Huawei S2720-EI Series Switches
Product Datasheet

S2720-EI Series Switches

Product Overview

The S2720-EI is a next-generation access switch that provides flexible 100M, GE access ports and GE uplink ports. Building on next-generation, high-performance hardware and the Huawei Versatile Routing Platform (VRP), the S2720-EI supports intelligent stack (iStack), flexible Ethernet networking, and diversified security control. It provides customers with a green, easy-to-manage, easy-to-expand, and cost-effective 100M to the desktop solution.

Appearance

S2720-12TP-EI

- 4 × Ethernet 10/100 Base-Tx ports, 4 × Ethernet 10/100/1000 Base-T ports, 2 × Gig SFP ports, 2 × combo Gig ports
- AC power supply
- Forwarding performance: 12.6Mpps
- Switching capacity: 68Gbps

S2720-12TP-PWR-EI

- 4 × Ethernet 10/100 Base-Tx ports, 4 × Ethernet 10/100/1000 Base-T ports, 2 × Gig SFP ports, 2 × combo Gig ports
- AC power supply
- PoE+
- Forwarding performance: 12.6Mpps
- Switching capacity: 68Gbps

S2720-28TP-PWR-EI-L

- 16 × Ethernet 10/100 Base-Tx ports, 8 × Ethernet 10/100/1000 Base-T ports, 2 × Gig SFP ports, 2 × combo Gig ports
- 8 × PoE+ ports
- AC power supply
- Forwarding performance: 20.4Mpps
- Switching capacity: 68Gbps

S2720-28TP-EI

- 16 × Ethernet 10/100 Base-Tx ports, 8 × Ethernet 10/100/1000 Base-T ports, 2 × Gig SFP ports, 2 × combo Gig ports
- AC power supply
- Forwarding performance: 20.4Mpps
- Switching capacity: 68Gbps

S2720-28TP-PWR-EI

- 16 × Ethernet 10/100 Base-Tx ports, 8 × Ethernet 10/100/1000 Base-T ports, 2 × Gig SFP ports, 2 × combo Gig ports
- AC power supply
- PoE+
- Forwarding performance: 20.4Mpps
- Switching capacity: 68Gbps

S2720-52TP-EI

- 32 × Ethernet 10/100 Base-Tx ports, 16 × Ethernet 10/100/1000 Base-T ports, 4 × Gig SFP ports
- AC power supply
- Forwarding performance: 34.8Mpps
- Switching capacity: 336Gbps

S2720-52TP-PWR-EI

- 32 × Ethernet 10/100 Base-Tx ports, 16 × Ethernet 10/100/1000 Base-T ports, 4 × Gig SFP ports
- AC power supply
- PoE+
- Forwarding performance: 34.8Mpps
- Switching capacity: 336Gbps

Power Supply

PoE Power Supply Configuration

- The S2720-EI series PoE switches, including S2720-12TP-PWR-EI, S2720-28TP-PWR-EI-L, S2720-28TP-PWR-EI, S2720-52TP-PWR-EI, have built-in PoE power modules.

- The S2720-12TP-PWR-EI and S2720-28TP-PWR-EI-L has a built-in power module and does not support pluggable power modules. The built-in power module can provide 124 W PoE power, which ensures full PoE power on 8 ports in compliance in 802.3af or on 4 ports in compliance with 802.3at. The switch cannot connect to an RPS power supply.

- The S2720-28TP-PWR-EI and S2720-52TP-PWR-EI has a built-in power module and does not support pluggable power modules. The built-in power module can provide 370 W PoE power, which ensures full PoE power on 24 ports in compliance in 802.3af or on 12 ports in compliance with 802.3at. The switch cannot connect to an RPS power supply.

Non-PoE Power Supply Configuration

- The S2720-EI series non-PoE switches have a single internal power module and do not support pluggable power modules.

Product Characteristics and Advantages

Flexible Ethernet Networking

- In addition to traditional Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), and Multiple Spanning Tree Protocol (MSTP), the S2720-EI 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 S2720-EI supports Smart Link, which implements backup of uplinks. One S2720-EI switch can connect to multiple aggregation switches through multiple links, significantly improving reliability of access devices.

- The S2720-EI supports Ethernet OAM (IEEE 802.3ah/802.1ag) to fast-detect link faults.

Diversified security control

- The S2720-EI supports 802.1x authentication, MAC address authentication, and combined authentication on a per port basis and implements dynamic policy delivery (VLAN, QoS, and ACL) to users.

- The S2720-EI collects and maintains information about access users, such as IP addresses, MAC addresses, IP address leases, VLAN IDs, and interface numbers in a DHCP snooping binding table. In this way, IP addresses and access interfaces of DHCP users can be tracked. You can specify DHCP snooping trusted and untrusted ports to ensure that users connect only to the authorized DHCP server.

- The S2720-EI supports strict ARP learning. This feature prevents ARP spoofing attackers from exhausting ARP entries so that users can connect to the Internet normally.

Easy maintenance

- The S2720-EI can be managed and maintained using Simple Network Management Protocol (SNMP) V1, V2, and V3, Command Line Interface (CLI), web-based network management system, or Secure Shell (SSH) V2.0.

- The S2720-EI supports Super Virtual Fabric (SVF), which virtualizes the "Core/aggregation + Access switch + AP" structure into a logical device. The S2720-EI enables the simplest network management solution in the industry. It allows plug-and-play access switches and APs. In addition, the S2720-EI 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 S2720-EI functions as a client in an SVF system

- The S2720-EI can use the GARP VLAN Registration Protocol (GVRP) to implement dynamic distribution, registration, and propagation of VLAN attributes. GVRP reduces manual configuration workload and ensures correct configuration. Additionally, the S2720-EI supports MUX VLAN, which involves a principal VLAN and multiple subordinate VLANs. Subordinate VLANs are classified into group VLANs and separate VLANs. Ports in the principal VLAN can communicate with ports in subordinate VLANs. Ports in a subordinate group VLAN can communicate with each other, whereas ports in a subordinate separate

VLAN can communicate only with ports in the principal VLAN. The S2720-EI also supports VLAN Central Management Protocol (VCMP) and VLAN-Based Spanning Tree (VBST) protocol.

iStack

• The S2720-EI supports intelligent stack (iStack). This technology combines multiple switches into a 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 ports, bandwidth, and processing capacity of a stack by simply adding member switches to the stack. 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.

Excellent network traffic analysis

• The S2720-EI supports the 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.

Product Specifications

Functions and Features

Feature	Description
MAC address table	16K MAC address entries MAC address learning and aging Static, dynamic, and blackhole MAC address entries Interface-based MAC learning limiting
VLAN	4K active VLANs Guest VLAN and voice VLAN GVRP MUX VLAN VLAN assignment based on MAC addresses, protocols, IP subnets, policies, and interfaces 1:1 and N:1 VLAN mapping
Ethernet loop protection	RRPP ring topology and RRPP multi-instance Smart Link tree topology and Smart Link multi-instance, providing millisecond-level protection switchover SEP ERPS (G.8032) STP(IEEE 802.1d), RSTP(IEEE 802.1w), and MSTP(IEEE 802.1s)
Reliability	EFM OAM (802.3ah) CFM OAM (802.1ag) ITU-Y.1731 DLDP LACP
IP routing	Static route, RIP, RIPng, OSPF

Feature	Description
IPv6	Neighbor Discovery (ND) Path MTU (PMTU) IPv6 ping, IPv6 tracert, and IPv6 Telnet
Multicast	IGMPv1/v2/v3 snooping Controllable multicast Interface-based multicast traffic statistics MLDv1/v2 snooping (Multicast Listener Discovery snooping)
QoS/ACL	Rate limiting by an interface Eight queues on each interface WRR, DRR, SP, WRR+SP, and DRR+SP queue scheduling algorithms Re-marking of the 802.1p priority and DSCP priority Rate limiting in each queue and traffic shaping on interfaces
Security	Port isolation, port security, and sticky MAC MFF Blackhole MAC address entries Limit on the number of learned MAC addresses IEEE 802.1x authentication and limit on the number of users on an interface AAA authentication, RADIUS authentication, HWTACACS+ authentication, and NAC SSH V2.0 Hypertext Transfer Protocol Secure (HTTPS) CPU defense Blacklist and whitelist DHCP relay, DHCP server, DHCP snooping DHCPv6 relay, DHCPv6 server, DHCPv6 snooping
Super Virtual Fabric (SVF)	Working as an SVF client that is plug-and-play with zero configuration Automatically loading the system software package and patches of clients One-click and automatic delivery of service configurations Supports independent running client
Management and maintenance	iStack Virtual Cable Test (VCT) Remote configuration and maintenance using Telnet SNMPv1/v2c/v3 RMON eSight and web-based NMS HTTPS LLDP/LLDP-MED System logs and multi-level alarms 802.3az EEE
Interoperability	Supports VBST (Compatible with PVST/PVST+/RPVST)
	Supports LNP (Similar to DTP)
	Supports VCMP (Similar to VTP)

Hardware Specifications

| Item		Specification
Memory (RAM)		512 MB
Flash memory		Hardware 512MB, customer available 240MB
Switching capacity		52-Port: 336 Gbps, others: 68 Gbps
Forwarding performance		S2720-12TP-EI: 12.6Mpps S2720-12TP-PWR-EI: 12.6Mpps S2720-28TP-PWR-EI-L: 20.4Mpps S2720-28TP-EI: 20.4Mpps S2720-28TP-PWR-EI: 20.4Mpps S2720-52TP-EI: 34.8Mpps S2720-52TP-PWR-EI: 34.8Mpps
Mean Time Between Failures (MTBF), years		S2720-12TP-EI: 23.8 S2720-12TP-PWR-EI: 23.8 S2720-28TP-PWR-EI-L: 42 S2720-28TP-EI: 49 S2720-28TP-PWR-EI: 40 S2720-52TP-EI: 31 S2720-52TP-PWR-EI: 38
Mean Time To Repair (MTTR), hours		2
Availability		> 0.99999
Surge protection	Service port protection	Common mode: ± 7 kV
	Power supply port protection	Common mode: ± 7 kV DC: ± 1 kV in differential mode; ± 2 kV in common mode AC: ± 6 kV in differential mode; ± 6 kV in common mode
Dimensions (W x D x H)		S2720-12TP-EI: 250 mm * 180 mm * 43.6 mm S2720-12TP-PWR-EI: 320 mm * 220 mm * 43.6 mm S2720-28TP-PWR-EI: 442 mm * 310 mm * 43.6 mm S2720-28TP-EI/S2720-28TP-PWR-EI-L: 442 mm * 220 mm * 43.6 mm S2720-52TP-EI: 442 mm * 220 mm * 43.6 mm S2720-52TP-PWR-EI: 442 mm * 310 mm * 43.6 mm
Weight		S2720-12TP-EI: ≤ 2 kg S2720-12TP-PWR-EI/ S2720-52TP-EI/ S2720-28TP-EI /S2720-28TP-PWR-EI-L: ≤ 5 kg S2720-28TP-PWR-EI/ S2720-52TP-PWR-EI: ≤ 6 kg
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)		Maximum power consumption (100% throughput, full speed of fans) S2720-12TP-EI: 12.85W S2720-12TP-PWR-EI: without PD: 15.61W; with PD: 160.5W（PoE: 123.2W） S2720-28TP-PWR-EI: without PD: 37.8W; with PD: 444.9W（PoE: 370W） S2720-28TP-EI: 20.1W S2720-28TP-PWR-EI-L: without PD: 24.8W; with PD: 167W（PoE: 123.2W） S2720-52TP-EI: 40.3W S2720-52TP-PWR-EI: without PD: 53.7W; with PD: 435W（PoE: 370W）
Temperature	Operating temperature	Operating temperature: 0m to 1,800m: 0°C to 45°C; 1,800m to 5,000m (decreases 1°C for every 220m increase in altitude)
	Storage temperature	-40°C to +70°C
Noise under normal temperature (27°C, sound power)		S2720-12TP-EI: Noise-free (no fans) S2720-12TP-PWR-EI: Noise-free (no fans) S2720-28TP-PWR-EI-L: Noise-free (no fans) S2720-28TP-EI: Noise-free (no fans) S2720-28TP-PWR-EI: less than 48.6 dBA S2720-52TP-EI: less than 44.5 dBA S2720-52TP-PWR-EI: less than 48.3 dBA
Relative humidity		5%RH to 95%RH, noncondensing
Operating altitude		0 m to 5000 m

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.

Networking and Applications

The S2720-EI provides 100M desktop access functions for a high performance network, such as voice VLAN, NAC and so on.
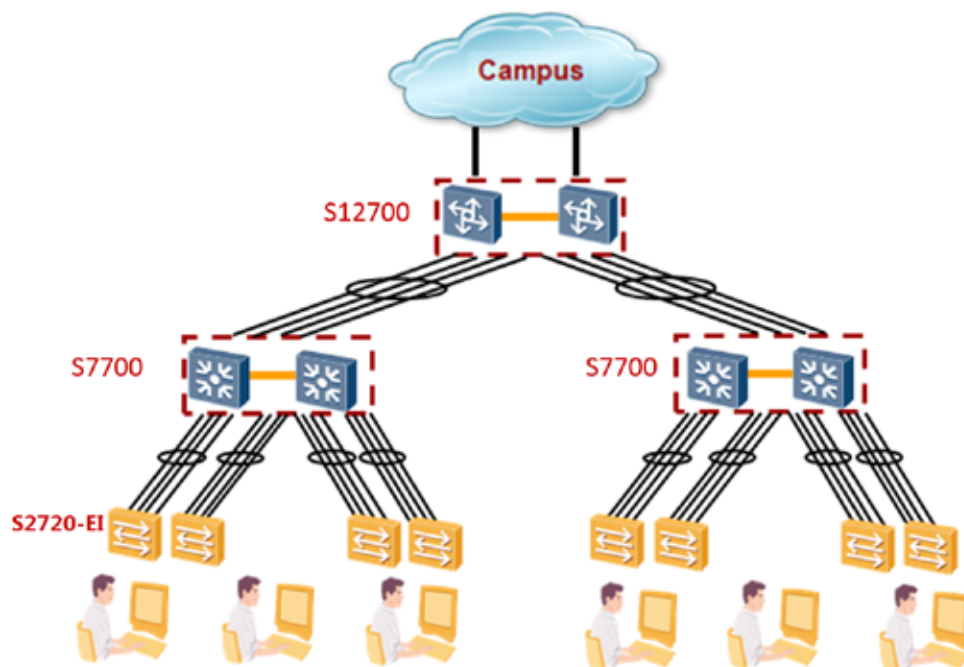
Ordering Information

Product Description
S2720-12TP-EI (4 × Ethernet 10/100 Base-Tx ports, 4 × Ethernet 10/100/1000 Base-T ports, 2 × Gig SFP ports, 2 × combo Gig ports, AC 110/220V)
S2720-12TP-PWR-EI (4 × Ethernet 10/100 Base-Tx ports, 4 × Ethernet 10/100/1000 Base-T ports, 2 × Gig SFP ports, 2 × combo Gig ports,124W PoE AC 110/220V)
S2720-28TP-PWR-EI (16 × Ethernet 10/100 Base-Tx ports, 8 × Ethernet 10/100/1000 Base-T ports, 2 × Gig SFP ports, 2 × combo Gig ports,370W PoE AC 110/220V)
S2720-28TP-PWR-EI-L (16 × Ethernet 10/100 Base-Tx ports, 8 × Ethernet 10/100/1000 Base-T ports, 2 × Gig SFP ports, 2 × combo Gig ports, 8 ports PoE+, 124W PoE AC 110/220V)
S2720-28TP-EI (16 × Ethernet 10/100 Base-Tx ports, 8 × Ethernet 10/100/1000 Base-T ports, 2 × Gig SFP ports, 2 × combo Gig ports, AC 110/220V)
S2720-52TP-EI (32 × Ethernet 10/100 Base-Tx ports, 16 × Ethernet 10/100/1000 Base-T ports, 4 × Gig SFP ports, AC 110/220V)
S2720-52TP-PWR-EI (32 × Ethernet 10/100 Base-Tx ports, 16 × Ethernet 10/100/1000 Base-T ports, 4 × Gig SFP ports, 370W PoE AC 110/220V)

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