H3C S5000V5-EI Managed Switch Series

Release Date: Apr, 2023

Product Overview

H3C S5000V5-EI series is the latest development of Gigabit speed managed Ethernet switch that is especially for SMB (Small Business) market. Besides high-performance access, it also offers abundant security access policy control and enhanced network manageability and maintenance. This makes it ideal for network construction on industries such as government, small to midsize enterprise, school and hotel.

H3C S5000V5-EI series Ethernet switch includes the following models:

- S5008PV5-EI-S: 8*10/100/1000BASE-T Ports and 2*1000BASE-X SFP Ports

- S5016PV5-EI-S: 16*10/100/1000BASE-T Ports and 4*1000BASE-X SFP Ports

- S5024PV5-EI-S: 24*10/100/1000BASE-T Ports and 2*1000BASE-X Ports

- S5024PV5-EI: 24*10/100/1000BASE-T Ports and 4*1000BASE-X Ports

- S5048PV5-EI: 48*10/100/1000BASE-T Ports and 4*1000BASE-X Ports

- S5008PV5-EI-HPWR: 8*10/100/1000BASE-T PoE+ Ports and 2*1000BASE-X SFP Ports

- S5016PV5-EI-PWR-S: 16*10/100/1000BASE-T PoE+ Ports and 2*1000BASE-X SFP Ports

- S5024PV5-EI-PWR-S: 16*10/100/1000BASE-T PoE+ Ports, 8*10/100/1000BASE-T Ports and 2*1000BASE-X Ports

- S5024PV5-EI-HPWR: 24*10/100/1000BASE-T PoE+ Ports (AC 370W) and 4*1000BASE-X SFP Ports

- S5048PV5-EI-PWR: 48*10/100/1000BASE-T PoE+ Ports (AC 370W) and 4*1000BASE-X SFP Ports

S5008PV5-EI-S

S5016PV5-EI-S

S5024PV5-EI-S

S5024PV5-EI
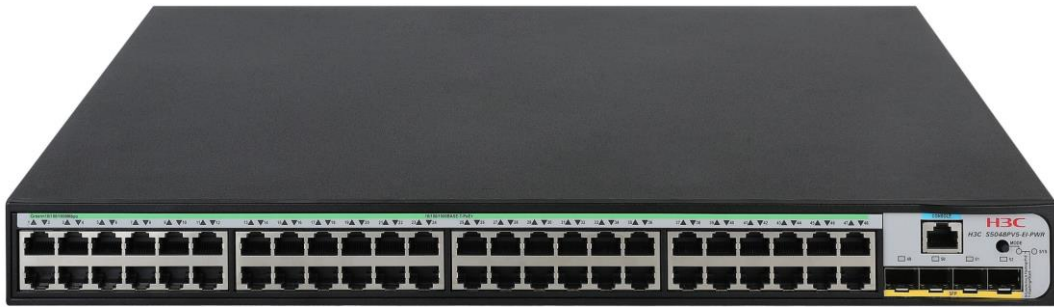
S5048PV5-EI

S5008PV5-EI-HPWR

S5016PV5-EI-PWR-S

S5024PV5-EI-PWR-S

S5024PV5-EI-HPWR

S5048PV5-EI-PWR

Features

Multi-type Port Access

- Ethernet fiber port and copper port capability offers customers flexibility.

- Offers 8-port, 16-port, 24-port, 48-port access and all ports support line-rate forward.

- Easy to install and use.

IRF2 (Intelligent Resilient Framework 2)

H3C S5000V5 series switch supports IRF2 technology that connects multiple physical devices (up to 9) to a logical device, that is to say, users can manage and use these devices as a single device. IRF can bring the following benefits to the user:

- **Simplify the management:** Any one of the ports can be connected to any of the devices to login to a unified logical device, and to manage the whole system and all the members of the system through the configuration of a single device, without the physical connection to each member of the device.

- **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 can be managed with a single IP, and upgraded at the same time to reduce network expansion cost.

- **High reliability:** IRF2 patented 1: N standby 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 Gigabit Ethernet (1GE) ports or 10 Gigabit Ethernet (10GE) ports which allocates bandwidth for business and application access and reasonably splits local traffic and upstream traffic.

Comprehensive Security Control Policies

- Support ARP Detection, which can prevent hack or ARP attack.

- Support IP Source Guard, which can prevent illegal IP/MAC address spoof and DOS attack.

- Support DHCP Snooping, which can prevent illegal DHCP server.

- Support port security features, which can prevent MAC address based attack and MAC address permit/limit flow.

- Support 802.1X and MAC authentication, client software version detection, Guest VLAN, agent detection and dual NIC detection with iMC.

Enhanced Service Capabilities

- Support speed limit on port and flow and multiple granular management tools.

- Supports flexible queue scheduling algorithms, including SP(Strict Priority), WRR(Weighted Round Robin) and SP+WRR.

- Support rich IPV6 services and multiple IPV6 manage tools.

Professional Surge Protection Function

The S5000V5-EI series switches use professional built-in surge protection technology and support the industry-leading 6KV service port surge protection capability, which greatly reduces the damage rate of surge strikes to equipment even in harsh working environments.

Green Features

Energy saving design greatly reduces device power consumption and trouble spots. Radiation is reducing to reach standard for household electrical appliances and is harmless to human.

The S5000V5-EI series switches are also compliant with material environmental protection and the EU RoHS safety standard.

Specifications

Features	S5008PV5-EI-S	S5016PV5-EI-S	S5024PV5-EI-S	S5024PV5-EI	S5048PV5-EI
Switching capacity	20Gbps	40Gbps	52Gbps	56Gbps	104Gbps
Packet forwarding rate	15Mpps	30Mpps	39Mpps	42Mpps	78Mpps
Management port	1 console port				
Latency (64byte/μs)	GE: < 5μs 10GE < 3μs				
10/100/1000 Base-T port	8	16	24	24	48
SFP port	2	4	2	4	4
Copper port features	Half-duplex, full-duplex, auto-negotiation				
	MDI/MDI-X				
Ethernet functions	LLDP				
	Static MAC configuration				
	MAC address learning limit				
	Port mirror and flow mirror				
	Link aggregation (up to 8 ports per group)				
	Port isolation				
	STP/RSTP/MSTP				
	IEEE 802.3ad（Dynamic link aggregation），static port aggregation				
	EEE 802.3az				
VLAN	802.1Q (up to 4K VLAN)				
	Protocol-based VLAN				
	Voice VLAN				
	IP subnet based VLAN				
	MAC based VLAN				

Features	S5008PV5-EI-S	S5016PV5-EI-S	S5024PV5-EI-S	S5024PV5-EI	S5048PV5-EI
	GUEST VLAN				
IP routing	Static routing				
DHCP	DHCP Relay				
	DHCP Client				
	DHCP Snooping				
	DHCP Snooping Option82				
Broadcast	IGMP V1/V2/V3 Snooping				
QoS	Diff-Serv QoS				
	WRR/HQ-WRR				
	802.1p, DSCP priority mapping				
	Directional port speed limit				
ACL	ACL on layer 2, layer 3 and layer 4				
	ACL on IPv4, IPv6				
	VLAN ACL				
IPv6	IPv6 static routing, dual-stack				
	DHCPv6 Client, DHCPv6 Snooping				
	ND, PMTU				
	IPv6 Ping, IPv6 Telnet, IPv6 SSHv2, IPv6 domain name resolution				
Reliability	Hot patch, in-service patch upgrade				
Security	Hierarchical user management and password protection				
	SSHv2				
	SSL				
	Specific IP address based FTP logging and password mechanism				
	Prevent attack from ARP, unknown multicast packet, broadcast packet, unknown unicast packet, TTL=1 packet and protocol packet				
	Prevent Dos attack				
	IP＋MAC+PORT+VLAN binding				
	IEEE 802.1x				
	SAVI source address validity authentication				
	Radius, HWTACACS				

Features	S5008PV5-EI-S	S5016PV5-EI-S	S5024PV5-EI-S	S5024PV5-EI	S5048PV5-EI
	SNMPv3				
	Broadcast suppression				
	Prevent CPU attack				
System Management	Console/AUX Modem/Telnet/SSH2.0/CLI				
	Loading and upgrading through FTP/TFTP/Xmodem/SFTP				
	SNMP V1/V2c/V3				
	NTP				
	HTTP/HTTPS				
	System log				
	Cluster management				
	RFC 1213 MIB-2 Stands for Management Information Base				
Environment temperature	Operating temperature：-5℃~45℃				
	Storage temperature：-40℃~70℃				
Environment humidity	Operating humidity：5%~95% , non-condensing				
	Storage humidity：5%~95% , non-condensing				
Environment protection	China RoHs, EEE				
Power consumption	MIN: 6W MAX: 11W	MIN: 7W MAX: 16W	MIN: 11W MAX: 20W	MIN: 9W MAX: 23W	MIN: 18W MAX: 41W
Fan NUM	Fanless	Fanless	Fanless	Fanless	1
PoE+	-	-	-	-	-
MTBF(Year)	140.82	136.24	150.86	150.86	115.68
MTTR(Hour)	1	1	1	1	1
Weight	≤1.5kg	≤2kg	≤2.5kg	≤2.5kg	≤3.5kg
Input voltage range	AC: 100V～240V AC，50/60Hz；				
Dimensions (W × D x H)	266x160x43.6mm	330x230x43.6mm	294x179x43.6mm	440×160×43.6 mm	440×230×43.6 mm

Note: This content is applicable only to regions outside mainland China. H3C reserves the right to interpret the content.

Specifications (Continued)

Features	S5008PV5-EI-HPWR	S5016PV5-EI-PWR-S	S5024PV5-EI-PWR-S	S5024PV5-EI-HPWR	S5048PV5-EI-PWR
Switching capacity	20Gbps	36Gbps	52Gbps	56Gbps	104Gbps
Packet forwarding rate	15Mpps	27Mpps	39Mpps	42Mpps	78Mpps
Management port	1 console port				
10/100/1000 Base-T port	8	16	24	24	48
SFP port	2	2	2	4	4
Copper port features	Half-duplex, full-duplex, auto-negotiation				
	MDI/MDI-X				
Ethernet functions	LLDP				
	Static MAC configuration				
	MAC address learning limit (up to 8K)				
	Port mirror and flow mirror				
	Link aggregation (up to 8 ports per group)				
	Port isolation				
	STP/RSTP/MSTP				
	IEEE 802.3ad（Dynamic link aggregation）, static port aggregation				
VLAN	802.1Q (up to 4K VLAN)				
	Protocol-based VLAN				
	IP subnet based VLAN				
	MAC based VLAN				
	GUEST VLAN				
IP routing	Static routing				
DHCP	DHCP Relay				
	DHCP Client				
	DHCP Snooping				
	DHCP Snooping Option82				

Features	S5008PV5-EI-HPWR	S5016PV5-EI-PWR-S	S5024PV5-EI-PWR-S	S5024PV5-EI-HPWR	S5048PV5-EI-PWR
Broadcast	IGMP V1/V2/V3 Snooping				
QoS	Diff-Serv QoS				
	WRR/HQ-WRR				
	802.1p, DSCP priority mapping				
	Directional port speed limit				
ACL	ACL on layer 2, layer 3 and layer 4				
	ACL on IPv4, IPv6				
	VLAN ACL				
IPv6	IPv6 static routing, dual-stack				
	DHCPv6 Client, DHCPv6 Snooping				
	ND, PMTU				
	IPv6 Ping, IPv6 Telnet, IPv6 SSHv2, IPv6 domain name resolution				
Reliability	Hot patch, in-service patch upgrade				
Security	Hierarchical user management and password protection				
	SSHv2				
	SSL				
	Specific IP address based FTP logging and password mechanism				
	Prevent attack from ARP, unknown multicast packet, broadcast packet, unknown unicast packet, TTL=1 packet and protocol packet				
	Prevent Dos attack				
	IP + MAC+PORT+VLAN binding				
	IEEE 802.1x				
	SAVI source address validity authentication				
	Radius, HWTACACS				
	SNMPv3				
	Broadcast suppression				
	Prevent CPU attack				
System management	Console/AUX Modem/Telnet/SSH2.0/CLI				
	Loading and upgrading through FTP/TFTP/Xmodem/SFTP				
	SNMP V1/V2c/V3				

Features	S5008PV5-EI-HPWR	S5016PV5-EI-PWR-S	S5024PV5-EI-PWR-S	S5024PV5-EI-HPWR	S5048PV5-EI-PWR
	NTP				
	System log				
	Cluster management				
Environmet temperature	Operating temperature：-5℃~45℃				
	Storage temperature：-40℃~70℃				
Environment humidity	Operating humidity：5%~95%, non-condensing				
	Storage humidity：5%~95%, non-condensing				
Environment protection	RoHs, EEE				
Power consumption	MIN: 14W MAX: 156W	MIN: 10W MAX: 152W	MIN: 13W MAX: 158W	MIN: 19W MAX: 448W	MIN: 36W MAX: 467W
Fan NUM	Fanless	Fanless	Fanless	1	1
PoE+	125W	125W	125W	370w	370W
MTBF(Year)	117.08	86.01	87.06	52.81	50.19
MTTR(Hour)	1	1	1	1	1
Weight	≤3kg	≤2.5kg	≤2.5kg	≤6kg	≤6kg
Input voltage range	AC: 100V～240V AC，50/60Hz；				
Dimensions (W × D x H)	330×230 × 43.6mm	330x230x43.6mm	330x230x43.6mm	440×260× 43.6mm	440×400× 43.6mm

Performance Specification

Entries	S5008PV5-EI-S	S5016PV5-EI-S	S5024PV5-EI-S	S5024PV5-EI	S5048PV5-EI
MAC address entries	8192	8192	8192	8192	8192
VLAN table	4094	4094	4094	4094	4094
VLAN interface	32	32	32	32	32
IPv4 routing	512	512	512	512	512

Entries	S5008PV5-EI-S	S5016PV5-EI-S	S5024PV5-EI-S	S5024PV5-EI	S5048PV5-EI
entries					
IPv4 ARP entries	128	128	128	128	128
IPv4 ACL entries	256	256	256	256	256
IPv4 multicast L2 entries	1000	1000	1000	1000	1000
IPv6 unicast routing entries	16	16	16	16	16
QOS forward queues	8	8	8	8	8
IPv6 ACL entries	256	256	256	256	256
IPv6 ND entries	64	64	64	64	64
Jumbo frame length	10000	10000	10000	10000	10000
Max Stacking Members	4	4	4	9	9
Max Stacking Bandwidth	8G	8G	8G	16G	16G
MAX num in one link group	4	8	8	8	8
Link group num	124	124	124	124	124

Performance Specification (Continued)

Entries	S5008PV5-EI-HPWR	S5016PV5-EI-PWR-S	S5024PV5-EI-PWR-S	S5024PV5-EI-HPWR	S5048PV5-EI-PWR
MAC address entries	8192	8192	8192	8192	8192
VLAN table	4094	4094	4094	4094	4094
VLAN interface	32	32	32	32	32
IPv4 routing entries	512	512	512	512	512
IPv4 ARP entries	128	128	128	128	128
IPv4 ACL entries	256	256	256	256	256
IPv4 multicast L2 entries	1000	1000	1000	1000	1000
IPv6 unicast routing entries	16	16	16	16	16

Entries	S5008PV5-EI-HPWR	S5016PV5-EI-PWR-S	S5024PV5-EI-PWR-S	S5024PV5-EI-HPWR	S5048PV5-EI-PWR
QOS forward queues	8	8	8	8	8
IPv6 ACL entries	256	256	256	256	256
IPv6 ND entries	64	64	64	64	64
Jumbo frame length	10000	10000	10000	10000	10000
Max Stacking Bandwidth	16G	8G	8G	16G	16G
Max Stacking Members	9	4	4	9	9

PoE Power Capacity

Product Name	Total PoE power capacity	PoE Ports Quantity
S5008PV5-EI-HPWR	125W	15.4W (802.3af): 8 30W (802.3at): 4
S5016PV5-EI-PWR-S	125W	15.4W (802.3af): 8 30W (802.3at): 4
S5024PV5-EI-PWR-S	125W	15.4W (802.3af): 8 30W (802.3at): 4
S5024PV5-EI-HPWR	370W	15.4W (802.3af): 24 30W (802.3at): 12
S5048PV5-EI-PWR	370W	15.4W (802.3af): 24 30W (802.3at): 12

Ordering Information

Product ID	Product Description
LS-5008PV5-EI-S-GL	H3C S5008PV5-EI-S L2 Ethernet Switch with 8*10/100/1000BASE-T Ports and 2*1000BASE-X SFP Ports,(AC)
LS-5016PV5-EI-S-GL	H3C S5016PV5-EI-S L2 Ethernet Switch with 16*10/100/1000BASE-T Ports and 4*1000BASE-X SFP Ports,(AC)
LS-5024PV5-EI-S-GL	H3C S5024PV5-EI-S L2 Ethernet Switch with 24*10/100/1000BASE-T Ports and 2*1000BASE-X Ports,(AC)
LS-5024PV5-EI-GL	H3C S5024PV5-EI L2 Ethernet Switch with 24*10/100/1000BASE-T Ports and 4*1000BASE-X Ports,(AC)
LS-5048PV5-EI-GL	H3C S5048PV5-EI L2 Ethernet Switch with 48*10/100/1000BASE-T Ports and 4*1000BASE-X Ports,(AC)

Product ID	Product Description
LS-5008PV5-EI-HPWR-GL	H3C S5008PV5-EI-HPWR L2 Ethernet Switch with 8*10/100/1000BASE-T PoE+ Ports (AC 125W) and 2*1000BASE-X SFP Ports,(AC)
LS-5016PV5-EI-PWR-S-GL	H3C S5016PV5-EI-PWR-S L2 Ethernet Switch with 16*10/100/1000BASE-T PoE+ Ports (AC 125W) and 2*1000BASE-X SFP Ports,(AC)
LS-5024PV5-EI-PWR-S-GL	H3C S5024PV5-EI-PWR-S L2 Ethernet Switch with 16*10/100/1000BASE-T PoE+ Ports, 8*10/100/1000BASE-T Ports and 2*1000BASE-X Ports,(AC)
LS-5024PV5-EI-HPWR-GL	H3C S5024PV5-EI-HPWR L2 Ethernet Switch with 24*10/100/1000BASE-T PoE+ Ports (AC 370W) and 4*1000BASE-X SFP Ports,(AC)
LS-5048PV5-EI-PWR-GL	H3C S5048PV5-EI-PWR L2 Ethernet Switch with 48*10/100/1000BASE-T PoE+ Ports (AC 370W) and 4*1000BASE-X SFP Ports,(AC)
SFP-GE-LH80-SM1550	1000BASE-LH80 SFP Transceiver, Single Mode (1550nm, 80km, LC)
SFP-STACK-Kit	SFP Stacking Cable (150cm,including two 1000BASE-T SFP module and one stacking cable)
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-SX-MM850-A	1000BASE-SX SFP Transceiver, Multi-Mode (850nm, 550m, LC)
SFP-GE-LX-SM1310-BIDI	1000BASE-LX BIDI SFP Transceiver, Single Mode (TX1310/RX1490, 10km, LC)
SFP-GE-LX-SM1490-BIDI	1000BASE-LX BIDI SFP Transceiver, Single Mode (TX1490/RX1310, 10km, LC)
SFP-GE-T	SFP GE Copper Interface Transceiver Module (100m,RJ45)

The Leader in Digital Solutions

http://www.h3c.com