DATASHEET

H3C S1850 Gigabit WEB Managed Switch Series

Product overview

The 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.

The series has 4 switches: three non-PoE models and one PoE+ models. 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

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 upto 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.

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			
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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