S5730-36C/60C-HI series switches provide a buffer size of 4 GB and an SSD storage card slot (240 GB) for VNF evolution.

Product Specifications

Functions and Features

lists the functions and features available on the S5730-HI.

Item	Specification
MAC address table	IEEE 802.1d standards compliance 256K MAC address entries MAC address learning and aging Static, dynamic, and blackhole MAC address entries Packet filtering based on source MAC addresses
VLAN	4K VLANs Guest VLAN and voice VLAN GVRP MUX VLAN VLAN assignment based on MAC addresses, protocols, IP subnets, policies, and ports VLAN mapping
Wireless service	AP access control, AP domain management, and AP configuration template management Radio management, unified static configuration, and dynamic centralized management WLAN basic services, QoS, security, and user management CAPWAP, tag/terminal location, and spectrum analysis
Ethernet loop protection	RRPP ring topology and RRPP multi-instance Smart Link tree topology and Smart Link multi-instance, providing millisecond-level protection switchover SEP ERPS (G.8032) BFD for OSPF, BFD for IS-IS, BFD for VRRP, and BFD for PIM STP (IEEE 802.1d), RSTP (IEEE 802.1w), and MSTP (IEEE 802.1s) BPDU protection, root protection, and loop protection
MPLS	MPLS L3VPN,MPLS L2VPN (VPWS/VPLS) ,MPLS-TE,MPLS QoS
IP routing	Static routes, RIP v1/2, RIPng, OSPF, OSPFv3, IS-IS, IS-ISv6, BGP, BGP4+, ECMP, routing policy
Interoperability	VLAN-Based Spanning Tree (VBST), working with PVST, PVST+, and RPVST Link-type Negotiation Protocol (LNP), similar to DTP VLAN Central Management Protocol (VCMP), similar to VTP

Item	Specification
IPv6 features	Neighbor Discover (ND) PMTU IPv6 Ping, IPv6 Tracert, IPv6 Telnet ACLs based on source IPv6 addresses, destination IPv6 addresses, Layer 4 ports, or protocol types Multicast Listener Discovery snooping (MLDv1/v2) IPv6 addresses configured for sub-interfaces, VRRP6, DHCPv6, and L3VPN
Multicast	IGMP v1/v2/v3 snooping and IGMP fast leave Multicast forwarding in a VLAN and multicast replication between VLANs Multicast load balancing among member ports of a trunk Controllable multicast Port-based multicast traffic statistics IGMP v1/v2/v3, PIM-SM, PIM-DM, and PIM-SSM MSDP MVPN
QoS/ACL	Rate limitation in the inbound and outbound directions of a port Packet redirection Port-based traffic policing and two-rate three-color CAR HQoS Eight queues on each port DRR, SP and DRR+SP queue scheduling algorithms WRED Re-marking of the 802.1p and DSCP fields of packets Packet filtering at Layer 2 to Layer 4, filtering out invalid frames based on the source MAC address, destination MAC address, source IP address, destination IP address, TCP/UDP port number, protocol type, and VLAN ID Queue-based rate limitation and shaping on ports
Security	Hierarchical user management and password protection DoS attack defense, ARP attack defense, and ICMP attack defense Binding of the IP address, MAC address, port number, and VLAN ID Port isolation, port security, and sticky MAC MAC Forced Forwarding (MFF) Blackhole MAC address entries Limit on the number of learned MAC addresses IEEE 802.1x authentication and limit on the number of users on a port AAA authentication, RADIUS authentication, and HWTACACS authentication NAC SSH V2.0 HTTPS CPU protection Blacklist and whitelist Attack source tracing and punishment for IPv6 packets such as ND, DHCPv6, and MLD packets MACsec IPsec

Item	Specification
Reliability	LACP E-trunk Ethernet OAM (IEEE 802.3ah and IEEE 802.1ag) ITU-Y.1731 DLDP LLDP BFD for BGP, BFD for IS-IS, BFD for OSPF, BFD for static route
VxLAN	VXLAN L2 and L3 gateways Centralized and distributed gateway BGP-EVPN Configured through the NETCONF protocol
Super Virtual Fabric (SVF)	Working as an SVF Parent node to vertically virtualize downlink switches and APs as one device for management. A two-layer client architecture is supported. IGMP snooping can be enabled on access switches (ASs) and the maximum number of access users on a port can be configured. ASs can be independently configured. Services that are not supported by templates can be configured on the parent. Third-party devices are allowed between SVF parent and clients. Working as an SVF Client node that is plug-and-play with zero configuration
iPCA	Directly coloring service packets to collect real-time statistics on the number of lost packets and packet loss ratio Collection of statistics on the number of lost packets and packet loss ratio at network and device levels
TWAMP	Two-way IP link performance measurement Measurement on two-way packet delay, one-way packet loss rate, and one-way packet jitter
Management and maintenance	iStack Virtual cable test SNMP v1/v2c/v3 RMON Web-based NMS System logs and alarms of different levels GVRP MUX VLAN 802.3az Energy Efficient Ethernet (EEE) NetStream Dying gasp upon power-off

Hardware Specifications

lists the S5730-HI hardware specifications.
S5730-HI hardware specifications

Item		Specification
Memory (RAM)		S5730-36C/60C-HI series models:4GB S5730-44C/68C-HI seires models:2GB
Flash memory		1 GB Note:S5730-36C/60C-HI series models provide an SSD storage card slot (240 GB).
Mean Time Between Failures (MTBF), years		• S5730-36C-HI: 47.53 years • S5730-36C-PWH-HI: 53.93 years • S5730-44C-HI: 50.95 years • S5730-44C-PWH-HI: 49.48 years • S5730-60C-HI: 47.28 years • S5730-60C-PWH-HI: 46.09 years • S5730-68C-HI: 49.29 years • S5730-68C-PWH-HI: 48.31 years
Mean Time To Repair (MTTR), hours		2
Availability		> 0.99999
Surge protection	Service port protection	± 7 kV in common mode
	Power supply port protection	• Non-PoE switch: -150W AC: ± 6 kV in differential mode; ± 6 kV in common mode -150W DC: ± 1 kV in differential mode; ± 2 kV in common mode • PoE switch: -500W AC: ± 6 kV in differential mode; ± 6 kV in common mode -650W DC: ± 2 kV in differential mode; ± 4 kV in common mode 1150W DC: ± 4 kV in differential mode; ± 2 kV in common mode
Dimensions (W x D x H)		442.0 mm x 420.0 mm x 44.4 mm (17.4 in. x 8.7 in. x 1.75 in.) When a 1150 W power module is installed, it extrudes out from the chassis. Therefore, the total depth of the switch changes to 507.3 mm (19.97 in.).

Item		Specification
Weight	Full configuration(no card or power supply)	S5730-36C-HI: 8.6 kg (18.96 lb) S5730-36C-PWH-HI: 8.76 kg (19.31 lb) S5730-44C-HI: 8.5 kg (18.74 lb) S5730-44C-PWH-HI: 8.52 kg (18.78 lb) S5730-60C-HI: 8.8 kg (19.40 lb) S5730-60C-PWH-HI: 9 kg (19.84 lb) S5730-68C-HI: 8.5 kg (18.74 lb) S5730-68C-PWH-HI: 8.7 kg (19.18 lb)
	Power supply	≤ 1.6 kg (3.53 lb)
	Interface card	2*40GE QSFP+ interface card:0.92 kg (2.03 lb) 8*10GE Base-T interface card:0.26 kg(0.57 lb)
Stack port		Four 10GE SFP+ ports or eight 10GE Base-T/2*40GE QSFP+ rear card ports
PoE/PoE+/PoE++		Supported by the PWH models
DC input voltage	Rated voltage range	-48V DC to -60V DC
	Maximum voltage range	-36V DC to -72V DC
AC input voltage	Rated voltage range	100V AC to 240V AC; 50/60 Hz
	Maximum voltage range	90V AC to 264V AC; 47 Hz to 63 Hz
Maximum power consumption (without card)		• S5730-36C-HI: 74 W • S5730-36C-PWH-HI: - 500W AC/650W DC » Without PD:90 W » With PD:815W(PD:739.2 W) -1150W AC » Without PD:105.9 W » With PD:1595W(PD:1440 W) • S5730-44C-HI:76.5 W • S5730-44C-PWH-HI: -500W AC/650W DC » Without PD:94 W » With PD: 830 W(PD: 739.2 W) -1150W AC » Without PD:107.6 W » With PD: 1596 W(PD: 1440 W) • S5730-60C-HI:87.7 W • S5730-60C-PWH-HI: -500W AC/650W DC » Without PD:106 W » With PD: 830 W(PD: 739.2 W) -1150W AC » Without PD:119.7 W » With PD: 1610 W(PD: 1440 W) • S5730-68C-HI:88.05 W • S5730-68C-PWH-HI: -500W AC/650W DC » Without PD:106 W » With PD: 830 W(PD: 739.2 W) -1150W AC » Without PD:116.3 W » With PD: 1608 W(PD: 1440 W)

Item		Specification
Temperature	Operating temperature	Altitude of 0-1800 m (0-5096 ft.): 0° C to 45° C (32° F to 113° F) NOTE: When the altitude is between 1800 m (5096 ft.) and 5000 m (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 (sound power)		• S5730-36C-HI: 52.9 dBA • S5730-36C-PWH-HI: -1150W: 69 dBA -650W/500W:55 dBA • S5730-44C-HI: 55.6 dBA • S5730-44C-PWH-HI: -1150W: 69.6 dBA -650W/500W:57.2 dBA • S5730-60C-HI:52.9 dBA • S5730-60C-PWH-HI: -1150W: 69 dBA -650W/500W:55 dBA • S5730-68C-HI: 55.6 dBA • S5730-68C-PWH-HI: -1150W: 69.6 dBA -650W/500W:57.2 dBA
Relative humidity		5%RH to 95%RH, noncondensing
Operating altitude		0-5000 m (0-16404 ft.)
Certification		• EMC certification • Safety certification • Manufacturing certification

NOTE

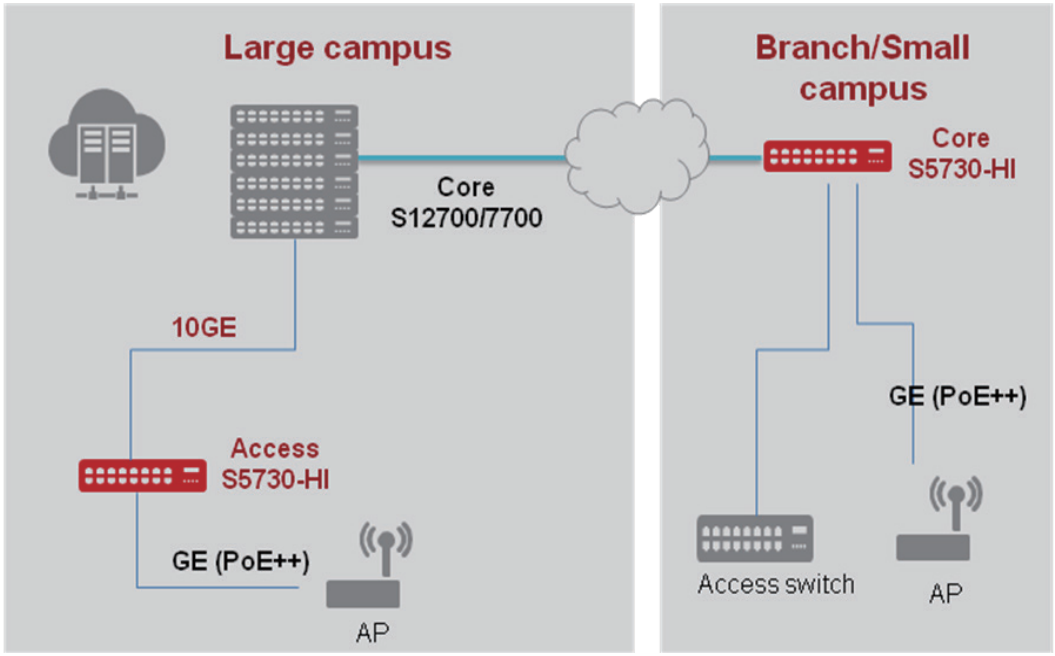
- Switching capacity: also called switching bandwidth. It refers to the maximum volume of bidirectional traffic that can be transferred between the switching chip and data bus. This index indicates the data transferring capability of a switch.
- Forwarding performance: This index indicates the wire-speed forwarding capability of a switch when the switch processes 64-byte packets (plus an 8-byte preamble and a 12-byte IFG). It represents the packet header processing capability.

Networking and Applications

- **Large enterprise campuses and branch/small campuses**

As shown in Figure 6-1, the S5730-HI switches are located at the access/core layer to build a high-performance, reliable enterprise campus network.

Position of the S5730-HI on an enterprise campus network



Huawei S5730-HI is the next-generation fixed agile switch. The S5730-HI has large table sizes and buffers, avoiding packet loss in traffic bursts. It supports wired and wireless convergence and unified management on devices, users, and services. The S5730-HI can be used as the core device on an enterprise branch network or a small campus network or as the aggregation or access device on a large campus network, to achieve a manageable and reliable enterprise campus network with scalable services.

Product Accessories

Optical Modules and Fibers

The S5730-HI supports the following GE and 10GE optical modules:

- GE: 100 m electrical, 500 m optical multimode, 10/40/80/100 km optical single-mode, two pairs of bidirectional optical modules (10/40 km)
- 10GE: 100/220/300 m SFP+ multi-mode, 1.4/10/40/80 km optical SFP+
- 40GE:150/400 m QSFP+ optical multi-mode, 1.4/2/10/40 km optical single-mode

Optical fibers fall into single-mode and multimode fibers. Single-mode optical modules use single-mode fibers, and multi-mode optical modules use multi-mode fibers. For a non-BIDI optical module, each optical interface must be configured with a Tx optical fiber and an Rx optical fiber of the same type. For a BIDI optical module, only one optical fiber needs to be configured.

The fibers and optical modules supported by Huawei switches are updating. For the latest information, visit http://e.huawei.com or contact your local Huawei sales office.

Stack Cables

The S5730-HI switches support service port stacking. The applicable stack cables are as follows:

- AOC cable

An active optical network (AOC) cable integrates an optical module and fiber. The AOC cables are available in SFP-10G-AOC3M and SFP-10G-AOC10M.

- SFP+ high-speed cable

The SFP+ high-speed cable also integrates an optical module and cable. The SFP+ high-speed cables are available in SFP-10G-CU1M, SFP-10G-CU3M, SFP-10G-CU5M, and SFP-10G-CU10M.

- QSFP+ high-speed cable

The QSFP+ high-speed cable also integrates an optical module and cable. The QSFP+ high-speed cables are available in QSFP-40G-CU1M, QSFP-40G-CU3M, QSFP-40G-CU5M.
lists the stack cable types and connectors.

Stack cables and connectors

Stack Cable	Model	Description
AOC	SFP-10G-AOC3M	Cable length: 3 m; connector: SFP+
	SFP-10G-AOC10M	Cable length: 10 m; connector: SFP+
	QSFP-H40G-AOC10M	Cable length: 10 m; connector: QSFP+
	QSFP-4SFP10-AOC10M	Cable length: 10 m; connector: 4*SFP+

Stack Cable	Model	Description
SFP+ high-speed	SFP-10G-CU1M	Cable length: 1 m; connector: SFP+
	SFP-10G-CU3M	Cable length: 3 m; connector: SFP+
	SFP-10G-CU5M	Cable length: 5 m; connector: SFP+
	SFP-10G-CU10M	Cable length: 10 m; connector: SFP+
QSFP+ high-speed	QSFP-40G-CU1M	Cable length: 1 m; connector: QSFP+
	QSFP-40G-CU3M	Cable length: 3 m; connector: QSFP+
	QSFP-40G-CU5M	Cable length: 5 m; connector: QSFP+
	QSFP-4SFP10G-CU1M	Cable length: 1 m; connector: 4*SFP+
	QSFP-4SFP10G-CU3M	Cable length: 3 m; connector: 4*SFP+
	QSFP-4SFP10G-CU5M	Cable length: 5 m; connector: 4*SFP+

Safety and Regulatory Compliance

lists the safety and regulatory compliance of S5730-HI.

S5730-HI safety and regulatory compliance

Certification Category	Description
Safety	• 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 • EN60825-1 • EN60825-2
Electromagnetic Compatibility (EMC)	• 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

Certification Category	Description
Environment	• 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

lists the MIBs supported by S5730-HI.

S5730-HI MIBs

Category	MIB
Public MIB	• BRIDGE-MIB • DISMAN-NSLOOKUP-MIB • DISMAN-PING-MIB • DISMAN-TRACEROUTE-MIB • ENTITY-MIB • EtherLike-MIB • IF-MIB • IP-FORWARD-MIB • IPv6-MIB

Category	MIB
Public MIB	• LAG-MIB • LLDP-EXT-DOT1-MIB • LLDP-EXT-DOT3-MIB • LLDP-MIB • MPLS-FTN-STD-MIB • MPLS-L3VPN-STD-MIB • MPLS-LDP-GENERIC-STD-MIB • MPLS-LDP-STD-MIB • MPLS-LSR-STD-MIB • MPLS-TE-STD-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

Category	MIB
Huawei-proprietary MIB	• 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 • 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

Category	MIB
Huawei-proprietary 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 • 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

lists the standards the S5730-HI complies with.

S5730-HI standards compliance

Standard Organization	Standard or Protocol
IETF	• 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) • 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)

Standard Organization	Standard or Protocol
IETF	• 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+
IEEE	• IEEE 802.1D Media Access Control (MAC) Bridges • IEEE 802.1p Virtual Bridged Local Area Networks • 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 • IEEE802.1x Port based network access control protocol • IEEE802.3af DTE Power via MIDI • IEEE802.3at DTE Power via the MDI Enhancements
ITU	• ITU SG13 Y.17ethoam • ITU SG13 QoS control Ethernet-Based IP Access • ITU-T Y.1731 ETH OAM performance monitor
ISO	• ISO 10589 IS-IS Routing Protocol

Standard Organization	Standard or Protocol
MEF	• 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

NOTE

The listed standards and protocols are fully or partially supported by Huawei switches. For details, visit http://e.huawei.com or contact your local Huawei sales office.

Ordering Information

Ordering list of S5730-HI series Ethernet switches

Model	Product Description
S5730-36C-HI	S5730-36C-HI (24*10/100/1000BASE-T ports, 4*10GE SFP+ ports, 1*expansion slot, without power module)
S5730-44C-HI	S5730-44C-HI (24*10/100/1000BASE-T ports, 4*10GE SFP+ ports, 2*expansion slots, without power module)
S5730-36C-PWH-HI	S5730-36C-PWH-HI(24*10/100/1000BASE-T ports, 4*10GE SFP+ ports, 1*expansion slot, PoE++, without power module)
S5730-44C-PWH-HI	S5730-44C-PWH-HI(24*10/100/1000BASE-T ports, 4*10GE SFP+ ports, 2*expansion slots, PoE++, without power module)
S5730-60C-HI	S5730-60C-HI (48*10/100/1000BASE-T ports, 4*10GE SFP+ ports, 1*expansion slot, without power module)
S5730-68C-HI	S5730-68C-HI (48*10/100/1000BASE-T ports, 4*10GE SFP+ ports, 2*expansion slots, without power module)

Model	Product Description
S5730-60C-PWH-HI	S5730-60C-PWH-HI (48*10/100/1000BASE-T ports, 4*10GE SFP+ ports, 1*expansion slot, PoE++, without power module)
S5730-68C-PWH-HI	S5730-68C-PWH-HI (48*10/100/1000BASE-T ports, 4*10GE SFP+ ports, 2*expansion slots, PoE++, without power module)
ES0W2PSA0150	150W AC Power Module(Black)
ES0W2PSD0150	150W DC Power Module(Black)
PAC-500WA-BE	500W AC PoE Power Module(Black, Power panel side exhaust)
PDC-650WA-BE	650W DC PoE Power Module(Black, Power panel side exhaust)
W2PSA1150	1150W AC Power Module
ES5D21Q02Q00	2 40 Gig QSFP+ interface card
ES5D21X08T00	8-port 10GE BASE-T interface card
ES5D21X08S00	8-port 10GE SFP+ interface card
ES5SVXLAN000	VXLAN Enhanced Function License
ES5SSVFF0000	SVF Function License
ES5SF4128K00	FIBv4 Resource License-128K
ES5SWL512AP0	WLAN access controller AP resource license-512AP
ES5SWL128AP0	WLAN access controller AP resource license-128AP
ES5SWL64AP00	WLAN access controller AP resource license-64AP
ES5SWL16AP00	WLAN access controller AP resource license-16AP

For more information, visit http://e.huawei.com or contact your local Huawei sales office

Others

The latest version of S5730-HI is V2R12.

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