



H3C S5170-EI Series Intelligent Gigabit Access Switches

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New H3C Technologies Co., Limited

Product Overview

The H3C S5170-EI switch adopts the industry-leading ASIC technology to develop a new generation of high-performance, high-port density, high-security and easy-to-install intelligent network-managed Gigabit Ethernet switches that support IPv4/IPV6 dual-stack management and forwarding. It supports static routing protocols and routing protocols such as RIP and OSPF and supports rich management and security features.

H3C S5170-EI products are mainly positioned at the access layer and aggregation layer of enterprises and campuses, meet high-density Gigabit access, fixed 10 Gigabit uplink ports, support PoE+, and build high-performance end-to-end IP networks together with other H3C products solution.

H3C S5170-EI series Ethernet switch includes the following models:

- 5170-28S-EI: 24x10/100/1000BASE-T Ethernet ports, 4x10G BASE-X SFP+ ports.
- 5170-54S-EI: 48x10/100/1000BASE-T Ethernet ports, 6x10G BASE-X SFP+ ports.
- 5170-54S-PWR-EI: 48x10/100/1000BASE-T Ethernet ports (PoE+), 6x10G BASE-X SFP+ ports.
- 5170-28S-HPWR-EI: 24x10/100/1000BASE-T Ethernet ports (PoE+), 4x10G BASE-X SFP+ ports.



S5170-28S-EI



S5170-28S-HPWR-EI



S5170-54S-EI



S5170-54S-PWR-EI

Features

Intelligent Resilient Framework 2 (IRF2)

H3C S5170-EI switch series is pre-built with Intelligent Resilient Framework 2 (IRF2). IRF2 provides the following benefit:

- High scalability: With IRF2, plug-n-play device aggregation can be achieved by adding one or more switches into the IRF2 stack and enabling IRF2 stacking on the new device. New devices
- High reliability: The IRF2 patented 1:N backup technology allows each slave device in the IRF2 stack to serve as the backup of the master, creating control and data link redundancy, as well as uninterrupted layer-3 forwarding. This improves the reliability, avoids unplanned business downtime and serves to improve overall performance. When the master device fails, traffic remains uninterrupted.
- Load balancing: IRF2 supports cross-device link aggregation, upstream and downstream can be

connected to more than one physical link, which creates another layer of network redundancy and boosts the network resource utilization.

- Availability: H3C Implements IRF2 through standard Forty Gigabit Ethernet (40GE) or Ten Gigabit Ethernet (10GE) ports which allocates bandwidth for business and application access and reasonably splits local traffic and upstream traffic. IRF2 rules not only able to obeyed within and across the rack, but also across the LAN.

Smart Management Center (SmartMC)

SmartMC is H3C's latest offering and innovation that helps small and middle size enterprise network to address management issue and is free of charge, easy to use web management tool. SmartMC is embedded network management tool into the switch, it includes commander switches and other access switches.

SmartMC delivers the following benefits:

- Intelligent operation: once the switch is powered on and SmartMC function is enabled, topology will be created automatically and user can go enhanced web GUI to check the latest status.
- Centralized management: all management can be achieved via commander switch such as centralized configuration backup, and software version management, increasing working efficiency.
- One key device replacement: in case of one switch failure, the new added same type switch can download the same configuration and work as old switch immediately

Comprehensive Security Control

- H3C S5170-EI switch series supports innovative single-port multi-authentication function, the access authentication modes supported by different clients are different. For example, some clients can only perform MAC addresses Authentication (such as the printer terminal), and some user host for 802.1X authentication, and some user hosts only want to access through the Web portal authentication. In order to flexibly adapt to the multi-authentication requirements of the network environment, the S5170-EI switch series support single-port multi-authentication unified deployment.
- The S5170-EI switch series supports SSH V2 (Secure Shell V2) to secure information security, and strong authentication protect the Ethernet network switch from attacks such as IP address spoofing and clear text interception.
- ARP attack and ARP virus are major threats to LAN security, so the S5170-EI switch series comes with diverse ARP protection functions such as ARP Detection to challenge the legitimacy of client, validate the ARP packets, and set a speed limit for ARP to prevent ARP swarm attacks from targeting CPU.
- H3C S5170-EI switch series supports EAD (End User Admission Domination) function. With the iMC (intelligent Management Centre) system, EAD integrates terminal security policies, such as anti-virus and patch update, network access control and access right control policies to form a cooperative security system. By checking, isolating, updating, managing, and monitoring access terminals, EAD changes to passive mode, single point network protection to active, comprehensive network protection, and changes separate management to centralized management, enhancing the network capability for preventing viruses, worms, and new threats.

High availability

- The S5170-EI switch series features multiple redundancy measures at the device and link levels, support current and voltage surge control, overheat protection, power and fan troubleshooting and alert, as well as fan speed adjustment when the temperature changes.
- Apart from device level redundancy, The S5170-EI series switch also provides diverse link redundancy support such as LACP/STP/RSTP/MSTP/Smart Link protocols. It supports IRF2 and 1: N redundancy backup as well as cross-device link aggregation which substantially increases network reliability.

Abundant QoS

The S5170-EI switch series supports packet filtering at Layer 2 through Layer 4, and traffic classification based on source MAC addresses, destination MAC addresses, source IP addresses, destination IP addresses, TCP/UDP port numbers, protocol types, and VLANs. It supports flexible queue scheduling algorithms based on ports and queues, including strict priority (SP), weighted round Robin (WRR) and SP+WRR. The S5170-EI switch series enables committed access rate (CAR) with the minimum granularity of 8 kbps. It supports port mirroring in the outbound and inbound directions, to monitor the packets on the specific ports, and to mirror the packets to the monitor port for network detection and troubleshooting.

Professional Anti-lightning function

The S5170-EI switch series uses built-in lightning protection technology and supports industry leading switch port 10KV anti-lightning capability, which can greatly reduce the rate of lightning damage to the equipment.

Excellent manageability

H3C S5170-EI switch series makes switch management with ease with the support of SNMPv1/v2/v3, which can be managed by NM platforms, such as Open View and iMC. With CLI and Telnet switch management is made easier. And with SSH 2.0 encryption, switch management security is enhanced.

Green design

The S5170-EI switch series implements a variety of green energy saving features, including auto-power-down (port automatic energy saving), if the interface status has been down for a period of time, the system automatically stops the interface power and the system enters power-saving mode. They also support EEE energy feature, by which if a port stays idle for a period of time, the system will set the port to energy-saving mode. The S5170-EI switch series is also compliant with material environmental protection and the EU RoHS safety standard.

Hardware Specifications

Feature	S5170-28S-EI	S5170-54S-EI	S5170-28S-HPWR-EI	S5170-54S-PWR-EI
Port Switching capacity	128Gbps	216Gbps	128Gbps	216Gbps
Forwarding capacity	96Mpps	161Mpps	96Mpps	161Mpps
CPU	Dual Core, 1GHz			
Dimensions (W × D × H)	440mm × 160mm × 43.6mm	440mm × 260mm × 43.6mm	440mm × 320mm × 43.6mm	440mm × 320mm × 43.6mm

Weight	≤2.2kg	≤4.0kg	≤5kg	≤5.5kg
10/100/1000Base-T port	24	48	24	48
SFP+ port	4	6	4	6
Maximum Stacking bandwidth	80G			
Maximum stacking num	9			
Input voltage	AC: Rated voltage range: 100V~240V AC, 50/60Hz Max voltage range: 90V~ 264V AC, 47~63HZ			
Flash/SDRAM	512M/1024M			
Power consumption (full configuration)	37W	53W	460W(including 370w PoE)	470W(including 370w PoE)
MTBF(Year)	105.515	34.74	44.59	38.25
Operating temperature	-5~45°C			
Storage temperature	-40~ +70°C			
Operating & storage relative humidity(noncondensing)	5%~95%			

Software Specifications

Feature	S5170-EI switch series
Port aggregation	GE/10GE port aggregation Dynamic aggregation Static aggregation Cross-device aggregation
Broadcast/Multicast/Unicast storm suppression	Storm suppression based on port bandwidth percentage Storm suppression based on PPS Storm suppression based on BPS Broadcast traffic/Multicast traffic/Unknown unicast traffic suppression
IRF2	Distributed device management, distributed link aggregation, and distributed resilient routing Stacking through standard Ethernet interfaces Local device stacking and remote device stacking
Jumbo Frame	10000 bytes
MAC address table	32K MAC address entries Static MAC address Blackhole MAC address



Feature	S5170-EI switch series
VLAN	Port-based VLAN (up to 4094 VLANs) MAC-based VLAN Protocol-based VLAN QinQ and selective QinQ VLAN mapping Voice VLAN GVRP
DHCP	DHCP Client DHCP Snooping DHCP Snooping option82 DHCP Relay DHCP Server DHCP auto-config
IP routing	6K IPv4 routing table Static routing RIPv1/v2 and RIPng OSPFv1/v2 and OSPFv3
Multicast	IGMP Snooping V2/V3 MLD Snooping Multicast VLAN
Layer 2 ring network protocol	STP/RSTP/MSTP/PVST Smart Link RRPP G.8032 ERPS (Ethernet Ring Protection Switching)
ACL	Packet filtering at Layer 2 through layer 4 Traffic classification based on source MAC addresses, destination MAC addresses, source IPv4/IPv6 addresses, Time range-based ACL VLAN-based ACL Bidirectional ACL
QoS	Port rate limit (receiving and transmitting) Packet redirection Committed access rate (CAR) Eight output queues on each port Flexible queue scheduling algorithms based on ports and queues, including SP, WRR and SP+WRR 802.1p DSCP remarking
Mirroring	Port mirroring RSPAN
Security	Hierarchical user management and password protection AAA authentication support RADIUS authentication HWTACACS SSH2.0 Port isolation 802.1X authentication, centralized MAC authentication Port security IP Source Guard HTTPs EAD



Feature	S5170-EI switch series
IEEE	IEEE 802.3x IEEE 802.3u, IEEE 802.3z, IEEE 802.3az, IEEE 802.3ab, IEEE 802.3ah IEEE 802.3ad IEEE 802.3af IEEE 802.3at IEEE 802.3bt IEEE 802.3bz IEEE 802.1p IEEE 802.1x IEEE 802.1q IEEE 802.1d IEEE 802.1w IEEE 802.1s IEEE 802.1ax IEEE 802.1ag
Management and maintenance	Loading and upgrading through XModem/FTP/TFTP Configuration through CLI, Telnet, and console port SNMPv1/v2/v3 and Web-based NMS Remote monitoring (RMON) alarm, event, and history recording IMC NMS System log, alarming based on severities, and output of debugging information NTP Ping, Tracert Virtual cable test (VCT) Device link detection protocol (DLDP) Loopback-detection
EMC	FCC Part 15 Subpart B CLASS A ICES-003 CLASS A VCCI-CISPR 32 CLASS A EN 55032 CLASS AS/NZS CISPR32 CLASS A CISPR 24 EN 55024 EN 61000-3-2 EN 61000-3-3 ETSI EN 300 386 GB/T 9254 YD/T 993
Safety	CAN/CSA C22.2 No 60950-1 IEC 60950-1 EN 60950-1 AS/NZS 60950-1 FDA 21 CFR Subchapter J GB 4943.1

Ordering Information

Product ID	Product Description
LS-5170-28S-EI-GL	H3C S5170-28S-EI L2 Ethernet Switch with 24*10/100/1000BASE-T Ports and 4*1G/10G BASE-X SFP Plus Ports,(AC)
LS-5170-54S-EI-GL	H3C S5170-54S-EI L2 Ethernet Switch with 48*10/100/1000BASE-T Ports and 6*1G/10G BASE-X SFP Plus Ports,(AC)

LS-5170-54S-PWR-EI-GL	H3C S5170-54S-PWR-EI L2 Ethernet Switch with 48*10/100/1000BASE-T Ports and 6*1G/10G BASE-X SFP Plus Ports,(AC),POE+
LS-5170-28S-HPWR-EI-GL	H3C S5170-28S-HPWR-EI L2 Ethernet Switch with 24*10/100/1000BASE-T Ports and 4*1G/10G BASE-X SFP Plus Ports,(AC),POE+
Transceivers	
SFP-GE-T	1000BASE-T SFP
SFP-GE-SX-MM850-A	1000BASE-SX SFP Transceiver, Multi-Mode (850nm, 550m, LC)
SFP-GE-LX-SM1310-A	1000BASE-LX SFP Transceiver, Single Mode (1310nm, 10km, LC)
SFP-GE-LH40-SM1310	1000BASE-LH40 SFP Transceiver, Single Mode (1310nm, 40km, LC)
SFP-GE-LH40-SM1550	1000BASE-LH40 SFP Transceiver, Single Mode (1550nm, 40km, LC)
SFP-GE-LH80-SM1550	1000BASE-LH80 SFP Transceiver, Single Mode (1550nm, 80km, LC)
SFP-GE-LH100-SM1550	1000BASE-LH100 SFP Transceiver, Single Mode (1550nm, 100km, LC)
SFP-XG-LX-SM1310-E	SFP+ Module(1310nm,10km,LC)
SFP-XG-SX-MM850-E	SFP+ Module(850nm,300m,LC)
Cable	
LSWM1STK	SFP+ Cable 0.65m
LSWM2STK	SFP+ Cable 1.2m
LSWM3STK	SFP+ Cable 3m
LSTM1STK	SFP+ Cable 5m



The Leader in Digital Solutions

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