

S5720-HI Series Agile Fixed Switches

Huawei S5720-HI series are fixed switches that provide extensive agile features. They work as core devices in enterprise branches or small/midsize campus networks or as aggregation devices in large campus networks.




Introduction


Huawei S5720-HI series switches are advanced Gigabit Ethernet switches that provide various agile features. The switches are developed based on the Huawei Versatile Routing Platform (VRP) 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 a single 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 S5720-HI series switches are the best choices for the branches of high-quality medium- and large-sized campus networks, the core layer of small-sized campus networks, and the access layer of data center networks.

Product Overview

Models and Appearances

Models and appearances of the S5720-HI series

Appearance	Description
 S5720-32C-HI-24S-AC	<ul style="list-style-type: none"> • 24 GE SFP ports (8 of which are dual-purpose 10/100/1000 or SFP ports), 4 10GE SFP+ ports • Two expansion slots (one is reserved for future use) • Dual pluggable AC or DC power supplies, one 600 W AC power supply equipped by default • Forwarding performance: 168 Mpps • Switching capacity: 598 Gbit/s
 S5720-56C-HI-AC	<ul style="list-style-type: none"> • 48 10/100/1000Base-T Ethernet ports, 4 10GE SFP+ ports • Two expansion slots (one is reserved for future use) • Dual pluggable AC or DC power supplies, one 600 W AC power supply equipped by default • Forwarding performance: 192 Mpps • Switching capacity: 598 Gbit/s
 S5720-56C-HI-AC	<ul style="list-style-type: none"> • 48 10/100/1000Base-T Ethernet ports, 4 10GE SFP+ ports • Two expansion slots (one is reserved for future use) • Dual pluggable AC power supplies, one 1150 W AC power supply equipped by

Appearance	Description
S5720-56C-PWR-HI-AC	<ul style="list-style-type: none"> default PoE+ Forwarding performance: 192 Mpps Switching capacity: 598 Gbit/s
 <p>S5720-56C-PWR-HI-AC1</p>	<ul style="list-style-type: none"> 48 10/100/1000Base-T Ethernet ports, 4 10GE SFP+ ports Two expansion slots (one is reserved for future use) Dual pluggable AC power supplies, one 580 W AC power supply equipped by default PoE+ Forwarding performance: 192 Mpps Switching capacity: 598 Gbit/s

Card Types


The S5720-HI provides one slot for ES5D21X04S01 (4-port 10GE SFP+ rear interface card) for upstream connections.

ES5D21X04S01 (4-Port 10 GE SFP+ Rear Interface Card)

The ES5D21X04S01 provides four 10GE SFP+ optical ports for data access and line-rate switching.

The ES5D21X04S01 can be installed in rear card slot 2 of the S5720-HI.

Technical specifications of the ES5D21X04S01

Card Module	Technical Specifications	Applied Switch Model
 <p>ES5D21X04S01</p>	<ul style="list-style-type: none"> Physical specifications: <ul style="list-style-type: none"> Dimensions (W x D x H): 100 mm x 208 mm x 40 mm (3.94 in. x 8.19 in. x 1.57 in.) Weight: 0.76 kg (1.68 lb) Maximum power consumption: 9.59 W Environment parameters: <ul style="list-style-type: none"> Operating temperature: 0°C to 45°C (32°F to 113°F) Relative humidity: 5% RH to 95% RH Storage temperature: -40°C to +70°C (-40°F to +158°F) 	<ul style="list-style-type: none"> S5720-32C-HI-24S-AC S5720-56C-HI-AC S5720-56C-PWR-HI-AC S5720-56C-PWR-HI-AC1

NOTE





Cards shipped since June 2014 have an applicability label attached at the back. Notice the card model and applicable device series on the label to avoid installing a card into an inapplicable device.

Functions and features of the ES5D21X04S01

Function and Feature	Description
Basic function	Provides two 10GE SFP+ optical ports for data access and line-rate switching.
Hot swap	Supported
Service ports for stacking	<p>The service ports on the card can be used as stack ports.</p> <p>NOTE The S5720-HI has supported service port-based stacking since V200R009C00.</p>

Power Supply

The following table lists the power supplies applicable to the S5720-HI.

Power Module	Technical Specifications	Applied Switch Model
 PAC-600WA-B	<ul style="list-style-type: none"> • Dimensions (W x D x H): 100 mm x 205 mm x 40 mm (3.9 in. x 8.1 in. x 1.6 in.) • Weight: 1 kg (2.20 lb) • Rated input voltage range: 100 V AC to 240 V AC, 50/60 Hz • Maximum input voltage range: 90 V AC to 290 V AC, 45 Hz to 65 Hz • Maximum input current: 9 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"> • S5720-56C-HI-AC • S5720-32C-HI-24S-AC
 PDC-350WA-B	<ul style="list-style-type: none"> • Dimensions (W x D x H): 100 mm x 205 mm x 40 mm (3.9 in. x 8.1 in. x 1.6 in.) • Weight: 0.72 kg (1.59 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: 11 A • Maximum output current: 29.17 A • Rated output voltage: 12 V • Maximum output power: 350 W • Hot swap: Supported 	<ul style="list-style-type: none"> • S5720-56C-HI-AC • S5720-32C-HI-24S-AC
 W2PSA1150	<ul style="list-style-type: none"> • Dimensions (W x D x H): 100.0 mm x 281.0 mm x 41.4 mm (3.9 in. x 11.1 in. x 1.63 in.) • Weight: < 1.6 kg (3.53 lb) • Rated input voltage range: 100 V AC to 240 V AC, 50/60 Hz • Maximum input voltage range: 90 V AC to 290 V AC, 47 Hz to 63 Hz • Maximum input current: 10 A • Maximum output current: <ul style="list-style-type: none"> – +12 V: 29.17 A – -53.5 V: 14.95 A • Maximum output power: <ul style="list-style-type: none"> – PoE: 800 W (220 V)/450 W (110 V) – Total: 1150 W (220 V)/800 W (110 V) • Hot swap: Supported 	<ul style="list-style-type: none"> • S5720-56C-PWR-HI-AC
 W2PSA0580	<ul style="list-style-type: none"> • Dimensions (W x D x H): 100 mm x 205 mm x 40 mm (3.9 in. x 8.1 in. x 1.6 in.) • Weight: < 1.6 kg (3.53 lb) • Rated input voltage range: 100 V AC to 240 V AC, 50/60 Hz 	<ul style="list-style-type: none"> • S5720-56C-PWR-HI-AC1

Power Module	Technical Specifications	Applied Switch Model
	<ul style="list-style-type: none"> Maximum input voltage range: 90 V AC to 290 V AC, 47 Hz to 63 Hz Input current: 9 A to 4.5 A Maximum output current: <ul style="list-style-type: none"> +12 V: 16.66 A -53.5 V: 7.11 A Maximum output power: <ul style="list-style-type: none"> PoE: 380 W Total: 580 W Hot swap: Supported 	

The S5720-HI uses built-in AC power supplies by default. If a switch supports pluggable power supplies, the customer can purchase the power supplies when or after purchasing the switch.

The S5720-HI supports multiple power supply options, including dual-power and PoE.

Dual-Power (Non-PoE)

Dual-power models (non-PoE) use pluggable power supplies and provide two power slots. By default, one AC power supply is equipped. When a switch has two power supplies installed, the power supplies work in 1+1 backup mode to power the switch. The switch supports dual AC power supplies, dual DC power supplies, as well as mixed insertion of AC and DC power supplies.

The following table lists the power supply options supported by the S5720-HI.

Power supply options supported by the S5720-HI series

Model	Power Supply 1	Power Supply 2
S5720-32C-HI-24S-AC	PAC-600WA-B (600 W-AC) or PDC-350WA-B (350 W-DC)	PAC-600WA-B (600 W-AC) or PDC-350WA-B (350 W-DC)
S5720-56C-HI-AC	PAC-600WA-B (600 W-AC) or PDC-350WA-B (350 W-DC)	PAC-600WA-B (600 W-AC) or PDC-350WA-B (350 W-DC)

PoE/PoE+

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

Each S5720-HI series PoE-capable switch has two power slots for pluggable PoE power supplies. The following table lists the power supply options supported by S5720-HI series PoE-capable switches.

Power supply options supported by the PoE-capable S5720-HI series

Model	Power Supply 1	Power Supply 2	PoE Power Supply	Number of PoE Ports
S5720-56C-PWR-HI-AC	1150 W (220 V)	-	785.4 W	<ul style="list-style-type: none"> PoE (15.4 W): 48 PoE+ (30 W): 26
	1150 W (220 V)	1150 W (220 V)	1140 W	<ul style="list-style-type: none"> PoE (15.4 W): 48 PoE+ (30 W): 48
	1150 W (110 V)	-	447 W	<ul style="list-style-type: none"> PoE (15.4 W): 29 PoE+ (30 W): 14
	1150 W (110 V)	1150 W (110 V)	894 W	<ul style="list-style-type: none"> PoE (15.4 W): 48 PoE+ (30 W): 29

Model	Power Supply 1	Power Supply 2	PoE Power Supply	Number of PoE Ports
S5720-56C-PWR-HI-AC1	580 W	-	370 W	<ul style="list-style-type: none"> PoE (15.4 W): 24 PoE+ (30 W): 12
	580 W	580 W	740 W	<ul style="list-style-type: none"> PoE (15.4 W): 48 PoE+ (30 W): 24

NOTE

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

Product Features and Highlights

Enabling Networks to Be More Agile for Services

- The S5720-HI'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 S5720-HI provides open interfaces and supports user-defined forwarding behaviors. 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.

Delivering Abundant Services More Agilely

- The S5720-HI integrates the AC function, so customers do not need to buy independent AC devices or hardware components. An S5720-HI switch can manage 1K APs and 16K users, adapting to the fast growth of wireless services.
- With the unified user management function, the S5720-HI authenticates both wired and wireless users, ensuring a consistent user experience regardless of 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 S5720-HI provides excellent 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 More Agile Refined Network Management

- The S5720-HI uses the Packet Conservation Algorithm for Internet (iPCA) technology that changes the traditional method of using simulated traffic for fault locating. 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" into "refined management".
- The S5720-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 S5720-HI supports SVF and functions as a parent switch. With this virtualization technology, a physical network with the "Core/aggregation switches + Access switches + APs" structure can be virtualized into a "super switch", offering the industry's simplest network management solution.
- With the EasyDeploy function, the S5720-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 EasyDeploy 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.

Intelligent O&M

- The S5720-HI 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 S5720-HI supports Enhanced Media Delivery Index(eMDI). It functions as a monitoring node to periodically collect and report eMDI fault data to eSight, and then eSight quickly locates video service quality faults based on monitoring results of multiple nodes. The device can also report eMDI fault data to the campus network analyzer CampusInsight for intelligent diagnosis of video services.

Comprehensive VPN Technologies

- The S5720-HI supports the MPLS function, and can be used as access devices on high-quality enterprise leased lines. The S5720-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, reducing the cost of VPN deployment.

Flexible Ethernet Networking

- In addition to traditional Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), and Multiple Spanning Tree Protocol (MSTP), the S5720-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 milliseconds. ERPS is defined in ITU-T G.8032. It implements millisecond-level protection switching based on traditional Ethernet MAC and bridging functions.
- The S5720-HI supports Smart Link and Virtual Router Redundancy Protocol (VRRP), which implement backup of uplinks. One S5720-HI switch can connect to multiple aggregation switches through multiple links, significantly improving reliability of access devices.
- The S5720-HI has large entry sizes and buffers, coping with the fast growth of data volume in the big data era. With the support for 128K MAC addresses, 1M FIB entries, and 200 ms buffering on each port, the S5720-HI meets the requirements for educational networks and metro area networks and allows the access of a large number of terminals. The S5720-HI is the best choice in the cloud computing era.

Various Security Control Methods

- The S5720-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 S5720-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 S5720-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 S5720-HI supports strict ARP learning, which prevents ARP spoofing attackers from exhausting ARP entries.

Mature IPv6 Features

- The S5720-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 S5720-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 S5720-HI supports the iStack function that combines multiple switches into one single 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.

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 S5720-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-Powered 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.
- The S5720-HI 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 Huawei Cybersecurity Intelligence System (CIS). It uses the AI algorithm to train the traffic model and compare characteristics of extracted encrypted traffic to identify malicious traffic. The CIS displays detection results on the GUI, provides threat handling suggestions, and automatically isolates threats with the Agile Controller to ensure campus network security.
- The S5720-HI 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 CIS. The CIS analyzes security logs. If the CIS determines that the suspicious traffic is an attack, it generates an alarm and provides handling suggestions. After the administrator confirms the alarm, the CIS delivers a policy to the Agile Controller. The Agile Controller delivers the policy to the switch for security event processing, ensuring campus network security.

OPS

- The Open Programmability System (OPS) is an open platform 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.

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.

Product Specifications

Functions and Features

The following table lists the functions and features available on the S5720-HI.

Function and feature metrics for the S5720-HI series

Function and Feature		Description	S5720-32C-HI-24S-AC	S5720-56C-HI-AC	S5720-56C-PWR-HI-AC	S5720-56C-PWR-HI-AC1
Ethernet features	Ethernet basics	Full-duplex, half-duplex, and auto-negotiation	Yes	Yes	Yes	Yes
		Rate auto-negotiation on an interface	Yes	Yes	Yes	Yes
		Flow control on an interface	Yes	Yes	Yes	Yes
		Jumbo frames	Yes	Yes	Yes	Yes

Function and Feature		Description	S5720-32C-HI-24S-AC	S5720-56C-HI-AC	S5720-56C-PWR-HI-AC	S5720-56C-PWR-HI-AC1
		Link aggregation	Yes	Yes	Yes	Yes
		Load balancing among links of a trunk	Yes	Yes	Yes	Yes
		Transparent transmission of Layer 2 protocol packets	Yes	Yes	Yes	Yes
		Device Link Detection Protocol (DLDP)	Yes	Yes	Yes	Yes
		Link Layer Discovery Protocol (LLDP)	Yes	Yes	Yes	Yes
		Link Layer Discovery Protocol-Media Endpoint Discovery (LLDP-MED)	Yes	Yes	Yes	Yes
		Interface isolation	Yes	Yes	Yes	Yes
		Broadcast traffic suppression on an interface	Yes	Yes	Yes	Yes
		Multicast traffic suppression on an interface	Yes	Yes	Yes	Yes
		Unknown unicast traffic suppression on an interface	Yes	Yes	Yes	Yes
		VLAN broadcast traffic suppression	Yes	Yes	Yes	Yes
		VLAN multicast traffic suppression	Yes	Yes	Yes	Yes
		VLAN unknown unicast traffic suppression	Yes	Yes	Yes	Yes
	VLAN	VLAN specification	4K	4K	4K	4K
	VLANIF interface specification	1K	1K	1K	1K	
	Access mode	Yes	Yes	Yes	Yes	
	Trunk mode	Yes	Yes	Yes	Yes	
	Hybrid mode	Yes	Yes	Yes	Yes	
	QinQ mode	Yes	Yes	Yes	Yes	
	Default VLAN	Yes	Yes	Yes	Yes	
	VLAN assignment based on interfaces	Yes	Yes	Yes	Yes	
	VLAN assignment based on protocols	Yes	Yes	Yes	Yes	
	VLAN assignment based on IP subnets	Yes	Yes	Yes	Yes	
VLAN assignment based on	Yes	Yes	Yes	Yes		

Function and Feature		Description	S5720-32C-HI-24S-AC	S5720-56C-HI-AC	S5720-56C-PWR-HI-AC	S5720-56C-PWR-HI-AC1
		MAC addresses				
		VLAN assignment based on MAC address + IP address	Yes	Yes	Yes	Yes
		VLAN assignment based on MAC address + IP address + interface number	Yes	Yes	Yes	Yes
		Adding double VLAN tags to packets based on interfaces	Yes	Yes	Yes	Yes
		Super-VLAN	Yes	Yes	Yes	Yes
		Super-VLAN specification	256	256	256	256
		Sub-VLAN	Yes	Yes	Yes	Yes
		Sub-VLAN specification	1K	1K	1K	1K
		VLAN mapping	Yes	Yes	Yes	Yes
		Selective QinQ	Yes	Yes	Yes	Yes
		MUX VLAN	Yes	Yes	Yes	Yes
		Voice VLAN	Yes	Yes	Yes	Yes
		Guest VLAN	Yes	Yes	Yes	Yes
	GVRP	GARP	Yes	Yes	Yes	Yes
		GVRP	Yes	Yes	Yes	Yes
	VCMP	VCMP	Yes	Yes	Yes	Yes
	MAC	MAC address	128K	128K	128K	128K
		Automatic learning of MAC addresses	Yes	Yes	Yes	Yes
		Automatic aging of MAC addresses	Yes	Yes	Yes	Yes
		Static, dynamic, and blackhole MAC address entries	Yes	Yes	Yes	Yes
Interface-based MAC address learning limiting		Yes	Yes	Yes	Yes	
Sticky MAC		Yes	Yes	Yes	Yes	
MAC address flapping detection		Yes	Yes	Yes	Yes	
Configuring MAC address learning priorities for interfaces		Yes	Yes	Yes	Yes	
MAC address spoofing defense		Yes	Yes	Yes	Yes	

Function and Feature		Description	S5720-32C-HI-24S-AC	S5720-56C-HI-AC	S5720-56C-PWR-HI-AC	S5720-56C-PWR-HI-AC1
		Port bridge	Yes	Yes	Yes	Yes
	ARP	Static ARP	Yes	Yes	Yes	Yes
		Dynamic ARP	Yes	Yes	Yes	Yes
		ARP entry	128K	128K	128K	128K
		ARP aging detection	Yes	Yes	Yes	Yes
		Intra-VLAN proxy ARP	Yes	Yes	Yes	Yes
		Inter-VLAN proxy ARP	Yes	Yes	Yes	Yes
		Routed proxy ARP	Yes	Yes	Yes	Yes
		Multi-egress-interface ARP	Yes	Yes	Yes	Yes
Ethernet loop protection	MSTP	STP	Yes	Yes	Yes	Yes
		RSTP	Yes	Yes	Yes	Yes
		MSTP	Yes	Yes	Yes	Yes
		VBST	Yes	Yes	Yes	Yes
		BPDU protection	Yes	Yes	Yes	Yes
		Root protection	Yes	Yes	Yes	Yes
		Loop protection	Yes	Yes	Yes	Yes
		Defense against TC BPDU attacks	Yes	Yes	Yes	Yes
	Loopback detection	Loop detection on an interface	Yes	Yes	Yes	Yes
	SEP	SEP	Yes	Yes	Yes	Yes
	Smart Link	Smart Link	Yes	Yes	Yes	Yes
		Smart Link multi-instance	Yes	Yes	Yes	Yes
		Monitor Link	Yes	Yes	Yes	Yes
	RRPP	RRPP	Yes	Yes	Yes	Yes
		Single RRPP ring	Yes	Yes	Yes	Yes
		Tangent RRPP ring	Yes	Yes	Yes	Yes
		Intersecting RRPP ring	Yes	Yes	Yes	Yes
		Hybrid networking of RRPP rings and other ring networks	Yes	Yes	Yes	Yes
	ERPS	G.8032 v1	Yes	Yes	Yes	Yes
		G.8032 v2	Yes	Yes	Yes	Yes
		ERPS semi-ring topology	Yes	Yes	Yes	Yes
		ERPS closed-ring topology	Yes	Yes	Yes	Yes

Function and Feature		Description	S5720-32C-HI-24S-AC	S5720-56C-HI-AC	S5720-56C-PWR-HI-AC	S5720-56C-PWR-HI-AC1
IPv4/IPv6 forwarding	IPv4 and unicast routing	IPv4 static routing	Yes	Yes	Yes	Yes
		VRF	Yes	Yes	Yes	Yes
		DHCP client	Yes	Yes	Yes	Yes
		DHCP server	Yes	Yes	Yes	Yes
		DHCP relay	Yes	Yes	Yes	Yes
		DHCP policy VLAN	Yes	Yes	Yes	Yes
		URPF check	Yes	Yes	Yes	Yes
		Routing policies	Yes	Yes	Yes	Yes
		IPv4 routes	2048K	2048K	2048K	2048K
		RIPv1	Yes	Yes	Yes	Yes
		RIPv2	Yes	Yes	Yes	Yes
		OSPF	Yes	Yes	Yes	Yes
		BGP	Yes	Yes	Yes	Yes
		MBGP	Yes	Yes	Yes	Yes
		IS-IS	Yes	Yes	Yes	Yes
	Policy-based routing (PBR)	Yes	Yes	Yes	Yes	
	Multicast routing features	IGMPv1/v2/v3	Yes	Yes	Yes	Yes
		PIM-DM	Yes	Yes	Yes	Yes
		PIM-SM	Yes	Yes	Yes	Yes
		MSDP	Yes	Yes	Yes	Yes
		IPv4 multicast routes	64K	64K	64K	64K
		IPv6 multicast routes	64K	64K	64K	64K
		Multicast routing policies	Yes	Yes	Yes	Yes
		RPF	Yes	Yes	Yes	Yes
	IPv6 features	IPv6 protocol stack	Yes	Yes	Yes	Yes
		ND	Yes	Yes	Yes	Yes
		ND entry	64K	64K	64K	64K
		ND snooping	Yes	Yes	Yes	Yes
		DHCPv6 snooping	Yes	Yes	Yes	Yes
		RIPng	Yes	Yes	Yes	Yes
		DHCPv6 server	Yes	Yes	Yes	Yes
		DHCPv6 relay	Yes	Yes	Yes	Yes
		OSPFv3	Yes	Yes	Yes	Yes

Function and Feature		Description	S5720-32C-HI-24S-AC	S5720-56C-HI-AC	S5720-56C-PWR-HI-AC	S5720-56C-PWR-HI-AC1
		BGP4+	Yes	Yes	Yes	Yes
		IS-IS for IPv6	Yes	Yes	Yes	Yes
		IPv6 routes	64K	64K	64K	64K
		VRRP6	Yes	Yes	Yes	Yes
		MLDv1/v2	Yes	Yes	Yes	Yes
		PIM-DM for IPv6	Yes	Yes	Yes	Yes
		PIM-SM for IPv6	Yes	Yes	Yes	Yes
	IPv6 transition technology	IPv6 manual tunneling	Yes	Yes	Yes	Yes
Layer 2 multicast features	-	IGMPv1/v2/v3 snooping	Yes	Yes	Yes	Yes
		IGMP snooping proxy	Yes	Yes	Yes	Yes
		MLD snooping	Yes	Yes	Yes	Yes
		Multicast traffic suppression	Yes	Yes	Yes	Yes
		Inter-VLAN multicast replication	Yes	Yes	Yes	Yes
MPLS & VPN	MPLS basic functions	LDP protocol	Yes	Yes	Yes	Yes
		Double MPLS labels	Yes	Yes	Yes	Yes
		Mapping from 802.1p priorities to EXP priorities in MPLS packets	Yes	Yes	Yes	Yes
		Mapping from DSCP priorities to EXP priorities in MPLS packets	Yes	Yes	Yes	Yes
	MPLS TE	MPLS-TE tunnel establishment	Yes	Yes	Yes	Yes
		MPLS-TE tunnel specification	256	256	256	256
		MPLS-TE protection group	Yes	Yes	Yes	Yes
	VPN	MCE	Yes	Yes	Yes	Yes
		GRE tunneling	Yes	Yes	Yes	Yes
		GRE tunnel specification	512	512	512	512
		VLL	Yes	Yes	Yes	Yes
		PWE3	Yes	Yes	Yes	Yes
		VPLS	Yes	Yes	Yes	Yes
		MPLS L3VPN	Yes	Yes	Yes	Yes
IPSec Efficient VPN	Yes	Yes	Yes	Yes		

Function and Feature		Description	S5720-32C-HI-24S-AC	S5720-56C-HI-AC	S5720-56C-PWR-HI-AC	S5720-56C-PWR-HI-AC1
Device reliability	BFD	Single-hop BFD	Yes	Yes	Yes	Yes
		BFD for static routes	Yes	Yes	Yes	Yes
		BFD for OSPF	Yes	Yes	Yes	Yes
		BFD for IS-IS	Yes	Yes	Yes	Yes
		BFD for BGP	Yes	Yes	Yes	Yes
		BFD for PIM	Yes	Yes	Yes	Yes
		BFD for VRRP	Yes	Yes	Yes	Yes
	Stacking	Service interface-based stacking	Yes	Yes	Yes	Yes
		Maximum number of stacked devices	9	9	9	9
		Stack bandwidth (Unidirectional)	Up to 40 Gbit/s	Up to 40 Gbit/s	Up to 40 Gbit/s	Up to 40 Gbit/s
VRRP	VRRP standard protocol	Yes	Yes	Yes	Yes	
Ethernet OAM	EFM (802.3ah)	Automatic discovery of links	Yes	Yes	Yes	Yes
		Link fault detection	Yes	Yes	Yes	Yes
		Link troubleshooting	Yes	Yes	Yes	Yes
		Remote loopback	Yes	Yes	Yes	Yes
	CFM (802.1ag)	Software-level CCM	Yes	Yes	Yes	Yes
		802.1ag MAC ping	Yes	Yes	Yes	Yes
		802.1ag MAC trace	Yes	Yes	Yes	Yes
	OAM association	Association between 802.1ag and 802.3ah	Yes	Yes	Yes	Yes
	Y.1731	Unidirectional delay and jitter measurement	Yes	Yes	Yes	Yes
		Bidirectional delay and jitter measurement	Yes	Yes	Yes	Yes
QoS features	Traffic classification	Traffic classification based on ACLs	Yes	Yes	Yes	Yes
		Configuring traffic classification priorities	Yes	Yes	Yes	Yes
		Matching the simple domains of packets	Yes	Yes	Yes	Yes
	Traffic behavior	Traffic filtering	Yes	Yes	Yes	Yes
		Traffic policing (CAR)	Yes	Yes	Yes	Yes
		Modifying the packet priorities	Yes	Yes	Yes	Yes

Function and Feature		Description	S5720-32C-HI-24S-AC	S5720-56C-HI-AC	S5720-56C-PWR-HI-AC	S5720-56C-PWR-HI-AC1	
		Modifying the simple domains of packets	Yes	Yes	Yes	Yes	
		Modifying the packet VLANs	Yes	Yes	Yes	Yes	
	Traffic shaping	Traffic shaping on an egress interface	Yes	Yes	Yes	Yes	
		Traffic shaping on queues on an interface	Yes	Yes	Yes	Yes	
	Congestion avoidance	Weighted Random Early Detection (WRED) on queues	Yes	Yes	Yes	Yes	
		Tail drop	Yes	Yes	Yes	Yes	
	Congestion management	Priority Queuing (PQ)	Yes	Yes	Yes	Yes	
		Weighted Deficit Round Robin (WDRR)	Yes	Yes	Yes	Yes	
		PQ+WDRR	Yes	Yes	Yes	Yes	
		Weighted Round Robin (WRR)	Yes	Yes	Yes	Yes	
		PQ+WRR	Yes	Yes	Yes	Yes	
	HQoS	HQoS	Yes	Yes	Yes	Yes	
	ACL	-	IPv4 ACL rule	16K	16K	16K	16K
			IPv6 ACL rule	8K	8K	8K	8K
			Basic IPv4 ACL	Yes	Yes	Yes	Yes
Advanced IPv4 ACL			Yes	Yes	Yes	Yes	
Basic IPv6 ACL			Yes	Yes	Yes	Yes	
Advanced IPv6 ACL			Yes	Yes	Yes	Yes	
Layer 2 ACL			Yes	Yes	Yes	Yes	
User group ACL			Yes	Yes	Yes	Yes	
User-defined ACL			Yes	Yes	Yes	Yes	
Configuration and maintenance	Login and configuration management	Command line interface (CLI)-based configuration	Yes	Yes	Yes	Yes	
		Console terminal service	Yes	Yes	Yes	Yes	
		Telnet terminal service	Yes	Yes	Yes	Yes	
		SSH v1.5	Yes	Yes	Yes	Yes	
		SSH v2.0	Yes	Yes	Yes	Yes	
		SNMP-based NMS for unified configuration	Yes	Yes	Yes	Yes	

Function and Feature		Description	S5720-32C-HI-24S-AC	S5720-56C-HI-AC	S5720-56C-PWR-HI-AC	S5720-56C-PWR-HI-AC1
		Web page-based configuration and management	Yes	Yes	Yes	Yes
		EasyDeploy (client)	Yes	Yes	Yes	Yes
		EasyDeploy (commander)	Yes	Yes	Yes	Yes
		SVF	Yes	Yes	Yes	Yes
		OPS	Yes	Yes	Yes	Yes
	File system	Directory and file management	Yes	Yes	Yes	Yes
		File upload and download	Yes	Yes	Yes	Yes
	Monitoring and maintenance	Deception	Yes	Yes	Yes	Yes
		ECA	Yes	Yes	Yes	Yes
		eMDI	Yes	Yes	Yes	Yes
		Hardware monitoring	Yes	Yes	Yes	Yes
		Log information output	Yes	Yes	Yes	Yes
		Alarm information output	Yes	Yes	Yes	Yes
		Debugging information output	Yes	Yes	Yes	Yes
		Port mirroring	Yes	Yes	Yes	Yes
		Flow mirroring	Yes	Yes	Yes	Yes
		Remote mirroring	Yes	Yes	Yes	Yes
		Energy saving	Yes	Yes	Yes	Yes
	Version upgrade	Version upgrade	Yes	Yes	Yes	Yes
		Version rollback	Yes	Yes	Yes	Yes
Security	ARP security	ARP packet rate limiting	Yes	Yes	Yes	Yes
		ARP anti-spoofing	Yes	Yes	Yes	Yes
		Association between ARP and STP	Yes	Yes	Yes	Yes
		ARP gateway anti-collision	Yes	Yes	Yes	Yes
		Dynamic ARP Inspection (DAI)	Yes	Yes	Yes	Yes
		Static ARP Inspection (SAI)	Yes	Yes	Yes	Yes
		Egress ARP Inspection (EAI)	Yes	Yes	Yes	Yes
	IP security	ICMP attack defense	Yes	Yes	Yes	Yes
		IPSG for IPv4	Yes	Yes	Yes	Yes

Function and Feature		Description	S5720-32C-HI-24S-AC	S5720-56C-HI-AC	S5720-56C-PWR-HI-AC	S5720-56C-PWR-HI-AC1	
		IPSG user capacity	3K	3K	3K	3K	
		IPSG for IPv6	Yes	Yes	Yes	Yes	
		IPSGv6 user capacity	1.5K	1.5K	1.5K	1.5K	
	Local attack defense	CPU attack defense	Yes	Yes	Yes	Yes	
	MFF	MFF	Yes	Yes	Yes	Yes	
	DHCP snooping	DHCP snooping	Yes	Yes	Yes	Yes	
		Option 82 function	Yes	Yes	Yes	Yes	
		Dynamic rate limiting for DHCP packets	Yes	Yes	Yes	Yes	
	Attack defense	Defense against malformed packet attacks	Yes	Yes	Yes	Yes	
		Defense against UDP flood attacks	Yes	Yes	Yes	Yes	
		Defense against TCP SYN flood attacks	Yes	Yes	Yes	Yes	
		Defense against ICMP flood attacks	Yes	Yes	Yes	Yes	
		Defense against packet fragment attacks	Yes	Yes	Yes	Yes	
		Local URPF	Yes	Yes	Yes	Yes	
	User access and authentication	AAA	Local authentication	Yes	Yes	Yes	Yes
			Local authorization	Yes	Yes	Yes	Yes
			RADIUS authentication	Yes	Yes	Yes	Yes
RADIUS authorization			Yes	Yes	Yes	Yes	
RADIUS accounting			Yes	Yes	Yes	Yes	
HWTACACS authentication			Yes	Yes	Yes	Yes	
HWTACACS authorization			Yes	Yes	Yes	Yes	
HWTACACS accounting			Yes	Yes	Yes	Yes	
NAC		802.1X authentication	Yes	Yes	Yes	Yes	
		MAC address authentication	Yes	Yes	Yes	Yes	
		Portal authentication	Yes	Yes	Yes	Yes	
		Hybrid authentication	Yes	Yes	Yes	Yes	
Policy association		Functioning as the control device	Yes	Yes	Yes	Yes	
Network		-	Ping	Yes	Yes	Yes	Yes

Function and Feature		Description	S5720-32C-HI-24S-AC	S5720-56C-HI-AC	S5720-56C-PWR-HI-AC	S5720-56C-PWR-HI-AC1
management		Tracert	Yes	Yes	Yes	Yes
		NQA	Yes	Yes	Yes	Yes
		NTP	Yes	Yes	Yes	Yes
		iPCA	Yes	Yes	Yes	Yes
		NetStream	Yes	Yes	Yes	Yes
		SNMP v1	Yes	Yes	Yes	Yes
		SNMP v2c	Yes	Yes	Yes	Yes
		SNMP v3	Yes	Yes	Yes	Yes
		HTTP	Yes	Yes	Yes	Yes
		HTTPS	Yes	Yes	Yes	Yes
		RMON	Yes	Yes	Yes	Yes
		RMON2	Yes	Yes	Yes	Yes
WLAN	-	Wireless forwarding performance	Up to 31 Mpps	Up to 31 Mpps	Up to 31 Mpps	Up to 31 Mpps
		AP management	Yes	Yes	Yes	Yes
		Number of managed APs	1K	1K	1K	1K
		Radio management	Yes	Yes	Yes	Yes
		WLAN service management	Yes	Yes	Yes	Yes
		WLAN QoS	Yes	Yes	Yes	Yes
		WLAN security	Yes	Yes	Yes	Yes
		WLAN user management	Yes	Yes	Yes	Yes
VXLAN	-	VXLAN Layer 2 gateway	Yes	Yes	Yes	Yes
		VXLAN Layer 3 gateway	Yes	Yes	Yes	Yes
		Centralized gateway	Yes	Yes	Yes	Yes
		Distributed gateway	Yes	Yes	Yes	Yes
		VXLAN tunnel specification	16K	16K	16K	16K
		BGP-EVPN	Yes	Yes	Yes	Yes
		BGP-EVPN neighbor capacity	256	256	256	256
Interoperability	-	VLAN-based Spanning Tree (VBST)	Yes	Yes	Yes	Yes
		Link-type Negotiation Protocol (LNP)	Yes	Yes	Yes	Yes
		VLAN Central Management Protocol (VCMP)	Yes	Yes	Yes	Yes



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 S5720-HI hardware specifications.

Hardware specifications of the S5720-HI series

Item		S5720-32C-HI-24S-AC	S5720-56C-HI-AC	S5720-56C-PWR-HI-AC	S5720-56C-PWR-HI-AC1
Physical specifications	Chassis dimensions (W x D x H, mm)	442 x 420 x 44.4	442 x 420 x 44.4	442 x 507 x 44.4	442 x 420 x 44.4
	Chassis height	1 U	1 U	1 U	1 U
	Chassis weight (full configuration weight, including weight of packaging materials)	9.9 kg	10 kg	10.9 kg	10.6 kg
Fixed port	GE port	24	48	48	48
	10GE port	4	4	4	4
Flexible card	Card slot	2 (one is reserved for future use)	2 (one is reserved for future use)	2 (one is reserved for future use)	2 (one is reserved for future use)
	Card type	4-port 10GE SFP+ interface card	4-port 10GE SFP+ interface card	4-port 10GE SFP+ interface card	4-port 10GE SFP+ interface card
	Card specification	For details about cards, see the section Card Types.	For details about cards, see the section Card Types.	For details about cards, see the section Card Types.	For details about cards, see the section Card Types.
Management port	ETH management port	Supported	Supported	Supported	Supported
	Console port (RJ45)	Supported	Supported	Supported	Supported
	Console port (Mini USB)	Supported	Supported	Supported	Supported
	USB port	USB 2.0	USB 2.0	USB 2.0	USB 2.0
CPU	Frequency	1.2 GHz	1.2 GHz	1.2 GHz	1.2 GHz
	Cores	4	4	4	4
Storage	Memory (RAM)	4 GB	4 GB	4 GB	4 GB
	Flash memory	Hardware: 512 MB, of which 400 MB is available for users	Hardware: 512 MB, of which 400 MB is available for users	Hardware: 512 MB, of which 400 MB is available for users	Hardware: 512 MB, of which 400 MB is available for users
Power supply	Power supply	• 600 W AC	• 600 W AC	• 1150 W AC	580 W AC

Item		S5720-32C-HI-24S-AC	S5720-56C-HI-AC	S5720-56C-PWR-HI-AC	S5720-56C-PWR-HI-AC1
system	type	(pluggable) • 350 W DC (pluggable)	(pluggable) • 350 W DC (pluggable)	(pluggable) • 1000 W AC (pluggable)	(pluggable)
	Power supply redundancy	1+1 NOTE The backup power supply is optional.	1+1 NOTE The backup power supply is optional.	1+1 NOTE The backup power supply is optional.	1+1 NOTE The backup power supply is optional.
	Rated voltage range	• AC: 100 V to 240 V; 50/60 Hz • DC: -48 V to -60 V	• AC: 100 V to 240 V; 50/60 Hz • DC: -48 V to -60 V	AC: 100 V to 240 V; 50/60 Hz	AC: 100 V to 240 V; 50/60 Hz
	Maximum voltage range	• AC: 90 V to 264 V; 47-63 Hz • DC: -38.4 V to -72 V	• AC: 90 V to 264 V; 47-63 Hz • DC: -38.4 V to -72 V	AC: 90 V to 264 V; 47-63 Hz	AC: 90 V to 264 V; 47-63 Hz
	Maximum input current	• 600 W AC: 9 A • 350 W DC: 11 A	• 600 W AC: 9 A • 350 W DC: 11 A	10 A	9 A
	Maximum power consumption of the device	172.7 W	183.3 W	• Without PDs: 188.74 W • With PDs: 1739 W (PDs: 1440 W)	• Without PDs: 188.74 W • With PDs: 1036 W (PDs: 740 W)
	Power consumption in the case of 30% traffic load ¹	122.12 W	128.93 W	132.35 W	137.8 W
	Power consumption in the case of 100% traffic load ¹	126.41 W	140.57 W	141.67 W	148.8 W
PoE specification	Maximum PoE power output	NA	NA	• Dual 1150 W power supplies: 1440 W (220 V input) • Dual 1150 W power supplies: 893.2 W (110 V input)	• Single power supply: 369.6 W • Dual power supplies: 739.2 W
	Number of PoE+ ports ²	NA	NA	48	48
	Maximum number of ports with maximum PoE power (15.4 W)	NA	NA	• Single power supply (220 V input): 48 • Single power supply (110 V input): 29 • Dual power	• Single power supply: 24 • Dual power supplies: 48

Item		S5720-32C-HI-24S-AC	S5720-56C-HI-AC	S5720-56C-PWR-HI-AC	S5720-56C-PWR-HI-AC1
				supplies (220 V input): 48 <ul style="list-style-type: none"> Dual power supplies (110 V input): 48 	
	Maximum number of ports with maximum PoE+ power (30 W)	NA	NA	<ul style="list-style-type: none"> Single power supply (220 V input): 26 Single power supply (110 V input): 14 Dual power supplies (220 V input): 48 Dual power supplies (110 V input): 29 	<ul style="list-style-type: none"> Single power supply: 12 Dual power supplies: 24
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	5	5	5	5
	Airflow	Air flows in from the left side and exhausts from the right side	Air flows in from the left side and exhausts from the right side	Air flows in from the left side and exhausts from the right side	Air flows in from the left side and exhausts from the right side
	Maximum heat dissipation of the device (BTU/hour)	589.4	625.6	<ul style="list-style-type: none"> Without PDs: 644 With PDs: 5935 	<ul style="list-style-type: none"> Without PDs: 644 With PDs: 3535.8
Environment parameters	Long-term operating temperature	<ul style="list-style-type: none"> 0-1800 m: 0°C to 45°C 1800-5000 m: The operating temperature decreases 1°C for every 220 m increase in altitude. 	<ul style="list-style-type: none"> 0-1800 m: 0°C to 45°C 1800-5000 m: The operating temperature decreases 1°C for every 220 m increase in altitude. 	<ul style="list-style-type: none"> 0-1800 m: 0°C to 45°C 1800-5000 m: The operating temperature decreases 1°C for every 220 m increase in altitude. 	<ul style="list-style-type: none"> 0-1800 m: 0°C to 45°C 1800-5000 m: The operating temperature decreases 1°C for every 220 m increase in altitude.
	Short-term operating temperature	<ul style="list-style-type: none"> 0-1800 m: -5 to +50°C 1800-5000 m: The operating temperature decreases 1°C for every 220 m increase in altitude. <p>NOTE</p>	<ul style="list-style-type: none"> 0-1800 m: -5 to +50°C 1800-5000 m: The operating temperature decreases 1°C for every 220 m increase in altitude. <p>NOTE</p>	<ul style="list-style-type: none"> 0-1800 m: -5 to +50°C 1800-5000 m: The operating temperature decreases 1°C for every 220 m increase in altitude. <p>NOTE</p>	<ul style="list-style-type: none"> 0-1800 m: -5 to +50°C 1800-5000 m: The operating temperature decreases 1°C for every 220 m increase in altitude. <p>NOTE</p>

Item		S5720-32C-HI-24S-AC	S5720-56C-HI-AC	S5720-56C-PWR-HI-AC	S5720-56C-PWR-HI-AC1
		Short term indicates that the successive operating time is no more than 96 hours, the total operating time is no more than 360 hours, or the number of times the operating temperature is over 45°C is no more than 15 in a year.	Short term indicates that the successive operating time is no more than 96 hours, the total operating time is no more than 360 hours, or the number of times the operating temperature is over 45°C is no more than 15 in a year.	Short term indicates that the successive operating time is no more than 96 hours, the total operating time is no more than 360 hours, or the number of times the operating temperature is over 45°C is no more than 15 in a year.	Short term indicates that the successive operating time is no more than 96 hours, the total operating time is no more than 360 hours, or the number of times the operating temperature is over 45°C is no more than 15 in a year.
	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)	60.0 dB(A)	60.1 dB(A)	69.8 dB(A)	64.6 dB(A)
	Noise under high temperature (sound power)	75.8 dB(A)	75.9 dB(A)	76.5 dB(A)	NA
	Noise under normal temperature (sound pressure)	50 dB(A)	50 dB(A)	55 dB(A)	51.5 dB(A)
	Surge protection specification (RJ45 service port)	±2 kV in common mode	±2 kV in common mode	±1 kV in common mode	±1 kV in common mode
	Surge protection specification (power port)	<ul style="list-style-type: none"> AC power port: ±6 kV in differential or common mode DC power port: ±1 kV in differential mode; ±2 kV in common mode 	<ul style="list-style-type: none"> AC power port: ±6 kV in differential or common mode DC power port: ±1 kV in differential mode; ±2 kV in common mode 	AC power port: ±2 kV in differential mode; ±4 kV in common mode	AC power port: ±6 kV in differential or common mode
Reliability	MTBF (year) ³	<ul style="list-style-type: none"> Without cards: 	<ul style="list-style-type: none"> Without cards: 	<ul style="list-style-type: none"> Without cards: 	<ul style="list-style-type: none"> Without cards:

Item	S5720-32C-HI-24S-AC	S5720-56C-HI-AC	S5720-56C-PWR-HI-AC	S5720-56C-PWR-HI-AC1
	56.21 • With 4-port 10GE cards: 52.63	53.05 • With 4-port 10GE cards: 49.85	39.31 • With 4-port 10GE cards: 37.53	39.31 • With 4-port 10GE cards: 37.53
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 For details about certifications, see the section Safety and Regulatory Compliance.	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification For details about certifications, see the section Safety and Regulatory Compliance.	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification For details about certifications, see the section Safety and Regulatory Compliance.	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification For details about certifications, see the section Safety and Regulatory Compliance.

NOTE

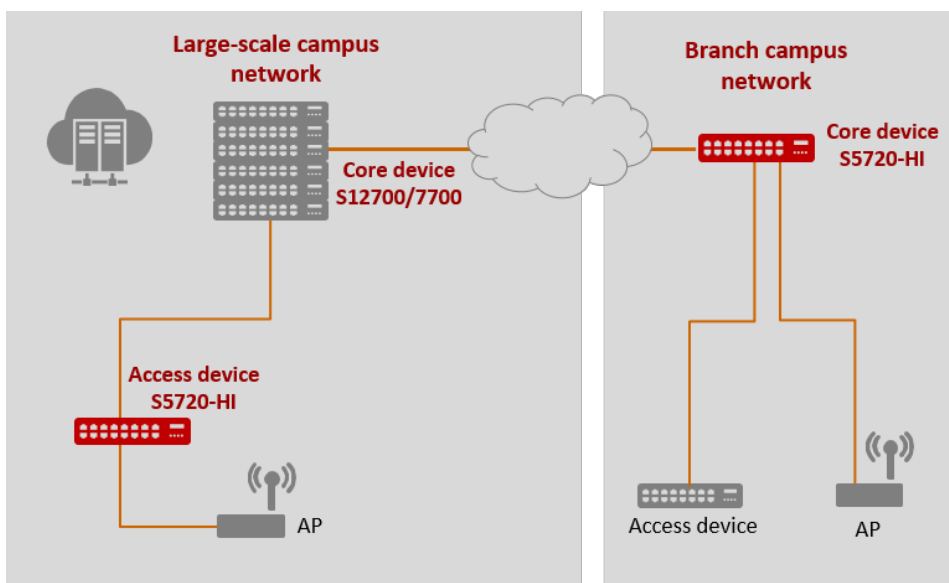
- 1: The power consumption under different load conditions is calculated according to the ATIS standard. Additionally, the EEE function is enabled and there is no PoE power output.
- 2: The number of working PoE+ ports depends on the maximum PoE power provided by the device and the maximum power consumption of PDs.
- 3: 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

Enterprise Campus Networks

As shown in the following figure, the S5720-HI series switches are located at the access layer to build a high-performance, reliable enterprise campus network.

Position of the S5720-HI on an enterprise campus network



Huawei S5720-HI is the industry's first agile fixed switch. The S5720-HI has large table sizes and buffers, avoiding packet loss in burst traffic. It supports in-depth wired and wireless convergence and unified management on devices, users, and services.

The S5720-HI can be used as the core device in an enterprise branch network or a small- or medium-sized campus network or as the aggregation device in a large-sized campus network, to achieve a manageable and reliable enterprise campus network with scalable services.

Product Accessories

Optical Modules and Fibers

The S5720-HI supports the following GE and 10GE optical modules:

- GE: 100 m electrical, 500 m optical multi-mode, 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+

Optical fibers fall into single-mode and multi-mode 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.

NOTE

The fibers and optical modules supported by Huawei switches are being updated. For the latest information, visit <http://support.huawei.com/enterprise/en/doc/EDOC1000013597?section=j07w&topicName=pluggable-modules-for-interfaces> or contact your local Huawei sales office.

Stack Cables

The S5720-HI series 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 a 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 a fiber. The SFP+ high-speed cables are available in SFP-10G-CU1M, SFP-10G-CU3M, SFP-10G-CU5M, and SFP-10G-CU10M.

NOTE

For more information about stack cables applicable to the S5720-HI series, visit <http://support.huawei.com/enterprise/en/doc/EDOC1000013597?section=j07f&topicName=cables> or contact your local Huawei sales office.

Safety and Regulatory Compliance

The following table describes the safety and regulatory compliance of the S5720-HI.

Safety and regulatory compliance of the S5720-HI 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 S5720-HI.

Supported MIBs by the S5720-HI 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 • 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
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

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

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

 **NOTE**

For more information about MIBs supported by the S5720-HI series, visit <https://support.huawei.com/enterprise/en/switches/s5700-pid-6691579?category=reference-guides&subcategory=mib-reference>.

Standard Compliance

The following table lists the standards that the S5720-HI complies with.

Standard compliance list of the S5720-HI 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)

Standard Organization	Standard or Protocol
	<ul style="list-style-type: none"> • 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) • 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	<ul style="list-style-type: none"> • 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

Standard Organization	Standard or Protocol
	<ul style="list-style-type: none"> 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	<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 monitor
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

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 information of the S5720-HI series

Item	Product Description
1	S5720-32C-HI-24S-AC (24 Gig SFP, 8 of which are dual-purpose 10/100/1000 or SFP, 4 10 Gig SFP+, with 2 interface slots, with 600 W AC power supply)
2	S5720-56C-HI-AC (48 Ethernet 10/100/1000 ports, 4 10 Gig SFP+, with 2 interface slots, with 600 W AC power supply)
3	S5720-56C-PWR-HI-AC (48 Ethernet 10/100/1000 POE+ ports, 4 10 Gig SFP+, with 2 interface slots, with 1150 W AC power supply)
4	S5720-56C-PWR-HI-AC1 (48 Ethernet 10/100/1000 POE+ ports, 4 10 Gig SFP+, with 2 interface slots, with 580 W AC power supply)
5	4 10 Gig SFP+ Interface Card (used in S5720-HI series)
6	350 W DC Power Module
7	580 W AC Power Module
8	600 W AC Power Module
9	1150 W AC PoE Power Module
10	Resource-ES1SWL512AP0-WLAN Access Controller AP Resource License-512AP (used in S5720HI series)

Item	Product Description
11	Resource-ES1SWL128AP0-WLAN Access Controller AP Resource License-128AP (used in S5720HI series)
12	Resource-ES1SWL64AP00-WLAN Access Controller AP Resource License-64AP (used in S5720HI series)
13	Resource-ES1SWL16AP00-WLAN Access Controller AP Resource License-16AP (used in S5720HI series)
14	Resource-ES5SF4512K00-FIBv4 Resource License-128K (used in S5720HI series)
15	Resource-ES5SF4128K00-FIBv4 Resource License-512K (used in S5720HI series)
16	Function-S5700-ES5FEA1-ES5SSVFF0000-SVF Function License (used in S5720HI series)

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

Copyright © Huawei Technologies Co., Ltd. 2018. All rights reserved.

No part of this document may be reproduced or transmitted in any form or by any means without prior written consent of Huawei Technologies Co., Ltd.

Trademarks and Permissions

 HUAWEI and other Huawei trademarks are trademarks of Huawei Technologies Co., Ltd.

All other trademarks and trade names mentioned in this document are the property of their respective holders.

Notice

The purchased products, services and features are stipulated by the contract made between Huawei and the customer. All or part of the products, services and features described in this document may not be within the purchase scope or the usage scope. Unless otherwise specified in the contract, all statements, information, and recommendations in this document are provided "AS IS" without warranties, guarantees or representations of any kind, either express or implied.

The information in this document is subject to change without notice. Every effort has been made in the preparation of this document to ensure accuracy of the contents, but all statements, information, and recommendations in this document do not constitute a warranty of any kind, express or implied.

Huawei Technologies Co., Ltd.

Address: Huawei Industrial Base Bantian,
Longgang Shenzhen 518129 People's
Republic of China

Website: e.huawei.com