

# Huawei S9700 Series Switches

## Product Brochure



# 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 implement 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, and wireless access. In addition, the S9700 also provides a variety of reliability technologies including non-stop forwarding, hardware OAM/BFD, and ring network protection. These technologies improve customers' network operation efficiency, maximize the device running time, and reduce customers' total cost of ownership (TCO).

An S9700 can be upgraded to an agile switch when it is equipped with X2S/X2E/X2H/X1E cards, the line cards with Huawei's first Ethernet Network Processor (ENP). Agile switches allow customers to make innovations on their networks.

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



S9712



S9706



S9703

## Product Characteristics

### Agile Switch, Enabling Networks to Be More Agile for Services

- The S9700 series' native ACs allow enterprises to build a wireless network without additional AC hardware. Each S9700 switch can manage up to 2,048 APs and 32,768 users. It is a core switch that provides T-bit AC capabilities, avoiding the performance bottleneck on independent AC devices. The native T-bit AC capabilities help organizations better cope with challenges in the high-speed wireless era.

- The S9700 series' unified user management function authenticates both wired and wireless users, ensuring a consistent user experience no matter whether they are connected to the network through wired or wireless access devices. The unified user management function supports various authentication methods, including 802.1x, MAC address, and Portal authentication, and is capable of managing users based on user groups, domains, and time ranges. These functions control user and service management and enable the transformation from device-centered management to user-centered management.
- Packet Conservation Algorithm for Internet (iPCA) changes the traditional method that uses simulated traffic for fault location. iPCA technology monitors network quality for any service flow at any network node, at any time, and without extra costs. It can detect temporary service interruptions within one second and can identify faulty ports accurately. This cutting-edge fault detection technology turns "extensive management" into "fine granular management."
- Super Virtual Fabric 2.0 (SVF 2.0) technology can not only virtualize fixed-configuration switches into S9700 switch line cards but also virtualize APs as switch ports. With this virtualization technology, a physical network with core/aggregation switches, access switches, and APs can be virtualized into a "super switch", offering the simplest network management solution.
- The S9700 series' Service Chain function can virtualize value-added service capabilities, such as next-generation firewall. Then these capabilities can be used by campus network entities (such as switches, routers, AC, AP, and terminals), regardless of their physical locations. Service Chain provides a more flexible value-added service deployment solution, which reduces equipment investment and maintenance costs.
- The S9700 series supports IEEE 1588v2 and Synchronous Ethernet (SyncE), meeting the high-precision synchronization requirements of network systems.

#### Innovative CSS Technology

- The S9700 switches support switch fabric clustering and service port clustering through cluster switching system (CSS) technology. 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 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 High-speed Self Recovery (HSR) technology. Using Huawei's ENP cards, the S9700 implements end-to-end IP MPLS bearer network protection switchover within 50 ms, improving network reliability.
- The S9700 supports hardware-based Ethernet OAM, including comprehensive IEEE 802.3ah, 802.1ag, and ITU-T 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 S9700 supports graceful restart to realize non-stop forwarding and supports non-stop routing, ensuring 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.

#### 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 supports MAC security (MACSec) that enables hop-by-hop secure data transmission. Therefore, the S9700 can be applied to scenarios that pose high requirements on data confidentiality, such as government and finance sectors.

- NGFW is a next-generation firewall card that can be installed on an S9700. In addition to the traditional defense functions such as firewall, identity authentication, and Anti-DDoS, the NGFW supports IPS, anti-spam, web security, and application control functions.
- 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 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. 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
Switching capacity	2.88/5.76 Tbit/s	6.72/14.72 Tbit/s	8.64/18.56 Tbit/s
Packet forwarding rate	2160 Mpps	2880/5040 Mpps	3840/6480 Mpps
Service slots	3	6	12



Item	S9703	S9706	S9712
Wireless network management	Native AC		
	AP access control, AP region management, and AP profile management		
	Radio profile management, uniform static configuration, and centralized dynamic management		
	Basic WLAN services, QoS, security, and user management		
User management	unified user management		
	802.1x, MAC address, and Portal authentication		
	Traffic- and time-based accounting		
	User authorization based on user groups, domains, and time ranges		
iPCA quality awareness	Marking real service packets to obtain real-time count of dropped packets and packet loss ratio		
	Counting number of dropped packets and packet loss ratio on devices and L2/L3 networks		
SVF 2.0 virtualization	Virtualizing access switches (ASs) and APs into one logical device to simplify management and maintenance		
	Two layers of ASs allowed in an SVF system		
	Third-party devices allowed between SVF parent and clients		
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/ERPS	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		
	ERPS (G.8032)		
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+		

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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		
	NSR, 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)		
	HSR		
	Supports ITU-Y.1731		
	Supports DLDP		
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 SP, WRR, DRR, SP+WRR, and SP+DRR		
	Supports congestion avoidance mechanisms, such as WRED and tail drop		
	Supports H-QoS		
	Supports traffic shaping		
Network synchronization	Ethernet synchronization		
	1588v2		

Item	S9703	S9706	S9712
Configuration and maintenance	Supports console, telnet, and SSH terminals		
	Supports the network management protocols, such as SNMP v1/v2c/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		
	MACsec		
	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 1K 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		
	Supports IPS		
Interoperability	Supports VBST (Compatible with PVST/PVST+/RPVST)		
	Supports LNP (Similar to DTP)		
	Supports VCMP (Similar to VTP)		
Energy saving	Supports IEEE 802.3az: Energy Efficient Ethernet (EEE)		
Dimensions (H x W x D in mm)	175 x 442 x 489, 4U	441.7 x 442 x 489, 10U	663.95 x 442 x 489, 15U
Chassis weight (empty)	11 kg	29 kg	37 kg
Operating voltage	DC: -40V ~ -72V AC: 90 V to 290 V		



Item	S9703	S9706	S9712
Power supply capability of the equipment	2200W	4400W	6600W

\*: The S9700 supports the NGFW and IPS cards. For more specification information, see the brochures of the cards.

## Order Information

Basic Configuration	
LE2BN66ED000	N66E DC Assembly Rack (Eight 60A Outputs, maximum 2200W per output, 600 x 600 x 2200mm)
LE0BN66EAC	N66E AC Assembly Rack (Eight 10A Outputs, maximum 1600W per output, 600 x 600 x 2200mm)
LE2BN66EA000	N66E AC Assembly Rack (Four 16A Outputs, maximum 2500W per output, 600 x 600 x 2200mm)
EH1BS9703E00	S9703 assembly chassis
EH1BS9706E00	S9706 assembly chassis
EH1BS9712E00	S9712 assembly chassis
EH1M00FBX000	Wide Voltage 74 Fan Box
Monitoring Unit (Sustain FCC)	
EH1D200CMU00	Centralized monitoring unit
MPU	
EH1D2MCUAC00	S9703 MCUA-clock (Sustain FCC)
EH1D2SRUDC00	S9706/S9712 SRUD-clock
EH1D2SRUC000	S9706/S9712, Main Control Unit C, Option clock
100M/1000M Ethernet Electrical Interface Card (Sustain FCC)	
EH1D2T24XEA0	24-port 100M/1000M Ethernet electrical interface and 2-port 10G 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)
EH1D2G48TEC0	48-port 100M/1000M Ethernet electrical interface card (EC, RJ45)
EH1D2G48TX1E	48-Port 10/100/1000BASE-T Interface Card(X1E, RJ45)
100M/1000M Ethernet Optical Interface Card (Sustain FCC)	
EH1D2G24SEC0	24-port 100M/1000M Ethernet optical interface card (EC, SFP)
EH1D2G24SED0	24-port 100M/1000M Ethernet optical interface card (ED, SFP)

Basic Configuration	
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)
EH1D2G48SEC0	48-port 100M/1000M Ethernet optical interface card (EC, SFP)
EH1D2G48SX1E	48-Port 100/1000BASE-X Interface Card (X1E, 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)
EH1D2X04XEA0	4-port 10GE optical interface card (EA, XFP)
EH1D2S04SX1E	4-port 10GBASE-X and 24-port 100/1000BASE-X and 8-port 10/100/1000BASE-T combo interface card (X1E, RJ45/SFP/SFP+)
EH1D2X08SED4	8-port 10GE optical interface card (ED, SFP+)
EH1D2S08SX1E	8-Port 10GBASE-X and 8-Port 100/1000BASE-X and 8-Port 10/100/1000BASE-T Combo Interface (X1E, RJ45/SFP/SFP+)
EH1D2X12SSA0	12-port 10GE optical interface card (SA, SFP+)
EH1D2X16SSC2	16-Port 10GBASE-X Interface Card (SC,SFP+)
EH1D2X32SSC0	32-Port 10GBASE-X Interface Card (SC,SFP+)
EH1D2X48SEC0	48-port 10GBASE-X interface card (EC,SFP+)
ET1D2X32SX2H	32-Port 10GE SFP+ Interface Card(X2H,SFP+)
ET1D2X32SX2S	32-Port 10GE SFP+ Interface Card(X2S,SFP+)
ET1D2X32SX2E	32-Port 10GE SFP+ Interface Card(X2E,SFP+)
ET1D2S24SX2S	24-Port 10GE SFP+ Interface and 8-Port GE SFP Interface Card(X2S,SFP+)
ET1D2S24SX2E	24-Port 10GE SFP+ Interface and 8-Port GE SFP Interface Card(X2E,SFP+)
ET1D2S16SX2S	16-Port 10GE SFP+ Interface and 16-Port GE SFP Interface Card(X2S,SFP+)
ET1D2S16SX2E	16-Port 10GE SFP+ Interface and 16-Port GE SFP Interface Card(X2E,SFP+)
ET1D2X48SX2S	48-Port 10GE SFP+ Interface Card(X2S,SFP+)
40GE Optical Interface Card(Sustain FCC)	
EH1D2L02QFC0	2-port 40GBASE-X interface card(FC, QSFP+)
EH1D2L08QFC0	8-port 40GBASE-X interface card (FC, QSFP+)
EH1D2L08QX2E	8-Port 40GE QSFP+ Interface Card(X2E,QSFP+)

Basic Configuration	
100GE optical interface cards	
EH1D2C02FEE0	2-Port 100GBASE-X Interface Card(EF,CFP)
ET1D2C04HX2S	4-Port 100GE QSFP28 Interface Card(X2S,QSFP28)
ET1D2C04HX2E	4-Port 100GE QSFP28 Interface Card(X2E,QSFP28)
ET1D2H02QX2S	2-Port 100GE QSFP28 Interface and 2-Port 40GE QSFP+ Interface Card(X2S,QSFP28)
ET1D2H02QX2E	2-Port 100GE QSFP28 Interface and 2-Port 40GE QSFP+ Interface Card(X2E,QSFP28)
Service Subcards	
EH1D2VS08000	8-Port 10G Cluster Switching System Service Unit (SFP+)
LE0D00CKMA00	Clock Pinch Board-1588
Service Processing Unit (Sustain FCC)	
ET1D2FW00S00	NGFW Module A, with HW General Security Platform Software
ET1D2FW00S01	NGFW Module B, with HW General Security Platform Software
ET1D2FW00S02	NGFW Module C, with HW General Security Platform Software
ET1D2IPS0S00	IPS Module A, with HW General Security Platform Software
ACU2	WLAN ACU2 Access Controller Unit (128 AP Control Resource Included)
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)
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)
GE-SFP Optical Module	
SFP-1000BaseT	Electrical module-SFP-GE- electrical interface modules (100 m, RJ45)
eSFP-GE-SX-MM850	Optical module -eSFP-GE- multi-mode 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)
10GE-XFP Optical Module	
XFP-SX-MM850	Optical module -XFP-10G- multi-mode 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)

Basic Configuration	
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, single-mode module (1310 nm, 10 km, LC)
OSX040N01	Optical module, SFP+, 10G, single-mode module (1550 nm, 40 km, LC)
OSXD22N00	Optical module, SFP+, 10 G, multi-mode module (1310 nm, 0.22 km, LC, LRM)
SFP-10G-USR	Optical Transceiver, SFP+, 10G,Multi-mode Module (850nm, 0.1km,LC)
SFP-10G-ZR	Optical Transceiver, SFP+, 10G, Single-mode Module (1550nm, 80km, LC)
SFP-10G-ZCW1571	Optical Transceiver, SFP+, 10G, Single-mode Module (CWDM, 1571nm, 70km, LC)
SFP-10G-ZCW1591	Optical Transceiver, SFP+, 10G, Single-mode Module (CWDM, 1591nm, 70km, LC)
SFP-10G-ZCW1611	Optical Transceiver, SFP+, 10G, Single-mode Module (CWDM, 1611nm, 70km, LC)
SFP-10G-iLR	Optical Transceiver, SFP+, 9.8G, Single-mode Module (1310nm, 1.4km, LC)
40GE-QSFP/CFP Optical Module	
QSFP-40G-iSR4	40GBase-iSR4 Optical transceiver, QSFP, 40G, multi-mode (850nm, 0.15km, MPO) (Connect to four SFP+)
QSFP-40G-LX4	40GBase-LX4 Optical Transceiver,QSFP+,40GE,Single-mode(1310nm,2km,LC),Multi-mode(1310nm,0.15km,LC)
QSFP-40G-iSM4	40GBase-iSM4 Optical Transceiver, QSFP+, 40G, Single-mode Module (1310nm,1.4km,MPO)(Connect to four SFP+ Optical Transceiver)
QSFP-40G-eSM4	40GBase-eSM4 Optical Transceiver, QSFP+, 40G, Single-mode Module (1310nm,10km,MPO)(Connect to four SFP+ Optical Transceiver)
QSFP-40G-LR4	40GBase-LR4 Optical Transceiver, QSFP+, 40GE, Single-mode Module (1310nm, 10km, LC)
QSFP-40G-eSR4	40GBase-eSR4 Optical Transceiver, QSFP+, 40G, Multi-mode (850nm, 0.3km, MPO) (Connect to four SFP+ Optical Transceiver)
CFP-40G-SR4	High Speed Transceiver, CFP, 40G, Multimode Module (850nm, 4*10G, 0.1km, MPO)
CFP-40G-LR4	High Speed Transceiver, CFP, 40G, Single-mode Module (1310nm band, 41.25G, 10km, stright LC)
CFP-40G-ER4	High Speed Transceiver, CFP, 40G, Single-mode Module (1310nm band, 41.25G, 40km, stright LC)
CFP-40G-ZR4	High Speed Transceiver,CFP,40G,Single-mode Module(1550nm band,41.25G,80km,stright LC)
QSFP-40G-ER4	40GBase-ER4 Optical Transceiver, QSFP+, 40G, Single-mode Module (1310nm, 40km, LC)
100GE optical transceivers	

Basic Configuration	
CFP-100G-SR10	High Speed Transceiver,CFP,100G,Multimode Module (850nm,10*10G,0.1km,MPO) (Can connect to 10 SFP+ ports or 2 QSFP+ ports)
CFP-100G-LR4	High Speed Transceiver, CFP, 100G, Single-mode Module (1310nm band, 4*25G, 10km, stright LC)
CFP-100G-ER4	High Speed Transceiver, CFP, 100G, Single-mode Module (1310nm band, 4*25G, 40km, stright LC)
QSFP-100G-CLR4	High Speed Transceiver,QSFP28,1310nm,4*25GBase,-6.5dBm,2.5dBm,-10.7dBm,LC/PC,2km
QSFP-100G-CWDM4	High Speed Transceiver,QSFP28,1310nm,4*25GBase,-6.5dBm,2.5dBm,-9.8dBm,LC/PC,2km
QSFP-100G-LR4	100GBase-LR4 Optical Transceiver,QSFP28,100G,Single-mode module (1310nm,10km,LC)
QSFP-100G-SR4	100GBase-SR4 Optical Transceiver,QSFP28,100G,Multi-mode (850nm,0.1km,MPO)
QSFP-100G-PSM4	100GBase-PSM4 Optical Transceiver,QSFP28,100G,Single-mode module (1310nm,0.5km,MPO)
BIDI-SFP Optical Module	
SFP-FE-LX-SM1310-BIDI	BiDi Transceiver, eSFP, Tx1310nm/Rx1550nm, 155M, -15dBm, -8dBm, -32dBm, LC/PC, SM, 15km
SFP-FE-LX-SM1550-BIDI	BiDi Transceiver, eSFP, Tx1550nm/Rx1310nm, 155M, -15dBm, -8dBm, -32dBm, LC/PC, SM, 15km
SFP-GE-LX-SM1310-BIDI	BiDi Transceiver, eSFP, Tx1310nm/Rx1490nm, 1.25Gb/s, -9dBm, -3dBm, -19.5dBm, LC, SM, 10km
SFP-GE-LX-SM1490-BIDI	BiDi Transceiver, eSFP, Tx1490nm/Rx1310nm, 1.25Gb/s, -9dBm, -3dBm, -19.5dBm, LC, SM, 10km
LE2MGSC40DE0	Optical Transceiver, eSFP, GE, BIDI Single-mode Module (TX1310/RX1490, 40km, LC)
LE2MGSC40ED0	Optical Transceiver, eSFP, GE, BIDI Single-mode Module (TX1490/RX1310, 40km, LC)
SFP-GE-ZBXD1	Optical Transceiver, eSFP, GE, BIDI Single-mode Module (1570nm (Tx) / 1490nm (Rx), 80km, LC)
SFP-GE-ZBXU1	Optical Transceiver, eSFP, GE, BIDI Single-mode Module (1490nm (Tx) / 1570nm (Rx), 80km, LC)
BIDI-SFP+ optical transceivers	
SFP-10G-ER-SM1330-BIDI	Optical Transceiver,SFP+,10G,BIDI Single-mode Module(TX 1330nm/RX 1270nm,40km,LC)
SFP-10G-ER-SM1270-BIDI	Optical Transceiver,SFP+,10G,BIDI Single-mode Module(TX 1270nm/RX 1330nm,40km,LC)
SFP-10G-BXU1	10G Base, Bi-Directional (BIDI) optical transceiver, SFP, 10G, single-mode module (TX1270 nm/RX1330 nm, 10 km, LC)

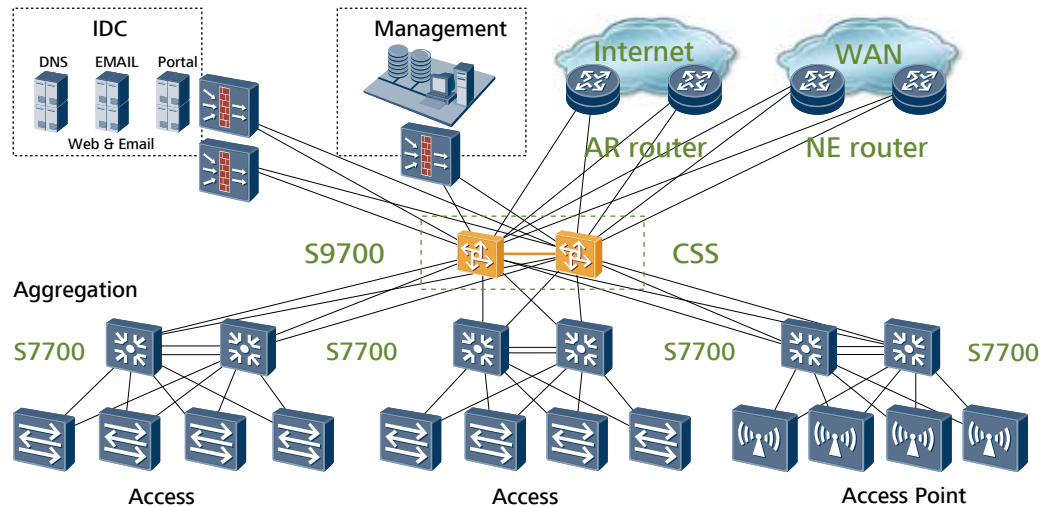
Basic Configuration	
SFP-10G-BXD1	10G Base, BIDI optical transceiver, SFP, 10G, single-mode module (TX1330 nm/ RX1270 nm, 10 km, LC)
High-Speed Cable	
SFP-10G-CU1M	SFP+, 10G, High Speed Direct-attach Cables, 1m, SFP+20M, CC2P0.254B(S), SFP+20M, Used indoor
SFP-10G-CU3M	SFP+, 10G, High Speed Direct-attach Cables, 3m, SFP+20M, CC2P0.254B(S), SFP+20M, Used indoor
SFP-10G-CU5M	SFP, 10G, High Speed Cable, 5m, SFP+20M, CC2P0.254B(S), SFP+20M, LSFRZH For Indoor
SFP-10G-AC10M	SFP+, 10G, Active High Speed Cables, 10m, SFP+20M, CC2P0.32B(S), SFP+20M, Used indoor
QSFP-4SFP10G-CU1M	QSFP+, 4SFP+ 10G, High Speed Direct-attach Cables, 1m, QSFP+38M, CC8P0.254B(S), 4 *SFP+20M, Used indoor
QSFP-4SFP10G-CU3M	QSFP+, 4SFP+ 10G, High Speed Direct-attach Cables, 3m, QSFP+38M, CC8P0.32B(S), 4 *SFP+20M, Used indoor
QSFP-4SFP10G-CU5M	QSFP+, 4SFP+ 10G, High Speed Direct-attach Cables, 5m, QSFP+38M, CC8P0.4B(S), 4 *SFP+20M, Used indoor
QSFP-40G-CU1M	QSFP+, 40G, High Speed Direct-attach Cables, 1m, QSFP+38M, CC8P0.254B(S), QSFP+38M, Used indoor
QSFP-40G-CU3M	QSFP+, 40G, High Speed Direct-attach Cables, 3m, QSFP+38M, CC8P0.32B(S), QSFP+38M, Used indoor
QSFP-40G-CU5M	QSFP+, 40G, High Speed Direct-attach Cables, 5m, QSFP+38M, CC8P0.40B(S), QSFP+38M, Used indoor
QSFP-100G-CU1M	High Speed Cable, 100G QSFP28 Passive High Speed Cable, 1m, QSFP28, CC8P0.254B(S), QSFP28, ETH 100GbE
QSFP-100G-CU3M	High Speed Cable, 100G QSFP28 Passive High Speed Cable, 3m, QSFP28, CC8P0.254B(S), QSFP28, ETH 100GbE
QSFP-100G-CU5M	High Speed Cable, 100G QSFP28 Passive High Speed Cable, 5m, QSFP28, CC8P0.4B(S), QSFP28, ETH 100GbE
Optical Fiber	
SFP-10G-AOC3M	AOC Optical Transceiver, SFP+, 850nm, 1G~10G, 0.003km
SFP-10G-AOC10M	AOC Optical Transceiver, SFP+, 850nm, 1G~10G, 10m
QSFP-H40G-AOC10M	Optical transceiver, QSFP+, 40G, (850nm, 10m, AOC)
QSFP-4SFP10-AOC10M	Optical transceiver, QSFP+, 40G, (850nm, 10m, AOC)(Connect to four SFP+ Optical Transceiver)
QSFP-100G-AOC10M	High Speed Transceiver, QSFP28 to QSFP28 AOC, 850nm, 100G, 0.01km
Power Supply Unit	
W2PSA0800	800W AC Power Module(black)



Basic Configuration	
IN6W18L10A	AC Power Distribution Unit (Eight 800W Outputs, include power cable)
PAC-2200WF	2200W AC Power Module
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	
ES0SMS279700	S9700 Basic SW,V200R007
ES0SMS289700	S9700 Basic SW,V200R008
EH1SMS299700	S9700 Basic SW,V200R009
EH1SMS2A9700	S9700 Basic SW,V200R010
EH1SMS2B9700	S9700 Basic SW,V200R011
EH1SMPLS0000	MPLS Function License
EH1SNQA00000	NQA Function License
EH1SIPV60000	IPv6 Function License
EH1SSVFF0000	SVF Function License (applicable only to the S9700 series)
EH1SFIB128K0	X-series LPU FIB Resource License-128K
EH1SFIB512K0	X-series LPU FIB Resource License-512K
EH1SWL512AP0	WLAN Access Controller AP Resource License-512AP (with the X-series LPU used)
EH1SWL128AP0	WLAN Access Controller AP Resource License-128AP (with the X-series LPU used)
EH1SWL64AP00	WLAN Access Controller AP Resource License-64AP (with the X-series LPU used)
EH1SWL16AP00	WLAN Access Controller AP Resource License-16AP (with the X-series LPU used)
L-ACU2-128AP	ACU2 Wireless Access Controller AP Resource License(128 AP)
L-ACU2-256AP	ACU2 Wireless Access Controller AP Resource License(256 AP)
L-ACU2-384AP	ACU2 Wireless Access Controller AP Resource License(384 AP)
L-ACU2-512AP	ACU2 Wireless Access Controller AP Resource License(512 AP)
Documentation	
EH1IV2RAC0E0	S9700 Series Switches V200R010C00 Product Documentation
ES1IV2RBC0E0	S9700 Series Switches V200R011C10 Product Documentation

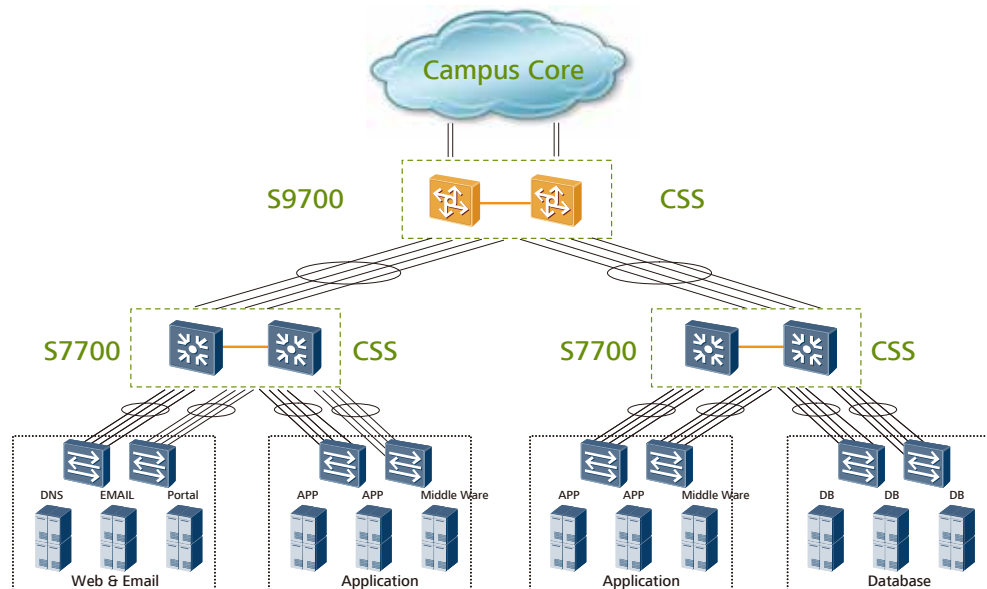
## Application in Large-Sized Campus Networks

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 Native AC 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 IP FRR, hardware-level BFD, NSR, NSF, VRRP, E-Trunk. Using the CSS and integrated load balancing solutions, the S9700 improves the network efficiency and reduces network maintenance costs.



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

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