H3C S1850V2-X Layer 2 Gigabit Access Switch Series

Release Date: April, 2024

New H3C Technologies Co., Limited

H3C S1850V2-X Layer 2 Gigabit Access Switch Series Product Overview

H3C S1850V2-X series Ethernet switch is the layer 2 Gigabit access switch developed and designed by New H3C Technologies Co., Ltd. (H3C) especially for meeting high-performance network requirements. Based on the high-performance access, it offers abundant security access policies and enhanced network manageability and maintenance. This makes it ideal for diversified network building scenarios, including government, small and medium-sized enterprises, general and vocational education, security monitoring, and hotels.

H3C S1850V2-X Ethernet switch series includes the following models:

- S1850V2-28X: 24*10/100/1000TX + 4*SFP Plus

- S1850V2-28X-HPWR: 24*10/100/1000TX + 4*SFP Plus

- S1850V2-52X: 48*10/100/1000TX + 4*SFP Plus

- S1850V2-52X-PWR: 48*10/100/1000TX + 4*SFP Plus

S1850V2-28X

S1850V2-28X-HPWR

S1850V2-52X

S1850V2-52X-PWR

Product features

Multi-type port access

H3C S1850V2-X switch series comes with standard Gigabit copper ports and Ten-Gigabit optical ports, making it a good fit for complex network environments and network expansion.

Simplified Web management

H3C S1850V2-X switch series provides convenient and intelligent Web management with visual port configuration and easy-to-operate pages.

Abundant features

H3C S1850V2-X switch series supports abundant software features such as VLAN division, 802.3x, link aggregation, and IGMP Snooping.

High reliability

H3C S1850V2-X switch series supports STP/RSTP/MSTP link protection, built-in loopback test, cable detection, and remote loopback detection.

Comprehensive security control policies

H3C S1850V2-X switch series supports DoS attack detection, ARP anti-attack, TCP attack defense, and port security functions.

Green and energy-saving design

H3C S1850V2-X switch series implements the built-in intelligent port speed limit and energy-saving hibernation functions, and the whole device adopts various green energy-saving designs. It is also compliant with the EU RoHS standard for material environmental protection and safety.

The S1850V2-28X switch is fan-less design, significantly reduce device power consumption and noise.

Power over Ethernet (PoE+)

The PWR model of H3C S1850V2-X switch series supports enhanced power over Ethernet (PoE+) with a maximum power supply of 370W for the whole device and a maximum output power of 30W for a single port.

Hardware Specifications

Feature	S1850V2-28X	S1850V2-52X	S1850V2-28X-HPWR	S1850V2-52X-PWR
Switching capacity	128Gbps	176Gbps	128Gbps	176Gbps
Forwarding capacity	95.232Mpps	130.952Mpps	95.232Mpps	130.952Mpps
CPU	1 Core, 800MHz			
Flash/SDRAM	256MB/512MB			
Dimensions (W × D × H)	440×160×43.6mm	440×230×43.6mm	440×260×43.6mm	440×400×43.6mm
Weight	≤ 2.5 kg	≤ 3.5 kg	≤ 6 kg	≤ 6 kg
Management port	1 console port			
Networking interface	24 10/100/1000Base-T electrical ports 4 1G/10G Base-X SFP Plus optical port	48 10/100/1000Base-T electrical ports 4 1G/10G Base-X SFP Plus optical port	24 10/100/1000Base-T electrical ports 4 1G/10G Base-X SFP Plus optical port	48 10/100/1000Base-T electrical ports 4 1G/10G Base-X SFP Plus optical port
Port Surge	6KV	6KV	6KV	6KV
Input voltage	AC: The rated voltage range is 100V to 240V, 50/60Hz.			
Total power consumption	MIN: AC: 10W MAX: AC: 24W	MIN: AC: 19W MAX: AC: 44W	MIN: AC: 19W MAX: AC: 448W (PoE 370W)	MIN: AC: 36W MAX: AC: 467W (PoE 370W)
Fan number	Fan-less	1	3	3
MTBF(Year)	150.86	115.68	52.81	50.19
MTTR(Hour)	1	1	1	1
Operating temperature	-5℃ ~ 50℃(normal operating temperature) -5℃ ~ 45℃(When using transceiver modules with maximum transmission distance < 80km) -5℃ ~ 40℃(When using transceiver modules with maximum transmission distance ≥ 80km)			
Storage temperature	-40℃ ~ 70℃			

Feature	S1850V2-28X	S1850V2-52X	S1850V2-28X-HPWR	S1850V2-52X-PWR
Relative humidity (non-condensing)	5% RH to 95% RH, non-condensing			

Software Specifications

Feature	S1850V2-X switch series
Port aggregation	GE/10GE port aggregation Dynamic aggregation Static 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
Ethernet features	802.3x traffic control and half-duplex backpressure Green Ethernet (EEE) Automatic port energy-saving
MAC address table	Static MAC address Blackhole MAC address Setting the maximum number of port MAC addresses to be learned
VLAN	Port-based VLAN MAC-based VLAN VLAN mapping MVRP Voice VLAN*
DHCP	DHCP Client DHCP Snooping DHCP Snooping option82 DHCP Relay DHCP auto-config
VLAN interface	Both IPv4 and IPv6 supported
ARP	ARP Detection ARP speed limit
IP routing	Static routing
Multicast	IGMP Snooping V2/V3 PIM Snooping MLD Snooping Multicast VLAN

Feature	S1850V2-X switch series
Layer 2 ring network protocol	STP/RSTP/MSTP/PVST/PVST+ BPDU protection/root protection/loopback protection/protection against TC-BPDU attack
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
Traffic Statistic	Sflow
Forwarding	Wire-speed/Line-rate architecture
Mirroring	Port mirroring Traffic 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/Port/MAC binding IP Source Guard HTTPs

Feature	S1850V2-X switch series
Management and maintenance	Loading and upgrading through XModem/FTP/TFTP
	Zero Touch Provisioning
	Configuration through CLI, Telnet, and console port
	SNMPv1/v2c/v3 and Web-based NMS
	Restful
	Remote monitoring (RMON) alarm, event, and history recording
	IMC NMS
	System log, alarming based on severities, and output of debugging information
	NTP
	Ping, Tracert
	NQA
	Virtual cable test (VCT)
	Device link detection protocol (DLDP)
	Loopback-detection

*Voice VLAN is supported since R6351P06.

Performance Specification

Entries	S1850V2-28X, S1850V2-28X-HPWR, S1850V2-52X, S1850V2-52X-PWR
MAC address entries	16K
Static Mac address	1K
VLAN table	4094
VLAN interface	32
IPv4 routing entries	32
IPv4 ARP entries	128
IPv4 ACL entries	512
IPv4 multicast L2 entries	1000
IPv6 unicast routing entries	16
QOS forward queues	8
IPv6 ACL entries	256
IPv6 ND entries	64
Jumbo frame length	10000
MAX num in one link group	8
Link group num	24

PoE Power Capacity

Product Name	Total PoE power capacity	PoE Ports Quantity
S1850V2-28X-HPWR	370W	15.4W (802.3af): 24 30W (802.3at): 12
S1850V2-52X-PWR	370W	15.4W (802.3af): 24 30W (802.3at): 12

Standards and Protocols Compliance

Organization	Standards And Protocols
IEEE	802.1x Port based network access control protocol
	802.1ab Link Layer Discovery Protocol
	802.1ak MVRP and MRP
	802.1ax Link Aggregation
	802.1d Media Access Control Bridges
	802.1p Priority
	802.1q VLANs
	802.1s Multiple Spanning Trees
	802.1ag Connectivity Fault Management
	802.1v VLAN classification by Protocol and Port
	802.1w Rapid Reconfiguration of Spanning Tree
	802.3ad Link Aggregation Control Protocol
	802.3af Power over Ethernet
	802.3at Power over Ethernet
	802.3az Energy Efficient Ethernet
	802.3ah Ethernet in the First Mile
	802.3x Full Duplex and flow control
	802.3u 100BASE-T
	802.3ab 1000BASE-T
	802.3z 1000BASE-X
IETF	RFC 768 User Datagram Protocol (UDP)
	RFC 791 Internet Protocol (IP)
	RFC 792 Internet Control Message Protocol (ICMP)
	RFC 793 Transmission Control Protocol (TCP)
	RFC 813 Window and Acknowledgement Strategy in TCP
	RFC 815 IP datagram reassembly algorithms
	RFC 8201 Path MTU Discovery for IP version 6
	RFC 826 Address Resolution Protocol (ARP)

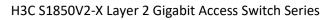| Organization	Standards And Protocols
	RFC 879 TCP maximum segment size and related topics
	RFC 896 Congestion control in IP/TCP internetworks
	RFC 917 Internet subnets
	RFC 919 Broadcasting Internet Datagrams
	RFC 922 Broadcasting Internet Datagrams in the Presence of Subnets (IP_BROAD)
	RFC 951 BOOTP
	RFC 1027 Proxy ARP
	RFC 1122 Requirements for Internet Hosts - Communications Layers
	RFC 1213 MIB-2 Stands for Management Information Base
	RFC 1215 Convention for defining traps for use with the SNMP
	RFC 1256 ICMP Router Discovery Messages
	RFC 1350 TFTP Protocol (revision 2)
	RFC 1393 Traceroute Using an IP Option
	RFC 1519 Classless Inter-Domain Routing (CIDR)
	RFC 1542 BOOTP Extensions
	RFC 1591 Domain Name System Structure and Delegation
	RFC 1757 Remote Network Monitoring Management Information Base
	RFC 1812 Requirements for IP Version 4 Router
	RFC 1918 Address Allocation for Private Internet
	RFC 2131 Dynamic Host Configuration Protocol (DHCP)
	RFC 2132 DHCP Options and BOOTP Vendor Extensions
	RFC 2273 SNMPv3 Applications
	RFC 2375 IPv6 Multicast Address Assignments
	RFC 2401 Security Architecture for the Internet Protocol
	RFC 2402 IP Authentication Header
	RFC 2460 Internet Protocol, Version 6 (IPv6) Specification
	RFC 2464 Transmission of IPv6 over Ethernet Networks
	RFC 2576 (Coexistence between SNMP V1, V2, V3)
	RFC 2579 Textual Conventions for SMIv2
	RFC 2580 Conformance Statements for SMIv2
	RFC 2711 IPv6 Router Alert Option
	RFC 2925 Definitions of Managed Objects for Remote Ping, Traceroute, and Lookup Operations
	RFC 3046 DHCP Relay Agent Information Option
	RFC 3056 Connection of IPv6 Domains via IPv4 Clouds

Organization	Standards And Protocols
	RFC 3416 (SNMP Protocol Operations v2)
	RFC 3417 (SNMP Transport Mappings)
	RFC 3418 Management Information Base (MIB) for the Simple Network Management Protocol (SNMP)
	RFC 3484 Default Address Selection for IPv6
	RFC 3580 IEEE 802.1X Remote Authentication Dial In User Service (RADIUS) Usage Guidelines
	RFC 4022 MIB for TCP
	RFC 4113 MIB for UDP
	RFC 4213 Basic Transition Mechanisms for IPv6 Hosts and Routers
	RFC 4251 The Secure Shell (SSH) Protocol
	RFC 4252 SSHv6 Authentication
	RFC 4253 SSHv6 Transport Layer
	RFC 4254 SSHv6 Connection
	RFC 4291 IP Version 6 Addressing Architecture
	RFC 4292 IP Forwarding Table MIB
	RFC 4293 Management Information Base for the Internet Protocol (IP)
	RFC 4419 Key Exchange for SSH
	RFC 4443 ICMPv6
	RFC 4541 IGMP & MLD Snooping Switch
	RFC 4861 IPv6 Neighbor Discovery
	RFC 4862 IPv6 Stateless Address Auto-configuration
	RFC 5095 Deprecation of Type 0 Routing Headers in IPv6
	RFC 5424 Syslog Protocol
	RFC 5880 Bidirectional Forwarding Detection
	RFC 5905 Network Time Protocol Version 4: Protocol and Algorithms Specification
	RFC 6620 FCFS SAVI
	RFC 5381 Experience of Implementing NETCONF over SOAP
ITU	ITU-T Y.1731
	ITU-T Rec G.8032/Y.1344 Mar. 2010

Ordering information

H3C S1850V2 switch series ordering list

Product ID	Product Description
LS-1850V2-28X-GL	H3C S1850V2-28X L2 Ethernet Switch with 24*10/100/1000BASE-T Ports and 4*1G/10G BASE-X SFP Plus Ports,(AC)
LS-1850V2-28X-HPWR-GL	H3C S1850V2-28X-HPWR L2 Ethernet Switch with 24*10/100/1000BASE-T PoE+ Ports (AC 370W) and 4*1G/10G BASE-X SFP Plus Ports,(AC)

Product ID	Product Description
LS-1850V2-52X-GL	H3C S1850V2-52X L2 Ethernet Switch with 48*10/100/1000BASE-T Ports and 4*1G/10G BASE-X SFP Plus Ports,(AC)
LS-1850V2-52X-PWR-GL	H3C S1850V2-52X-PWR L2 Ethernet Switch with 48*10/100/1000BASE-T PoE+ Ports and 4*1G/10G BASE-X SFP Plus Ports,(AC)
Transceivers	
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-T	SFP GE Copper Interface Transceiver Module (100m,RJ45)
SFP-XG-SX-MM850-E	SFP+ Module(850nm,300m,LC)
SFP-XG-LX-SM1310	SFP+ Module(1310nm,10km,LC)
Cable	
LSWM1STK	SFP+ Cable 0.65m
LSWM2STK	SFP+ Cable 1.2m
LSWM3STK	SFP+ Cable 3m
LSTM1STK	SFP+ Cable 5m

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

http://www.h3c.com