Huawei S12700 Series Switches
Product Datasheet

HUAWEI TECHNOLOGIES CO., LTD.

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1 Introduction

HUAWEI S12700 series agile switches (S12700 for short) are designed for next-generation campus networks. Using a fully programmable switching architecture, the S12700 allows fast, flexible function customization and supports a smooth evolution to Software-Defined Networking (SDN). The S12700 uses a Huawei Ethernet Network Processor (ENP) and provides a native Wireless Access Controller (AC) to help build a wired and wireless converged network. Its Unified User Management capabilities deliver unified user and service management, and Huawei's Packet Conservation Algorithm for Internet (iPCA) supports hop-by-hop monitoring of any service flows, helping manage services in a more refined way.

The S12700 runs the Huawei Versatile Routing Platform (VRP), which provides high-performance L2/L3 switching services and rich network services, such as Multiprotocol Label Switching (MPLS) VPN, hardware IPv6, desktop cloud, and video conferencing. In addition, the S12700 series uses a variety of reliability technologies, including non-stop forwarding, hardware Eth-OAM/BFD, ring network protection, and Cluster Switch System Generation2 (CSS2) — a switch fabric hardware clustering technology that allows 1+N backup of Main Processing Units (MPUs). These technologies help improve productivity and maximize network operation time, reducing Total Cost of Ownership (TCO).

2 Product Overview

2.1 Product Models

The S12700 series is available in four models: S12704, S12708, S12710 and S12712.

S12712   S12710   S12708   S12704

Table 2-1 lists the basic physical specifications of S12700 models.

Table 2-1 Physical specifications of S12700 models

Item	Description
Number of LPU slots	S12704: 4 S12708: 8 S12710: 10 S12712: 12
Number of MPU slots	2
Number of SFU slots	S12704: 2 S12708: 4 S12710: 4 S12712: 4
Number of fan slots	S12704: 2 S12708: 4 S12710: 4 S12712: 5
Number of power module slots	S12704: 4 S12708: 6 S12710: 4 S12712: 6
Number of CMU slots	2
Port density per chassis	S12704: 192xFE, 192xGE, 192x10GE, 32x40GE, 16x100GE S12708: 384xFE, 384xGE, 384x10GE, 64x40GE, 32x100GE S12710: 480xFE, 480xGE, 480x10GE, 80x40GE, 40x100GE S12712: 576xFE, 576xGE, 576x10GE, 96x40GE, 48x100GE
Installation	The switch can be installed in an N66E or N68E cabinet, one cabinet for one chassis.
Cluster switch system (CSS)	CSS2, switch fabric hardware clustering
Maximum power consumption (full configuration) NOTE: The heat dissipation value of a chassis is equal to the current power consumption.	S12704: 2200 W S12708: 4400 W S12710: 4400 W S12712: 6600 W

Item	Description
Power parameters	DC input voltage • Rated voltage: -48 V DC/-60 V DC • Maximum voltage range: -40 V DC to -72 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)	• S12704 With cable management frames: 442 mm x 585 mm x 441.7 mm (10 U) Without cable management frames: 442 mm x 489 mm x 441.7 mm (10 U) • S12708 With cable management frames: 442 mm x 585 mm x 663.95 mm (15 U) Without cable management frames: 442 mm x 489 mm x 663.95 mm (15 U) • S12710 With cable management frames: 442 mm x 585 mm x 663.95 mm (15 U) Without cable management frames: 442 mm x 489 mm x 663.95 mm (15 U) • S12712 With cable management frames: 442 mm x 585 mm x 841.75 mm (19 U) Without cable management frames: 442 mm x 489 mm x 841.75 mm (19 U)
Weight (empty/fully loaded)	S12704: 29 kg/60 kg S12708: 42 kg/100 kg S12710: 37 kg/70 kg S12712: 63 kg/130 kg

2.2 Card Types

Table 2-2 lists the cards supported by the S12700.

Table 2-2 Cards supported by the S12700

Card Type	Card Name	Card Description	Functions and Features	Specifications
Main Control Unit	ET1D2MPUA000	S12700 Main Control Unit A (Optional Clock)	The system control and management unit for the S12704/S12708/S12712 eUSB card: 2 GB by default, expandable to 4 GB or 8 GB 1+1 hot standby Hot swap	Dimensions (W x D x H): 394.7 mm x 426.8 mm x 35.1 mm Weight: 2.88 kg Maximum power consumption: 100 W
	ET1D2MPUBC00	S12710 Main Control Unit B (Optional Clock)	The system control and management unit for the S12710 eUSB card: 2 GB by default, expandable to 4 GB or 8 GB 1+1 hot standby Hot swap	Dimensions (W x D x H): 394.7 mm x 426.8 mm x 35.1 mm Weight: 3.65 kg Maximum power consumption: 214.9 W
SFU	ET1D2SFUA000	S12704/S12708/ S12712 Switch Fabric Unit A	N+1 hot standby Hot swap	Dimensions (W x D x H): 394.7 mm x 426.8 mm x 35.1 mm Weight: ET1D2SFUA000: 3.32 kg ET1D2SFUC000: 3.96 kg ET1D2SFUD000: 3.96 kg ET1D2SFUB000: 3.25 kg Maximum power consumption: ET1D2SFUA000: 83 W ET1D2SFUC000: 350 W ET1D2SFUD000: 350 W ET1D2SFUB000: 186.3 W
	ET1D2SFUC000	S12704/S12708, Switch Fabric Unit C		
	ET1D2SFUD000	S12708/S12712, Switch Fabric Unit D		
	ET1D2SFUB000	S12700 Switch Fabric Unit B		
Subcard on the SFU	EH1D2VS08000	8-port 10G Cluster Switching System Service Unit (SFP+)	Provides eight 10G optical ports for data transmission and line-speed switching. Hot swap CSS service	Dimensions (W x D x H): 213.0 mm x 151.8 mm x 35.1 mm Weight: 0.50 kg Maximum power consumption: 30 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
OSP	EH1D2PS00P00	Open Service Platform Unit	Processes and forwards service data Provides certain functions using specific operating system and application software Supports intrusion prevention system (IPS) software	Dimensions (W x D x H): 394.7 mm x 426.8 mm x 35.1 mm Weight: 5.50 kg Maximum power consumption: 137.5 W
LPU	ET1D2G24SEC0	24-port 100/1000BASE-X interface card (EC, SFP)-128K MAC	Provides 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 Priority queuing (PQ), weighted round robin (WRR), deficit round robin (DRR), PQ+WRR, and PQ+DRR Buffer: 4 MB Hot swap	Dimensions (W x D x H): 394.7 mm x 426.8 mm x 35.1 mm Weight: 2.66 kg Maximum power consumption: 63 W

Card Type	Card Name	Card Description	Functions and Features	Specifications
LPU	ET1D2G48TEA0	48-port 10/100/1000BASE-T interface card (EA, RJ45)-32K MAC	Provides 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	Dimensions (W x D x H): 394.7 mm x 426.8 mm x 35.1 mm Weight: ET1D2G48TEA0: 2.50 kg ET1D2G48TEC0: 2.66 kg Maximum power consumption: ET1D2G48TEA0: 62 W ET1D2G48TEC0: 68 W
	ET1D2G48TEC0	48-port 10/100/1000BASE-T interface card (EC, RJ45)-128K MAC		
	ET1D2G48SEA0	48-port 100/1000BASE-X interface card (EA, SFP)-32K MAC	Provides 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	Dimensions (W x D x H): 394.7 mm x 426.8 mm x 35.1 mm Weight: ET1D2G48SEA0: 2.54 kg ET1D2G48SEC0: 2.66 kg Maximum power consumption: ET1D2G48SEA0: 75 W ET1D2G48SEC0: 92 W
	ET1D2G48SEC0	48-port 100/1000BASE-X interface card (EC, SFP)-128K MAC		
	ET1D2T36SEA0	12-port 100/1000BASE-X and 36-port 10/100/1000BASE-T interface card (EA, RJ45/SFP)-32K MAC	Provides 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	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

Card Type	Card Name	Card Description	Functions and Features	Specifications
LPU	ET1D2X04XEA0	4-port 10GBASE-X interface card (EA, XFP)-32K MAC	Provides 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	Dimensions (W x D x H): 394.7 mm x 426.8 mm x 35.1 mm Weight: ET1D2X04XEA0: 2.16 kg ET1D2X04XEC1: 2.28 kg Maximum power consumption: ET1D2X04XEA0: 64 W ET1D2X04XEC1: 75 W MAC address table size ET1D2X04XEA0: 32K ET1D2X04XEC1: 128K
	ET1D2X04XEC1	4-port 10GBASE-X interface card (EC, XFP)-128K MAC		
	ET1D2X12SSA0	12-port 10GBASE-X interface card (SA, SFP+)-32K MAC	Provides 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	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
	ET1D2X16SSC0	16-port 10GBASE-X interface card (SC, SFP+)-128K MAC	Provides 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	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

Card Type	Card Name	Card Description	Functions and Features	Specifications
LPU	ET1D2X16SSC2	16-port 10GBASE-X interface card (SC, SFP+)-128K MAC	Provides 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	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
	ET1D2X32SSC0	32-port 10GBASE-X interface card (SC, SFP+)-128K MAC	Provides 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	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
	ET1D2X32SX2H	32-Port 10GE SFP+ Interface Card(X2H,SFP+)	Provides thirty-two 10GE optical ports for data transmission and line-speed switching. Performs concurrent data forwarding using a distributed data plane Buffer: 13.5 MB Hot swap	Dimensions (W x D x H): 394.7mm × 426.8mm × 35.1mm Weight: 3.3kg Maximum power consumption: 214.9W
	ET1D2X32SX2S	32-Port 10GE SFP+ Interface Card(X2S,SFP+)		Dimensions (W x D x H): 394.7mm × 426.8mm × 35.1mm Weight: 3.2 kg Maximum power consumption: 203.3W
	ET1D2X32SX2E	32-Port 10GE SFP+ Interface Card(X2E,SFP+)		Dimensions (W x D x H): 394.7mm × 426.8mm × 35.1mm Weight: 3.3kg Maximum power consumption: 213.7W

Card Type	Card Name	Card Description	Functions and Features	Specifications
LPU	ET1D2S24SX2S	24-Port 10GE SFP+ Interface and 8-Port GE SFP Interface Card(X2S,SFP+)	Provides twenty-four 10G Ethernet optical ports, and eight GE optical ports for data access and line-speed switching.	Dimensions (W x D x H): 394.7mm × 426.8mm × 35.1mm Weight: 3.2kg Maximum power consumption: 192.3W
	ET1D2S24SX2E	24-Port 10GE SFP+ Interface and 8-Port GE SFP Interface Card(X2E,SFP+)	Performs concurrent data forwarding using a distributed data plane Buffer: 13.5 MB Hot swap	Dimensions (W x D x H): 394.7mm × 426.8mm × 35.1mm Weight: 3.3kg Maximum power consumption: 201.8W
	ET1D2S16SX2S	16-Port 10GE SFP+ Interface and 16-Port GE SFP Interface Card(X2S,SFP+)	Provides sixteen 10G Ethernet optical ports, and sixteen GE optical ports for data access and line-speed switching.	Dimensions (W x D x H): 394.7mm × 426.8mm × 35.1mm Weight: 3.2kg Maximum power consumption: 182.4W
	ET1D2S16SX2E	16-Port 10GE SFP+ Interface and 16-Port GE SFP Interface Card(X2E,SFP+)	Performs concurrent data forwarding using a distributed data plane Buffer: 13.5 MB Hot swap	Dimensions (W x D x H): 394.7mm × 426.8mm × 35.1mm Weight: 3.3kg Maximum power consumption: 192.4W
	ET1D2X48SX2S	48-Port 10GE SFP+ Interface Card(X2S,SFP+)	Provides forty-eight 10GE optical ports for data transmission and line-speed switching. Performs concurrent data forwarding using a distributed data plane Buffer: 13.5 MB Hot swap	Dimensions (W x D x H): 394.7mm × 426.8mm × 35.1mm Weight: 3.4kg Maximum power consumption: 258.1W

Card Type	Card Name	Card Description	Functions and Features	Specifications
LPU	ET1D2L02QSC0	2-port 40GBASE-X interface card (SC, QSFP+)-128K MAC	Provides 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 Software feature: service port clustering Hot swap	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
	ET1D2L08QSC0	8-port 40GBASE-X interface card (SC, QSFP+)-128K MAC	Provides eight 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 Buffer: 9 MB Hot swap	Dimensions (W x D x H): 394.7 mm x 426.8 mm x 35.1 mm Weight: 2.80 kg Maximum power consumption: 157.2 W
	EH1D2L08QX2E	8-Port 40GE QSFP+ Interface Card(X2E,QSFP+)	Provides eight 40GE Ethernet optical ports for data access and line-rate switching. Allows a 40GE port to split into four 10GE ports. Performs concurrent data forwarding using a distributed data plane. Buffer: 13.5 MB Hot swap	Dimensions (W x D x H): 394.7 mm x 426.8 mm x 35.1 mm Weight: 3.0 kg Maximum power consumption: 178.4 W

Card Type	Card Name	Card Description	Functions and Features	Specifications
LPU	ET1D2G48TX1E	48-port 10/100/1000BASE-T interface card (X1E, RJ45)	Provides 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, DRR, and PQ+DRR Hot swap	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
	ET1D2G48SX1E	48-port 100/1000BASE-X interface card (X1E SFP)	Provides 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, DRR, and PQ+DRR Hot swap	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
	ET1D2S04SX1E	4-port 10GBASE-X and 24-port 100/1000BASE-X and 8-port 10/100/1000BASE-T combo interface card (X1E, RJ45/SFP/SFP+)	Provides 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, DRR, and PQ+DRR Software feature: LAN/WAN switching Hot swap	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

Card Type	Card Name	Card Description	Functions and Features	Specifications
LPU	ET1D2S08SX1E	8-port 10GBASE-X and 8-port 100/1000BASE-X and 8-port 10/100/ 1000BASE-T combo interface card (X1E, RJ45/ SFP/SFP+)	Provides 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, DRR, and PQ+DRR Hot swap	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
	ET1D2X48SEC0	48-port 10GBASE-X interface card (EC, SFP+)	Provides forty-eight 1000M/10G BASE-X ports for data access 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	Dimensions (W x D x H): 394.7 mm x 426.8 mm x 35.1 mm Weight: 3.42 kg Maximum power consumption: 300 W
	ET1D2C02FEE0	2-port 100GBASE-X interface card (EE, CFP)-688K MAC	Provides 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	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

Card Type	Card Name	Card Description	Functions and Features	Specifications
LPU	ET1D2C04HX2H	4-Port 100GE QSFP28 Interface Card (X2H,QSFP28)	Provides two 100GE optical ports for data transmission and line-speed switching. Performs concurrent data forwarding using a distributed data plane Buffer: 13.5 MB Hot swap	Dimensions (W x D x H): 394.7mm × 426.8mm × 35.1mm Weight: 3.15kg Maximum power consumption: 170.7W
	ET1D2C04HX2S	4-Port 100GE QSFP28 Interface Card(X2S,QSFP28)		Dimensions (W x D x H): 394.7mm × 426.8mm × 35.1mm Weight: 3.05kg Maximum power consumption: 154.7W
	ET1D2C04HX2E	4-Port 100GE QSFP28 Interface Card(X2E,QSFP28)		Dimensions (W x D x H): 394.7mm × 426.8mm × 35.1mm Weight: 3.15kg Maximum power consumption: 164.8W
	ET1D2H02QX2S	2-Port 100GE QSFP28 Interface and 2-Port 40GE QSFP+ Interface Card(X2S,QSFP28)	Provides two 40GE optical ports and two 100GE optical ports for data transmission and line-speed switching. Performs concurrent data forwarding using a distributed data plane Buffer: 13.5 MB Hot swap	Dimensions (W x D x H): 394.7mm × 426.8mm × 35.1mm Weight: 3.05kg Maximum power consumption: 143.5W
	ET1D2H02QX2E	2-Port 100GE QSFP28 Interface and 2-Port 40GE QSFP+ Interface Card(X2E,QSFP28)		Dimensions (W x D x H): 394.7mm × 426.8mm × 35.1mm Weight: 3.15kg Maximum power consumption: 153.1W
	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.

Card Type	Card Name	Card Description	Functions and Features	Specifications
LPU	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.
	ET1D2FW00S02	NGFW Module C, 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.

3 Power Supply

Table 3-1 lists power supplies supported by the S12700.

Table 3-1 Power supplies supported by the S12700

Device Model	Supporting PoE	1600 W DC	2200 W DC	800 W AC	2200 W AC
S12700	N	N	Y	S12704/S12710:Y S12708/S12712:N	Y

The S12704 and S12710 provide slots PWR1 to PWR4 for power modules. The S12708 and S12712 provides slots PWR1 to PWR6 for power modules.

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

The S12700 series switches support three redundancy modes of power modules: N+N, N+1, and N+0. The value of N depends on the maximum power actually required by the system. Ensure that the total maximum output power of N power modules (N x maximum output power of each power module) 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 2+0 mode. If three 2200 W power modules are installed, they work in 2+1 redundancy mode. If four 2200 W power modules are installed, they work in 2+2 redundancy mode. The system can identify the power redundancy mode, and you do not need to manually configure the power redundancy mode.

2200 W DC Power Module

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

Figure 3-1 2200 W DC power module

Table 3-2 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℃ to 45℃ Operating relative humidity: 5% RH to 95% RH (noncondensing) Storage temperature: -40℃ to +70℃ 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.

Figure 3-2 800 W DC power module

Table 3-3 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℃ to 45℃ Operating relative humidity: 5% RH to 95% RH (noncondensing) Storage temperature: -40℃ to +70℃ 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.

Figure 3-3 2200 W AC power module

Table 3-4 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℃ to 45℃ Operating relative humidity: 5% RH to 95% RH (noncondensing) Storage temperature: -40℃ to +70℃ Storage relative humidity: 5% RH to 95% RH (noncondensing)

4 Product Characteristics

Make Your Network Agile and Service-Oriented

The high-speed ENP chip used in the S12700 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.

In addition to providing all the capabilities of common switches, the S12700 series provides fully programmable open interfaces and supports programmable forwarding behaviors. Enterprises can use the open interfaces to develop new protocols and functions independently, or jointly with other vendors, to build campus networks that meet their needs.

The ENP chip uses a fully programmable architecture, on which enterprises can define their own forwarding models, forwarding behaviors, and lookup algorithms. This architecture speeds service innovation and enables the provisioning of a customized service within six months, without replacing hardware. In contrast, traditional Application Specific Integrated Circuit (ASIC) chips use a fixed forwarding architecture and follow a fixed forwarding process. For this reason, new services cannot be provisioned until new hardware is developed to support the services, which can take one to three years.

Deliver Abundant Services Agilely

The S12700 series' native AC capabilities allow enterprises to build a wireless network without additional AC hardware. Each S12700 switch can manage up to 6,144 APs and 65,536 users. It is a core switch that provides 4 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 S12700 series' unified user management function authenticates both wired and wireless users, ensuring a consistent user experience no matter whether they are connected to the network through wired or wireless access devices. The unified user management function supports various authentication methods, including 802.1x, MAC address, and Portal authentication, and is capable of managing users based on user groups, domains, and time ranges. These functions control user and service management and enable the transformation from device-centered management to user-centered management.

The S12700 series' Service Chain function can virtualize value-added service capabilities, such as next-generation firewall. Then these capabilities can be used by campus network entities (such as switches, routers, AC, AP, and terminals), regardless of their physical locations. Service Chain provides a more flexible value-added service deployment solution, which reduces equipment investment and maintenance costs.

The S12700 series supports IEEE 1588v2 and Synchronous Ethernet (SyncE), meeting the high-precision synchronization requirements of network systems.

Provide Agile Fine Granular Management

Packet Conservation Algorithm for Internet (iPCA) changes the traditional method that uses simulated traffic for fault location. iPCA technology monitors network quality for any service flow at any network node, at any time, and without extra costs. It can detect temporary service interruptions within one second and can identify faulty ports accurately. This cutting-edge fault detection technology turns "extensive management" into "fine granular management."

Super Virtual Fabric 2.0 (SVF 2.0) technology can not only virtualize fixed-configuration switches into S12700 switch line cards but also virtualize APs as switch ports. With this virtualization technology, a physical network with core/aggregation switches, access switches, and APs can be virtualized into a "super switch", offering the simplest network management solution.

The S12700 series manages access switches in a similar way an AC manages APs, saving the trouble of laborious configuration on access switches. It manages access switches and APs uniformly through CAPWAP tunnels, allowing access switches and APs to connect to the network with zero configuration.

Industry-leading Line cards

Using Huawei's advanced ENP chips, the S12700 series supports several million hardware entries, leaving traditional switches far behind. The S12700 series provides 1M MAC address entries and 3M Forwarding Information Base (FIB) entries, meeting requirements of route-intensive scenarios, such as the Metropolitan Area Network (MAN) for a television broadcasting or education network. Providing 1M NetStream entries enables fine granular traffic statistics for college campus networks and large-scale enterprise campus networks.

The S12700 series provides large buffer on line card to prevent packet loss upon traffic bursts, delivering high-quality video services.

The S12700 series supports high-density line-speed cards, such as 48 x 10 GE, 8 x 40GE and 4 x 100GE cards. Each S12700 chassis can provide a maximum of 576 x 10 GE ports, 96 x40G ports and 48 x 100GE ports. This large port capacity fully meets the requirements of bandwidth-consuming applications, such as multimedia video conferencing, protecting customer investments.

End-to-End Reliability Design

Device-Level Reliability: CSS2 Switch Fabric Hardware Clustering Technology

Based on back-to-back clustering technology, widely used on high-end core routers, the S12700 series employs second-generation switching fabric hardware clustering technology, CSS2, an enhancement to CSS switching fabric clustering technology.

CSS2 technology connects cluster member switches through switch fabric unit hardware channels; therefore, cluster control and data packets need only be forwarded once by the switch fabric units and do not go through service cards. Compared with traditional service port clustering technologies, CSS2 minimizes the impact of software failures, reduces service interruption risks caused by service cards, and also significantly shortens transmission latency.

CSS2 supports 1+N backup of MPUs. This means a cluster can run stably as long as one MPU of any chassis in the cluster is working normally. In a cluster connected by service ports, each chassis must have at least one MPU working normally; therefore, CSS2 is more reliable than traditional service port clustering technologies.

Network-Level Reliability: End-to-End Hardware Protection Switching

The S12700 uses a series of link detection and protection switching technologies, such as hardware Eth-OAM, BFD, G.8032, and Smart Ethernet Protection (SEP), to realize end-to-end protection switching. These technologies help build a campus network that responds quickly to topology changes and provides the most reliable services.

The S12700 supports High-speed Self Recovery (HSR) technology. Using Huawei's ENP cards, the S12700 implements end-to-end IP MPLS bearer network protection switchover within 50 ms, improving network reliability .

Comprehensive Security Measures

The S12700 supports MAC security (MACSec) that enables hop-by-hop secure data transmission. Therefore, the S12700 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 S12700. 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 S12700 provides innovative next-generation environment awareness and access control. It identifies the application-layer attacks and protects network-layer applications based on application type, content, time, user, threaten, and location.

The dedicated software and hardware platforms provide an Intelligent Aware Engine (IAE) to perceive application information when all security functions are enabled. The built-in hardware accelerator for content detection improves application-layer protection efficiency and ensures the 10G+ performance when all security functions are enabled.

5 Product Specifications

5.1 Product Specifications

Table 5-1 Product specifications of the S12700

Item	S12704	S12708	S12710	S12712
Switching capacity	4.88Tbps/ 16.08Tbps	12.32Tbps/ 32.16Tbps	13.12Tbps/ 38.56Tbps	17.44Tbps/ 44.96Tbps
Packet forwarding rate	3,120/4,560Mpps	6,240 /9,120Mpps	7,440/11,040Mpps	9,120/12,960Mpps
Slot bandwidth	480Gbps	640 Gbps	480Gbps	640Gbps
Redundancy design	MPUs, SFUs, power supplies, and fan modules			
CSS2	1+N backup of MPUs in a cluster			
	Up to 1.92 Tbit/s cluster bandwidth, 4 μs inter-chassis transmission latency			

Item	S12704	S12708	S12710	S12712
Wireless network management	Native AC			
	AP access control, AP region management, and AP profile management			
	Radio profile management, uniform static configuration, and centralized dynamic management			
	Basic WLAN services, QoS, security, and user management			
User management	Unified user management			
	802.1X, MAC, and Portal authentication			
	Traffic- and time-based accounting			
	User authorization based on user groups, domains, and time ranges			
iPCA quality awareness	Marking real service packets to obtain real-time count of dropped packets and packet loss ratio			
	Counting number of dropped packets and packet loss ratio on devices and L2/L3 networks			
SVF 2.0 virtualization	Up to 4K clients (access switches and APs) virtualized into a single device			
	Two layers of ASs allowed in an SVF system			
	Third-party devices allowed between SVF parent and clients			
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			
ARP	Up to 256K ARP entries			
MAC address	1M MAC address entries			
	Dynamic MAC address learning and aging			
	Static, dynamic, and blackhole MAC address entries			
	Source MAC address filtering			
	MAC address limiting based on ports and VLANs			
Ring network protection	Spanning Tree Protocol (STP) (IEEE 802.1d), RSTP (IEEE 802.1w), and MSTP (IEEE 802.1s)			
	SEP			
	Bridge Protocol Data Unit (BPDU), root protection, and loop protection			
	BPDU tunnel			
	G.8032 Ethernet Ring Protection Switching (ERPS)			

Item	S12704	S12708	S12710	S12712
IP routing	3M IPv4 routing entries			
	512K IPv6 routing entries			
	IPv4 dynamic routing protocols, such as RIP, OSPF, IS-IS, and BGP			
	IPv6 routing protocols, such as RIPng, OSPFv3, IS-ISv6, and BGP4+			
Multicast	128,000 multicast routing entries			
	IGMPv1/v2/v3 and IGMP v1/v2/v3 snooping			
	PIM-DM, PIM-SM, and PIM-SSM			
	Multicast Source Discovery Protocol (MSDP) and Multiprotocol Extensions for BGP (MBGP)			
	Fast leave			
	Multicast traffic control			
	Multicast querier			
	Multicast protocol packet suppression			
	Multicast Call Admission Control (CAC)			
	Multicast ACL			
MPLS	Basic MPLS functions			
	MPLS Operations, Administration, and Maintenance (OAM)			
	MPLS Traffic Engineering (TE)			
	MPLS VPN/VLL/VPLS			
Reliability and availability	Link Aggregation Control Protocol (LACP) and E-Trunk			
	Virtual Router Redundancy Protocol (VRRP) and Bidirectional Forwarding Detection (BFD) for VRRP			
	BFD for BGP/IS-IS/OSPF/static route			
	Non-Stop Routing (NSR), Non-Stop Forwarding (NSF) and Graceful Restart (GR) for BGP/IS-IS/OSPF/LDP			
	TE Fast ReRoute (FRR) and IP FRR			
	Eth-OAM 802.3ah and 802.1ag (hardware-based)			
	HSR			
	ITU-Y.1731			
	Device Link Detection Protocol (DLDP)			

Item	S12704	S12708	S12710	S12712
Reliability and availability	• S12704 Mean Time Between Failures (MTBF): 40.65 years Mean time to repair (MTTR): 35 minutes Availability: 0.999998837 • S12708 Mean Time Between Failures (MTBF): 40.04 years Mean time to repair (MTTR): 36 minutes Availability: 0.9999984 • S12710 Mean Time Between Failures (MTBF): 40.04 years Mean time to repair (MTTR): 36 minutes Availability: 0.9999984 • S12712 Mean Time Between Failures (MTBF): 35.95 years Mean time to repair (MTTR): 35 minutes Availability: 0.9999981			
QoS	256K ACLs			
	Traffic classification based on Layer 2 headers, Layer 3 protocols, Layer 4 protocols, and 802.1p priority			
	ACLs and actions such as Committed Access Rate (CAR), re-marking, and scheduling			
	Queuing algorithms, such as SP, WRR, DRR, SP + WRR, and SP + DRR			
	Congestion avoidance mechanisms, including (WRED) and tail drop			
	H-QoS			
	Traffic shaping			
Network synchronization	Ethernet synchronization			
	1588v2			
Configuration and maintenance	Terminal access services such as console port login, Telnet, and SSH			
	Network management protocols, such as SNMPv1/v2/v3			
	File uploading and downloading through FTP and TFTP			
	BootROM upgrade and remote in-service upgrade			
	Hot patches			
	User operation logs			

Item	S12704	S12708	S12710	S12712
Security and management	MAC address, Portal, 802.1x, and Dynamic Host Configuration Protocol (DHCP) snooping triggered authentication			
	MACsec			
	RADIUS and HWTACACS authentication for login users			
	Command line authority control based on user levels, preventing unauthorized users from using command configurations			
	Defense against DoS attacks, Transmission Control Protocol (TCP) SYN Flood attacks, User Datagram Protocol (UDP) Flood attacks, broadcast storms, and heavy traffic attacks			
	Remote Network Monitoring (RMON)			
Security protection *	Firewall			
	Network Address Translation (NAT)			
	IPSec, SSL VPN			
	Intrusion Protection System (IPS)			
	Load balancing Analog Digital Conversion (ADC)			
Interoperability	Interoperable with VBST (compatible with PVST/PVST+/RPVST)			
	Interoperable with LNP (similar to DTP)			
	Interoperable with VCMP (similar to VTP)			
Energy saving	Energy Efficient Ethernet (802.3az)			
Environment parameters	Operating temperature and altitude: – -60 m to +1800 m: 0℃ to 45℃ – 1800 m to 4000 m: Temperature decreases by 1℃ every time the altitude increases 220 m. – 4000 m: 0℃ to 35℃ Operating relative humidity: 5% RH to 95% RH (noncondensing) Storage temperature: -40℃ to +70℃ Storage altitude: < 5000 m Storage relative humidity: 5% RH to 95% RH (noncondensing)			
Noise under normal temperature (sound power)	S12704: ≤ 77.8 dBA S12708: ≤ 72 dBA S12710: ≤ 75.7 dBA S12712: ≤ 77.9 dBA			

Item	S12704	S12708	S12710	S12712
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 S12700 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

In an enterprise campus network

S12700 series switches are deployed on the core layer of an enterprise campus network. Native ACs provided by the S12700 enable customers to build wireless networks without additional AC hardware, reducing network construction costs. It is a core switch that provides 4 Tbit/s AC capabilities, avoiding the performance bottleneck on independent ACs. The native AC capabilities help customers migrate their wireless networks to 802.11ac. The S12700 series realizes wired and wireless convergence and delivers consistent experience to wired and wireless users through uniform device, user, and service management.

In a college campus network

S12700 series switches are deployed on the core layer of a college campus network. The unified user management function on the S12700 reduces network construction costs by removing the need to purchase new BRAS hardware. Each S12700 switch supports up to 65,536 users, allowing a large number of concurrent access users. Its H-QoS feature implements fine granular user and service management. The

S12700 series realizes wired and wireless convergence and delivers consistent experience to wired and wireless users through uniform device, user, and service management.

In a bearer network for video conferencing, desktop cloud, and video surveillance applications

The Large buffer prevents packet loss upon traffic bursts, delivering high-quality video streams. The S12700 series supports up to 1M MAC address entries and 3M FIB entries, which allow access from a large number of terminals and help evolution to IPv6 and the Internet of Things (IoT). Employing end-to-end hardware reliability technologies and iPCA technology, the S12700 series offers a highly reliable, high-quality, scalable video conferencing and surveillance solution.

On the core/aggregation layer of a MAN

S12700 series switches are used as core or aggregation switches on the Metropolitan Area Network (MAN) of a television broadcasting or education network. The 3M FIB entries provided are sufficient for large-scale routing on the MAN. CSS2 switch fabric hardware clustering technology, originating from clustering technology for high-end core routers, delivers carrier-class reliability on the MAN. Additionally, the S12700 series supports comprehensive L2/L3 MPLS VPN features, providing a highly reliable, secure, and scalable metropolitan bearer network solution.

In an enterprise data center

S12700 series switches are deployed on the core or aggregation layer of an enterprise data center network. The S12700 series has high-density line cards, such as 48 x 10 GE, 8 x 40GE and 4 x 100GE cards, meeting the requirements for large data throughput on data center core/aggregation nodes. Using CSS2 switch fabric hardware clustering technology, the S12700 series provides up to 1.92 Tbit/s cluster bandwidth and shortens the inter-chassis forwarding latency to 4 μs. This technology helps customers build a high performance, high reliability, and low latency data center network.

7 Safety and Regulatory Compliance

Table 7-1 lists the safety and regulatory compliance of S12700.

Table 7-1 S12700 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

Certification Category	Description
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

8.1 Supported MIBs

Table 8-1 lists the MIBs supported by S12700.

Table 8-1 S12700 MIBs

Category	MIB	
Public MIB	BGP4-MIB	MSDP-MIB
	BRIDGE-MIB	NOTIFICATION-LOG-MIB
	DISMAN-NSLOOKUP-MIB	NQA-MIB
	DISMAN-PING-MIB	OSPF-MIB
	DISMAN-TRACEROUTE-MIB	OSPF-TRAP-MIB
	ENTITY-MIB	P-BRIDGE-MIB
	EtherLike-MIB	PIM-BSR-MIB
	IF-MIB	PIM-STD-MIB
	IP-FORWARD-MIB	Q-BRIDGE-MIB
	IPMCAST-MIB	RFC1213-MIB
	IPv6-ICMP-MIB	RIPv2-MIB
	IPv6-MIB	RMON2-MIB
	IPv6-TCP-MIB	RMON-MIB
	IPv6-UDP-MIB	SAVI-MIB
	ISIS-MIB	SNMP-FRAMEWORK-MIB
	LAG-MIB	SNMP-MPD-MIB
	LLDP-EXT-DOT1-MIB	SNMP-NOTIFICATION-MIB
	LLDP-EXT-DOT3-MIB	SNMP-TARGET-MIB
	LLDP-MIB	SNMP-USER-BASED-SM-MIB
	MGMD-STD-MIB	SNMPv2-MIB
	MPLS-FTN-STD-MIB	SNMP-VIEW-BASED-ACM-MIB
	MPLS-L3VPN-STD-MIB	TCP-MIB
	MPLS-LDP-GENERIC-STD-MIB	UDP-MIB
	MPLS-LDP-STD-MIB	VRRP-MIB
	MPLS-LSR-STD-MIB	VRRPv3-MIB
	MPLS-TE-STD-MIB	
Huawei-proprietary MIB	HUAWEI-AAA-MIB	HUAWEI-CLOCK-MIB
	HUAWEI-ACL-MIB	HUAWEI-CPU-MIB
	HUAWEI-ALARM-MIB	HUAWEI-DAD-MIB
	HUAWEI-ALARM-RELIABILITY-MIB	HUAWEI-DC-TRAP-MIB
	HUAWEI-BASE-TRAP-MIB	HUAWEI-DATASYNC-MIB
	HUAWEI-BFD-MIB	HUAWEI-DEVICE-MIB
	HUAWEI-BGP-VPN-MIB	HUAWEI-DHCPR-MIB
	HUAWEI-BRAS-RADIUS-MIB	HUAWEI-DHCPS-MIB
	HUAWEI-BRAS-SRVCFG-EAP-MIB	HUAWEI-DHCP-SNOOPING-MIB
	HUAWEI-BRAS-SRVCFG-STATICUSER-MIB	HUAWEI-DIE-MIB
	HUAWEI-BULKSTAT-MIB	HUAWEI-DNS-MIB
	HUAWEI-CBQOS-MIB	HUAWEI-DLDP-MIB
	HUAWEI-CCC-MIB	HUAWEI-ERPS-MIB
	HUAWEI-CONFIG-MAN-MIB	HUAWEI-ERRORDOWN-MIB

Category	MIB	
Huawei-proprietary MIB	HUAWEI-ENERGYMNGT-MIB	HUAWEI-NETSTREAM-MIB
	HUAWEI-EASY-OPERATION-MIB	HUAWEI-NTPV3-MIB
	HUAWEI-ENTITY-EXTENT-MIB	HUAWEI-OSPFV2-MIB
	HUAWEI-ENTITY-TRAP-MIB	HUAWEI-OSPFV3-MIB
	HUAWEI-ETHARP-MIB	HUAWEI-PERFORMANCE-MIB
	HUAWEI-ETHOAM-MIB	HUAWEI-PIM-BSR-MIB
	HUAWEI-E-TRUNK-MIB	HUAWEI-PIM-STD-MIB
	HUAWEI-FLASH-MAN-MIB	HUAWEI-PERFMGMT-MIB
	HUAWEI-FTP-MIB	HUAWEI-PORT-MIB
	HUAWEI-FWD-RES-TRAP-MIB	HUAWEI-PORTAL-MIB
	HUAWEI-GARP-APP-MIB	HUAWEI-PWE3-MIB
	HUAWEI-GTL-MIB	HUAWEI-PWE3-TNL-MIB
	HUAWEI-GTSM-MIB	HUAWEI-QINQ-MIB
	HUAWEI-HGMP-MIB	HUAWEI-RIPv2-EXT-MIB
	HUAWEI-HQOS-MIB	HUAWEI-RM-EXT-MIB
	HUAWEI-HWTACACS-MIB	HUAWEI-RRPP-MIB
	HUAWEI-IF-EXT-MIB	HUAWEI-RSVPTE-MIB
	HUAWEI-INFOCENTER-MIB	HUAWEI-SECURITY-MIB
	HUAWEI-IPFPM-MIB	HUAWEI-SEP-MIB
	HUAWEI-IPLPM-MIB	HUAWEI-SMARTLINK-MIB
	HUAWEI-IPMCAST-MIB	HUAWEI-SNMP-EXT-MIB
	HUAWEI-IPPOOL-MIB	HUAWEI-SSH-MIB
	HUAWEI-IPSESSION-MIB	HUAWEI-STACK-MIB
	HUAWEI-IPV6-MIB	HUAWEI-SWITCH-L2MAM-EXT-MIB
	HUAWEI-ISOLATE-MIB	HUAWEI-SWITCH-SRV-TRAP-MIB
	HUAWEI-KOMPELLA-MIB	HUAWEI-SYS-MAN-MIB
	HUAWEI-L2IF-MIB	HUAWEI-TASK-MIB
	HUAWEI-L2MAM-MIB	HUAWEI-TCP-MIB
	HUAWEI-L2MULTICAST-MIB	HUAWEI-TFTPC-MIB
	HUAWEI-L2VLAN-MIB	HUAWEI-TRNG-MIB
	HUAWEI-L2VPN-MIB	HUAWEI-TUNNEL-MIB
	HUAWEI-LDT-MIB	HUAWEI-TUNNEL-TE-MIB
	HUAWEI-LSP-PING-TRACE-TRAP-MIB	HUAWEI-UNIMNG-MIB
	HUAWEI-LINE-MIB	HUAWEI-USC-MIB
	HUAWEI-LLDP-MIB	HUAWEI-VPLS-EXT-MIB
	HUAWEI-MAC-AUTHEN-MIB	HUAWEI-VPLS-TNL-MIB
	HUAWEI-MDNS-RELAY-MIB	HUAWEI-VPN-DIAGNOSTICS-MIB
	HUAWEI-MEMORY-MIB	HUAWEI-VRRP-EXT-MIB
	HUAWEI-MFF-MIB	HUAWEI-WLAN-DEVICE-MIB
	HUAWEI-MFLP-MIB	HUAWEI-WLAN-QOS-MIBB
	HUAWEI-MGMD-STD-MIB	HUAWEI-WLAN-RADIO-MIB
	HUAWEI-MPLS-EXTEND-MIB	HUAWEI-WLAN-SECURITY-MIB
	HUAWEI-MPLSLDP-MIB	HUAWEI-WLAN-SERVICE-MIB
	HUAWEI-MPLSLSR-EXT-MIB	HUAWEI-WLAN-SYS-MIB
	HUAWEI-MPLSOAM-MIB	HUAWEI-WLAN-UPDATE-MIB
	HUAWEI-MSDP-MIB	HUAWEI-WLAN-WIDS-MIB
	HUAWEI-MSTP-MIB	HUAWEI-XQOS-MIB
	HUAWEI-MULTICAST-MIB	

8.2 Standard Compliance

Table 8-2 lists the standards the S12700 complies with.

Table 8-2 S12700 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
ITU	ITU SG13 Y.17ethoam ITU SG13 QoS control Ethernet-Based IP Access ITU-T Y.1730 ETH OAM performance monitor ITU-T Y.1731 ETH OAM performance monitor ITU-T Y.1710 Requirements for OAM functionality for MPLS networks ITU-T Y.1711 Operation and maintenance mechanism for MPLS networks ITU-T Y.1720 Protection switching for MPLS networks
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

NOTE:

The listed standards and protocols are fully or partially supported by Huawei switches. For details, see the

HUAWEI Sx700 Switch Standard and Protocol Compliance List or contact your local Huawei sales office.

9 Ordering Information

S12700 basic configuration	
LE2BN66ED000	N66E DC assembly rack (eight 60A outputs, maximum 2,200W per output, 600 x 600 x 2,200 mm)
LE2BN66EA000	N66E AC assembly rack (four 16A outputs, maximum 2,500W per output, 600 x 600 x 2,200 mm)
ET1BS12704S0	S12704 Assembly Chassis
ET1BS12708S0	S12708 assembly chassis
ET1BS12710S0	S12710 assembly chassis
ET1BS12712S0	S12712 assembly chassis
ET1MFBX00000	Wide Voltage 129 Fan Box
EH1M00FBX000	Wide Voltage 74 Fan Box
Monitoring unit	
EH1D200CMU00	Centralized monitoring unit
Main processing unit	
ET1D2MPUA000	S12700 main control unit A, optional clock
ET1D2MPUBC00	S12710 main control unit B, optional clock
Switch fabric unit	
ET1D2SFUA000	S12700 switch fabric unit A
ET1D2SFUB000	S12700 switch fabric unit B
ET1D2SFUC000	S12700 switch fabric unit C
ET1D2SFUD000	S12700 switch fabric unit D
100M/1000M Ethernet electrical interface cards	
ET1D2G48TEA0	48-port 10/100/1000 BASE-T interface card (EA, RJ45)
ET1D2G48TEC0	48-port 10/100/1000 BASE-T interface card (EC, RJ45)
ET1D2G48TX1E	48-port 10/100/1000 BASE-T interface card (X1E, RJ45)*
100M/1000M Ethernet optical interface cards	
ET1D2G24SEC0	24-port 100/1000 BASE-X interface card (EC, SFP)
ET1D2G48SEA0	48-port 100/1000 BASE-X interface card (EA, SFP)
ET1D2G48SEC0	48-port 100/1000 BASE-X interface card (EC, SFP)
ET1D2G48SX1E	48-port 100/1000 BASE-X interface card (X1E, SFP)
100M/1000M Ethernet electrical and optical interface cards	
ET1D2T36SEA0	36-port 10/100/1000 BASE-T and 12-port 100/1000 BASE-X interface card (EA, RJ45/SFP)

10 GE optical interface cards	
ET1D2X04XEA0	4-port 10G BASE-X interface card (EA, XFP)
ET1D2X04XEC1	4-port 10G BASE-X interface card (EC, XFP)
ET1D2S04SX1E	4-port 10G BASE-X and 24-port 100/1000 BASE-X and 8-port 10/100/1000 BASE-T combo interface card (X1E, RJ45/SFP/SFP+)
ET1D2S08SX1E	8-port 10G BASE-X and 8-port 100/1000 BASE-X and 8-port 10/100/1000 BASE-T combo interface card (X1E, RJ45/SFP/SFP+)
ET1D2X12SSA0	12-port 10G BASE-X interface card (SA, SFP+)
ET1D2X16SSC0	16-port 10G BASE-X interface card (SC, SFP+)
ET1D2X16SSC2	16-Port 10GBASE-X Interface Card(SC,SFP+)
ET1D2X32SSC0	32-Port 10GBASE-X Interface Card(SC,SFP+)
ET1D2X48SEC0	48-port 10G BASE-X interface card (EC, SFP+)
ET1D2X32SX2H	32-Port 10GE SFP+ Interface Card(X2H,SFP+)
ET1D2X32SX2S	32-Port 10GE SFP+ Interface Card(X2S,SFP+)
ET1D2X32SX2E	32-Port 10GE SFP+ Interface Card(X2E,SFP+)
ET1D2S24SX2S	24-Port 10GE SFP+ Interface and 8-Port GE SFP Interface Card(X2S,SFP+)
ET1D2S24SX2E	24-Port 10GE SFP+ Interface and 8-Port GE SFP Interface Card(X2E,SFP+)
ET1D2S16SX2S	16-Port 10GE SFP+ Interface and 16-Port GE SFP Interface Card(X2S,SFP+)
ET1D2S16SX2E	16-Port 10GE SFP+ Interface and 16-Port GE SFP Interface Card(X2E,SFP+)
ET1D2X48SX2S	48-Port 10GE SFP+ Interface Card(X2S,SFP+)
40 GE optical interface cards	
ET1D2L02QSC0	2-port 40G BASE-X interface card (SC, QSFP+)
ET1D2L08QSC0	8-port 40G BASE-X interface card (SC, QSFP+)
EH1D2L08QX2E	8-Port 40GE QSFP+ Interface Card(X2E,QSFP+)
100GE optical interface cards	
ET1D2C02FEE0	2-Port 100GBASE-X Interface Card(EE,CFP)
ET1D2C04HX2H	4-Port 100GE QSFP28 Interface Card(X2H,QSFP28)
ET1D2C04HX2S	4-Port 100GE QSFP28 Interface Card(X2S,QSFP28)
ET1D2C04HX2E	4-Port 100GE QSFP28 Interface Card(X2E,QSFP28)
ET1D2H02QX2S	2-Port 100GE QSFP28 Interface and 2-Port 40GE QSFP+ Interface Card(X2S,QSFP28)
ET1D2H02QX2E	2-Port 100GE QSFP28 Interface and 2-Port 40GE QSFP+ Interface Card(X2E,QSFP28)
Service subcard	
EH1D2VS08000	8-port 10G cluster switching system service unit (SFP+)

LE0D00CKMA00	Clock Pinch Board-1588
Service processing cards	
ET1D2FW00S00	NGFW Module A, with HW General Security Platform Software
ET1D2FW00S01	NGFW Module B, with HW General Security Platform Software
ET1D2FW00S02	NGFW Module C, with HW General Security Platform Software
ET1D2IPS0S00	IPS Module A, with HW General Security Platform Software
ACU2	WLAN ACU2 Access Controller Unit(128 AP Control Resource Included)***
Optical transceivers	
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 (1,310 nm, 40 km, LC)
S-SFP-FE-LH80-SM1550	Optical transceiver, eSFP, FE, single-mode module (1,550 nm, 80 km, LC)
GE-SFP optical transceiver	
SFP-1000BaseT	Copper transceiver, SFP, GE, electrical interface module (100m, RJ45)
eSFP-GE-SX-MM850	Optical transceiver, eSFP, GE, multimode module (850 nm, 0.5 km, LC)
SFP-GE-LX-SM1310	Optical transceiver, SFP, GE, single-mode module (1,310 nm, 10 km, LC)
S-SFP-GE-LH40-SM1310	Optical transceiver, eSFP, GE, single-mode module (1,310 nm, 40 km, LC)
S-SFP-GE-LH40-SM1550	Optical transceiver, eSFP, GE, single-mode module (1,550 nm, 40 km, LC)
S-SFP-GE-LH80-SM1550	Optical transceiver, eSFP, GE, single-mode module (1,550 nm, 80 km, LC)
eSFP-GE-ZX100-SM1550	Optical transceiver, eSFP, GE, single-mode module (1,550 nm, 100 km, LC)
10 GE-XFP Optical transceiver	
XFP-SX-MM850	Optical transceiver, XFP, 10G, multimode module (850 nm, 0.3 km, LC)
XFP-STM64-LX-SM1310	Optical transceiver, XFP, 10G, single-mode module (1,310 nm, 10 km, LC)
XFP-STM64-LH40-SM1550	Optical transceiver, XFP, 10G, single-mode module (1,550 nm, 40 km, LC)
XFP-STM64-SM1550-80 km	Optical transceiver, XFP, 10G, single-mode module (1,550 nm, 80 km, LC)

10 GE-SFP+ Optical transceiver	
OMXD30000	Optical transceiver, SFP+, 10G, multimode module (850 nm, 0.3 km, LC)
OSX010000	Optical transceiver, SFP+, 10G, single-mode module (1,310 nm, 10 km, LC)
OSX040N01	Optical transceiver, SFP+, 10G, single-mode module (1,550 nm, 40 km, LC)
OSXD22N00	Optical transceiver, SFP+, 10G, single-mode module (1,310 nm, 0.22km, LC, LRM)
SFP-10G-USR	Optical transceiver, SFP+, 10G, multimode module (850 nm, 0.1 km, LC)
SFP-10G-ZR	Optical transceiver, SFP+, 10G, single-mode module (1,550 nm, 80 km, LC)
SFP-10G-ZCW1571	Optical transceiver, SFP+, 10G, single-mode module (CWDM, 1,571 nm, 70 km, LC)
SFP-10G-ZCW1591	Optical transceiver, SFP+, 10G, single-mode module (CWDM, 1,591 nm, 70 km, LC)
SFP-10G-ZCW1611	Optical transceiver, SFP+, 10G, single-mode module (CWDM, 1,611 nm, 70 km, LC)
SFP-10G-iLR	Optical Transceiver,SFP+, 9.8G, Single-mode Module (1310nm,1.4km,LC)
40 GE optical transceivers	
QSFP-40G-iSR4	40GBase-iSR4 Optical transceiver, QSFP, 40G, multimode module (850 nm, 0.15 km, MPO) (connecting to four SFP+ optical transceivers)
QSFP-40G-LX4	40GBase-LX4 Optical Transceiver,QSFP+,40GE,Single-mode(1310nm,2km,LC),Multi-mode(1310nm,0.15km,LC)
QSFP-40G-iSM4	40GBase-iSM4 Optical Transceiver, QSFP+, 40G, Single-mode Module (1310nm,1.4km,MPO)(Connect to four SFP+ Optical Transceiver)
QSFP-40G-eSM4	40GBase-eSM4 Optical Transceiver, QSFP+, 40G, Single-mode Module (1310nm,10km,MPO)(Connect to four SFP+ Optical Transceiver)
QSFP-40G-LR4	40G Base-LR4 optical transceiver, QSFP+, 40G, single-mode module (1,310 nm, 10 km, LC)
QSFP-40G-eSR4	40G Base-SR4 Optical transceiver, QSFP+, 40G, multimode module (850 nm, 0.3 km, MPO) (connecting to four SFP+ optical transceivers)
CFP-40G-SR4	High Speed Transceiver, CFP, 40G, Multimode Module (850nm,4*10G,0.1km,MPO)
CFP-40G-LR4	High Speed Transceiver, CFP, 40G, Single-mode Module (1310nm band,41.25G,10km,stright LC)
CFP-40G-ER4	High Speed Transceiver, CFP, 40G, Single-mode Module (1310nm band,41.25G,40km,stright LC)
CFP-40G-ZR4	High Speed Transceiver,CFP,40G,Single-mode Module(1550nm band,41.25G,80km,stright LC)
QSFP-40G-ER4	40G Base-ER4 Optical Transceiver, QSFP+, 40G, Single-mode Module (1310nm,40km,LC)
100GE optical transceivers	
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)
CFP-100GE-ZR4	100GBase,CFP Module,100G,Single-mode Module(1310nm band,4*25G,80km,stright LC)
QSFP-100G-CLR4	High Speed Transceiver,QSFP28,1310nm,4*25GBase,-6.5dBm,2.5dBm,-10.7dBm,LC/PC,2km
QSFP-100G-CWDM4	High Speed Transceiver,QSFP28,1310nm,4*25GBase,-6.5dBm,2.5dBm,-9.8dBm,LC/PC,2km
QSFP-100G-LR4	100GBase-LR4 Optical Transceiver,QSFP28,100G,Single-mode module (1310nm,10km,LC)
QSFP-100G-SR4	100GBase-SR4 Optical Transceiver,QSFP28,100G,Multi-mode (850nm,0.1km,MPO)
QSFP-100G-PSM4	100GBase-PSM4 Optical Transceiver,QSFP28,100G,Single-mode module (1310nm,0.5km,MPO)
BIDI-SFP optical transceivers	
SFP-FE-LX-SM1310-BIDI	Optical transceiver, eSFP, FE, BIDI single-mode module (TX1310/RX1550, 15 km, LC)
SFP-FE-LX-SM1550-BIDI	Optical transceiver, eSFP, FE, BIDI single-mode module (TX1550/RX1310, 15 km, LC)
SFP-GE-LX-SM1310-BIDI	Optical transceiver, eSFP, GE, BIDI single-mode module (TX1310/RX1490,10 km, LC)
SFP-GE-LX-SM1490-BIDI	Optical transceiver, eSFP, GE, BIDI single-mode module (TX1490/RX1310,10 km, LC)
LE2MGSC40ED0	Optical transceiver, SFP, GE, BIDI single-mode module (TX1490/RX1310, 40 km, LC)
LE2MGSC40DE0	Optical transceiver, SFP, GE, BIDI single-mode module (TX1310/RX1490, 40 km, LC)
SFP-GE-ZBXD1	Optical Transceiver, eSFP,GE,BIDI Single-mode Module (1570nm(Tx)/1490nm(Rx),80km,LC)
SFP-GE-ZBXU1	Optical Transceiver,eSFP,GE,BIDI Single-mode Module (1490nm(Tx)/1570nm(Rx),80km,LC)
BIDI-SFP+ optical transceivers	
SFP-10G-ER-SM1330-BIDI	Optical Transceiver,SFP+,10G,BIDI Single-mode Module(TX 1330nm/RX 1270nm,40km,LC)
SFP-10G-ER-SM1270-BIDI	Optical Transceiver,SFP+,10G,BIDI Single-mode Module(TX 1270nm/RX 1330nm,40km,LC)
SFP-10G-BXU1	10G Base, Bi-Directional (BIDI) optical transceiver, SFP, 10G, single-mode module (TX1270 nm/RX1330 nm, 10 km, LC)
SFP-10G-BXD1	10G Base, BIDI optical transceiver, SFP, 10G, single-mode module (TX1330 nm/RX1270 nm, 10 km, LC)

High-Speed Cable	
SFP-10G-CU1M	SFP+,10G,High Speed Direct-attach Cables,1m,SFP+20M,CC2P0.254B(S),SFP+20M, Used indoor
SFP-10G-CU3M	SFP+,10G,High Speed Direct-attach Cables,3m,SFP+20M,CC2P0.254B(S),SFP+20M, Used indoor
SFP-10G-CU5M	SFP,10G,High Speed Cable,5m,SFP+20M,CC2P0.254B(S),SFP+20M,LSFRZH For Indoor
SFP-10G-AC10M	SFP+,10G,Active High Speed Cables,10m,SFP+20M,CC2P0.32B(S),SFP+20M,Used indoor
QSFP-4SFP10G-CU1M	QSFP+,4SFP+10G,High Speed Direct-attach Cables,1m,QSFP+38M,CC8P0.254B(S), 4*SFP+20M,Used indoor
QSFP-4SFP10G-CU3M	QSFP+,4SFP+10G,High Speed Direct-attach Cables,3m,QSFP+38M,CC8P0.32B(S),4* SFP+20M,Used indoor
QSFP-4SFP10G-CU5M	QSFP+,4SFP+10G,High Speed Direct-attach Cables,5m,QSFP+38M,CC8P0.4B(S),4*S FP+20M,Used indoor
QSFP-40G-CU1M	QSFP+,40G,High Speed Direct-attach Cables,1m,QSFP+38M,CC8P0.254B(S),QSFP+ 38M,Used indoor
QSFP-40G-CU3M	QSFP+,40G,High Speed Direct-attach Cables,3m,QSFP+38M,CC8P0.32B(S),QSFP+3 8M,Used indoor
QSFP-40G-CU5M	QSFP+,40G,High Speed Direct-attach Cables,5m,QSFP+38M,CC8P0.40B(S),QSFP+3 8M,Used indoor
QSFP-100G-CU1M	High Speed Cable,100G QSFP28 Passive High Speed Cable,1m,QSFP28,CC8P0.254 B(S),QSFP28,ETH 100GbE
QSFP-100G-CU3M	High Speed Cable,100G QSFP28 Passive High Speed Cable,3m,QSFP28,CC8P0.254 B(S),QSFP28,ETH 100GbE
QSFP-100G-CU5M	High Speed Cable,100G QSFP28 Passive High Speed Cable,5m,QSFP28,CC8P0.4B(S),QSFP28,ETH 100GbE
Optical Fiber	
SFP-10G-AOC3M	AOC Optical Transceiver,SFP+,850nm,1G~10G,0.003km
SFP-10G-AOC10M	AOC Optical Transceiver,SFP+,850nm,1G~10G,10m
QSFP-H40G-AOC10M	Optical transceiver,QSFP+,40G,(850nm,10m,AOC)
QSFP-4SFP10-AOC10M	Optical transceiver,QSFP+,40G,(850nm,10m,AOC)(Connect to four SFP+ Optical Transceiver)
QSFP-100G-AOC10M	High Speed Transceiver,QSFP28 to QSFP28 AOC,850nm,100G,0.01km
Power modules	
PAC-2200WF	2,200W AC power module

PDC-2200WF	2,200W DC power module
W2PSA0800	800W AC Power Module(black)
Software	
ET1SBSM27000	S12700 V200R007C00 software
ET1SBSM28000	S12700 V200R008C00 software
ET1SBSM29000	S12700 V200R009C00 software
ET1SBSM2A000	S12700 V200R010C00 software
License	
ET1SMPLS0000	MPLS Function License
ET1SNQA00000	NQA Function License
ET1SIPV60000	IPV6 Function License
ET1SSVFF0000	SVF Function License (applicable only to the S12700 series)
ET1SFIB128K0	X-series LPU FIB Resource License-128K
ET1SFIB512K0	X-series LPU FIB Resource License-512K
ET1SWL512AP0	WLAN Access Controller AP Resource License-512AP (with the X-series LPU used)
ET1SWL128AP0	WLAN Access Controller AP Resource License-128AP (with the X-series LPU used)
ET1SWL64AP00	WLAN Access Controller AP Resource License-64AP (with the X-series LPU used)
ET1SWL16AP00	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	
ET1IV2RAC0E0	S12700 Series Agile Switches Product Documentation

10 Others

The latest version of S12700 is V2R10.