Huawei Enterprise
Sx700 Series Switch Product

HUAWEI TECHNOLOGIES CO., LTD.

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Huawei Enterprise Sx700 Series Switch Product

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S9700 Series Terabit Routing Switches

Product Overview

The S9700 series terabit routing switches (S9700 for short) are high-end switches designed for next-generation campus networks and data centers to provide service aggregation.

Based on Huawei Versatile Routing Platform (VRP), the S9700 provides high L2/L3 switching capabilities and integrates diversified services such as MPLS VPN, hardware IPV6, desktop cloud, video conferencing, wireless access. In addition, the S9700 also provides a variety of reliability technologies including in-service software upgrade, non-stop forwarding, hardware OAM/BFD, and ring network protection. These technologies improve customers' network efficiency and maximize the normal operation time, which reduce customers' total cost of ownership (TCO).

The S9700 is available in three models: S9703, S9706, and S9712.

S9712

S9706

S9703

Product Characteristics

Advanced Architecture to Ensure Industry-Leading Performance

- The S9700 is designed for a 100G platform and provides a maximum of 5.12 Tbps switching capacity, which can be smoothly expanded to 7.68 Tbps to support high-density GE/10GE line-speed forwarding.
- The S9700 provides high performance line cards, such as 8*40GE and 40*10GE line cards.
- The S9700 supports a maximum of 96*40GE ports or 480*10GE ports, bringing enterprise campus networks and data centers into the era of the all-10GE core network.
- The S9700 supports the 100G Ethernet standard to meet future requirements from bandwidth-intensive applications (such as multimedia conferencing and data access), eliminating the trouble of frequent upgrading.

Innovative CSS Technology

- The S9700 switches can form a cluster switch system (CSS) using service ports on LPUs. The CSS technology virtualizes multiple physical switches into one logical device that has higher reliability, switching efficiency, and flexibility and is easier to manage.
- High reliability: Through hot backup of routes, all control plane and data plane information is backed up and forwarded continuously at Layer 3, which significantly improves the reliability and performance of the device. Inter-chassis link aggregation can also be used to eliminate single-point failure and prevent service interruption.
- Flexibility: Service ports can be used as cluster ports so that cluster members can be connected through optical fibers. This expands the clustering distance substantially.
- Easy management: The member switches in a cluster are managed using the same IP address, which simplifies network device and topology management, improves operation efficiency, and reduces maintenance costs.

Carrier-class Reliability

- All the key components of the S9700 (including MPUs, power supply units, and fans) use a redundant design, and all modules are hot swappable to ensure stable network operation.
- The S9700 supports 3.3 ms hardware-based BFD for protocols such as static routing, RIP, OSPF, BGP, ISIS, VRRP, PIM, and MPLS. Hardware-based BFD greatly improves network reliability.
- The S9700 supports hardware-based Ethernet OAM, including comprehensive EEE802.3ah, 802.1ag, and ITU-Y. 1731 implementations. Hardware-based Ethernet OAM can collect accurate network parameters, such as transmission latency and jitter, to help customers monitor network operating status in real time and to realize quick detection, location, and switching when a network fault occurs.
- The in-service software upgrade (ISSU) function of the S9700 prevents interruption of key services during software upgrading. The S9700 supports graceful restart to realize nonstop forwarding and ensure reliable and high-speed operation of the entire network.

Powerful Service Processing Capability

- The S9700's multi-service routing and switching platform meets requirements for service bearing at the access layer, aggregation layer, and core layer of enterprise networks. The S9700 provides wireless access, voice, video, and data services, helping enterprises build an integrated full service network with high availability and low latency.
- The S9700 supports distributed Layer 2/Layer 3 MPLS VPN functions, MPLS, VPLS, HVPLS, and VLL. These functions allow enterprise users to connect to the enterprise network through VPNs.
- The S9700 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 software platform provides various routing protocols and supports large routing tables for both SME networks and large-scale multinational company networks. Moreover, it supports IPv6, allowing an enterprise network to smoothly migrate to IPv6.

Wireless AC Modules, Meeting Requirements for Mobile Office

- The S9700 AC card supports radio frequency management. The AC allows APs to select their radio channels and power automatically. In an AP region, APs automatically adjust radio channels and power in the event of signal interference, enabling the receive signal strength indicator (RSSI) and signal-to-noise ratio (SNR) to be continuously updated. The system then can monitor the electromagnetic environment of every wireless user, improving network availability.
- The S9700 AC card supports various authentication methods for wireless users, including 802.1x MAC address authentication, portal certification, and WAPI authentication, to ensure access of different terminals and devices of different security levels.

Powerful Network Traffic Analysis

- The S9700 supports Netstream and V5/V8/V9 packet formats. The Netstream feature supports aggregation traffic template, real-time traffic collection, dynamic report generation and traffic attribute analysis, and traffic exception report. The S9700 sends traffic statistics logs to master and backup servers to avoid data loss. The S9700 can realize real-time network monitoring and the traffic analysis of the entire network. It also provides applications and analysis including fault pre-detection, effective fault rectification, fast problem handling, and security monitoring, to help customers optimize network structure and adjust service deployment.

Comprehensive Security Measures

- The S9700 has an integrated built-in firewall card and supports virtual firewalls and NAT multi-instance, allowing multiple VPN customers to share the same firewall. The application-layer packet filtering technology detects and filters application layer packets according to rules.
- The S9700 provides comprehensive NAC solutions for enterprise networks. It supports MAC address authentication, portal authentication, 802.1x authentication, and DHCP snooping-triggered authentication. These authentication methods ensure security of various access modes such as dumb terminal access, mobile access, and centralized IP address allocation.
- The S9700 is the industry leader in integrated security solutions. It uses a 2-level CPU protection mechanism and supports 1K CPU queues, and protects the CPU by separating the data plane and control plane. Additionally, the S9700 defends against DoS attacks and unauthorized access, and prevents control plane overloading.

Comprehensive IPv6 Solution

- The S9700 software and hardware platforms support IPv6 and the S9700 has been granted an IPv6 Network Access License and the IPv6 Ready Logo Phase 2 Certification by the Ministry of Industry and Information Technology.
- The S9700 supports various IPv6 unicast routing protocols (such as IPv6 static routing, RIPng, OSPFv3, IS-ISv6, and BGP4+) and multicast features (such as MLD v1/v, MLD snooping, PIM-SM/DMv6, and PIM-SSMv6), which provides customers with comprehensive IPv4/IPv6 solutions.
- The S9700 supports various IPv4-to-IPv6 technologies: IPv6 manual tunnels, 6-to-4 tunnel, ISATAP tunnel, GRE tunnel, and IPv4-compatible automatic tunnels. These technologies ensure smooth transition from an IPv4 network to an IPv6 network.

Innovative Energy Conservation Design

- The S9700 uses a rotating ventilation channel to improve heat dissipation efficiency. In addition, it uses a variable current chip to dynamically adjust the power according to traffic, reducing power consumption by 11%. Ports can go into a sleeping state when there is no traffic to reduce power consumption.
- The S9700 uses intelligent fan-speed adjustment technology. The fan module monitors and controls the temperature in each zone, and adjusts the fan speed of in each zone individually. This technology extends the service life of each fan and reduces power consumption.
- The S9700 supports IEEE 802.3az Energy Efficient Ethernet, provides a low-power idle mode for the PHY line card, and switches to a lower power state during low link utilization.

Product Specifications

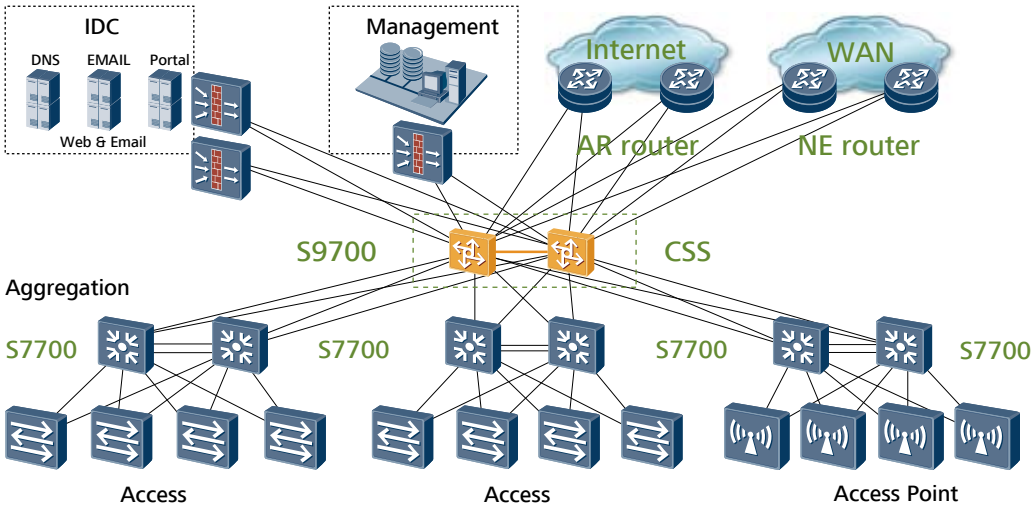
Item	S9703	S9706	S9712
Backplane capacity	7.2 Tbps	14.4 Tbps	19.2 Tbps
Switching capacity	2.88 Tbps	3.84 Tbps/5.76 Tbps	5.12 Tbps/7.68 Tbps
Forwarding performance	1440 Mpps	2880 Mpps/ 4320 Mpps	3840 Mpps/ 5760 Mpps
Service slots	3	6	12
VLAN	Supports adding access, trunk, and hybrid interfaces to VLANs		
	Supports the default VLAN		
	Supports VLAN switching		
	Supports QinQ and selective QinQ		
	Supports MAC address-based VLAN assignment		
MAC address	Supports automatic learning and aging of MAC addresses		
	Supports static, dynamic, and blackhole MAC address entries		
	Supports packet filtering based on source MAC addresses		
	Supports MAC address limiting based on ports and VLANs		
STP	Supports STP(IEEE 802.1d), RSTP(IEEE 802.1w), and MSTP(IEEE 802.1s)		
	Supports BPDU protection, root protection, and loop protection		
	Supports BPDU tunnel		
IP routing	Supports IPv4 routing protocols, such as RIP, OSPF, BGP, and IS-IS		
	Supports IPv6 dynamic routing protocols, such as, RIPng, OSPFv3, ISISv6, and BGP4+		

Item	S9703	S9706	S9712
Multicast	Supports IGMP v1/v2/v3, IGMPv1/v2/v3 snooping		
	Supports PIM-SM, PIM-DM, PIM-SSM		
	Supports MSDP, MBGP		
	Supports prompt leave		
	Supports multicast traffic control		
	Supports multicast querier		
	Supports suppression on multicast packets		
	Supports multicast CAC		
	Supports multicast ACL		
MPLS	Supports basic MPLS functions		
	Supports MPLS OAM		
	Supports MPLS TE		
	Supports MPLS VPN/VLL/VPLS		
Reliability	Supports LACP and E-Trunk		
	Supports VRRP and BFD for VRRP		
	Supports BFD for BGP/IS-IS/OSPF/static route		
	Supports NSF, and GR for BGP/IS-IS/OSPF/LDP		
	Supports TE FRR and IP FRR		
	Supports Ethernet OAM (IEEE 802.3ah and 802.1ag)(Hardware level)		
	Supports ITU-Y.1731		
	Supports DLDP		
	Supports In-Service Software Upgrade (ISSU)		
QoS	Supports traffic classification based on Layer 2 headers, Layer 3 protocols, Layer 4 protocols, and 802.1p priority		
	Supports actions of ACL, CAR, re-mark, and schedule		
	Supports queue scheduling algorithms, such as PQ, WRR, DRR, PQ+WRR, and PQ+DRR		
	Supports congestion avoidance mechanisms, such as WRED and tail drop		
	Supports H-QoS		
	Supports traffic shaping		

Item	S9703	S9706	S9712
Configuration and maintenance	Supports console, telnet, and SSH terminals		
	Supports the network management protocols, such as SNMPv1/v2/v3		
	Supports file uploading and downloading using FTP and TFTP		
	Supports BootROM upgrade and remote upgrade		
	Supports hot patches		
	Supports user operation logs		
Security and management	Supports 802.1x authentication and Portal authentication		
	Supports NAC		
	Supports RADIUS and HWTACACS authentication for login users		
	Supports command line authority control based on user levels, preventing unauthorized users from using commands		
	Supports defense against DoS attacks, TCP SYN Flood attacks, UDP Flood attacks, broadcast storms, and heavy traffic attacks		
	Supports 1 K CPU queues		
	Supports ping and traceroute functions based on ICMP packets		
	Supports remote network monitoring		
Value-added services	Supports Firewall		
	Supports NAT		
	Supports Netstream		
	Supports IPSec		
	Supports Load balancing		
	Supports Wireless AC		
Energy saving	Supports IEEE 802.3az: Energy Efficient Ethernet (EEE)		
Dimensions (W x D x H)	442 mm × 476 mm × 175 mm	442 mm × 476 mm × 442 mm	442 mm × 476 mm × 664 mm
Chassis weight (empty)	< 15 kg	< 30 kg	< 45 kg
Operating voltage	DC: –38.4 V to –72 V AC: 90 V to 290V		
Power supply capability of the equipment	2200W	4400W	6600W

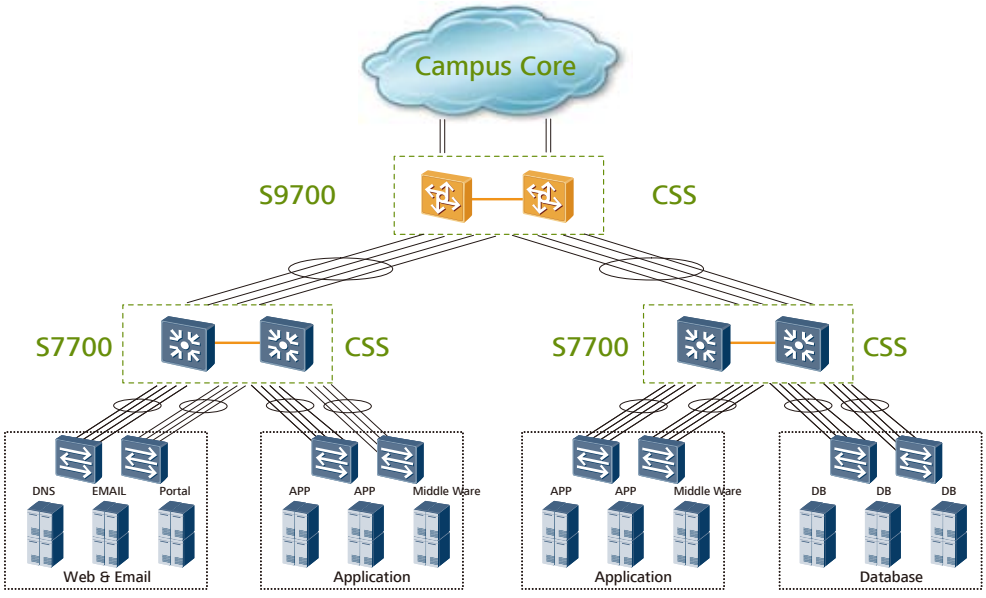
Application in Large-Scale Campus Networks

The S9700 can be used to build highly reliable, scalable, and manageable high performance enterprise campus networks. Its capability to switch IPv4/IPv6/MPLS services at line speeds enables it to provide high-density 10G throughput as a core or aggregation node on an enterprise campus network. The S9700 supports the AC module and can provide WLAN access while working as a core switch, reducing the network investment. It also supports hardware CPU queues to protect the enterprise core network against DDoS attacks and other security threats.



Applications in Large-Scale Data Centers

The S9700 functions as a high-density 10G core or aggregation node in large-scale data centers, helping enterprises build highly reliable, non-blocking, and virtualized data center networks. The S9700 employs various technologies to ensure uninterrupted services, including ISSU upgrades, IP FRR, hardware-level BFD, NSF, VRRP, E-Trunk. Using the CSS and integrated load balancing solutions, the S9700 improves the network efficiency and reduces network maintenance costs.



Order Information

Basic Configuration	
LE2BN66ED000	N66E DC Assembly Rack (Eight 60A Outputs, maximum 2200W per output, 600X600X2200mm)
LE0BN66EAC	N66E AC Assembly Rack (Eight 10A Outputs ,maximum 1600W per output, 600X600X2200mm)
LE2BN66EA000	N66E AC Assembly Rack (Four 16A Outputs, maximum 2500W per output, 600X600X2200mm)
EH1BS9703E00	S9703 assembly chassis
EH1BS9706E00	S9706 assembly chassis
EH1BS9712E00	S9712 assembly chassis
EH1BS9703E01	S9703 Assembly Chassis-sustain FCC
EH1BS9706E01	S9706 Assembly Chassis-sustain FCC
EH1BS9712E01	S9712 Assembly Chassis-sustain FCC
EH1M00FBX000	Wide Voltage 74 Fan Box
Monitoring Unit (Sustain FCC)	
EH1D200CMU0	Centralized monitoring unit
MPU	
EH1D2MCUAC00	S9703 MCUA-clock (Sustain FCC)
EH1D2SRUDC00	S9706/S9712 SRUD-clock
EH1D2SRUDC01	S9706/S9712 SRUD-clock (Sustain FCC)
100M Ethernet Electrical Interface Card (Sustain FCC)	
EH1D2F48TEA0	48-port 100M Ethernet electrical interface card (EA, RJ45)
EH1D2F48TFA0	48-port 100M Ethernet electrical interface card (FA, RJ45)
EH1D2F48TEC0	48-port 100M Ethernet electrical interface card (EC, RJ45)
100M Ethernet Optical Interface Card (Sustain FCC)	
EH1D2F48SEA0	48-port 100M Ethernet optical interface card (EA, SFP)
EH1D2F48SEC0	48-port 100M Ethernet optical interface card (EC, SFP)
100M/1000M Ethernet Electrical Interface Card (Sustain FCC)	

Basic Configuration	
EH1D2T24XEA0	24-port 100M/1000M Ethernet electrical interface and 2-port 10GE Ethernet optical interface card (EA, RJ45/XFP)
EH1D2G24TFA0	24-port 100M/1000M Ethernet electrical interface card (FA, RJ45)
EH1D2G48TEA0	48-port 100M/1000M Ethernet electrical interface card (EA, RJ45)
EH1D2G48TFA0	48-port 100M/1000M Ethernet electrical interface card (FA, RJ45)
EH1D2G48TBC0	48-port 100M/1000M Ethernet electrical interface card (BC, RJ45)
EH1D2G48TEC0	48-port 100M/1000M Ethernet electrical interface card (EC, RJ45)
EH1D2G48TED0	48-port 100M/1000M Ethernet electrical interface card (ED, RJ45)
100M/1000M Ethernet Optical Interface Card (Sustain FCC)	
EH1D2G24SSA0	24-port 100M/1000M Ethernet optical interface card (SA, SFP)
EH1D2G24SEC0	24-port 100M/1000M Ethernet optical interface card (EC, SFP)
EH1D2G24SED0	24-port 100M/1000M Ethernet optical interface card (ED, SFP)
EH1D2S24CSA0	24-port 100M/1000M Ethernet optical interface and 8-port 100M/1000M combo electrical interface card (SA, SFP/RJ45)
EH1D2S24CEA0	24-port 100M/1000M Ethernet optical interface and 8-port 100M/1000M combo electrical interface card (EA, SFP/RJ45)
EH1D2S24XEA0	24-port 100M/1000M Ethernet optical interface and 2-port 10GE Ethernet optical interface card (EA, SFP/XFP)
EH1D2S24XEC0	24-port 100M/1000M Ethernet optical interface and 2-port 10G Ethernet optical interface card (EC, SFP/XFP)
EH1D2G48SEA0	48-port 100M/1000M Ethernet optical interface card (EA, SFP)
EH1D2G48SFA0	48-port 100M/1000M Ethernet optical interface card (FA, SFP)
EH1D2G48SBC0	48-port 100M/1000M Ethernet optical interface card (BC, SFP)
EH1D2G48SEC0	48-port 100M/1000M Ethernet optical interface card (EC, SFP)
EH1D2G48SED0	48-port 100M/1000M Ethernet optical interface card (ED, SFP)
100M/1000M Ethernet Combo Interface Card (Sustain FCC)	
EH1D2T36SEA0	36-port 100 M/1000 M Ethernet electrical interface and 12-port 100 M/1000 M optical interface card (EA, RJ45/SFP)
10GE Optical Interface Card	
EH1D2X02XEA0	2-port 10GE optical interface card (EA, XFP)

Basic Configuration	
EH1D2X02XEC0	2-port 10GE optical interface card (EC, XFP)
EH1D2X04XEA0	4-port 10GE optical interface card (EA, XFP)
EH1D2X04XEC0	4-port 10GE optical interface card (EC, XFP)
EH1D2X04XED0	4-port 10GE optical interface card (ED, XFP)
EH1D2X08SED4	8-port 10GE optical interface card (ED, SFP+)
EH1D2X08SED5	8-port 10GE optical interface card (ED, SFP+) (Sustain FCC)
EH1D2X12SSA0	12-port 10GE optical interface card (SA, SFP+)
EH1D2X16SFC0	16-port 10GE optical interface card (FC, SFP+) (Sustain FCC)
EH1D2X40SFC0	40-port 10GE optical interface card (FC, SFP+) (Sustain FCC)
40GE Optical Interface Card (Sustain FCC)	
EH1D2L02QFC0	2-port 40GBASE-X interface card (FC,QSFP+)
EH1D2L08QFC0	8-port 40GBASE-X interface card (FC, QSFP+)
Service Processing Unit (Sustain FCC)	
LE0D0VAMPA00	Value-added service card
Optical Module	
FE-SFP Optical Module	
S-SFP-FE-LH40-SM1310	Optical module -eSFP-FE- single-mode modules (1310 nm, 40 km, LC)
S-SFP-FE-LH80-SM1550	Optical module -eSFP-FE- single-mode modules (1550 nm, 80 km, LC)
GE-SFP Optical Module	
SFP-1000BaseT	Electrical module-SFP-GE- electrical interface modules (100 m, RJ45)
eSFP-GE-SX-MM850	Optical module -eSFP-GE- multimode modules (850 nm, 0.5 km, LC)
SFP-GE-LX-SM1310	Optical module -SFP-GE- single-mode modules (1310 nm, 10 km, LC)
S-SFP-GE-LH40-SM1310	Optical module -eSFP-GE- single-mode modules (1310 nm, 40 km, LC)
S-SFP-GE-LH40-SM1550	Optical module -eSFP-GE- single-mode modules (1550 nm, 40 km, LC)
S-SFP-GE-LH80-SM1550	Optical module -eSFP-GE- single-mode modules (1550 nm, 80 km, LC)
eSFP-GE-ZX100-SM1550	Optical module -ESFP-GE- single-mode modules (1550 nm, 100 km, LC)

Basic Configuration	
10GE-XFP Optical Module	
XFP-SX-MM850	Optical module -XFP-10G- multimode modules (850 nm, 0.3 km, LC)
XFP-STM64-LX-SM1310	Optical module -XFP-10G- single-mode modules (1310 nm, 10 km, LC)
XFP-STM64-LH40-SM1550	Optical module -XFP-10G- single-mode modules (1550 nm, 40 km, LC)
XFP-STM64-SM1550-80km	Optical module -XFP-10G- single-mode modules (1550 nm, 80 km, LC)
10GE-SFP+ Optical Module	
OMXD30000	Optical module, SFP+, 10G, multi-mode module (850 nm, 0.3 km, LC)
OSX010000	Optical module, SFP+, 10G, dingle-mode module (1310nm, 10 km, LC)
OSX040N01	Optical module, SFP+, 10G, dingle-mode module (1550 nm, 40 km, LC)
OSXD22N00	Optical module, SFP+, 10 G, dingle-mode module (1310 nm, 0.22 km, LC, LRM)
LE2MXSC80FF0	Optical module, SFP+, 10G, dingle-mode module (1550 nm, 80 km, LC) (Dedicated for 8-port 10GE card)
40GE-QSFP Optical Module	
QSFP-40G-SR4	Optical transceiver, QSFP, 40G, muti-mode (850nm, 0.15km ,MPO) (Connect to QSFP)
QSFP-40G-iSR4	Optical transceiver, QSFP, 40G, muti-mode (850nm, 0.15km ,MPO) (Connect to four SFP+)
BIDI-SFP Optical Module	
SFP-FE-LX-SM1310-BIDI	Optical module -eSFP-FE-BIDI single-mode modules (TX1310/ RX1550, 15 km, LC)
SFP-FE-LX-SM1550-BIDI	Optical module -eSFP-FE-BIDI single-mode modules (TX1550/ RX1310, 15 km, LC)
SFP-GE-LX-SM1310-BIDI	Optical module -eSFP-GE-BIDI single-mode modules (TX1310/ RX1490, 10 km, LC)
SFP-GE-LX-SM1490-BIDI	Optical module -eSFP-GE-BIDI single-mode modules (TX1490/ RX1310, 10 km, LC)
LE2MGSC40DE0	Optical module -SFP-GE-BIDI single-mode modules (TX1310/ RX1490, 40 km, LC)
LE2MGSC40ED0	Optical module -SFP-GE-BIDI single-mode modules (TX1490/ RX1310, 40 km, LC)

Basic Configuration	
Power Supply Unit	
W2PSA0800	800W AC Power Module(black)
IN6W18L10A	AC Power Distribution Unit(Eight 800W Outputs, include power cable)
W2PSA2200	2200W AC Power Module(black)
IM1W24APD	AC Power Distribution Unit(Four 2200W Outputs, include power cable)
W2PSD2200	2200W DC Power Module(black)
EH1M00PDBS01	DC Power Distribution Unit(Eight 2200W Outputs, include power cable)
Software	
EH1SMS219700	S9700 system software, V200R001
EH1SMS229700	S9700 system software, V200R002
EH1SMPLS0000	MPLS license
EH1SNQA00000	NQA license
EH1SIPV60000	IPv6 license
EH1SWLAN64AP	AP resource license-64 APs for WLAN access controller
EH1SWLAN128AP	AP resource license-128 APs for WLAN access controller
Documentation	
EH1I000DOC00	S9700 routing switches product documentation

*: The value-added service card support the firewall/NAT, IPSec, load balancing, NetStream, and wireless AC functions.
**: The card has the 200 ms caching capability.

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

S7700 Series Smart Routing Switches

Product Overview

The S7700 series switches (S7700 for short) are high-end smart routing switches designed for next-generation enterprise networks. The S7700 design is based on Huawei's intelligent multi-layer switching technology to provide intelligent service optimization methods, such as MPLS VPN, traffic analysis, comprehensive QoS policies, controllable multicast, load balancing, and security, in addition to high-performance Layer 2 to Layer 4 switching services. The S7700 also features superb scalability and reliability.

The S7700 can function either as an aggregation or core node on a campus network or in a data center to provide integrated wireless access. The S7700 also offers voice, video, and data services, helping enterprises build an integrated cost-effective end-to-end network.

Product Appearance

The S7700 series is available in three models: S7703, S7706, and S7712. The switching capacity and port density of all three models is expandable. The S7700 is based on a new hardware platform, which adopts a left-to-rear ventilation channel to achieve better energy efficiency. Key components work in redundancy mode to minimize risks of system breakdown and service interruption. Using innovative energy-saving chips, the S7700 provides an industry-leading solution for a sustainable energy-saving network.

S7703	S7706	S7712
		

Product Features

Powerful service processing capabilities

- Huawei's advanced switching architecture permits rapid bandwidth expansion. The highly expansible backplane enables ports to be upgraded to a rate of 40 Gbit/s or 100 Gbit/s, and is compatible with the currently used cards, helping enterprises maximize their ROI.
- Each 7700 supports 480 10GE ports. The high density of 10GE ports brings enterprise campus networks and data centers into the era of the all-10GE core network.
- The S7700's multi-service routing and switching platform meets requirements for service bearing at the access layer, aggregation layer, and core layer of enterprise networks. The S7700 provides wireless access along with voice, video, and data services, helping enterprises build integrated full-service networks with high availability and low latency.
- The S7700 supports distributed Layer 2/Layer 3 MPLS VPN functions, including MPLS, VPLS, HVPLS, and VLL, implementing VPN access for enterprise users.
- The S7700 supports various Layer 2 and Layer 3 multicast protocols such as PIM SM, PIM DM, PIM SSM, MLD, and IGMP snooping. It can provide enterprises with multi-terminal high definition video surveillance and video conferencing services.

Carrier-class reliability and visual fault diagnosis

- Huawei's high reliability design ensures that the S7700 is 99.999% reliable. The S7700 provides redundant backup for key components, including MPUs, power supply units, and fans, all of which are hot swappable.
- The S7700 innovatively implements the CSS function through switch fabrics, and packets are only switched once when they are forwarded between chassis. This addresses the problem of low switching efficiency caused by multiple switching processes during inter-chassis forwarding in clusters established using line cards. The cluster provides the industry's highest cluster bandwidth 256 Gbit/s, In addition, inter-chassis link aggregation can be used to improve link use efficiency and prevent single-point failures.
- The S7700 can use service ports as cluster ports, so that cluster members can be connected through optical fibers. This substantially expands the clustering distance.
- The S7700 has a dedicated fault detection subcard that provides hardware-based OAM function conforming to IEEE 802.3ah, 802.1ag, and ITU-Y.1731. Hardware-based OAM implements 3.3 ms fault detection and can check session connectivity of all terminals in real time when a network fault occurs. The S7700 can also work with an NMS. The NMS provides a graphical fault diagnosis interface and traverses all network elements and links automatically to help users detect and locate faults quickly.
- The S7700 implements seamless switchover between the master and slave MPUs and supports graceful restart to ensure nonstop forwarding. The in-service software upgrade (ISSU) function of the S7700 prevents interruption of key services during software upgrading.

Enhanced QoS mechanism, improving the voice and video experience

- The S7700's QoS control mechanisms classify traffic based on information from the link layer to the application layer. With advanced queue scheduling and congestion control algorithms, the S7700 performs accurate multi-level scheduling for data flows, satisfying enterprises' QoS requirements for a variety of services and user terminals.
- The S7700 supports hardware-based low delay queues for multicast packets so that the video service can be processed with high priority and low delay. This feature guarantees the high quality of key services in an

enterprise, such as video conference and surveillance.

- The S7700 uses innovative priority scheduling algorithms to optimize the QoS queue scheduling mechanism for voice and video services. The improved scheduling mechanism shortens the delay of the VoIP service and eliminates the pixelation effect in the video service, improving user experience.

High-performance IPv6 service processing, resulting in a smooth transition from IPv4 to IPv6

- Both the hardware platform and software platform of the S7700 support IPv6. The S7700 has earned the IPv6 Ready Phase 2 (Gold) designation.
- The S7700 supports IPv4/IPv6 dual stack, various tunneling technologies, IPv6 static routing, RIPng, OSPFv3, BGP+, IS-ISv6, and IPv6 multicast. These features meet the demand for IPv6 networking and combined IPv4 and IPv6 networking.

Superb traffic analysis capability, resulting in real-time network performance monitoring

- The S7700 supports NetStream for the real-time collection and analysis of network traffic statistics.
- The S7700 supports the V5, V8, and V9 Netstream formats and provides aggregation traffic templates to reduce the burden on the network collector system. In addition, the S7700 supports real-time traffic collection, dynamic report generation, traffic attribute analysis, and traffic exception trap.
- NetStream monitors network traffic in real time and analyzes the device's throughput, providing data for network structure optimization and capacity expansion.

Comprehensive security mechanisms, protecting enterprises from internal and external security threats

- The S7700 comes equipped with an integrated firewall card and supports virtual firewalls and NAT multi-instance, allowing multiple VPN customers to share the same firewall. Its application-layer packet filtering technology detects and filters application layer packets according to preset rules.
- The S7700 provides comprehensive NAC solutions for enterprise networks. It supports MAC address authentication, Portal authentication, 802.1x authentication, and DHCP snooping-triggered authentication. These authentication methods ensure the security of various access modes, such as dumb terminal access, mobile access, and centralized IP address allocation.
- The S7700 is the industry leader in integrated security solutions. It supports 1K CPU queues and uses a 2-level CPU protection mechanism, separating the data plane from the control plane. Additionally, the S7700 defends against DoS attacks, prevents unauthorized access, and prevents control plane overloading.

Wireless AC boards, meeting mobile office requirements

- The S7700 can use an access controller (AC) board to provide radio frequency management functions. The AC board allows access points (APs) to automatically select their radio channels and power. In an AP region, APs automatically adjust radio channels and power in the event of signal interference, enabling the receive signal strength indicator (RSSI) and signal-to-noise ratio (SNR) to be continuously updated. The system can then monitor the electromagnetic environment of every wireless user to improve network availability.
- The S7700's AC board supports multiple authentication methods, including 802.1x authentication, MAC address authentication, Portal authentication, and WAPI authentication. These authentication methods meet the requirements of users who use different types of STAs and require different security levels.

- The S7700's AC board supports Layer 2 roaming, allowing STAs to rapidly switch between APs. The S7700 supports 1+1 and N+1 cold backup between ACs and load balancing among ACs, improving network reliability.

Innovative energy-saving chips, allowing for intelligent power consumption control

- The S7700 uses innovative energy-saving chips, which can dynamically adjust power on all ports based on traffic volume. An idle port enters a sleep mode to reduce power consumption.
- The S7700 supports Power over Ethernet (PoE) and uses different energy management modes according to the powered device (PD) type, ensuring flexible energy management.
- The S7700 supports IEEE 802.3az Energy Efficient Ethernet and provides the low power idle mode for the PHY line card. If the link utilization is low, the S7700 switches to a lower speed or power PHY to reduce power consumption.

Product Specifications

Item	S7703	S7706	S7712
Backplane capacity	3 Tbps	6 Tbps	12 Tbps
Switching capacity	768 G	2 T	2 T
Forwarding performance	576 Mpps	1152 Mpps	1344 Mpps
Service Slot	3	6	12
VLAN	Three types of interfaces: access, trunk, and hybrid		
	Default VLAN		
	VLAN switching		
	QinQ and selective QinQ		
	MAC address-based VLAN assignment		
MAC address	MAC address learning and aging		
	Static, dynamic, and blackhole MAC address entries		
	Packet filtering based on source MAC addresses		
	Limit on the number of MAC addresses learned on ports and VLANs		
STP	STP(IEEE 802.1d), RSTP(IEEE 802.1w), and MSTP(IEEE 802.1s)		
	BPDU protection, root protection, and loop protection		
	BPDU tunnel		
IP routing	IPv4 routing protocols, such as RIP, OSPF, BGP, and IS-IS		
	IPv6 dynamic routing protocols, such as RIPng, OSPFv3, ISISv6, and BGP4+		

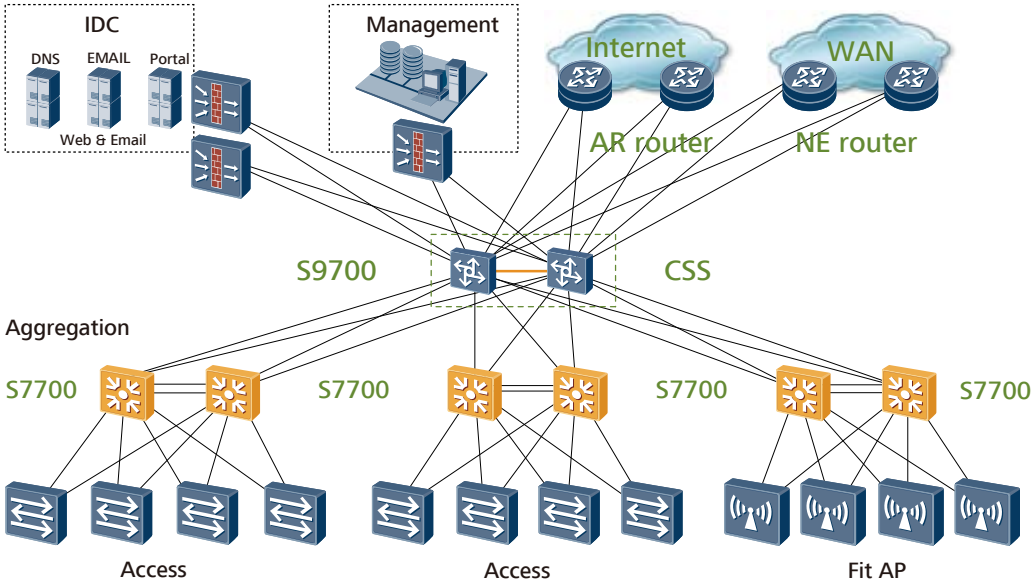
Item	S7703	S7706	S7712
Multicast	IGMPv1/v2/v3 and IGMP v1/v2/v3 snooping		
	PIM-DM, PIM-SM, and PIM-SSM		
	MSDP and MBGP		
	Fast leave		
	Multicast traffic control		
	Multicast querier		
	Multicast packet suppression		
	Multicast CAC		
	Multicast ACL		
MPLS	Basic MPLS functions		
	MPLS OAM		
	MPLS-TE		
	MPLS VPN/VLL/VPLS		
Reliability	LACP and E-Trunk between devices		
	VRRP and BFD for VRRP		
	BFD for BGP/IS-IS/OSPF/static route		
	NSF and GR for BGP/IS-IS/OSPF/LDP		
	TE FRR and IP FRR		
	Ethernet OAM (IEEE 802.3ah and 802.1ag)		
	ITU-Y.1731		
	DLDP		
	ISSU		
	CSS		
QoS	Traffic classification based on Layer 2 protocol packet header, Layer 3 protocol information, Layer 4 protocol information, and 802.1p priority		
	ACL, CAR, re-mark, and scheduling		
	Queue scheduling algorithms including PQ, WRR, DRR, PQ+WRR, and PQ+DRR		
	Congestion avoidance mechanisms, such as WRED and tail drop		
	Traffic shaping		

Item	S7703	S7706	S7712
Configuration and maintenance	Console, Telnet, and SSH terminals		
	Network management protocols, such as SNMPv1/v2/v3		
	File uploading and downloading using FTP and TFTP		
	BootROM upgrade and remote upgrade		
	Hot patches		
	User operation logs		
Security and management	802.1x authentication and portal authentication		
	NAC		
	RADIUS and HWTACACS authentication		
	Different user levels for commands, preventing unauthorized users from using certain commands		
	Defense against DoS attacks, TCP SYN Flood attacks, UDP Flood attacks, broadcast storms, and heavy traffic attacks		
	1K CPU queues		
	Ping and traceroute		
	RMON		
Value-added service	Firewall		
	NAT		
	Netstream		
	IPSec		
	Load balancing		
	AC		
Energy conservation	IEEE 802.3az: Energy Efficient Ethernet (EEE)		
Dimensions (W x D x H)	442 mm x 476 mm x 175 mm	442 mm x 476 mm x 442 mm	442 mm x 476 mm x 664 mm
Chassis weight (empty)	< 15 kg	<30 kg	< 45 kg
Working voltage	DC: –38.4 V to –72 V AC: 90 V to 290 V		
Maximum power consumption of the entire equipment	≤800 W	≤1600 W	≤3000 W
Maximum PoE power	2200 W	8800 W	8800 W

Applications

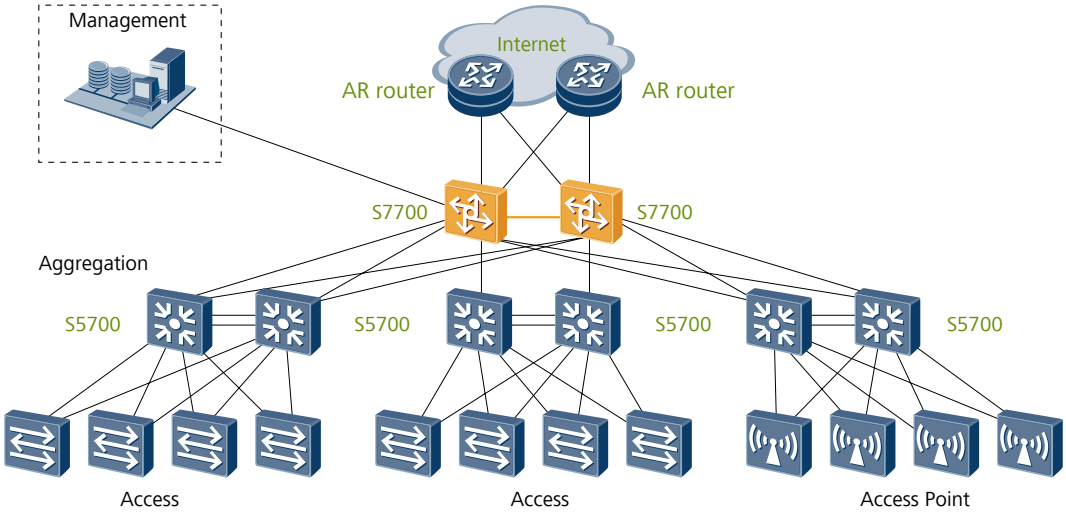
Large-scale Campus Networks

The S7700 provides a switching capacity of 2 Tbit/s and high-density 10GE ports. The S7700 can be used as an aggregation switch on a large-scale campus network, helping to build a highly reliable, scalable, and manageable enterprise network. With hardware-based CPU queue scheduling and firewall modules, the S7700 enhances security at the aggregation layer and protects the enterprise's core network from DDoS attacks and other security threats.



Small - and Medium-sized Campus Networks

The S7700 implements the line-speed forwarding of OSPF, BGP, and MPLS packets. With its 2 Tbit/s switching capacity, firewall module, and IPSec module, the S7700 can work at the core layer of small- and medium-sized campus networks. It provides a cost-effective, reliable, and easy-to-deploy network solution for small- and medium-sized enterprises.



Product List

Basic Configuration	
LE0BN66EDC	N66E DC Assembly Rack(Four 40A outputs ,maximum 1600W per output，600X600X2200mm)
LE0BN66EAC	N66E AC Assembly Rack(Eight 10A Outputs ,maximum 1600W per output，600X600X2200mm)
LE2BN66EA000	N66E AC Assembly Rack(Four 16A Outputs，maximum 2500W per output，600X600X2200mm)
ES0B00770300	S7703 Assembly Chassis
ES0B00770600	S7706 Assembly Chassis
ES0B00771200	S7712 Assembly Chassis
ES0B017706P0	S7706 POE Assembly Chassis
ES0B017712P0	S7712 POE Assembly Chassis
LE0M00FBXB00	Wide Voltage 68 Fan Box
Monitoring Board	
LE0DCMUA0000	Centralized Monitoring Board
Main Control Unit	
ES0D00MCUA00	S7703 Main Control Unit A
ES0D00SRUA00	S7706/S7712 Main Control Unit A
ES0D00SRUB00	S7706/S7712 Main Control Unit B, Clock
SRU Service Card	
ES0D00FSUA00	Enhanced Flexible Service Unit
LE0D0VSTSA00	Cluster Switching System Service Unit
10/100BASE-T Interface Card	
ES0D0F48TA00	48-Port 10/100BASE-T Interface Card (EA, RJ45)

ES0DF48TFA00	48-Port 10/100BASE-T Interface Card (FA, RJ45)
ES0D0F48TC00	48-Port 10/100BASE-T Interface Card (EC, RJ45)
10/100/1000BASE-T Interface Card	
ES0DG24TFA00	24-Port 10/100/1000BASE-T Interface Card (FA, RJ45)
ES0D0G48TA00	48-Port 10/100/1000BASE-T Interface Card (EA, RJ45)
ES0DG48TFA00	48-Port 10/100/1000BASE-T Interface Card (FA, RJ45)
ES0D0G48TC00	48-Port 10/100/1000BASE-T Interface Card (EC, RJ45)
ES1D2G48TED0	48-Port 10/100/1000BASE-T Interface Card(ED,RJ45)
ES1D2G48TBC0	48-Port 10/100/1000BASE-T Interface Card(BC,RJ45)
ES0D0T24XA00	24-Port 10/100/1000BASE-T and 2-Port 10GBASE-X Interface Card (EA,RJ45/XFP)
100/1000BASE-X Interface Card	
ES0D0G24SA00	24-Port 100/1000BASE-X Interface Card (SA, SFP)
ES0D0G24SC00	24-Port 100/1000BASE-X Interface Card (EC, SFP)
ES0D0G24CA00	24-Port 100/1000BASE-X and 8-Port 10/100/1000BASE-T Combo Interface Card (SA, SFP/RJ45)
ES0D0S24XA00	24-Port 100/1000BASE-X and 2-Port 10GBASE-X Interface Card (EA, SFP/XFP)
ES1D2G24SED0	24-Port 100/1000BASE-X Interface Card(ED,SFP)
ES0D0G48SA00	48-Port 100/1000BASE-X Interface Card (EA, SFP)
ES0D0G48SC00	48-Port 100/1000BASE-X Interface Card (EC, SFP)
ES1D2G48SFA0	48-Port 100/1000BASE-X Interface Card (FA, SFP)
ES1D2G48SED0	48-Port 100/1000BASE-X Interface Card (ED, SFP)
ES1D2G48SBC0	48-Port 100/1000BASE-X Interface Card(BC,SFP)

100/1000BASE-X Interface Card	
ES0DG48CEAT0	36-Port 10/100/1000BASE-T and 12-Port 100/1000BASE-X Interface Card (EA, RJ45/SFP)
ES1D2S24XEC0	24-Port 100/1000BASE-X and 2-Port 10GBASE-X Interface Card(EC,SFP/XFP)
10GBASE-X Interface Card	
ES0D0X2UXA00	2-Port 10GBASE-X Interface Card (EA, XFP)
ES0D0X2UXC00	2-Port 10GBASE-X Interface Card (EC, XFP)
ES0D0X4UXA00	4-Port 10GBASE-X Interface Card (EA, XFP)
ES0D0X4UXC00	4-Port 10GBASE-X Interface Card (EC, XFP)
ES1D2X04XED0	4-Port 10GBASE-X Interface Card (ED, XFP)
ES1D2X08SED4	8-Port 10GBASE-X Interface Card(ED,SFP+)
ES1D2X08SED5	8-Port 10GBASE-X Interface Card(ED,SFP+),FCC
ES0DX12XSA00	12-Port 10GBASE-X Interface Card (SA, SFP+)
ES1D2X16SFC0	16-Port 10GBASE-X Interface Card (FC, SFP+)
ES1D2X40SFC0	40-Port 10GBASE-X Interface Card (FC, SFP+)
40GE BASE-X interface card	
ES1D2L02QFC0	2-port 40GBASE-X interface card(FC,QSFP+)
POE Interface Card	
ES0D0G48VA00	48-Port 10/100/1000BASE-T POE Interface Card (EA, RJ45, POE)
Service Processing Unit	
LE0D0VAMPA00	Value-added Service Unit*
Optical transceiver	

FE-SFP optical transceiver	
SFP-FE-SX-MM1310	Optical Transceiver,SFP,100M/155M,Multi-mode Module(1310nm,2km,LC)
eSFP-FE-LX-SM1310	Optical Transceiver,eSFP,100M/155M,Single-mode Module(1310nm,15km,LC)
S-SFP-FE-LH40-SM1310	Optical Transceiver-eSFP-FE-Single-mode Module (1310nm,40km,LC)
S-SFP-FE-LH80-SM1550	Optical Transceiver-eSFP-FE-Single-mode Module (1550nm,80km,LC)
GE-SFP module	
SFP-1000BaseT	Electrical transceiver-SFP-GE-Electrical Interface Module (100m,RJ45)
eSFP-GE-SX-MM850	Optical Transceiver-ESFP-GE-Multi-mode Module (850nm,0.5km,LC)
SFP-GE-LX-SM1310	Optical Transceiver-SFP-GE-Single-mode Module (1310nm,10km,LC)
S-SFP-GE-LH40-SM1310	Optical Transceiver-eSFP-GE-Single-mode Module (1310nm,40km,LC)
S-SFP-GE-LH40-SM1550	Optical Transceiver-eSFP-GE-Single-mode Module (1550nm,40km,LC)
S-SFP-GE-LH80-SM1550	Optical Transceiver-eSFP-GE-Single-mode Module (1550nm,80km,LC)
eSFP-GE-ZX100-SM1550	Optical Transceiver-ESFP-GE-Single-mode Module (1550nm,100km,LC)
10GE-XFP optical transceiver	
XFP-SX-MM850	Optical Transceiver-XFP-10G-Multi-mode Module (850nm,0.3km,LC)
XFP-STM64-LX-SM1310	Optical Transceiver-XFP-10G-Single-mode Module (1310nm,10km,LC)
XFP-STM64-LH40-SM1550	Optical Transceiver-XFP-10G-Single-mode Module (1550nm,40km,LC)
XFP-STM64-SM1550-80km	Optical Transceiver-XFP-10G-Single-mode Module (1550nm,80km,LC)
10GE-SFP+ optical transceiver	
OMXD30000	Optical Transceiver-SFP+-10G-Multi-mode Module (850nm,0.3km,LC)
OSX010000	Optical Transceiver-SFP+-10G-Single-mode Module (1310nm,10km,LC)
OSX040N01	Optical Transceiver-SFP+-10G-Single-mode Module (1550nm,40km,LC)

LE2MXSC80FF0	Optical Transceiver,SFP+,10G,Single-mode Module(1550nm,80km,LC)
OSXD22N00	Optical module, SFP+, 10 G, dingle-mode module (1310 nm, 0.22 km, LC, LRM)
40GE-QSFP+ optical transceiver	
QSFP-40G-SR4	40GBase-SR4 Optical Transceiver,QSFP+,40G,Muti-mode (850nm, 0.15km ,MPO)
QSFP-40G-iSR4	40GBase-SR4 Optical Transceiver,QSFP+,40G,Muti-mode (850nm, 0.15km, MPO)(Connect to four SFP+ Optical Transceiver)
BIDI-SFP optical transceiver	
SFP-FE-LX-SM1310-BIDI	Optical Transceiver-eSFP-FE-BIDI Single-mode Module (TX1310/ RX1550,15km,LC)
SFP-FE-LX-SM1550-BIDI	Optical Transceiver-eSFP-FE-BIDI Single-mode Module (TX1550/ RX1310,15km,LC)
SFP-GE-LX-SM1310-BIDI	Optical Transceiver-eSFP-GE-BIDI Single-mode Module (TX1310/ RX1490,10km,LC)
SFP-GE-LX-SM1490-BIDI	Optical Transceiver-eSFP-GE-BIDI Single-mode Module (TX1490/ RX1310,10km,LC)
LE2MGSC40ED0	Optical Transceiver,eSFP,GE,BIDI Single-mode Module(TX1490/ RX1310,40km,LC)
LE2MGSC40DE0	Optical Transceiver,eSFP,GE,BIDI Single-mode Module(TX1310/ RX1490,40km,LC)
Power module	
LE0MPSD16	1600W DC Power Module(gray)
LE0MPSA08	800W AC Power Module(gray)
W0PSA2200	2200W AC Power Module(gray)
LE0W01DPDB	DC Power Distribution Unit（Four 40A outputs ,maximum 1600W per output，include power cable）
IN6W18L10A	AC Power Distribution Unit（Eight 10A Outputs , maximum 1600W per output，include power cable）
IM1W24APD	AC Power Distribution Unit（Four 16A Outputs，maximum 2500W per output，include power cable）

Software	
ES0SMS217700	Quidway S7700 Basic SW, V200R001
ES0SMS227700	Quidway S7700 Basic SW, V200R002
ES0SMPLS7700	MPLS Function License
ES0SNQAF7700	NQA Function License
ES0SIPV67700	IPV6 Function License
ES1SWLAN64AP	WLAN Access Controller AP Resource License-64AP
ES0SWLAN7700	WLAN Access Controller AP Resource License-128AP
Documentation	
ES0I000DOC00	S7700 Smart Routing Switch Documentation

In the preceding table, *indicates a value-added board that supports the firewall/NAT, IPSec, Netstream, wireless AC and load balancing functions.

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

S6700 Series 10G Switches

Product Overview

The S6700 series switches (S6700s) are next-generation 10G box switches. The S6700 can function as an access switch in an Internet data center (IDC) or a core switch on a campus network.

The S6700 has industry-leading performance and provides up to 24 or 48 line-speed 10GE ports. It can be used in a data center to provide 10 Gbit/s access to servers or function as a core switch on a campus network to provide 10 Gbit/s traffic aggregation. In addition, the S6700 provides a wide variety of services, comprehensive security policies, and various QoS features to help customers build scalable, manageable, reliable, and secure data centers. The S6700 is available in two models: S6700-48-EI and S6700-24-EI.

Product Appearance

S6700-48-EI

- Forty-eight GE SFP or 10 GE SFP+ ports
- Double swappable AC/DC power supplies
- USB port
- Forwarding performance: 715 Mpps

S6700-24-EI

- Twenty-four GE SFP or 10 GE SFP+ ports
- Double swappable AC/DC power supplies
- USB port
- Forwarding performance: 358 Mpps

Product Features

Large-capacity, high-density, 10 Gbit/s access

- To provide sufficient bandwidth for users, many servers, particularly those in data centers, use 10G network adapters. The S6700 can be used in data centers to provide high forwarding performance and 10GE ports. The S6700 has the high density of all 10GE ports and the large switching capacity. Each S6700 provides a maximum of 48 line-speed 10GE ports.
- S6700 ports support 1GE and 10GE access and can identify optical module types, maximizing the return on investment and allowing users to flexibly deploy services.
- The S6700 has a large buffering capacity and uses an advanced buffer scheduling mechanism to ensure non-block transmission when data center traffic volume is high.

Comprehensive security policies

- The S6700 provides multiple security measures to defend against Denial of Service (DoS) attacks, as well as attacks against networks or users. DoS attack types include SYN Flood attacks, Land attacks, Smurf attacks, and ICMP Flood attacks. Attacks to networks refer to STP BPDU/root attacks. Attacks to users include bogus DHCP server attacks, man-in-the-middle attacks, IP/MAC spoofing attacks, and DHCP request flood attacks. DoS attacks that change the CHADDR field in DHCP packets are also attacks against users.
- The S6700 supports DHCP snooping, which generates user binding entries based on users' access interfaces, MAC addresses, IP addresses, IP address leases, and VLAN IDs. DHCP snooping discards invalid packets that do not match any binding entries, such as ARP spoofing packets and IP spoofing packets. This prevents hackers from using ARP packets to initiate attacks on campus networks. The interface connected to a DHCP server can be configured as a trusted interface to protect the system against bogus DHCP server attacks.
- The S6700 supports strict ARP learning, which prevents ARP spoofing attacks that exhaust ARP entries. The S6700 also provides an IP source check to prevent DoS attacks caused by MAC address spoofing, IP address spoofing, and MAC/IP spoofing. URPF, provided by the S6700, authenticates packets by checking the packet transmission path in reverse, which can protect the network against source address spoofing attacks.
- The S6700 supports centralized MAC address authentication and 802.1x authentication. The S6700 authenticates users based on statically or dynamically bound user information such as the user name, IP address, MAC address, VLAN ID, access interface, and flag indicating whether antivirus software is installed. VLANs, QoS policies, and ACLs can be dynamically applied to users.
- The S6700 can limit the number of MAC addresses learned on an interface to prevent attackers from exhausting MAC address entries by using bogus source MAC addresses. This function minimizes the packet flooding that occurs when users' MAC addresses cannot be found in the MAC address table.

Higher reliability mechanism

- The S6700 supports redundant power supplies. You can choose a single power supply or use two power supplies to ensure device reliability. With two fans, the S6700 has a longer MTBF time than its counterpart switches.
- The S6700 supports MSTP multi-process that enhances the existing STP, RSTP, and MSTP implementation. This function increases the number of MSTPs supported on a network. It also supports enhanced Ethernet reliability technologies such as Smart Link and RRPP, which implement millisecond-level protection switchover and ensure network reliability. Smart Link and RRPP both support multi-instance to implement load balancing among links, optimizing bandwidth usage.
- The S6700 supports the enhanced trunk (E-Trunk) feature. When a CE is dual-homed to two S6700s (PEs), E-Trunk protects the links between the CE and PEs and implements backup between the PEs. E-trunk enhances link reliability between devices.
- The S6700 supports the Smart Ethernet Protection (SEP) protocol, a ring network protocol applied to the link layer on an Ethernet network. SEP can be used on open ring networks and can be deployed on upper-layer aggregation devices to provide fast switchover (within 50 ms), ensuring the non-stop transmission of services. SEP features simplicity, high reliability, fast switchover, easy maintenance, and flexible topology, facilitating network planning and management.

- The S6700 supports Ethernet Ring Protection Switching (ERPS), also referred to as G.8032. As the latest ring network protocol, ERPS was developed based on traditional Ethernet MAC and bridging functions and uses mature Ethernet OAM function and a ring automatic protection switching (R-APS) mechanism to implement millisecond-level protection switching. ERPS supports various services and allows flexible networking, helping customers build a network with lower OPEX and CAPEX.
- The S6700 supports VRRP. Two S6700s can form a VRRP group to ensure nonstop reliable communication. Multiple equal-cost routes to upstream devices can be configured on the S6700 to provide route redundancy. When an active route is unreachable, traffic is switched to a backup route.

Enhanced QoS control mechanism

- The S6700 implements complex traffic classification based on packet information, such as the 5-tuple, IP preference, ToS, DSCP, IP protocol type, ICMP type, TCP source port, VLAN ID, Ethernet protocol type, and CoS. ACLs can be applied to inbound or outbound directions on an interface. The S6700 supports a flow-based two-rate three-color CAR. Each port supports eight priority queues, multiple queue scheduling algorithms, such as WRR, DRR, SP, WRR+SP, and DRR+SP, and WRED, a congestion avoidance algorithm. All of these features ensure high-quality voice, video, and data services.

High scalability

- The S6700 supports the iStack function, which allows switches that are far apart to form a stack. A port on the S6700 can be configured as a stack port using a command for flexible stack deployment. The distance between stacked switches is further increased when the switches are connected with optical fibers. A stack is easier to expand, is more reliable, and has a higher performance rate than a single switch. New member switches can be added to a stack without interrupting services when the system capacity needs to be increased or a member switch fails. Compared with the stacking of chassis-shaped switches, the iStack function can increase system capacity and port density without being restricted by hardware. Multiple devices in a stack can function as one logical device, which simplifies network management and configuration.

Convenient management

- The S6700 supports automatic configuration, plug-and-play, deployment using a USB flash drive, and batch remote upgrades. These capabilities simplify device management and maintenance and reduce maintenance costs.
- The S6700 supports SNMP v1/v2/v3 and provides flexible methods for managing devices. Users can manage the S6700 using the CLI, Web NMS, Telnet, and HGMP. The NQA function assists users with network planning and upgrades. In addition, the S6700 supports NTP, SSH v2, HWTACACS, RMON, log hosts, and port-based traffic statistics.
- The S6700 supports GARP VLAN Registration Protocol (GVRP), which dynamically distributes, registers, and propagates VLAN attributes to reduce network administrator workloads and ensure correct VLAN configuration. In a complex network topology, GVRP simplifies VLAN configuration and reduces network communication faults caused by incorrect VLAN configuration.
- The S6700 supports Multiplex VLAN (MUX VLAN). MUX VLAN isolates Layer 2 traffic between interfaces in a VLAN. Interfaces in a subordinate separate VLAN can communicate with ports in the principal VLAN, but cannot communicate with each other. MUX VLAN is typically used on an enterprise intranet to isolate user interfaces from each other while still allowing them to communicate with server interfaces. This function prevents communication between network devices connected to certain interfaces or interface groups,

but allows these devices to communicate with the default gateway.

- The S6700 supports BFD, which provides millisecond-level fault detection for protocols, such as OSPF, IS-IS, VRRP, and PIM, to improve network reliability. Complying with IEEE 802.3ah and 802.1ag, the S6700 supports point-to-point Ethernet fault management and can detect faults in the last mile of an Ethernet link to users. Ethernet OAM improves Ethernet network management and maintenance capabilities and ensures a stable network.

Various IPv6 features

- The S6700 supports IPv4/IPv6 dual stack and can migrate from an IPv4 network to an IPv6 network. S6700 hardware supports IPv4/IPv6 dual stack, IPv6 over IPv4 tunnels (including manual tunnels, 6to4 tunnels, and ISATAP tunnels), and Layer 3 line-speed forwarding. The S6700 can be deployed on IPv4 networks, IPv6 networks, or networks that run both IPv4 and IPv6. This makes networking flexible and enables a network to migrate from IPv4 to IPv6.
- The S6700 supports various IPv6 routing protocols, including RIPng and OSPFv3. The S6700 uses the IPv6 Neighbor Discovery Protocol (NDP) to manage packets exchanged between neighbors. It also provides a path MTU (PMTU) discovery mechanism to select a proper MTU on the path from the source to the destination, optimizing network resource utilization and obtaining the maximum throughput.

Product Specifications

Item	S6700-24-EI	S6700-48-EI
Port	24* GE SFP/10 GE SFP+ ports	48* GE SFP/10 GE SFP+ ports
MAC address table	128 K MAC address entries MAC address learning and aging Static, dynamic, and blackhole MAC address entries Packet filtering based on source MAC addresses	
VLAN	4 K VLANs Guest VLAN and voice VLAN VLAN assignment based on MAC addresses, protocols, IP subnets, policies, and ports 1:1 and N:1 VLAN Mapping QinQ and selective QinQ	
IPv4 routing	Static routing, RIPv1, RIPv2, ECMP, and URPF OSPF, IS-IS, and BGP VRRP Policy-based routing Routing policy	
IPv6 routing	Static route RIPng OSPFv3 BGP4+	

Item	S6700-24-EI	S6700-48-EI
IPv6 features	Neighbor Discovery (ND) 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	
multicast	Static Layer 2 multicast MAC address MAC-based multicast forwarding IGMP snooping and IGMP fast leave Multicast VLAN MLD snooping IGMP proxy Controllable multicast Port-based multicast traffic statistics IGMP v1/v2/v3 PIM-SM, PIM-DM, and PIM-SSM MSDP	
QoS/ACL	Rate limiting on packets sent and received by an interface 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, port number, protocol type, and VLAN ID Rate limiting in each queue and traffic shaping on ports	
Reliability	STP(IEEE 802.1d), RSTP(IEEE 802.1w), and MSTP(IEEE 802.1s) BPDU protection, root protection, and loop protection RRPP ring topology and RRPP multi-instance Smart Link tree topology and Smart Link multi-instance, providing the millisecond-level protection switchover SEP ERPS(G.8032) BFD for OSPF, BFD for IS-IS, BFD for VRRP, and BFD for PIM E-Trunk	

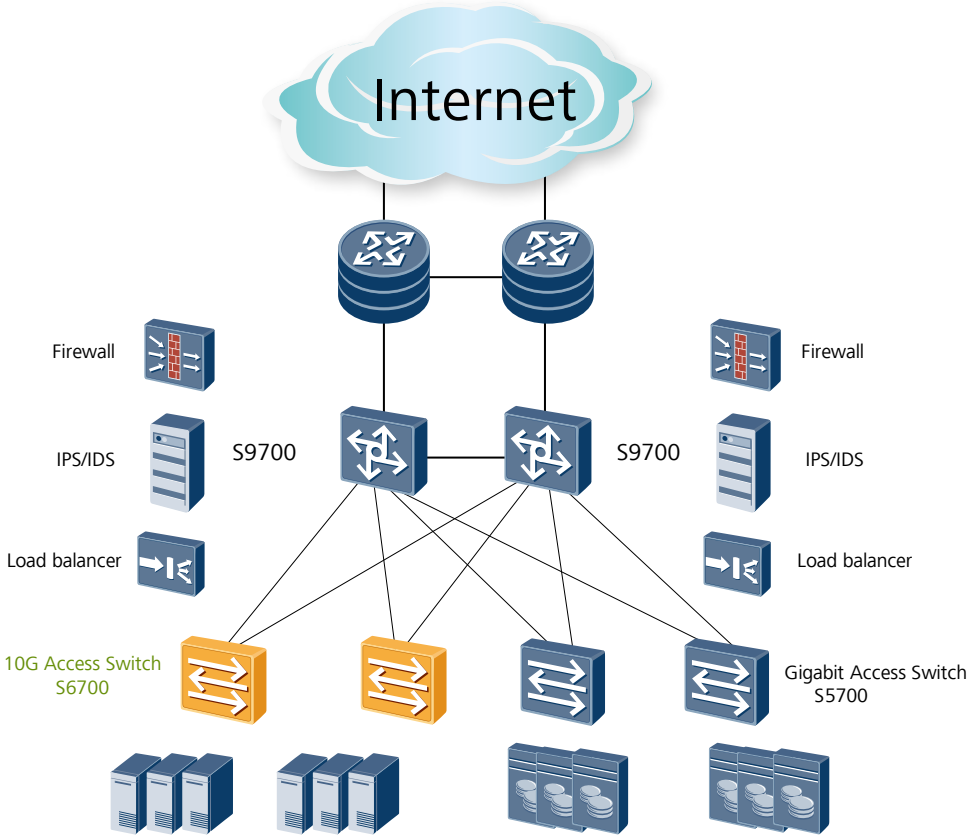
Item	S6700-24-EI	S6700-48-EI
Security	User privilege management and password protection DoS attack defense, ARP attack defense, and ICMP attack defense Binding of the IP address, MAC address, interface, and VLAN Port isolation, port security, and sticky MAC Blackhole MAC address entries Limit on the number of learned MAC addresses 802.1x authentication and limit on the number of users on an interface AAA authentication, RADIUS authentication and TACACS authentication SSH v2.0 Hypertext Transfer Protocol Secure (HTTPS) CPU defense Blacklist and whitelist	
Management and maintenance	Stacking (using service ports as stack ports) MAC Forced Forwarding (MFF) Virtual cable test Ethernet OAM (IEEE 802.3ah and 802.1ag) Local port mirroring and remote switched port analyzer (RSPAN), allowing an observing port to forward packets Remote configuration and maintenance using Telnet SNMP v1/v2/v3 RMON Web NMS HGMP System logs and alarms of different levels GVRP MUX VLAN sFlow	
Operating environment	Operating temperature: 0°C–45°C (long term); -5°C–50°C (short term) Relative humidity: 10%–90% (non-condensing)	
Input voltage	AC: Rated voltage range: 100 V to 240 V AC, 50/60 Hz Maximum voltage range: 90 V to 264 V AC, 50/60 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)	442 mm x 420 mm x 43.6 mm	
Power consumption	153W	240W

Applications

Data Centers

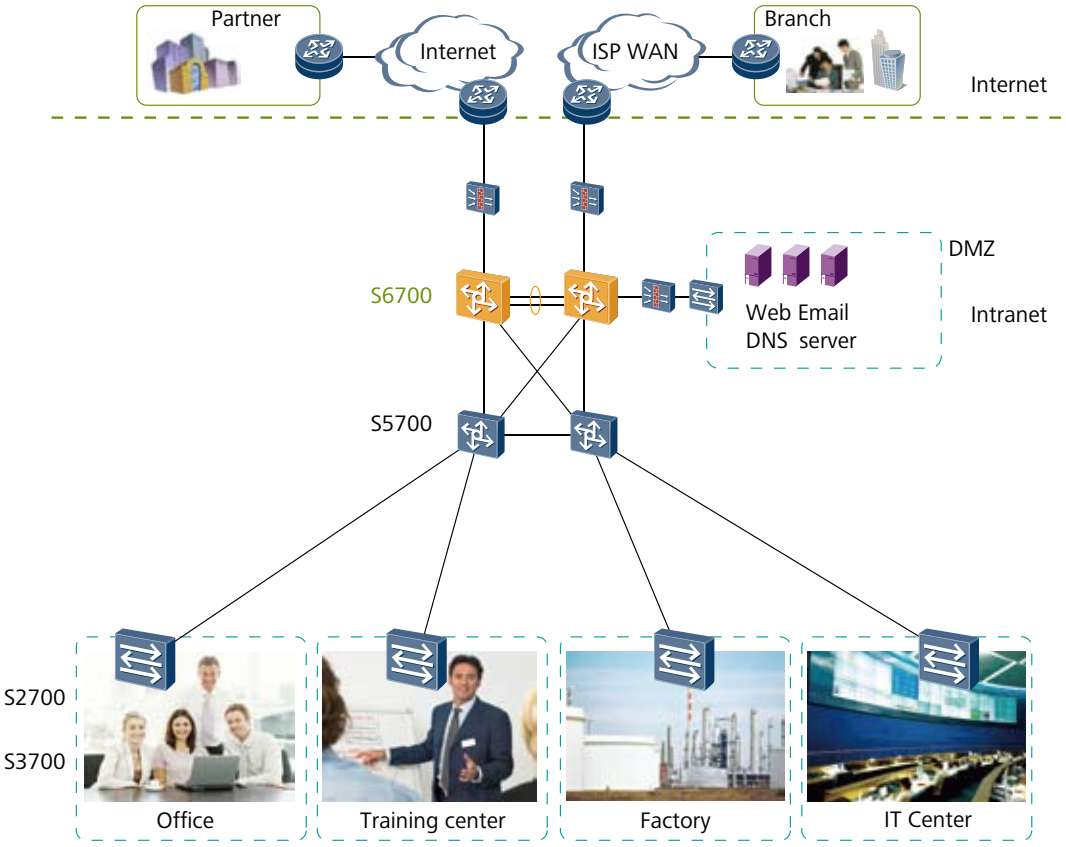
The S6700 can be used in Huawei's sustainable data center solution, which offers four major advantages: evolution, availability, pooling, and visualization.

As shown in the following figure, the S9700 Terabit routing switches function as core switches in a data center and use firewall and load balancer boards to ensure security and load balancing. The S6700 functions as an access switch and provides high-density 10GE ports to connect to 10G servers.



Campus Networks

The S6700 can function as a core switch on a campus network and provide high-density line-speed 10GE ports, rich service features, and comprehensive security mechanisms. This makes the S6700 a cost-effective option.



Product List

Product Description
S6700-24-EI Mainframe(24 10GE SFP+,Dual Slots of power,Without Power Module)
S6700-48-EI Mainframe(48 10GE SFP+, Dual Slots of power,Without Power Module)
500W AC Power Module
500W DC Power Module

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

S5700-HI Series Gigabit Enterprise Switches

Product Overview

The S5700-HI series are the latest gigabit Layer 3 multi-service switches developed by Huawei, with the highest processing capabilities and the most service features of all box switches in the industry. The S5700-HI supports basic MPLS, VPLS and VLL functions, millisecond hardware-based BFD, and Eth-OAM technology. Its intelligent monitoring port and dying-gasp function protect the S5700-HI against ultra-low temperature and theft, allowing it to be installed outdoors. In addition, its excellent security and multi-service capabilities make it the best choice as an access switch on large and medium-sized enterprise campus networks and data centers, aggregation switch on small enterprise campus networks, and edge device at the MAN.

Product Appearance

S5700-28C-HI

- Twenty-four 10/100/1000Base-T ports
- Subcards supported: 4x1000Base-X SFP subcard, 2x10GE SFP+ subcard, and 4x10GE SFP+ subcard
- Double swappable AC/DC power supplies
- Forwarding performance: 96 Mpps

S5700-28C-HI-24S

- Twenty-four 100/1000Base-X ports
- Subcards supported: 4x1000Base-X SFP subcard, 2x10GE SFP+ subcard, and 4x10GE SFP+ subcard
- Double swappable AC/DC power supplies
- Forwarding performance: 96 Mpps

Product Features and highlights

Powerful support for services

- The S5700-HI switches are cost-effective case-shaped MPLS switches. They support MPLS, VPLS, and VLL functions and can be used as high-quality access devices to provide leased line services for enterprises.
- The S5700-HI provides the Multi-VPN-Instance CE (MCE) function to isolate users in different VLANs on a device, ensuring data security and reducing costs.
- The S5700-HI supports IGMP v1/v2/v3 snooping, IGMP filter, IGMP fast leave, and IGMP proxy. It supports line-speed replication of multicast packets between VLANs, multicast load balancing among member interfaces of a trunk, and controllable multicast, meeting requirements for IPTV services and other multicast services.

Comprehensive reliability mechanisms

- Besides STP, RSTP, and MSTP, the S5700-HI supports enhanced Ethernet reliability technologies such as Smart Link and RRPP (Rapid Ring Protection Protocol), which implement millisecond-level protection switchover and ensure network reliability. It also provides Smart Link multi-instance and RRPP multi-instance to implement load balancing among links, optimizing bandwidth usage.
- The S5700-HI supports enhanced trunk (E-Trunk) that enables a CE to be dual-homed to two PEs (S5700s). E-Trunk greatly enhances link reliability between devices and implements link aggregation between devices. This improves reliability of access devices.
- The S5700-HI supports the Smart Ethernet Protection (SEP) protocol, a ring network protocol applied to the link layer on an Ethernet network. SEP can be used on open ring networks and can be deployed on upper-layer aggregation devices to provide fast switchover (within 50 ms), ensuring non-stop transmission of services. SEP features simplicity, high reliability, fast switchover, easy maintenance, and flexible topology, facilitating network planning and management.
- The S5700-HI supports Ethernet Ring Protection Switching (ERPS), also referred to as G.8032. As the latest ring network protocol, ERPS was developed based on traditional Ethernet MAC and bridging functions and uses mature Ethernet OAM function and a ring automatic protection switching (R-APS) mechanism to implement millisecond-level protection switching. ERPS supports various services and allows flexible networking, helping customers build a network with lower OPEX and CAPEX.
- The S5700-HI supports redundant power supplies, and can use an AC power supply and a DC power simultaneously. Users can choose a single power supply or use two power supplies to ensure device reliability.
- The S5700-HI supports VRRP, and can set up VRRP groups with other Layer 3 switches. VRRP provides redundant routes to ensure stable and reliable communication. Multiple equal-cost routes to an uplink device can be configured on the S5700 to provide route redundancy. When an active route is unreachable, traffic is switched to a backup route.
- The S5700-HI supports BFD, which provides millisecond-level fault detection for protocols such as OSPF, IS-IS, VRRP, and PIM to improve network reliability. Complying with IEEE 802.3ah and 802.1ag, the S5700 supports point-to-point Ethernet fault management and can detect faults in the last mile of an Ethernet link to users.
- The S5700-HI provides 3.3 millisecond hardware-based Ethernet OAM function and Y.1731, which can quickly detect and locate faults. By using the Ethernet OAM technology and switchover technologies, the S5700-HI can provide millisecond-level protective switchover for networks.

Well-designed QoS policies and security mechanisms

- The S5700-HI implements complex traffic classification based on packet information such as the 5-tuple, IP preference, ToS, DSCP, IP protocol type, ICMP type, TCP source port, VLAN ID, Ethernet protocol type, and CoS. ACLs can be applied to inbound or outbound direction on an interface. The S5700-HI supports a flow-based

two-rate three-color CAR. Each port supports eight priority queues and multiple queue scheduling algorithms such as WRR, DRR, PQ, WRR+PQ, and DRR+PQ. All of these ensure the quality of voice, video, and data services.

- The S5700-HI provides multiple security measures to defend against Denial of Service (DoS) attacks, and attacks against networks or users. DoS attack types include SYN Flood attacks, Land attacks, Smurf attacks, and ICMP Flood attacks. Attacks to networks refer to STP BPDU/root attacks. Attacks to users include bogus DHCP server attacks, man-in-the-middle attacks, IP/MAC spoofing attacks, DHCP request flood attacks. DoS attacks that change the CHADDR field in DHCP packets are also attacks against users.
- The S5700-HI supports DHCP snooping, which generates user binding entries based on MAC addresses, IP addresses, IP address leases, VLAN IDs, and access interfaces of users. DHCP snooping discards invalid packets that do not match any binding entries, such as ARP spoofing packets and IP spoofing packets. This prevents man-in-the-middle attacks to campus networks that hackers initiate by using ARP packets. The interface connected to a DHCP server can be configured as a trusted interface to protect the system against bogus DHCP server attacks.
- The S5700-HI supports strict ARP learning, which prevents ARP spoofing attacks that will exhaust ARP entries. It also provides IP source check to prevent DoS attacks caused by MAC address spoofing, IP address spoofing, and MAC/IP spoofing.
- The S5700-HI supports centralized MAC address authentication, 802.1x authentication, and NAC. It authenticates users based on statically or dynamically bound user information such as the user name, IP address, MAC address, VLAN ID, access interface, and flag indicating whether antivirus software is installed. VLANs, QoS policies, and ACLs can be applied to users dynamically.
- The S5700-HI can limit the number of MAC addresses learned on an interface to prevent attackers from exhausting MAC address entries by using bogus source MAC addresses. This function minimizes packet flooding that occurs when MAC addresses of users cannot be found in the MAC address table.

Easy deployment and maintenance free

- The S5700-HI supports automatic configuration, plug-and-play, deployment using a USB flash drive, and batch remote upgrade. These capabilities simplify device management and maintenance and reduce maintenance costs. The S5700-HI supports SNMP v1/v2/v3 and provides flexible methods for managing devices. Users can manage the S5700 using the CLI, Web NMS, Telnet, and HGMP. The NQA function helps users with network planning and upgrades. In addition, the S5700 supports NTP, SSH v2, HWTACACS+, RMON, log hosts, and port-based traffic statistics.

- The S5700-HI supports GVRP（GARP VLAN Registration Protocol）, which dynamically distributes, registers, and propagates VLAN attributes to reduce manual configuration workloads of network administrators and to ensure correct VLAN configuration. In a complex network topology, GVRP simplifies VLAN configuration and reduces network communication faults caused by incorrect VLAN configuration.
- The S5700-HI supports MUX VLAN. MUX VLAN isolates Layer 2 traffic between interfaces in a VLAN. Interfaces in a subordinate separate VLAN can communicate with ports in the principal VLAN but cannot communicate with each other. MUX VLAN is usually used on an enterprise intranet to isolate user interfaces from each other but allow them to communicate with server interfaces. This function prevents communication between network devices connected to certain interfaces or interface groups but allows the devices to communicate with the default gateway.

Various IPv6 features

- The S5700-HI supports IPv4/IPv6 dual stack and can migrate from an IPv4 network to an IPv6 network. S5700-HI hardware supports IPv4/IPv6 dual stack, IPv6 over IPv4 tunnels (including manual tunnels, 6to4 tunnels, and ISATAP tunnels), and Layer 3 line-speed forwarding. The S5700 can be deployed on IPv4 networks, IPv6 networks, or networks that run both IPv4 and IPv6. This makes networking flexible and enables a network to migrate from IPv4 to IPv6.

Product Specifications

Item	S5700-HI	
	S5700-28C-HI	S5700-28C-HI-24S
1000M port	24*10/100/1000Base-T	24*100/1000Base-X
Extended slot	provides an extended slot for an uplink subcard	
MAC address table	IEEE 802.1d compliance 32K 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 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 the 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 E-Trunk	

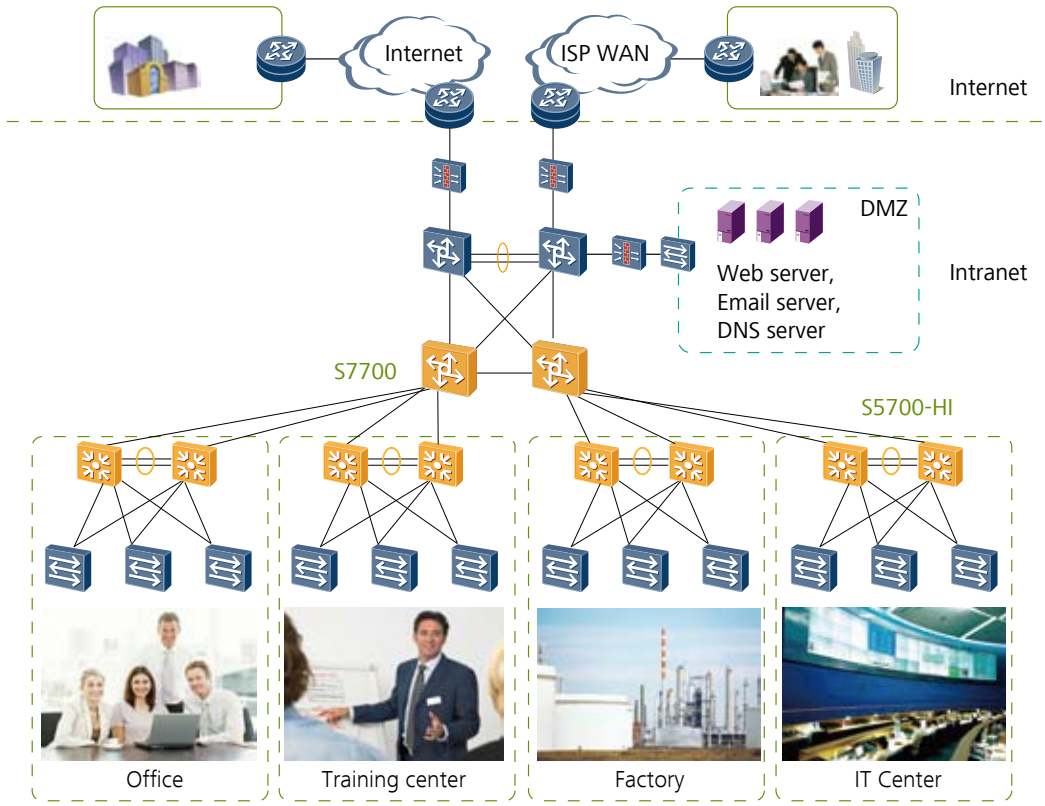
Item	S5700-HI	
	S5700-28C-HI	S5700-28C-HI-24S
MPLS features	MPLS, MPLS VLL	
VPLS	Martini VPLS	
IP routing	Static routing, RIPv1, RIPv2, OSPF, IS-IS, BGP, and ECMP	
IPv6 features	Neighbor Discovery (ND) Path MTU (PMTU) IPv6 ping, IPv6 tracert, and IPv6 Telnet 6to4 tunnel, ISATAP tunnel, and manually configured tunnel ACLs based on the source IPv6 address, destination IPv6 address, Layer 4 ports, or protocol type MLD v1/v2 snooping	
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	
QoS/ACL	Rate limiting on packets sent and received by an interface Packet redirection Port-based traffic policing and two-rate three-color CAR Eight queues on each port WRR, DRR, PQ, WRR+PQ, and DRR+PQ queue scheduling algorithms WRED 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, port number, protocol type, and VLAN ID Rate limiting in each queue and traffic shaping on ports	
Security	User privilege management and password protection DoS attack defense, ARP attack defense, and ICMP attack defense Binding of the IP address, MAC address, interface, and VLAN Port isolation, port security, and sticky MAC Blackhole MAC address entries Limit on the number of learned MAC addresses 802.1x authentication and limit on the number of users on an interface AAA authentication, RADIUS authentication, HWTACACS+ authentication, and NAC SSH v2.0 Hypertext Transfer Protocol Secure (HTTPS) CPU defense Blacklist and whitelist	

Item	S5700-HI	
	S5700-28C-HI	S5700-28C-HI-24S
OAM	Hardware implementation EFM OAM CFM OAM Y.1731 performance test supports hardware-level delay and jitter detection	
Management and maintenance	MAC Forced Forwarding (MFF) Virtual cable test Port mirroring and RSPAN (remote port mirroring) Remote configuration and maintenance by using Telnet SNMP v1/v2/v3 RMON Web NMS HGMP System logs and alarms of different levels GVRP MUX VLAN 802.3az EEE sFlow	
Operating environment	Operating temperature: 0°C–50°C (long term); -5°C–55°C (short term) Relative humidity: 10%–90% (non-condensing)	
Input voltage	AC: Rated voltage range: 100 V to 240 V AC, 50/60 Hz Maximum voltage range: 90 V to 264 V AC, 50/60 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)	442 mm x 220 mm x 43.6 mm	
Power consumption	< 76 W	<80W

Applications

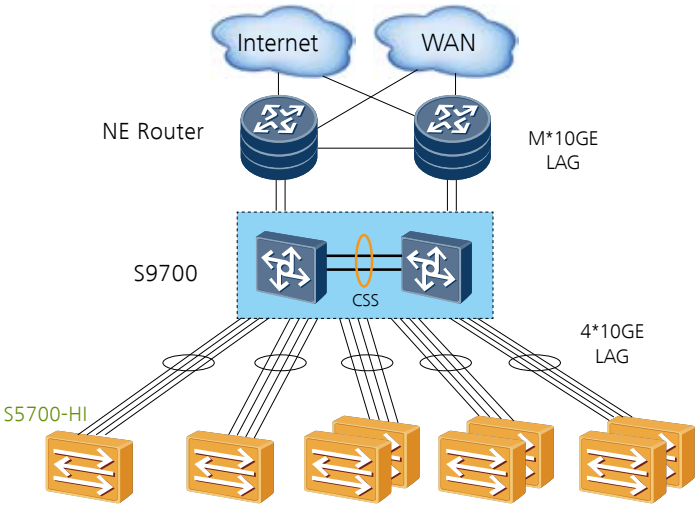
On Large-sized Enterprise Networks

The S5700-HI can function as an access device on a large-sized enterprise network or an aggregation device on a small-sized or medium-sized campus network. It supports link aggregation and dual-homing to improve network reliability.



In Data Centers

The S5700-HI can be used in a data center. It connects to gigabit servers and aggregates traffic from the servers to uplink devices through trunk links. If multiple servers are available, an S5700 stack can be used to facilitate network maintenance and improve network reliability.



Product List

Product Description
S5700-28C-HI Mainframe(24 GE RJ45,Dual Slots of power,Single Slot of Flexible Card,Without Flexible Card and Power Module)
S5700-28C-HI-24S Mainframe (24 GE SFP,Dual Slots of power, Without Flexible Card and Power Module)
2-Port GE SFP or 10GE SFP+ Optical Interface Card (Used In S5700-HI Series)
4-Port GE SFP or 10GE SFP+ Optical Interface Card (Used In S5700-HI Series)
4-Port GE SFP Optical Interface Card (Used In S5700-HI Series)

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

S5700-EI Series Gigabit Enterprise Switches

Product Overview

The S5700-EI series gigabit enterprise switches (S5700-EI) are next-generation energy-saving switches developed by Huawei to meet the demand for high-bandwidth access and Ethernet multi-service aggregation. Based on the cutting-edge hardware and Huawei Versatile Routing Platform (VRP) software, the S5700-EI provides a large switching capacity and high-density GE ports to implement 10 Gbit/s upstream transmissions. The S5700-EI is for use in various enterprise network scenarios. For example, it can function as an access or aggregation switch on a campus network, a gigabit access switch in an Internet data center (IDC), or a desktop switch to provide 1000 Mbit/s access for terminals. The S5700-EI is easy to install and maintain, reducing workloads for network planning, construction, and maintenance. The S5700-EI uses advanced reliability, security, and energy conservation technologies, helping enterprise customers build a next generation IT network.

Product Appearance

S5700-28C-EI

- Twenty-four 10/100/1000Base-T ports
- Subcards supported: 4x1000Base-X SFP subcard, 2x10GE SFP+ subcard, and 4x10GE SFP+ subcard
- Double hot swappable power supplies
- Forwarding performance: 96 Mpps

S5700-28C-EI-24S

- Twenty 100/1000Base-X ports and four GE combo ports
- Subcards supported: 4x1000Base-X SFP subcard, 2x10GE SFP+ subcard, and 4x10GE SFP+ subcard
- Double hot swappable power supplies
- Forwarding performance: 96 Mpps

S5700-28C-PWR-EI

- Twenty-four 10/100/1000Base-T ports
- Subcards supported: 4x1000Base-X SFP subcard, 2x10GE SFP+ subcard, and 4x10GE SFP+ subcard
- Double hot swappable AC power supplies
- PoE+
- Forwarding performance: 96 Mpps

S5700-52C-EI

- Forty-eight 10/100/1000Base-T ports
- Subcards supported: 4x1000Base-X SFP subcard, 2x10GE SFP+ subcard, and 4x10GE SFP+ subcard
- Double hot swappable power supplies
- Forwarding performance: 132 Mpps

S5700-52C-PWR-EI

- Forty-eight 10/100/1000Base-T ports
- Subcards supported: 4x1000Base-X SFP subcard, 2x10GE SFP+ subcard, and 4x10GE SFP+ subcard
- Double hot swappable AC power supplies
- PoE+
- Forwarding performance: 132 Mpps

S5710-28C-EI

- Twenty 10/100/1000 Base-T ports,four GE combo ports and four 10GE SFP+ ports
- Subcards supported: 2x10GE SFP+, 8x10/100/1000BASE-T, and 8×1000Base-X subcard
- Double hot swappable power supplies
- Forwarding performance: 156Mpps

S5710-28C-PWR-EI-AC

- Twenty 10/100/1000 Base-T ports, four GE combo ports and four 10GE SFP+ ports
- Subcards supported: 2x10GE SFP+, 8x10/100/1000BASE-T, and 8×1000Base-X subcard
- Double hot swappable AC power supplies, including a 580W AC power
- PoE+
- Forwarding performance: 156Mpps

S5710-52C-EI

- Forty-eight 10/100/1000 Base-T ports and four 10GE SFP+ ports
- Subcards supported: 2x10GE SFP+, 8x10/100/1000BASE-T, and 8×1000Base-X subcard
- Double hot swappable power supplies
- Forwarding performance: 192Mpps

S5710-52C-PWR-EI-AC
S5710-52C-PWR-EI

- Forty-eight 10/100/1000 Base-T ports and four 10GE SFP+ ports
- Subcards supported: 2x10GE SFP+, 8x10/100/1000BASE-T, and 8×1000Base-X subcard
- Double hot swappable AC power supplies(A 580W AC power is included in S5710-52C-PWR-EI-AC model while no power in S5710-52C-PWR-EI)
- PoE+
- Forwarding performance: 192Mpps

Product Features and highlights

Powerful support for services

- The S5700-EI supports IGMP v1/v2/v3 snooping, IGMP filter, IGMP fast leave, and IGMP proxy. It supports line-speed replication of multicast packets between VLANs, multicast load balancing among member interfaces of a trunk, and controllable multicast, meeting requirements for IPTV services and other multicast services.
- The S5700-EI provides the Multi-VPN-Instance CE (MCE) function to isolate users in different VLANs on a device, ensuring data security and reducing costs.

Comprehensive reliability mechanisms

- Besides STP, RSTP, and MSTP, the S5700-EI supports enhanced Ethernet reliability technologies such as Smart Link and RRPP (Rapid Ring Protection Protocol), which implement millisecond-level protection switchover and ensure network reliability. It also provides Smart Link multi-instance and RRPP multi-instance to implement load balancing among links, optimizing bandwidth usage.
- The S5700-EI supports enhanced trunk (E-Trunk) that enables a CE to be dual-homed to two PEs (S5700s). E-Trunk greatly enhances link reliability between devices and implements link aggregation between devices. This improves reliability of access devices.

- The S5700-EI supports the Smart Ethernet Protection (SEP) protocol, a ring network protocol applied to the link layer on an Ethernet network. SEP can be used on open ring networks and can be deployed on upper-layer aggregation devices to provide fast switchover (within 50 ms), ensuring non-stop transmission of services. SEP features simplicity, high reliability, fast switchover, easy maintenance, and flexible topology, facilitating network planning and management.
- The S5700-EI supports Ethernet Ring Protection Switching (ERPS), also referred to as G.8032. As the latest ring network protocol, ERPS was developed based on traditional Ethernet MAC and bridging functions and uses mature Ethernet OAM function and a ring automatic protection switching (R-APS) mechanism to implement millisecond-level protection switching. ERPS supports various services and allows flexible networking, helping customers build a network with lower OPEX and CAPEX.
- The S5700-EI supports redundant power supplies, and can use an AC power supply and a DC power simultaneously. Users can choose a single power supply or use two power supplies to ensure device reliability.
- The S5700-EI supports VRRP, and can set up VRRP groups with other Layer 3 switches. VRRP provides redundant routes to ensure stable and reliable communication. Multiple equal-cost routes to an uplink device can be configured on the S5700-EI to provide route redundancy. When an active route is unreachable, traffic is switched to a backup route.
- The S5700-EI supports Bidirectional Fast Detection (BFD) and provides millisecond-level detection for protocols such as OSPF, IS-IS, VRRP, and PIM to improve network reliability. The S5700-EI complies with IEEE 802.3ah and 802.1ag. IEEE 802.3ah defines the mechanism for detecting faults on direct links over the Ethernet in the first mile, and 802.1ag defines the mechanism for end-to-end service fault detection. The S5700-EI supports Y.1731. Besides fast end-to-end service fault detection, the S5700-EI can use the performance measurement tools defined in Y.1731 to monitor network performance, providing accurate data about network quality.

Well-designed QoS policies and security mechanisms

- The S5700-EI implements complex traffic classification based on packet information such as the 5-tuple, IP preference, ToS, DSCP, IP protocol type, ICMP type, TCP source port, VLAN ID, Ethernet protocol type, and CoS. ACLs can be applied to inbound or outbound direction on an interface. The S5700-EI supports a flow-based two-rate three-color CAR. Each port supports eight priority queues and multiple queue scheduling algorithms such as WRR, DRR, PQ, WRR+PQ, and DRR+PQ. All of these ensure the quality of voice, video, and data services.
- The S5700-EI provides multiple security measures to defend against Denial of Service (DoS) attacks, and attacks against networks or users. DoS attack types include SYN Flood attacks, Land attacks, Smurf attacks, and ICMP Flood attacks. Attacks to networks refer to STP BPDU/root attacks. Attacks to users include bogus DHCP server attacks, man-in-the-middle attacks, IP/MAC spoofing attacks, DHCP request flood attacks. DoS attacks that change the CHADDR field in DHCP packets are also attacks against users.
- The S5700-EI supports DHCP snooping, which generates user binding entries based on MAC addresses, IP addresses, IP address leases, VLAN IDs, and access interfaces of users. DHCP snooping discards invalid packets that do not match any binding entries, such as ARP spoofing packets and IP spoofing packets. This prevents man-in-the-middle attacks to campus networks that hackers initiate by using ARP packets. The interface connected to a DHCP server can be configured as a trusted interface to protect the system against bogus DHCP server attacks.
- The S5700-EI supports strict ARP learning, which prevents ARP spoofing attacks that will exhaust ARP entries. It also provides IP source check to prevent DoS attacks caused by MAC address spoofing, IP

address spoofing, and MAC/IP spoofing.

- The S5700-EI supports centralized MAC address authentication, 802.1x authentication, and NAC. It authenticates users based on statically or dynamically bound user information such as the user name, IP address, MAC address, VLAN ID, access interface, and flag indicating whether antivirus software is installed. VLANs, QoS policies, and ACLs can be applied to users dynamically.
- The S5700-EI can limit the number of MAC addresses learned on an interface to prevent attackers from exhausting MAC address entries by using bogus source MAC addresses. This function minimizes packet flooding that occurs when MAC addresses of users cannot be found in the MAC address table.

Fine-grained traffic management

- The S5710-EI supports NetStream. The NetStream module supports V5, V8, and V9 packet formats and provides various traffic analysis functions, such as real-time traffic sampling, dynamic report generation, traffic attribute analysis, and traffic exception report. The Netstream module enables administrators to monitor network status in real time and provides applications and analysis functions including potential fault detection, effective fault rectification, fast problem handling, and security monitoring, to help customers optimize network structure and adjust resource deployment.
- The S5700-EI supports the Sampled Flow (sFlow) function, which uses a sampling mechanism to obtain statistics about traffic forwarded on a network and sends the statistics to the Collector in real time. The Collector analyzes traffic statistics to help customers manage network traffic efficiently. The S5700-EI integrates the sFlow Agent module and uses hardware for traffic monitoring. Unlike traffic monitoring through port mirroring, sFlow does not degrade network performance during traffic monitoring.

Easy deployment and maintenance free

- The S5700-EI supports automatic configuration, plug-and-play, and batch remote upgrade. These capabilities simplify device management and maintenance and reduce maintenance costs. The S5700-EI supports SNMP v1/v2/v3 and provides flexible methods for managing devices. Users can manage the S5700-EI using the CLI, Web NMS, Telnet, and HGMP. The NQA function helps users with network planning and upgrades. In addition, the S5700-EI supports NTP, SSH v2, HWTACACS+, RMON, log hosts, and port-based traffic statistics.
- The S5700-EI supports the GARP VLAN Registration Protocol (GVRP), which dynamically distributes, registers, and propagates VLAN attributes to reduce manual configuration workloads of network administrators and to ensure correct VLAN configuration. In a complex network topology, GVRP simplifies VLAN configuration and reduces network communication faults caused by incorrect VLAN configuration.
- The S5700-EI supports MUX VLAN. MUX VLAN isolates Layer 2 traffic between interfaces in a VLAN. Interfaces in a subordinate separate VLAN can communicate with ports in the principal VLAN but cannot communicate with each other. MUX VLAN is usually used on an enterprise intranet to isolate user interfaces from each other but allow them to communicate with server interfaces. This function prevents communication between network devices connected to certain interfaces or interface groups but allows the devices to communicate with the default gateway.

PoE function

- The S5700-EI PWR can use PoE power supplies with different power levels to provide -48V DC power for

powered devices (PDs) such as IP Phones, WLAN APs, and Bluetooth APs. In its role as power sourcing equipment (PSE), the S5700-EI PWR complies with IEEE 802.3af and 802.3at (PoE+) and can work with PDs that are incompatible with 802.3af or 802.3at. Each port provides a maximum of 30 W power, complying with IEEE 802.3at. The PoE+ function increases the maximum power of each port and implements intelligent power management for high-power consumption applications. This facilitates the use of PDs. PoE ports can work in power-saving mode. The S5700-EI PWR provides improved PoE solutions. Users can configure whether and when a PoE port supplies power.

High scalability

- The S5700-EI supports intelligent stacking (iStack). Multiple S5700-EI switches can be connected with stack cables to set up a stack, which functions as a virtual switch. A stack consists of a master switch, a backup switch, and several slave switches. The backup switch takes over services when the master switch fails, reducing service interruption time. Stacks support intelligent upgrade so that users do not need to change the software version of a switch when adding it to a stack. The iStack function allows users to connect multiple switches with stack cables to expand system capacity. These switches can be managed using a single IP address, which greatly reduces the costs of system expansion, operation, and maintenance. Compared with traditional networking technologies, iStack has advantages in scalability, reliability, and system architecture.

Various IPv6 features

- The S5700-EI supports IPv4/IPv6 dual stack and can migrate from an IPv4 network to an IPv6 network. S5700-EI hardware supports IPv4/IPv6 dual stack, IPv6 over IPv4 tunnels (including manual tunnels, 6to4 tunnels, and ISATAP tunnels), and Layer 3 line-speed forwarding. The S5700-EI can be deployed on IPv4 networks, IPv6 networks, or networks that run both IPv4 and IPv6. This makes networking flexible and enables a network to migrate from IPv4 to IPv6.

Product Specifications

Item	S5700-28C-EI/ S5700-28C-PWR-EI	S5700-28C-EI-24S	S5700-52C-EI/ S5700-52C-PWR-EI	S5710-28C-EI S5710-28C-PWR-EI-AC	S5710-52C-EI S5710-52C-PWR-EI S5710-52C-PWR-EI-AC
1000M port	24*10/100/1000 Base-T	20*100/1000 Base-X, 4*GE Combo	48*10/100/ 1000Base-T	20*10/100/1000 Base-T, 4*GE Comb, 4*10GE SFP +	48*10/100/1000 Base-T, 4*10GE SFP +
Extended slot	S5700C Provide two extended slots, one for an uplink subcard and the other for a stack card. S5710C Provide two extended slots for uplink subcards.				
MAC address table	IEEE 802.1d compliance 32K MAC 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 VLAN assignment based on MAC addresses, protocols, IP subnets, policies, and ports 1:1 and N:1 VLAN Mapping				

Item	S5700-28C-EI/ S5700-28C-PWR-EI	S5700-28C-EI-24S	S5700-52C-EI/ S5700-52C-PWR-EI	S5710-28C-EI S5710-28C-PWR-EI-AC	S5710-52C-EI S5710-52C-PWR-EI S5710-52C-PWR-EI-AC
Reliability	RRPP ring topology and RRPP multi-instance Smart Link tree topology and Smart Link multi-instance, providing the 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 E-Trunk				
IP routing	Static routing, OSPF, OSPF v3, IS-IS, IS-ISv6, BGP, BGP 4+, and ECMP				
IPv6 features	Neighbor Discovery (ND) Path MTU (PMTU) IPv6 ping, IPv6 tracert, and IPv6 Telnet ACLs based on the source IPv6 address, destination IPv6 address, Layer 4 ports, or protocol type MLD v1/v2 snooping 6to4 tunnel, ISATAP tunnel, and manually configured tunnel				
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				
QoS/ACL	Rate limiting on packets sent and received by an interface Packet redirection Port-based traffic policing and two-rate three-color CAR Eight queues on each port WRR, DRR, PQ, WRR+PQ, and DRR+PQ queue scheduling algorithms WRED (supported by the S5710-EI) 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, port number, protocol type, and VLAN ID Rate limiting in each queue and traffic shaping on ports				
Security	User privilege management and password protection DoS attack defense, ARP attack defense, and ICMP attack defense Binding of the IP address, MAC address, interface, and VLAN Port isolation, port security, and sticky MAC Blackhole MAC address entries Limit on the number of learned MAC addresses 802.1x authentication and limit on the number of users on an interface AAA authentication, RADIUS authentication, HWTACACS+ authentication, and NAC SSH v2.0 Hypertext Transfer Protocol Secure (HTTPS) CPU defense Blacklist and whitelist				

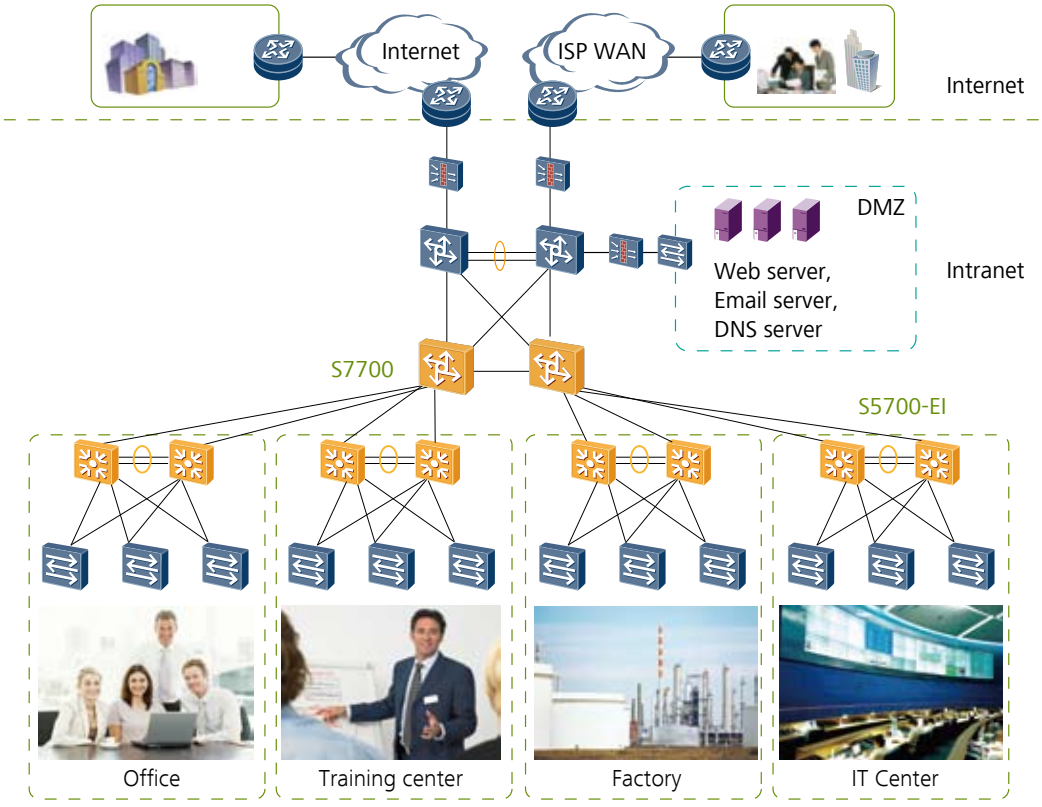
Item	S5700-28C-EI/ S5700-28C-PWR-EI	S5700-28C-EI-24S	S5700-52C-EI/ S5700-52C-PWR-EI	S5710-28C-EI S5710-28C-PWR-EI-AC	S5710-52C-EI S5710-52C-PWR-EI S5710-52C-PWR-EI-AC
Management and maintenance	Stacking MAC Forced Forwarding (MFF) Virtual cable test Port mirroring and RSPAN (remote port mirroring) Remote configuration and maintenance by using Telnet SNMP v1/v2/v3 RMON Web NMS HGMP System logs and alarms of different levels GVRP MUX VLAN NetStream (supported by S5710-EI) sFlow				
Operating environment	Operating temperature: 0°C–50°C (long term); -5°C–55°C (short term) Relative humidity: 10%–90% (non-condensing)				
Input voltage	AC: Rated voltage range: 100 V to 240 V AC, 50/60 Hz Maximum voltage range: 90 V to 264 V AC, 50/60 Hz DC: Rated voltage range: –48 V to –60 V, DC Maximum voltage range: –36 V to –72 V, DC Note: PoE-support switches do not use DC power supplies.				
Dimensions (W x D x H)	442 mm x 420 mm x 43.6 mm				
Power consumption	Non-PoE: < 60 W PoE: < 842 W (PoE power: 740 W)	< 63 W	Non-PoE: < 88 W PoE: < 930 W (PoE power: 740 W)	Non-PoE:<100W PoE: <942W	Non-PoE:<165W PoE:< 1043W with two 580W AC supplies, or <1675W with two 1150W AC supplies

*:The S5700 switches of the EI series are collectively called S5700-EI. S5710-EI is a sub-series switches of S5700-EI .

Applications

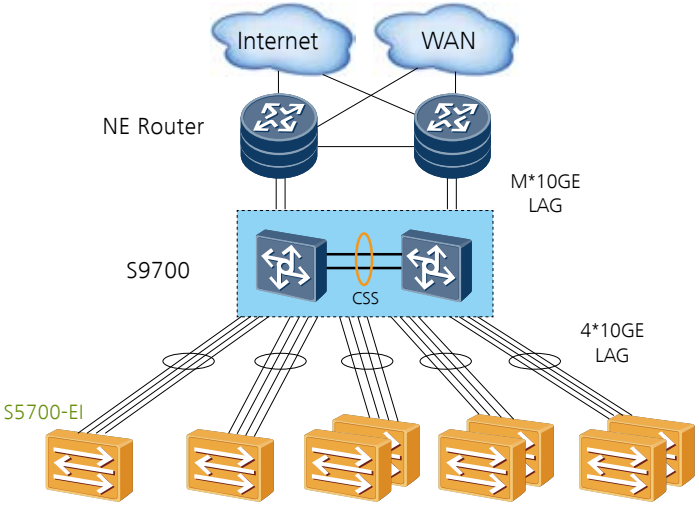
On Large-sized Enterprise Networks

The S5700-EI can function as an access device on a large-sized enterprise network or an aggregation device on a small-sized or medium-sized campus network. It supports link aggregation and dual-homing to improve network reliability.



In Data Centers

The S5700-EI can be used in a data center. It connects to gigabit servers and aggregates traffic from the servers to uplink devices through trunk links. If multiple servers are available, an S5700-EI stack can be used to facilitate network maintenance and improve network reliability.



Product List

Product Description
S5700-28C-EI Mainframe(24 GE RJ45,dual slots of power,without flexible card and power module)
S5710-28C-EI Mainframe(20 GE RJ45,4 GE combo,4 10GE SFP+,dual slots of power and flexible card, without flexible card and power module)
S5710-52C-EI Mainframe(48 GE RJ45,4 10GE SFP+,dual slots of power and flexible card,without flexible card and power module)
S5700-28C-EI-24S Mainframe(20 GE SFP, 4 GE combo,dual slots of power,without flexible card and power module)
S5700-52C-EI Mainframe(48 GE RJ45,dual slots of power,without flexible card and power module)
S5700-28C-PWR-EI Mainframe(24 GE RJ45,PoE,dual slots of power,without flexible card and power module)
S5700-52C-PWR-EI Mainframe(48 GE RJ45,PoE,dual slots of power,without flexible card and power module)
S5710-28C-PWR-EI-AC Mainframe(20 GE RJ45,4 GE combo,4 10GE SFP+,PoE,dual slots for flexible cards,dual slots for power modules , with a 580W AC power module, without flexible cards)
S5710-52C-PWR-EI-AC Mainframe(48 GE RJ45,4 10GE SFP+,PoE,dual slots for flexible cards,dual slots for power modules, with a 580W AC power module ,without flexible cards)
S5710-52C-PWR-EI Mainframe(48 GE RJ45,4 10GE SFP+,PoE,dual slots for flexible card,dual slots for power modules, without flexible cards or power modules)
8-Port GE RJ45 Interface Card(used in S5710-EI series)
8-Port GE SFP Optical Interface Card(used in S5710-EI series)
4-Port GE SFP Optical Interface Card(used in S5700-EI series)(including 4-Port GE SFP optical interface card,extend channel card)
2-Port 10GE SFP+ Optical Interface Card
2-Port GE SFP or 10GE SFP+ Optical Interface Card (used in S5710-EI series)
4-Port 10GE SFP+ Optical Interface Card(including 4-Port 10GE SFP+ optical interface card,extend channel card)
Ethernet Stack Interface Card(Including stack card,100cm stack cable)

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

S5700-SI Series Gigabit Enterprise Switches

Product Overview

The S5700-SI series are gigabit Layer 3 Ethernet switches based on new generation of high-performance hardware and Huawei Versatile Routing Platform (VRP). It provides a large capacity, high-density GE interfaces, and10GE uplink interfaces. With extensive service features and IPv6 forwarding capabilities, the S5700-SI is applicable to various scenarios. For example, it can be used as an access or aggregation switch on campus networks or an access switch in data centers. The S5700-SI integrates many advanced technologies in terms of reliability, security, and energy saving. It employs simple and convenient means of installation and maintenance to reduce customers' OAM cost and help enterprise customers build a next-generation IT network.

Product Appearance

S5700-24TP-SI-AC

S5700-24TP-SI-DC

- Twenty 10/100/1000Base-T ports and four GE combo ports
- Two models: AC model and DC model
- Forwarding performance: 36 Mpps

S5700-24TP-PWR-SI

- Twenty 10/100/1000Base-T ports and four GE combo ports
- Double hot swappable AC power supplies
- PoE+
- Forwarding performance: 36 Mpps

S5700-26X-SI-12S-AC

- Twelve 10/100/1000BASE-T ports，twelve 1000Base-X ports，two 10GE SFP+ ports
- One AC power module，external RPS
- Forwarding performance: 66Mpps

S5700-48TP-SI-AC

S5700-48TP-SI-DC

- Forty-four10/100/1000Base-T ports and four GE combo ports
- Two models: AC model and DC model
- Forwarding performance: 72 Mpps

S5700-48TP-PWR-SI

- Forty-four 10/100/1000Base-T ports and four GE combo ports
- AC power supply
- PoE+
- Forwarding performance: 72 Mpps

S5700-28C-SI

- Twenty 10/100/1000Base-T ports and four GE combo ports
- Subcards supported: 4x1000Base-X SFP subcard, 2x10GE SFP+ subcard, and 4x10GE SFP+ subcard
- Double hot swappable power supplies
- Forwarding performance: 96 Mpps

S5700-28C-PWR-SI

- Twenty 10/100/1000Base-T ports and four GE combo ports
- Subcards supported: 4x1000Base-X SFP subcard, 2x10GE SFP+ subcard, and 4x10GE SFP+ subcard
- Double hot swappable AC power supplies
- PoE+
- Forwarding performance: 96 Mpps

S5700-52C-SI

- Forty-eight 10/100/1000Base-T ports
- Subcards supported: 4x1000Base-X SFP subcard, 2x10GE SFP+ subcard, and 4x10GE SFP+ subcard
- Double hot swappable power supplies
- Forwarding performance: 132 Mpps

S5700-52C-PWR-SI

- Forty-eight 10/100/1000Base-T ports
- Subcards supported: 4x1000Base-X SFP subcard, 2x10GE SFP+ subcard, and 4x10GE SFP+ subcard
- Double hot swappable AC power supplies
- PoE+
- Forwarding performance: 132 Mpps

Product Features and highlights

Powerful support for services

- The S5700-SI supports IGMP v1/v2/v3 snooping, IGMP filter, IGMP fast leave, and IGMP proxy. The S5700-SI supports wire-speed replication of multicast packets between VLANs, multicast load balancing among member interfaces of a trunk, and controllable multicast, meeting requirements for IPTV and other multicast services.

Comprehensive reliability mechanisms

- Besides STP, RSTP, and MSTP, the S5700-SI supports enhanced Ethernet reliability technologies such as Smart Link and RRPP (Rapid Ring Protection Protocol), which implement millisecond-level protection switchover and ensure network reliability. It also provides Smart Link multi-instance and RRPP multi-instance to implement load balancing among links, optimizing bandwidth usage.

- The S5700-SI supports enhanced trunk (E-Trunk) that enables a CE to be dual-homed to two PEs (S5700s). E-Trunk greatly enhances link reliability between devices and implements link aggregation between devices. This improves reliability of access devices.
- The S5700-SI supports the Smart Ethernet Protection (SEP) protocol, a ring network protocol applied to the link layer on an Ethernet network. SEP can be used on open ring networks and can be deployed on upper-layer aggregation devices to provide fast switchover (within 50 ms), ensuring non-stop transmission of services. SEP features simplicity, high reliability, fast switchover, easy maintenance, and flexible topology, facilitating network planning and management.
- The S5700-SI supports Ethernet Ring Protection Switching (ERPS), also referred to as G.8032. As the latest ring network protocol, ERPS was developed based on traditional Ethernet MAC and bridging functions and uses mature Ethernet OAM function and a ring automatic protection switching (R-APS) mechanism to implement millisecond-level protection switching. ERPS supports various services and allows flexible networking, helping customers build a network with lower OPEX and CAPEX.

Well-designed QoS policies and security mechanisms

- The S5700-SI implements complex traffic classification based on packet information such as the 5-tuple, IP preference, ToS, DSCP, IP protocol type, ICMP type, TCP source port, VLAN ID, Ethernet protocol type, and CoS. ACLs can be applied to inbound or outbound direction on an interface. The S5700-SI supports a flow-based two-rate three-color CAR. Each port supports eight priority queues and multiple queue scheduling algorithms such as WRR, DRR, PQ, WRR+PQ, and DRR+PQ. All of these ensure the quality of voice, video, and data services.
- The S5700-SI provides multiple security measures to defend against Denial of Service (DoS) attacks, and attacks against networks or users. DoS attack types include SYN Flood attacks, Land attacks, Smurf attacks, and ICMP Flood attacks. Attacks to networks refer to STP BPDU/root attacks. Attacks to users include bogus DHCP server attacks, man-in-the-middle attacks, IP/MAC spoofing attacks, DHCP request flood attacks. DoS attacks that change the CHADDR field in DHCP packets are also attacks against users.
- The S5700-SI supports DHCP snooping, which generates user binding entries based on MAC addresses, IP addresses, IP address leases, VLAN IDs, and access interfaces of users. DHCP snooping discards invalid packets that do not match any binding entries, such as ARP spoofing packets and IP spoofing packets. This prevents man-in-the-middle attacks to campus networks that hackers initiate by using ARP packets. The interface connected to a DHCP server can be configured as a trusted interface to protect the system against bogus DHCP server attacks.
- The S5700-SI supports strict ARP learning, which prevents ARP spoofing attacks that will exhaust ARP entries. It also provides IP source check to prevent DoS attacks caused by MAC address spoofing, IP address spoofing, and MAC/IP spoofing.
- The S5700-SI supports centralized MAC address authentication, 802.1x authentication, and NAC. It authenticates users based on statically or dynamically bound user information such as the user name, IP address, MAC address, VLAN ID, access interface, and flag indicating whether antivirus software is installed. VLANs, QoS policies, and ACLs can be applied to users dynamically.
- The S5700-SI can limit the number of MAC addresses learned on an interface to prevent attackers from exhausting MAC address entries by using bogus source MAC addresses. This function minimizes packet flooding that occurs when MAC addresses of users cannot be found in the MAC address table.

Easy deployment and maintenance free

- The S5700-SI supports automatic configuration, plug-and-play, deployment using a USB flash drive, and batch remote upgrade. These capabilities simplify device management and maintenance and reduce maintenance costs. The S5700 supports SNMP v1/v2/v3 and provides flexible methods for managing devices. Users can manage the S5700 using the CLI, Web NMS, Telnet, and HGMP. The NQA function helps users with network planning and upgrades. In addition, the S5700 supports NTP, SSH v2, HWTACACS+, RMON, log hosts, and port-based traffic statistics.
- The S5700-SI supports GVRP（GARP VLAN Registration Protocol）, which dynamically distributes, registers, and propagates VLAN attributes to reduce manual configuration workloads of network administrators and to ensure correct VLAN configuration. In a complex network topology, GVRP simplifies VLAN configuration and reduces network communication faults caused by incorrect VLAN configuration.
- The S5700-SI supports MUX VLAN. MUX VLAN isolates Layer 2 traffic between interfaces in a VLAN. Interfaces in a subordinate separate VLAN can communicate with ports in the principal VLAN but cannot communicate with each other. MUX VLAN is usually used on an enterprise intranet to isolate user interfaces from each other but allow them to communicate with server interfaces. This function prevents communication between network devices connected to certain interfaces or interface groups but allows the devices to communicate with the default gateway.

PoE function

- The S5700-SI PWR can use PoE power supplies with different power levels to provide -48V DC power for powered devices (PDs) such as IP Phones, WLAN APs, and Bluetooth APs. In its role as power sourcing equipment (PSE), the S5700-SI PWR complies with IEEE 802.3af and 802.3at (PoE+) and can work with PDs that are incompatible with 802.3af or 802.3at. Each port provides a maximum of 30 W power, complying with IEEE 802.3at. The PoE+ function increases the maximum power of each port and implements intelligent power management for high-power consumption applications. This facilitates the use of PDs. PoE ports can work in power-saving mode. The S5700-SI PWR provides improved PoE solutions. Users can configure whether and when a PoE port supplies power.

High scalability

- The S5700-SI supports intelligent stacking (iStack). Multiple S5700-SI can be connected with stack cables to set up a stack, which functions as a virtual switch. A stack consists of a master switch, a backup switch, and several slave switches. The backup switch takes over services when the master switch fails, reducing service interruption time. Stacks support intelligent upgrade so that users do not need to change the software version of a switch when adding it to a stack. The iStack function allows users to connect multiple switches with stack cables to expand system capacity. These switches can be managed using a single IP address, which greatly reduces the costs of system expansion, operation, and maintenance. Compared with traditional networking technologies, iStack has advantages in scalability, reliability, and system architecture.

Various IPv6 features

- The S5700-SI supports IPv4/IPv6 dual stack and can migrate from an IPv4 network to an IPv6 network. S5700-SI hardware supports IPv4/IPv6 dual stack, IPv6 over IPv4 tunnels (including manual tunnels, 6to4 tunnels, and ISATAP tunnels), and Layer 3 line-speed forwarding. The S5700 can be deployed on IPv4 networks, IPv6 networks, or networks that run both IPv4 and IPv6. This makes networking flexible and enables a network to migrate from IPv4 to IPv6.

Product Specifications

Item	S5700-24TP-SI**/ S5700-24TP-PWR-SI	S5700-28C-SI/ S5700-28C-PWR-SI	S5700-26X-SI-12S-AC	S5700-48TP-SI/ S5700-48TP-PWR-SI	S5700-52C-SI/ S5700-52C-PWR-SI
Fixed port	20*10/100/1000Base-T, 4*GE Combo		12*10/100/ 1000BASE-T, 12*1000 Base-X, 2*10 GE SFP+	44*10/100/ 1000 Base-T, 4*GE Combo	48*10/100/ 1000 Base-T
Extended slot	The S5700TP provides an extended slot for a stack card The S5700-28C and S5700-52C provide two extended slots, one for an uplink subcard and the other for for a stack card.				
MAC address table	IEEE 802.1d compliance 16 K MAC address entries MAC address learning and aging Static, dynamic, and blackhole MAC address entries Packet filtering based on source MAC addresses				
VLAN	4 K VLANs Guest VLAN and voice 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 the millisecond-level protection switchover SEP ERPS(G.8032) STP(IEEE 802.1d), RSTP(IEEE 802.1w), and MSTP(IEEE 802.1s) BPDU protection, root protection, and loop protection E-Trunk				
IP routing	Static routing, RIPv1, RIPv2, and ECMP				
IPv6 features	Neighbor Discovery (ND) Path MTU (PMTU) IPv6 ping, IPv6 tracert, and IPv6 Telnet ACLs based on the source IPv6 address, destination IPv6 address, Layer 4 ports, or protocol type MLD v1/v2 snooping 6to4 tunnel, ISATAP tunnel, and manually configured tunnel				
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				

Item	S5700-24TP-SI**/ S5700-24TP-PWR-SI	S5700-28C-SI/ S5700-28C-PWR-SI	S5700-26X-SI-12S-AC	S5700-48TP-SI/ S5700-48TP-PWR-SI	S5700-52C-SI/ S5700-52C-PWR-SI
QoS/ACL	Rate limiting on packets sent and received by an interface Packet redirection Port-based traffic policing and two-rate three-color CAR Eight queues on each port WRR, DRR, PQ, WRR+PQ, and DRR+PQ 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, port number, protocol type, and VLAN ID Rate limiting in each queue and traffic shaping on ports				
Security	User privilege management and password protection DoS attack defense, ARP attack defense, and ICMP attack defense Binding of the IP address, MAC address, interface, and VLAN Port isolation, port security, and sticky MAC Blackhole MAC address entries Limit on the number of learned MAC addresses 802.1x authentication and limit on the number of users on an interface AAA authentication, RADIUS authentication, HWTACACS+ authentication, and NAC SSH v2.0 Hypertext Transfer Protocol Secure (HTTPS) CPU defense Blacklist and whitelist				
Management and maintenance	Stacking MAC Forced Forwarding (MFF) Virtual cable test Port mirroring and RSPAN (remote port mirroring) Remote configuration and maintenance by using Telnet SNMP v1/v2/v3 RMON Web NMS HGMP System logs and alarms of different levels GVRP MUX VLAN				
Operating environment	Operating temperature: 0°C–50°C (long term); -5°C–55°C (short term) Relative humidity: 10%–90% (non-condensing)				
Input voltage	AC: Rated voltage range: 100 V to 240 V AC, 50/60 Hz Maximum voltage range: 90 V to 264 V AC, 50/60 Hz DC: Rated voltage range: –48 V to –60 V, DC Maximum voltage range: –36 V to –72 V, DC Note: PoE-support switches do not use DC power supplies.				

Item	S5700-24TP-SI**/ S5700-24TP-PWR-SI	S5700-28C-SI/ S5700-28C-PWR-SI	S5700-26X-SI-12S-AC	S5700-48TP-SI/ S5700-48TP-PWR-SI	S5700-52C-SI/ S5700-52C-PWR-SI
Dimensions (W x D x H)	S5700-24TP-SI: 442 mm x 220 mm x 43.6 mm S5700-26X-SI-12S-AC: 442 mm x310 mm x43.6mm Others: 442 mm x 420 mm x 43.6 mm				
Power consumption	Non-PoE: < 40 W PoE: < 455 W (PoE power:370 W)	Non-PoE: <56W PoE: <836W (PoE power:740W)	<42.3W	Non-PoE: < 64 W PoE: < 907 W (PoE power:740 W)	Non-PoE: <78W PoE: <917W (PoE power:740W)

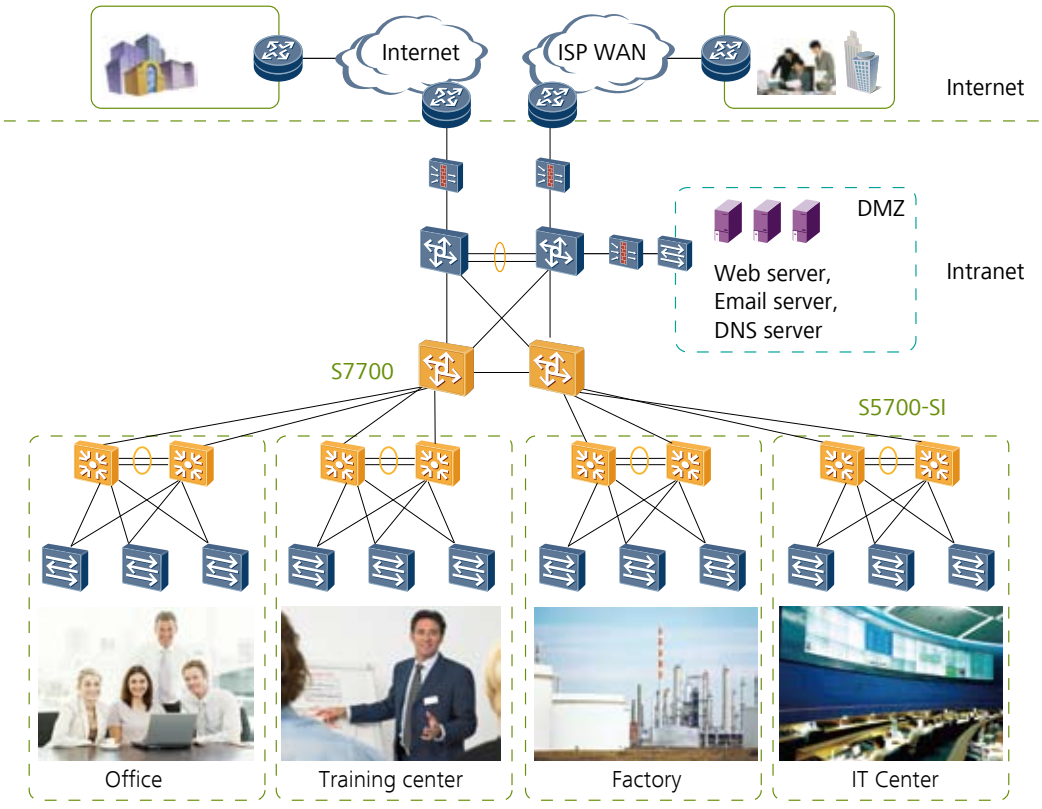
*:The S5700 switches of the SI series are collectively called S5700-SI.

**:S5700-24TP-SI is short for S5700-24TP-SI-AC and S5700-24TP-SI-DC. As product versions are irrelevant to the power supply mode, the product names mentioned in product specifications do not contain AC or DC. This rule also applies to other product models.

Applications

On Large-sized Enterprise Networks

The S5700-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.



Product List

Product Description
S5700-24TP-SI-AC Mainframe(20 GE RJ45,4 GE Combo,AC 110/220V)
S5700-24TP-SI-DC Mainframe(20 GE RJ45,4 GE Combo,DC -48V)
S5700-48TP-SI-AC Mainframe(44 GE RJ45,4 GE Combo,AC 110/220V)
S5700-48TP-SI-DC Mainframe(44 GE RJ45,4 GE Combo,DC -48V)
S5700-24TP-PWR-SI Mainframe(20 GE RJ45,4 GE Combo,PoE,Dual Slots of power,Without Power Module)
S5700-48TP-PWR-SI Mainframe(44 GE RJ45,4 GE Combo,PoE,Dual Slots of power,Without Power Module)
S5700-28C-SI Mainframe(20 GE RJ45,4 GE Combo,Dual Slots of power,Without Flexible Card and Power Module)
S5700-52C-SI Mainframe(48 GE RJ45,Dual Slots of power,Without Flexible Card and Power Module)
S5700-28C-PWR-SI Mainframe(20 GE RJ45,4 GE Combo,PoE,Dual Slots of Power,Single Slot of Flexible Card,Including Single 500W AC Power)
S5700-52C-PWR-SI Mainframe(48 GE RJ45,PoE,Dual Slots of Power,Single Slot of Flexible Card,Including Single 500W AC Power)
S5700-26X-SI-12S-AC mainframe(12 GE RJ45,12 SFP, 2-port 10G SFP+， AC 110/220V)
4-Port GE SFP Optical Interface Card(Used In S5700-SI & S5710-LI Series)(Including 4-Port GE SFP Optical Interface Card,Extend Channel Card)
2-Port 10GE SFP+ Optical Interface Card
4-Port 10GE SFP+ Optical Interface Card (Including 4-Port 10GE SFP+ Optical Interface Card,Extend Channel Card)
Ethernet Stack Interface Card(Including Stack Card,100cm Stack Cable)

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

S5700-LI Series Gigabit Enterprise Switches

Product Overview

The S5700-LI is a next-generation energy-saving gigabit Layer 2 Ethernet switch that provides flexible GE access ports and extensive services. It supports EEE and device sleeping, providing customers with a green, easy-to-manage, easy-to-expand, and cost-effective gigabit to the desktop solution.

Product Appearance

S5700-10P-LI-AC

- Eight 10/100/1000Base-T ports, two 100/1000Base-X SFP ports
- AC power supply
- Forwarding performance: 15Mpps

S5700-10P-PWR-LI-AC

- Eight 10/100/1000Base-T ports , two 100/1000Base-X SFP
- AC power supply
- PoE+
- Forwarding performance: 15Mpps

S5700-28P-LI-AC

S5700-28P-LI-DC

- Twenty-four 10/100/1000Base-T ports and four 100/1000Base-X SFP ports
- Two models: AC model and DC model, supporting RPS (redundant power supply)
- Forwarding performance: 42 Mpps

S5700-28X-LI-AC

S5700-28X-LI-DC

- Twenty-four 10/100/1000Base-T ports and four 10GE SFP+ ports
- Two models: AC model and DC model,supporting RPS (redundant power supply)
- Forwarding performance: 96Mpps

S5700-28X-PWR-LI-AC

- Twenty-four 10/100/1000 Base-T ports and four 10GE SFP+ ports
- AC power supply , supporting RPS (redundant power supply)
- PoE+
- Forwarding performance: 96Mpps

S5700-28P-PWR-LI-AC

- Twenty-four 10/100/1000 Base-T ports and four 100/1000Base-X ports
- AC power supply , supporting RPS (redundant power supply)
- PoE+
- Forwarding performance: 42Mpps

S5700-52P-LI-AC

S5700-52P-LI-DC

- Forty-eight 10/100/1000 Base-T ports and four 100/1000Base-X ports
- Two models: AC model and DC model, supporting RPS (redundant power supply)
- Forwarding performance: 78Mpps

S5700-52X-LI-AC

S5700-52X-LI-DC

- Forty-eight 10/100/1000Base-T ports and four 10GE SFP+ ports
- Two models: AC model and DC model,supporting RPS (redundant power supply)
- Forwarding performance: 132Mpps

S5700-52X-PWR-LI-AC

- Forty-eight 10/100/1000Base-T ports and four 10GE SFP+ ports
- Two models: AC model and DC model, supporting RPS (redundant power supply)
- PoE+
- Forwarding performance: 132Mpps

S5700-52P-PWR-LI-AC

- Forty-eight 10/100/1000 Base-T ports and four 100/1000Base-X ports
- AC power supply , supporting RPS (redundant power supply)
- PoE+
- Forwarding performance: 78Mpps

S5710-28C-LI

- Twenty 10/100/1000 Base-T ports and four GE combo ports
- Subcards supported: 4×1000Base-X SFP, 2×10GE SFP+, 4×10GE SFP+ subcard
- Double hot swappable power supplies
- Forwarding performance: 96Mpps

S5710-28PC-PWR-LI-AC

- Twenty 10/100/1000 Base-T ports and four GE combo ports
- Subcards supported: 4×1000Base-X SFP, 2×10GE SFP+, 4×10GE SFP+ subcard
- Double hot swappable AC power supplies
- PoE+
- Forwarding performance: 96Mpps

S5710-52C-LI

- Forty-eight 10/100/1000 Base-T ports
- Subcards supported: 4×1000Base-X SFP, 2×10GE SFP+, 4×10GE SFP+ subcard
- Double hot swappable power supplies
- Forwarding performance: 132Mpps

S5710-52C-PWR-LI

- Forty-eight 10/100/1000 Base-T ports,
- Subcards supported: 4×1000Base-X SFP, 2×10GE SFP+, 4×10GE SFP+ subcard
- Double hot swappable AC power supplies
- PoE+
- Forwarding performance: 132Mpps

Product Features

Innovative Energy Saving Design

- The S5700-LI offer customers extensive selection of energy-saving with standard mode, basic mode and advanced mode that accommodates most needs. By matching port link down/up, optical-module in-place/out of place, port shut down/undo shutdown, idle period, busy period to increase the proportion of the dynamic energy-saving to reduce the power consumption.
- The S5700-LI series reduces energy consumption without compromising system performance, ensuring good user experience. The S5700-LI adopts multiple cutting-edge energy-saving designs, including Energy Efficient Ethernet (EEE), port energy detection, dynamic CPU frequency adjustment, and device sleeping.

Comprehensive reliability mechanisms

- Besides STP, RSTP, and MSTP, the S5700-LI supports enhanced Ethernet reliability technologies, such as Smart Link and RRPP (Rapid Ring Protection Protocol), which implement millisecond-level protection switchover and ensure network reliability. The S5700 also provides Smart Link multi-instance and RRPP multi-instance to implement load balancing among links, optimizing bandwidth usage.
- The S5700-LI supports the Smart Ethernet Protection (SEP) protocol, a ring network protocol applied to the link layer on an Ethernet network. SEP can be used on open ring networks and can be deployed on upper-layer aggregation devices to provide fast switchover (within 50 ms), ensuring continuous transmission of services. SEP features simplicity, high reliability, fast switchover, easy maintenance, and flexible topology, facilitating network planning and management.
- The S5700-LI supports Ethernet Ring Protection Switching (ERPS), also referred to as G.8032. As the latest ring network protocol, ERPS was developed based on traditional Ethernet MAC and bridging functions and uses mature Ethernet OAM function and a ring automatic protection switching (R-APS) mechanism to implement millisecond-level protection switching. ERPS supports various services and allows flexible networking, helping customers build a network with lower OPEX and CAPEX.

- Complying with IEEE 802.3ah and 802.1ag, the S5700-LI supports point-to-point Ethernet fault management and can detect faults in the last mile of an Ethernet link to users.

Well-designed QoS policies and security mechanisms

- The S5700-LI implements complex traffic classification based on packet information, such as the 5-tuple, IP preference, ToS, DSCP, IP protocol type, ICMP type, TCP source port, VLAN ID, Ethernet protocol type, and CoS. ACLs can be applied to inbound or outbound directions on an interface. The S5700 supports a flow-based two-rate three-color CAR. Each port supports eight priority queues and multiple queue scheduling algorithms, such as WRR, DRR, SP, WRR+SP, and DRR+SP. All of these ensure the quality of voice, video, and data services.
- The S5700-LI provides multiple security measures to defend against Denial of Service (DoS) attacks, as well as attacks against networks or users. DoS attack types include SYN Flood attacks, Land attacks, Smurf attacks, and ICMP Flood attacks. Attacks to networks refer to STP BPDU/root attacks. Attacks to users include bogus DHCP server attacks, man-in-the-middle attacks, IP/MAC spoofing attacks, and DHCP request flood attacks. DoS attacks that change the CHADDR field in DHCP packets are also attacks against users.
- The S5700-LI supports DHCP snooping, which generates user binding entries based on MAC addresses, IP addresses, IP address leases, VLAN IDs, and user access interfaces. DHCP snooping discards invalid packets that do not match any binding entries, such as ARP spoofing packets and IP spoofing packets. This prevents hackers from using ARP packets to initiate man-in-the-middle attacks on campus networks. The interface connected to a DHCP server can be configured as a trusted interface to protect the system against bogus DHCP server attacks.
- The S5700-LI supports strict ARP learning, which prevents ARP spoofing attacks that exhaust ARP entries. It also provides IP source checks to prevent DoS attacks caused by MAC address spoofing, IP address spoofing, and MAC/IP spoofing.
- The S5700-LI supports centralized MAC address authentication, 802.1x authentication, and NAC. It authenticates users based on statically or dynamically bound user information, such as the user name, IP address, MAC address, VLAN ID, access interface, and flag indicating whether antivirus software is installed. VLANs, QoS policies, and ACLs can be dynamically applied to users.
- The S5700-LI can limit the number of MAC addresses learned on an interface to prevent attackers from exhausting MAC address entries by using bogus source MAC addresses. This function minimizes the packet flooding that occurs when users' MAC addresses cannot be found in the MAC address table.

Maintenance-free design and manageability

- The S5700-LI supports automatic configuration, plug-and-play features, and batch remote upgrades. These capabilities simplify device management and maintenance and reduce maintenance costs. The S5700 supports SNMP v1/v2/v3 and provides flexible methods for managing devices. Users can manage the S5700 using the CLI, Web NMS, Telnet, and HGMP. The NQA function assists users with network planning and upgrades. In addition, the S5700 supports NTP, SSH v2, HWTACACS, RMON, log hosts, and port-based traffic statistics.
- The S5700-LI supports GARP VLAN Registration Protocol (GVRP), which dynamically distributes, registers, and propagates VLAN attributes to reduce manual configuration workloads of network administrators and ensure correct VLAN configuration. In a complex network topology, GVRP simplifies VLAN configuration and reduces network communication faults caused by incorrect VLAN configuration.
- The S5700-LI supports MUX VLAN. MUX VLAN isolates the Layer 2 traffic between interfaces in a VLAN. Interfaces in a subordinate separate VLAN can communicate with ports in the principal VLAN, but cannot communicate with each other. MUX VLAN is typically used on an enterprise intranet to isolate user interfaces

from each other while still allowing them to communicate with server interfaces. This function prevents communication between network devices connected to certain interfaces or interface groups, but allows these devices to communicate with the default gateway.

PoE function

- The S5700-LI PWR provides improved PoE solutions. It can use PoE power supplies with different power levels to provide -48 V DC power for powered devices (PDs), such as IP Phones, WLAN APs, and Bluetooth APs. As a power sourcing equipment (PSE), the S5700-LI PWR complies with IEEE 802.3af and 802.3at (PoE+) and can work with PDs that are incompatible with 802.3af or 802.3at. Each port provides a maximum of 30 W of power, complying with IEEE 802.3at. The PoE+ function increases the maximum power available on each port and implements intelligent power management for high-power consumption applications. This facilitates the ease of PD use. PoE ports continue to work while in power-saving mode. Users can configure whether and when a PoE port supplies power.

High scalability

- The S5700-LI supports intelligent stacking (iStack). Multiple S5700s can be connected with stack cables to set up a stack, which functions as a virtual switch. A stack consists of a master switch, a backup switch, and several slave switches. The backup switch takes over services when the master switch fails, reducing service interruption time. Stacks support intelligent upgrades so that users do not need to change the software version of a switch when adding it to a stack. The iStack function allows users to connect multiple switches with stack cables to expand the system capacity. These switches can be managed using a single IP address, which greatly reduces the costs of system expansion, operation, and maintenance. Compared with traditional networking technologies, iStack has distinct advantages regarding scalability, reliability, and system architecture.

Product Specifications

Item	S5700-10P-LI-AC S5700-10P-PWR-LI-AC	S5700-28P-LI* S5700-28P-PWR-LI S5700-28X-LI-AC S5700-28X-LI-DC S5700-28X-PWR-LI-AC	S5700-52P-LI S5700-52P-PWR-LI S5700-52X-LI-AC S5700-52X-LI-DC S5700-52X-PWR-LI-AC	S5710-28C-LI S5710-28C-PWR-LI	S5710-52C-LI S5710-52C-PWR-LI
Fixed port	8*10/100/1000Base-T, 2*100/1000 Base-X SFP	24*10/100/1000 Base-T, 4*100/1000 Base-X SFP 24*10/100/1000 Base-T, 4*10GE SFP+	48*10/100/1000 Base-T, 4*100/1000 Base-X SFP 48*10/100/1000 Base-T, 4*10GE SFP+	20*10/100/1000Base-T, 4*GE Combo	48*10/100/1000Base-T
Extended slot	S5710-28C-LI/S5710-28C-PWR-LI/S5710-52C-LI/S5710-52C-PWR-LI have two extended slots for uplink subcards or stack cards				
MAC address table	16K MAC address entries IEEE 802.1d compliance MAC address learning and aging Static, dynamic, and blackhole MAC address entries Packet filtering based on source MAC addresses				

Item	S5700-10P-LI-AC S5700-10P-PWR-LI-AC	S5700-28P-LI* S5700-28P-PWR-LI S5700-28X-LI-AC S5700-28X-LI-DC S5700-28X-PWR-LI-AC	S5700-52P-LI S5700-52P-PWR-LI S5700-52X-LI-AC S5700-52X-LI-DC S5700-52X-PWR-LI-AC	S5710-28C-LI S5710-28C-PWR-LI	S5710-52C-LI S5710-52C-PWR-LI
VLAN	4K VLANs Guest VLAN and voice VLAN VLAN assignment based on MAC addresses, protocols, IP subnets, policies, and ports 1:1 and N:1 VLAN Mapping SuperVLAN (supported by the S5710-LI)				
Reliability	RRPP ring topology and RRPP multi-instance Smart Link tree topology and Smart Link multi-instance, providing the millisecond-level protection switchover SEP ERPS(G.8032) STP(IEEE 802.1d), RSTP(IEEE 802.1w), and MSTP(IEEE 802.1s) BPDU protection, root protection, and loop protection E-Trunk (supported by the S5710-LI)				
IP routing	Static routing, ECMP (supported by the S5710-LI)				
IPv6 features	Neighbor Discovery (ND) Path MTU (PMTU) IPv6 ping, IPv6 tracert, and IPv6 Telnet ACLs based on the source IPv6 address, destination IPv6 address, Layer 4 ports, or protocol type MLD v1/v2 snooping 6to4 tunnel, ISATAP tunnel, and manually configured tunnel (supported by the S5710-LI)				
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				
QoS/ACL	Rate limiting on packets sent and received by an interface 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 Rate limiting in each queue and traffic shaping on ports				

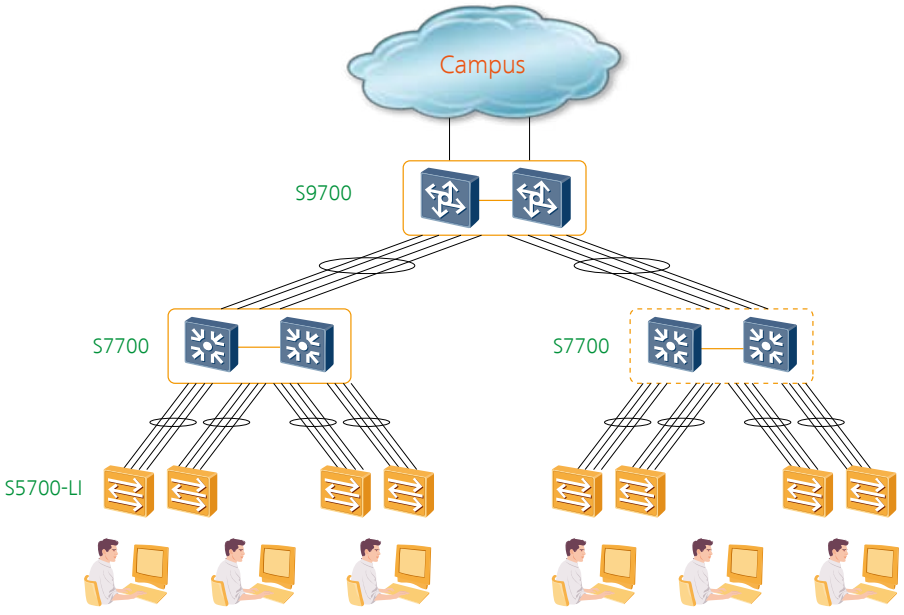
Item	S5700-10P-LI-AC S5700-10P-PWR-LI-AC	S5700-28P-LI* S5700-28P-PWR-LI S5700-28X-LI-AC S5700-28X-LI-DC S5700-28X-PWR-LI-AC	S5700-52P-LI S5700-52P-PWR-LI S5700-52X-LI-AC S5700-52X-LI-DC S5700-52X-PWR-LI-AC	S5710-28C-LI S5710-28C-PWR-LI	S5710-52C-LI S5710-52C-PWR-LI
Security	User privilege management and password protection DoS attack defense, ARP attack defense, and ICMP attack defense Binding of the IP address, MAC address, interface, and VLAN Port isolation, port security, and sticky MAC Blackhole MAC address entries Limit on the number of learned MAC addresses 802.1x authentication and limit on the number of users on an interface AAA authentication, RADIUS authentication, HWTACACS authentication, and NAC SSH v2.0 Hypertext Transfer Protocol Secure (HTTPS) CPU defense Blacklist and whitelist				
Management and maintenance	Stacking MAC Forced Forwarding (MFF) Virtual cable test Port mirroring and RSPAN (remote port mirroring) Remote configuration and maintenance using Telnet SNMP v1/v2/v3 RMON Web NMS HGMP System logs and alarms of different levels GVRP MUX VLAN 802.3az EEE (supported by the S5700-LI) Dying gasp (supported by the S5700-LI)				
Operating environment	Operating temperature: 0°C–50°C (long term); -5°C–55°C (short term) Relative humidity: 10%–90% (non-condensing)				
Input voltage	AC: Rated voltage range: 100 V to 240 V AC, 50/60 Hz Maximum voltage range: 90 V to 264 V AC, 50/60 Hz DC: Rated voltage range: –48 V to –60 V, DC Maximum voltage range: –36 V to –72 V , DC Note: PoE-support switches do not use DC power supplies.				

Item	S5700-10P-LI-AC S5700-10P-PWR-LI-AC	S5700-28P-LI* S5700-28P-PWR-LI S5700-28X-LI-AC S5700-28X-LI-DC S5700-28X-PWR-LI-AC	S5700-52P-LI S5700-52P-PWR-LI S5700-52X-LI-AC S5700-52X-LI-DC S5700-52X-PWR-LI-AC	S5710-28C-LI S5710-28C-PWR-LI	S5710-52C-LI S5710-52C-PWR-LI
Dimensions (W x D x H)	S5700-10P-LI-AC : 250 mm x 180 mm x 43.6 mm S5700-10P-PWR-LI-AC : 320 mm x 220 mm x 43.6 mm S5700-28P-LI/S5700-28X-LI-AC/S5700-28X-LI-DC: 442 mm x 220 mm x 43.6 mm S5700-28P-PWR-LI/S5700-52P-LI/S5700-52P-PWR-LI/S5700-28X-PWR-LI-AC/S5700-52X-LI-AC/S5700-52X-LI-DC/S5700-52X-PWR-LI-AC : 442 mm x 310 mm x 43.6 mm Others: 442 mm x 420 mm x 43.6 mm				
Power consumption	Non PoE <11.5W; PoE<139W	S5700-28P-LI<25W S5700-28P-PWR-LI<765W (PoE: 740W) S5700-28X-LI-AC/ S5700-28X-LI-DC <42W; S5700-28X-PWR-LI-AC <420W	S5700-52P-LI<52W S5700-52P-PWR-LI<792W (PoE: 740W) S5700-52X-LI-AC/ S5700-52X-LI-DC <61W S5700-52X-PWR-LI-AC <440W	S5710-28C-LI<56W S5710-28C-PWR-LI<836W (PoE: 740W)	S5710-52C-LI<78W S5710-52C-PWR-LI<917W (PoE: 740W)

*:S5700-28P-LI is short for S5700-28P-LI-AC and S5700-28P-LI-DC. As product versions are irrelevant to the power supply mode, the product names mentioned in product specifications do not contain AC or DC. This rule also applies to other product models.

Applications

1000 Mbit/s Access Rate for Terminals



Product List

Product Description
S5700-10P-LI-AC Mainframe(8 GE RJ45,2 GE SFP,AC 110/220V)
S5700-28P-LI-AC Mainframe(24 GE RJ45,4 GE SFP,AC 110/220V)
S5700-28P-LI-DC Mainframe(24 GE RJ45,4 GE SFP,DC -48V)
S5710-28C-LI Mainframe(20 GE RJ45,4 GE Combo,Dual Slots of Power and Flexible Card,Including Single 150W AC Power)
S5700-28X-LI-AC Mainframe(24 GE RJ45,4 10GE SFP+,AC 110/220V)
S5700-28X-LI-DC Mainframe(24 GE RJ45,4 10GE SFP+,DC -48V)
S5700-52P-LI-AC Mainframe(48 GE RJ45,4 GE SFP,AC 110/220V)
S5700-52P-LI-DC Mainframe(48 GE RJ45,4 GE SFP,DC -48V)
S5710-52C-LI Mainframe(48 GE RJ45,Dual Slots of Power and Flexible Card,Including Single 150W AC Power)
S5700-52X-LI-AC Mainframe(48 GE RJ45,4 10GE SFP+,AC 110/220V)
S5700-52X-LI-DC Mainframe(48 GE RJ45,4 10GE SFP+,DC -48V)
S5700-10P-PWR-LI-AC Mainframe(8 GE RJ45,2 GE SFP,PoE,AC 110/220V)
S5700-28X-PWR-LI-AC Mainframe(24 GE RJ45,4 10GE SFP+,PoE,AC 110/220V)
S5700-28P-PWR-LI-AC Mainframe(24 GE RJ45,4 GE SFP,PoE,AC 110/220V)
S5710-28C-PWR-LI Mainframe(20 GE RJ45,4 GE Combo,PoE,Dual Slots of Power and Flexible Card,Including Single 500W AC Power)
S5700-52X-PWR-LI-AC Mainframe(48 GE RJ45,4 10GE SFP+,PoE,AC 110/220V)
S5700-52P-PWR-LI-AC Mainframe(48 GE RJ45,4 GE SFP,PoE,AC 110/220V)
S5710-52C-PWR-LI Mainframe(48 GE RJ45,PoE,Dual Slots of Power and Flexible Card,Including Single 500W AC Power)
RPS1800 Redundant Power System
4-Port GE SFP Optical Interface Card(Used In S5700-SI&S5710-LI Series)(Including 4-Port GE SFP Optical Interface Card,Extend Channel Card)
2-Port 10GE SFP+ Optical Interface Card
4-Port 10GE SFP+ Optical Interface Card (Including 4-Port 10GE SFP+ Optical Interface Card,Extend Channel Card)
Ethernet Stack Interface Card(Including Stack Card,100cm Stack Cable)

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

S5700S-LI Series Gigabit Enterprise Switches

Product Overview

The S5700S-LI series gigabit enterprise switches (S5700S-LI for short) are next-generation energy-saving switches developed by Huawei to meet the demand for high-bandwidth access and Ethernet multi-service aggregation. Based on the cutting-edge hardware and Huawei Versatile Routing Platform (VRP) software, the S5700S-LI provides a large switching capacity and high-density GE ports. The S5700S-LI is for use in various enterprise network scenarios. For example, it can function as an access or aggregation switch on a campus network, a gigabit access switch in an Internet data center (IDC), or a desktop switch to provide 1000 Mbit/s access for terminals. The S5700S-LI is easy to install and maintain, reducing workloads for network planning, construction, and maintenance. The S5700S-LI uses advanced reliability, security, and energy conservation technologies, helping enterprise customers build a next generation IT network.

Product Appearance

S5700S-28P-LI-AC

- Twenty-four 10/100/1000 Base-T ports and four 100/1000Base-X ports
- AC power supply, supporting RPS
- Forwarding performance: 42Mpps

S5700S-52P-LI-AC

- Forty-eight 10/100/1000 Base-T ports and four 100/1000Base-X ports
- AC power supply, supporting RPS
- Forwarding performance: 78Mpps

Product Features and highlights

Comprehensive reliability mechanisms

- Besides STP, RSTP, and MSTP, the S5700S-LI supports enhanced Ethernet reliability technologies such as Smart Link and RRPP (Rapid Ring Protection Protocol), which implement millisecond-level protection switchover and ensure network reliability. It also provides Smart Link multi-instance and RRPP multi-instance to implement load balancing among links, optimizing bandwidth usage.
- The S5700S-LI supports the Smart Ethernet Protection (SEP) protocol, a ring network protocol applied to the link layer on an Ethernet network. SEP can be used on open ring networks and can be deployed on upper-layer aggregation devices to provide fast switchover (within 50 ms), ensuring non-stop transmission of services. SEP features simplicity, high reliability, fast switchover, easy maintenance, and flexible topology, facilitating network planning and management.
- Complying with IEEE 802.3ah and 802.1ag, the S5700S-LI supports point-to-point Ethernet fault management and can detect faults in the last mile of an Ethernet link to users.

Well-designed QoS policies and security mechanisms

- The S5700S-LI implements complex traffic classification based on packet information such as the 5-tuple, IP preference, ToS, DSCP, IP protocol type, ICMP type, TCP source port, VLAN ID, Ethernet protocol type, and CoS. ACLs can be applied to inbound or outbound direction on an interface. The S5700S-LI supports a flow-based two-rate three-color CAR. Each port supports eight priority queues and multiple queue scheduling algorithms such as WRR, DRR, PQ, WRR+PQ, and DRR+PQ. All of these ensure the quality of voice, video, and data services.
- The S5700S-LI provides multiple security measures to defend against Denial of Service (DoS) attacks, and attacks against networks or users. DoS attack types include SYN Flood attacks, Land attacks, Smurf attacks, and ICMP Flood attacks. Attacks to networks refer to STP BPDU/root attacks. Attacks to users include bogus DHCP server attacks, man-in-the-middle attacks, IP/MAC spoofing attacks, DHCP request flood attacks. DoS attacks that change the CHADDR field in DHCP packets are also attacks against users.
- The S5700S-LI supports DHCP snooping, which generates user binding entries based on MAC addresses, IP addresses, IP address leases, VLAN IDs, and access interfaces of users. DHCP snooping discards invalid packets that do not match any binding entries, such as ARP spoofing packets and IP spoofing packets. This prevents man-in-the-middle attacks to campus networks that hackers initiate by using ARP packets. The interface connected to a DHCP server can be configured as a trusted interface to protect the system against bogus DHCP server attacks.
- The S5700S-LI supports strict ARP learning, which prevents ARP spoofing attacks that will exhaust ARP entries. It also provides IP source check to prevent DoS attacks caused by MAC address spoofing, IP address spoofing, and MAC/IP spoofing.
- The S5700S-LI supports centralized MAC address authentication, 802.1x authentication, and NAC. It authenticates users based on statically or dynamically bound user information such as the user name, IP address, MAC address, VLAN ID, access interface, and flag indicating whether antivirus software is installed. VLANs, QoS policies, and ACLs can be applied to users dynamically.
- The S5700S-LI can limit the number of MAC addresses learned on an interface to prevent attackers from exhausting MAC address entries by using bogus source MAC addresses. This function minimizes packet flooding that occurs when MAC addresses of users cannot be found in the MAC address table.

Easy deployment and maintenance free

- The S5700S-LI supports automatic configuration, plug-and-play, and batch remote upgrade. These capabilities simplify device management and maintenance and reduce maintenance costs. The S5700S-LI supports SNMP v1/v2/v3 and provides flexible methods for managing devices. Users can manage the S5700S-LI using the CLI, Web NMS, Telnet, and HGMP. The NQA function helps users with network planning and upgrades. In addition, the S5700SLI supports NTP, SSH v2, HWTACACS+, RMON, log hosts, and port-based traffic statistics.

- The S5700S-LI supports GVRP（GARP VLAN Registration Protocol）, which dynamically distributes, registers, and propagates VLAN attributes to reduce manual configuration workloads of network administrators and to ensure correct VLAN configuration. In a complex network topology, GVRP simplifies VLAN configuration and reduces network communication faults caused by incorrect VLAN configuration.
- The S5700S-LI supports MUX VLAN. MUX VLAN isolates Layer 2 traffic between interfaces in a VLAN. Interfaces in a subordinate separate VLAN can communicate with ports in the principal VLAN but cannot communicate with each other. MUX VLAN is usually used on an enterprise intranet to isolate user interfaces from each other but allow them to communicate with server interfaces. This function prevents communication between network devices connected to certain interfaces or interface groups but allows the devices to communicate with the default gateway.

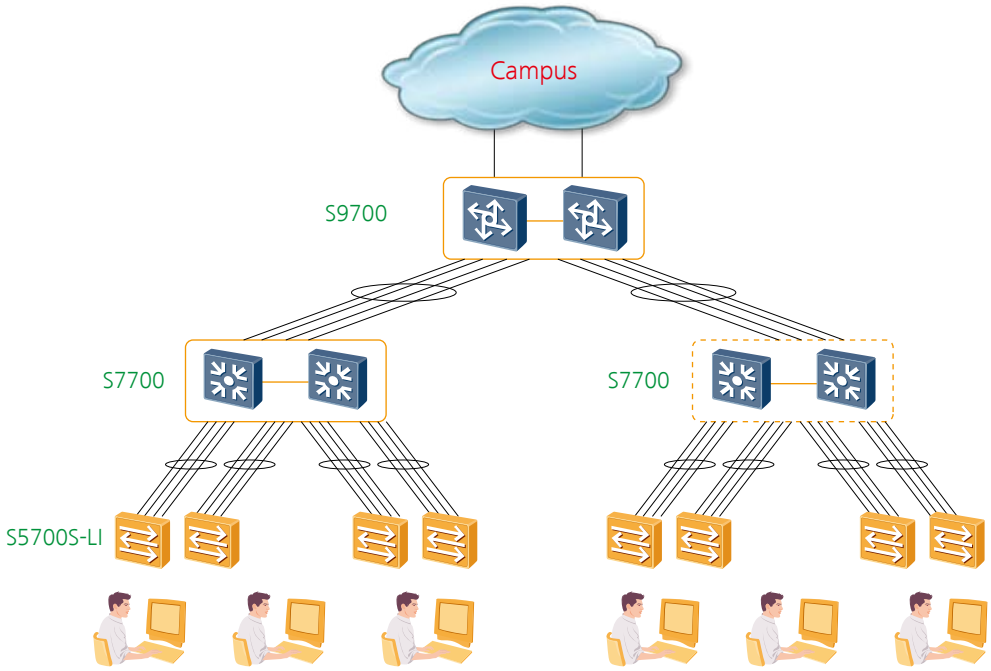
Product Specifications

Item	S5700S-LI	
	S5700S-28P-LI-AC	S5700S-52P-LI-AC
1000M port	24*10/100/1000Base-T, 4*100/1000 Base-X	48*10/100/1000Base-T, 4*100/1000 Base-X
MAC address table	IEEE 802.1d compliance 8 K MAC address entries MAC address learning and aging Static, dynamic, and blackhole MAC address entries Packet filtering based on source MAC addresses	
VLAN	4 K VLANs Guest VLAN and voice VLAN VLAN assignment based on MAC addresses, protocols, IP subnets, policies, and ports QinQ, Selective QinQ 1:1 and N:1 VLAN Mapping GVRP	
Reliability	RRPP ring topology and RRPP multi-instance Smart Link tree topology and Smart Link multi-instance, providing the millisecond-level protection switchover Smart Ethernet Protection (SEP) STP(IEEE 802.1d), RSTP(IEEE 802.1w), and MSTP(IEEE 802.1s) BPDU protection, root protection, and loop protection	
IP routing	Static routing	
IPv6 features	IPv6 host Static IPv6 routes Path MTU (PMTU) IPv6 ping, IPv6 tracert, and IPv6 Telnet ACLs based on the source IPv6 address, destination IPv6 address, Layer 4 ports, or protocol type	
multicast	IGMP v1/v2/v3 snooping and IGMP fast leave MLD v1/v2 snooping Multicast VLAN Multicast load balancing among member ports of a trunk Controllable multicast Port-based multicast traffic statistics	

Item	S5700S-LI	
	S5700S-28P-LI-AC	S5700S-52P-LI-AC
QoS/ACL	Rate limiting on packets sent and received by an interface Packet redirection Port-based traffic policing and two-rate three-color CAR Eight queues on each port WRR, DRR, PQ, WRR+PQ, and DRR+PQ q ueue 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, port number, protocol type, and VLAN ID Rate limiting in each queue and traffic shaping on ports	
Security	User privilege management and password protection DoS attack defense, ARP attack defense, and ICMP attack defense Binding of the IP address, MAC address, interface, and VLAN Port isolation, port security, and sticky MAC Limit on the number of learned MAC addresses 802.1x authentication and limit on the number of users on an interface AAA authentication, RADIUS authentication, HWTACACS authentication, and NAC SSH v2.0 Hypertext Transfer Protocol Secure (HTTPS) CPU defense Blacklist and whitelist	
Surge protection	6 KV surge protection capability on service ports	
Management and maintenance	MAC Forced Forwarding (MFF) Virtual cable test Ethernet OAM (IEEE 802.3ah and 802.1ag) Port mirroring and RSPAN (remote port mirroring) Remote configuration and maintenance by using Telnet SNMP v1/v2/v3 RMON Web NMS HGMP NTP System logs and alarms of different levels DLDP MUX VLAN EEE 802.3az(Energy Efficient Ethernet)	
Operating environment	Operating temperature: 0°C–50°C (long term); -5°C–55°C (short term) Relative humidity: 10%–90% (non-condensing)	
Input voltage	AC: Rated voltage range: 100 V to 240 V AC, 50/60 Hz Maximum voltage range: 90 V to 264 V AC, 50/60 Hz	
Dimensions (W x D x H)	442 mm x 220 mm x 43.6 mm	442 mm x 310 mm x 43.6 mm
Power consumption	< 25W	< 52W

Applications

1000 Mbit/s Access Rate for Terminals



Product List

Product Description
S5700S-28P-LI-AC Mainframe(24 GE RJ45,4 GE SFP,AC 110/220V)
S5700S-52P-LI-AC Mainframe(48 GE RJ45,4 GE SFP, AC 110/220V)

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

S3700 Series Enterprise Switches

Product Overview

The S3700 series enterprise switches (S3700s) are next-generation energy-saving Layer 3 switches. The S3700 utilizes cutting-edge hardware and Huawei Versatile Routing Platform (VRP) software to provide high-performance access and aggregation to an enterprise campus network. The S3700 is easy to install and maintain. With its flexible VLAN deployment, PoE capabilities, comprehensive routing functions, and capability to migrate to an IPv6 network, the S3700 helps enterprise customers build next-generation IT networks. In addition, the S3700 uses advanced reliability technologies such as stacking, VRRP, and RRPP, enhancing network reliability and diversity.

The S3700 is a box device that is 1 U high. It is available in a standard version (SI), an enhanced version (EI), and an advanced version (HI). The SI version provides Layer 2 functions and basic Layer 3 functions. The EI version supports complex routing protocols and provides more functions than the SI version offers. In addition to the functions of EI, HI supports higher-specification MAC addresses, routes, and multicast table entries, along with powerful hardware capabilities.

Produce Appearance

S3700-26C-HI

- Twenty-two 10/100Base-TX ports, two gigabit combo ports (10/100/1000Base-T or 100/1000Base-X)
- A two-port gigabit optical-port card can be selected as the uplink interface card
- Supports dual pluggable power supplies, AC power supplies, and DC power supplies
- Forwarding performance: 9.3 Mpps

S3700-28TP-SI-AC

S3700-28TP-EI-AC

S3700-28TP-SI-DC

S3700-28TP-EI-DC

- Twenty-four 10/100Base-TX ports, two 1000Base-X SFP ports, and two gigabit combo ports (10/100/1000Base-T or 100/1000Base-X)
- Two models: AC model and DC model
- Forwarding performance: 9.6 Mpps

S3700-28TP-EI-MC-AC

- Twenty-four 10/100Base-TX ports, two 1000Base-X SFP ports, two monitor ports, and two gigabit combo ports (10/100/1000Base-T or 100/1000Base-X)
- AC power supply
- Forwarding performance: 9.6 Mpps

S3700-28TP-PWR-SI

S3700-28TP-PWR-EI

- Twenty-four 10/100Base-TX ports, two 1000Base-X SFP ports, and two gigabit combo ports (10/100/1000Base-T or 100/1000Base-X)
- AC power supply
- PoE+
- Forwarding performance: 9.6 Mpps

S3700-28TP-EI-24S-AC

- Twenty-four 100Base-FX SFP ports, two 1000Base-X SFP ports, and two gigabit combo ports (10/100/1000Base-T or 100/1000Base-X)
- AC power supply
- Forwarding performance: 9.6 Mpps

S3700-52P-SI-AC

S3700-52P-EI-AC

S3700-52P-EI-DC

- Forty-eight 10/100Base-TX ports, two 100/1000Base-X SFP ports, and two 1000Base-X SFP ports
- AC and DC power supply for the EI version; AC power supply for the SI version
- Forwarding performance: 13.2 Mpps

S3700-52P-PWR-SI/EI

- Forty-eight 10/100Base-TX ports, two 100/1000Base-X SFP ports, and two 1000Base-X SFP ports
- AC power supply
- PoE+
- Forwarding performance: 13.2 Mpps

S3700-52P-EI-48S-AC

S3700-52P-EI-48S-DC

- Forty-eight 100Base-FX SFP ports, two 100/1000Base-X SFP ports, and two 1000Base-X SFP ports
- Two models: AC model and DC model
- Forwarding performance: 13.2 Mpps

S3700-52P-EI-24S-AC

S3700-52P-EI-24S-DC

- Twenty-four 10/100Base-TX ports, twenty-four 100Base-FX SFP ports, two 100/1000Base-X SFP ports, and two 1000Base-X SFP ports
- Two models: AC model and DC model
- Forwarding performance: 13.2 Mpps

Product Features

Reliable service support

- The S3700 provides the Multi-VPN-Instance CE (MCE) function to isolate users in different VLANs, ensuring data security and reducing costs.
- The S3700 supports multicast functions such as IGMP snooping, IGMP filter, fast leave, and IGMP proxy. It supports line-speed replication of multicast packets between VLANs, multicast load balancing among member interfaces of a trunk, and controllable multicast, meeting requirements for IPTV and other multicast services.

PoE function

- The S3700 PWR offers an improved Power over Ethernet (PoE) function. Users can determine when or whether a PoE port provides power.
- The S3700 PWR can use PoE power supplies with different power levels to provide -48V DC power for powered devices (PDs), such as IP Phones, WLAN APs, and Bluetooth APs. As a power sourcing equipment (PSE), the S3700 PWR complies with IEEE 802.3af and 802.3at (PoE+) and can work with PDs that are incompatible with 802.3af or 802.3at. Each port provides a maximum of 30W of power, complying with IEEE 802.3at. The PoE+ function increases the maximum power available to each port and implements intelligent power management for high power consumption applications. This facilitates the ease of PD use. PoE ports continue to work while in power-saving mode.

Comprehensive QoS policies and security mechanisms

- The S3700 classifies complex traffic based on packet information such as the 5-tuple, IP preference, ToS, DSCP, IP protocol type, ICMP type, TCP source port, VLAN ID, Ethernet protocol type, and CoS. The S3700 supports a flow-based two-rate three-color CAR. Each port supports eight priority queues and multiple queue scheduling algorithms, such as WRR, DRR, SP, WRR+SP, and DRR+SP. Together, these features ensure high-quality voice, video, and data services.
- The S3700 provides multiple security measures to defend against Denial of Service (DoS) attacks, as well as attacks against networks or individual users. DoS attack types include SYN Flood attacks, Land attacks, Smurf attacks, and ICMP Flood attacks. Attacks on networks refer to STP BPDU/root attacks. Attacks on users include bogus DHCP server attacks, man-in-the-middle attacks, IP/MAC spoofing attacks, and DHCP request flood attacks. DoS attacks that change the CHADDR field in DHCP packets are another type of attack aimed at users.
- The S3700 supports DHCP snooping, which generates user binding entries based on users' access interfaces, MAC addresses, IP addresses, IP address leases, and VLAN IDs. DHCP snooping discards invalid packets that do not match any binding entries, such as ARP spoofing packets and IP spoofing packets. This prevents hackers from using ARP packets to initiate man-in-the-middle attacks on campus networks. The interface connected to a DHCP server can be configured as a trusted interface to protect the system against bogus DHCP server attacks.
- The S3700 supports strict ARP learning, which prevents ARP spoofing attacks that exhaust ARP entries. The S3700 also provides IP source guard to prevent DoS attacks caused by MAC address spoofing, IP address spoofing, and MAC/IP spoofing.
- The S3700 supports centralized MAC address authentication and 802.1x authentication. It authenticates users based on statically or dynamically bound user information, such as the user name, IP address, MAC address, VLAN ID, access interface, and flag indicating whether antivirus software is installed. VLANs, QoS policies, and ACLs can be dynamically applied to users.
- The S3700 can limit the number of MAC addresses learned on an interface to prevent attackers from exhausting MAC address entries by using bogus source MAC addresses. This function minimizes the packet flooding that occurs when users' MAC addresses cannot be found in the MAC address table.

Various routing and IPv6 features

- The S3700 supports various routing protocols, including static routing, RIPv1, RIPv2, OSPF, IS-IS and BGP.
- S3700 hardware supports IPv4/IPv6 dual stack, IPv6 over IPv4 tunnels (including manual tunnels, 6to4 tunnels, and ISATAP tunnels), and Layer 3 line-speed forwarding. The S3700 can be deployed on IPv4 networks, IPv6 networks, or networks that run both IPv4 and IPv6. This makes networking flexible and enables a network to migrate from IPv4 to IPv6.
- The S3700 supports various IPv6 routing protocols including RIPng and OSPFv3. It uses the IPv6 Neighbor Discovery Protocol (NDP) to manage the packets exchanged between neighbors. The S3700 also provides a path MTU (PMTU) discovery mechanism to select an appropriate MTU on the path from the source to the destination, optimizing network resource utilization and obtaining maximum throughput.

High scalability and reliability

- The S3700 supports intelligent stacking (iStack). Multiple S3700s can be connected with stack cables to set up a stack, which functions as a virtual switch. The backup switch takes over services when the master switch fails, reducing service interruption time. Stacks support intelligent upgrades so that users do not

need to change the software version of a switch when adding it to a stack. The iStack function allows users to connect multiple switches with stack cables to expand the system capacity. These switches can be managed using a single IP address, which greatly reduces the costs of system expansion, operation, and maintenance. Compared with traditional networking technologies, iStack has distinct advantages regarding scalability, reliability, and system architecture.

- Besides STP, RSTP, and MSTP, the S3700 supports enhanced Ethernet reliability technologies, such as Smart Link and RRPP, which implement millisecond-level protection switchovers and ensure network reliability. The S3700 also provides RRPP multi-instance for load balancing among links, optimizing bandwidth usage.
- The S3700 supports Ethernet Ring Protection Switching (ERPS), also referred to as G.8032. As the latest ring network protocol, ERPS was developed based on traditional Ethernet MAC and bridging functions and uses mature Ethernet OAM function and a ring automatic protection switching (R-APS) mechanism to implement millisecond-level protection switching. ERPS supports various services and allows flexible networking, helping customers build a network with lower OPEX and CAPEX.
- The S3700 supports BFD, which provides millisecond-level fault detection for protocols, such as OSPF, IS-IS, VRRP, and PIM to improve network reliability. Complying with IEEE 802.3ah and 802.1ag, the S3700 supports point-to-point Ethernet fault management and can detect faults within the last mile of an Ethernet link to users.
- The reliable design of the S3700 is highly expansible and compatible. The S3700 can work with devices on existing networks, which protects customer investments and enables customers to deploy new services.

Maintenance-free design and manageability

- The S3700 offers a maintenance-free design which supports batch remote upgrades. The S3700 provides multiple maintenance and management modes to help users monitor various data. In addition, it supports HGMP v2, SNMP, NTP, SSH v2, HWTACACS, RMON, port-based traffic statistics, and NQA.
- The S3700 supports GARP VLAN Registration Protocol (GVRP), which dynamically distributes, registers, and propagates VLAN attributes to reduce network administrator workloads and ensure the correct configuration of VLANs. In a complex network topology, GVRP simplifies VLAN configuration and reduces network communication faults caused by incorrect VLAN configuration.
- The S3700 supports MUX VLAN. MUX VLAN isolates the Layer 2 traffic between interfaces in a VLAN. Interfaces in a subordinate separate VLAN can communicate with ports in the principal VLAN, but cannot communicate with each other. MUX VLAN is typically used on an enterprise intranet to isolate user interfaces from each other while still allowing them to communicate with server interfaces. This function prevents communication between network devices connected to certain interfaces or interface groups, but allows these devices to communicate with the default gateway.

Unique fan-free and energy-saving design

- S3700s that are equipped with 24 electrical ports offer a fan-free design, which dramatically reduces power consumption and eliminates noise. This design reduces mechanical faults and protects the device against damage caused by condensed water and dust.
- The S3700 incorporates an energy-saving integrated circuit design to ensure even heat dissipation. Idle ports can enter a sleep mode to further reduce power consumption.
- Radiation produced by the S3700 is within the standard range for electric appliances and causes no harm to the human body.

Product Specifications

Item	S3700-SI*	S3700-EI*	S3700-HI*
100M port	S3700-28TP-EI**/S3700-28TP-SI/S3700-28TP-PWR-SI/S3700-28TP-PWR-EI/ S3700-28TP-EI-MC: 24*10/100Base-TX S3700-52P-EI/S3700-52P-SI/S3700-52P-PWR-EI/S3700-52P-PWR-SI: 48*10/100Base-T S3700-28TP-EI-24S: 24*100Base-FX S3700-52P-EI-24S: 24*10/100Base-T+24*100Base-FX S3700-52P-EI-48S: 48*100Base-FX S3700-26C-HI: 22*10/100Base-T		
1000M port	SI/EI 28 ports: 2*1000Base-X, 2*GE Combo SI/EI 52 ports: 2*100/1000Base-X, 2*1000Base-X S3700-26C-HI: 2*GE Combo		
Extended slot	The S3700-26C-HI provides an extended slot for an uplink subcard		
MAC address table	IEEE 802.1d compliance 16 K MAC address entries MAC address learning and aging Static, dynamic, and blackhole MAC address entries Packet filtering based on source MAC addresses		32 K MAC address entries Same as EI for all other items
VLAN	4 K VLANs Guest VLANs, voice VLAN, and super VLAN VLAN assignment based on MAC addresses, protocols, and IP subnets QinQ Selective QinQ 1:1 VLAN mapping N:1 VLAN mapping		
Reliability	RRPP (ring topology, intersecting rings, and multi-instance), implementing protection switchover within 50 ms Smart Link tree topology and Smart Link multi-instance, providing the millisecond-level protection switchover STP(IEEE 802.1d), RSTP(IEEE 802.1w), and MSTP(IEEE 802.1s) BPDU protection, root protection, and loop protection Smart Ethernet Protection (SEP) ERPS(Supported by S3700-26C-HI)		
	N/A	BFD for OSPF, BFD for IS-IS, BFD for VRRP, and BFD for PIM	
IP routing	Static routing, RIPv1, RIPv2, and ECMP		
	N/A	OSPF, IS-IS, and BGP	
IPv6 features	Neighbor Discovery (ND) Path MTU (PMTU) IPv6 ping, IPv6 tracert, and IPv6 Telnet Manually configured tunnel 6to4 tunnel ISATAP tunnel ACLs based on the source IPv6 address, destination IPv6 address, Layer 4 ports, or protocol type MLD v1/v2 snooping		

Item	S3700-SI*	S3700-EI*	S3700-HI*
Multicast	1 K multicast groups IGMP v1/v2/v3 snooping and IGMP fast leave Multicast VLAN and multicast replication between VLANs Multicast load balancing among member ports of a trunk Controllable multicast Port-based multicast traffic statistics		2048 multicast groups Same as EI for all other items
	N/A	IGMP v1/v2/v3, PIM-SM, PIM-DM, and PIM-SSM	
QoS/ACL	Rate limiting on packets sent and received by an interface 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 WRED (S3700-26C-HI) Re-marking of the 802.1p priority and DSCP priority Packet filtering on Layers 2 through 4, filtering out invalid frames based on the source MAC address, destination MAC address, source IP address, destination IP address, port number, protocol type, and VLAN ID Rate limiting in each queue and traffic shaping on ports		
Security	User privilege management and password protection DoS attack defense, ARP attack defense, and ICMP attack defense Binding of the IP address, MAC address, interface, and VLAN Port isolation, port security, and sticky MAC Blackhole MAC address entries Limit on the number of learned MAC addresses 802.1x authentication and limit on the number of users on an interface AAA authentication, RADIUS authentication, HWTACACS authentication, and NAC SSH v2.0 CPU defense Blacklist and whitelist		
Surge protection	6 KV surge protection capability on service ports (1 KV on service ports on PoE devices)		
Management and maintenance	iStack (except the S3700-26C-HI) MAC Forced Forwarding (MFF) Remote configuration and maintenance using Telnet Auto-Config. Virtual cable test Ethernet OAM (IEEE 802.3ah and 802.1ag) Dying gasp power-off alarm (S3700-28TP-EI-MC-AC and S3700-26C-HI) Port mirroring and RSPAN (remote port mirroring) SNMPv1/v2/v3 and RMON MUX VLAN and GVRP Web NMS Auto-Config and HGMP SSHv2 HTTPS (S3700-26C-HI) 802.3az EEE (S3700-26C-HI) System logs and alarms of different levels		

Item	S3700-SI*	S3700-EI*	S3700-HI*
Operating environment	Operating temperature: 0°C–50°C (long term); -5°C–55°C (short term) Relative humidity: 10%–90% (non-condensing)		
Power supply	AC: Rated voltage range: 100 V to 240 V AC; 50/60 Hz Maximum voltage range: 90 V to 264 V AC; 50/60 Hz DC: Rated voltage range: –48 V to –60 V DC Maximum voltage range: –36 V to –72 V DC Note: PoE-support switches do not use DC power supplies.		
Dimen-sions (W x D x H)	S3700-28TP-EI/SI, S3700-28TP-EI-MC, S3700-28TP-EI-24S, S3700-52P-EI/SI , S3700-26C-HI: 442 mm x 220 mm x 43.6 mm S3700-28TP-PWR-EI/SI, S3700-52P-EI-48S, S3700-52P-EI-24S, S3700-52P-PWR-EI/SI: 442 mm x 420 mm x 43.6 mm		
Weight	S3700-28TP-SI<2.5Kg S3700-52P-SI<3Kg S3700-28TP-PWR-SI<4Kg (without power supply) S3700-52P-PWR-SI<4.3Kg (without power supply)	S3700-28TP-EI<2.5Kg S3700-28TP-EI-MC<2.5Kg S3700-28TP-EI-24S<2.6Kg S3700-52P-EI<3Kg S3700-52P-EI-24S<4.8Kg S3700-52P-EI-48S<4.8Kg S3700-28TP-PWR-EI<4Kg (without power supply) S3700-52P-PWR-EI< 4.3Kg (without power supply)	S3700-26C-HI<3.3KG (without power supply)
Power consumption	S3700-28TP-SI<20W S3700-52P-SI<38W S3700-28TP-PWR-SI<818W (PoE: 740W) S3700-52P-PWR-SI<880W (PoE: 740W)	S3700-28TP-EI<20W S3700-28TP-EI-MC<20W S3700-28TP-EI-24S<52W S3700-52P-EI<38W S3700-52P-EI-24S<65W S3700-52P-EI-48S<90W S3700-28TP-PWR-EI<818W (PoE: 740W) S3700-52P-PWR-EI<880W (PoE: 740W)	S3700-26C-HI<50W

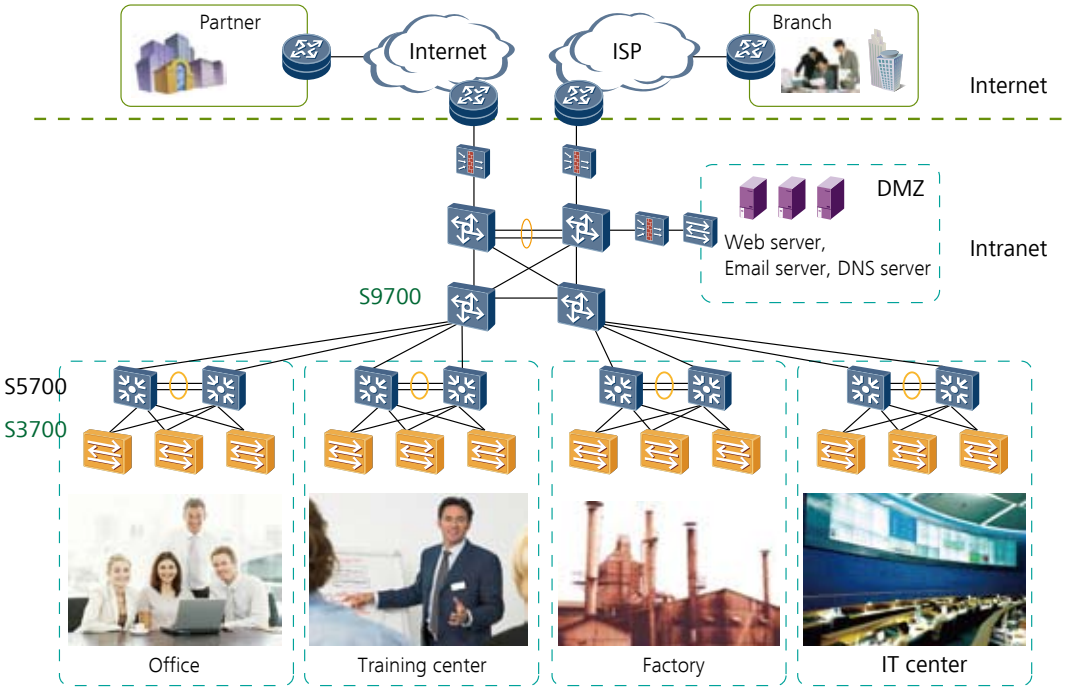
*:The S3700 is provided in the standard version (SI) , enhanced version (EI), and advanced version (HI). The S3700 switches of the EI series are collectively called S3700-EI, the S3700 switches of the SI series are collectively called S3700-SI, and the S3700 switches of the HI series are collectively called S3700-HI.

**:S3700-28TP-EI is short for S3700-28TP-EI-AC and S3700-28TP-EI-DC. As product versions are irrelevant to the power supply mode, the product names mentioned in product specifications do not contain AC or DC. This rule also applies to other product models.

Applications

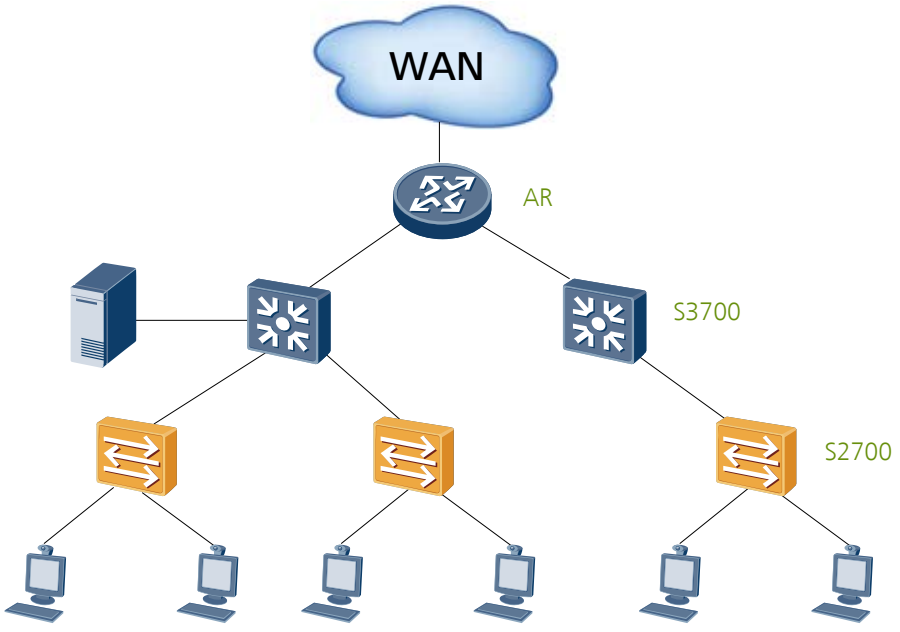
Large-scale Enterprise Networks

The S3700 can function as an access device on large-scale enterprise networks.



Medium- and Small-scale Enterprise Networks

Medium- and small-scale enterprises can use S3700s as core switches. The S3700s provide routing functions to enable users in different departments to communicate with each other. Multiple S3700s can be stacked to expand system capacity and increase the number of ports.



Product List

Product Description
S3700-28TP-SI-DC Mainframe(24 FE RJ45,2 GE Combo,2 GE SFP,DC -48V)
S3700-28TP-EI-DC Mainframe(24 FE RJ45,2 GE Combo,2 GE SFP,DC -48V)
S3700-52P-EI-DC Mainframe(48 FE RJ45,4 GE SFP,DC -48V)
S3700-52P-PWR-EI Mainframe(48 FE RJ45,4 GE SFP,PoE,Dual Slots of power,Without Power Module)
S3700-28TP-PWR-EI Mainframe(24 FE RJ45,2 GE Combo,2 GE SFP ,PoE,Dual Slots of power,Without Power Module)
S3700-28TP-EI-AC Mainframe(24 FE RJ45,2 GE Combo,2 GE SFP,AC 110/220V)
S3700-28TP-EI-24S-AC Mainframe(24 FE SFP,2 GE Combo,2 GE SFP,AC 110/220V)
S3700-28TP-EI-MC-AC Mainframe(24 FE RJ45,2 GE Combo,2 GE SFP,2 MC ports,AC 110/220V)
S3700-52P-SI-AC Mainframe(48 FE RJ45,4 GE SFP,AC 110/220V)
S3700-52P-EI-48S-AC Mainframe(48 FE SFP,4 GE SFP,AC 110/220V)
S3700-28TP-SI-AC Mainframe(24 FE RJ45,2 GE Combo,2 GE SFP,AC 110/220V)
S3700-52P-EI-24S-AC Mainframe(24 FE RJ45,24 FE SFP,4 GE SFP,AC 110/220V)
S3700-52P-EI-AC Mainframe(48 FE RJ45,4 GE SFP,AC 110/220V)
S3700-52P-EI-48S-DC Mainframe(48 FE SFP,4 GE SFP,DC -48V)
S3700-52P-EI-24S-DC Mainframe(24 FE RJ45,24 FE SFP,4 GE SFP,DC -48V)
S3700-26C-HI Mainframe (22 FE RJ45,2 GE Combo,Dual Slots of power,Single Slot of Flexible Card,Without Flexible Card and Power Module)
2-Port GE SFP Optical Interface Card (Used In S3700-26C-HI)
170W DC power module (Used In S3700-26C-HI)
170W AC Power Module(Used In S3700-26C-HI)
S3700-52P-PWR-SI Mainframe(48 FE RJ45,4 GE SFP,PoE,Dual Slots of Power,Including Single 500W AC Power)
S3700-28TP-PWR-SI Mainframe(24 FE RJ45,2 GE Combo,2 GE SFP,PoE,Dual Slots of Power,Including Single 500W AC Power)
250W AC Power Module
500W AC Power Module

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

S2700 Series Enterprise Switches

Product Overview

The S2700 series enterprise switches (S2700s) are next-generation energy-saving intelligent 100M Ethernet switches. The S2700 utilizes cutting-edge switching technologies and Huawei Versatile Routing Platform (VRP) software to meet the demand for multi-service provisioning and access on Ethernet networks. It is easy to install and maintain and can be used in a variety of enterprise network scenarios. With its flexible VLAN deployment, comprehensive security and QoS policies, and energy-saving technologies, the S2700 helps enterprise customers build next-generation IT networks.

The S2700 is a box device that is 1 U high. It is available in a standard version (SI) or an enhanced version (EI).

Product Appearance

S2700-9TP-SI-AC

S2700-9TP-EI-AC

S2700-9TP-EI-DC

- Eight 10/100Base-TX ports and one gigabit combo port (10/100/1000Base-T or 100/1000Base-X)
- AC and DC power supply for the EI version; AC power supply for the SI version
- Forwarding performance: 2.7 Mpps

S2700-9TP-PWR-EI

- Eight 10/100Base-TX ports and one gigabit combo port (10/100/1000Base-T or 100/1000Base-X)
- AC power supply
- PoE+
- Forwarding performance: 2.7 Mpps

S2700-18TP-SI-AC

S2700-18TP-EI-AC

- Sixteen 10/100Base-TX ports and two gigabit combo ports (10/100/1000Base-T or 100/1000Base-X)
- AC power supply
- Forwarding performance: 5.4 Mpps

S2700-26TP-SI-AC

S2700-26TP-EI-AC

S2700-26TP-EI-DC

- Twenty-four 10/100Base-TX ports and two gigabit combo ports (10/100/1000Base-T or 100/1000Base-X)
- AC and DC power supply for the EI version; AC power supply for the SI version
- Forwarding performance: 6.6 Mpps

S2700-26TP-PWR-EI

- Twenty-four 10/100Base-TX ports and two gigabit combo ports (10/100/1000Base-T or 100/1000Base-X)
- AC power supply
- PoE+
- Forwarding performance: 6.6 Mpps

S2710-52P-SI-AC

- Forty-eight 10/100Base-TX ports, two 100/1000Base-X SFP ports, and two 1000Base-X SFP ports
- AC power supply
- Forwarding performance: 13.2 Mpps

S2700-52P-EI-AC

- Forty-eight 10/100Base-TX ports, two 100/1000Base-X SFP ports, and two 1000Base-X SFP ports
- AC and DC power supply
- Forwarding performance: 13.2 Mpps

S2710-52P-PWR-SI

- Forty-eight 10/100Base-TX ports, two 100/1000Base-X SFP ports, and two 1000Base-X SFP ports
- AC power supply
- PoE+
- Forwarding performance: 13.2 Mpps

S2700-52P-PWR-EI

- Forty-eight 10/100Base-TX ports, two 100/1000Base-X SFP ports, and two 1000Base-X SFP ports
- AC power supply
- PoE+
- Forwarding performance: 13.2 Mpps

Product Features

Maintenance-free, easy deployment and effortless management

- The S2700 supports automatic configuration and plug-and-play, which dramatically reduces maintenance costs. The S2700 offers a new application-specific integrated circuit (ASIC) switching technique and a fan-free design. This design reduces mechanical faults and protects the device against damages caused by condensed water and dust, reducing the maintenance workload by 53%.
- The S2700 supports batch remote upgrades, which makes the device easy to use and deploy. It provides a Web NMS system with a user-friendly GUI to implement automatic topology discovery, alarm management, and visual configuration, facilitating operation and maintenance. The network quality analyzing (NQA) function assists users with network planning and upgrades. In addition, the S2700 supports HGMP v2, SSH v2, HWTACACS, RMON, and port-based traffic statistics.
- The S2700 supports GARP VLAN Registration Protocol (GVRP), which dynamically distributes, registers, and propagates VLAN attributes to ensure correct VLAN configuration and reduce network administrator workloads.

Flexible service control

- The S2700-EI supports various ACLs. ACL rules can be applied to VLANs to flexibly control ports and schedule VLAN resources.
- The S2700 supports port-based VLAN assignment and MAC address-based VLAN assignment. Port-based VLAN assignment is used in networks where users move frequently, and MAC address-based VLAN assignment applies to networks that require high levels of security.

Excellent security features

- The S2700 supports DHCP snooping, which generates user binding entries based on users' access interfaces, MAC addresses, IP addresses, IP address leases, VLAN IDs. The DHCP snooping function protects enterprises from common attacks such as bogus IP packet attacks, man-in-the-middle attacks, and bogus DHCP server attacks.
- The S2700 can limit the number of MAC addresses that can be learned on an interface to prevent attackers from exhausting MAC address entries by using bogus source MAC addresses. This function minimizes packet flooding, which occurs when users' MAC addresses cannot be found in the MAC address table. The S2700 can also limit the number of ARP entries to prevent ARP spoofing attacks. In addition, it provides an IP source check function to prevent malicious users from using spoofed IP addresses to initiate DoS attacks.
- The S2700 supports centralized MAC address authentication and 802.1x authentication. It authenticates users based on statically or dynamically bound user information such as the user name, IP address, MAC address, VLAN ID, access interface, and flag indicating whether antivirus software is installed. VLANs, QoS policies, and ACLs can be dynamically applied to users.

PoE function

- The S2700 PWR can use Power over Ethernet (PoE) power supplies with different power levels to provide -48 V DC power for powered devices (PDs) such as IP Phones, WLAN APs, and Bluetooth APs. In its role as power sourcing equipment (PSE), the S2700 PWR complies with IEEE 802.3af and 802.3at (PoE+), and can work with PDs that are incompatible with 802.3af or 802.3at (PoE+). Each port provides a maximum of 30 W of power, complying with IEEE 802.3at. The PoE+ function increases the maximum power available on each port and implements intelligent power management for high-power consumption applications. This process facilitates the ease of PD use. PoE ports are still able to work while in power-saving mode.

High scalability

- The S2700 series switches (S2700-52P-EI-AC, S2710-52P-SI-AC, S2700-52P-PWR-EI, and S2710-52P-PWR-SI) support intelligent stacking (iStack). Multiple S2700 switches can be connected with stack cables and set up as a stack to expand the system switching capacity. Meanwhile, stacking switches work as a virtual system and are managed using a single IP address, which greatly reduces cost of system operation and maintenance.
- Other S2700 models support the Huawei Group Management Protocol (HGMP). A maximum of 16 switches can set up a stack using the HGMP protocol and be managed using one IP address. This function implements automatic and centralized management of a large number of sparsely distributed switches.

Comprehensive QoS policies

- The S2700 supports complex traffic classification based on packets' port numbers, VLAN IDs, source MAC/IP addresses, destination MAC/IP addresses, IP protocols, or priorities. By limiting the traffic rate based on traffic classification results, the S2700 implements line-speed forwarding on each port to ensure high-quality voice, video, and data services. Each port supports four queues and multiple queue scheduling algorithms, such as WRR, SP, and WRR+SP.

Powerful surge protection capability

- The S2700 uses the Huawei patented surge protection technique that supports 6 KV surge protection capability on service ports. This effectively protect switches against over lightning induced overvoltage. The Huawei patented surge protection technique greatly reduces the possibility of equipment being damaged by lightning, even in extreme situations or in scenarios where grounding is not feasible.

Quiet operation, energy conservation, and low radiation

- The S2700 uses an energy-saving integrated circuit design to ensure even heat dissipation. Idle ports can enter a sleep mode to further reduce power consumption. The S2700 generates no sound because it does not contain any fans. Radiation produced by the S2700 is within the standard range for electric appliances and causes no harm to the human body.

Product Specifications

Item	S2700-EI*	S2700-SI/S2710-SI*
100M port	S2700-9TP-SI**/S2700-9TP-EI/S2700-9TP-PWR-EI: 8*10/100Base-TX S2700-18TP-SI/S2700-18TP-EI: 16*10/100Base-TX S2700-26TP-SI/S2700-26TP-EI/S2700-26TP-PWR-EI: 24*10/100Base-TX S2710-52P-SI/S2700-52P-EI/S2710-52P-PWR-SI/S2700-52P-PWR-EI: 48*10/100Base-TX	
1000M port	S2700-9TP-SI/S2700-9TP-EI/S2700-9TP-PWR-EI: 1*GE Combo S2710-52P-SI/S2700-52P-EI/S2710-52P-PWR-SI/S2700-52P-PWR-EI: 2*100/1000Base-X,2*1000Base-X Others: 2*GE Combo	
MAC address table	8 K MAC address entries Manual creation and deletion of MAC address entries Aging time of MAC address entries Disabling MAC address learning on an interface or aggregation group Limit on the number of MAC addresses learned on an interface Blackhole MAC address entries	

Item	S2700-EI*	S2700-SI/S2710-SI*
VLAN	4 K VLANs, complying with IEEE 802.1Q Port-based VLAN assignment	
	MAC address-based VLAN assignment Port-based QinQ assignment	N/A
QoS	Port-based rate limiting and flow-based rate limiting Four or eight queues of different priorities on each port Mapping between 802.1p priorities and queues SP, WRR, and SP+WRR algorithms	
	Traffic classification based on the source MAC address, destination MAC address, source IP address, destination IP address, Layer 4 port number, protocol type, VLAN ID, Ethernet protocol, and CoS Flow-based priority marking and packet redirection	N/A
IPv6 features	IPv6 host Static IPv6 routes IPv6 ACLs MLD v1/v2 snooping	IPv6 host Static IPv6 routes
Multicast	IGMP v1/v2/v3 snooping Multicast load balancing among member ports of a trunk Port-based rate limiting and traffic statistics for multicast packets	
Port mirroring	1:1 and N:1 port mirroring	
	Traffic mirroring	N/A
Security	802.1x authentication and limit on the number of users on an interface Dynamic ARP detection IP source guard	N/A
	AAA authentication, RADIUS authentication, HWTACACS authentication, and NAC Binding of the IP address, MAC address, interface, and VLAN Port-based rate limiting Port isolation, port security, and sticky MAC Packet filtering Packet filtering based on MAC addresses Suppression of multicast, broadcast, and unknown unicast packets Limit on the number of learned MAC addresses CPU defense	Port isolation Suppression of multicast, broadcast, and unknown unicast packets CPU defense

Item	S2700-EI*	S2700-SI/S2710-SI*
Surge protection	6 KV surge protection capability on service ports (1 KV on service ports on PoE devices)	
Device management	Stacking Auto-Config CLI-based configuration Remote configuration using Telnet SNMP V1/V2/V3 RMON HGMP v2 SSHv2 Web-based device management GVRP	
Operating environment	Operating temperature: 0°C–50°C (long term); -5°C–55°C (short term) Relative humidity: 10%–90% (non-condensing)	
Power supply	AC: Rated voltage range: 100 V to 240 V AC, 50/60 Hz Maximum voltage range: 90 V to 264 V AC, 50/60 Hz	
	DC: Rated voltage range: –48 V to –60 V DC Maximum voltage range: –36 V to –72 V DC Note: PoE-support switches do not use DC power supplies.	N/A
Dimensions (W x D x H)	S2700-9TP-EI/SI: 250 mm x 180 mm x 43.6 mm S2700-9TP-PWR-EI: 320 mm x 220 mm x 43.6 mm S2700-18TP-EI/SI, S2700-26TP-EI/SI, S2710-52P-SI/S2700-52P-EI: 442 mm x 220 mm x 43.6 mm S2700-26TP-PWR-EI/S2710-52P-PWR-SI/S2700-52P-PWR-EI: 442 mm x 420 mm x 43.6 mm	
Weight	S2700-9TP-EI < 1.4 kg S2700-9TP-PWR-EI < 2.5 kg S2700-18TP-EI < 2.4 kg S2700-26TP-EI < 2.4 kg S2700-52P-EI < 3kg S2700-26TP-PWR-EI < 4 kg (without power supply) S2700-52P-PWR-EI < 4.3 kg (without power supply)	S2700-9TP-SI < 1.4 kg S2700-18TP-SI < 2.4 kg S2700-26TP-SI < 2.4 kg S2710-52P-SI < 3 kg S2710-52P-PWR-SI < 4.3 kg (without power supply)

Item	S2700-EI*	S2700-SI/S2710-SI*
Power consumption	S2700-9TP-EI < 12.8 W S2700-18TP-EI < 14.5 W S2700-26TP-EI<15.5 W S2700-52P-EI < 38 W S2700-9TP-PWR-EI < 154 W (PoE: 124 W) S2700-26TP-PWR-EI < 808W (PoE: 740 W) S2700-52P-PWR-EI < 880W (PoE: 740 W)	S2700-9TP-SI < 12.8 W S2700-18TP-SI < 14.5 W S2700-26TP-SI < 15.5 W S2710-52P-SI < 38 W S2710-52P-PWR-SI < 880 W(PoE: 740 W)

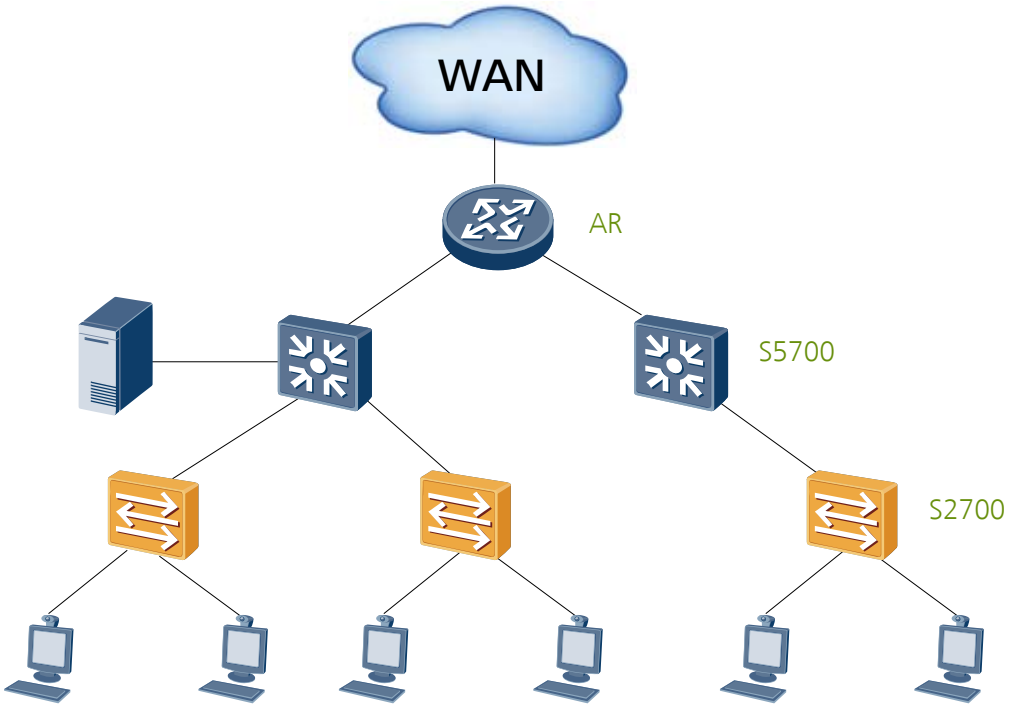
*: The S2700 is provided in the standard version (SI) and enhanced version (EI). The S2700 switches of the EI series are collectively called S2700-EI, and the S2700 switches of the SI series are collectively called S2700-SI. S2710-SI is a sub-series switches of S2700-SI .

**: S2700-9TP-SI is short for S2700-9TP-SI-AC. As product versions are irrelevant to the power supply mode, the product names mentioned in product specifications do not contain AC or DC. This rule also applies to other product models.

Applications

100 Mbit/s Access Rate for Terminals

The S2700 can function as a desktop access device that provides an access rate of 100 Mbit/s for terminals and 1000 Mbit/s uplink interfaces to communicate with uplink devices.



Product List

Product Description
S2700-9TP-EI-AC Mainframe(8 FE RJ45,1 GE Combo,AC 110/220V)
S2700-9TP-EI-DC Mainframe(8 FE RJ45,1 GE Combo,DC -48V)
S2700-9TP-SI-AC Mainframe(8 FE RJ45,1 GE Combo,AC 110/220V)
S2700-18TP-EI-AC Mainframe(16 FE RJ45,2 GE Combo,AC 110/220V)
S2700-18TP-SI-AC Mainframe(16 FE RJ45,2 GE Combo,AC 110/220V)
S2700-26TP-EI-AC Mainframe(24 FE RJ45,2 GE Combo,AC 110/220V)
S2700-26TP-EI-DC Mainframe(24 FE RJ45,2 GE Combo,DC -48V)
S2700-26TP-SI-AC Mainframe(24 FE RJ45,2 GE Combo,AC 110/220V)
S2700-52P-EI-AC Mainframe(48 FE RJ45,4 GE SFP,AC 110/220V)
S2710-52P-SI-AC Mainframe(48 FE RJ45,4 GE SFP,AC 110/220V)
S2700-9TP-PWR-EI Mainframe(8 FE RJ45,1 GE Combo,PoE,AC 110/220V)
S2700-26TP-PWR-EI Mainframe(24 FE RJ45,2 GE Combo,PoE,Dual Slots of power,Without Power Module)
S2700-52P-PWR-EI Mainframe(48 FE RJ45,4 GE SFP,PoE,Dual Slots of Power,Including Single 500W AC Power)
S2710-52P-PWR-SI Mainframe(48 FE RJ45,4 GE SFP,PoE,Dual Slots of Power,Including Single 500W AC Power)
250W PoE power supply unit
500W PoE power supply unit

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

S1700 Series Enterprise Switches

Product Overview

The S1700 series enterprise switches (S1700s) are next-generation energy-saving Ethernet access switches. The S1700 uses high-performance hardware, which offers a wide array of features to help customers build secure, reliable, high-performance networks. The S1700 is easy to install and maintain, and is ideal for small-size and medium-size enterprises, Internet cafes, hotels, and schools.

The S1700 consists of unmanaged switches, SNMP-based switches, and a web-managed switch:

- Unmanaged switches include the S1700-8-AC, S1700-24-AC, S1700-52R-2T2P-AC, S1700-8G-AC, and S1724G.
- SNMP-based switches include the S1700-28FR-2T2P-AC, S1700-52FR-2T2P-AC, S1700-28GFR-4P-AC, and S1700-52GFR-4P-AC.
- The web-managed switch is the S1728GWR-4P-AC.

Product Appearance

S1700-8-AC

- Eight 10/100 M Ethernet electrical ports
- AC power supply
- Packet forwarding rate: 1.2 Mpps

S1700-24-AC

- Twenty-four 10/100 M Ethernet electrical ports
- AC power supply
- Packet forwarding rate: 3.6 Mpps

S1700-52R-2T2P-AC

- Forty-eight 10/100 M Ethernet electrical ports, two GE electrical ports, and two GE optical ports
- AC power supply
- Packet forwarding rate: 13.2 Mpps

S1700-8G-AC

- Eight 10/100/1000 M Ethernet electrical ports
- AC power supply
- Packet forwarding rate: 12 Mpps

S1724G-AC

- Twenty-four 10/100/1000 M Ethernet electrical ports
- AC power supply
- Packet forwarding rate: 36 Mpps

S1728GWR-4P-AC

- Twenty-four 10/100/1000M Ethernet electrical ports and four GE SFP optical ports
- AC power supply
- Packet forwarding rate: 42 Mpps

S1700-28FR-2T2P-AC

- Twenty-four 10/100M Ethernet electrical ports, two GE RJ45 ports, and two GE SFP ports
- AC power supply
- Packet forwarding rate: 9.6Mpps

S1700-52FR-2T2P-AC

- Forty-eight 10/100M Ethernet electrical ports, two GE RJ45 ports, and two GE SFP ports
- AC power supply
- Packet forwarding rate: 13.2Mpps

S1700-28GFR-4P-AC

- Twenty-four 10/100/1000 M Ethernet electrical ports and four GE SFP ports
- AC power supply
- Packet forwarding rate: 42 Mpps

S1700-52GFR-4P-AC

- Forty-eight 10/100/1000M Ethernet electrical ports and four GE SFP ports
- AC power supply
- Packet forwarding rate: 78 Mpps

Product Features

Innovative energy-saving design

- All S1700 series switches except the S1700-52GFR-4P-AC feature a fan-free design, which reduces power consumption and noise.
- The S1700 supports Energy Efficient Ethernet (EEE), which enables the switch to enter a power-saving mode when traffic is light.
- The S1700 can adjust the power output for transmissions based on the cable length. It can also set any ports that are not transmitting traffic to sleep mode.

Non-blocking and high-speed forwarding

- All S1700 ports provide Layer 2 wire-speed forwarding capabilities to ensure non-blocking packet forwarding. S1700 models provide optical and electrical GE uplink ports, which facilitate user access and are cost-effective.
- The S1700 MAC address table supports up to 8 K of MAC addresses, making it easy to expand networks and deploy new services.

Convenient management and maintenance

- The S1700 is easy to manage and maintain, being equipped with a one-key operation button on the front panel.
- Web-managed S1700 models come with a web network management system, making it easy to configure switches.
- SNMP-based S1700 models allow for the use of an SNMP-based NMS for centralized configuration and management.

Powerful security performance

- The S1700 provides a range of security features, including 802.1x, RADIUS, and NAC. The S1700 also supports packet filtering based on MAC addresses or ports in order to defend against hackers and virus attacks.

Great networking and bandwidth extensibility

- The S1700 provides LACP, STP, RSTP, and MSTP functions to implement link aggregation and backup. SNMP-based switches support up to eight MSTP instances for flexible networking.

Product Specifications

Type	Unmanaged Switch					Web-managed Switch	SNMP-based Switch			
Model	S1700-8-AC	S1700-24-AC	S1700-52R-2T2P-AC	S1700-8G-AC	S1724G-AC	S1728GWR-4P-AC	S1700-28FR-2T2P-AC	S1700-52FR-2T2P-AC	S1700-28GFR-4P-AC	S1700-52GFR-4P-AC
Downlink port	Eight 10/100 M electrical ports	Twenty-four 10/100 M electrical ports	Forty-eight 10/100 M electrical ports	Eight 10/100/1000 M electrical ports	Twenty-four 10/100/1000 M electrical ports	Twenty-four 10/100/1000 M electrical ports	Twenty-four 10/100 M electrical ports	Forty-eight 10/100 M electrical ports	Twenty-four 10/100/1000 M electrical ports	Forty-eight 10/100/1000 M electrical ports
Uplink port	Shared with downlink ports	Shared with downlink ports	2 GE electrical ports 2 GE SFP optical ports	Shared with downlink ports	Shared with downlink ports	4 GE SFP optical ports	2 GE electrical ports 2 GE SFP optical ports	2 GE electrical ports 2 GE SFP optical ports	4 GE SFP optical ports	4 GE SFP optical ports
MAC address table	8 K MAC	8 K MAC	8 K MAC	8 K MAC	8 K MAC	8 K MAC	8 K MAC	8 K MAC	8 K MAC	8 K MAC
Dimensions W*D*H	160*134*30mm	320*208*43.6mm	442*220*43.6mm	160*134*30mm	330*208*43.6mm	442*220*43.6mm	442*220*43.6mm	442*220*43.6mm	442*220*43.6mm	442*220*43.6mm
Input voltage	100 V to 240 V AC, 50/60 Hz	100 V to 240 V AC, 50/60 Hz	100 V to 240 V AC, 50/60 Hz	100 V to 240 V AC, 50/60 Hz	100 V to 240 V AC, 50/60 Hz	100 V to 240 V AC, 50/60 Hz	100 V to 240 V AC, 50/60 Hz	100 V to 240 V AC, 50/60 Hz	100 V to 240 V AC, 50/60 Hz	100 V to 240 V AC, 50/60 Hz
EEE	Not supported	Not supported	Not supported	Not Supported	Supported	Supported	Not supported	Not supported	Supported	Supported
Power consumption	<5 W	<10 W	<20 W	<10 W	<20 W	<20 W	<20 W	<30 W	<25 W	<45 W
Operating temperature	0°C to 45°C	0°C to 45°C	0°C to 45°C	0°C to 45°C	0°C to 45°C	0°C to 45°C	0°C to 45°C	0°C to 45°C	0°C to 45°C	0°C to 45°C
Humidity (non-condensing)	20% to 85%	20% to 85%	20% to 85%	20% to 85%	20% to 85%	20% to 85%	20% to 85%	20% to 85%	20% to 85%	20% to 85%
Storage humidity (non-condensing)	10% to 90%	10% to 90%	10% to 90%	10% to 90%	5% to 95%	5% to 95%	10% to 90%	10% to 90%	10% to 90%	10% to 90%
Heat dissipation	Without fan modules	Without fan modules	Without fan modules	Without fan modules	Without fan modules	Without fan modules	Without fan modules	Without fan modules	Without fan modules	With fan modules

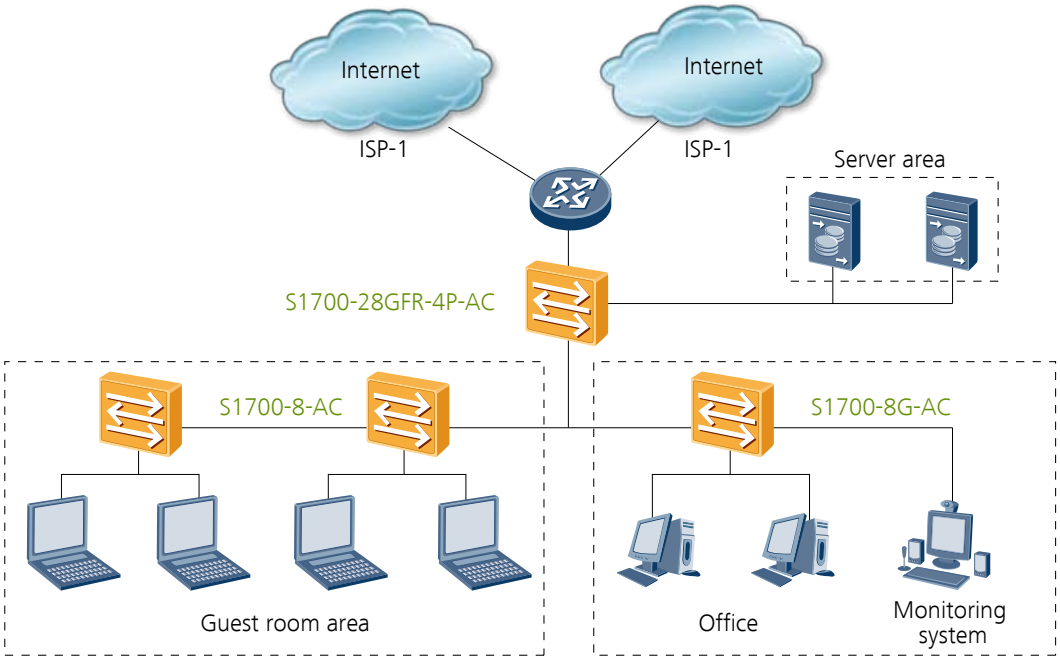
Service Features

Item	Web-managed Switch	SNMP-based Switch
Security features	Packet filtering based on MAC addresses Port-based 802.1x authentication RADIUS authentication Port isolation	Hardware ACL Packet filtering based on MAC addresses MAC address authentication Port-based 802.1x authentication. RADIUS authentication Port isolation Storm suppression Attack defense, which prevents broadcast traffic, ARP attacks, ICMP attacks, TCP attacks, worm viruses, and DoS attacks DHCP snooping
VLANs	256 VLANs Access port Trunk port Hybrid port Management VLAN Voice VLAN	4 K VLANs Access port Trunk port Hybrid port Management VLAN Voice VLAN
QOS	PQ and WRR Four queues on each port Queue scheduling based on 802.1p or DSCP priorities	PQ and WRR Eight queues on each port Queue scheduling based on 802.1p or DSCP priorities
STP	STP(IEEE 802.1d), RSTP(IEEE 802.1w)	STP(IEEE 802.1d), RSTP(IEEE 802.1w), and MSTP(IEEE 802.1s)
Multicast	IGMP snooping and a maximum of 256 multicast groups	IGMP snooping and a maximum of 256 multicast groups Fast leave
Link aggregation	12 link aggregation groups (LAGs) with a maximum of eight ports in each LAG Static LACP	12 link aggregation groups (LAGs) with a maximum of eight ports in each LAG Static LACP
Port mirroring	Port-based bidirectional flow mirroring	Port-based bidirectional flow mirroring Configuring a trunk as a mirrored interface
Bandwidth control	Rate limiting for incoming and outgoing packets, with a granularity of 64 kbps	Rate limiting for incoming and outgoing packets, with a granularity of 64 kbps
Broadcast storm suppression	Broadcast storm suppression based on the interface rate Alarm sending when the traffic rate reaches the upper limit	Broadcast storm suppression based on the interface rate Alarm sending when the traffic rate reaches the upper limit

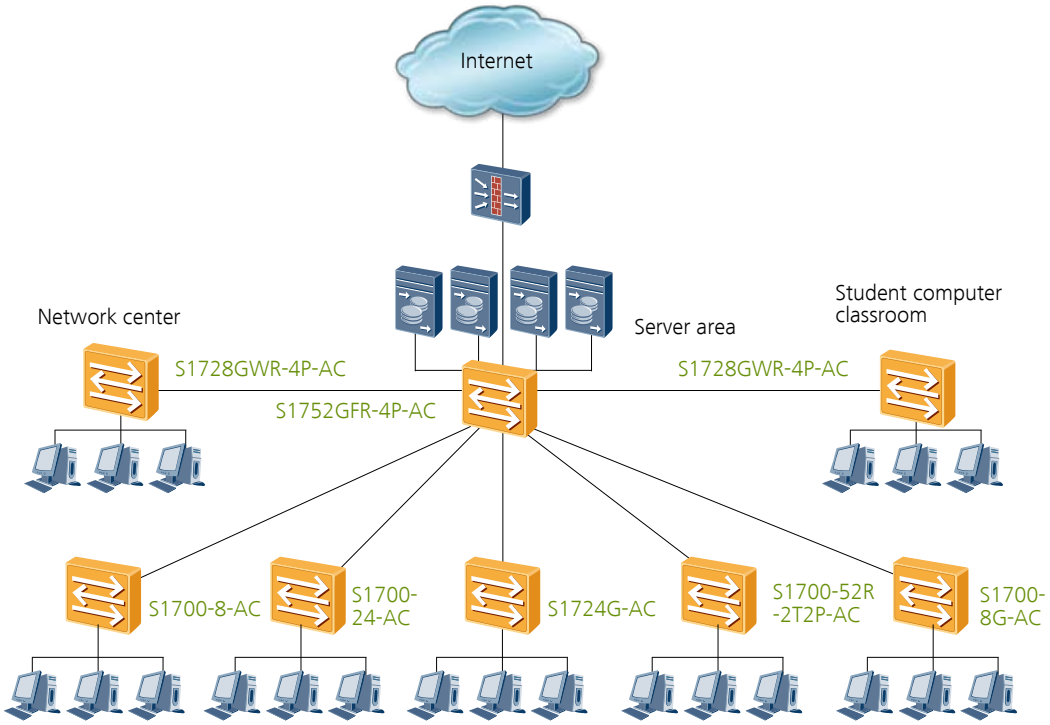
Item	Web-managed Switch	SNMP-based Switch
Device management	Web system network management DHCP client One-key restoration	SNMP Web system network management (HTTPS) DHCP client User password protection One-key restoration
Device maintenance	System log Ping Virtual Cable Test (VCT) Link Layer Discovery Protocol (LLDP)	Remote Network Monitoring (RMON) System log Ping and traceroute Virtual Cable Test (VCT) Link Layer Discovery Protocol (LLDP)

Applications

Hotels



Schools



Product List

S1700 switch models

Product Description
S1700-8-AC Mainframe(8 FE RJ45,AC 110/220V)
S1700-24-AC Mainframe(24 FE RJ45,AC 110/220V)
S1700-52R-2T2P-AC Mainframe(48 FE RJ45,2 GE RJ45,2 GE SFP ,AC 110/220V)
S1700-8G-AC Mainframe(8 GE RJ45,AC110/220V)
S1724G-AC Mainframe(24 GE RJ45,AC 110/220V)
S1728GWR-4P-AC Mainframe(24 GE RJ45,4 GE SFP,AC 110/220V)
S1700-28FR-2T2P-AC Mainframe(24 FE RJ45,2 GE RJ45,2 GE SFP,AC 110/220V)
S1700-52FR-2T2P-AC Mainframe(48 FE RJ45,2 GE RJ45,2 GE SFP,AC 110/220V)
S1700-28GFR-4P-AC Mainframe(24 GE RJ45,4 GE SFP,AC 110/220V)
S1700-52GFR-4P-AC Mainframe(48 GE RJ45,4 GE SFP,AC 110/220V)

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

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