S7700 Series Smart Routing Switches

The S7700 series switches are smart routing switches designed for next-generation enterprise networks. The S7700 series switches can offer voice, video, and data services, helping enterprises build routing and switching integrated end-to-end networks.
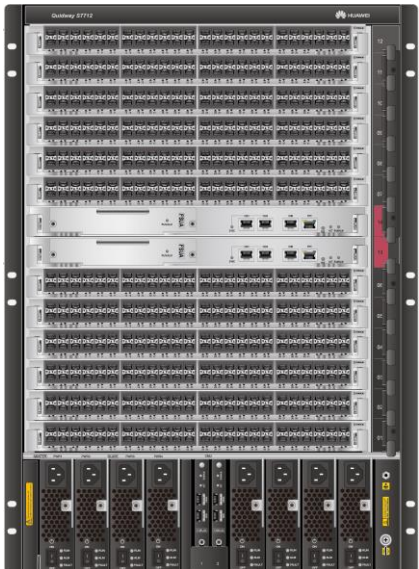
Product Overview

The S7700 series design is based on Huawei's intelligent multi-layer switching technology to provide intelligent service optimization methods, such as MPLS VPN, traffic analysis, comprehensive HQoS policies, controllable multicast, load balancing, and security, in addition to high-performance Layer 2 to Layer 4 switching services. The S7700 also features super scalability and reliability.

The S7700 series is available in three models: S7703, S7706, and S7712. The switching capacity and port density of all four models is expandable. The S7700 is developed based on a new hardware platform and 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, and can function either as an aggregation or core node on a campus network or in a data center to provide integrated wireless access.

Models and Appearances

The S7700 series is available in five models: S7703, S7703 PoE, S7706, S7706 PoE and S77712.

S7703 S7703 PoE	S7706 S7706 PoE	S7712

Features and Highlights

Agile Switch, Enabling Networks to Be More Agile for Services

The high-speed ENP chip used in the S7700 series is tailored for Ethernet. The chip's flexible packet processing and traffic control capabilities can meet current and future service requirements, helping build a highly scalable network.

The built-in native AC on S7700 series switches allows enterprises to build a wireless network without additional AC hardware. S7700 switch can manage up to 4K APs. It is a core switch that provides up to Tbit/s AC capabilities, avoiding the performance bottleneck on independent AC devices. The native AC capabilities help organizations better cope with challenges in the high-speed wireless era.

The S7700 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 PPPoE, 802.1x, MAC address, and Portal authentication, and is capable of managing users based on user groups, domains, and time ranges. These functions implement user and service management and enable the transformation from device-centric management to user-centric management.

Huawei's Super Virtual Fabric 2.0 (SVF 2.0) technology can not only virtualize fixed-configuration switches into S7700 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", greatly simplifying network management.

Huawei's Packet Conservation Algorithm for Internet (iPCA) technology 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."

Huawei's IEEE 1588v2 and Synchronous Ethernet (SyncE) solutions enable high-precision time synchronization between network devices. Compared with the Global Positioning System (GPS) time synchronization solution, Huawei's solutions enhance security while reducing costs.

The Service Chain feature virtualizes the value-added service processing capabilities, such as firewall, so that campus networks can utilize these capabilities in an undifferentiated manner. That is, these capabilities can be used without location constraint.

Note: The S7700 series switches can manage 16 APs by default . You can purchase licenses for more AP management on demand.

Powerful Service Processing Capabilities

The S7700 provides high-density 10GE ports and 100GE ports. Each S7712 chassis can provide a maximum of 576 x 10GE ports, 96 x 40GE ports or 48 x 100GE ports, meeting the requirements of bandwidth-consuming applications, such as multimedia conferencing and data access.

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 main processing units (MPUs), power supply units, and fans trays, all of which are hot swappable.

The S7700 innovatively implements the Cluster Switch System (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. 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, enabling flexible port utilization.

The S7700 supports High-speed Self Recovery (HSR) technology. Using Huawei's ENP cards, the S7700 is the industry's only switch that implements end-to-end IP MPLS bearer network protection switchover within 50 ms, improving network reliability.

The S7700 has a dedicated fault detection subcard that provides hardware-based BFD and hardware-based OAM including 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 a network management system (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.

Enhanced QoS Mechanism, Improving the Voice and Video Experience

The S7700's HQoS 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 supports MAC security (MACSec) that enables hop-by-hop secure data transmission. The S7700 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 S7700. 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 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.

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.

Cloud-based Management

- The Huawei cloud management platform allows users to configure, monitor, and inspect switches on the cloud, reducing on-site deployment and O&M manpower costs and decreasing network OPEX. Huawei switches support both cloud management and on-premise management modes. These two management modes can be flexibly switched as required to achieve smooth evolution while maximizing return on investment (ROI).

VXLAN

VXLAN is used to construct a Unified Virtual Fabric (UVF). As such, multiple service networks or tenant networks can be deployed on the same physical network, and service and tenant networks are isolated from each other. This capability truly achieves 'one network for multiple purposes'. The resulting benefits include enabling data transmission of different services or customers, reducing the network construction costs, and improving network resource utilization. The S7700 series switches are VXLAN-capable and allow centralized and distributed VXLAN gateway deployment modes. These switches also support the BGP EVPN protocol for dynamically establishing VXLAN tunnels and can be configured using NETCONF/YANG.

OPS

Open Programmability System (OPS) is an open programmable system based on the Python language. IT administrators can program the O&M functions of a switch through Python scripts to quickly innovate functions and implement intelligent O&M.

Big Data Security Collaboration

The S7700 uses NetStream to collect campus network data and then report such data to the Huawei HiSec Insight. The purposes of doing so are to detect network security threats, display the security posture across the entire network, and enable automated or manual response to security threats. The HiSec Insight delivers the security policies to the iMaster NCE-Campus(or Agile Controller). The iMaster NCE-Campus(or Agile Controller) then delivers such policies to switches that will handle security events accordingly. All these ensure campus network security.

Intelligent Diagnosis

Open Intelligent Diagnosis System (OIDS) integrates the device health monitoring and fault diagnosis functions – that are typically deployed on a Network Management System (NMS) – into the switch software to implement intelligent diagnosis on a single switch. After OIDS is deployed on a switch, the switch periodically collects and records the running information and automatically determines whether a fault occurs. If a fault occurs, the switch automatically locates the fault or helps locate the fault. All these merits increase fault locating efficiency of O&M staff while improving device maintainability.

Licensing

The S7700 supports both the traditional feature-based licensing mode and the latest Huawei IDN One Software (N1 mode for short) licensing mode. The N1 mode is ideal for deploying Huawei CloudCampus Solution in the on-premises scenario, as it greatly enhances the customer experiences in purchasing and upgrading software services with simplicity.

Software Package Features in N1 Mode

Switch Functions	N1 Basic Software	N1 Foundation Software Package	N1 Advanced Software Package
Basic network functions: Layer 2 functions, IPv4, IPv6, MPLS, SVF, and others	√	√	√
Basic network automation based on the Agile Controller:	×	√	√

Switch Functions	N1 Basic Software	N1 Foundation Software Package	N1 Advanced Software Package
• Basic automation: Plug-and-play, SSID, and AP group management • Basic monitoring: Application visualization • NE management: Image and topology management and discovery • WLAN enhancement: Roaming and optimization for up to 128 APs			
Advanced network automation and intelligent O&M: VXLAN, user access authentication, free mobility, and CampusInsight basic functions	×	×	√

Note: Only V200R019C00 and later versions can support N1 mode

Product Specifications

Item	S7703	S7703 PoE	S7706	S7706 PoE	S7712
Switching capacity	1.92 Tbps	4.8 Tbps	4.32 Tbps	4.32 Tbps	4.64Tbps
Forwarding performance	1440 Mpps	3600 Mpps	3240 Mpps	3240 Mpps	3480 Mpps
MPU slot	2	2	2	2	2
Service slot	3	3	6	6	12
Redundancy design	MPUs, power modules, CMUs, fans trays				
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				
	PPPoE, 802.1x, MAC address, and Portal authentication				
	Traffic- and time-based accounting				
	User authorization based on user groups, domains, and time ranges				
VLAN	4K VLANs				
	Access, trunk, and hybrid interface types, auto-negotiation of LNP links				
	Default VLAN				
	VLAN switching				
	QinQ and selective QinQ				
	MAC address-based VLAN assignment				
VXLAN	VXLAN centralized gateway and distributed gateway				

Item	S7703	S7703 PoE	S7706	S7706 PoE	S7712
	BGP EVPN				
	Configured through NETCONF protocol				
ARP	128K ARP entries		256K ARP entries		
	ARP Snooping				
MAC address	1M MAC address entries				
	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				
Ring protection	STP (IEEE 802.1d), RSTP (IEEE 802.1w), and MSTP (IEEE 802.1s)				
	SEP				
	BPDU protection, root protection, and loop protection				
	BPDU tunnel				
	ERPS(G.8032)				
IP routing	IPv4 routing protocols, such as RIPv1/v2, OSPF, BGP, and IS-IS				
	IPv6 dynamic routing protocols, such as RIPng, OSPFv3, ISISv6, and BGP4+				
Multicast	128,000 multicast routing entries				
	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				
CSS Switch Fabric Clustering	CSS Switch Fabric Clustering (S7706 and S7712)				
Service Port Clustering	Service Port Clustering (S7706 and S7712)				
Reliability	LACP and E-Trunk between devices				
	VRRP and BFD for VRRP				

Item	S7703	S7703 PoE	S7706	S7706 PoE	S7712
	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)				
	HSR				
	ITU-Y.1731				
	DLDP				
QoS	256K ACLs				
	Traffic classification based on Layer 2 protocol packet header, Layer 3 protocol information, Layer 4 protocol information, and 802.1p priority				
	ACL, CAR, re-marking, and scheduling				
	Queue scheduling algorithms including PQ, WRR, DRR, PQ+WRR, and PQ+DRR				
	Congestion avoidance mechanisms, such as WRED and tail drop				
	HQoS				
	Traffic shaping				
Configuration and maintenance	Zero Touch Provisioning				
	Console, Telnet, and SSH terminals				
	Network management protocols, such as SNMPv1/v2c/v3				
	File uploading and downloading using FTP and TFTP				
	BootROM upgrade and remote upgrade				
	Hot patches				
	User operation logs				
	Open Programmability System (OPS)				
	Video intelligent operation and maintenance				
	eMDI				
Security and management	802.1x authentication and portal authentication				
	MACSec				
	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				
	Ping and traceroute				
	RMON				
	Service Chain				

Item	S7703	S7703 PoE	S7706	S7706 PoE	S7712
	Secure Boot(need to use MPU that supports Secure Boot)				
Time synchronization	IEEE 1588v2				
	SyncE				
Value-added service	Firewall				
	NAT				
	NetStream				
	IPSec				
	Load balancing				
	Wireless AC				
	IPS				
	Cybersecurity Intelligence System (CIS)				
	Encrypted Communication Analytics(ECA)				
Interoperability	Supports VBST (compatible with PVST/PVST+/RPVST)				
	Supports LNP (similar to DTP)				
	Supports VCMP (similar to VTP)				
Energy conservation	IEEE 802.3az: Energy Efficient Ethernet (EEE)				
Dimensions (W x D x H, mm)	442×517.4×175, 4U	442×517.4×175, 4U	442×517.4×441.7, 10U	442×517.4×441.7, 10U	442×517.4×663.9, 15U
Chassis weight (empty)	10kg	10.3kg	15kg	21.3kg	25kg
Operating environment	- Operating temperature:0°C to 45°C − Operating temperature: − 0 m to 1800 m: The long-term operating temperature is 0C° to 45°C and the short-term operating temperature is 0C° to 55C° − 1800 m to 4000 m: The operating temperature reduces by 1°C every time the altitude increases by 220 m - Storage temperature: -40°C to +70°C - Relative humidity: 5% to 95% (noncondensing)				
Operating voltage	- AC: 90 V to 290 V - DC: –38.4 V to –72 V				
Maximum power consumption of the entire equipment (Without PoE)	1000 W	1185 W	2200 W	2640 W	4200 W
Maximum PoE power	3000 W	9000W - (system power without PoE)	8800 W	24000 W - (system power without PoE)	8800 W

# Networking and Applications

Large-Sized Campus Networks

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.
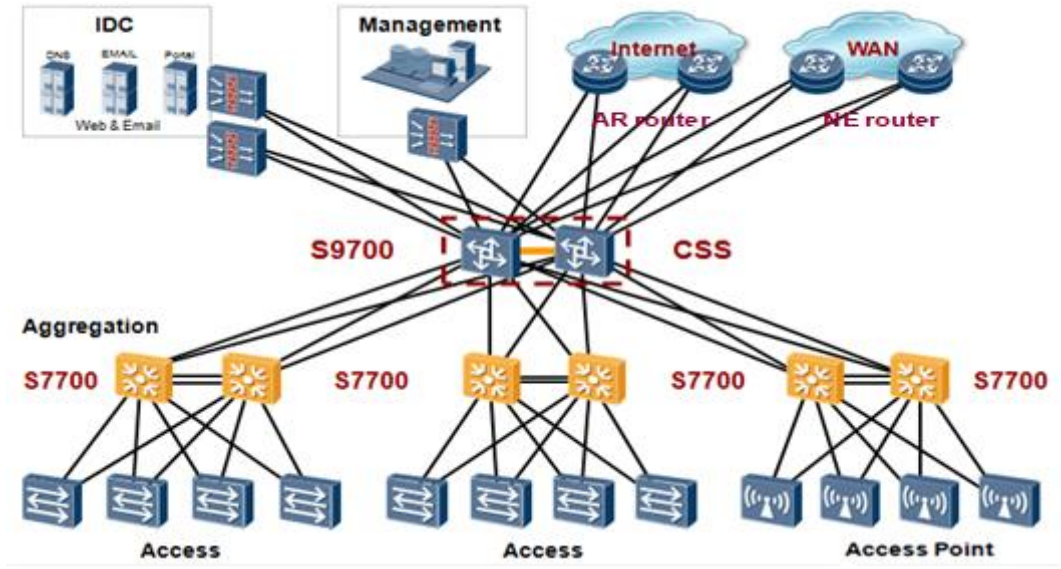
Small- and Medium-Sized Campus Networks

The S7700 implements line-speed forwarding of OSPF, BGP, and MPLS packets. With its firewall and IPSec modules, 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.
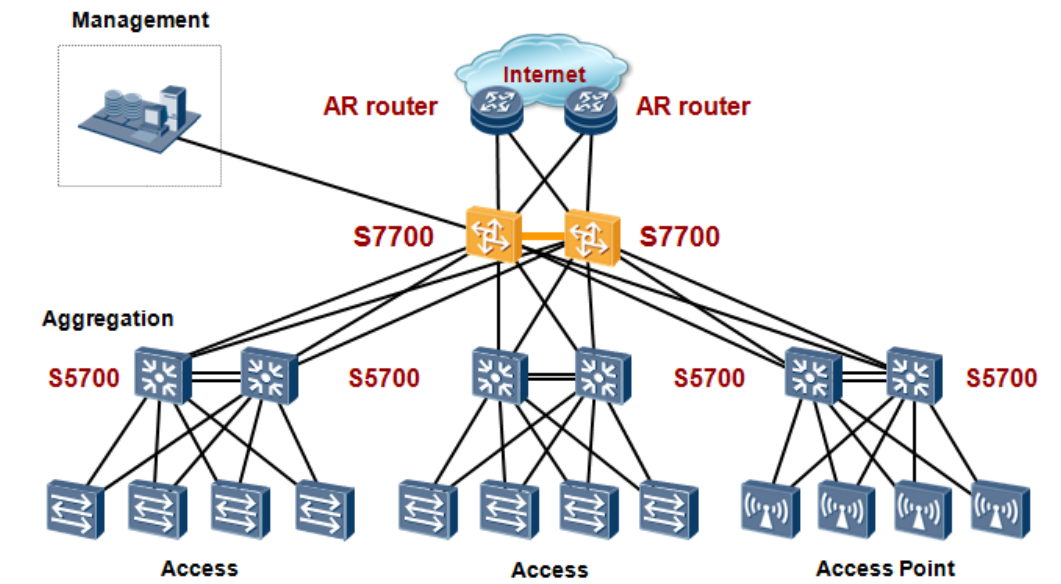
Ordering Information

Basic Configuration	
LE0BN66EDC	N66E DC Assembly Rack (Four 40A outputs, maximum 1600W per output, 600X600X2200mm)

Basic Configuration	
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
SWC02BAKN001	S7703 PoE assembly chassis
ES0B00770600	S7706 Assembly Chassis
SWC02BAKJ000	S7706 PoE assembly chassis
ES0B00771200	S7712 Assembly Chassis
ES0E2FBX	Wide Voltage Fan Box
ES1M00FBX001	Enhancement Wide Voltage 68 Fan Box
EH1M00FBX000	Wide Voltage 74 Fan Box

Monitoring Board	
EH1D200CMU00	Centralized Monitoring Board

Main Control Unit		Supported Version
ES0D00MCUA00	S7703 Main Control Unit A	
ES1D2MCUD000	S7703 Main Control Unit D	V200R019C00 and later versions
ES0D00SRUA00	S7706/S7712 Main Control Unit A	
ES1D2SRUE000	S7706/S7712,Main Control Unit E	
ES1D2SRUH000	S7706/S7712 Main Control Unit H	
LSS7SRUHA100	S7706/S7712 Main Control Unit H(A1)	V200R019C00 and later versions
LSS7SRUHX100	S7706/S7712 Main Control Unit H(X1)	V200R019C10 and later versions

SRU Service Card	
ES02VSTSA	Cluster Switching System Service Unit
ES1D2VS04000	4-Port 10G Cluster Switching System Service Unit (SFP+)

10/100/1000BASE-T Interface Card		Supported Version
ES0D0G48TC01	48-Port 10/100/1000BASE-T Interface Card (EC, RJ45)	V200R019C00 and later versions
ES1M2G48TX5S	48-port 10/100/1000BASE-T interface card (X5S,M,RJ45)	V200R019C00 and later versions

10/100/1000BASE-T Interface Card		Supported Version
ES1M2G48TX5E	48-port 10/100/1000BASE-T interface card (X5E,M,RJ45)	V200R019C00 and later versions

POE Interface Card		Supported Version
LSS7G48VX5E0	48-port 100/1000BASE-T PoE interface card (X5E, RJ45, PoE++)	V200R019C10 and later versions

100/1000BASE-X Interface Card		Supported Version
ES0D0G48SC01	48-Port 100/1000BASE-X Interface Card (EC, SFP)	V200R019C00 and later versions
LSS7G48SX6S0	48-port GE SFP interface card (X6S,SFP)	V200R019C00 and later versions
LSS7G48SX6E0	48-port GE SFP interface card (X6E,SFP)	V200R019C00 and later versions

100/1000BASE-X and 10G BASE-X Interface Card		Supported Version
LSS7X24BX6S0	24-port 10GE SFP+ interface and 24-port GE SFP interface card (X6S,SFP+)	V200R019C00 and later versions
LSS7X24BX6E0	24-port 10GE SFP+ interface and 24-port GE SFP interface card (X6E,SFP+)	V200R019C00 and later versions

10GBASE-X Interface Card		Supported Version
ES1D2X08SX5H	8-port 10GE SFP+ interface card (X5H, SFP+)	
ES0D0X12SA01	12-Port 10GBASE-X Interface Card(SA, SFP+)	V200R019C00 and later versions
LSS7X48SX6S0	48-port 10GE SFP+ interface card (X6S,SFP+)	V200R019C00 and later versions
LSS7X48SX6E0	48-port 10GE SFP+ interface card (X6E,SFP+)	V200R019C00 and later versions
ES1D2X16SSC2	16-Port 10GBASE-X Interface Card(SC,SFP+)	
ES1D2X32SSC0	32-Port 10GBASE-X Interface Card(SC,SFP+)	

40G/100GE BASE-X Interface Card		Supported Version
LSS7C02BX6E0	2-port 100GE QSFP28 interface and 4-port 40GE QSFP28 interface card (X6E,QSFP28)	V200R020C00 and later versions

100GE BASE-X Interface Card		Supported Version
LSS7C06HX6S0	6-port 100GE QSFP28 interface card (X6S,QSFP28)	V200R019C00 and later versions
LSS7C06HX6E0	6-port 100GE QSFP28 interface card (X6E,QSFP28)	V200R019C00 and later versions

Power Module		Supported Version
ES02PSD16	1600W DC Power Module(Black)	
W2PSA0800	800W AC Power Module(Black)	
PAC-2200WF	2200W AC Power Module	
W2PSD2200	2200W DC Power Module(Black)	
PAC3KS54-CE	3000W AC power module (Black)	V200R019C00 and later versions
PAC3KS54-NE	3000W AC power module (Black)	V200R020C10 and later versions
LE0W01DPDB	DC Power Distribution Unit (Four 40A outputs, maximum 1600 W per output, include power cable) **NOTE** The S7700 series switches use NEMA-compliant power cable.	
IN6W18L10A	AC Power Distribution Unit (Eight 10A outputs, maximum 1600 W per output, include power cable) **NOTE** The S7700 series switches use NEMA-compliant power cable.	
IM1W24APD	AC Power Distribution Unit (Four 16A outputs, maximum 2500 W per output, include power cable) **NOTE** The S7700 series switches use NEMA-compliant power cable.	

Software	
ES1SMS2D7700	S7700 Basic SW,V200R013C00
ES1SMS2J7700	S7700 Basic SW,V200R019C00
ES1SMS2J7701	S7700 Basic SW,V200R019C10
ESS7R20C00SW	S7700 Basic SW,V200R020C00
ESS7R20C10SW	S7700 Basic SW,V200R020C10

License	
ES0SSVFF7700	SVF Function License(with S7700 used)
ES0SMPLS7700	MPLS Function License

License	
ES0SNQAF7700	NQA Function License
ES0SIPV67700	IPV6 Function License
ES1SVXLAN000	VXLAN enhanced function license(used in S7700 series)
ES1SFIB128K0	X-series LPU FIB Resource License-128K
ES1SWL512AP0	WLAN Access Controller AP Resource License-512AP (with the X-series LPU used)
ES1SWL128AP0	WLAN Access Controller AP Resource License-128AP (with the X-series LPU used)
ES1SWL64AP00	WLAN Access Controller AP Resource License-64AP (with the X-series LPU used)
ES1SWL16AP00	WLAN Access Controller AP Resource License-16AP (with the X-series LPU used)
ES1SPPPOE4K0	PPPoE Access Subscriber Resource License-4K (with the X-series LPU used)
ES1SPPPOE8K0	PPPoE Access Subscriber Resource License-8K (with the X-series LPU used)
ES1SPPPOE16K	PPPoE Access Subscriber Resource License-16K (with the X-series LPU used)
L-ACU2-128AP	ACU2 Wireless Access Controller AP Resource License(128 AP)
N1-S77-F-Lic	N1-CloudCampus,Foundation,S77 Series,Per Device
N1-S77-F-SnS1Y	N1-CloudCampus,Foundation,S77 Series,SnS,Per Device,1Year
N1-S77-A-Lic	N1-CloudCampus,Advanced,S77 Series,Per Device
N1-S77-A-SnS1Y	N1-CloudCampus,Advanced,S77 Series,SnS,Per Device,1Year
N1-S77-FToA-Lic	N1-Upgrade-Foundation to Advanced,S77 Series,Per Device
N1-S77-FToA-SnS1Y	N1-Upgrade-Foundation to Advanced,S77 Series,SnS,Per Device,1Year
N1-AC1.0-AM-15-Lic	N1-CloudCampus,Access Management-AC1.0,15 Terminals
N1-AC1.0-AM-15-SnS1Y	N1-CloudCampus,Access Management-AC1.0,15 Terminals,SnS,1Year
CI-X7MSwitch-U	CampusInsight-Upgrade-Foundation to Advanced, X7 Series Modular Switch, Per Device
CI-X7MSwitch-U-SnS1Y	CampusInsight-Upgrade-Foundation to Advanced, X7 Series Modular Switch, SnS, Per Device, 1 Year

Documentation	
EH1IV2RDC0E0	S7700 and S9700 Series Switches V200R013C00 Product Documentation
EH1IV2RJC0E0	S7700 Series Switches V200R019C00 Product Documentation
EH1IV2RJC1E0	S7700 Series Switches V200R019C10 Product Documentation

More Information

For more information about Huawei Campus Switches, visit http://e.huawei.com or contact us in the following ways:

- Global service hotline: http://e.huawei.com/en/service-hotline
- Logging in to the Huawei Enterprise technical support website: http://support.huawei.com/enterprise/
- Sending an email to the customer service mailbox: support_e@huawei. com