DATASHEET

H3C S1850 Gigabit WEB Managed Switch Series

Product overview

H3C 1850 Switch Series consists of advanced smart-managed fixed-configuration Gigabit switches designed for small businesses in an easy-to-administer solution. By utilizing the latest design in silicon technology, this series is one of the most power efficient in the market.

S1850 series has 4 models: three non-PoE models and one PoE+ model. All models are equipped with additional Gigabit SFP ports for fiber connectivity.

The series is part of the portfolio of H3C small business networking products. These switches provide a great value, and includes features to satisfy even the most advanced small business networks. All models support rack mounting or desktop operation. Customizable features include basic Layer 2 features like VLANs and link aggregation, as well as advanced features such as Layer 3 static routing, IPv6, ACLs, and Spanning Tree Protocols.

S1850-10P

S1850-28P

S1850-28P-PWR

S1850-52P

Features and benefits

Management

- Simple Web management

  Allows for easy management of the switch even by nontechnical users through an intuitive Web GUI, supports HTTP and HTTP Secure (HTTPS)

- Single IP management

  Enables management of up to 32 H3C S1850 switches using a single Web interface, simplifies management of multiple devices

- SNMPv1, v2c, and v3

  Facilitates management of the switch, as the device can be discovered and monitored from an SNMP management station

- Management Security

  Restricts access to critical configuration commands; offers multiple privilege levels with password protection; ACLs provide Telnet and SNMP access; local and remote syslog capabilities allow logging of all access

- Complete session logging

  Provides detailed information for problem identification and resolution

- Port mirroring

  Enables traffic on a port to be simultaneously sent to a network analyzer for monitoring

- Dual flash images

Provides independent primary and secondary operating system files for backup while upgrading

- Network Time Protocol (NTP)

  Synchronizes timekeeping among distributed time servers and clients; keeps timekeeping consistent among all clock dependent devices within the network so that the devices can provide diverse applications based on the consistent time

- Limited CLI

  Enables users to quickly deploy and troubleshoot devices in the network

- Default DHCP client mode

  Allows the switch to be directly connected to a network, enabling plug-and-play operation; in absence of a DHCP server on the network, the switch will fall back to a unique static address determined by the switch's MAC address

- FTP, TFTP, and SFTP support

  Offers different mechanisms for configuration updates; FTP allows bidirectional transfers over a TCP/IP network; trivial FTP (TFTP) is a simpler method using User Datagram Protocol (UDP); Secure File Transfer Protocol (SFTP) runs over an SSH tunnel to provide additional security

- Remote monitoring (RMON)

  Uses standard SNMP to monitor essential network functions; supports events, alarm, history, and statistics group plus a private alarm extension group

Quality of Service (QoS)

- Traffic prioritization

Provides time-sensitive packets (like VoIP and video) with priority over other traffic based on DSCP or IEEE 802.1p classification; packets are mapped to eight hardware queues for more effective throughput

- IEEE 802.1p/Q

  Delivers data to devices based on the priority and type of traffic; supports IEEE 802.1Q

- Class of Service (CoS)

  Sets the IEEE 802.1p priority tag based on IP address, IP Type of Service (ToS), Layer 3 protocol, TCP/UDP port number, source port, and DiffServ

- Broadcast control

  Allows limitation of broadcast traffic rate to cut down on unwanted network broadcast traffic

- Advanced Classifier based QoS

  Classifies traffic using multiple match criteria based on Layer 2, 3, and 4 information; applies QoS policies such as setting priority level and rate limit to selected traffic on a per-port basis

- Rate limiting

  Sets per-port ingress enforced maximums and per-port, per-queue minimums

- Powerful QoS feature

  Supports the following congestion actions: strict priority queuing (SP), weighted round robin (WRR) queuing, and SP+WRR

Connectivity

- IPv6
  - IPv6 host

Enables switches to be managed and deployed at the IPv6 network's edge

- IPv6 routing

  Supports IPv6 static routes

- MLD snooping

  Forwards IPv6 multicast traffic to the appropriate interface, preventing traffic flooding

- IPv6 ACL/QoS

  Supports ACL and QoS for IPv6 network traffic

- IEEE 802.3X flow control

  Provides a flow throttling mechanism propagated through the network to prevent packet loss at a congested node

- IEEE 802.3at Power over Ethernet (PoE+)

  Provides up to 30W per port, which allows support of the latest PoE+-capable devices such as IP phones, wireless access points, and security cameras, as well as any IEEE 802.3af-compliant end device; lowers the cost of additional electrical cabling and circuits that would otherwise be necessary in IP phone and WLAN deployments.

- Cable diagnostics

  Detects cable issues remotely using a browser-based tool

- Flow control

  Provides back pressure using standard IEEE 802.3x, reducing congestion in heavy traffic situations

- Auto MDI/MDI-X

Adjusts automatically for straight-through or crossover cables on all 10/100/1000 ports

Security

- Advanced access control lists (ACLs)

  Enables network traffic filtering and enhances network control using MAC- and IP-based ACLs; time-based ACLs allow for greater flexibility with managing network access

- IEEE 802.1X and RADIUS network logins

  Controls port-based access for authentication and accountability

- Secure Socket Layer (SSL)

  Encrypts all HTTP traffic, allowing safe access to the browser-based management GUI in the switch

- Port Isolation

  The port isolation feature isolates Layer 2 traffic for data privacy and security without using VLANs. This feature can also be used to isolate the hosts in a VLAN from one another.

- Port Security

  Combines and extends IEEE 802.1X and MAC authentication to provide MAC-based network access control

- ARP attack protection

  The ARP detection feature enables access devices to block ARP packets from unauthorized clients to prevent user spoofing and gateway spoofing attacks.

- Automatic VLAN assignment

  Assigns users automatically to the appropriate VLAN based on their identity, location and time of day

- STP BPDU port protection

  Blocks Bridge Protocol Data Units (BPDUs) on ports that do not require BPDUs, preventing forged BPDU attacks

- STP root guard

  Protects the root bridge from malicious attacks or configuration mistakes

- Automatic denial-of-service protection

  Monitors for malicious attacks and protects the network by blocking the attacks

- Management password

  Provides security so that only authorized access to the Web browser interface is allowed

Performance

Half- and full-duplex auto-negotiating capability on every port

Doubles the throughput on every port

- Selectable queue configurations

  Allows for increased performance by selecting the number of queues and associated memory buffering that best meet the requirements of the network applications

- IGMP snooping

  Improves network performance through multicast filtering, instead of flooding traffic to all ports

- Fiber uplink

  Provides greater distance connectivity using Gigabit Ethernet fiber uplinks

Layer 2 switching

- Spanning Tree Protocol (STP)

  Supports standard IEEE 802.1D STP, IEEE 802.1w Rapid Spanning Tree Protocol (RSTP) for faster convergence, and IEEE 802.1s Multiple Spanning Tree Protocol (MSTP)

- BPDU filtering

  Drops BPDU packets when STP is enabled globally but disabled on a specific port

- Jumbo frame support

  Supports up to 10 kilobyte frame size to improve the performance of large data transfers

- VLAN support and tagging

  Supports IEEE 802.1Q with 4,094 simultaneous VLAN IDs

Layer 3 switching

- Address Resolution Protocol (ARP)

  Determines the MAC address of another IP host in the same subnet; supports static ARPs; gratuitous ARP allows detection of duplicate IP addresses; proxy ARP allows normal ARP operation between subnets or when subnets are separated by a Layer 2 network

- DHCP relay

  Simplifies management of DHCP addresses in networks with multiple subnets

Layer 3 routing

- Static IPv4/IPv6 routing

Provides basic routing (supporting up to 32 static routes and 8 virtual VLAN interfaces); allows manual routing configuration

Resiliency and high availability

- Link aggregation

Groups together multiple ports up to a maximum of eight ports per trunk either automatically using Link Aggregation Control Protocol (LACP), or manually, to form an ultra-high-bandwidth connection to the network backbone; help prevent traffic bottlenecks. The 8 port models support 4 trunks, 16 and 24 port models support 8 trunks, 48 port models support 16 trunks.

Convergence

- LLDP-MED (Media Endpoint Discovery)

Defines a standard extension of LLDP that stores values for parameters such as QoS and VLAN to automatically configure network devices such as IP phones

- PoE allocations

Supports multiple methods (automatic, IEEE 802.3af class, LLDP-MED, or user-specified) to allocate PoE power for more efficient energy savings

- Auto voice VLAN

Recognizes IP phones and automatically assigns voice traffic to dedicated VLAN for IP phones

Additional information

- Green initiative support

Provides support for RoHS and WEEE regulations

- Green IT and power

  Improves energy efficiency through the use of the latest advances in silicon development; shuts off unused ports and utilizes variable-speed fans, reducing energy costs

- Energy Efficient Ethernet

  Compliant with IEEE 802.3az standard requirements to save energy during periods of low data activity.

Specifications

Hardware Specifications

Item	S1850-10P	S1850-28P	S1850-28P-PWR	S1850-52P
Fixed ports	8 × 10/100/1000Base-T Ethernet ports 2 × 100/1000 BASE-X SFP ports	24 × 10/100/1000Base-T Ethernet ports 4 × 100/1000 BASE-X SFP ports		48 × 10/100/1000Base-T Ethernet ports 4 × 100/1000 BASE-X SFP ports
Management Ethernet ports	1 RJ-45 console port to access limited CLI port			
Dimensions (H × W × D)	44 × 266 × 162 mm	44 × 440 × 173 mm	44 × 440 × 238 mm	44 × 440 ×238 mm
Weight	0.9 kg	2.25 kg	3.4 kg	3.15 kg
Fan	Fanless	Fanless	2	1
Switching capacity	20 Gbps	56 Gbps	56 Gbps	104 Gbps
Packet forwarding rate	15 Mpps	42 Mpps		78 Mpps
MAC table	8K			16K
Lightning protection level	6 KV			
PoE power	Not support		Maximum per switch 190W Maximum per port 30W	Not support
AC input voltage	AC：100V～240V AC，50/60Hz			

Item	S1850-10P	S1850-28P	S1850-28P-PWR	S1850-52P
Power consumption	≤ 9W	≤ 19W	≤ 235W	≤ 32W
Operating temperature	0ºC to 40ºC			
Operating humidity	10% RH to 90% RH, non-condensing			

Ordering Information:

Product ID	Product Description
SMB-S1850-10P-GL	H3C S1850-10P,10-Port Gigabit Ethernet Switch(8GE+2SFP)
SMB-S1850-28P-GL	H3C S1850-28P,28-Port Gigabit Ethernet Switch(24GE+4SFP)
SMB-S1850-52P-GL	H3C S1850-52P,52-Port Gigabit Ethernet Switch(48GE+4SFP)
SMB-S1850-28P-PWR-GL	H3C S1850-28P-PWR,28-Port Gigabit Ethernet Switch(24GE+4SFP+PoE,AC)

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