S5720-SI Series Switches

HUAWEI TECHNOLOGIES CO., LTD.

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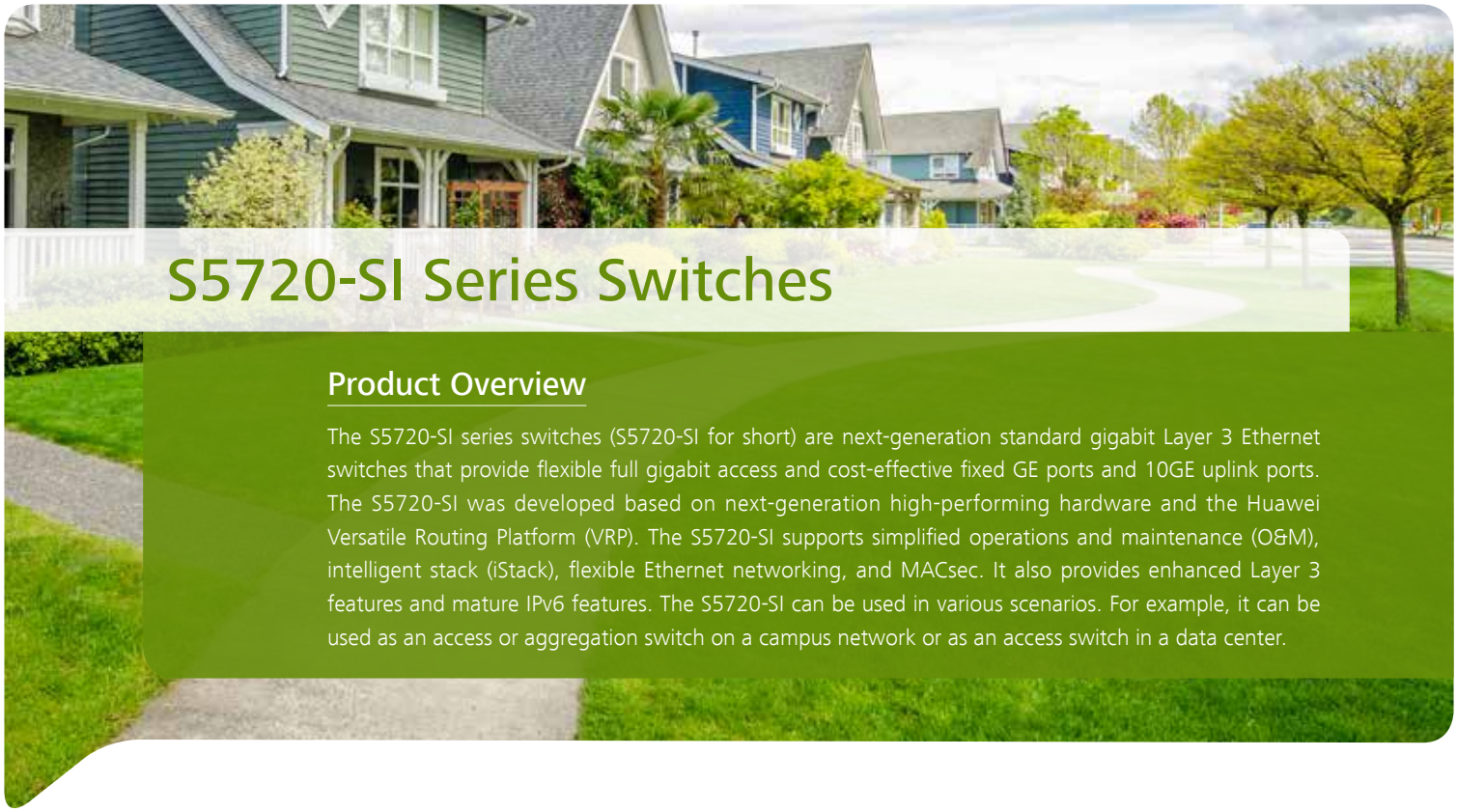


S5720-SI Series Switches

Product Overview

The S5720-SI series switches (S5720-SI for short) are next-generation standard gigabit Layer 3 Ethernet switches that provide flexible full gigabit access and cost-effective fixed GE ports and 10GE uplink ports. The S5720-SI was developed based on next-generation high-performing hardware and the Huawei Versatile Routing Platform (VRP). The S5720-SI supports simplified operations and maintenance (O&M), intelligent stack (iStack), flexible Ethernet networking, and MACsec. It also provides enhanced Layer 3 features and mature IPv6 features. The S5720-SI can be used in various scenarios. For example, it can be used as an access or aggregation switch on a campus network or as an access switch in a data center.

Models and Appearances

The following models are available in the S5720-SI series.

S5720-28P-SI-AC

- 24 Ethernet 10/100/1000 ports, 4 of which are dual-purpose 10/100/1000 or SFP, 4 Gig SFP
- Dual pluggable AC or DC power supplies, one AC power supply equipped by default
- Forwarding performance: 42 Mpps
- Switching capacity: 336 Gbit/s

S5720-28X-SI-AC
S5720-28X-SI-DC

- 24 Ethernet 10/100/1000 ports, 4 of which are dual-purpose 10/100/1000 or SFP, 4 10 Gig SFP+
- Dual pluggable AC or DC power supplies, one AC or DC power supply equipped by default
- Forwarding performance: 96 Mpps
- Switching capacity: 336 Gbit/s

S5720-28X-SI-24S-AC

S5720-28X-SI-24S-DC

- 24 100/1000 SFP, 8 of which are dual-purpose 10/100/1000 or SFP, 4 10 Gig SFP+
- AC/DC power supply, supporting RPS
- Forwarding performance: 96 Mpps
- Switching capacity: 336 Gbit/s

S5720-52P-SI-AC

- 48 Ethernet 10/100/1000 ports, 4 Gig SFP
- Dual pluggable AC or DC power supplies, one AC power supply equipped by default
- Forwarding performance: 78 Mpps
- Switching capacity: 336 Gbit/s

S5720-52X-SI-AC
S5720-52X-SI-DC

- 48 Ethernet 10/100/1000 ports, 4 10 Gig SFP+
- Dual pluggable AC or DC power supplies, one AC or DC power supply equipped by default
- Forwarding performance: 132 Mpps
- Switching capacity: 336 Gbit/s

S5720-28X-PWR-SI-AC
S5720-28X-PWR-SI-DC

- 24 Ethernet 10/100/1000 PoE+ ports, 4 of which are dual-purpose 10/100/1000 or SFP, 4 10 Gig SFP+
- Dual pluggable AC or DC power supplies, one 500 W AC power supply or one 650 W DC power supply equipped by default
- PoE+
- Forwarding performance: 96 Mpps
- Switching capacity: 336 Gbit/s

S5720-52X-PWR-SI-AC
S5720-52X-PWR-SI-DC

- 48 Ethernet 10/100/1000 PoE+ ports, 4 10 Gig SFP+
- Dual pluggable AC or DC power supplies, one 500 W AC power supply or one 650 W DC power supply equipped by default
- PoE+
- Forwarding performance: 132 Mpps
- Switching capacity: 336 Gbit/s

S5720-52X-PWR-SI-ACF

- 48 Ethernet 10/100/1000 PoE+ ports, 4 10 Gig SFP+
- Dual pluggable AC power supplies, one 1150 W AC power supply equipped by default
- PoE+
- Forwarding performance: 132 Mpps
- Switching capacity: 336 Gbit/s

S5720S-28P-SI-AC

- 24 Ethernet 10/100/1000 ports, 4 Gig SFP
- AC power supply, supporting RPS
- Forwarding performance: 42 Mpps
- Switching capacity: 336 Gbit/s

S5720S-28X-SI-AC
S5720S-28X-SI-DC

- 24 Ethernet 10/100/1000 ports, 4 10 Gig SFP+
- AC/DC power supply, supporting RPS
- Forwarding performance: 96 Mpps
- Switching capacity: 336 Gbit/s

S5720S-52P-SI-AC

- 48 Ethernet 10/100/1000 ports, 4 Gig SFP
- AC power supply, supporting RPS
- Forwarding performance: 78 Mpps
- Switching capacity: 336 Gbit/s

S5720S-52X-SI-AC
S5720S-52X-SI-DC

- 48 Ethernet 10/100/1000 ports, 4 10 Gig SFP+
- AC/DC power supply, supporting RPS
- Forwarding performance: 132 Mpps
- Switching capacity: 336 Gbit/s

S5720-14X-PWH-SI-AC

- 8 Ethernet 10/100/1000 ports, 4 Ethernet 2.5GE/GE ports, 2 10 Gig SFP+
- AC power supply
- Forwarding performance: 57 Mpps
- Switching capacity: 336 Gbit/s

Product Features and Highlights

Powerful service processing capability and multiple security control mechanisms

- The S5720-SI supports many Layer 2/Layer 3 multicast protocols such as PIM SM, PIM DM, PIM SSM, MLD, and IGMP snooping, to support multi-terminal high-definition video surveillance and video conferencing services.
- The S5720-SI supports multiple Layer 3 features including OSPF, IS-IS, BGP, and VRRP, meeting enterprises' requirements on access and aggregation service bearing, and enabling a variety of voice, video, and data applications.
- The S5720-SI supports MAC address authentication, 802.1x authentication, and Portal authentication, and implements dynamic delivery of policies (VLAN, QoS, and ACL) to users.
- The S5720-SI 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-SI 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.
- S5720-SI support to adapt to the Software Defined Networking (SDN) development trend / SDN readiness, which controled by the Core Switch with Ethernet Network Processor (ENP).

Easy O&M

- The S5720-SI supports Super Virtual Fabric (SVF), which virtualizes the "Core/aggregation + Access switch + AP" structure into a logical device. The S5720-SI provides the simplest network management solution in the industry to simplify device management. It allows plug-and-play access switches and APs. In addition, the S5720-SI supports service configuration templates. The templates are configured on core devices and automatically delivered to access devices, enabling centralized control, simplified service configuration, and flexible configuration modification. The S5720-SI functions as a client in an SVF system.

- The S5720-SI supports zero-touch deployment, replacement of faulty devices without additional configuration, USB-based deployment, batch configuration, and batch remote upgrade. The capabilities facilitate device deployment, upgrade, service provisioning, and other management and maintenance operations, and also greatly reduce O&M costs. The S5720-SI can be managed using SNMP v1/v2c/v3, CLI, web-based network management system, or SSH v2.0. Additionally, it supports RMON, multiple log hosts, port traffic statistics collection, and network quality analysis, which facilitate network optimization and reconstruction.
- The S5720-SI supports the Sampled Flow (sFlow) function. It uses a method defined in the sFlow standard to sample traffic passing through it and sends sampled traffic to the collector in real time. The collected traffic statistics are used to generate statistical reports, helping enterprises maintain their networks.

Multiple reliability mechanisms

- The S5720-SI supports iStack. This technology can virtualize up to nine physical switches into one logical switch. Downlink electrical ports support iStack. Member switches in a stack implement redundancy backup to improve device reliability and use inter-device link aggregation to improve link reliability. iStack provides high network scalability. You can increase a stack's ports, bandwidth, and processing capacity by simply adding member switches. iStack also simplifies device configuration and management. After a stack is set up, multiple physical switches are virtualized into one logical device. You can log in to any member switch in the stack to manage all the member switches in the stack.
- The S5720-SI is equipped with two removable power modules that can work in 1+1 redundancy backup mode. Mixed installation of AC and DC power modules is supported, allowing for flexible configuration of AC or DC power modules according to service requirements.
- In addition to traditional STP, RSTP, and MSTP, the S5720-SI 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 S5720-SI supports Smart Link. One S5720-SI switch can connect to multiple aggregation switches through multiple links, implementing backup of uplinks and significantly improving reliability of access devices.
- The S5720-SI supports Ethernet OAM (IEEE 802.3ah/802.1ag) to detect link faults quickly.

Mature IPv6 technologies

- The S5720-SI uses the mature, stable VRP platform and supports IPv4/IPv6 dual stack, IPv6 RIPng, and IPv6 over IPv4 tunnels (including manual, 6-to-4, and ISATAP tunnels). With these IPv6 features, the S5720-SI can be deployed on a pure IPv4 network, a pure IPv6 network, or a shared IPv4/IPv6 network, helping achieve IPv4-to-IPv6 transition.

PoE++ ultra-large power supply

- The S5720-SI provides a PoE++ model, which supports 2.5GE/GE PoE++ Ethernet electrical ports that are compatible with GE cables. The PoE++ model provides up to 90 W power supply per port, accommodating the requirements of scenarios in which a large power supply is required, such as enterprise office desktop systems, smart lighting, and Wi-Fi/LTE Pico co-site.

Cloud-based management

- The S5720-SI can work in cloud-based management mode or traditional management based on requirements. In cloud-based management mode, the S5720-SI can be monitored, managed, and configured on the Huawei agile cloud management platform (Agile Controller-Cloud Manager). A mobile O&M app is also supported.

Product Specifications

Item	S5720-28P-SI-AC S5720-28X-SI-AC(DC) S5720-28X-PWR-SI-AC(DC)	S5720-52P-SI-AC S5720-52X-SI-AC (DC) S5720-52X-PWR-SI-AC(DC) S5720-52X-PWR-SI-ACF	S5720-28X-SI-24S-AC(DC)	S5720S-28P-SI-AC S5720S-28X-SI-AC(DC)	S5720S-52P-SI-AC S5720S-52X-SI-AC(DC)	S5720-14X-PWH-SI-AC
Fixed port	24 Ethernet 10/100/1000 ports,4 of which are dual-purpose 10/100/1000 or SFP P series: 4 Gig SFP X series: 4 10 Gig SFP+	48 Ethernet 10/100/1000 ports P series: 4 Gig SFP X series: 4 10 Gig SFP+	24 100/1000 SFP, 8 of which are dual-purpose 10/100/1000 or SFP, 4 10 Gig SFP+	24 Ethernet 10/100/1000 ports P series: 4 Gig SFP X series: 4 10 Gig SFP+	48 Ethernet 10/100/1000 ports P series: 4 Gig SFP X series: 4 10 Gig SFP+	8 Ethernet 10/100/1000 ports 4 Ethernet 2.5GE/GE ports 2 10 Gig SFP+
Extended slot	NA					
MAC address table	IEEE 802.1d compliance 16K 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 1:1 and N:1 VLAN mapping					
Reliability	RRPP ring topology and RRPP multi-instance Smart Link tree topology and Smart Link multi-instance, providing millisecond-level protection switchover SEP STP (IEEE 802.1d), RSTP (IEEE 802.1w), and MSTP (IEEE 802.1s) ERPS (G.8032) BPDU protection, root protection, and loop protection					
IP routing	Static route, RIPv1/v2, RIPng, OSPF, OSPFv3, ECMP, IS-IS, IS-ISv6, BGP, BGP4+, VRRP, and VRRP6					
IPv6 features	Neighbor Discovery (ND) Path MTU (PMTU) IPv6 ping, IPv6 tracert, and IPv6 Telnet 6to4 tunnel, ISATAP tunnel, and manually configured tunnel ACLs based on the source IPv6 address, destination IPv6 address, Layer 4 ports, or protocol type MLD v1/v2 snooping					

Item	S5720-28P-SI-AC S5720-28X-SI-AC(DC) S5720-28X-PWR-SI-AC(DC)	S5720-52P-SI-AC S5720-52X-SI-AC (DC) S5720-52X-PWR-SI-AC(DC) S5720-52X-PWR-SI-ACF	S5720-28X-SI-24S-AC(DC)	S5720S-28P-SI-AC S5720S-28X-SI-AC(DC)	S5720S-52P-SI-AC S5720S-52X-SI-AC(DC)	S5720-14X-PWH-SI-AC
Multicast	PIM DM, PIM SM, PIM SSM 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					
QoS/ACL	Rate limiting on packets sent and received by a port Packet redirection Port-based traffic policing and two-rate three-color CAR Eight queues on each port WRR, DRR, SP, WRR+SP, and DRR+SP queue scheduling algorithms Re-marking of the 802.1p priority and DSCP priority 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 Rate limiting in each queue and traffic 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 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, HWTACACS authentication, and NAC SSH v2.0 HTTPS CPU defense Blacklist and whitelist IEEE 802.1x authentication, MAC address authentication, and Portal authentication DHCPv4/v6 client/relay/server/snooping Attack source tracing and punishment for IPv6 packets such as ND, DHCPv6, and MLD packets					
SVF	Plug-and-play SVF client Automatic software and patch loading to clients One-click and automatic delivery of service configurations Independent client running					
OAM	Software OAM: EFM OAM CFM OAM Y.1731 performance test					

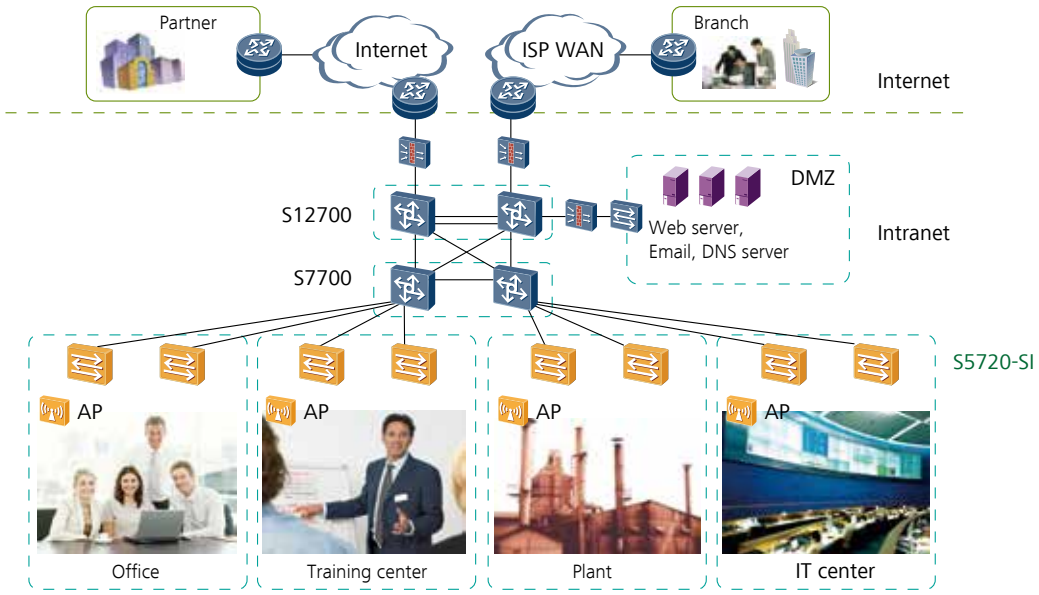
Item	S5720-28P-SI-AC S5720-28X-SI-AC(DC) S5720-28X-PWR-SI-AC(DC)	S5720-52P-SI-AC S5720-52X-SI-AC (DC) S5720-52X-PWR-SI-AC(DC) S5720-52X-PWR-SI-ACF	S5720-28X-SI-24S-AC(DC)	S5720S-28P-SI-AC S5720S-28X-SI-AC(DC)	S5720S-52P-SI-AC S5720S-52X-SI-AC(DC)	S5720-14X-PWH-SI-AC
Manage-ment and maintenance	iStack (using service ports as stack ports) Virtual cable test SNMP v1/v2c/v3 RMON Web-based NMS System logs and alarms of different levels sFlow					
Interopera-bility	Supports VBST (Compatible with PVST/PVST+/RPVST) Supports LNP (Similar to DTP) Supports VCMP (Similar to VTP)					
Operating environment	Operating temperature: 0-1800 m altitude: 0°C to 45°C 1800-5000 m altitude: The operating temperature reduces by 1°C every time the altitude increases by 220 m. Relative humidity: 5% to 95% (non-condensing)					
Input voltage	AC: Rated voltage range: 100 V to 240 V AC, 50 Hz to 60 Hz Maximum voltage range: 90 V to 264 V AC, 47 Hz to 63 Hz DC: Rated voltage range: –48 V to –60 V, DC Maximum voltage range: –36 V to –72 V, DC					
Dimensions (W x D x H, mm)	442 × 420 × 44.4	S5720-52X-PWR-SI-ACF: 442 × 420 × 44.4 When 1150 W power modules are installed, the total depth of the switch changes to 507.3 mm.	442 × 220 × 43.6	442 × 220 × 43.6	442 × 220 × 43.6	442 × 310 × 43.6

Item	S5720-28P-SI-AC S5720-28X-SI-AC(DC) S5720-28X-PWR-SI-AC(DC)	S5720-52P-SI-AC S5720-52X-SI-AC (DC) S5720-52X-PWR-SI-AC(DC) S5720-52X-PWR-SI-ACF	S5720-28X-SI-24S-AC(DC)	S5720S-28P-SI-AC S5720S-28X-SI-AC(DC)	S5720S-52P-SI-AC S5720S-52X-SI-AC(DC)	S5720-14X-PWH-SI-AC
Typical power consumption	S5720-28P-SI-AC: 21.2 W S5720-28X-SI-AC (DC): 22.3 W S5720-28X-PWR-SI-AC (DC): without PD: 31.8 W; with PD: <913 W (PoE: 740 W)	S5720-52P-SI-AC: 32.2 W S5720-52X-SI-AC (DC): 33.8 W S5720-52X-PWR-SI-AC (DC): without PD: 51 W; with PD: <943.2 W (PoE: 740 W) S5720-52X-PWR-SI-ACF: without PD: 57 W; with PD: <1631.5 W (PoE: 1440 W)	S5720-28X-SI-24S-AC: 28.9 W S5720-28X-SI-24S- DC: 30.3W	S5720S-28P-SI-AC: 20.2 W S5720S-28X-SI-AC (DC): 22 W	S5720S-52P-SI-AC: 33 W S5720S-52X-SI-AC (DC): 34.4 W	S5720-14X-PWH-SI-AC: without PD: 46.3 W; with PD: <415.9 W (PoE: 369.6 W)

Applications

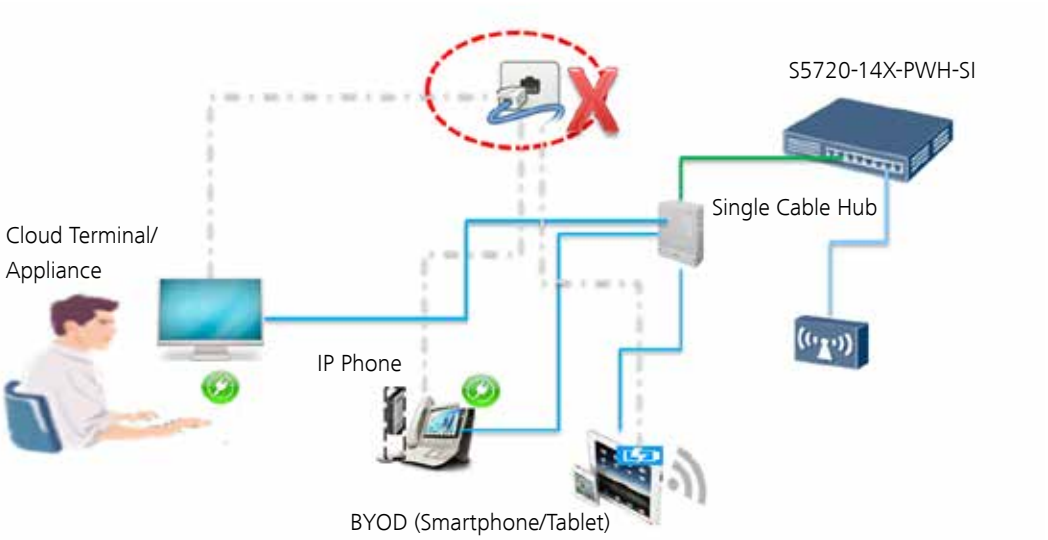
On Large-sized Enterprise Networks

The S5720-SI can function as an access device on a large-sized or medium-sized enterprise network or an aggregation device on a small-sized campus network. It supports link aggregation and dual-homing to improve network reliability.



Enterprise office desktop systems

Huawei S5720-14X-PWH-SI PoE++ switch that provides 90 W power supply per port builds a Single Cable Solution for office desktop systems, enabling both power supply and network access for office desktop terminals through a single cable.



Ordering Information

The following table lists ordering information of the S5720-SI series switches.

Models	Product Description
S5720-28P-SI-AC	S5720-28P-SI bundle (24 Ethernet 10/100/1000 ports,4 of which are dual-purpose 10/100/1000 or SFP,4 Gig SFP,with 150W AC power supply)
S5720-28X-SI-AC	S5720-28X-SI bundle (24 Ethernet 10/100/1000 ports,4 of which are dual-purpose 10/100/1000 or SFP,4 10 Gig SFP+,with 150W AC power supply)
S5720-28X-SI-DC	S5720-28X-SI bundle (24 Ethernet 10/100/1000 ports, 4 of which are dual-purpose 10/100/1000 or SFP, 4 10 Gig SFP+, with 150W DC power supply)
S5720-28X-SI-24S-AC	S5720-28X-SI-24S bundle (24 100/1000 SFP, 8 of which are dual-purpose 10/100/1000 or SFP, 4 10 Gig SFP+, AC)
S5720-28X-SI-24S-DC	S5720-28X-SI-24S bundle (24 100/1000 SFP, 8 of which are dual-purpose 10/100/1000 or SFP, 4 10 Gig SFP+, DC)
S5720-52P-SI-AC	S5720-52P-SI bundle (48 Ethernet 10/100/1000 ports,4 Gig SFP,with 150W AC power supply)
S5720-52X-SI-AC	S5720-52X-SI bundle (48 Ethernet 10/100/1000 ports,4 10 Gig SFP+,with 150W AC power supply)
S5720-52X-SI-DC	S5720-52X-SI bundle (48 Ethernet 10/100/1000 ports, 4 10 Gig SFP+, with 150W DC power supply)
S5720-28X-PWR-SI-AC	S5720-28X-PWR-SI bundle (24 Ethernet 10/100/1000 PoE+ ports,4 of which are dual-purpose 10/100/1000 or SFP,4 10 Gig SFP+,with 500W AC power)
S5720-28X-PWR-SI-DC	S5720-28X-PWR-SI bundle (24 Ethernet 10/100/1000 PoE+ ports, 4 of which are dual-purpose 10/100/1000 or SFP,4 10 Gig SFP+, with 650W DC power)
S5720-52X-PWR-SI-AC	S5720-52X-PWR-SI bundle (48 Ethernet 10/100/1000 PoE+ ports,4 10 Gig SFP+,with 500W AC power)
S5720-52X-PWR-SI-DC	S5720-52X-PWR-SI bundle (48 Ethernet 10/100/1000 PoE+ ports, 4 10 Gig SFP+,with 650W DC power)
S5720-52X-PWR-SI-ACF	S5720-52X-PWR-SI bundle (48 Ethernet 10/100/1000 PoE+ ports,4 10 Gig SFP+,with 1150W AC power supply)
S5720S-28P-SI-AC	S5720S-28P-SI-AC(24 Ethernet 10/100/1000 ports,4 Gig SFP,AC 110/220V)
S5720S-28X-SI-AC	S5720S-28X-SI-AC(24 Ethernet 10/100/1000 ports,4 10 Gig SFP+,AC 110/220V)
S5720S-28X-SI-DC	S5720S-28X-SI-AC (24 Ethernet 10/100/1000 ports, 4 10 Gig SFP+, DC)
S5720S-52P-SI-AC	S5720S-52P-SI-AC(48 Ethernet 10/100/1000 ports,4 Gig SFP,AC 110/220V)
S5720S-52X-SI-AC	S5720S-52X-SI-AC(48 Ethernet 10/100/1000 ports,4 10 Gig SFP+,AC 110/220V)
S5720S-52X-SI-DC	S5720S-52X-SI-DC(S5720S-52X-SI-AC (48 Ethernet 10/100/1000 ports, 4 10 Gig SFP+, DC)
S5720-14X-PWH-SI-AC	S5720-14X-PWH-SI-AC(8 Ethernet 10/100/1000 ports,4 Ethernet 2.5GE/GE ports, 2 10 Gig SFP+,AC)
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
RPS1800	RPS1800 Redundant Power Supply (6 DC Output Ports,12V Total Output Power 140W,48V Total Output Power 1600W)

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

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