

Huawei S6720-EI Series Switches Product Datasheet



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Product Datasheet

1 Introduction

Huawei S6720-EI series switches are next-generation 10G box 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, provides line-speed 10GE access ports and line-speed 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 centers.

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

2 Product Overview

2.1 Product Models

Table 2-1 lists all models of S6720-EI appearances and brief description.

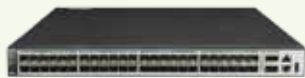
Table 2-1 S6720-EI models and description

S6720-30C-EI-24S-AC
S6720-30C-EI-24S-DC



- 24 × 10GE SFP+, 2 × 40GE QSFP+ ports
- One extended slot for 4 × 40GE QSFP+ interface card
- Double hot swappable AC/DC power supplies
- Forwarding performance: 720 Mpps
- Switching capacity: 2.56 Tbps

S6720-54C-EI-48S-AC
S6720-54C-EI-48S-DC



- 48 × 10GE SFP+, 2 × 40GE QSFP+ ports
- One extended slot for 4 × 40GE QSFP+ interface card
- Double hot swappable AC/DC power supplies
- Forwarding performance: 1080 Mpps
- Switching capacity: 2.56 Tbps

S6720S-26Q-EI-24S-AC
S6720S-26Q-EI-24S-DC



- 24 × 10GE SFP+, 2 × 40GE QSFP+ ports
- Double hot swappable AC/DC power supplies
- Forwarding performance: 480 Mpps
- Switching capacity: 2.56 Tbps

2.2 Interface Card

The S6720-EI provides 4 × 40GE QSFP+ interface card for upstream connections. The card support hot swap and ports on the card can be used as stack ports.

Figure 2-1 4 × 40GE QSFP+ interface card



The card can be installed in the rear extended slot on the S6720-30C-EI-24S or S6720-54C-EI-48S.

Table 2-2 S6720 Interface Card

| Card Model | Name | Applied Switch Model |
|--------------|-------------------------------|---|
| ES5D21Q04Q01 | 4 × 40GE QSFP+ interface card | S6720-30C-EI-24S-AC S6720-30C-EI-24S-DC S6720-54C-EI-48S-AC S6720-54C-EI-48S -DC |

2.3 Fan Module

Table 2-3 lists the fan module on the S6720-EI. A FAN-060B-B fan module has two fans to cool the chassis. It is hot swappable.

Table 2-3 S6720-EI fan module

| Fan Model | Description | Applied Switch Model |
|------------|---|---|
| FAN-060B-B | Number of fans: 2 Max power consumption: 32.6 W Maximum fan speed: 19000 ± 10% rounds per minute (RPM) Maximum wind rate: 64 cubic feet per minute (CFM) | S6720-30C-EI-24S-AC S6720-30C-EI-24S-DC S6720-54C-EI-48S-AC S6720-54C-EI-48S -DC |

The S6720S-26Q-EI-24S has a built-in heat dissipation system. Customers do not need to purchase fan module.

3 Power Supply

Table 3-1 lists the power supplies on the S6720-EI.

Table 3-1 S6720-EI power supplies

| Power Model | Name | Applied Switch Model |
|--------------|---------|--|
| W0PSA1701 | 170W AC | S6720S-26Q-EI-24S-AC S6720S-26Q-EI-24S-DC |
| ES5M0PSD1700 | 170W DC | S6720S-26Q-EI-24S-AC S6720S-26Q-EI-24S-DC |
| PDC-350WA-B | 350W DC | S6720-30C-EI-24S-AC S6720-30C-EI-24S-DC S6720-54C-EI-48S-AC S6720-54C-EI-48S-DC |
| PAC-600WA-B | 600W AC | 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 the switch supports pluggable power supplies, the customer can purchase the power supplies when or after purchasing the switch.

Dual-Power

An S6720-EI-EI switch can have one or two power modules installed.

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 itself. The switch supports dual AC, dual DC, as well as AC and DC mixing.

Table 3-2 lists the power supply options supported by S6720-EI.

Table 3-2 S6720-EI dual-power

| Model | Power 1 | Power 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 S6720S-26Q-EI-24S-DC | W0PSA1701 or ES5M0PSD1700 | W0PSA1701 or ES5M0PSD1700 |

4 Product Characteristics and Advantages

Huawei S6720-EI series switches have the following characteristics.

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 can be used in data centers to provide high forwarding performance and 10GE ports. The S6720-EI has the high density of all 10GE ports and the large switching capacity. Each S6720-EI provides a maximum of 6 line-speed QSFP+ ports and 48 line-speed 10GE ports.

S6720-EI ports support 1GE and 10GE access and can identify optical module types, maximizing the return on investment 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 attack types include SYN Flood attacks, Land attacks, Smurf attacks, 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 an 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.

Higher 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 MTBF time than its counterpart switches.

The S6720-EI supports MSTP multi-process that enhances the existing STP, RSTP, and MSTP implementation. This function increases the number of MSTPs supported on a network. It also supports enhanced Ethernet reliability technologies such as Smart Link and RRPP, which implement millisecond-level protection switchover 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 S6720s-EI (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, 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 the 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), 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 VRRP. Two S6720-EI 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 inbound or outbound directions on an interface. The S6720-EI supports a 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, 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, is more reliable, and has a higher performance rate than a single switch. 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 chassis-shaped switches, the iStack function can increase system capacity and port density without being restricted by hardware.

Multiple devices in a stack can function as one logical device, which simplifies network management and configuration.

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 NMS 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 interfaces in a VLAN. Interfaces in a subordinate separate VLAN can communicate with ports in the principal VLAN, but cannot communicate with each other. MUX VLAN is typically used on an enterprise intranet to isolate user interfaces from each other while still allowing them to communicate with server interfaces. This function prevents communication between network devices connected to certain interfaces or interface 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 makes networking flexible 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.

5 Product Specifications

5.1 Functions and Features

Table 5-1 lists the functions and features available on the S6720-EI.

Table 5-1 Functions and features available on the S6720-EI

| Feature | Description |
|-------------------|--|
| MAC address table | 288k MAC address entries MAC address learning and aging Static, dynamic, and black hole MAC address entries Packet filtering based on source MAC addresses |
| VLAN | 4K VLANs Guest VLAN and voice VLAN VLAN assignment based on MAC addresses, protocols, IP subnets, policies, and ports 1:1 and N:1 VLAN Mapping QinQ and selective QinQ |
| IPv4 routing | Static routing, RIPv1, RIPv2, ECMP, and URPF OSPF, IS-IS, and BGP VRRP Policy-based routing Routing policy |
| IPv6 routing | Static route RIPng OSPFv3 BGP4+ ISISv6 |
| IPv6 features | Neighbor Discovery (ND) PMTU IPv6 ping, IPv6 tracert, and IPv6 Telnet 6to4 tunnel, ISATAP tunnel, and manually configured tunnel ACLs based on the source IPv6 address, destination IPv6 address, Layer 4 ports, or protocol type MLD v1/v2 snooping |
| multicast | Static Layer 2 multicast MAC address MAC-based multicast forwarding IGMP snooping and IGMP fast leave Multicast VLAN MLD snooping IGMP proxy Controllable multicast Port-based multicast traffic statistics IGMP v1/v2/v3 PIM-SM, PIM-DM, and PIM-SSM MSDP MVPN |

| Feature | Description |
|----------------------------|--|
| QoS/ACL | <ul style="list-style-type: none"> Rate limiting on packets sent and received by an interface Packet redirection Port-based traffic policing and two-rate three-color CAR Eight queues on each port WRR, DRR, SP, WRR+SP, and DRR+SP queue scheduling algorithms Re-marking of the 802.1p priority and DSCP priority Packet filtering at Layer 2 to Layer 4, filtering out invalid frames based on the source MAC address, destination MAC address, source IP address, destination IP address, port number, protocol type, and VLAN ID Rate limiting in each queue and traffic shaping on ports |
| MPLS | MPLS, MPLS VLL, L3VPN |
| VPLS | Martini VPLS |
| Reliability | <ul style="list-style-type: none"> STP(IEEE 802.1d), RSTP(IEEE 802.1w), and MSTP(IEEE 802.1s) BPDU protection, root protection, and loop protection RRPP ring topology and RRPP multi-instance Smart Link tree topology and Smart Link multi-instance, providing the millisecond-level protection switchover SEP ERPS(G.8032 v2) BFD for OSPF, BFD for IS-IS, BFD for VRRP, and BFD for PIM E-Trunk |
| Security | <ul style="list-style-type: none"> User privilege management and password protection DoS attack defense, ARP attack defense, and ICMP attack defense Binding of the IP address, MAC address, interface, and VLAN Port isolation, port security, and sticky MAC Blackhole MAC address entries Limit on the number of learned MAC addresses 802.1x authentication and limit on the number of users on an interface AAA authentication, RADIUS authentication and TACACS authentication SSH v2.0 Hypertext Transfer Protocol Secure (HTTPS) CPU defense Blacklist and whitelist |
| Super Virtual Fabric (SVF) | <ul style="list-style-type: none"> Working as the parent node to vertically virtualize downlink switches as one device for management, supports two-layer clients architecture Support as a client node to be managed by SVF parent |
| VXLAN | <ul style="list-style-type: none"> Supports the VXLAN function, support the VXLAN L2 gateway and L3 gateway Configured through the NETCONF protocol. |

| Feature | Description |
|----------------------------|--|
| Management and maintenance | iStack (using service ports as stack ports) MAC Forced Forwarding (MFF) Virtual cable test Ethernet OAM (IEEE 802.3ah and 802.1ag) Local port mirroring and remote switched port analyzer (RSPAN), allowing an observing port to forward packets Remote configuration and maintenance using Telnet SNMP v1/v2c/v3 RMON Web NMS System logs and alarms of different levels GVRP MUX VLAN |
| Interoperability | VLAN-based Spanning Tree (working with PVST/PVST+/RPVST) Link-type Negotiation Protocol (LNP), similar to the Dynamic Trunking Protocol (DTP) VLAN Central Management Protocol (VCMP), similar to the VLAN Trunk Protocol (VTP) |

5.2 Hardware Specifications

Table 5-2 lists the S6720-EI hardware specifications.

Table 5-2 S6720-EI hardware specifications

| Item | Specification |
|--|--|
| Cabinet | Standard 19-inch cabinet/rack, such as N66E and N68E |
| Memory (RAM) | 2 GB |
| Flash memory | 240 MB |
| Switching capacity | 2.56 Tbps |
| Forwarding performance | S6720-30C-EI-24S-AC: 720 Mpps S6720-30C-EI-24S-DC: 720 Mpps S6720-54C-EI-48S-AC: 1080 Mpps S6720-54C-EI-48S-DC: 1080 Mpps S6720S-26Q-EI-24S-AC: 480 Mpps S6720S-26Q-EI-24S-DC: 480 Mpps |
| Mean Time Between Failures (MTBF), years | S6720-30C-EI-24S-AC: 80.60 years without card; 70.79 years when a 4x40GE QSFP+ card is configured S6720-30C-EI-24S-DC: 80.60 years without card; 70.79 years when a 4x40GE QSFP+ card is configured S6720-54C-EI-48S-AC: 79.39 years without card; 69.86 years when a 4x40GE QSFP+ card is configured S6720-54C-EI-48S-DC: 79.39 years without card; 69.86 years when a 4x40GE QSFP+ card is configured S6720S-26Q-EI-24S-AC: 69.53 years S6720S-26Q-EI-24S-DC: 69.53 years |

| Item | | Specification |
|-----------------------------------|------------------------------|---|
| Mean Time To Repair (MTTR), hours | | 2 |
| Availability | | > 0.99999 |
| Surge protection | Service port protection | - |
| | Power supply port protection | AC model: ± 6 kV in differential mode and ± 6 kV in common mode DC model: ± 1 kV in differential mode and ± 2 kV in common mode |
| Dimensions (W x D x H) | | S6720-30C-EI-24S-AC: 442 × 420 × 44.4 S6720-30C-EI-24S-DC: 442 × 420 × 44.4 S6720-54C-EI-48S-AC: 442 × 420 × 44.4 S6720-54C-EI-48S-DC : 442 × 420 × 44.4 S6720S-26Q-EI-24S-AC: 442 × 220 × 44.4 S6720S-26Q-EI-24S-DC: 442 × 220 × 44.4 |
| Weight (full configuration) | | S6720-30C-EI-24S-AC: 9.8 kg S6720-30C-EI-24S-DC: 9.8 kg S6720-54C-EI-48S-AC: 10.2 kg S6720-54C-EI-48S-DC : 10.2 kg S6720S-26Q-EI-24S-AC: 5.35 kg S6720S-26Q-EI-24S-DC: 5.15 kg |
| Stack port | | Any 10GE SFP+ ports (a maximum of 16 physical ports) Any 40GE QSFP+ ports (a maximum of 6 physical ports) |
| RPS | | Not supported |
| PoE | | Not supported |
| DC input voltage | Rated voltage range | -48V DC to -60V DC |
| | Maximum voltage range | -36V DC to -72V DC |
| AC input voltage | Rated voltage range | 100V AC to 240V AC; 50/60 Hz |
| | Maximum voltage range | 90V AC to 264V AC; 47 Hz to 63 Hz |

| Item | | Specification |
|---|-----------------------|--|
| Maximum power consumption (100% throughput, full speed of fans) | | S6720-30C-EI-24S-AC: 233.7W S6720-30C-EI-24S-DC: 212.5W S6720-54C-EI-48S-AC: 296.1W S6720-54C-EI-48S-DC: 268.6W S6720S-26Q-EI-24S-AC: 143.4 W S6720S-26Q-EI-24S-DC: 126.3 W |
| Temperature | Operating temperature | 0°C to 45°C (0m-1800m altitude) Note: When the altitude is between 1800 m and 5000 m, the operating temperature reduces by 1°C every time the altitude increases by 220 m. |
| | Storage temperature | -40°C to +70°C |
| Noise under normal temperature (sound power) | | S6720-30C-EI-24S-AC: < 72.1 dBA S6720-30C-EI-24S-DC: < 72.1 dBA S6720-54C-EI-48S-AC: < 72.1 dBA S6720-54C-EI-48S -DC : < 72.1 dBA S6720S-26Q-EI-24S-AC: < 67.1 dBA S6720S-26Q-EI-24S-DC: < 67.1 dBA |
| Noise under normal temperature (sound voltage) | | S6720-30C-EI-24S-AC: < 59.3dBA S6720-30C-EI-24S-DC: < 59.3dBA S6720-54C-EI-48S-AC: < 59.3dBA S6720-54C-EI-48S -DC : < 59.3dBA S6720S-26Q-EI-24S-AC: < 54.1 dBA S6720S-26Q-EI-24S-DC: < 54.1 dBA |
| Relative humidity | | 5%RH to 95%RH, noncondensing |
| Operating altitude | | AC power equipped: 0 m to 5000 m DC power equipped: 0 m to 2000 m |

NOTE:

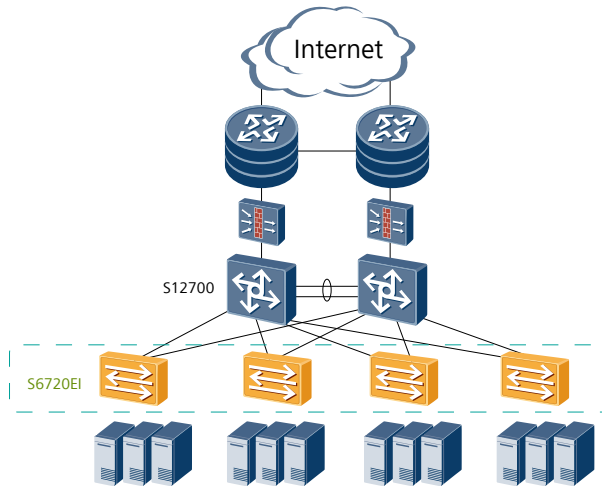
- Switching capacity: also called switching bandwidth. It refers to the maximum volume of bidirectional traffic that can be transferred between the switching chip and data bus. This index indicates the data transferring capability of a switch.
- Forwarding performance: This index indicates the wire-speed forwarding capability of a switch when the switch processes 64-byte packets (plus an 8-byte preamble and a 12-byte IFG). It represents the packet header processing capability.

6 Networking and Applications

6.1 Data Center Network

As shown in Figure 6-1, the S6720-EI are located at the access layer to build a high-performance, reliable datacenter network, and provides high-density 10GE ports to connect to 10G servers.

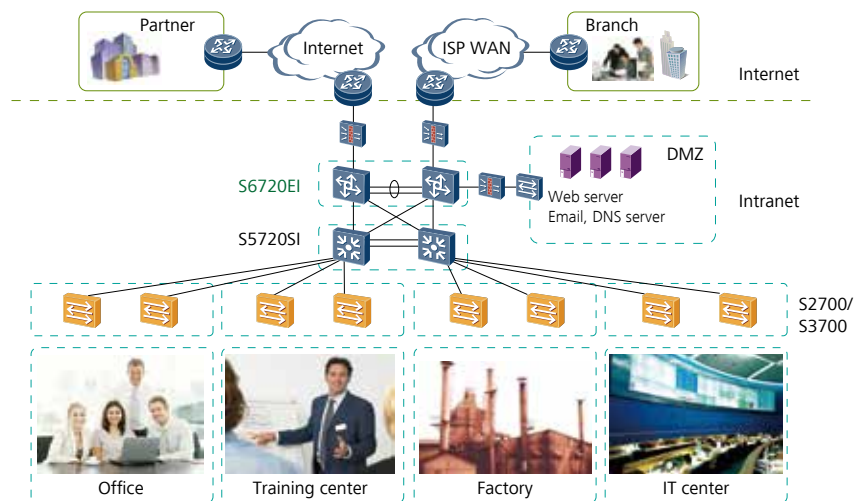
Figure 6-1 Position of the S6720-EI on a datacenter network



6.2 Small and Middle Campus Network

As shown in Figure 6-2, The S6720-EI can be used for small and medium campus network as core switches. It provides industry-leading high-density 10-gigabit ports to meet the increasing bandwidth demand. Abundant features and perfect security control mechanisms enable the S6720-EI to be the most cost-effective choice for campus network.

Figure 6-2 Position of the S6720-EI on a small and middle campus network



7 Product Accessories

7.1 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 multimode 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.

The fibers and optical modules supported by Huawei switches are updating. For the latest information, visit <http://enterprise.huawei.com> or contact your local Huawei sales office.

7.2 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 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 cable. 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 cable. The QSFP+ high-speed cables are available in QSFP-40G-CU1M, QSFP-40G-CU3M, QSFP-40G-CU5M.

Table 7-1 lists the stack cable types and connectors.

Table 7-1 Stack cables and connectors

| Stack Cable | Model | Description |
|-----------------|----------------|-------------------------------------|
| AOC | SFP-10G-AOC3M | Cable length: 3 m; connector: SFP+ |
| | SFP-10G-AOC10M | Cable length: 5 m; connector: SFP+ |
| SFP+ high-speed | SFP-10G-CU1M | Cable length: 1 m; connector: SFP+ |
| | SFP-10G-CU3M | Cable length: 3 m; connector: SFP+ |
| | SFP-10G-CU5M | Cable length: 5 m; connector: SFP+ |
| | SFP-10G-CU10M | Cable length: 10 m; connector: SFP+ |

| Stack Cable | Model | Description |
|------------------|---------------|-------------------------------------|
| QSFP+ high-speed | QSFP-40G-CU1M | Cable length: 1 m; connector: QSFP+ |
| | QSFP-40G-CU3M | Cable length: 3 m; connector: QSFP+ |
| | QSFP-40G-CU5M | Cable length: 5 m; connector: QSFP+ |

8 Safety and Regulatory Compliance

Table 8-1 lists the safety and regulatory compliance of S6720-EI.

Table 8-1 S6720-EI safety and regulatory compliance

| Certification Category | Description |
|-------------------------------------|---|
| Safety | 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) | 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 IEC61000-4-2 ITU-T K 20 ITU-T K 21 ITU-T K 44 CNS13438 |
| Environment | 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

9 MIB and Standards Compliance

9.1 Supported MIBs

Table 9-1 lists the MIBs supported by S6720-EI.

Table 9-1 S6720-EI MIBs

| Category | MIB |
|------------|-----------------------|
| Public MIB | BRIDGE-MIB |
| | DISMAN-NSLOOKUP-MIB |
| | DISMAN-PING-MIB |
| | DISMAN-TRACEROUTE-MIB |
| | ENTITY-MIB |
| | EtherLike-MIB |
| | IF-MIB |
| | IP-FORWARD-MIB |
| | IPv6-MIB |
| | LAG-MIB |
| | LLDP-EXT-DOT1-MIB |
| | LLDP-EXT-DOT3-MIB |
| | LLDP-MIB |
| | NOTIFICATION-LOG-MIB |
| | NQA-MIB |

| Category | MIB |
|------------------------|--|
| Public 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 | 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 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 |

| Category | MIB |
|---------------------------|-----------------------------|
| Huawei-proprietary 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 |
| | HUAWEI-SWITCH-SRV-TRAP-MIB |
| | HUAWEI-SYS-MAN-MIB |
| | HUAWEI-TCP-MIB |
| HUAWEI-TFTPC-MIB | |
| HUAWEI-TRNG-MIB | |
| HUAWEI-XQOS-MIB | |

9.2 Standard Compliance

Table 9-2 lists the standards the S6720-EI complies with.

Table 9-2 S6720-EI standards compliance

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

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

NOTE:

The listed standards and protocols are fully or partially supported by Huawei switches. For details, visit <http://enterprise.huawei.com> or contact your local Huawei sales office.

10 Ordering Information

Table 10-1 Ordering list of S6720-EI series Ethernet switches

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

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

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