

Huawei S5730-SI Series Switches Product Brochure



S5730-SI Series Switches

Product Overview

The S5730-SI series switches (S5730-SI for short) are next-generation standard gigabit Layer 3 Ethernet switches that provide flexible full gigabit access and cost-effective fixed GE ports and 10GE uplink ports, meanwhile can provide 40GE uplink ports with an interface card. The S5730-SI was developed based on next-generation high-performing hardware and the Huawei Versatile Routing Platform (VRP). The S5730-SI supports simplified operations and maintenance (O&M), intelligent stack (iStack), flexible Ethernet networking. It also provides enhanced Layer 3 features and mature IPv6 features. The S5730-SI can be used in various scenarios. For example, it can be used as an access or aggregation switch on a campus network or as an access switch in a data center.

Product Appearance

S5730-48C-SI-AC



- 24 Ethernet 10/100/1000 ports, 8 10 Gig SFP+
- One interface slot
- Dual pluggable AC or DC power supplies, one 150W AC power supply equipped by default
- Forwarding performance: 240 Mpps
- Switching capacity: 680 Gbit/s

S5730-48C-PWR-SI-AC



- 24 Ethernet 10/100/1000 ports, 8 10 Gig SFP+
- One interface slot
- One 500W AC power supply equipped by default
- PoE+
- Forwarding performance: 240 Mpps
- Switching capacity: 680 Gbit/s

S5730-68C-SI-AC



- 48 Ethernet 10/100/1000 ports, 4 10 Gig SFP+
- One interface slot
- Dual pluggable AC or DC power supplies, one 150W AC power supply equipped by default
- Forwarding performance: 240 Mpps
- Switching capacity: 680 Gbit/s

S5730-68C-PWR-SI-AC



- 48 Ethernet 10/100/1000 ports, 4 10 Gig SFP+, PoE+
- One interface slot
- One 500W AC power supply equipped by default
- PoE+
- Forwarding performance: 240 Mpps
- Switching capacity: 680 Gbit/s

S5730-68C-PWR-SI



- 48 Ethernet 10/100/1000 ports, 4 10 Gig SFP+, PoE+
- One interface slot
- PoE+
- Forwarding performance: 240 Mpps
- Switching capacity: 680 Gbit/s

Product Features and Highlights

Powerful service processing capability and multiple security control mechanisms

- The S5730-SI supports many Layer 2/Layer 3 multicast protocols such as PIM SM, PIM DM, PIM SSM, MLD, and IGMP snooping, to support multi-terminal high-definition video surveillance and video conferencing services.
- The S5730-SI supports multiple Layer 3 features including OSPF, IS-IS, BGP, and VRRP, meeting enterprises' requirements on access and aggregation service bearing, and enabling a variety of voice, video, and data applications.
- The S5730-SI supports MAC address authentication, 802.1x authentication, and Portal authentication, and implements dynamic delivery of policies (VLAN, QoS, and ACL) to users.
- The S5730-SI provides a series of mechanisms to defend against DoS and user-targeted attacks. DoS attacks are targeted at switches and include SYN flood, Land, Smurf, and ICMP flood attacks. User-targeted attacks include bogus DHCP server attacks, IP/MAC address spoofing, DHCP request flood, and change of the DHCP CHADDR value.
- The S5730-SI sets up and maintains a DHCP snooping binding table, and discards the packets that do not match the table entries. You can specify DHCP snooping trusted and untrusted ports to ensure that users connect only to the authorized DHCP server.
- The S5730-SI supports strict ARP learning, which protects a network against ARP spoofing attacks to ensure normal network access.

Easy O&M

- The S5730-SI supports Super Virtual Fabric (SVF), which virtualizes the "Core/aggregation + Access switch + AP" structure into a logical device. The S5730-SI provides the simplest network management solution in the industry to simplify device management. It allows plug-and-play access switches and APs. In addition, the S5730-SI supports service configuration templates. The templates are configured on core devices and automatically delivered to access devices, enabling centralized control, simplified service configuration, and flexible configuration modification. The S5730-SI functions as a client in an SVF system.
- The S5730-SI supports zero-touch deployment, replacement of faulty devices without additional configuration, USB-based deployment, batch configuration, and batch remote upgrade. The capabilities facilitate device deployment, upgrade, service provisioning, and other management and maintenance operations, and also greatly reduce O&M costs. The S5730-SI can be managed using SNMP v1/v2c/v3, CLI, web-based network management system, or SSH v2.0. Additionally, it supports RMON, multiple log hosts, port traffic statistics collection, and network quality analysis, which facilitate network optimization and reconstruction.
- The S5730-SI supports the Sampled Flow (sFlow) function. It uses a method defined in the sFlow standard to sample traffic passing through it and sends sampled traffic to the collector in real time. The collected traffic statistics are used to generate statistical reports, helping enterprises maintain their networks.

Multiple reliability mechanisms

- The S5730-SI supports iStack. This technology can virtualize up to nine physical switches into one logical switch. Member switches in a stack implement redundancy backup to improve device reliability and use inter-device link aggregation to improve link reliability. iStack provides high network scalability. You can increase a stack's ports, bandwidth, and processing capacity by simply adding member switches. iStack also simplifies device configuration and management. After a stack is set up, multiple physical switches are virtualized into one logical device. You can log in to any member switch in the stack to manage all the member switches in the stack.
- The S5730-SI is equipped with two removable power modules that can work in 1+1 redundancy backup mode. Mixed installation of AC and DC power modules is supported, allowing for flexible configuration of AC or DC power modules according to service requirements.
- In addition to traditional STP, RSTP, and MSTP, the S5730-SI supports Huawei-developed Smart Ethernet Protection (SEP) technology and the latest Ethernet Ring Protection Switching (ERPS) standard. SEP is a ring protection protocol specific to the Ethernet link layer, and applies to various ring network topologies, such as open ring topology, closed ring topology, and cascading ring topology. This protocol

is reliable, easy to maintain, and implements fast protection switching within 50 ms. ERPS is defined in ITU-T G.8032. It implements millisecond-level protection switching based on traditional Ethernet MAC and bridging functions.

- The S5730-SI supports Smart Link. One S5730-SI switch can connect to multiple aggregation switches through multiple links, implementing backup of uplinks and significantly improving reliability of access devices.
- The S5730-SI supports Ethernet OAM (IEEE 802.3ah/802.1ag) to detect link faults quickly.

Mature IPv6 technologies

- The S5730-SI uses the mature, stable VRP platform and supports IPv4/IPv6 dual stack, IPv6 RIPng, and IPv6 over IPv4 tunnels (including manual, 6-to-4, and ISATAP tunnels). With these IPv6 features, the S5730-SI can be deployed on a pure IPv4 network, a pure IPv6 network, or a shared IPv4/IPv6 network, helping achieve IPv4-to-IPv6 transition.

Open Programmability System (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.

Perpetual PoE

- When a PoE switch is rebooted by running the reboot command or the software version is upgraded, the power supply to PDs is not interrupted. This capability ensures that PDs are not powered off during the switch reboot.

Fast PoE

- S5730-48C/68C-PWR-SI switches can supply power to PDs within 10s after they are powered on. This is different from common switches that generally take 1 to 3 minutes to start to supply power to PDs. When a PoE switch reboots due to a power failure, the PoE switch continues to supply power to the PDs immediately after being powered on without waiting until it finishes reboot. This greatly shortens the power failure time of PDs.

Product Specifications

Item	S5730-48C-SI-AC	S5730-48C-PWR-SI-AC	S5730-68C-SI-AC	S5730-68C-PWR-SI-AC	S5730-68C-PWR-SI
Fixed ports	24 × 10/ 100/ 1000 Base-T, 8 × 10 Gig SFP+	24 × 10/ 100/ 1000 Base-T, 8 × 10 Gig SFP+	48 × 10/ 100/ 1000 Base-T, 4 × 10 Gig SFP+	48 × 10/ 100/ 1000 Base-T, 4 × 10 Gig SFP+	48 × 10/ 100/ 1000 Base-T, 4 × 10 Gig SFP+
MAC address table	32K MAC	32K MAC	32K MAC	32K MAC	32K MAC
Dimensions mm (W × D × H)	442 × 420 × 44.4	442 × 420 × 44.4	442 × 420 × 44.4	442 × 420 × 44.4	442 × 420 × 44.4
Slot	One extended slot that supports an interface card:4*40 GE QSFP+ interface card				
Input voltage	AC: Rated AC voltage: 100-240V AC;50/60Hz Max AC voltage: 90-264V AC;47-63Hz;				
	DC: Rated DC power: -48- -60V DC Max DC voltage: -36- -72V DC				

Item	S5730-48C-SI-AC	S5730-48C-PWR-SI-AC	S5730-68C-SI-AC	S5730-68C-PWR-SI-AC	S5730-68C-PWR-SI
Maximum power consumption	62.4W(Without card)	Without card and PD:83.2W Without card and full PoE: 967W(PoE:740 W)	65.4W(Without card)	Without card and PD: 68.3 W Without card and full PoE load: 925 W (switch power consumption: 185 W, PoE: 740 W) with AC 500W/ DC 650W power supply	Without card and PD: 68.3 W Without card and full PoE load: 925 W (switch power consumption: 185 W, PoE: 740 W) with AC 500W/ DC 650W power supply; Without card and full PoE load: 1733 W (switch power consumption: 294 W, PoE: 1440 W) with AC 1150W power supply
Typical power consumption (Without PD)	39.02W (Without card)	44.2W (Without card)	42.3W (Without card)	50.1W (Without card)	50.1W (Without card)
Operating temperature	0 m-1800 m altitude:0-45°C(long term);-5°C to 50°C (short term) 1800-5000 m altitude: The operating temperature reduces by 1° C every time the altitude increases by 220 m.				
Relative humidity	5% to 95% (non-condensing)				
Heat dissipation	Heat dissipation using fans supporting intelligent speed adjustment				

Service Features

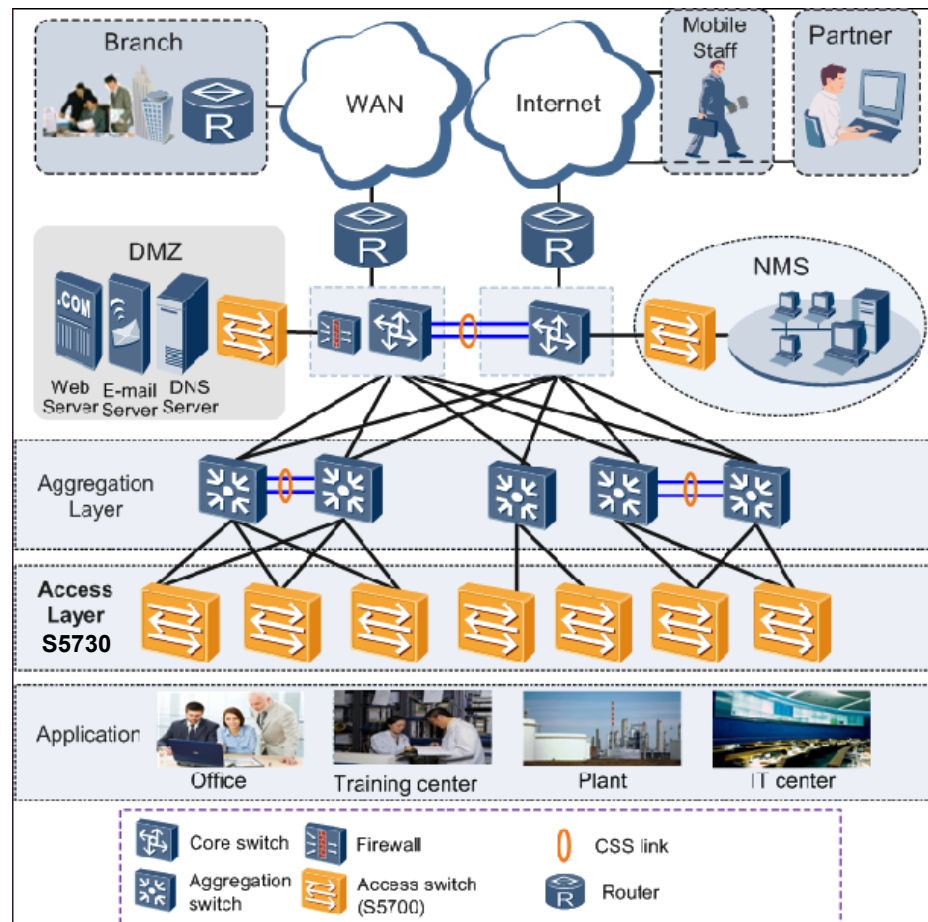
Item	Description
MAC address table	IEEE 802.1d compliance 32K MAC address entries MAC address learning and aging Static, dynamic, and blackhole MAC address entries Packet filtering based on source MAC addresses
VLAN	4K VLANs Guest VLAN and voice VLAN GVRP MUX VLAN VLAN assignment based on MAC addresses, protocols, IP subnets, policies, and ports 1:1 and N:1 VLAN mapping
Reliability	RRPP ring topology and RRPP multi-instance Smart Link tree topology and Smart Link multi-instance, providing millisecond-level protection switchover SEP STP (IEEE 802.1d), RSTP (IEEE 802.1w), and MSTP (IEEE 802.1s) ERPS (G.8032) BPDU protection, root protection, and loop protection
IP routing	Static route, RIPv1/v2, RIPng, OSPF, OSPFv3, ECMP, IS-IS, IS-ISv6, BGP, BGP4+, VRRP, and VRRP6

Item	Description
Multicast	<p>PIM DM, PIM SM, PIM SSM</p> <p>IGMP v1/v2/v3, IGMP v1/v2/v3 snooping and IGMP fast leave</p> <p>MLD v1/v2 and MLD v1/v2 snooping</p> <p>Multicast forwarding in a VLAN and multicast replication between VLANs</p> <p>Multicast load balancing among member ports of a trunk</p> <p>Controllable multicast</p> <p>Port-based multicast traffic statistics</p>
IPv6 features	<p>Neighbor Discovery (ND)</p> <p>Path MTU (PMTU)</p> <p>IPv6 ping, IPv6 tracer, and IPv6 Telnet</p> <p>6to4 tunnel, ISATAP tunnel, and manually configured tunnel</p> <p>ACLs based on the source IPv6 address, destination IPv6 address, Layer 4 ports, or protocol type</p>
QoS/ACL	<p>Rate limiting on packets sent and received by a port</p> <p>Packet redirection</p> <p>Port-based traffic policing and two-rate three-color CAR</p> <p>Eight queues on each port</p> <p>WRR, DRR, SP, WRR+SP, and DRR+SP queue scheduling algorithms</p> <p>Re-marking of the 802.1p priority and DSCP priority</p> <p>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, TCP/UDP port number, protocol type, and VLAN ID</p> <p>Rate limiting in each queue and traffic shaping on ports</p>
Security	<p>Hierarchical user management and password protection</p> <p>DoS attack defense, ARP attack defense, and ICMP attack defense</p> <p>Binding of the IP address, MAC address, port number, and VLAN ID of a user</p> <p>Port isolation, port security, and sticky MAC</p> <p>MFF</p> <p>Blackhole MAC address entries</p> <p>Limit on the number of learned MAC addresses</p> <p>IEEE 802.1x authentication and limit on the number of users on a port</p> <p>AAA authentication, RADIUS authentication, HWTACACS authentication, and NAC SSH v2.0</p> <p>HTTPS</p> <p>CPU defense</p> <p>Blacklist and whitelist</p> <p>IEEE 802.1x authentication, MAC address authentication, and Portal authentication</p> <p>DHCPv4/v6 client/relay/server/snooping</p> <p>Attack source tracing and punishment for IPv6 packets such as ND, DHCPv6, and MLD packets</p>
SVF	<p>Plug-and-play SVF client</p> <p>Automatic software and patch loading to clients</p> <p>One-click and automatic delivery of service configurations</p> <p>Independent client running</p>
OAM	<p>Software OAM:</p> <p>EFM OAM</p> <p>CFM OAM</p> <p>Y.1731 performance test</p>
Management and maintenance	<p>iStack</p> <p>Virtual cable test</p> <p>SNMP v1/v2c/v3</p> <p>RMON</p> <p>Web-based NMS</p> <p>System logs and alarms of different levels</p> <p>802.3az EEE</p> <p>sFlow</p>
Interoperability	<p>Supports VBST (Compatible with PVST/PVST+/RPVST)</p> <p>Supports LNP (Similar to DTP)</p> <p>Supports VCMP (Similar to VTP)</p>

Applications

Large-sized enterprise Campus networks

The S5730-SI provides various terminal security management features, and supports functions such as PoE, voice VLAN, and QoS. The switch can be used for desktop access and provides gigabit access speed.



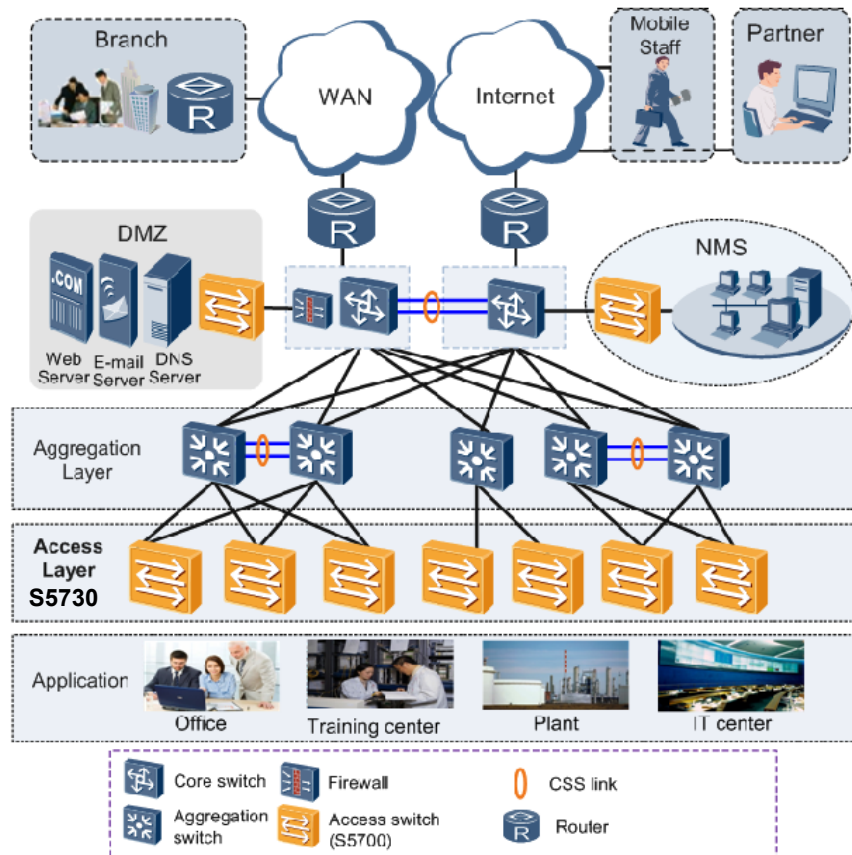
The S5730-SI provides various security features including ARP security, IP security, IP source guard, and user access control policies such as NAC and ACLs, to control access of user terminals.

In addition, the switch supports the Link Aggregation Control Protocol (LACP) to provide multi-link access for servers, improving link bandwidth and reliability.

In terms of device management, the S5730-SI provides EasyOperation and USB-based deployment, which facilitates device deployment and management.

Small- and Middle-Sized Enterprise Campus Network

The S5730-SI switches can be located at the aggregation layer to build a high-performance, reliable enterprise campus network.

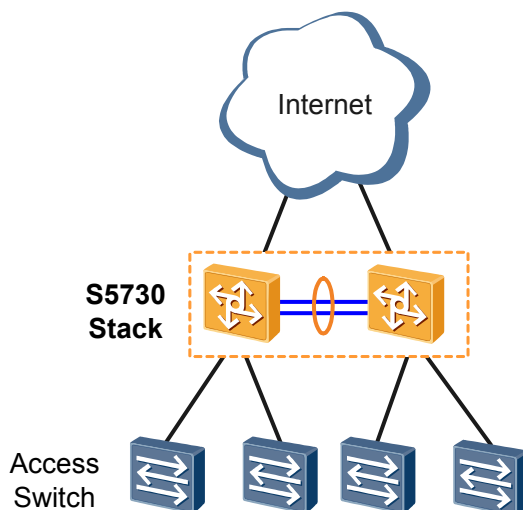


On an enterprise network or campus network, the S5730-SI switches connect to access switches through gigabit or 10 gigabit interfaces, provide high performance and large switching capacity, and connect to core switches through 10 gigabit optical interfaces. The network provides 10 Gbit/s rate for the backbone layer and 100 Mbit/s access rate for terminals, meeting requirements for high bandwidth and multi-service.

The S5730-SI provides SEP and RRPP to implement millisecond-level protection switchover. The switches form a stack system by using iStack technology to implement the distributed forwarding structure and fast fault recovery. The stack system increases the number of user interfaces and improves packet processing capability. The member switches can be managed in a uniform manner to facilitate network management and maintenance.

Small-Sized Enterprise Campus Network

Other than that, the S5730-SI switches can be used as the core switches of a small-sized enterprise campus network, which have powerful aggregation and routing capabilities. The S5730-SI switches use iStack to ensure high reliability. The switches provide various access control policies to achieve centralized user management and simplify configuration.



Ordering Information

The following table lists ordering information of the S5730-SI series switches.

Model	Product Description
S5730-48C-SI-AC	S5730-48C-SI Bundle(24 Ethernet 10/100/1000 ports,8 10 Gig SFP+,with 1 interface slot,with 150W AC power supply)
S5730-48C-PWR-SI-AC	S5730-48C-PWR-SI Bundle(24 Ethernet 10/100/1000 ports,8 10 Gig SFP+,PoE+,with 1 interface slot,with 500W AC power supply)
S5730-68C-SI-AC	S5730-68C-SI Bundle(48 Ethernet 10/100/1000 ports,4 10 Gig SFP+,with 1 interface slot,with 150W AC power supply)
S5730-68C-PWR-SI-AC	S5730-68C-PWR-SI Bundle(48 Ethernet 10/100/1000 ports,4 10 Gig SFP+,PoE+,with 1 interface slot,with 500W AC power supply)
S5730-68C-PWR-SI	S5730-68C-PWR-SI(48 Ethernet 10/100/1000 ports,4 10 Gig SFP+,PoE+,with 1 interface slot,without power module)
ES5D21Q04Q01	4-port 40GE QSFP+ interface card
ES0W2PSA0150	150W AC Power Module(Black)
ES0W2PSD0150	150W DC Power Module(Black)
PAC-500WA-BE	500W AC PoE Power Module(Black, Power panel side exhaust)
PDC-650WA-BE	650W DC PoE Power Module(Black, Power panel side exhaust)
W2PSA1150	1150W AC Power Module

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

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