

## S9700 Series Terabit Routing Switches









# 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 is capable of delivering up to 18.56Tbps 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 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 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 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 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
Switching capacity	2.88T/5.76T	6.72T/14.72T	8.64T/18.56T
Forwarding performance	2160M	2880M/5040M	3840M/6480M
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/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+		

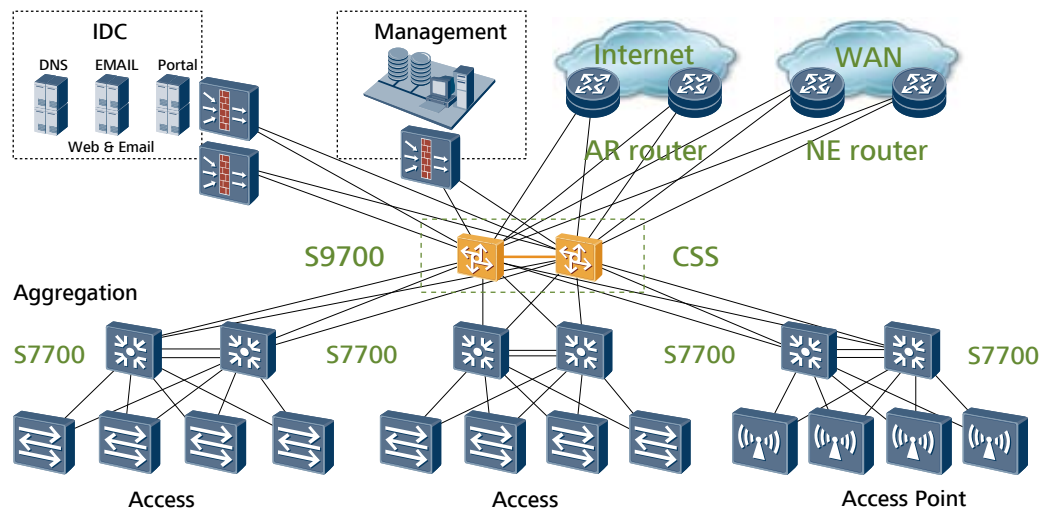
Item	S9703	S9706	S9712
Multicast	Supports IGMP v1/v2/v3, IGMPv1/v2/v3 snooping		
	Supports PIM-SM, PIM-DM, PIM-SSM		
	Supports MSDP, MBGP		
	Supports prompt leave		
	Supports multicast traffic control		
	Supports multicast querier		
	Supports suppression on multicast packets		
	Supports multicast CAC		
	Supports multicast ACL		
MPLS	Supports basic MPLS functions		
	Supports MPLS OAM		
	Supports MPLS TE		
	Supports MPLS VPN/VLL/VPLS		
CSS switch fabric clustering	CSS Switch Fabric Clustering (S9706 and S9712)		
Service port clustering	Service Port Clustering (S9706 and S9712)		
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 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		
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



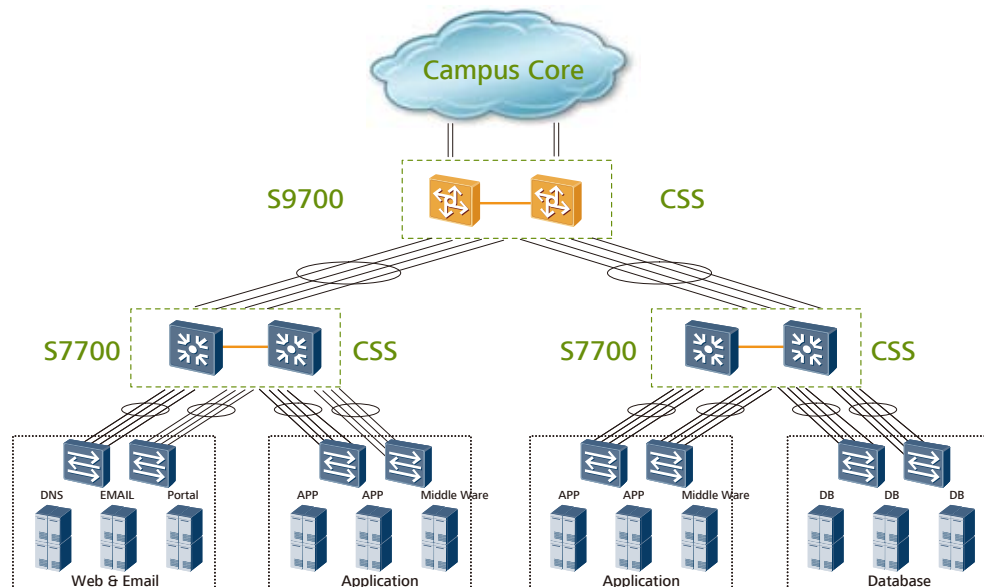
## Application in Large-Scale Campus Networks

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)
EH1D2SRUC000	S9706/S9712,Main Control Unit C,Option clock
EH1D2SRUF000	S9706/S9712, Main Control Unit F, Option clock
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)
EH1D2F48TECO	48-port 100M Ethernet electrical interface card (EC, RJ45)

Basic Configuration	
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)	
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)



Basic Configuration	
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)
EH1D2X02XEC0	2-port 10GE optical interface card (EC, XFP)
EH1D2X02XEC1	2-Port 10GBASE-X Interface Card(EC,XFP),FCC
EH1D2X04XEA0	4-port 10GE optical interface card (EA, XFP)
EH1D2X04XEC0	4-port 10GE optical interface card (EC, XFP)
EH1D2X04XEC1	4-Port 10GBASE-X Interface Card(EC,XFP),FCC
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+)
Cluster Switching System Service Unit	
EH1D2VS08000	8-Port 10G Cluster Switching System Service Unit (SFP+)

Basic Configuration	
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)
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)

Basic Configuration	
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)
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-AOC3M	AOC Optical Transceiver,SFP+,850nm,1G~10G,0.003km
SFP-10G-AOC10M	AOC Optical Transceiver,SFP+,850nm,1G~10G,0.01km
SFP-10G-BXU1	10GBase,BIDI Optical Transceiver,SFP,10G,Single-mode Module(TX1270nm/RX1330nm,10km,LC)
SFP-10G-BXD1	10GBase,BIDI Optical Transceiver,SFP,10G,Single-mode Module(TX1330nm/RX1270nm,10km,LC)
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+)
QSFP-40G-LR4	40GBase-LR4 Optical Transceiver,QSFP+,40GE,Single-mode Module(1310nm,10km,LC)
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)



Basic Configuration	
LE2MGSC40ED0	Optical module -SFP-GE-BIDI single-mode modules (TX1490/ RX1310, 40 km, LC)
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
EH1SB5M23000	S9700 system software, V200R003
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.

**Copyright © Huawei Technologies Co., Ltd. 2013. All rights reserved.**

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

**Trademark Notice**



, HUAWEI, and  are trademarks or registered trademarks of Huawei Technologies Co., Ltd.

Other trademarks, product, service and company names mentioned are the property of their respective owners.

**General Disclaimer**

The information in this document may contain predictive statements including, without limitation, statements regarding the future financial and operating results, future product portfolio, new technology, etc. There are a number of factors that could cause actual results and developments to differ materially from those expressed or implied in the predictive statements. Therefore, such information is provided for reference purpose only and constitutes neither an offer nor an acceptance. Huawei may change the information at any time without notice.

HUAWEI TECHNOLOGIES CO.,LTD.  
Huawei Industrial Base  
Bantian Longgang  
Shenzhen 518129,P.R.China  
Tel: +86 755 28780808

[www.huawei.com](http://www.huawei.com)