Huawei X7 Series Switches

S7700 Datasheet (Detailed Version)

HUAWEI TECHNOLOGIES CO., LTD.

HUAWEI

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1 Introduction

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 H-QoS 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 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.

An S7700 running the V2R5C00 or later system software can be upgraded to an agile switch by using an X1E card, which is equipped with the first Ethernet Network Processor (ENP) of Huawei. Customers can enjoy the benefits brought by the agile switch.

2 Product Overview

Product Models

The S7700 series is available in three models: S7703, S7706 (-PoE), and S7712 (-PoE). 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 / S7706-POE

S7712 / S7712-POE

Physical specifications of S7700 models

Item	Description
Number of LPU slots	• S7703: 3 • S7706 & S7706-POE: 6 • S7712 & S7712-POE: 12
Number of MPU slots	2
Number of fan slots	• S7703: 1 • S7706 & S7706-POE: 2 • S7712 & S7712-POE: 4
Number of power module slots	• S7703: 2 for system and 1 for POE • S7706 & S7706-POE: 4 for system and 4 for POE • S7712 & S7712-POE: 4 for system and 4 for POE
Number of CMU slots	2, except S7703, the CMU card's function is integrate in S7703's supervisor
Port density per chassis	• S7703: 144xFE, 144xGE, 120x10GE, 6x40GE, 6x100GE • S7706: 288xFE, 288xGE, 240x10GE, 12x40GE, 12x100GE • S7712: 576xFE, 576xGE, 480x10GE, 24x40GE, 24x100GE
Installation	The switch can be installed in an N66E or N68E cabinet, one cabinet for one chassis.
Cluster switch system (CSS)	CSS, switch fabric hardware clustering
Maximum power consumption (full configuration) NOTE: The heat dissipation value of a chassis is equal to the current power consumption.	PoE power modules are independent from system power modules. System power consumption: • S7703: 4400W(220V), 2200W (110V) • S7706 : 4400W(220V), 2200W (110V) S7712 : 4400W(220V), 2200W (110V) PoE power consumption: • S7703: 2200W(220V), 1100W (110V) • S7706-PoE : 8800W(220V), 4400W (110V) S7712-PoE : 8800W(220V), 4400W (110V)
Power parameters	• DC input voltage – Rated voltage: -48 V DC/-60 V DC • AC input voltage – Rated voltage: 110 V AC/220 V AC, 50/60 Hz – Maximum voltage range: 90 V AC to 290 V AC; 47 Hz to 63 Hz (The output power reduces to half of the maximum output when the input voltage is in the range of 90 V AC to 175 V AC.)
Dimensions (W x D x H, excluding rack-mounting brackets)	• S7703 : 442 mm x 489 mm x 175 mm (4 U) • S7706 & S7706-PoE : 442 mm x 489 mm x 442 mm (10 U) • S7712 & S7712-PoE: 442 mm x 489 mm x 664mm (15 U)
Weight (empty/fully loaded)	• S7703 : 10kg/22kg • S7706 & S7706-PoE : 15kg/42kg • S7712 & S7712-PoE: 25kg/70kg

Cards supported by the S7700

Card Type	Card Name	Card Description	Functions and Features	Specifications
Main Control Unit	ES0D00MCUA00	S7703 Main Control Unit A	• The system control and management unit for the S7703 • CF card: built in 512M • 1+1 hot standby • Hot swap	• Dimensions (W x D x H): 194.5 mm x 426.8 mm x 35.1 mm • Weight: 0.90 kg • Maximum power consumption: 18 W
	ES0D00SRUA00	S7706/S7712 Main Control Unit A	• The system control and management unit for the S7706, S7712, S7706-PoE, S7712-PoE • CF card: built in 512M, can be expanded to 1GB, 2GB • 1+1 hot standby • Hot swap	• Dimensions (W x D x H): 394.7 mm x 426.8 mm x 35.1 mm • Space reserved for a subcard: 243.7 mm x 170.0 mm x 35.1 mm • Weight :2.80 kg • Maximum power consumption : 81 W (including ES0D00FSUA00)
	ES0D00SRUB00	S7706/S7712 Main Control Unit B, Clock	• The system control and management unit for the S7706, S7712, S7706-PoE, S7712-PoE • CF card: built in 512M, can be expanded to 1GB, 2GB • 1+1 hot standby • Hot swap	• Dimensions (W x D x H): 394.7 mm x 426.8 mm x 35.1 mm • Space reserved for a subcard: 243.7 mm x 170.0 mm x 35.1 mm • Weight: 2.90 kg • Maximum power consumption: 105 W (including ES0D00FSUA00)
	ES1D2SRUH000	S7706/S7712 Main Control Unit H	• The system control and management unit for the S7706, S7712, S7706-PoE, S7712-PoE • eUSB: built in 2GB, can be expanded to 4GB, 8GB • 1+1 hot standby • Hot swap	• Dimensions (W x D x H): 394.7 mm x 426.8 mm x 35.1 mm • Reserved subcard slot: 243.7 mm x 170.0 mm x 35.1 mm • Weight: : 3.46 kg • Maximum power consumption: 183 W
Subcard on the SFU	ES02VSTSA	Cluster Switching System Service Unit	CSS service	• Dimensions (W x D x H): 170.0 mm x 243.7 mm x 35.1 mm • Weight: 1 kg • Maximum power consumption: 12 W

Card Type	Card Name	Card Description	Functions and Features	Specifications
CMU	EH1D200CMU00	Centralized Monitoring Unit	• Device management module: sends interface control signals for device management. • Backplane interface module: provides management channels for power modules, fan modules, and communication channels between the active and standby EH1D200CMU00 cards.	• Dimensions (W x D x H): 112.9 mm x 412.7 mm x 19.8 mm • Weight: 0.22 kg • Maximum power consumption: 1 W
LPU	ES0DG24TFA00	24-Port 10/100/1000BASE-T Interface Card (FA, RJ45)	• Twenty-four GE electrical ports for data transmission and line-speed switching • Performs concurrent data forwarding using a distributed data plane • Eight queues on each port • PQ, WRR, DRR, PQ+WRR, and PQ+DRR • Buffer: 2 MB • Hot swap • MAC Address Table Size: 32K	• Dimensions (W x D x H): 394.7 mm x 426.8 mm x 35.1 mm • Weight: 2.20 kg • Maximum power consumption: 32 W
	ES0D0G24CA00	24-Port 100/1000BASE-X and 8-Port 10/100/1000BASE-T Combo Interface Card (SA, SFP/RJ45)	• Twenty-four GE optical ports for data transmission and line-speed switching, and eight of them can combo ports • Performs concurrent data forwarding using a distributed data plane • Eight queues on each port • PQ, WRR, DRR, PQ+WRR, and PQ+DRR • Buffer: 2 MB • Hot swap • MAC Address Table Size: 32K	• Dimensions (W x D x H): 394.7 mm x 426.8 mm x 35.1 mm • Weight: 2.26 kg • Maximum power consumption: 67 W

Card Type	Card Name	Card Description	Functions and Features	Specifications
LPU	ES0D0G24SA00	24-Port 100/1000BASE-X Interface Card (SA, SFP)	• Twenty-four GE optical ports for data transmission and line-speed switching • Performs concurrent data forwarding using a distributed data plane • Eight queues on each port • PQ, WRR, DRR, PQ+WRR, and PQ+DRR • Buffer: • ES0D0G24SA00: 2M • ES0D0G24SC00: 4M • ES1D2G24SED0: 4M • Hot swap • MAC Address Table Size: • ES0D0G24SA00: 32K • ES0D0G24SC00: 128K • ES1D2G24SED0: 512K	• Dimensions (W x D x H): 394.7 mm x 426.8 mm x 35.1 mm • Weight: • ES0D0G24SA00: 2.22kg • ES0D0G24SC00: 2.66 kg • ES1D2G24SED0: 2.66 kg • Maximum power consumption: • ES0D0G24SA00: 45W • ES0D0G24SC00: 63 W • ES1D2G24SED0: 75 W
	ES0D0G24SC00	24-Port 100/1000BASE-X Interface Card (EC, SFP)		
	ES0D0F48TA00	48-Port 10/100BASE-T Interface Card (EA, RJ45)	• forty-eight FE electrical ports for data transmission and line-speed switching • Performs concurrent data forwarding using a distributed data plane • Eight queues on each port • PQ, WRR, DRR, PQ+WRR, and PQ+DRR • Buffer: 4 MB • Hot swap • MAC Address Table Size: : 32K	• Dimensions (W x D x H): 394.7 mm x 426.8 mm x 35.1 mm • Weight: 2.50 kg • Maximum power consumption: 59 W

Card Type	Card Name	Card Description	Functions and Features	Specifications
LPU	ES0DG48TFA00	48-Port 10/100/1000BASE-T Interface Card (FA, RJ45)	• forty-eight GE electrical ports for data transmission and line-speed switching • Performs concurrent data forwarding using a distributed data plane • Eight queues on each port • PQ, WRR, DRR, PQ+WRR, and PQ+DRR • Buffer: 4 MB • Hot swap • MAC Address Table Size: • ES0DG48TFA00: 32K • ES0D0G48TA00: 32K • ES0D0G48TC00: 128K • ES1D2G48TED0: 512K	• Dimensions (W x D x H): 394.7 mm x 426.8 mm x 35.1 mm • Weight: • ES0DG48TFA00: 2.50 kg • ES0D0G48TA00: 2.50 kg • ES0D0G48TC00: 2.66 kg • ES1D2G48TED0: 2.66kg • Maximum power consumption: • ES0DG48TFA00: 48W • ES0D0G48TA00: 62 W • ES0D0G48TC00: 68 W • ES1D2G48TED0: 98W
	ES0D0G48TA00	48-Port 10/100/1000BASE-T Interface Card (EA, RJ45)		
	ES1D2G48TED0	48-Port 10/100/1000BASE-T Interface Card(ED,RJ45)		
	ES0D0G48TC00	48-Port 10/100/1000BASE-T Interface Card (EC, RJ45)		
	ES0D0G48VA00	48-Port 10/100/1000BASE-T POE Interface Card (EA, RJ45, POE)	• forty-eight GE electrical ports for data transmission and line-speed switching • PoE+ • Performs concurrent data forwarding using a distributed data plane • Eight queues on each port • PQ, WRR, DRR, PQ+WRR, and PQ+DRR • Buffer: 4 MB • Hot swap • MAC Address Table Size: 32K	• Dimensions (W x D x H): 394.7 mm x 426.8 mm x 35.1 mm • Weight: 2.60 kg • Maximum power consumption: 64 W (The PoE power supply is not included.) • Maximum power: 30 W for each port and 1440 W for the whole card
	ES1D2G48SFA0	48-Port 100/1000BASE-X Interface Card (FA, SFP)	• forty-eight GE optical ports for data transmission and line-speed switching • Performs concurrent data forwarding using a distributed data plane • Eight queues on each port • PQ, WRR, DRR, PQ+WRR, and PQ+DRR • Buffer: 4 MB • Hot swap • MAC Address Table Size: – ES1D2G48SFA0: 32K – ES0D0G48SA00: 32K – ES0D0G48SC00: 128K	• Dimensions (W x D x H): 394.7 mm x 426.8 mm x 35.1 mm • Weight: – ES1D2G48SFA0: 2.60kg – ES0D0G48SA00: 2.54 kg – ES0D0G48SC00: 2.66 kg • Maximum power consumption: – ES1D2G48SFA0: 65W – ES0D0G48SA00: 75 W – ES0D0G48SC00: 92 W
	ES0D0G48SA00	48-Port 100/1000BASE-X Interface Card (EA, SFP)		
	ES0D0G48SC00	48-Port 100/1000BASE-X Interface Card (EC, SFP)		

Card Type	Card Name	Card Description	Functions and Features	Specifications
LPU	ES0DG48CEAT0	36-Port 10/100/1000BASE-T and 12-Port 100/1000BASE-X Interface Card (EA, RJ45/SFP)	• thirty-six 10M/100M/1000M Ethernet electrical ports and twelve 100M/1000M Ethernet optical ports for data transmission and line-speed switching • Performs concurrent data forwarding using a distributed data plane • Eight queues on each port • PQ, WRR, DRR, PQ+WRR, and PQ+DRR • Buffer: 4 MB • Hot swap • MAC Address Table Size: 32K	• Dimensions (W x D x H): 394.7 mm x 426.8 mm x 35.1 mm • Weight: 2.50 kg • Maximum power consumption: 62 W
	ES0D0X2UXA00	2-Port 10GBASE-X Interface Card (EA, XFP)	• thirty-six 10M/100M/1000M Ethernet electrical ports and twelve 100M/1000M Ethernet optical ports for data transmission and line-speed switching • Performs concurrent data forwarding using a distributed data plane • Eight queues on each port • PQ, WRR, DRR, PQ+WRR, and PQ+DRR • Buffer: 4 MB • Hot swap • MAC Address Table Size: 32K	• Dimensions (W x D x H): 394.7 mm x 426.8 mm x 35.1 mm • Weight: : 2.14 kg • Maximum power consumption: 52 W

Card Type	Card Name	Card Description	Functions and Features	Specifications
LPU	ES0D0T24XA00	24-Port 10/100/1000BASE-T and 2-Port 10GBASE-X Interface Card (EA,RJ45/XFP)	• Twenty-four 10M/100M/1000M Ethernet electrical ports and two 10GE optical ports for data transmission and line-speed switching • Performs concurrent data forwarding using a distributed data plane • Eight queues on each port • PQ, WRR, DRR, PQ+WRR, and PQ+DRR • Buffer: 4 MB • Hot swap • MAC Address Table Size: 32K	• Dimensions (W x D x H): 394.7 mm x 426.8 mm x 35.1 mm • Weight: 2.30 kg • Maximum power consumption: 53 W
	ES0D0S24XA00	24-Port 100/1000BASE-X and 2-Port 10GBASE-X Interface Card (EA, SFP/XFP)	• Twenty-four 100M/1000M Ethernet optical ports and two 10GE optical ports for data transmission and line-speed switching • Performs concurrent data forwarding using a distributed data plane • Eight queues on each port • PQ, WRR, DRR, PQ+WRR, and PQ+DRR • Buffer: 4 MB • Hot swap • MAC Address Table Size: • ES0D0S24XA00: 32K • ES1D2S24XEC0: 128K	• Dimensions (W x D x H): 394.7 mm x 426.8 mm x 35.1 mm • Weight: • ES0D0S24XA00: 2.40 kg • ES1D2S24XEC0: 2.50 kg • Maximum power consumption: • ES0D0S24XA00: 65 W • ES1D2S24XEC0: 81 W
	ES1D2S24XEC0	24-Port 100/1000BASE-X and 2-Port 10GBASE-X Interface Card(EC,SFP/XFP)		

Card Type	Card Name	Card Description	Functions and Features	Specifications
LPU	ES0D0X4UXA00	4-Port 10GBASE-X Interface Card (EA, XFP)	• four 10GE optical ports for data transmission and line-speed switching • Performs concurrent data forwarding using a distributed data plane • Eight queues on each port • PQ, WRR, DRR, PQ+WRR, and PQ+DRR • Buffer: 4 MB • Hot swap • MAC Address Table Size: • ES0D0X4UXA00: 32K • ES0D0X4UXC00/ ES1D2X04XEC1: 128K • ES1D2X04XED0: 512K	• Dimensions (W x D x H): 394.7 mm x 426.8 mm x 35.1 mm • Weight: • ES0D0X4UXA00: 2.16 kg • ES0D0X4UXC00/ ES1D2X04XEC1: 2.28 kg • ES1D2X04XED0: 2.30kg • Maximum power consumption: • ES0D0X4UXA00: 64 W • ES0D0X4UXC00/ ES1D2X04XEC1: 75 W • ES1D2X04XED0: 93W
	ES0D0X4UXC00	4-Port 10GBASE-X Interface Card (EC, XFP)		
	ES1D2X04XEC1	4-Port 10GBASE-X Interface Card(EC,XFP),FCC		
	ES1D2X04XED0	4-Port 10GBASE-X Interface Card (ED, XFP)		
	ES1D2X08SED4	8-Port 10GBASE-X Interface Card(ED,SFP+)	• eight 10GE optical ports for data transmission and line-speed switching • Performs concurrent data forwarding using a distributed data plane • Eight queues on each port • PQ, WRR, DRR, PQ+WRR, and PQ+DRR • Buffer:8 MB • Hot swap • MAC Address Table Size: 512K	• Dimensions (W x D x H): 394.7 mm x 426.8 mm x 35.1 mm • Weight: 2.50 kg • Maximum power consumption: 198.1 W
	ES1D2X08SED5	8-Port 10GBASE-X Interface Card(ED,SFP+),FCC		
	ES0D0X12SA00	12-Port 10GBASE-X Interface Card (SA, SFP+)	• twelve 10GE optical ports for data transmission and line-speed switching • Performs concurrent data forwarding using a distributed data plane • Eight queues on each port • PQ, WRR, DRR, PQ+WRR, and PQ+DRR • LAN/WAN switchover • Buffer: 2 MB • Hot swap • MAC Address Table Size: 32K	• Dimensions (W x D x H): 394.7 mm x 426.8 mm x 35.1 mm • Weight: 2.30 kg • Maximum power consumption: 85 W

Card Type	Card Name	Card Description	Functions and Features	Specifications
LPU	ES1D2X16SFC0	16-Port 10GBASE-X Interface Card (FC, SFP+)	• sixteen 10GE BASE-X optical ports for data transmission and line-speed switching • Performs concurrent data forwarding using a distributed data plane • Eight queues on each port • PQ, WRR, DRR, PQ+WRR, and PQ+DRR • Buffer: 9 MB • Hot swap • MAC Address Table Size: 128K	• Dimensions (W x D x H): 394.7 mm x 426.8 mm x 35.1 mm • Weight: 2.60 kg • Maximum power consumption: 150 W
	ES1D2X16SSC2	16-Port 10GBASE-X Interface Card(SC,SFP+)	• sixteen 10GE optical ports for data transmission and line-speed switching • Performs concurrent data forwarding using a distributed data plane • Eight queues on each port • PQ, WRR, DRR, PQ+WRR, and PQ+DRR • Buffer: 9 MB • Hot swap • MAC Address Table Size:128K	• Dimensions (W x D x H): 394.7 mm x 426.8 mm x 35.1 mm • Weight: 2.80 kg • Maximum power consumption: 131 W
	ES1D2X32SSC0	32-Port 10GBASE-X Interface Card(SC,SFP+)	• thirty-two 10GE optical ports for data transmission and line-speed switching • Performs concurrent data forwarding using a distributed data plane • Eight queues on each port • PQ, WRR, DRR, PQ+WRR, and PQ+DRR • Buffer: 9 MB • Hot swap • MAC Address Table Size: 128K	• Dimensions (W x D x H): 394.7 mm x 426.8 mm x 35.1 mm • Weight: 3.02 kg • Maximum power consumption: 207 W

Card Type	Card Name	Card Description	Functions and Features	Specifications
LPU	ES1D2X40SFC0	40-Port 10GBASE-X Interface Card (FC, SFP+)	• fourty 10GE optical ports for data transmission and 240G switching capacity • Performs concurrent data forwarding using a distributed data plane • Eight queues on each port • PQ, WRR, DRR, PQ+WRR, and PQ+DRR • Buffer: 9 MB • Hot swap • MAC Address Table Size: 128K	• Dimensions (W x D x H): 394.7 mm x 426.8 mm x 35.1 mm • Weight: 2.90 kg • Maximum power consumption: 183 W
	ES1D2L02QFC0	2-Port 40GBASE-X Interface Card (FC,QSFP+)	• two 40GE optical ports for data transmission and line-speed switching (allows a 40GE port to split into four 10GE ports) • Performs concurrent data forwarding using a distributed data plane • Eight queues on each port • PQ, WRR, DRR, PQ+WRR, and PQ+DRR • Service port clustering • Buffer: 9 MB • Hot swap • MAC Address Table Size: 128K	• Dimensions (W x D x H): 394.7 mm x 426.8 mm x 35.1 mm • Weight: 2.50 kg • Maximum power consumption: 88 W
	ES1D2G48TX1E	48-Port 10/100/1000BASE-T Interface Card (X1E, RJ45)	• forty-eight GE electrical ports for data access and line-speed switching • Forwarding speed: 48 Gbit/s • Performs concurrent data forwarding using a distributed data plane • Eight queues on each port • PQ, WRR, DRR, PQ+WRR, and PQ+DRR • Hot swap • MAC Address Table Size: 1M	• Dimensions (W x D x H): 394.7 mm x 426.8 mm x 35.1 mm • Weight: 2.92 kg • Maximum power consumption: 120 W

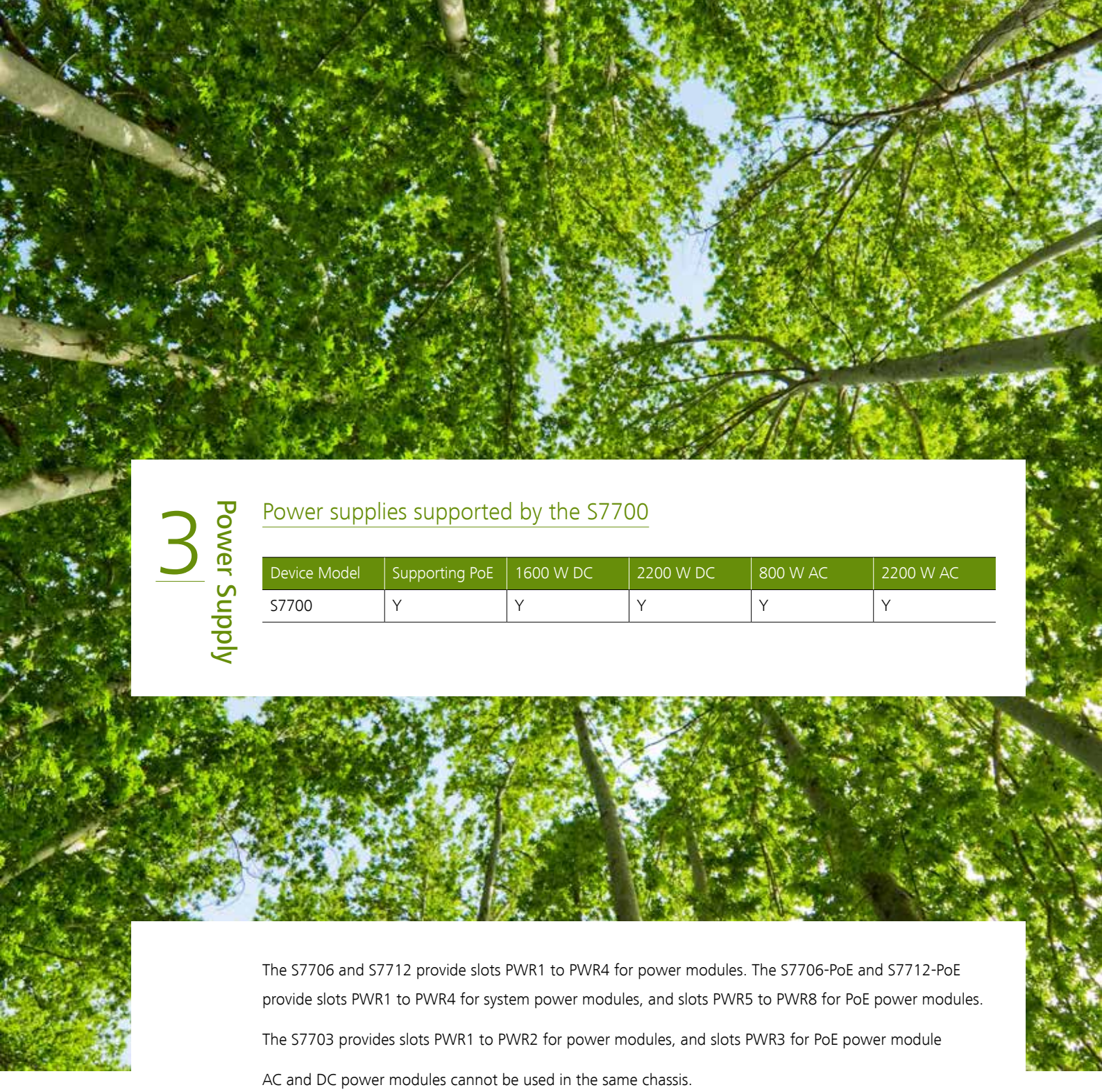
Card Type	Card Name	Card Description	Functions and Features	Specifications
LPU	ES1D2G48SX1E	48-Port 100/1000BASE-X Interface Card (X1E,SFP)	• forty-eight GE optical ports for data access and line-speed switching • Forwarding speed: 48 Gbit/s • Performs concurrent data forwarding using a distributed data plane • Eight queues on each port • PQ, WRR, DRR, PQ+WRR, and PQ+DRR • Hot swap • MAC Address Table Size: 1M	• Dimensions (W x D x H): 394.7 mm x 426.8 mm x 35.1 mm • Weight: 3.04 kg • Maximum power consumption: 140 W
	ES1D2S04SX1E	4-Port 10GBASE-X and 24-Port 100/1000BASE-X and 8-Port 10/100/1000BASE-T Combo Interface Card (X1E,RJ45/SFP/SFP+)	• four 10G Ethernet optical ports, sixteen 100/1000M Ethernet optical ports, and eight 10/100/1000M combo ports for data access and line-speed switching • Forwarding speed: 64 Gbit/s • Performs concurrent data forwarding using a distributed data plane • Eight queues on each port • LAN/WAN switchover • PQ, WRR, DRR, PQ+WRR, and PQ+DRR • Hot swap • MAC Address Table Size: 1M	• Dimensions (W x D x H): 394.7 mm x 426.8 mm x 35.1 mm • Weight: 2.88 kg • Maximum power consumption: 130 W
	ES1D2S08SX1E	8-Port 10GBASE-X and 8-Port 100/1000BASE-X and 8-Port 10/100/1000BASE-T Combo Interface Card (X1E,RJ45/SFP/SFP+)	• eight 10GBASE-X ports and eight 10/100/1000M combo ports for data access and line-speed switching • Forwarding speed: 88 Gbit/s • Performs concurrent data forwarding using a distributed data plane • Eight queues on each port • PQ, WRR, DRR, PQ+WRR, and PQ+DRR • Hot swap • MAC Address Table Size: 1M	• Dimensions (W x D x H): 394.7 mm x 426.8 mm x 35.1 mm • Weight: 2.84 kg • Maximum power consumption: 130 W

Card Type	Card Name	Card Description	Functions and Features	Specifications
LPU	ES1D2C02FEE0	2-Port 100GBASE-X Interface Card(EE,CFP)	• two 100GE optical ports for data transmission and line-speed switching • Performs concurrent data forwarding using a distributed data plane • Eight queues on each port • PQ, WRR, DRR, PQ+WRR, and PQ+DRR • Buffer: 5 MB • Hot swap • MAC Address Table Size: 768K	• Dimensions (W x D x H): 394.7 mm x 426.8 mm x 35.1 mm • Weight: 4.20 kg • Maximum power consumption: 339 W
	ACU2	WLAN ACU2 Access Controller Unit (128 AP Control Resource Included)	• Number of managed APs: • Central AP: 256 • Common AP and RRU: 2048 • Number of MAC address entries: 32K • Number of routing entries: 16K • Number of ARP entries: 48K • Number of ESSIDs: 8K	• Board dimensions: 35.56 mm x 380.00 mm x 378.45 mm (height x width x depth) • Maximum power consumption: 168 W • Board weight: 3.2 kg
	ET1D2FW00S00	NGFW Module A, with HW General Security Platform Software	NOTE: For details, see the NGFW Module Hardware Guide.	NOTE: For details, see the NGFW Module Hardware Guide.
	ET1D2FW00S01	NGFW Module B, with HW General Security Platform Software	NOTE: For details, see the NGFW Module Hardware Guide.	NOTE: For details, see the NGFW Module Hardware Guide.
	ET1D2IPS0S00	IPS Module A, with HW General Security Platform Software	NOTE: For details, see the IPS Module Hardware Guide.	NOTE: For details, see the IPS Module Hardware Guide.

NOTE:

Interface cards consist of S series, E series, F series and X1E series interface cards:

- The S series includes SA, interface cards, for example, 12-port 10GBASE-X interface card (SA, SFP+).
- The E series includes EA, EC and EE interface cards, for example, 48-port 100M BASE-X optical interface card (EA, SFP).
- The F series includes FA and FC, interface cards, for example, 16-port 10GBASE-X interface card (FC, SFP+).
- The X1E series interface cards, for example, 48-Port 10/100/1000BASE-T Interface Card (X1E, RJ45).



3 Power Supply

Power supplies supported by the S7700

Device Model	Supporting PoE	1600 W DC	2200 W DC	800 W AC	2200 W AC
S7700	Y	Y	Y	Y	Y

The S7706 and S7712 provide slots PWR1 to PWR4 for power modules. The S7706-PoE and S7712-PoE provide slots PWR1 to PWR4 for system power modules, and slots PWR5 to PWR8 for PoE power modules.

The S7703 provides slots PWR1 to PWR2 for power modules, and slots PWR3 for PoE power module

AC and DC power modules cannot be used in the same chassis.

The S7700 series switches support three redundancy modes of power modules: 2:2, 1:1. Ensure that the total maximum output power is larger than the maximum power actually required by the system.

For example, the maximum power required by the system is 4000 W. If two 2200 W power modules are installed in the chassis, they work in no redundancy mode. If four 2200 W power modules are installed, they work in 2:2 redundancy model..

2200 W DC Power Module

A 2200 W DC power module adopts a 3 U high standard structure.

2200 W DC power module

Technical specifications of a 2200 W DC power module

Item		Value
Dimensions (W x D x H)		41 mm x 393 mm x 130 mm
Weight		< 2.5 kg
Input	Rated input voltage	-48 V DC/-60 V DC
	Input voltage range	-40 V DC to -72 V DC
	Maximum input current	60 A
Output	Maximum output current	42 A
	Maximum output power	2200 W
Hot swap		Supported
Environment parameters		Operating temperature: 0°C to 45°C Operating relative humidity: 5% RH to 95% RH (noncondensing) Storage temperature: -40°C to +70°C Storage relative humidity: 5% RH to 95% RH (noncondensing)

800 W AC Power Module

An 800 W AC power module adopts a 3 U high standard structure.

800 W DC power module

Technical specifications of a 880 W AC power module

Item		Value
Dimensions (W x D x H)		41 mm x 393 mm x 130 mm
Weight		< 2.5 kg
Input	Rated input voltage	220 V AC/110 V AC; 50/60 Hz
	Rated input voltage range	200 V AC to 240 V AC (220 V AC input)/100 V AC to 120 V AC (110 V AC input); 47 Hz to 63 Hz
	Maximum input voltage range	90 V AC to 290 V AC; 47 Hz to 63 Hz (When the input voltage is in the range of 90 V AC to 175 V AC, the power module provides up to half of the maximum output power.)
	Maximum input current	5 A
Output	Maximum output current	15 A (220 V AC input)/7.5 A (110 V AC input)
	Maximum output power	800 W (220 V AC input)/400 W (110 V AC input)
Hot swap		Supported
Environment parameters		Operating temperature: 0°C to 45°C Operating relative humidity: 5% RH to 95% RH (noncondensing) Storage temperature: -40°C to +70°C Storage relative humidity: 5% RH to 95% RH (noncondensing

2200 W AC Power Module

A 2200 W AC power module adopts a 3 U high standard structure.

2200 W AC power module

Technical specifications of a 2200 W AC power module

Item		Value
Dimensions (W x D x H)		41 mm x 393 mm x 130 mm
Weight		< 2.5 kg
Input	Rated input voltage	220 V AC/110 V AC; 50/60 Hz
	Rated input voltage range	200 V AC to 240 V AC (220 V AC input)/100 V AC to 120 V AC (110 V AC input); 47 Hz to 63 Hz
	Maximum input voltage range	90 V AC to 290 V AC; 47 Hz to 63 Hz (The maximum output power reduces by a half when the input voltage is in the range of 90 V AC to 175 V AC.)
	Maximum input current	15.5 A
Output	Maximum output current	42 A (220 V AC input)/21 A (110 V AC Input)
	Maximum output power	2200 W (220 V AC input)/1100 W (110 V AC input)
Hot swap		Supported
Environment parameters		Operating temperature: 0°C to 45°C Operating relative humidity: 5% RH to 95% RH (noncondensing) Storage temperature: -40°C to +70°C Storage relative humidity: 5% RH to 95% RH (noncondensing)

4 Product Characteristics

Agile Switch, Enabling Networks to Be More Agile for Services

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 2K APs. 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 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 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-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", offering the simplest network management solution.

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."

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.

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, and is compatible with the currently used cards, helping enterprises maximize their ROI.

The S7700 provides high-density 10GE ports and 100G ports, Each S7712 chassis can provide a maximum of 480 x 10GE ports or 24 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's rack structure uses a passive backplane design. The S7700 provides redundant backup for key components, including 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, so that cluster members can be connected through optical fibers. This substantially expands the clustering distance.

The S7700 supports High-speed Self Recovery (HSR) technology. Using Huawei's ENP cards, the S700 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 OAM functions conforming to IEEE 802.3ah, 802.1ag, and ITU-Y.1731. 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.

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.

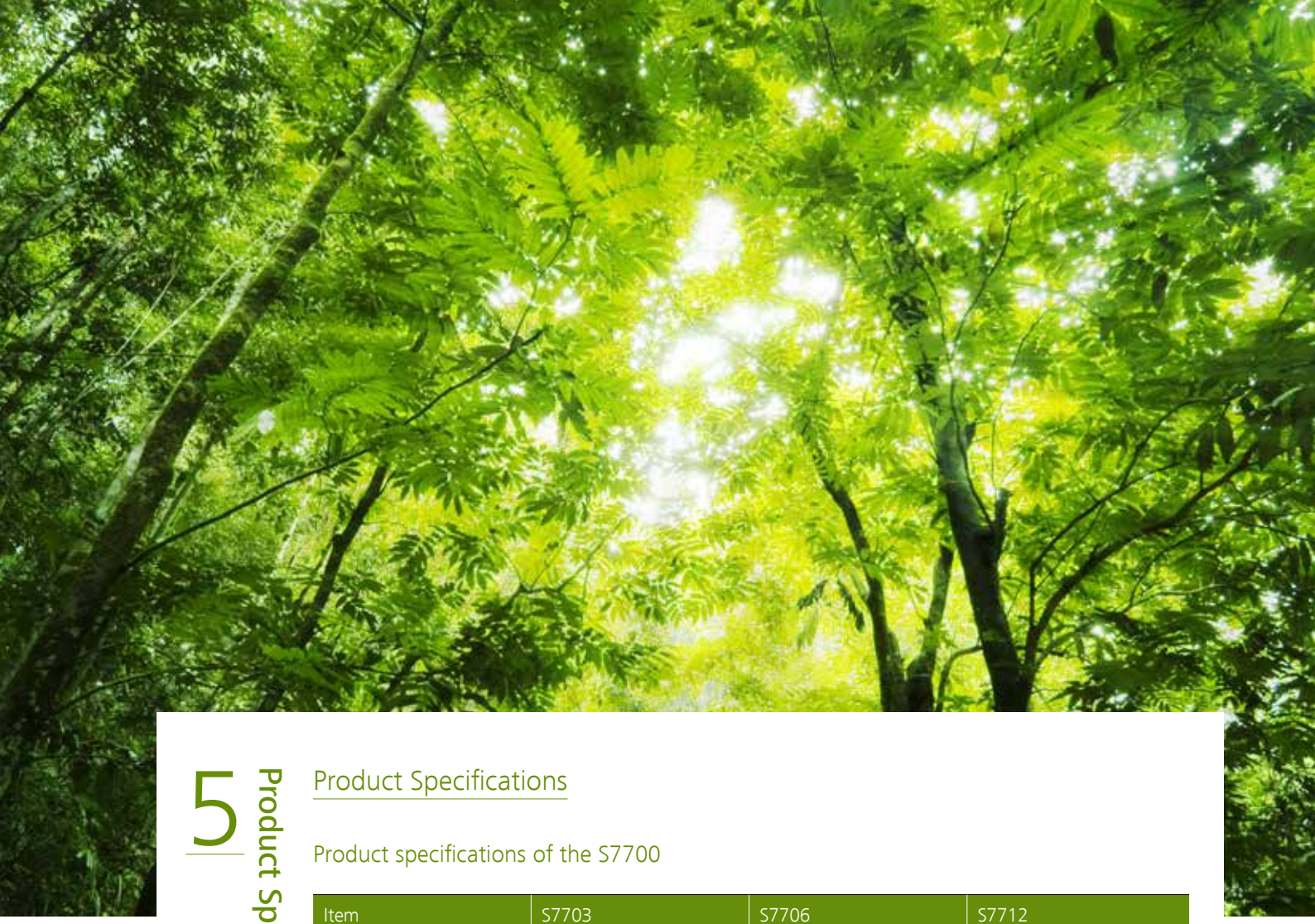
Additionally, the S7700 defends against DoS attacks, prevents unauthorized access, and prevents control plane overloading.

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.



5 Product Specifications

Product Specifications

Product specifications of the S7700

Item	S7703	S7706	S7712
Switching capacity	1.92 Tbps	3.84 Tbps	3.84Tbps
Forwarding performance	1440 Mpps	2880 Mpps	2880 Mpps
Service Slot	3	6	12
Redundancy Design	Supervisors, 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		
	Deployment of ACs on different network layers		
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		
VLAN	Three types of interfaces: access, trunk, and hybrid		

Item	S7703	S7706	S7712
VLAN	Default VLAN		
	VLAN switching		
	QinQ and selective QinQ		
	MAC address-based VLAN assignment		
ARP	256K ARP entries		
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	1M IPv4 routing entries		
	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)		

Item	S7703	S7706	S7712
Service port clustering	Service Port Clustering (S7706 and S7712)		
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		
	HSR		
	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-mark, and scheduling		
	Queue scheduling algorithms including PQ, WRR, DRR, PQ+WRR, and PQ+DRR		
	Congestion avoidance mechanisms, such as WRED and tail drop		
	H-QoS		
	Traffic shaping		
Configuration and maintenance	Zero Touch Provisioning		
	Console 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		

Item	S7703	S7706	S7712
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		
Value-added service*	Firewall		
	NAT		
	NetStream		
	IPSec		
	Load balancing		
	IPS		
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)	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
Energy saving	Energy Efficient Ethernet (802.3az)		

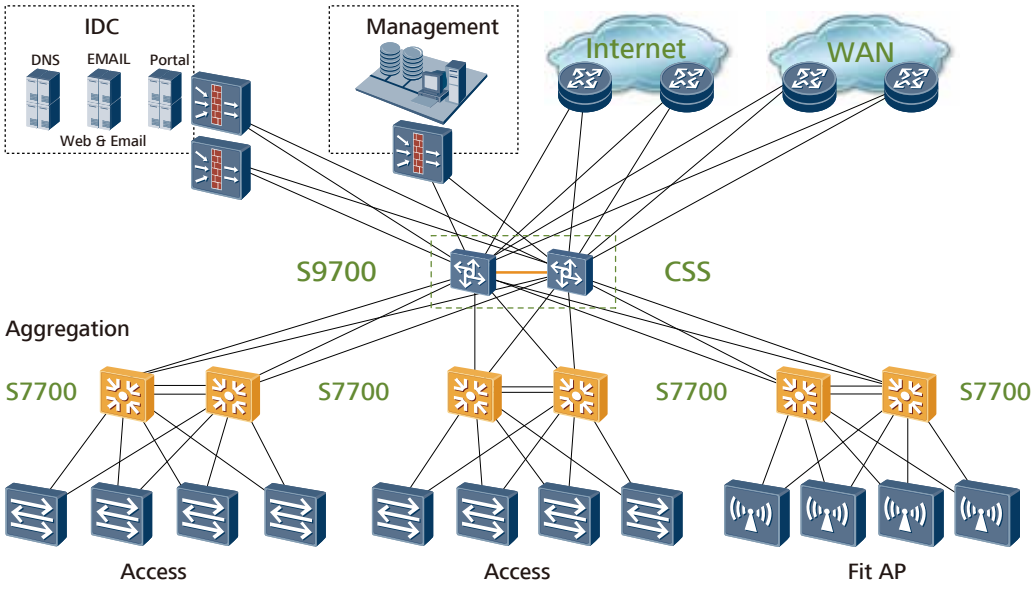
Item	S7703	S7706	S7712
Environment parameters	• Operating temperature and altitude: – -60 m to +1800 m: 0°C to 45°C – 1800 m to 4000 m: Temperature decreases by 1°C every time the altitude increases 220 m. – 4000 m: 0°C to 35°C • Operating relative humidity: 5% RH to 95% RH (noncondensing) • Storage temperature: -40° C to +70° C • Storage altitude: < 5000 m • Storage relative humidity: 5% RH to 95% RH (noncondensing)		
Noise under normal temperature (sound power)	≤ 72 dBA		
Electromagnetic Compatibility (EMC)	• CISPR22 Class A • CISPR24 • EN55022 Class A • EN50024 • ETSI EN 300 386 Class A • CFR 47 FCC Part 15 Class A • ICES 003 Class A • AS/NZS CISPR22 Class A • VCCI Class A • IEC61000-6-2 • IEC61000-6-4 • IEC61000-4-2		
Environmental standards compliance	• RoHS • REACH • WEEE		
Safety standards compliance	• IEC 60950-1 • EN 60950-1 • UL 60950-1 • CSA C22.2 No 60950-1 • AS/NZS 60950.1 • BS EN 60950-1		

*: The S7700 supports the NGFW, which is the next-generation firewall card, and the IPS card. For more specification information, see the brochures of the cards.

6 Product Application

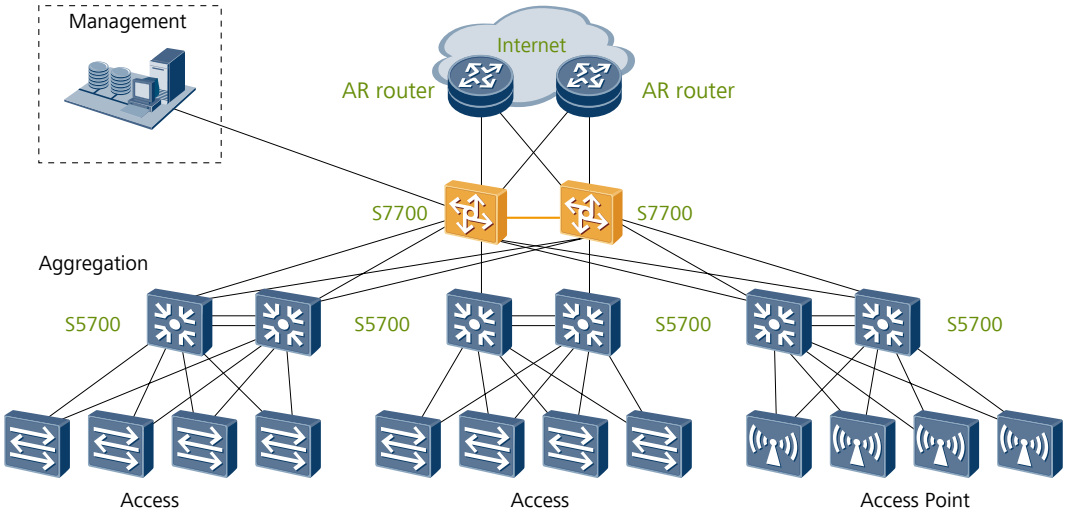
Large-Scale Campus Networks

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 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.



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

7 Safety and Regulatory Compliance

S7700 safety and regulatory compliance

Certification Category	Description
Safety	IEC 60950-1 EN 60950-1 UL 60950-1 CSA C22.2 No 60950-1 AS/NZS 60950.1 BS EN 60950-1 CNS 14336-1
Electromagnetic Compatibility (EMC)	CISPR22 Class A CISPR24 EN55022 Class A EN55024 ETSI EN 300 386 Class A CFR 47 FCC Part 15 Class A ICES 003 Class A AS/NZS CISPR22 Class A VCCI Class A IEC61000-6-2 IEC61000-6-4 IEC61000-4-2 ITU-T K 20 ITU-T K 21 ITU-T K 44 CNS13438
Environment	RoHS REACH WEEE
Laser safety	IEC60825-1, IEC60825-2, EN60825-1, EN60825-2

NOTE:

- EMC: electromagnetic compatibility
- CISPR: International Special Committee on Radio Interference
- EN: European Standard
- ETSI: European Telecommunications Standards Institute
- CFR: Code of Federal Regulations
- FCC: Federal Communication Commission
- IEC: International Electrotechnical Commission
- AS/NZS: Australian/New Zealand Standard
- VCCI: Voluntary Control Council for Interference
- UL: Underwriters Laboratories
- CSA: Canadian Standards Association
- IEEE: Institute of Electrical and Electronics Engineers
- RoHS: restriction of the use of certain hazardous substances
- REACH: Registration Evaluation Authorization and Restriction of Chemicals
- WEEE: Waste Electrical and Electronic Equipment

8 MIB Compliance

S7700 MIBs

Category	MIB	
Public MIB	• BGP4-MIB • BRIDGE-MIB • DISMAN-NSLOOKUP-MIB • DISMAN-PING-MIB • DISMAN-TRACEROUTE-MIB • ENTITY-MIB • EtherLike-MIB • IF-MIB • IP-FORWARD-MIB • IPMCAST-MIB • IPv6-ICMP-MIB • IPv6-MIB • IPv6-TCP-MIB • IPv6-UDP-MIB • ISIS-MIB • LAG-MIB • LLDP-EXT-DOT1-MIB • LLDP-EXT-DOT3-MIB • LLDP-MIB • MGMD-STD-MIB • MPLS-FTN-STD-MIB • MPLS-L3VPN-STD-MIB • MPLS-LDP-GENERIC-STD-MIB • MPLS-LDP-STD-MIB • MPLS-LSR-STD-MIB • MPLS-TE-STD-MIB	• MSDP-MIB • NOTIFICATION-LOG-MIB • NQA-MIB • OSPF-MIB • OSPF-TRAP-MIB • P-BRIDGE-MIB • PIM-BSR-MIB • PIM-STD-MIB • Q-BRIDGE-MIB • RFC1213-MIB • RIPv2-MIB • RMON2-MIB • RMON-MIB • SAVI-MIB • SNMP-FRAMEWORK-MIB • SNMP-MPD-MIB • SNMP-NOTIFICATION-MIB • SNMP-TARGET-MIB • SNMP-USER-BASED-SM-MIB • SNMPv2-MIB • SNMP-VIEW-BASED-ACM-MIB • TCP-MIB • UDP-MIB • VRRP-MIB • VRRPv3-MIB
Huawei-proprietary MIB	• HUAWEI-AAA-MIB • HUAWEI-ACL-MIB • HUAWEI-ALARM-MIB • HUAWEI-ALARM-RELIABILITY-MIB • HUAWEI-BASE-TRAP-MIB • HUAWEI-BFD-MIB • HUAWEI-BGP-VPN-MIB • HUAWEI-BRAS-RADIUS-MIB • HUAWEI-BRAS-SRVCFG-EAP-MIB • HUAWEI-BRAS-SRVCFG-STATICUSER-MIB • HUAWEI-BULKSTAT-MIB • HUAWEI-CBQOS-MIB • HUAWEI-CCC-MIB • HUAWEI-CONFIG-MAN-MIB • HUAWEI-CLOCK-MIB • HUAWEI-CPU-MIB • HUAWEI-DAD-MIB	• HUAWEI-GTSM-MIB • HUAWEI-HGMP-MIB • HUAWEI-HQOS-MIB • HUAWEI-HWTACACS-MIB • HUAWEI-IF-EXT-MIB • HUAWEI-INFOCENTER-MIB • HUAWEI-IPFPM-MIB • HUAWEI-IPLPM-MIB • HUAWEI-IPMCAST-MIB • HUAWEI-IPPOOL-MIB • HUAWEI-IPSESSION-MIB • HUAWEI-IPV6-MIB • HUAWEI-ISOLATE-MIB • HUAWEI-KOMPELLA-MIB • HUAWEI-L2IF-MIB • HUAWEI-L2MAM-MIB • HUAWEI-L2MULTICAST-MIB

Category	MIB	
Huawei-proprietary MIB	• HUAWEI-DC-TRAP-MIB • HUAWEI-DATASYNC-MIB • HUAWEI-DEVICE-MIB • HUAWEI-DHCPR-MIB • HUAWEI-DHCPS-MIB • HUAWEI-DHCP-SNOOPING-MIB • HUAWEI-DIE-MIB • HUAWEI-DNS-MIB • HUAWEI-DLDP-MIB • HUAWEI-ERPS-MIB • HUAWEI-ERRORDOWN-MIB • HUAWEI-ENERGYMNGT-MIB • HUAWEI-EASY-OPERATION-MIB • HUAWEI-ENTITY-EXTENT-MIB • HUAWEI-ENTITY-TRAP-MIB • HUAWEI-ETHARP-MIB • HUAWEI-ETHOAM-MIB • HUAWEI-E-TRUNK-MIB • HUAWEI-FLASH-MAN-MIB • HUAWEI-FTP-MIB • HUAWEI-FWD-RES-TRAP-MIB • HUAWEI-GARP-APP-MIB • HUAWEI-GTL-MIB • HUAWEI-PERFORMANCE-MIB • HUAWEI-PIM-BSR-MIB • HUAWEI-PIM-STD-MIB • HUAWEI-PERFMGMT-MIB • HUAWEI-PORT-MIB • HUAWEI-PORTAL-MIB • HUAWEI-PWE3-MIB • HUAWEI-PWE3-TNL-MIB • HUAWEI-QINQ-MIB • HUAWEI-RIPv2-EXT-MIB • HUAWEI-RM-EXT-MIB • HUAWEI-RRPP-MIB • HUAWEI-RSVPTE-MIB • HUAWEI-SECURITY-MIB • HUAWEI-SEP-MIB • HUAWEI-SMARTLINK-MIB • HUAWEI-SNMP-EXT-MIB • HUAWEI-SSH-MIB • HUAWEI-STACK-MIB • HUAWEI-SWITCH-L2MAM-EXT-MIB • HUAWEI-SWITCH-SRV-TRAP-MIB	• HUAWEI-L2VLAN-MIB • HUAWEI-L2VPN-MIB • HUAWEI-LDT-MIB • HUAWEI-LSP-PING-TRACE-TRAP-MIB • HUAWEI-LINE-MIB • HUAWEI-LLDP-MIB • HUAWEI-MAC-AUTHEN-MIB • HUAWEI-MDNS-RELAY-MIB • HUAWEI-MEMORY-MIB • HUAWEI-MFF-MIB • HUAWEI-MFLP-MIB • HUAWEI-MGMD-STD-MIB • HUAWEI-MPLS-EXTEND-MIB • HUAWEI-MPLSLDP-MIB • HUAWEI-MPLSLSR-EXT-MIB • HUAWEI-MPLSOAM-MIB • HUAWEI-MSDP-MIB • HUAWEI-MSTP-MIB • HUAWEI-MULTICAST-MIB • HUAWEI-NETSTREAM-MIB • HUAWEI-NTPV3-MIB • HUAWEI-OSPFV2-MIB • HUAWEI-OSPFV3-MIB • HUAWEI-SYS-MAN-MIB • HUAWEI-TASK-MIB • HUAWEI-TCP-MIB • HUAWEI-TFTPC-MIB • HUAWEI-TRNG-MIB • HUAWEI-TUNNEL-MIB • HUAWEI-TUNNEL-TE-MIB • HUAWEI-UNIMNG-MIB • HUAWEI-USC-MIB • HUAWEI-VPLS-EXT-MIB • HUAWEI-VPLS-TNL-MIB • HUAWEI-VPN-DIAGNOSTICS-MIB • HUAWEI-VRRP-EXT-MIB • HUAWEI-WLAN-DEVICE-MIB • HUAWEI-WLAN-QOS-MIBB • HUAWEI-WLAN-RADIO-MIB • HUAWEI-WLAN-SECURITY-MIB • HUAWEI-WLAN-SERVICE-MIB • HUAWEI-WLAN-SYS-MIB • HUAWEI-WLAN-UPDATE-MIB • HUAWEI-WLAN-WIDS-MIB • HUAWEI-XQOS-MIB

9 Standard Compliance

Table 9-1 lists the standards the S7700 complies with.

Table 9-1 S7700 standards compliance

Standard Organization	Standard or Protocol
IETF	• RFC 768 User Datagram Protocol (UDP) • RFC 792 Internet Control Message Protocol (ICMP) • RFC 793 Transmission Control Protocol (TCP) • RFC 826 Ethernet Address Resolution Protocol (ARP) • RFC 854 Telnet Protocol Specification • RFC 951 Bootstrap Protocol (BOOTP) • RFC 959 File Transfer Protocol (FTP) • RFC 1058 Routing Information Protocol (RIP) • RFC 1112 Host extensions for IP multicasting • RFC 1157 A Simple Network Management Protocol (SNMP) • RFC 1256 ICMP Router Discovery • RFC 1305 Network Time Protocol Version 3 (NTP) • RFC 1349 Internet Protocol (IP) • RFC 1493 Definitions of Managed Objects for Bridges • RFC 1542 Clarifications and Extensions for the Bootstrap Protocol • RFC 1643 Ethernet Interface MIB • RFC 1757 Remote Network Monitoring (RMON) • RFC 1901 Introduction to Community-based SNMPv2 • RFC 1902-1907 SNMP v2 • RFC 1981 Path MTU Discovery for IP version 6 • RFC 2131 Dynamic Host Configuration Protocol (DHCP) • RFC 2328 OSPF Version 2 • RFC 2453 RIP Version 2 • RFC 2460 Internet Protocol, Version 6 Specification (IPv6) • RFC 2461 Neighbor Discovery for IP Version 6 (IPv6) • RFC 2462 IPv6 Stateless Address Auto configuration • RFC 2463 Internet Control Message Protocol for IPv6 (ICMPv6) • RFC 2474 Differentiated Services Field (DS Field) • RFC 2740 OSPF for IPv6 (OSPFv3) • RFC 2863 The Interfaces Group MIB • RFC 2597 Assured Forwarding PHB Group • RFC 2598 An Expedited Forwarding PHB • RFC 2571 SNMP Management Frameworks • RFC 2865 Remote Authentication Dial In User Service (RADIUS) • RFC 3046 DHCP Option82 • RFC 3376 Internet Group Management Protocol, Version 3 (IGMPv3) • RFC 3513 IP Version 6 Addressing Architecture • RFC 3579 RADIUS Support For EAP • RFC 4271 A Border Gateway Protocol 4 (BGP-4) • RFC 4760 Multiprotocol Extensions for BGP-4 • draft-grant-tacacs-02 TACACS+

Standard Organization	Standard or Protocol
IEEE	• IEEE 802.1D Media Access Control (MAC) Bridges • IEEE 802.1p Virtual Bridged Local Area Networks • IEEE 802.1Q Virtual Bridged Local Area Networks • IEEE 802.1ad Provider Bridges • IEEE 802.2 Logical Link Control • IEEE Std 802.3 CSMA/CD • IEEE Std 802.3ab 1000BASE-T specification • IEEE Std 802.3ad Aggregation of Multiple Link Segments • IEEE Std 802.3ae 10GE WEN/LAN Standard • IEEE Std 802.3x Full Duplex and flow control • IEEE Std 802.3z Gigabit Ethernet Standard • IEEE802.1ax/IEEE802.3ad Link Aggregation • IEEE 802.3ah Ethernet in the First Mile. • IEEE 802.1ag Connectivity Fault Management • IEEE 802.1ab Link Layer Discovery Protocol • IEEE 802.1D Spanning Tree Protocol • IEEE 802.1w Rapid Spanning Tree Protocol • IEEE 802.1s Multiple Spanning Tree Protocol • IEEE802.1x Port based network access control protocol • IEEE802.3af DTE Power via MIDI • IEEE802.3at DTE Power via the MDI Enhancements
ITU	• ITU SG13 Y.17ethoam • ITU SG13 QoS control Ethernet-Based IP Access • ITU-T Y.1731 ETH OAM performance monitor
ISO	• ISO 10589 IS-IS Routing Protocol
MEF	• MEF 2 Requirements and Framework for Ethernet Service Protection • MEF 9 Abstract Test Suite for Ethernet Services at the UNI • MEF 10.2 Ethernet Services Attributes Phase 2 • MEF 11 UNI Requirements and Framework • MEF 13 UNI Type 1 Implementation Agreement • MEF 15 Requirements for Management of Metro Ethernet Phase 1 Network Elements • MEF 17 Service OAM Framework and Requirements • MEF 20 UNI Type 2 Implementation Agreement • MEF 23 Class of Service Phase 1 Implementation Agreement • Xmodem XMODEM/YMODEM Protocol Reference

10 Ordering Information

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
ES1BS7703S01	S7703 Assembly Chassis-sustain FCC
ES1BS7706S01	S7706 Assembly Chassis-sustain FCC
ES1BS7712S01	S7712 Assembly Chassis-sustain FCC
ES0B017706P0	S7706 POE Assembly Chassis
ES0B017712P0	S7712 POE Assembly Chassis
ES1BS7706SP1	S7706 POE Assembly Chassis-sustain FCC
ES1BS7712SP1	S7712 POE Assembly Chassis-sustain FCC
LE0M00FBXB00	Wide Voltage 68 Fan Box
ES1M00FBX001	Enhancement 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
ES1D2SRUH000	S7706/S7712 Main Control Unit H
SRU Service Card	
ES0D00FSUA00	Enhanced Flexible Service Unit
ES02VSTSA	Cluster Switching System Service Unit
10/100BASE-T Interface Card	
ES0D0F48TA00	48-Port 10/100BASE-T Interface Card (EA, 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)
ES0D0T24XA00	24-Port 10/100/1000BASE-T and 2-Port 10GBASE-X Interface Card (EA,RJ45/XFP)
ES1D2G48TX1E	48-Port 10/100/1000BASE-T Interface Card (X1E, RJ45)
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)
ES1D2G48SX1E	48-Port 100/1000BASE-X Interface Card (X1E,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)
ES0D0X4UXA00	4-Port 10GBASE-X Interface Card (EA, XFP)
ES0D0X4UXC00	4-Port 10GBASE-X Interface Card (EC, XFP)
ES1D2X04XEC1	4-Port 10GBASE-X Interface Card(EC,XFP),FCC
ES1D2X04XED0	4-Port 10GBASE-X Interface Card (ED, XFP)
ES1D2S04SX1E	4-Port 10GBASE-X and 24-Port 100/1000BASE-X and 8-Port 10/100/1000BASE-T Combo Interface Card (X1E,RJ45/SFP/SFP+)
ES1D2X08SED4	8-Port 10GBASE-X Interface Card(ED,SFP+)
ES1D2X08SED5	8-Port 10GBASE-X Interface Card(ED,SFP+),FCC
ES1D2S08SX1E	8-Port 10GBASE-X and 8-Port 100/1000BASE-X and 8-Port 10/100/1000BASE-T Combo Interface Card (X1E,RJ45/SFP/SFP+)
ES0D0X12SA00	12-Port 10GBASE-X Interface Card (SA, SFP+)
ES1D2X16SFC0	16-Port 10GBASE-X Interface Card (FC, SFP+)
ES1D2X16SSC2	16-Port 10GBASE-X Interface Card(SC,SFP+)
ES1D2X32SSC0	32-Port 10GBASE-X Interface Card(SC,SFP+)
ES1D2X40SFC0	40-Port 10GBASE-X Interface Card (FC, SFP+)
40GE BASE-X interface card	

ES1D2L02QFC0	2-Port 40GBASE-X Interface Card (FC,QSFP+)
100GE BASE-X interface card	
ES1D2C02FEE0	2-Port 100GBASE-X Interface Card(EE,CFP)
POE Interface Card	
ES0D0G48VA00	48-Port 10/100/1000BASE-T POE Interface Card (EA, RJ45, POE)
Service Processing Unit	
ET1D2FW00S00	NGFW Module A,with HW General Security Platform Software
ET1D2FW00S01	NGFW Module B,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 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)
SFP-10G-iLR	Optical Transceiver,SFP+,9.8G,Single-mode Module(1310nm,1.4km,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+, 10G, 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-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)
SFP-10G-ZCW1511	Optical Transceiver,SFP+,10G,Single-mode Module(CWDM,1511nm,70km,LC)
SFP-10G-ZCW1471	Optical Transceiver,SFP+,10G,Single-mode Module(CWDM,1471nm,70km,LC)
SFP-10G-ZCW1491	Optical Transceiver,SFP+,10G,Single-mode Module(CWDM,1491nm,70km,LC)
SFP-10G-ZCW1531	Optical Transceiver,SFP+,10G,Single-mode Module(CWDM,1531nm,70km,LC)
SFP-10G-ZCW1551	Optical Transceiver,SFP+,10G,Single-mode Module(CWDM,1551nm,70km,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-GE-SX	Optical Transceiver,SFP,10G/GE,Multi-mode Module(850nm,0.4km/0.55km,LC)
SFP-10G-GE-LX	Optical Transceiver,SFP,10G/GE,Single-mode Module(1310nm,10km,LC)
SFP-10G-GE-EX	Optical Transceiver,SFP,10G/GE,Single-mode Module(1550nm,40km,LC)
40GE-QSFP+ & CFP 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)
QSFP-40G-LR4	40GBase-LR4 Optical Transceiver,QSFP+,40GE,Single-mode Module(1310nm,10km,LC)
QSFP-40G-eiSR4	40GBase-eSR4 Optical Transceiver,QSFP+,40G,Multi-mode (850nm,0.3km,MPO) (Connect to four SFP+ Optical Transceiver)
QSFP-40G-ER4	40GBase-ER4 Optical Transceiver,QSFP+,40G,Single-mode Module (1310nm,40km,LC)
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)
100GE- CFP optical transceiver	
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)
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)
SFP-GE-BXU1-SC	1000Base,BIDI Optical Transceiver,SFP,GE,Single-mode Module(TX1490nm/RX1310nm,10km,SC)
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)
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)
Power module	
ES02PSD16	1600W DC Power Module(Black)
W2PSA0800	800W AC Power Module(Black)
PAC-2200WF	2200W AC Power Module
W2PSD2200	2200W DC Power Module(Black)
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	
ES1SBSM23000	Quidway S7700 Basic SW, V200R003
ES1SBSM25000	Quidway S7700 Basic SW, V200R005
ES0SMS267700	Quidway S7700 Basic SW, V200R006
ES0SMS277700	Quidway S7700 Basic SW, V200R007
ES0SMS287700	Quidway S7700 Basic SW, V200R008
ES0SSVFF7700	SVF Function License(with S7700 used)
ES0SMPLS7700	MPLS Function License
ES0SNQAF7700	NQA Function License
ES0SIPV67700	IPV6 Function License
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)
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	
ES0I000DOC00	S7700 Smart Routing Switch Documentation

11 Others

The latest version of S7700 is V2R8.

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

www.huawei.com