



H3C S5000NV6-EI Series Gigabit Managed Access Switches

Product overview

H3C S5000NV6-EI series is the latest development of Gigabit speed managed Ethernet switch that is especially for SMB (Small and Medium-Sized 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 S5000NV6-EI series switches include the following model:

S5000NV6-4T4N2NS-EI

4*10/100/1000BASE-T Ports, 4*1G/2.5G BASE-T Ports, and 2*1G/2.5G BASE-X SFP Ports,(AC)

S5000NV6-4P4UN2NS-EI

4*10/100/1000BASE-T PoE+ Ports, 4*1G/2.5G BASE-T PoE++ Ports, and 2*1G/2.5G BASE-X SFP Ports,(AC)

S5000NV6-12T4N4NS-EI

12*10/100/1000BASE-T Ports, 4*1G/2.5G BASE-T Ports, and 4*1G/2.5G BASE-X SFP Ports,(AC)

S5000NV6-12P4UN4NS-EI

12*10/100/1000BASE-T PoE+ Ports, 4*1G/2.5G BASE-T PoE++ Ports, and 4*1G/2.5G BASE-X SFP Ports,(AC)

S5000NV6-20T4N4NS-EI

20*10/100/1000BASE-T Ports, 4*1G/2.5G BASE-T Ports, and 4*1G/2.5G BASE-X SFP Ports,(AC)

S5000NV6-20P4UN4NS-EI

20*10/100/1000BASE-T PoE+ Ports, 4*1G/2.5G BASE-T PoE++ Ports, and 4*1G/2.5G BASE-X SFP Ports,(AC)

S5000NV6-48T4NS-EI

48*10/100/1000BASE-T Ports and 4*1G/2.5G BASE-X SFP Ports,(AC)

S5000NV6-48P4NS-EI

48*10/100/1000BASE-T PoE+ Ports and 4*1G/2.5G BASE-X SFP Ports,(AC)

Views

	
S5000NV6-4T4N2NS-EI	S5000NV6-4P4UN2NS-EI
	
S5000NV6-12T4N4NS-EI	S5000NV6-12P4UN4NS-EI
	
S5000NV6-20T4N4NS-EI	S5000NV6-20P4UN4NS-EI
	
S5000NV6-48T4NS-EI	S5000NV6-48P4NS-EI

Features and highlights

Multi-type Port Access

- Ethernet fiber port and copper port capability offers customers flexibility.
- Offers 8-port, 16-port, 24-port, 48-port access with 2.5G uplinks and all ports support line-rate forward.

- 8-port, 16-port, 24-port, 48-port PoE models provide 4-port 2.5G PoE++.
- Easy to install and use.

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 S5000NV6-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 S5000NV6-EI series switches are also compliant with material environmental protection and the EU RoHS safety standard.

Technical specifications

Hardware specifications

non-PoE models

S5000NV6-4T4N2NS-EI/S5000NV6-12T4N4NS-EI/S5000NV6-20T4N4NS-EI/S5000NV6-48T4NS-EI:

Item	S5000NV6-4T4N2NS-EI	S5000NV6-12T4N4NS-EI	S5000NV6-20T4N4NS-EI	S5000NV6-48T4NS-EI
Port switching capacity	38Gbps	64Gbps	80Gbps	116Gbps
Forwarding capacity	29Mpps	48Mpps	60Mpps	87Mpps
System switching capacity	232Gbps			
CPU	1.2GHz			
SDRAM	1G			
Flash	256MB			
Buffer	0.5MB	0.5MB	0.5MB	1MB
Dimensions(H x W x D)	43.6 × 266 × 160 mm	43.6 × 330 × 230 mm	43.6 × 440 × 160 mm	43.6 × 440 × 260 mm
Weight	≤ 1.1 kg	≤ 1.9 kg	≤ 2.0 kg	≤ 3.4 kg
10/100/1000 Base-T port	4	12	20	48
10/100/1000/2.5GBase-T port	4	4	4	-
SFP port(GE/2.5G)	4	4	4	4
Console port	1	1	1	1
Input voltage	Rated voltage range: 100 VAC to 240 VAC @ 50 Hz or 60 Hz Max voltage range: 90 VAC to 264 VAC @ 47 Hz to 63 Hz			
Power consumption (static) Data collection standard: no load	7 W	8 W	8 W	12 W
Power consumption (with typical configuration) Data collection standard: fully configured with DAC cables or twisted pair cables, 30% loaded	10 W	14 W	16 W	24 W
Power consumption (fully configured) Data collection standard: fully configured with transceiver modules or twisted pair cables, 100% loaded	12 W	16 W	19 W	27 W
Latency(64byte LIFO)	≤5μs			
Sound pressure level at 27°C (80.6°F)	NA	NA	NA	NA
Fan NUM	Fanless, passive cooling	Fanless, passive cooling	Fanless, passive cooling	1
Sound pressure level at 27°C (80.6°F)	NA	NA	NA	34.8 dB
MTBF(Year)	111	95	100	103
MTTR(Hour)	1	1	1	1

Item	S5000NV6-4T4N2NS-EI	S5000NV6-12T4N4NS-EI	S5000NV6-20T4N4NS-EI	S5000NV6-48T4NS-EI
Operating temperature	-5°C to +45°C (23°F to 113°F) Note: The maximum acceptable temperature decreases by 0.33°C (0.59°F) for every 100 m (328.08 ft) increase in altitude from 0 m (0 ft).			
Storage temperature	-40°C ~ +70°C			
Operating & storage humidity	5% RH to 95% RH, non-condensing			

PoE models

S5000NV6-4P4UN2NS-EI/S5000NV6-12P4UN4NS-EI/S5000NV6-20P4UN4NS-EI/S5000NV6-48P4NS-EI:

Item	S5000NV6-4P4UN2NS-EI	S5000NV6-12P4UN4NS-EI	S5000NV6-20P4UN4NS-EI	S5000NV6-48P4NS-EI
Port switching capacity	38Gbps	64Gbps	80Gbps	116Gbps
Forwarding capacity	29Mpps	48Mpps	60Mpps	87Mpps
System switching capacity	232Gbps			
CPU	1.2GHz			
SDRAM	1G			
Flash	256MB			
Buffer	0.5MB	0.5MB	0.5MB	1MB
Dimensions (H x W x D)	43.6 × 330 × 230 mm	43.6 × 440 × 260 mm	43.6 × 440 × 260 mm	43.6 × 440 × 260 mm
Weight	≤ 3.6 kg	≤ 4.2 kg	≤ 4.2 kg	≤ 4.1 kg
10/100/1000 Base-T port	4	12	20	48
10/100/1000/2.5GBase-T port	4	4	4	-
PoE	Ports 1 to 4: 35 W Ports 5 to 8: 100 W	Ports 1 to 12: 35 W Ports 13 to 16: 100 W	Ports 1 to 20: 35 W Ports 21 to 24: 100 W	35 W
SFP port(GE/2.5G)	4	4	4	4
Console port	1	1	1	1
Input voltage	Rated voltage range: 100 VAC to 240 VAC @ 50 Hz or 60 Hz Max voltage range: 90 VAC to 264 VAC @ 47 Hz to 63 Hz			
Power consumption (static) Data collection standard: no load	10 W	14 W	14 W	18 W
Power consumption (with typical configuration) Data collection standard: fully configured with DAC cables or twisted pair cables, 30% loaded	14 W	21 W	23 W	25 W

Item	S5000NV6-4P4UN2NS-EI	S5000NV6-12P4UN4NS-EI	S5000NV6-20P4UN4NS-EI	S5000NV6-48P4NS-EI
Power consumption (fully configured) Data collection standard: fully configured with transceiver modules or twisted pair cables, 100% loaded	158 W (PoE: 135 W)	299 W (PoE: 255 W)	492 W (PoE: 420 W)	492 W (PoE: 410 W)
Latency(64byte LIFO)	≤5μs			
Fan NUM	Fanless, passive cooling	1	2	2
Sound pressure level at 27°C (80.6°F)	NA	35.3 dB	35.9 dB	35.3 dB
MTBF(Year)	96	91	87	84
MTTR(Hour)	1	1	1	1
Operating temperature	-5°C to +45°C (23°F to 113°F) Note: The maximum acceptable temperature decreases by 0.33°C (0.59°F) for every 100 m (328.08 ft) increase in altitude from 0 m (0 ft).			
Storage temperature	-40°C ~ +70°C			
Operating & storage humidity	5% RH to 95% RH, non-condensing			

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

Software specifications

Item	S5000NV6-EI switch series
LAN	VLAN ID range 0 to 4095(Total 4096, 0 and 4095 are reserved) Access/Trunk/Hybrid VLAN Port-based VLAN MAC-based VLAN IP subnet-based VLAN Protocol-based VLAN IEEE 802.1P(CoS priority) Private VLAN Voice VLAN QinQ (802.1Q-in-802.1Q) Vlan mapping Static/Dynamic/Blackhole/Multiport unicast MAC MAC automatic learning and aging Port-based/VLAN-based MAC learning limit

Item	S5000NV6-EI switch series
	MAC filter Port isolation Loop detection MVRP (Multiple VLAN Registration Protocol) STP (Spanning tree protocol) RSTP (Rapid Spanning Tree Protocol) MSTP (Multiple Spanning Tree Protocol) PVST (Per-VLAN Spanning Tree) (compatible with PVST+/RPVST+/PVRST+) BPDU/root/loop/TC-BPDU/PVST BPDU/dispute loopback guard BPDU filter Role/TC-BPDU transmission restriction LLDP (Link Layer Discovery Protocol) and LLDP-MED Broadcast/multicast/unknown unicast storm constrain Jumbo frame
Ethernet link aggregation	Static aggregation Dynamic aggregation Port aggregation LACP (Link Aggregation Control Protocol) S-MLAG
IP services	Static/Dynamic/Gratuitous/proxy ARP ARP snooping/fast-reply/direct route advertisement/ping ARP attack detection DHCP (Dynamic Host Configuration Protocol) DHCP Server/relay agent/client/snooping DNS (Domain Name System) IRDP (ICMP Router Discovery Protocol) UDP helper ND (Neighbor Discovery) ND snooping/proxy/direct route advertisement/ping DHCPv6 Server/relay agent/client/snooping/guard HTTP redirect IPv4/IPv6 over IPv4 tunneling, and IPv4/IPv6 over IPv6 tunneling IPv4/IPv6 Fast Forwarding
Routing	Static routing
Forwarding	Hardware-based (ASIC) Wire-speed/Line-rate architecture Store-and-forward

Item	S5000NV6-EI switch series
Multicast	- PIM snooping - IGMP Snooping - IPv6 PIM snooping - MLD Snooping - Multicast VLAN
ACL/QoS	- ACL (Access Control List) - Advanced ACL - User-defined ACL - Ingress and Egress ACL - CAR - Diff-Serv QoS - Eight queues on a port - Flexible queue scheduling algorithms including SP, WRR, SP+WRR - Traffic shaping - Traffic redirecting - Time ranges - Traffic classification based on source MAC, destination MAC, source IP, destination IP, port, protocol, and VLAN
Security	- RBAC (Role-based access control) - AAA (Authentication, Authorization, and Accounting) - RADIUS (Remote Authentication Dial-In User Service) - TACACS (Terminal Access Controller Access Control System) - HWTACACS (HW Terminal Access Controller Access Control System) (Same authentication processes and implementations with TACACS+) 802.1X authentication - Portal authentication - MAC authentication - Web authentication - Triple authentication - Port security - SSH1.x and SSH2.0 (Secure Shell) - SSL (Secure Sockets Layer) - HTTP/HTTPs - Public Key Infrastructure (PKI) - Control Plane Protection (CoPP) - Secure Boot - Attack detection and prevention

Item	S5000NV6-EI switch series
	ARP protection Dynamic ARP Inspection (DAI) TCP attack prevention ARP attack protection ND attack protection MFF (MAC-forced forwarding) Hierarchical user management and password protection Basic and advanced ACLs for packet filtering
High availability	Ethernet OAM (IEEE 802.3ah) DLDP (Device Link Detection Protocol) ERPS (G.8032 Ethernet Ring Protection Switching) CPU protection Hot patching Link aggregation
Network management	Performance management through gRPC or NETCONF MDI/MDIX (medium-dependent interface/MDI crossover) NTP (Network Time Protocol) SNMPv1/SNMPv2c/SNMPv3 RMON (Remote Network Monitoring) and groups 1,2,3 and 9 Port mirroring SPAN (Switch Port Analyzer)/RSPAN (Remote SPAN) Flow mirroring sFlow Information center Multiple syslog server connection Fault alarm and automatic fault recovery System logs Alarming based on severity Debugging information output Device status monitoring mechanism, including the CPU engine, backplane, chips and other key components Configuration through CLI, Telnet, and console port Web-based configuration Cloud management WebSocket Loading and upgrading through XModem/FTP/TFTP/SFTP iMC network management system SmartMC (embedded Smart Graphical Management Center)(Member)

Item	S5000NV6-EI switch series
	No additional license required for switch software and hardware
EMC	ICES-003 CLASS A VCCI CLASS A CISPR 32 CLASS A EN 55032 CLASS A CISPR 35 AS/NZS CISPR 32 EN 55035 EN 61000-3-2 EN 61000-3-3 ETSI EN 300 386
Safety	CSA C22.2 No. 62368-1-14 IEC 62368-1 EN 62368-1 EN 60825-1 AS/NZS 62368-1 GB 4943.1
RoHS	EU RoHS2.0 Directive China RoHS 2.0

Performance specifications

Item	S5000NV6-EI series switches
MAC address entries	16K
VLAN table	4K
VLAN interface	16
Active VLAN	4K
IPv4 routing entries	64
IPv4 ARP entries	64(Static), 512(Dynamic)
IPv4 ACL entries	512
IPv4 multicast L2 entries	62
QOS forward queues	8
IPv6 unicast routing entries	64
IPv6 ND entries	256
IPv6 ACL entries	256

Item	S5000NV6-EI series switches
Jumbo frame length	9216
MAX num in one aggregation group	8
Aggregation group num	8
Group of RMON	4

Ordering information

Item	Description
LS-5000NV6-4T4N2NS-EI-GL	H3C S5000NV6-4T4N2NS-EI Ethernet Switch with 4*10/100/1000BASE-T Ports, 4*1G/2.5G BASE-T Ports, and 2*1G/2.5G BASE-X SFP Ports,(AC)
LS-5000NV6-4P4UN2NS-EI-GL	H3C S5000NV6-4P4UN2NS-EI Ethernet Switch with 4*10/100/1000BASE-T PoE+ Ports, 4*1G/2.5G BASE-T PoE++ Ports, and 2*1G/2.5G BASE-X SFP Ports,(AC)
LS-5000NV6-12T4N4NS-EI-GL	H3C S5000NV6-12T4N4NS-EI Ethernet Switch with 12*10/100/1000BASE-T Ports, 4*1G/2.5G BASE-T Ports, and 4*1G/2.5G BASE-X SFP Ports,(AC)
LS-5000NV6-12P4UN4NS-EI-GL	H3C S5000NV6-12P4UN4NS-EI Ethernet Switch with 12*10/100/1000BASE-T PoE+ Ports, 4*1G/2.5G BASE-T PoE++ Ports, and 4*1G/2.5G BASE-X SFP Ports,(AC)
LS-5000NV6-20T4N4NS-EI-GL	H3C S5000NV6-20T4N4NS-EI Ethernet Switch with 20*10/100/1000BASE-T Ports, 4*1G/2.5G BASE-T Ports, and 4*1G/2.5G BASE-X SFP Ports,(AC)
LS-5000NV6-20P4UN4NS-EI-GL	H3C S5000NV6-20P4UN4NS-EI Ethernet Switch with 20*10/100/1000BASE-T PoE+ Ports, 4*1G/2.5G BASE-T PoE++ Ports, and 4*1G/2.5G BASE-X SFP Ports,(AC)
LS-5000NV6-48T4NS-EI-GL	H3C S5000NV6-48T4NS-EI Ethernet Switch with 48*10/100/1000BASE-T Ports and 4*1G/2.5G BASE-X SFP Ports,(AC)
LS-5000NV6-48P4NS-EI-GL	H3C S5000NV6-48P4NS-EI Ethernet Switch with 48*10/100/1000BASE-T PoE+ Ports and 4*1G/2.5G BASE-X SFP Ports,(AC)

- For more information about transceiver please check 'Hardware Information and Specifications' in support website.

Datasheet history

Description	Location	Date



New H3C Technologies Co., Limited
Beijing Headquarters
Tower 1, LSH Center, 8 Guangshun South Street,
Chaoyang
District, Beijing, China
Zip: 100102
Hangzhou Headquarters
No.466 Changhe Road, Binjiang District, Hangzhou,
Zhejiang,
China Zip: 310052
Tel: +86-571-86760000
Fax: +86-571-86760001

Copyright ©2025 New H3C Technologies Co., Limited
Reserves all rights Disclaimer: Though H3C strives to
provide accurate information in this document, we
cannot guarantee that details do not contain any
technical error or printing error. Therefore, H3C cannot
accept responsibility for any inaccuracy in this
document. H3C reserves the right for the modification
of the contents herein without prior notification.

<https://www.h3c.com>