S12700 Series Agile Switches

Huawei S12700 series switches are core switches designed for next-generation high-quality campus networks. These purpose-built switches help create a campus network that improves user experiences, reduces operating costs, and delivers unmatched security and trustworthiness for a fully connected, wireless era.

Product Overview

Huawei S12700 series switches are flagship core switches in Huawei's CloudCampus Solution. By building an intelligent campus core, these feature-rich switches help customers head towards a service experience-centric campus network that is intelligent and simplified.

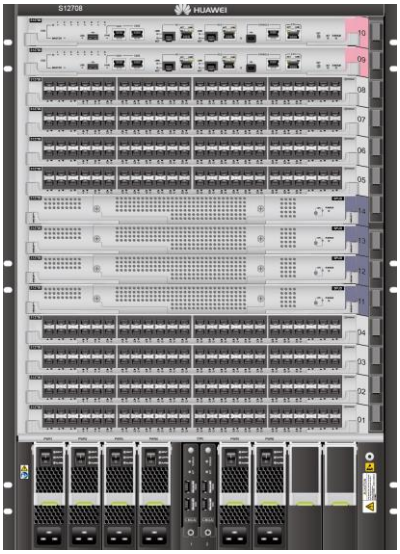
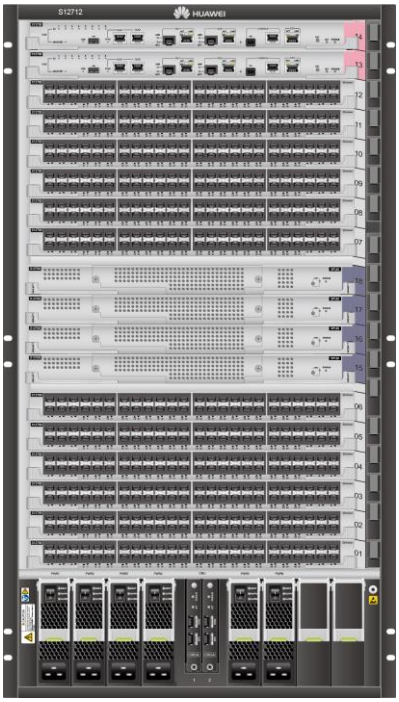
The S12700 uses a secure and reliable platform architecture for software systems, and uses a redundancy design for all key components to ensure the security, reliability, and reliability of core nodes on the campus network. In addition to the industry-leading data switching capability and massive terminal access capability, the solution also provides innovative features, such as native AC, VXLAN, free mobility, intelligent HQoS, iPCA, and SVF, making it an ideal choice for building high-quality core switches on campus networks in the Wi-Fi 6 era, facilitate global customers' digital transformation.

- Highly reliable CLOS architecture: The system control board and switching board are separated. SFUs are configured on demand, reducing costs. In the future, SFUs can be upgraded to achieve smooth evolution of campus networks.
- Industry-leading native AC feature: The device can manage a maximum of 10,240 APs, implementing integrated management of wired and wireless networks, reducing overall network construction costs and simplifying campus network O&M.
- Industry-leading free mobility features: refined policy management based on users and applications, users can enjoy consistent service policies and experience anywhere, anytime, and any access mode.
- Leading CSS2 cluster architecture: Based on the innovative CSS2 hardware clustering technology, 1+N backup of MPUs on modular core switches is implemented. A MPU failure does not affect service data exchange of the entire system.

Models and Appearances

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

S12704	S12708	S12712

S12704	S12708	S12712
		

Features and Highlights

Make Your Network Agile and Service-Oriented

The S12700 uses a fully-programmable architecture that adapts to the changing forwarding processes driven by protocol evolution and technology advances. It enables fast and flexible provisioning of new services simply by upgrading software, without having to replace hardware, thereby protecting customers' investment. In contrast, traditional ASIC chips use a fixed forwarding architecture and follow a fixed forwarding process; as a result, new services cannot be provisioned until new hardware is developed to support the services, which may take 1 to 3 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 10K APs and 65, 536 users. It is a core switch that provides up to 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

Open Intelligent Diagnosis System (OIDS) integrates the device health monitoring and fault diagnosis functions – that are typically deployed on a Network Management System (NMS) – into the switch software to implement intelligent diagnosis on a

single switch. After OIDS is deployed on a switch, the switch periodically collects and records the running information and automatically determines whether a fault occurs. If a fault occurs, the switch automatically locates the fault or helps locate the fault. All these merits increase fault locating efficiency of O&M staff while improving device maintainability.

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", greatly simplifying network management.

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

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 cards, such as 48 x 10 GE, 16 x 40GE and 8 x 100GE cards. Each S12700 chassis can provide a maximum of 576 x 10 GE ports, 192 x 40G ports and 96 x 100GE ports. This large port capacity fully meets the requirements of bandwidth-consuming applications, such as multimedia video conferencing, protecting customer investments.

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.

VXLAN

VXLAN is used to construct a Unified Virtual Fabric (UVF). As such, multiple service networks or tenant networks can be deployed on the same physical network, and service and tenant networks are isolated from each other. This capability truly achieves 'one network for multiple purposes'. The resulting benefits include enabling data transmission of different services or customers, reducing the network construction costs, and improving network resource utilization. The S12700 series switches are VXLAN-capable and allow centralized and distributed VXLAN gateway deployment modes. These switches also support the BGP EVPN protocol for dynamically establishing VXLAN tunnels and can be configured using NETCONF/YANG.

OPS

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

Big Data Security Collaboration

The S12700 uses NetStream to collect campus network data and then report such data to the Huawei HiSec Insight. The purposes of doing so are to detect network security threats, display the security posture across the entire network, and enable automated or manual response to security threats. The HiSec Insight delivers the security policies to the iMaster NCE-Campus(or Agile Controller). The iMaster NCE-Campus(or Agile Controller) then delivers such policies to switches that will handle security events accordingly. All these ensure campus network security.

Intelligent Diagnosis

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

Licensing

The S12700E supports both the traditional feature-based licensing mode and the latest Huawei IDN One Software (N1 mode for short) licensing mode. The N1 mode is ideal for deploying Huawei CloudCampus Solution in the on-premises scenario, as it greatly enhances the customer experiences in purchasing and upgrading software services with simplicity.

Software Package Features in N1 Mode

Switch Functions	N1 Basic Software	N1 Foundation Software Package	N1 Advanced Software Package
Basic network functions: Layer 2 functions, IPv4, IPv6, MPLS, SVF, and others	√	√	√
Basic network automation based on the Agile Controller: • Basic automation: Plug-and-play, SSID, and AP group management • Basic monitoring: Application visualization • NE management: Image and topology management and discovery	×	√	√

Switch Functions	N1 Basic Software	N1 Foundation Software Package	N1 Advanced Software Package
• WLAN enhancement: Roaming and optimization for up to 128 APs			
Advanced network automation and intelligent O&M: VXLAN, user access authentication, free mobility, and CampusInsight basic functions	×	×	√

Note: Only V200R019C00 and later versions can support N1 mode

Product Specifications

Functions and Features

Item	S12704	S12708	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		
MAC	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		
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	256K ARP entries ARP Snooping		
IP routing	3M IPv4 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		

Item	S12704	S12708	S12712
	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		
VXLAN	VXLAN centralized gateway and distributed gateway BGP EVPN Configured through NETCONF protocol		
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		
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 10K 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		
Network synchronization	Ethernet synchronization 1588v2		
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)		
Reliability	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	S12712
Configuration and maintenance	Easy Operation 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 Open Programmability System (OPS) Streaming Telemetry eMDI		
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) Secure Boot(need to use MPU that supports Secure Boot)		
Security protection*	Firewall Network Address Translation (NAT) IPSec, SSL VPN Intrusion Protection System (IPS) Load balancing Analog Digital Conversion (ADC) Cybersecurity Intelligence System (CIS) Encrypted Communication Analytics(ECA)		
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)		

Hardware Specifications

Item	S12704	S12708	S12712
Switching capacity	4.88Tbps/16.08*Tbps	12.32Tbps/44.96*Tbps	17.44Tbps/44.96*Tbps
Packet forwarding rate	3, 120Mpps/4, 560*Mpps	6, 240Mpps/30, 240*Mpps	9, 120Mpps/30, 240*Mpps
MPU slots	2	2	2
SFU slots	2	4	4
Service card slots	4	8	12
Fan slots	2	4	5
Buffer size	200ms buffer each port		

Item	S12704	S12708	S12712
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		
Dimensions (H x W x D in mm)	441.7x442x489, 10U	663.95x442x489, 15U	841.75x442x489, 19U
Weight (empty chassis)	24.5kg	42kg	64kg
Operating voltage	DC：–40 V to –72 V AC：90 V to 290 V		
Maximum power consumption of the entire equipment	≤2200W	≤4400W	≤6600W
Operating temperature	• -60 m to +1800 m: 0°C to 45°C • 1800 m to 4000 m: The operating temperature decreases 1°C every time the altitude increases 220 m • 4000m：0°C to 35°C		
Relative humidity	5% to 95% (non-condensing)		
Heat dissipation mode	Air-cooled heat dissipation and intelligent fan speed adjustment		

NOTE

*: 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.

Networking and Applications

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 or 802.11ax. 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, 16 x 40GE and 8 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.

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
ET1BS12712S0	S12712 assembly chassis
ET1MFBX00000	Wide Voltage 129 Fan Box
EH1M00FBX000	Wide Voltage 74 Fan Box

Main Control Unit		Supported Version
ET1D2MPUDC00	S12704/S12708/S12712 Main Processing Unit D	

Monitoring Board	
EH1D200CMU00	Centralized Monitoring Unit

Switch Fabric Unit	
ET1D2SFUA000	S12700 Switch Fabric Unit A

Switch Fabric Unit	
ET1D2SFUB000	S12700 Switch Fabric Unit B
ET1D2SFUD000	S12708/S12712 Switch Fabric Unit D

100M/1000M Ethernet electrical interface cards		Supported Version
LST7G48TX5S0	48-port 10/100/1000BASE-T interface card (X5S, M, RJ45)	V200R019C00 and later versions
LST7G48TX5E0	48-port 10/100/1000BASE-T interface card (X5E, M, RJ45)	V200R019C00 and later versions

100M/1000M Ethernet optical interface cards		Supported Version
LST7G48SX6S0	48-port GE SFP interface card (X6S,SFP)	V200R019C00 and later versions
LST7G48SX6E0	48-port GE SFP interface card (X6E,SFP)	V200R019C00 and later versions

10 GE optical interface cards		Supported Version
LST7X48SX6S1	48-port 10GE SFP+ interface card (X6S,SFP+)	V200R019C00 and later versions
LST7X48SX6E1	48-port 10GE SFP+ interface card (X6E,SFP+)	V200R019C00 and later versions
LST7X24BX6S0	24-port 10GE SFP+ interface and 24-port GE SFP interface card (X6S,SFP+)	V200R019C00 and later versions
LST7X24BX6E0	24-port 10GE SFP+ interface and 24-port GE SFP interface card (X6E,SFP+)	V200R019C00 and later versions
ET1D2X16SSC0	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+)	

40GE/100GE optical interface cards		Supported Version
LST7C02BX6E0	2-port 100GE QSFP28 interface and 4-port 40GE QSFP28 interface card (X6E,QSFP28)	V200R020C00 and later versions

100GE optical interface cards		Supported Version
LST7C06HX6S1	6-port 100GE QSFP28 interface card (X6S,QSFP28)	V200R019C00 and later versions
LST7C06HX6E1	6-port 100GE QSFP28 interface card (X6E,QSFP28)	V200R019C00 and later versions

Service subcards	
EH1D2VS08000	8-port 10G cluster switching system service unit (SFP+)
ET1D2VQ06000	6-Port 40GE Cluster Switching System Service Unit (QSFP+)

Power modules		Supported Version
PAC3KS54-NE	3000W AC power module (Black)	V200R020C10 and later versions
PAC3KS54-CE	3000W AC power module (Black)	V200R019C00 and later versions
PAC3KS54-CB	3000W AC Power Module(Black)	
W2PSD2200	2200W DC power module	V200R019C00 and later versions
PDC-2200WF	2200W DC power module	
W2PSA0800	800W AC Power Module (black)	

Software	
ET1SM2D12700	S12700 Basic SW,V200R013C00
ET1SM2J12700	S12700 Basic SW,V200R019C00
EST7R20C00SW	S12700 Basic SW,V200R020C00
EST7R20C10SW	S12700 Basic SW,V200R020C10

License	
ET1SMPLS0000	MPLS Function License
ET1SNQA00000	NQA Function License
ET1SIPV60000	IPV6 Function License
ET1SSVFF0000	SVF Function License (applicable only to the S12700 series)
ET1SVXLAN000	VXLAN enhanced function license(used in S12700 series)
ET1SFIB128K0	X-series LPU FIB Resource License-128K
ET1SFIB512K0	X-series LPU FIB Resource License-512K

License	
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)
N1-S127-F-Lic	N1-CloudCampus,Foundation,S127 Series,Per Device
N1-S127-F-SnS1Y	N1-CloudCampus,Foundation,S127 Series,SnS,Per Device,1Year
N1-S127-A-Lic	N1-CloudCampus,Advanced,S127 Series,Per Device
N1-S127-A-SnS1Y	N1-CloudCampus,Advanced,S127 Series,SnS,Per Device,1Year
N1-S127-FToA-Lic	N1-Upgrade-Foundation to Advanced,S127 Series,Per Device
N1-S127-FToA-SnS1Y	N1-Upgrade-Foundation to Advanced,S127 Series,SnS,Per Device,1Year
N1-AC1.0-AM-15-Lic	N1-CloudCampus,Access Management-AC1.0,15 Terminals
N1-AC1.0-AM-15-SnS1Y	N1-CloudCampus,Access Management-AC1.0,15 Terminals,SnS,1Year
CI-X7MSwitch-U	CampusInsight-Upgrade-Foundation to Advanced, X7 Series Modular Switch, Per Device
CI-X7MSwitch-U-SnS1Y	CampusInsight-Upgrade-Foundation to Advanced, X7 Series Modular Switch, SnS, Per Device, 1 Year

Documentation	
ET1IV2RDC0C0	S12700 Series Agile Switches V200R013C00 Product Documentation
ET1IV2RJC0E0	S12700 Series Agile Switches V200R019C00 Product Documentation

More Information

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

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

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