H3C S3100V3-EI Series FE&Gigabit Access Switches

Release Date: January 2022

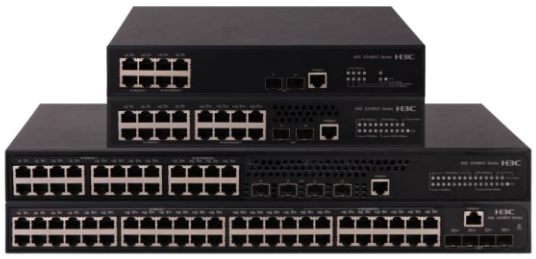
New H3C Technologies Co., Limited

Product Overview

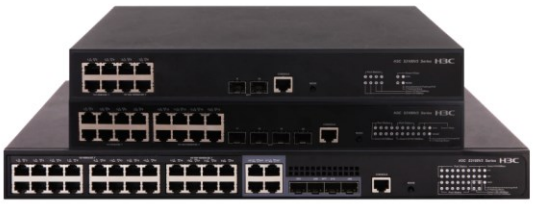
H3C S3100V3-EI Switch Series – A cost-effective, easy deployment and management access switching solution with fast or Giga PoE Ethernet ports that delivers entry level features for small-to-midsize businesses, which meet the requirements for SME access and enterprise desktop access.

H3C S3100V3-EI switch series include the following models:

- **S3100V3-10TP-EI**: 4 × 10/100BASE-TX ports, 4 × 10/100/1000BASE-T ports, 2 × 100/1000BASE-X SFP ports.
- **S3100V3-18TP-EI**: 8 × 10/100BASE-TX ports, 8 × 10/100/1000BASE-T ports, 2 × 100/1000BASE-X SFP ports.
- **S3100V3-18TP-EI-DC**: 8 × 10/100BASE-TX ports, 8 × 10/100/1000BASE-T ports, 2 × 100/1000BASE-X SFP ports.
- **S3100V3-28TP-EI**: 16 × 10/100BASE-TX ports, 8 × 10/100/1000BASE-T ports, 4 × 100/1000BASE-X SFP ports.
- **S3100V3-28TP-EI-DC**: 16 × 10/100BASE-TX ports, 8 × 10/100/1000BASE-T ports, 4 × 100/1000BASE-X SFP ports.
- **S3100V3-10TP-PWR-EI**: 4 × 10/100BASE-TX ports, 4 × 10/100/1000BASE-T ports, 2 × 100/1000BASE-X SFP ports.
- **S3100V3-20TP-PWR-EI**: 8 × 10/100BASE-TX ports, 8 × 10/100/1000BASE-T ports, 4 × 100/1000BASE-X SFP ports.
- **S3100V3-20TP-PWR-EI-DC**: 8 × 10/100BASE-TX ports, 8 × 10/100/1000BASE-T ports, 4 × 100/1000BASE-X SFP ports.
- **S3100V3-28TP-PWR-EI**: 16 × 10/100BASE-TX ports, 8 × 10/100/1000BASE-T ports, 4 × 100/1000BASE-X SFP(Combo) ports
- **S3100V3-52TP-EI**: 32 × 10/100BASE-TX ports, 16 × 10/100/1000BASE-T ports, 4 × 100/1000BASE-X SFP ports.



S3100V3-10TP-EI
S3100V3-18TP-EI
S3100V3-18TP-EI-DC
S3100V3-28TP-EI
S3100V3-28TP-EI-DC



S3100V3-10TP-PWR-EI
S3100V3-20TP-PWR-EI
S3100V3-20TP-PWR-EI-DC
S3100V3-28TP-PWR-EI
S3100V3-52TP-EI

Features and benefits

High Performance and Multiple Options

H3C S3100V3-EI switch series all ports support wire speed forwarding, with a minimum of four GE uplinks and two FE/GE SFP fiber ports onboard making flexible choices for customers.

Software Defined Network (SDN)

- Software Defined Network (SDN) is an innovative network architecture that simplifies network management and reduces maintenance complexity by separating network control layer and network forwarding layer through Openflow. More importantly, it implements flexible network flow control and provides a well-defined network platform for core network application and innovation.
- The S3100V3-EI switch series supports a large network flow table. Combined with H3C SDN controller, it can easily implement a two-layer network architecture and quickly add functions in existing network in order to drastically reduce network management complexity while substantially lowers network maintenance cost.

Intelligent Resilient Framework 2 (IRF2)

H3C S3100V3-EI switch series is pre-built with Intelligent Resilient Framework 2 (IRF2). IRF2 provides the following benefits:

- 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: 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 Gigabit Ethernet (1GE) ports which allocates bandwidth for business and application access and reasonably splits local traffic and upstream traffic. IRF2 rules not only able to obey 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 S3100V3-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 S3100V3-EI switch series support single-port multi-authentication unified deployment.
- The S3100V3-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 S3100V3-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 S3100V3-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.

Enhanced Manageability and Maintenance

- The H3C S3100V3-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, and with SSH 2.0 encryption, switch management security is enhanced.
- The S3100V3-EI switch series supports RSPAN mirroring, access ports traffic can be mirrored to core switches to carry out corresponding management, maintenance measures, and traffic of network services and applications is visible.
- The S3100V3-EI switch series supports VCT (Virtual Cable Test) function to locate network failure point

quickly. It also supports DLDP (Device Link Detection Protocol) technology to detect unidirectional links, which can automatically shut down the faulty port to avoid network problems.

Abundant Service Capabilities

- H3C S3100V3-EI switch series supports 802.3af/802.3at PoE function, provides maximum power of 30w per port for connected devices, such as IP phones, wireless APs, and high power cameras.
- H3C S3100V3-EI switch series supports flexible queue scheduling algorithms based on ports and queues, including strict priority (SP), weighted round Robin (WRR) and SP+WRR.
- H3C S3100V3-EI switch series supports abundant IPv6 management features, including IPv6 unicast address configuration, ICMPv6, IPv6 ND, IPv6-TCP, IPv6-TFTP, IPv6- Tracert. It also supports IPv6 functions, including IPv6 A CL, QoS, multicast and more.

Hardware Specifications

Feature	S3100V3-10TP-EI	S3100V3-18TP-EI	S3100V3-28TP-EI	S3100V3-52TP-EI	S3100V3-10TP-PWR-EI
Port Switching capacity	12.8Gbps	21.6Gbps	27.2Gbps	46.4Gbps	12.8Gbps
Box Switching capacity	128Gbps				
Packet forwarding rate	9.6 Mpps	16.2 Mpps	20.4 Mpps	34.8 Mpps	9.6Mpps
Dimensions (H × W × D)	43.6 × 266 × 161 mm	43.6 × 266 × 161 mm	43.6 × 440 × 160 mm	43.6 × 440 × 230 mm	43.6 × 330 × 230 mm
Weight	≤ 1.5 kg	≤ 1.5 kg	≤ 2.5 kg	≤ 3.5 kg	≤3 kg
10/100Base-TX port	4	8	16	32	4
10/100/1000Base-T port	4	8	8	16	4
SFP port	2	2	4	4	2
Input voltage range	AC input (not supported by the S3100V3-18TP-EI-DC switch/ S3100V3-28TP-EI-DC switch/ S3100V3-20TP-PWR-EI-DC switch) - Rated voltage: 100 VAC to 240 VAC @ 50 or 60 Hz - Max voltage: 90 VAC to 264 VAC @ 47 to 63 Hz DC input from a –48 VDC power source in the equipment room or an H3C RPS1600-A (supported only by the S3100V3-18TP-EI-DC switch/ S3100V3-28TP-EI-DC switch/ S3100V3-20TP-PWR-EI-DC switch) - Rated voltage: –48 VDC to –60 VDC - Max voltage: –36 VDC to –72 VDC				

Flash/SDRAM	256MB/512MB				
Power consumption (Idle)	7 W	9 W	11 W	20 W	13 W
Power consumption (full configuration)	11 W	16 W	19 W	33 W	150W (including 125w PoE)
Heat dissipation	No fan, natural cooling	No fan, natural cooling	No fan, natural cooling	Fixed fan	No fan, natural cooling
Operating temperature	0ºC to 45ºC (32°F to 113°F)				
Operating humidity	10% RH to 90% RH, non-condensing				

Hardware Specifications (continued)

Item	**S3100V3-18TP-EI-DC**	**S3100V3-20TP-PWR-EI-DC**	**S3100V3-28TP-EI-DC**	**S3100V3-20TP-PWR-EI**	**S3100V3-28TP-PWR-EI**
Port Switching capacity	21.6Gbps	25.6Gbps	27.2Gbps	25.6Gbps	27.2Gbps
Box Switching capacity	128Gbps				
Packet forwarding rate	16.2Mpps	19.2Mpps	20.4Mpps	19.2Mpps	20.4Mpps
Dimensions (H × W × D)	43.6 × 266 × 161 mm	43.6 × 330 × 230 mm	43.6 × 440 × 160 mm	43.6 × 330 × 230 mm	43.6 × 440 × 260 mm
Weight	≤ 1.5 kg	≤2.5 kg	≤ 2.5 kg	≤3 kg	≤4.5 kg
10/100Base-TX port	8	8	16	8	16
10/100/1000Base-T port	8	8	8	8	12
SFP port	2	4	4	4	4 (Combo)
Input voltage range	AC input (not supported by the S3100V3-18TP-EI-DC switch/ S3100V3-28TP-EI-DC switch/ S3100V3-20TP-PWR-EI-DC switch) - Rated voltage: 100 VAC to 240 VAC @ 50 or 60 Hz - Max voltage: 90 VAC to 264 VAC @ 47 to 63 Hz H3C RPS1600-A input (supported only by an S3100V3-28TP-PWR-EI switch) - Rated voltage: –54 VDC to –57 VDC - Max voltage: Single DC input: –44 VDC to –60 VDC AC and DC inputs: –54 VDC to –57 VDC				

	DC input from a –48 VDC power source in the equipment room or an H3C RPS1600-A (supported only by the S3100V3-18TP-EI-DC switch/ S3100V3-28TP-EI-DC switch/ S3100V3-20TP-PWR-EI-DC switch) - Rated voltage: –48 VDC to –60 VDC - Max voltage: –36 VDC to –72 VDC				
Flash/SDRAM	256MB/512MB				
Power consumption (Idle)	19 W	21 W	20 W	18 W	26 W
Power consumption (full configuration)	25 W	220 W (including 185w PoE)	27 W	220W (including 170w PoE)	439W (including 370w PoE)
Heat dissipation	Fixed fan	Fixed fan	Fixed fan	Fixed fan	Fixed fan
Operating temperature	0ºC to 45ºC (32°F to 113°F) -60m-5000m altitude: From 0m, the maximum operating temperature reduce by 0.33℃ for every time 100 the altitude increases by 100m.				
Operating humidity	10% RH to 90% RH, non-condensing				

Software Specifications

Features	S3100V3-EI switch series
Port aggregation	GE 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	10000bytes
MAC address table	16K MAC address entries Static MAC address Blackhole MAC address
VLAN	Port-based VLAN (up to 4094 VLANs) MAC-based VLAN Protocol-based VLAN QinQ and selective QinQ VLAN mapping Voice VLAN

	MVRP
DHCP	DHCP Client DHCP Snooping DHCP Snooping option82 DHCP Relay DHCP Server DHCP auto-config
IP routing	1K IPV4 routing entries Static routing RIPv1/v2 and RIPng OSPFv1/v2 and OSPFv3
Multicast	IGMP Snooping v1/v2/v3 MLD Snooping v1/v2 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
IEEE	IEEE 802.3x

	IEEE 802.3ad IEEE 802.3af IEEE 802.3at IEEE 802.3bz IEEE 802.1p IEEE 802.1x IEEE 802.1q IEEE 802.1d IEEE 802.1w IEEE 802.1s
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 CLASS A CISPR 32 CLASS A EN 55032 CLASS A AS/NZS CISPR32 CLASS A CISPR 24 EN 55024 EN 61000-3-2 EN 61000-3-3 ETSI EN 300 386 for telecommunications center installations GB/T 9254 YD/T 993 ETSI EN 300 386
Safety	UL 60950-1 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-3100V3-10TP-EI-GL	H3C S3100V3-10TP-EI L2 Ethernet Switch with 4*10/100BASE-T Ports, 4*10/100/1000BASE-T Ports, and 2*1000BASE-X SFP Ports,(AC)
LS-3100V3-18TP-EI-GL	H3C S3100V3-18TP-EI L2 Ethernet Switch with 8*10/100BASE-T Ports, 8*10/100/1000BASE-T Ports, and 2*1000BASE-X SFP Ports,(AC)
LS-3100V3-28TP-EI-GL	H3C S3100V3-28TP-EI L2 Ethernet Switch with 16*10/100BASE-T Ports, 8*10/100/1000BASE-T Ports, and 4*1000BASE-X SFP Ports,(AC)
LS-3100V3-10TP-PWR-EI-GL	H3C S3100V3-10TP-PWR-EI L2 Ethernet Switch with 4*10/100BASE-T PoE+ Ports, 4*10/100/1000BASE-T PoE+ Ports(AC 125W), and 2*1000BASE-X SFP Ports,(AC)
LS-3100V3-20TP-PWR-EI-GL	H3C S3100V3-20TP-PWR-EI L2 Ethernet Switch with 8*10/100BASE-T PoE+ Ports, 8*10/100/1000BASE-T PoE+ Ports(AC 185W), and 4*1000BASE-X SFP Ports,(AC)
LS-3100V3-28TP-PWR-EI-GL	H3C S3100V3-28TP-PWR-EI L2 Ethernet Switch with 16*10/100BASE-T PoE+ Ports, 8*10/100/1000BASE-T PoE+ Ports(AC 370W,DC 740W),4*GE Combo Ports,and 4*1000BASE-X Ports,(AC/DC)
LS-3100V3-52TP-EI-GL	H3C S3100V3-52TP-EI L2 Ethernet Switch with 32*10/100BASE-T Ports, 16*10/100/1000BASE-T Ports, and 4*1000BASE-X SFP Ports,(AC)
LS-3100V3-18TP-EI-DC-GL	H3C S3100V3-18TP-EI-DC L2 Ethernet Switch with 8*10/100BASE-T Ports, 8*10/100/1000BASE-T Ports, and 2*1000BASE-X SFP Ports,(DC)
LS-3100V3-20TP-PWR-EI-DC-GL	H3C S3100V3-20TP-PWR-EI-DC L2 Ethernet Switch with 8*10/100BASE-T PoE+ Ports, 8*10/100/1000BASE-T PoE+ Ports, and 4*1000BASE-X SFP Ports,(DC)
LS-3100V3-28TP-EI-DC-GL	H3C S3100V3-28TP-EI-DC L2 Ethernet Switch with 16*10/100BASE-T PoE+ Ports, 8*10/100/1000BASE-T PoE+ Ports,4*GE Combo Ports, and 4*1000BASE-X Ports, (DC)
RPS1600-A-GL	H3C RPS1600-A Redundant Power System
AD162M56-1M1A-GL	Power Supply Unit with 800W (AC 110V) or 1600W (AC 220V) (optional)
CAB-RPS PoE-2m-JD5	Cable A with JD5 type connector (optional)
CAB-RPS Non PoE-2m-JD5-A	Cable with JD5-A type connector for Non-PoE switches (optional),2*2mm^2
CAB-RPS Non PoE-2m-JD5	Cable B with JD5 type connector (optional),2*2mm^2
CAB-CON-1.8m	Single Cable,Console Serial Port Cable,1.8m,D9F,28UL20276(4P)(P296U),MPH-8P8C
SOHO-SWITCH-FL-01	11 Inch Chassis Mount Angle Component,SOHO/Low-End Access,Network Terminal Shared
SOHO-SWITCH-FL-02	13 Inch Chassis Mount Angle Component,SOHO/Low-End Access,Network Terminal Shared
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-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-STACK-Kit	SFP Stacking Cable (150cm,including two 1000BASE-T SFP module and one stacking cable)

The Leader in Digital Solutions

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