H3C S1850V2-EI Layer 2 Gigabit Access Switch Series

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New H3C Technologies Co., Limited

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Product Overview

H3C S1850V2-EI series Ethernet switch is the layer 2 Gigabit access switch with GE up-link ports, it is 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-EI Ethernet switch series includes the following models:

- S1850V2-10P-EI: 8*10/100/1000TX + 2*SFP
- S1850V2-28P-EI: 24*10/100/1000TX + 4*SFP
- S1850V2-28P-HPWR-EI: 24*10/100/1000TX + 4*SFP
- S1850V2-52P-EI: 48*10/100/1000TX + 4*SFP
- S1850V2-10P-HPWR-EI: 8*10/100/1000TX + 2*SFP

S1850V2-10P-EI

S1850V2-28P-EI

S1850V2-52P-EI

S1850V2-28P-HPWR-EI

S1850V2-10P-HPWR-EI

Product features

Multi-type port access

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

Simplified Web management

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

Abundant features

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

High reliability

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

Comprehensive security control policies

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

Green and energy-saving design

H3C S1850V2-EI 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 S1850V2-10P-EI, S1850V2-10P-HPWR-EI and S1850V2-28P-EI switches are fan-less design, significantly reduce devices power consumption and noise.

Power over Ethernet (PoE+)

The PWR model of H3C S1850V2-EI 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	S1850V2-10P-EI	S1850V2-28P-EI	S1850V2-52P-EI	S1850V2-28P-HPWR-EI	S1850V2-10P-HPWR-EI
Switching capacity	20 Gbps	56 Gbps	104 Gbps	56 Gbps	20 Gbps
Forwarding capacity	15Mpps	42 Mpps	78 Mpps	42 Mpps	15Mpps
CPU	1 Core, 800MHz				
Flash/SDRAM	256MB/512MB				
Dimensions (W × D × H)	266×161×43.6mm	440×160×43.6mm	440×230×43.6mm	440×260×43.6mm	330×230×43.6mm
Weight	≤ 1.5 kg	≤ 2.5 kg	≤ 3.5 kg	≤ 6 kg	≤ 3 kg
Management port	1 console port				
Networking interface	8 10/100/1000Base-T electrical ports 2 1000Base-X SFP optical port	24 10/100/1000Base-T electrical ports 4 1000Base-X SFP optical port	48 10/100/1000Base-T electrical ports 4 1000Base-X SFP optical port	24 10/100/1000Base-T electrical ports 4 1000Base-X SFP optical port	8 10/100/1000Base-T electrical ports 2 1000Base-X SFP optical port
Port Surge	6KV	6KV	6KV	6KV	6KV

Feature	S1850V2-10P-EI	S1850V2-28P-EI	S1850V2-52P-EI	S1850V2-28P-HPWR-EI	S1850V2-10P-HPWR-EI
Input voltage	AC: The rated voltage range is 100V to 240V, 50/60Hz.				
Total power consumption	MIN: AC: 8W MAX: AC: 15W	MIN: AC: 9W MAX: AC: 23W	MIN: AC: 18W MAX: AC: 41W	MIN: AC: 19W MAX: AC: 448W (PoE 370W)	MIN: AC: 14W MAX: AC: 156W (PoE 125W)
Fan number	Fan-less	Fan-less	1	1	Fan-less
MTBF(Year)	140.82	150.86	115.68	52.81	117.08
MTTR(Hour)	1	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℃				
Relative humidity (non-condensing)	5% RH to 95% RH, non-condensing				

Software Specifications

Feature	S1850V2-EI switch series
Port aggregation	GE 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*

Feature	S1850V2-EI switch series
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
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

Feature	S1850V2-EI switch series
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
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	S1850V2-10P-EI, S1850V2-10P-HPWR-EI,	S1850V2-52P-EI	S1850V2-28P-EI, S1850V2-28P-HPWR-EI
MAC address entries	16K	8K	8K
Static Mac address	1K		
VLAN table	4094		
VLAN interface	32		
IPv4 routing entries	32	32	32
IPv4 ARP entries	128		
IPv4 ACL entries	512	512	256

Entries	S1850V2-10P-EI, S1850V2-10P-HPWR-EI,	S1850V2-52P-EI	S1850V2-28P-EI, S1850V2-28P-HPWR-EI
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
S1850V2-28P-HPWR-EI	370W	15.4W (802.3af): 24 30W (802.3at): 12
S1850V2-10P-HPWR-EI	125W	15.4W (802.3af): 8 30W (802.3at): 4

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

Organization	Standards And Protocols
	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)
	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

Organization	Standards And Protocols
	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
	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

Organization	Standards And Protocols
	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-1850V2-10P-EI-GL	H3C S1850V2-10P-EI L2 Ethernet Switch with 8*10/100/1000BASE-T Ports and 2*1000BASE-X SFP Ports,(AC)
LS-1850V2-28P-EI-GL	H3C S1850V2-28P-EI L2 Ethernet Switch with 24*10/100/1000BASE-T Ports and 4*1000BASE-X SFP Ports,(AC)
LS-1850V2-28P-HPWR-EI-GL	H3C S1850V2-28P-HPWR-EI L2 Ethernet Switch with 24*10/100/1000BASE-T PoE+ Ports (AC 370W) and 4*1000BASE-X SFP Ports,(AC)
LS-1850V2-52P-EI-GL	H3C S1850V2-52P-EI L2 Ethernet Switch with 48*10/100/1000BASE-T Ports and 4*1000BASE-X SFP Ports,(AC)
LS-1850V2-10P-HPWR-EI-GL	H3C S1850V2-10P-HPWR-EI L2 Ethernet Switch with 8*10/100/1000BASE-T PoE+ Ports (AC 125W) and 2*1000BASE-X SFP 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)

The Leader in Digital Solutions

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