

S6720-EI Series Next-Generation Enhanced 10 GE Switches

Huawei S6720-EI series switches are industry-leading, high-performance fixed switches that provide line-speed 10GE access ports and 40GE uplink ports. It can be used for server access in data centers or core/aggregation switch in campus network.

Introduction

Huawei S6720-EI series switches are next-generation 10GE fixed switches. The S6720-EI can function as an access switch in an Internet data center (IDC) or a core/aggregation switch on a campus network.

The S6720-EI has industry-leading performance and provides line-speed 10GE access ports and 40GE uplink ports. It can be used in a data center to provide 10 Gbit/s access to servers or function as a core switch on a campus network to provide 10 Gbit/s traffic aggregation. In addition, the S6720-EI provides a wide variety of services, comprehensive security policies, and various QoS features to help customers build scalable, manageable, reliable, and secure data center networks.




S6720S-26Q-EI-24S is a compact switch with 220 mm depth and perfectly suitable in a 300 mm deep cabinet, saving installation space for customers.




Product Overview

Models and Appearances

The following models are available in the S6720-EI series.

Models and appearances of the S6720-EI series

Appearance	Description
 S6720-30C-EI-24S-AC	<ul style="list-style-type: none"> • 24 10GE SFP+ ports, 2 40GE QSFP+ ports • One extended slot • Double hot swappable AC power supplies • Forwarding performance: 720 Mpps • Switching capacity: 2.56 Tbit/s
 S6720-30C-EI-24S-DC	<ul style="list-style-type: none"> • 24 10GE SFP+ ports, 2 40GE QSFP+ ports • One extended slot • Double hot swappable DC power supplies • Forwarding performance: 720 Mpps • Switching capacity: 2.56 Tbit/s
	<ul style="list-style-type: none"> • 48 10GE SFP+ ports, 2 40GE QSFP+ ports • One extended slot • Double hot swappable AC power supplies

Appearance	Description
S6720-54C-EI-48S-AC	<ul style="list-style-type: none"> Forwarding performance: 1080 Mpps Switching capacity: 2.56 Tbit/s
 S6720-54C-EI-48S-DC	<ul style="list-style-type: none"> 48 10GE SFP+ ports, 2 40GE QSFP+ ports One extended slot Double hot swappable DC power supplies Forwarding performance: 1080 Mpps Switching capacity: 2.56 Tbit/s
 S6720S-26Q-EI-24S-AC	<ul style="list-style-type: none"> 24 10GE SFP+ ports, 2 40GE QSFP+ ports Double hot swappable AC power supplies Forwarding performance: 480 Mpps Switching capacity: 2.56 Tbit/s
 S6720S-26Q-EI-24S-DC	<ul style="list-style-type: none"> 24 10GE SFP+ ports, 2 40GE QSFP+ ports Double hot swappable DC power supplies Forwarding performance: 480 Mpps Switching capacity: 2.56 Tbit/s


Card Types

The S6720-EI (C series) provides one extended slot for ES5D21Q04Q01 (4-port 40GE QSFP+ rear interface card) or ES5D21X08S00 (8-port 10GE SFP+ rear optical interface card) for upstream connections.

ES5D21Q04Q01 (4-Port 40 Gig QSFP+ Rear Interface Card)

The ES5D21Q04Q01 provides four 40GE QSFP+ optical ports for data access and line-rate switching. It can be installed in a rear card slot of the switch models listed in the following table.

Technical specifications of the ES5D21Q04Q01

Card Model	Technical Specifications	Applied Switch Model
 ES5D21Q04Q01	<ul style="list-style-type: none"> Physical specifications: <ul style="list-style-type: none"> Dimensions (W x D x H): 100 mm x 208 mm x 40 mm (3.94 in. x 8.19 in. x 1.57 in.) Weight: 0.5 kg (1.10 lb) Maximum power consumption: 18.83 W Environment parameters: <ul style="list-style-type: none"> Operating temperature: 0°C to 45°C (32°F to 113°F) Relative humidity: 5% RH to 95% RH Storage temperature: -40°C to +70°C (-40°F to +158°F) 	<ul style="list-style-type: none"> S6720-30C-EI-24S-AC S6720-30C-EI-24S-DC S6720-54C-EI-48S-AC S6720-54C-EI-48S-DC

Functions and features of the ES5D21Q04Q01


Function and Feature	Description
Basic function	Provides four 40GE QSFP+ optical ports for data access and line-rate switching. Each 40GE port can be split into four 10GE ports.
Hot swap	Supported

Function and Feature	Description
Service ports for stacking	Ports on the card can be used as stack ports. NOTE A 40GE port cannot be used as a stack port after it is split into four 10GE ports.

ES5D21X08S00 (8-Port 10GE SFP+ Rear Optical Interface Card)

The ES5D21X08S00 provides eight 10GE SFP+ optical ports for data access and line-rate switching. It can be installed in a rear card slot of the switch models listed in the following table.

Technical specifications of the ES5D21X08S00

Card Model	Technical Specifications	Applied Switch Model
 ES5D21X08S00	<ul style="list-style-type: none"> Physical specifications: <ul style="list-style-type: none"> Dimensions (W x D x H): 100 mm x 208 mm x 40 mm (3.94 in. x 8.19 in. x 1.57 in.) Weight: 0.26 kg (0.57 lb) Maximum power consumption: 35.8 W Environment parameters: <ul style="list-style-type: none"> Operating temperature: 0°C to 45°C (32°F to 113°F) Relative humidity: 5% RH to 95% RH Storage temperature: -40°C to +70°C (-40°F to +158°F) 	<ul style="list-style-type: none"> S6720-30C-EI-24S-AC S6720-30C-EI-24S-DC S6720-54C-EI-48S-AC S6720-54C-EI-48S-DC


Functions and features of the ES5D21X08S00

Function and Feature	Description
Basic function	Provides eight 10GE SFP+ optical ports for data access and line-rate switching.
Hot swap	Supported

Fan Module



The following table lists the fan module on the S6720-EI.

Technical specifications of the fan module applicable to the S6720-EI series

Fan Model	Technical Specifications	Applied Switch Model
 FAN-060B-B	<ul style="list-style-type: none"> Dimensions (W x D x H): 100 mm x 220 mm x 40 mm Number of fan modules: 2 Weight: 0.4 kg Maximum power consumption: 32.6 W Maximum fan speed: 19000±10% revolutions per minute (RPM) Maximum wind rate: 64 cubic feet Hot swap: Supported 	<ul style="list-style-type: none"> S6720-30C-EI-24S-AC S6720-30C-EI-24S-DC S6720-54C-EI-48S-AC S6720-54C-EI-48S-DC

Power Supply

The following table lists the power supplies applicable to the S6720-EI.

Power Module	Technical Specifications	Applied Switch Model
 <p>W0PSA1701</p>	<ul style="list-style-type: none"> • Dimensions (W x D x H): 70 mm x 205 mm x 40 mm (2.8 in. x 8.1 in. x 1.6 in.) • Weight: < 1.0 kg (2.20 lb) • Rated input voltage range: 100 V AC to 240 V AC, 50/60 Hz • Maximum input voltage range: 90 V AC to 264 V AC, 47 Hz to 63 Hz • Maximum input current: 2.5 A • Maximum output current: 14.2 A • Rated output voltage: 12 V • Maximum output power: 170 W • Hot swap: Supported 	<ul style="list-style-type: none"> • S6720S-26Q-EI-24S-AC • S6720S-26Q-EI-24S-DC
 <p>ES5M0PSD1700</p>	<ul style="list-style-type: none"> • Dimensions (W x D x H): 70 mm x 205 mm x 40 mm (2.8 in. x 8.1 in. x 1.6 in.) • Weight: < 1.0 kg (2.20 lb) • Rated input voltage range: -48 V DC to -60 V DC • Maximum input voltage range: -36 V DC to -72 V DC • Maximum input current: 6 A • Maximum output current: 14.2 A • Rated output voltage: 12 V • Maximum output power: 170 W • Hot swap: Supported 	<ul style="list-style-type: none"> • S6720S-26Q-EI-24S-AC • S6720S-26Q-EI-24S-DC
 <p>PDC-350WA-B</p>	<ul style="list-style-type: none"> • Dimensions (W x D x H): 100 mm x 205 mm x 40 mm (3.9 in. x 8.1 in. x 1.6 in.) • Weight: 0.72 kg (1.59 lb) • Rated input voltage range: -48 V DC to -60 V DC • Maximum input voltage range: -38.4 V DC to -72 V DC • Maximum input current: 11 A • Maximum output current: 29.17 A • Rated output voltage: 12 V • Maximum output power: 350 W • Hot swap: Supported 	<ul style="list-style-type: none"> • S6720-30C-EI-24S-AC • S6720-30C-EI-24S-DC • S6720-54C-EI-48S-AC • S6720-54C-EI-48S-DC
 <p>PAC-600WA-B</p>	<ul style="list-style-type: none"> • Dimensions (W x D x H): 100 mm x 205 mm x 40 mm (3.9 in. x 8.1 in. x 1.6 in.) • Weight: 1.0 kg (2.20 lb) • Rated input voltage range: 100 V AC to 240 V AC, 50/60 Hz • Maximum input voltage range: 90 V AC to 290 V AC, 45 Hz to 65 Hz • Maximum input current: 9 A • Maximum output current: 50 A • Rated output voltage: 12 V • Maximum output power: 600 W • Hot swap: Supported 	<ul style="list-style-type: none"> • S6720-30C-EI-24S-AC • S6720-30C-EI-24S-DC • S6720-54C-EI-48S-AC • S6720-54C-EI-48S-DC

The S6720-EI uses built-in power supplies by default. If a switch supports pluggable power supplies, the customer can purchase the power supplies when or after purchasing the switch.

Dual-Power

The S6720-EI provides two power slots. By default, one AC or DC power supply is equipped. When a switch has two power supplies installed, the power supplies work in 1+1 backup mode to power the switch. The switch supports dual AC power supplies, dual DC power supplies, as well as mixed insertion of AC and DC power supplies.

The following table lists the power supply options supported by the S6720-EI.

Power supply options supported by the S6720-EI series

Model	Power Supply 1	Power Supply 2
S6720-30C-EI-24S-AC S6720-30C-EI-24S-DC	PDC-350WA-B or PAC-600WA-B	PDC-350WA-B or PAC-600WA-B
S6720-54C-EI-48S-AC S6720-54C-EI-48S -DC	PDC-350WA-B or PAC-600WA-B	PDC-350WA-B or PAC-600WA-B
S6720S-26Q-EI-24S-AC	W0PSA1701 or ES5M0PSD1700	W0PSA1701 or ES5M0PSD1700

Product Features and Highlights

Large-Capacity, High-Density, 10 Gbit/s Access

- To provide sufficient bandwidth for users, many servers, particularly those in data centers, use 10G network adapters. The S6720-EI provides high-density 10GE ports and can be used in data centers to provide high forwarding performance and large switching capacity. Each S6720-EI provides up to six line-speed QSFP+ ports and 48 line-speed 10GE ports.
- S6720-EI ports support GE and 10GE access and can identify optical module types, maximizing the return on investment (ROI) and allowing users to flexibly deploy services.
- The S6720-EI has a large buffering capacity and uses an advanced buffer scheduling mechanism to ensure non-block transmission when data center traffic volume is high.

Comprehensive Security Policies

- The S6720-EI provides multiple security measures to defend against Denial of Service (DoS) attacks, as well as attacks against networks or users. DoS attacks include SYN flood, Land, Smurf, and ICMP flood attacks. Attacks to networks refer to STP BPDU/root attacks. Attacks to users include bogus DHCP server attacks, man-in-the-middle attacks, IP/MAC spoofing attacks, and DHCP request flood attacks. DoS attacks that change the CHADDR field in DHCP packets are also attacks against users.
- The S6720-EI supports DHCP snooping, which generates user binding entries based on users' access interfaces, MAC addresses, IP addresses, IP address leases, and VLAN IDs. DHCP snooping discards invalid packets that do not match any binding entries, such as ARP spoofing packets and IP spoofing packets. This prevents hackers from using ARP packets to initiate attacks on campus networks. The interface connected to a DHCP server can be configured as a trusted interface to protect the system against bogus DHCP server attacks.
- The S6720-EI supports strict ARP learning, which prevents ARP spoofing attacks that exhaust ARP entries. The S6720-EI also provides IP source check to prevent DoS attacks caused by MAC address spoofing, IP address spoofing, and MAC/IP spoofing. URPF, provided by the S6720-EI, authenticates packets by checking the packet transmission path in reverse, which can protect the network against source address spoofing attacks.
- The S6720-EI supports centralized MAC address authentication and 802.1X authentication. The S6720-EI authenticates users based on statically or dynamically bound user information such as the user name, IP address, MAC address, VLAN ID, access interface, and flag indicating whether antivirus software is installed. VLANs, QoS policies, and ACLs can be dynamically applied to users.
- The S6720-EI can limit the number of MAC addresses learned on an interface to prevent attackers from exhausting MAC address entries by using bogus source MAC addresses. This function minimizes the packet flooding that occurs when users' MAC addresses cannot be found in the MAC address table.

- This series of switches supports MACsec, a secure LAN communication method based on 802.1AE and 802.1X. The switches provide identity authentication, data encryption, integrity check, and replay protection to protect Ethernet frames and prevent attack packets.

High Reliability Mechanism

- The S6720-EI supports redundant power supplies. You can choose a single power supply or use two power supplies to ensure device reliability. With two fans, the S6720-EI has a longer Mean Time Between Failures (MTBF) than its counterpart switches.
- The S6720-EI supports Multiple Spanning Tree Protocol (MSTP) multi-process that enhances the existing Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), and MSTP implementation. This function increases the number of MSTP instances supported on a network. The S6720-EI also supports enhanced Ethernet reliability technologies such as Smart Link and RRPP, which implement millisecond-level protection switching and ensure network reliability. Smart Link and RRPP both support multi-instance to implement load balancing among links, optimizing bandwidth usage.
- The S6720-EI supports the enhanced trunk (E-trunk) feature. When a CE is dual-homed to two S6720-EI switches (PEs), E-trunk protects the links between the CE and PEs and implements backup between the PEs. E-trunk enhances link reliability between devices.
- The S6720-EI supports the Smart Ethernet Protection (SEP) protocol which is a ring network protocol applied to the link layer on an Ethernet network. SEP can be used on open ring networks and can be deployed on upper-layer aggregation devices to provide fast switchover (within 50 ms), ensuring non-stop transmission of services. SEP features simplicity, high reliability, fast switchover, easy maintenance, and flexible topology, facilitating network planning and management.
- The S6720-EI supports Ethernet Ring Protection Switching (ERPS) which is also referred to as G.8032. As the latest ring network protocol, ERPS was developed based on traditional Ethernet MAC and bridging functions and uses mature Ethernet OAM function and a ring automatic protection switching (R-APS) mechanism to implement millisecond-level protection switching. ERPS supports various services and allows flexible networking, helping customers build a network with lower OPEX and CAPEX.
- The S6720-EI supports Virtual Router Redundancy Protocol (VRRP). Two S6720-EI switches can form a VRRP group to ensure nonstop reliable communication. Multiple equal-cost routes to upstream devices can be configured on the S6720-EI to provide route redundancy. When an active route is unreachable, traffic is switched to a backup route.

Enhanced QoS Control Mechanism

- The S6720-EI implements complex traffic classification based on packet information, such as the 5-tuple, IP preference, ToS, DSCP, IP protocol type, ICMP type, TCP source port, VLAN ID, Ethernet protocol type, and CoS. ACLs can be applied to the inbound or outbound direction of a port. The S6720-EI supports flow-based two-rate three-color CAR. Each port supports eight priority queues, multiple queue scheduling algorithms, such as WRR, DRR, SP, WRR+SP, and DRR+SP, and WRED that is a congestion avoidance algorithm. All of these features ensure high-quality voice, video, and data services.

High Scalability

- The S6720-EI supports the iStack function, which allows switches that are far apart to form a stack. A port on the S6720-EI can be configured as a stack port using a command for flexible stack deployment. The distance between stacked switches is further increased when the switches are connected with optical fibers. A stack is easier to expand and more reliable, and has a higher performance rate than a single switch. Member switches in a stack implement redundancy backup to improve device reliability and use inter-device link aggregation to improve link reliability, which help to provide within 200 millisecond failover for path failure and hitless master/ backup failover. New member switches can be added to a stack without interrupting services when the system capacity needs to be increased or a member switch fails. Compared with the stacking of modular switches, the iStack function can increase system capacity and port density without being restricted by hardware. iStack also simplifies device configuration and management. After a stack is set up, multiple physical switches are virtualized into a single logical device.

Convenient Management

- The S6720-EI supports automatic configuration, plug-and-play, deployment using a USB flash drive, and batch remote upgrades. These capabilities simplify device management and maintenance and reduce maintenance costs.
- The S6720-EI supports SNMP v1/v2c/v3 and provides flexible methods for managing devices. Users can manage the S6720-EI using the CLI, web-based management platform, and Telnet. The NQA function assists users with network planning and upgrades. In addition, the S6720-EI supports NTP, SSH v2, HWTACACS, RMON, log hosts, and port-based traffic statistics.
- The S6720-EI supports GARP VLAN Registration Protocol (GVRP) which dynamically distributes, registers, and propagates VLAN attributes to reduce network administrator workloads and ensure correct VLAN configuration. In a complex

network topology, GVRP simplifies VLAN configuration and reduces network communication faults caused by incorrect VLAN configuration.

- The S6720-EI supports Multiplex VLAN (MUX VLAN). MUX VLAN isolates Layer 2 traffic between ports in a VLAN. Ports in a subordinate separate VLAN cannot communicate with each other but can communicate with ports in the principal VLAN. MUX VLAN is typically used on an enterprise intranet to isolate user ports from each other while still allowing them to communicate with server ports. This function prevents communication between network devices connected to certain ports or port groups, but allows these devices to communicate with the default gateway.
- The S6720-EI supports BFD which provides millisecond-level fault detection for protocols, such as OSPF, IS-IS, VRRP, and PIM, to improve network reliability. Complying with IEEE 802.3ah and 802.1ag, the S6720-EI supports point-to-point Ethernet fault management and can detect faults in the last mile of an Ethernet link to users. Ethernet OAM improves Ethernet network management and maintenance capabilities and ensures a stable network.

Various IPv6 Features

- The S6720-EI supports IPv4/IPv6 dual stack and can migrate from an IPv4 network to an IPv6 network. S6720-EI hardware supports IPv4/IPv6 dual stack, IPv6 over IPv4 tunnels (including manual tunnels, 6to4 tunnels, and ISATAP tunnels), and Layer 3 line-speed forwarding. The S6720-EI can be deployed on IPv4 networks, IPv6 networks, or networks that run both IPv4 and IPv6. This achieves flexible networking and enables a network to migrate from IPv4 to IPv6.
- The S6720-EI supports various IPv6 routing protocols, including RIPng and OSPFv3. The S6720-EI uses the IPv6 Neighbor Discovery Protocol (NDP) to manage packets exchanged between neighbors. It also provides a path MTU (PMTU) discovery mechanism to select a proper MTU on the path from the source to the destination, optimizing network resource utilization and obtaining the maximum throughput.

Cloud-based Management

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

VXLAN

- VXLAN is used to construct a Unified Virtual Fabric (UVF). As such, multiple service networks or tenant networks can be deployed on the same physical network, and service and tenant networks are isolated from each other. This capability truly achieves 'one network for multiple purposes'. The resulting benefits include enabling data transmission of different services or customers, reducing the network construction costs, and improving network resource utilization. The S6720-EI 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.

Intelligent O&M

- The S6720-EI provides telemetry technology to collect device data in real time and send the data to Huawei campus network analyzer CampusInsight. The CampusInsight analyzes network data based on the intelligent fault identification algorithm, accurately displays the real-time network status, effectively demarcates and locates faults in a timely manner, and identifies network problems that affect user experience, accurately guaranteeing user experience.
- The S6720-EI supports a variety of intelligent O&M features for audio and video services, including the enhanced Media Delivery Index (eMDI). With this eMDI function, the S6720-EI can function as a monitored node to periodically conduct statistics and report audio and video service indicators to the CampusInsight platform. In this way, the CampusInsight platform can quickly demarcate audio and video service quality faults based on the results of multiple monitored nodes.

Product Specifications

Functions and Features

The following table describes the functions and features available on the S6720-EI.

Function and feature metrics for the S6720-EI series

Function and Feature		Description	S6720-30C-EI-24S-AC/DC	S6720-54C-EI-48S-AC/DC	S6720S-26Q-EI-24S-AC/DC
Ethernet features	Ethernet basics	Rate auto-negotiation on an interface	Yes	Yes	Yes
		Flow control on an interface	Yes	Yes	Yes
		Jumbo frames	Yes	Yes	Yes
		Link aggregation	Yes	Yes	Yes
		Load balancing among links of a trunk	Yes	Yes	Yes
		Transparent transmission of Layer 2 protocol packets	Yes	Yes	Yes
		Device Link Detection Protocol (DLDP)	Yes	Yes	Yes
		Link Layer Discovery Protocol (LLDP)	Yes	Yes	Yes
		Link Layer Discovery Protocol-Media Endpoint Discovery (LLDP-MED)	Yes	Yes	Yes
		Interface isolation	Yes	Yes	Yes
		Broadcast traffic suppression on an interface	Yes	Yes	Yes
		Multicast traffic suppression on an interface	Yes	Yes	Yes
		Unknown unicast traffic suppression on an interface	Yes	Yes	Yes
		VLAN broadcast traffic suppression	Yes	Yes	Yes
		VLAN multicast traffic suppression	Yes	Yes	Yes
	VLAN unknown unicast traffic suppression	Yes	Yes	Yes	
	VLAN	VLAN specification	4094	4094	4094
		VLANIF interface specification	1024	1024	1024
		Access mode	Yes	Yes	Yes
		Trunk mode	Yes	Yes	Yes
Hybrid mode		Yes	Yes	Yes	

Function and Feature		Description	S6720-30C-EI-24S-AC/DC	S6720-54C-EI-48S-AC/DC	S6720S-26Q-EI-24S-AC/DC
		QinQ mode	Yes	Yes	Yes
		Default VLAN	Yes	Yes	Yes
		VLAN assignment based on interfaces	Yes	Yes	Yes
		VLAN assignment based on protocols	Yes	Yes	Yes
		VLAN assignment based on IP subnets	Yes	Yes	Yes
		VLAN assignment based on MAC addresses	Yes	Yes	Yes
		VLAN assignment based on MAC address + IP address	Yes	Yes	Yes
		VLAN assignment based on MAC address + IP address + interface number	Yes	Yes	Yes
		Adding double VLAN tags to packets based on interfaces	Yes	Yes	Yes
		Super-VLAN	Yes	Yes	Yes
		Super-VLAN specification	256	256	256
		Sub-VLAN	Yes	Yes	Yes
		Sub-VLAN specification	1K	1K	1K
		VLAN mapping	Yes	Yes	Yes
		Selective QinQ	Yes	Yes	Yes
		MUX VLAN	Yes	Yes	Yes
		Voice VLAN	Yes	Yes	Yes
		Guest VLAN	Yes	Yes	Yes
	GVRP	GARP	Yes	Yes	Yes
		GVRP	Yes	Yes	Yes
	VCMP	VCMP	Yes	Yes	Yes
	MAC	MAC address	Up to 288K	Up to 288K	Up to 288K
		Automatic learning of MAC addresses	Yes	Yes	Yes
		Automatic aging of MAC addresses	Yes	Yes	Yes
		Static, dynamic, and blackhole MAC address entries	Yes	Yes	Yes
Interface-based MAC address learning limiting		Yes	Yes	Yes	

Function and Feature		Description	S6720-30C-EI-24S-AC/DC	S6720-54C-EI-48S-AC/DC	S6720S-26Q-EI-24S-AC/DC
		Sticky MAC	Yes	Yes	Yes
		MAC address flapping detection	Yes	Yes	Yes
		Configuring MAC address learning priorities for interfaces	Yes	Yes	Yes
		MAC address spoofing defense	Yes	Yes	Yes
		Port bridge	Yes	Yes	Yes
	ARP	Static ARP	Yes	Yes	Yes
		Dynamic ARP	Yes	Yes	Yes
		ARP entry	Up to 44K	Up to 44K	Up to 44K
		ARP aging detection	Yes	Yes	Yes
		Intra-VLAN proxy ARP	Yes	Yes	Yes
		Inter-VLAN proxy ARP	Yes	Yes	Yes
		Routed proxy ARP	Yes	Yes	Yes
		Multi-egress-interface ARP	Yes	Yes	Yes
Ethernet loop protection	MSTP	STP	Yes	Yes	Yes
		RSTP	Yes	Yes	Yes
		MSTP	Yes	Yes	Yes
		VBST	Yes	Yes	Yes
		BPDU protection	Yes	Yes	Yes
		Root protection	Yes	Yes	Yes
		Loop protection	Yes	Yes	Yes
		Defense against TC BPDU attacks	Yes	Yes	Yes
	Loopback detection	Loop detection on an interface	Yes	Yes	Yes
	SEP	SEP	Yes	Yes	Yes
	Smart Link	Smart Link	Yes	Yes	Yes
		Smart Link multi-instance	Yes	Yes	Yes
		Monitor Link	Yes	Yes	Yes
	RRPP	RRPP	Yes	Yes	Yes
		Single RRPP ring	Yes	Yes	Yes
		Tangent RRPP ring	Yes	Yes	Yes
		Intersecting RRPP ring	Yes	Yes	Yes
		Hybrid networking of RRPP rings and other ring networks	Yes	Yes	Yes

Function and Feature		Description	S6720-30C-EI-24S-AC/DC	S6720-54C-EI-48S-AC/DC	S6720S-26Q-EI-24S-AC/DC
	ERPS	G.8032 v1	Yes	Yes	Yes
		G.8032 v2	Yes	Yes	Yes
		ERPS semi-ring topology	Yes	Yes	Yes
		ERPS closed-ring topology	Yes	Yes	Yes
IPv4/IPv6 forwarding	IPv4 and unicast routing	IPv4 static routing	Yes	Yes	Yes
		VRF	Yes	Yes	Yes
		DHCP client	Yes	Yes	Yes
		DHCP server	Yes	Yes	Yes
		DHCP relay	Yes	Yes	Yes
		DHCP policy VLAN	Yes	Yes	Yes
		URPF check	Yes	Yes	Yes
		Routing policies	Yes	Yes	Yes
		IPv4 routes	128K	128K	128K
		RIPv1	Yes	Yes	Yes
		RIPv2	Yes	Yes	Yes
		OSPF	Yes	Yes	Yes
		BGP	Yes	Yes	Yes
		MBGP	Yes	Yes	Yes
		IS-IS	Yes	Yes	Yes
		Policy-based routing (PBR)	Yes	Yes	Yes
	Multicast routing features	IGMPv1/v2/v3	Yes	Yes	Yes
		PIM-DM	Yes	Yes	Yes
		PIM-SM	Yes	Yes	Yes
		MSDP	Yes	Yes	Yes
		IPv4 multicast routes	4K	4K	4K
		IPv6 multicast routes	4K	4K	4K
		Multicast routing policies	Yes	Yes	Yes
		RPF	Yes	Yes	Yes
	IPv6 features	IPv6 protocol stack	Yes	Yes	Yes
		ND	Yes	Yes	Yes
		ND entry	Up to 44K	Up to 44K	Up to 44K
		ND snooping	Yes	Yes	Yes
DHCPv6 snooping		Yes	Yes	Yes	

Function and Feature		Description	S6720-30C-EI-24S-AC/DC	S6720-54C-EI-48S-AC/DC	S6720S-26Q-EI-24S-AC/DC
		RIPng	Yes	Yes	Yes
		DHCPv6 server	Yes	Yes	Yes
		DHCPv6 relay	Yes	Yes	Yes
		OSPFv3	Yes	Yes	Yes
		BGP4+	Yes	Yes	Yes
		IS-IS for IPv6	Yes	Yes	Yes
		IPv6 routes	80K	80K	80K
		VRRP6	Yes	Yes	Yes
		MLDv1/v2	Yes	Yes	Yes
		PIM-DM for IPv6	Yes	Yes	Yes
		PIM-SM for IPv6	Yes	Yes	Yes
IPv6 transition technology	IPv6 manual tunneling	Yes	Yes	Yes	
Layer 2 multicast features	-	IGMPv1/v2/v3 snooping	Yes	Yes	Yes
		IGMP snooping proxy	Yes	Yes	Yes
		MLD snooping	Yes	Yes	Yes
		Multicast traffic suppression	Yes	Yes	Yes
		Inter-VLAN multicast replication	Yes	Yes	Yes
MPLS & VPN	MPLS basic functions	LDP protocol	Yes	Yes	Yes
		Double MPLS labels	Yes	Yes	Yes
		Mapping from 802.1p priorities to EXP priorities in MPLS packets	Yes	Yes	Yes
		Mapping from DSCP priorities to EXP priorities in MPLS packets	Yes	Yes	Yes
	MPLS TE	MPLS-TE tunnel establishment	Yes	Yes	Yes
		MPLS-TE tunnel specification	256	256	256
		MPLS-TE protection group	Yes	Yes	Yes
	VPN	MCE	Yes	Yes	Yes
		GRE tunneling	Yes	Yes	Yes
		GRE tunnel specification	512	512	512
		VLL	Yes	Yes	Yes
		PWE3	Yes	Yes	Yes
		VPLS	Yes	Yes	Yes
MPLS L3VPN		Yes	Yes	Yes	

Function and Feature		Description	S6720-30C-EI-24S-AC/DC	S6720-54C-EI-48S-AC/DC	S6720S-26Q-EI-24S-AC/DC
		IPSec Efficient VPN	Yes	Yes	Yes
Device reliability	BFD	Single-hop BFD	Yes	Yes	Yes
		BFD for static routes	Yes	Yes	Yes
		BFD for OSPF	Yes	Yes	Yes
		BFD for IS-IS	Yes	Yes	Yes
		BFD for BGP	Yes	Yes	Yes
		BFD for PIM	Yes	Yes	Yes
		BFD for VRRP	Yes	Yes	Yes
	Stacking	Service interface-based stacking	Yes	Yes	Yes
		Maximum number of stacked devices	9	9	9
		Stack bandwidth (Unidirectional)	Up to 120 Gbit/s	Up to 120 Gbit/s	Up to 120 Gbit/s
VRRP	VRRP standard protocol	Yes	Yes	Yes	
Ethernet OAM	EFM (802.3ah)	Automatic discovery of links	Yes	Yes	Yes
		Link fault detection	Yes	Yes	Yes
		Link troubleshooting	Yes	Yes	Yes
	CFM (802.1ag)	Software-level CCM	Yes	Yes	Yes
		802.1ag MAC ping	Yes	Yes	Yes
		802.1ag MAC trace	Yes	Yes	Yes
	OAM association	Association between 802.1ag and 802.3ah	Yes	Yes	Yes
	Y.1731	Unidirectional delay and jitter measurement	Yes	Yes	Yes
Bidirectional delay and jitter measurement		Yes	Yes	Yes	
QoS features	Traffic classification	Traffic classification based on ACLs	Yes	Yes	Yes
		Configuring traffic classification priorities	Yes	Yes	Yes
		Matching the simple domains of packets	Yes	Yes	Yes
	Traffic behavior	Traffic filtering	Yes	Yes	Yes
		Traffic policing (CAR)	Yes	Yes	Yes
		Modifying the packet priorities	Yes	Yes	Yes
		Modifying the simple domains of packets	Yes	Yes	Yes

Function and Feature		Description	S6720-30C-EI-24S-AC/DC	S6720-54C-EI-48S-AC/DC	S6720S-26Q-EI-24S-AC/DC	
	Traffic shaping	Modifying the packet VLANs	Yes	Yes	Yes	
		Traffic shaping on an egress interface	Yes	Yes	Yes	
		Traffic shaping on queues on an interface	Yes	Yes	Yes	
	Congestion avoidance	Weighted Random Early Detection (WRED) on queues	Yes	Yes	Yes	
		WRED on interfaces	Yes	Yes	Yes	
		Tail drop	Yes	Yes	Yes	
	Congestion management	Priority Queuing (PQ)	Yes	Yes	Yes	
		Weighted Deficit Round Robin (WDRR)	Yes	Yes	Yes	
		PQ+WDRR	Yes	Yes	Yes	
		Weighted Round Robin (WRR)	Yes	Yes	Yes	
		PQ+WRR	Yes	Yes	Yes	
	ACL	Packet filtering at Layer 2 to Layer 4	Number of rules per IPv4 ACL	4K	4K	4K
			Number of rules per IPv6 ACL	2K	2K	2K
			Basic IPv4 ACL	Yes	Yes	Yes
			Advanced IPv4 ACL	Yes	Yes	Yes
Basic IPv6 ACL			Yes	Yes	Yes	
Advanced IPv6 ACL			Yes	Yes	Yes	
Layer 2 ACL			Yes	Yes	Yes	
User group ACL			Yes	Yes	Yes	
User-defined ACL			Yes	Yes	Yes	
Configuration and maintenance	Login and configuration management	Command line interface (CLI)-based configuration	Yes	Yes	Yes	
		Console terminal service	Yes	Yes	Yes	
		Telnet terminal service	Yes	Yes	Yes	
		SSH v1.5	Yes	Yes	Yes	
		SSH v2.0	Yes	Yes	Yes	
		SNMP-based NMS for unified configuration	Yes	Yes	Yes	
		Web page-based configuration and management	Yes	Yes	Yes	
		EasyDeploy (client)	Yes	Yes	Yes	
		EasyDeploy (commander)	Yes	Yes	Yes	

Function and Feature		Description	S6720-30C-EI-24S-AC/DC	S6720-54C-EI-48S-AC/DC	S6720S-26Q-EI-24S-AC/DC
		SVF	Yes	Yes	Yes
		Cloud management	Yes	Yes	Yes
		OPS	Yes	Yes	Yes
	File system	Directory and file management	Yes	Yes	Yes
		File upload and download	Yes	Yes	Yes
	Monitoring and maintenance	eMDI	Yes	Yes	Yes
		Hardware monitoring	Yes	Yes	Yes
		Log information output	Yes	Yes	Yes
		Alarm information output	Yes	Yes	Yes
		Debugging information output	Yes	Yes	Yes
		Port mirroring	Yes	Yes	Yes
		Flow mirroring	Yes	Yes	Yes
		Remote mirroring	Yes	Yes	Yes
		Energy saving	Yes	Yes	Yes
	Version upgrade	Version upgrade	Yes	Yes	Yes
Version rollback		Yes	Yes	Yes	
Security	ARP security	ARP packet rate limiting	Yes	Yes	Yes
		ARP anti-spoofing	Yes	Yes	Yes
		Association between ARP and STP	Yes	Yes	Yes
		ARP gateway anti-collision	Yes	Yes	Yes
		Dynamic ARP Inspection (DAI)	Yes	Yes	Yes
		Static ARP Inspection (SAI)	Yes	Yes	Yes
		Egress ARP Inspection (EAI)	Yes	Yes	Yes
	IP security	ICMP attack defense	Yes	Yes	Yes
		IPSG for IPv4	Yes	Yes	Yes
		IPSG user capacity	2500	2500	2500
		IPSG for IPv6	Yes	Yes	Yes
		IPSGv6 user capacity	1200	1200	1200
	Local attack defense	CPU attack defense	Yes	Yes	Yes
	MFF	MFF	Yes	Yes	Yes
	DHCP snooping	DHCP snooping	Yes	Yes	Yes
Option 82 function		Yes	Yes	Yes	

Function and Feature		Description	S6720-30C-EI-24S-AC/DC	S6720-54C-EI-48S-AC/DC	S6720S-26Q-EI-24S-AC/DC
		Dynamic rate limiting for DHCP packets	Yes	Yes	Yes
	Attack defense	Defense against malformed packet attacks	Yes	Yes	Yes
		Defense against UDP flood attacks	Yes	Yes	Yes
		Defense against TCP SYN flood attacks	Yes	Yes	Yes
		Defense against ICMP flood attacks	Yes	Yes	Yes
		Defense against packet fragment attacks	Yes	Yes	Yes
		Local URPF	Yes	Yes	Yes
	MACSec	MACSec	Yes	Yes	No
User access and authentication	AAA	Local authentication	Yes	Yes	Yes
		Local authorization	Yes	Yes	Yes
		RADIUS authentication	Yes	Yes	Yes
		RADIUS authorization	Yes	Yes	Yes
		RADIUS accounting	Yes	Yes	Yes
		HWTACACS authentication	Yes	Yes	Yes
		HWTACACS authorization	Yes	Yes	Yes
		HWTACACS accounting	Yes	Yes	Yes
	NAC	802.1X authentication	Yes	Yes	Yes
		MAC address authentication	Yes	Yes	Yes
		Portal authentication	Yes	Yes	Yes
		Hybrid authentication	Yes	Yes	Yes
	Policy association	Functioning as the access device	Yes	Yes	Yes
		Functioning as the control device	Yes	Yes	Yes
Network management	-	Ping	Yes	Yes	Yes
		Tracert	Yes	Yes	Yes
		NQA	Yes	Yes	Yes
		NTP	Yes	Yes	Yes
		sFlow	Yes	Yes	Yes
		SNMP v1	Yes	Yes	Yes

Function and Feature		Description	S6720-30C-EI-24S-AC/DC	S6720-54C-EI-48S-AC/DC	S6720S-26Q-EI-24S-AC/DC
		SNMP v2c	Yes	Yes	Yes
		SNMP v3	Yes	Yes	Yes
		HTTP	Yes	Yes	Yes
		HTTPS	Yes	Yes	Yes
		RMON	Yes	Yes	Yes
		RMON2	Yes	Yes	Yes
		NETCONF/YANG	Yes	Yes	Yes
VXLAN	-	VXLAN Layer 2 gateway	Yes	Yes	Yes
		VXLAN Layer 3 gateway	Yes	Yes	Yes
		Centralized gateway	Yes	Yes	Yes
		Distributed gateway	Yes	Yes	Yes
		BGP-EVPN	Yes	Yes	Yes
		BGP-EVPN neighbor capacity	64	64	64
Interoperability	-	VLAN-based Spanning Tree (VBST)	Yes	Yes	Yes
		Link-type Negotiation Protocol (LNP)	Yes	Yes	Yes
		VLAN Central Management Protocol (VCMP)	Yes	Yes	Yes

NOTE

This content is applicable only to regions outside mainland China. Huawei reserves the right to interpret this content.

Hardware Specifications

The following table lists hardware specifications of the S6720-EI.

Hardware specifications of the S6720S-26Q-EI-24S-AC and S6720S-26Q-EI-24S-DC

Item		S6720S-26Q-EI-24S-AC	S6720S-26Q-EI-24S-DC
Physical specifications	Chassis dimensions (W x D x H, mm)	442 x 420 x 44.4	442 x 420 x 44.4
	Chassis height	1 U	1 U
	Chassis weight (full configuration weight, including weight of packaging materials)	5.35 kg	5.15 kg
Fixed port	10GE port	24	24
	40GE port	2	2
Management port	ETH management port	Supported	Supported
	Console port (RJ45)	Supported	Supported

Item		S6720S-26Q-EI-24S-AC	S6720S-26Q-EI-24S-DC
	USB port	USB 2.0	USB 2.0
CPU	Frequency	1.2 GHz	1.2 GHz
	Cores	4	4
Memory	Memory (RAM)	2 GB	2 GB
	Flash	Hardware: 512 MB, of which 240 MB is available for users	Hardware: 512 MB, of which 240 MB is available for users
Power supply system	Power supply type	<ul style="list-style-type: none"> 170 W AC(pluggable) 170 W DC (pluggable) 	<ul style="list-style-type: none"> 170 W AC(pluggable) 170 W DC (pluggable)
	Power supply redundancy	1+1 backup NOTE The backup power supply is optional.	1+1 backup NOTE The backup power supply is optional.
	Rated voltage range	<ul style="list-style-type: none"> AC: 100 V AC to 240 V AC, 50/60 Hz DC: -48 V DC to -60 V DC 	<ul style="list-style-type: none"> AC: 100 V AC to 240 V AC, 50/60 Hz DC: -48 V DC to -60 V DC
	Maximum voltage range	<ul style="list-style-type: none"> AC: 90 V AC to 264 V AC; 47-63 Hz DC: -38.4 V DC to -72 V DC 	<ul style="list-style-type: none"> AC: 90 V AC to 264 V AC; 47-63 Hz DC: -38.4 V DC to -72 V DC
	Maximum input current	<ul style="list-style-type: none"> 170 W AC: 2.5 A 170 W DC: 6 A 	<ul style="list-style-type: none"> 170 W AC: 2.5 A 170 W DC: 6 A
	Maximum power consumption of the device	143.4 W	126.3 W
	Power consumption in the case of 30% traffic load ¹	108.59 W	101.31 W
	Power consumption in the case of 100% traffic load ¹	121.3 W	120.4 W
Heat dissipation system	Heat dissipation mode	Air-cooled heat dissipation and intelligent fan speed adjustment	Air-cooled heat dissipation and intelligent fan speed adjustment
	Number of fan modules	3	3
	Airflow	Air flows in from the left side and front panel, and exhausts from the rear panel	Air flows in from the left side and front panel, and exhausts from the rear panel
	Maximum heat dissipation of the device (BTU/hour)	489	431
Environment parameters	Long-term operating temperature	<ul style="list-style-type: none"> 0-1800 m: 0°C to 45°C 1800-5000 m: The operating temperature decreases 1°C for every 220 m increase in altitude. 	<ul style="list-style-type: none"> 0-1800 m: 0°C to 45°C 1800-5000 m: The operating temperature decreases 1°C for every 220 m increase in altitude.
	Storage temperature	-40°C to +70°C	-40°C to +70°C
	Relative humidity	5%–95% (non-condensing)	5%–95% (non-condensing)
	Operating altitude	5000 m	5000 m

Item		S6720S-26Q-EI-24S-AC	S6720S-26Q-EI-24S-DC
	Noise under normal temperature (sound power)	67.1 dB(A)	67.1 dB(A)
	Noise under high temperature (sound power)	NA	NA
	Noise under normal temperature (sound pressure)	54.1 dB(A)	54.1 dB(A)
	Surge protection specification (power port)	<ul style="list-style-type: none"> AC power port: ± 6 kV in differential or common mode DC power port: ± 1 kV in differential mode; ± 2 kV in common mode 	<ul style="list-style-type: none"> AC power port: ± 6 kV in differential or common mode DC power port: ± 1 kV in differential mode; ± 2 kV in common mode
Reliability	MTBF (year) ²	69.53	69.53
	MTTR (hour)	2	2
	Availability	> 0.99999	> 0.99999
Certification		<ul style="list-style-type: none"> EMC certification Safety certification Manufacturing certification <p>NOTE For details about certifications, see the section Safety and Regulatory Compliance.</p>	<ul style="list-style-type: none"> EMC certification Safety certification Manufacturing certification <p>NOTE For details about certifications, see the section Safety and Regulatory Compliance.</p>

Hardware specifications of the S6720-30C-EI and S6720-54C-EI series

Item		S6720-30C-EI-24S-AC	S6720-30C-EI-24S-DC	S6720-54C-EI-48S-AC	S6720-54C-EI-48S-DC
Physical specifications	Chassis dimensions (W x D x H, mm)	442 x 420 x 44.4	442 x 420 x 44.4	442 x 420 x 44.4	442 x 420 x 44.4
	Chassis height	1 U	1 U	1 U	1 U
	Chassis weight (full configuration weight, including weight of packaging materials)	9.8 kg	9.8 kg	10.2 kg	10.2 kg
Fixed port	10GE port	24	24	48	48
	40GE port	2	2	2	2
Management port	ETH management port	Supported	Supported	Supported	Supported
	Console port	Supported	Supported	Supported	Supported

Item		S6720-30C-EI-24S-AC	S6720-30C-EI-24S-DC	S6720-54C-EI-48S-AC	S6720-54C-EI-48S-DC
	(RJ45)				
	USB port	USB 2.0	USB 2.0	USB 2.0	USB 2.0
CPU	Frequency	1.2 GHz	1.2 GHz	1.2 GHz	1.2 GHz
	Cores	4	4	4	4
Memory	Memory (RAM)	2 GB	2 GB	2 GB	2 GB
	Flash	Hardware: 512 MB, of which 240 MB is available for users	Hardware: 512 MB, of which 240 MB is available for users	Hardware: 512 MB, of which 240 MB is available for users	Hardware: 512 MB, of which 240 MB is available for users
Power supply system	Power supply type	<ul style="list-style-type: none"> 600 W AC (pluggable) 350 W DC (pluggable) 	<ul style="list-style-type: none"> 600 W AC (pluggable) 350 W DC (pluggable) 	<ul style="list-style-type: none"> 600 W AC (pluggable) 350 W DC (pluggable) 	<ul style="list-style-type: none"> 600 W AC (pluggable) 350 W DC (pluggable)
	Power supply redundancy	1+1 backup NOTE The backup power supply is optional.	1+1 backup NOTE The backup power supply is optional.	1+1 backup NOTE The backup power supply is optional.	1+1 backup NOTE The backup power supply is optional.
	Rated voltage range	<ul style="list-style-type: none"> AC: 100 V AC to 240 V AC, 50/60 Hz DC: -48 V DC to -60 V DC 	<ul style="list-style-type: none"> AC: 100 V AC to 240 V AC, 50/60 Hz DC: -48 V DC to -60 V DC 	<ul style="list-style-type: none"> AC: 100 V AC to 240 V AC, 50/60 Hz DC: -48 V DC to -60 V DC 	<ul style="list-style-type: none"> AC: 100 V AC to 240 V AC, 50/60 Hz DC: -48 V DC to -60 V DC
	Maximum voltage range	<ul style="list-style-type: none"> AC: 90 V AC to 264 V AC; 47-63 Hz DC: -38.4 V DC to -72 V DC 	<ul style="list-style-type: none"> AC: 90 V AC to 264 V AC; 47-63 Hz DC: -38.4 V DC to -72 V DC 	<ul style="list-style-type: none"> AC: 90 V AC to 264 V AC; 47-63 Hz DC: -38.4 V DC to -72 V DC 	<ul style="list-style-type: none"> AC: 90 V AC to 264 V AC; 47-63 Hz DC: -38.4 V DC to -72 V DC
	Maximum input current	<ul style="list-style-type: none"> 600 W AC: 9 A 350 W DC: 11 A 	<ul style="list-style-type: none"> 600 W AC: 9 A 350 W DC: 11 A 	<ul style="list-style-type: none"> 600 W AC: 9 A 350 W DC: 11 A 	<ul style="list-style-type: none"> 600 W AC: 9 A 350 W DC: 11 A
	Maximum power consumption of the device	<ul style="list-style-type: none"> Without cards: 213.7 W With cards: 233.7 W 	<ul style="list-style-type: none"> Without cards: 192.5 W With cards: 212.5 W 	<ul style="list-style-type: none"> Without cards: 276.1 W With cards: 296.1 W 	<ul style="list-style-type: none"> Without cards: 248.6 W With cards: 268.6 W
	Power consumption in the case of 30% traffic load ¹	<ul style="list-style-type: none"> Without cards: 147 W With cards: 166 W 	<ul style="list-style-type: none"> Without cards: 141 W With cards: 160 W 	<ul style="list-style-type: none"> Without cards: 190 W With cards: 209 W 	<ul style="list-style-type: none"> Without cards: 185 W With cards: 204 W
	Power consumption in the case of 100% traffic load ¹	<ul style="list-style-type: none"> Without cards: 147 W With cards: 166 W 	<ul style="list-style-type: none"> Without cards: 141 W With cards: 160 W 	<ul style="list-style-type: none"> Without cards: 190 W With cards: 209 W 	<ul style="list-style-type: none"> Without cards: 185 W With cards: 204 W
Heat dissipation system	Heat dissipation mode	Air-cooled heat dissipation and intelligent fan speed adjustment	Air-cooled heat dissipation and intelligent fan speed adjustment	Air-cooled heat dissipation and intelligent fan speed adjustment	Air-cooled heat dissipation and intelligent fan speed adjustment

Item		S6720-30C-EI-24S-AC	S6720-30C-EI-24S-DC	S6720-54C-EI-48S-AC	S6720-54C-EI-48S-DC
	Number of fan modules	Dual pluggable fans	Dual pluggable fans	Dual pluggable fans	Dual pluggable fans
	Airflow	Air flows in from the left and right sides as well as the front panel, and exhausts from the rear panel	Air flows in from the left and right sides as well as the front panel, and exhausts from the rear panel	Air flows in from the left and right sides as well as the front panel, and exhausts from the rear panel	Air flows in from the left side and front panel, and exhausts from the rear panel
	Maximum heat dissipation of the device (BTU/hour)	798	725	1011	1011
Environment parameters	Long-term operating temperature	<ul style="list-style-type: none"> 0-1800 m: 0°C to 45°C 1800-5000 m: The operating temperature decreases 1°C for every 220 m increase in altitude. 	<ul style="list-style-type: none"> 0-1800 m: 0°C to 45°C 1800-5000 m: The operating temperature decreases 1°C for every 220 m increase in altitude. 	<ul style="list-style-type: none"> 0-1800 m: 0°C to 45°C 1800-5000 m: The operating temperature decreases 1°C for every 220 m increase in altitude. 	<ul style="list-style-type: none"> 0-1800 m: 0°C to 45°C 1800-5000 m: The operating temperature decreases 1°C for every 220 m increase in altitude.
	Storage temperature	-40°C to +70°C	-40°C to +70°C	-40°C to +70°C	-40°C to +70°C
	Relative humidity	5%–95% (non-condensing)	5%–95% (non-condensing)	5%–95% (non-condensing)	5%–95% (non-condensing)
	Operating altitude	5000 m	5000 m	5000 m	5000 m
	Noise under normal temperature (sound power)	72.1 dB(A)	72.1 dB(A)	72.1 dB(A)	72.1 dB(A)
	Noise under high temperature (sound power)	82.7 dB(A)	82.7 dB(A)	82.7 dB(A)	82.7 dB(A)
	Noise under normal temperature (sound pressure)	59.3 dB(A)	59.3 dB(A)	59.3 dB(A)	59.3 dB(A)
	Surge protection specification (power port)	<ul style="list-style-type: none"> AC power port: ±6 kV in differential or common mode DC power port: ±1 kV in differential mode; ±2 kV in common mode 	<ul style="list-style-type: none"> AC power port: ±6 kV in differential or common mode DC power port: ±1 kV in differential mode; ±2 kV in common mode 	<ul style="list-style-type: none"> AC power port: ±6 kV in differential or common mode DC power port: ±1 kV in differential mode; ±2 kV in common mode 	<ul style="list-style-type: none"> AC power port: ±6 kV in differential or common mode DC power port: ±1 kV in differential mode; ±2 kV in common mode
	Reliability	MTBF (year) ²	<ul style="list-style-type: none"> Without cards: 	<ul style="list-style-type: none"> Without cards: 	<ul style="list-style-type: none"> Without cards:

Item	S6720-30C-EI-24S-AC	S6720-30C-EI-24S-DC	S6720-54C-EI-48S-AC	S6720-54C-EI-48S-DC
	80.60 • With 4-port 40GE QSFP+ cards: 70.79	80.60 • With 4-port 40GE QSFP+ cards: 70.79	79.39 • With 4-port 40GE QSFP+ cards: 69.86	80.60 • With 4-port 40GE QSFP+ cards: 70.79
MTTR (hour)	2	2	2	2
Availability	> 0.99999	> 0.99999	> 0.99999	> 0.99999
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification <p>NOTE For details about certifications, see the section Safety and Regulatory Compliance.</p>	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification <p>NOTE For details about certifications, see the section Safety and Regulatory Compliance.</p>	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification <p>NOTE For details about certifications, see the section Safety and Regulatory Compliance.</p>	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification <p>NOTE For details about certifications, see the section Safety and Regulatory Compliance.</p>

NOTE

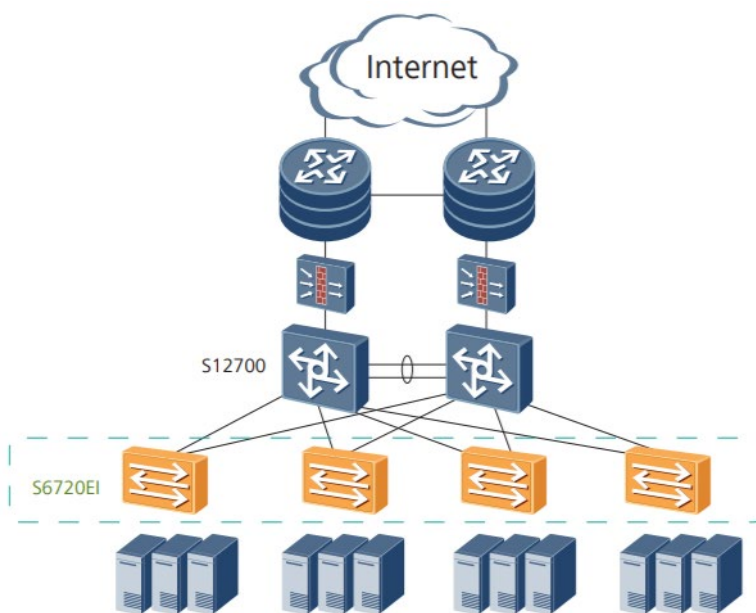
1: The power consumption under different load conditions is calculated according to the ATIS standard. Additionally, the EEE function is enabled and there is no PoE power output.

2: The reliability parameter values are calculated based on the typical configuration of the device. The parameter values vary according to the modules configured by the customer.

Networking and Applications

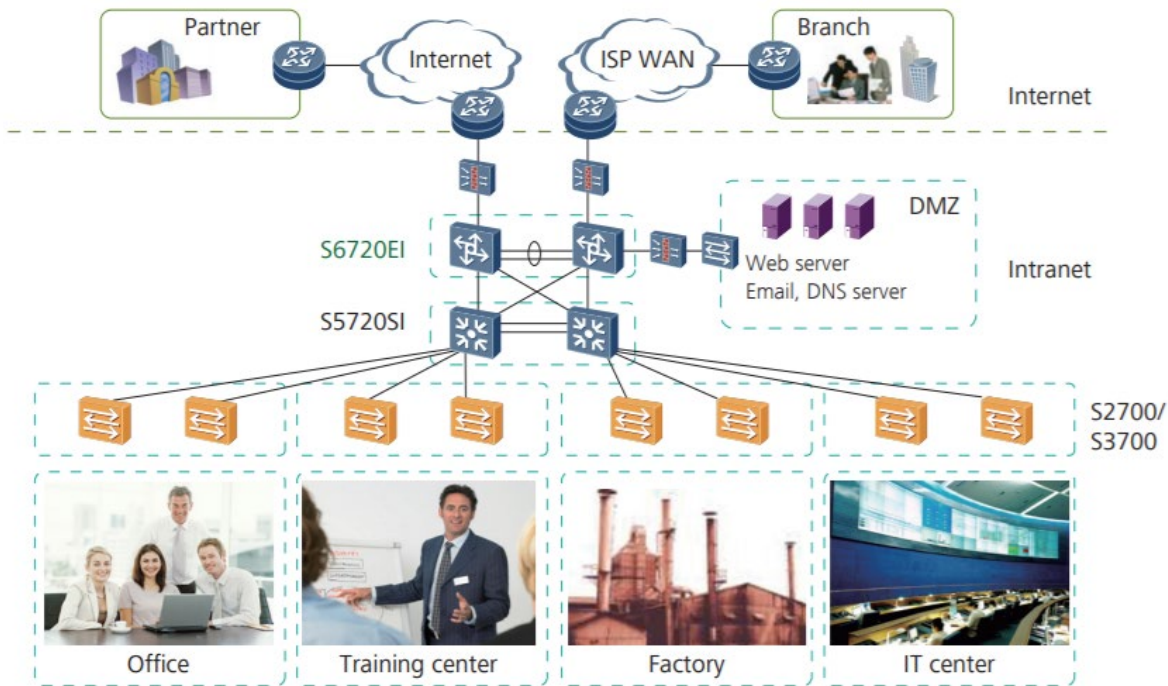
Data Center Networks

As shown in the following figure, the S6720-EI series switches are located at the access layer to build a high-performance, reliable data center network, and provide high-density 10GE ports to connect to 10G servers.



Small- and Medium-sized Campus Networks

As shown in the following figure, the S6720-EI can be used as a core switch on a small- or medium-sized campus network. The S6720-EI provides industry-leading high-density 10GE ports to meet the increasing bandwidth demands. Abundant features and various security control mechanisms enable the S6720-EI to be the most cost-effective choice for campus networks.



Product Accessories

Optical Modules and Fibers

The S6720-EI supports the following GE, 10GE, and 40GE optical modules:

- GE: 100 m electrical, 500 m optical multi-mode, 10/40/80/100 km optical single-mode, two pairs of bidirectional optical modules (10/40 km)
- 10GE: 100/220/300 m SFP+ multi-mode, 1.4/10/40/80 km optical SFP+
- 40GE: 150/400 m QSFP+ optical multi-mode, 1.4/2/10/40 km optical single-mode

Optical fibers fall into single-mode and multi-mode fibers. Single-mode optical modules use single-mode fibers, and multi-mode optical modules use multi-mode fibers. For a non-BIDI optical module, each optical interface must be configured with a Tx optical fiber and an Rx optical fiber of the same type. For a BIDI optical module, only one optical fiber needs to be configured.

NOTE

The fibers and optical modules supported by Huawei switches are periodically updated. For the latest information, visit <http://support.huawei.com/enterprise/en/doc/EDOC1000013597?section=j07w&topicName=pluggable-modules-for-interfaces> or contact your local Huawei sales office.

Stack Cables

The S6720-EI switches support service port stacking. The applicable stack cables are as follows:

- AOC cable

An active optical network (AOC) cable integrates an optical module and a fiber. The AOC cables are available in SFP-10G-AOC3M and SFP-10G-AOC10M.

- SFP+ high-speed cable

The SFP+ high-speed cable integrates an optical module and a fiber. The SFP+ high-speed cables are available in SFP-10G-CU1M, SFP-10G-CU3M, SFP-10G-CU5M, and SFP-10G-CU10M.

- QSFP+ high-speed cable

The QSFP+ high-speed cable also integrates an optical module and a fiber. The QSFP+ high-speed cables are available in QSFP-40G-CU1M, QSFP-40G-CU3M, and QSFP-40G-CU5M.

Stack cable types and connectors applicable to the S6720-EI series

Stack Cable	Model	Cable Length	Description
AOC	SFP-10G-AOC3M	3 m	SFP+
	SFP-10G-AOC10M	5 m	SFP+
SFP+ high-speed	SFP-10G-CU1M	1 m	SFP+
	SFP-10G-CU3M	3 m	SFP+
	SFP-10G-CU5M	5 m	SFP+
	SFP-10G-CU10M	10 m	SFP+
QSFP+ high-speed	QSFP-40G-CU1M	1 m	QSFP+
	QSFP-40G-CU3M	3 m	QSFP+
	QSFP-40G-CU5M	5 m	QSFP+

NOTE

For more information about stack cables applicable to the S6720-EI series, visit <http://support.huawei.com/enterprise/en/doc/EDOC1000013597?section=j07f&topicName=cables> or contact your local Huawei sales office.

Safety and Regulatory Compliance

The following table lists the safety and regulatory compliance of the S6720-EI.

Safety and regulatory compliance of the S6720-EI series

Certification Category	Description
Safety	<ul style="list-style-type: none"> • IEC 60950-1 • EN 60950-1/A11/A12 • UL 60950-1 • CSA C22.2 No 60950-1 • AS/NZS 60950.1 • CNS 14336-1 • IEC60825-1 • IEC60825-2 • EN60825-1 • EN60825-2
Electromagnetic Compatibility (EMC)	<ul style="list-style-type: none"> • 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

Certification Category	Description
	<ul style="list-style-type: none"> AS/NZS CISPR22 Class A VCCI Class A IEC61000-4-2 ITU-T K 20 ITU-T K 21 ITU-T K 44 CNS13438
Environment	<ul style="list-style-type: none"> RoHS REACH WEEE

 **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

MIB and Standards Compliance

Supported MIBs

The following table lists the MIBs supported by the S6720-EI.

MIBs supported by the S6720-EI series

Category	MIB
Public MIB	<ul style="list-style-type: none"> BRIDGE-MIB DISMAN-NSLOOKUP-MIB DISMAN-PING-MIB DISMAN-TRACEROUTE-MIB ENTITY-MIB EtherLike-MIB IF-MIB IP-FORWARD-MIB IPv6-MIB LAG-MIB

Category	MIB
	<ul style="list-style-type: none"> • LLDP-EXT-DOT1-MIB • LLDP-EXT-DOT3-MIB • LLDP-MIB • NOTIFICATION-LOG-MIB • NQA-MIB • OSPF-TRAP-MIB • P-BRIDGE-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 • TCP-MIB • UDP-MIB
Huawei-proprietary MIB	<ul style="list-style-type: none"> • HUAWEI-AAA-MIB • HUAWEI-ACL-MIB • HUAWEI-ALARM-MIB • HUAWEI-ALARM-RELIABILITY-MIB • HUAWEI-BASE-TRAP-MIB • HUAWEI-BRAS-RADIUS-MIB • HUAWEI-BRAS-SRVCFG-EAP-MIB • HUAWEI-BRAS-SRVCFG-STATICUSER-MIB • HUAWEI-CBQOS-MIB • HUAWEI-CDP-COMPLIANCE-MIB • HUAWEI-CONFIG-MAN-MIB • HUAWEI-CPU-MIB • HUAWEI-DAD-TRAP-MIB • HUAWEI-DC-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-ELMI-MIB

Category	MIB
	<ul style="list-style-type: none"> • 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-FLASH-MAN-MIB • HUAWEI-FWD-RES-TRAP-MIB • HUAWEI-GARP-APP-MIB • HUAWEI-GTSM-MIB • HUAWEI-HGMP-MIB • HUAWEI-HWTACACS-MIB • HUAWEI-IF-EXT-MIB • HUAWEI-INFOCENTER-MIB • HUAWEI-IPPOOL-MIB • HUAWEI-IPV6-MIB • HUAWEI-ISOLATE-MIB • HUAWEI-L2IF-MIB • HUAWEI-L2MAM-MIB • HUAWEI-L2VLAN-MIB • HUAWEI_LDT-MIB • HUAWEI-LLDP-MIB • HUAWEI-MAC-AUTHEN-MIB • HUAWEI-MEMORY-MIB • HUAWEI-MFF-MIB • HUAWEI-MFLP-MIB • HUAWEI-MSTP-MIB • HUAWEI-MULTICAST-MIB • HUAWEI-NAP-MIB • HUAWEI-NTPV3-MIB • HUAWEI-PERFORMANCE-MIB • HUAWEI-PORT-MIB • HUAWEI-PORTAL-MIB • HUAWEI-QINQ-MIB • HUAWEI-RIPv2-EXT-MIB • HUAWEI-RM-EXT-MIB • HUAWEI-RRPP-MIB • HUAWEI-SECURITY-MIB • HUAWEI-SEP-MIB • HUAWEI-SNMP-EXT-MIB • HUAWEI-SSH-MIB • HUAWEI-STACK-MIB • HUAWEI-SWITCH-L2MAM-EXT-MIB

Category	MIB
	<ul style="list-style-type: none"> • HUAWEI-SWITCH-SRV-TRAP-MIB • HUAWEI-SYS-MAN-MIB • HUAWEI-TCP-MIB • HUAWEI-TFTPC-MIB • HUAWEI-TRNG-MIB • HUAWEI-XQOS-MIB

 **NOTE**

For more information about MIBs supported by the S6720-EI series, visit:
<https://support.huawei.com/enterprise/en/switches/s6700-pid-6691593?category=reference-guides>

Standards Compliance

The following table lists the standards that the S6720-EI complies with.

[Standards compliance list of the S6720-EI series](#)

Standard Organization	Standard or Protocol
IETF	<ul style="list-style-type: none"> • 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

Standard Organization	Standard or Protocol
	<ul style="list-style-type: none"> • 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+ • RFC 6241 Network Configuration Protocol (NETCONF) • RFC 6020 YANG - A Data Modeling Language for the Network Configuration Protocol (NETCONF)
IEEE	<ul style="list-style-type: none"> • IEEE 802.1D Media Access Control (MAC) Bridges • IEEE 802.1p Traffic Class Expediting and Dynamic Multicast Filtering • 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 • IEEE 802.1AE: MAC Security (MACsec)
ITU	<ul style="list-style-type: none"> • ITU SG13 Y.17ethoam • ITU SG13 QoS control Ethernet-Based IP Access • ITU-T Y.1731 ETH OAM performance monitor
ISO	<ul style="list-style-type: none"> • ISO 10589 IS-IS Routing Protocol
MEF	<ul style="list-style-type: none"> • 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

Standard Organization	Standard or Protocol
	<ul style="list-style-type: none"> 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, visit <http://e.huawei.com/en> or contact your local Huawei sales office.

Ordering Information

The following table lists ordering information of the S6720-EI series switches.

Ordering information of the S6720-EI series

Item	Product Description
1	S6720-30C-EI-24S-AC bundle (24×10GE SFP+ , 2×40GE QSFP+ ports , with 1 extended slot, with 600W AC power supply)
2	S6720-54C-EI-48S-AC bundle (48×10GE SFP+ , 2×40GE QSFP+ ports , with 1 extended slot, with 600W AC power supply)
3	S6720-30C-EI-24S-DC bundle (24×10GE SFP+ , 2×40GE QSFP+ ports , with 1 extended slot, with 350W DC power supply)
4	S6720-54C-EI-48S-DC bundle (48×10GE SFP+ , 2×40GE QSFP+ ports , with 1 extended slot, with 350W DC power supply)
5	S6720S-26Q-EI-24S-AC bundle (24×10GE SFP+ , 2×40GE QSFP+ ports , with 170W AC power supply)
6	4× 40GE QSFP+ interface card (used in S6720EI series)
7	8× 10GE SFP+ interface card (used in S6720EI series)
8	Fan box (B, FAN panel side exhaust)
9	600W AC power module
10	350W DC power module
11	170W AC power module
12	170W DC power module

More Information


For more information about the 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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Huawei Technologies Co., Ltd.

Address: Huawei Industrial Base Bantian,
Longgang Shenzhen 518129 People's
Republic of China

Website: e.huawei.com