FS S5860-48SC and S5850-48S2Q4C Switch Competitive Comparison

S5860-48SC

S5850-48S2Q4C

Product Comparison Models

- S5860-48SC
- S5850-48S2Q4C

Contents

Product Software Function

Both of theS5860-48SC and S5850-48S2Q4C switches offer rich layer 2 and layer 3 functions. The Layer 3 equipment network will be more flexible, which can do more strategies, software control and software linkage, etc..

- Flexible Layer 3 networking, supporting IPv4 and IPv6 dual-stack protocols.
- Support diversified security features to ensure network stable and meet more choices for users.
- Rich operation and maintenance methods to meet various operation and maintenance needs of technical experts and technical novices.
- Provides full gigabit access and unmatched scalability for 10G performance.
- Supports LACP. When a link fails, the LACP mode will automatically adjust the links in the aggregation group, and other available member links in the group will take over the failed links to maintain load balance. In this way, the logical bandwidth between devices can be increased and the reliability of the network can be improved without hardware upgrade.
- Support ISIS (Link State Protocol) to use the Shortest Path First (SPF) algorithm for route calculation. The topology and IP network segments are separated to speed up network convergence.
- Support VRRP to effectively ensure network stability. It is suitable for financial, retail, call center and other scenarios.

The Difference Between S5860-48SC and S5850-48S2Q4C Switches in terms of Software

Compared with S5850-48S2Q4C, S5860-48SC switch

- Supports stacking millisecond-level failure recovery: Stacking devices and peripheral devices are connected through aggregated links. If one of the devices or member links fails, it only takes 50 to 200 milliseconds to switch to the other member links. It supports 2 units stacking[1].

Compared with S5860-48SC, S5850-48S2Q4C switch

- Support MLAG (Multichassis Link Aggregation Group), which aggregates one device and two other devices across devices, thus improving the link reliability from the board level to the device level, forming an active-active system.
- Supports MPLS. MPLS helps establish point-to-point connections, enabling small and medium-sized operators to create tunnels for their users, helping to establish point-to-point connections and realizing interconnection between user networks.
- Support OAM, provide a more complete Ethernet OAM mechanism, monitor the network running status in real time, and quickly locate and detect faults.

Models	S5860-48SC	S5850-48S2Q4C
Stackability	Up to 2 Units	Not support
Security	• Support hardware-based IPv6 ACLs • Support hardware CPU protection mechanism • Support DHCP snooping[2], QinQ and LACP • Support the Secure Shell (SSH) and SNMPv3 • Support RADIUS, TACACS+ and BPDU Guard	• Sound Security Protection Policies • Support IPv4/IPv6 ACL and MAC whitelisting • Support ARP inspection • Support IP source guard • Support IEEE802.1X RADIUS authentication, TACAS+ • Support DHCP Server Relay/Snooping • Support Control Plane Protect (CoPP) black & white list and rate limit features
Operation and Maintenance Method	• Support SNMP (Managed by Zabbix), RMON, log and configuration backup • Support Syslog, CLI, Web-based management, Telnet, SSH[3], Netconf	• Support CLI-based, using console ports • Support WEB UI, Telnet, SSH, using 10/100/1000Mbps management port or service ports • Support SNMP (Managed by Zabbix) v1, v2, and v3 • Support RPC-API for Software Defined Network (SDN)
Layer 3 Feature	• Support line-rate IPv4/IPv6 dual-stack multi-layer switching • Support RIP, OSPFv2, IS-ISv4, BGP4, static routing, RIPng, OSPFv3, ISISv6, ERand BGP4+ • Supports IPv6 addressing, ICMPv6, Path MTU Discovery	• Support line-rate IPv4/IPv6 dual-stack • Support RIP, OSPFv2, BGP, static routing, RIPng, OSPFv3 and BGP4+
Type	Fully Managed Pro	Fully Managed Plus
LACP	Yes	Yes
BFD	Yes	Yes
VRRP[4]	Yes	Yes
STP/RSTP/MSTP	Yes	Yes
ISIS	Yes	Yes
ERPS[5]	No	Yes
Voice Vlan[6]	No	Yes
MPLS	No	Yes
OAM	No	Yes
MLAG	No	Yes

Product Performance

- Adopt modular power supply to improve equipment stability and reliability. When the power supply fails, it can be directly replaced with continuous network.
- Three layers of anti-corrosion coating are used for key components that are prone to dust accumulation, such as fans and power supplies, to prevent corrosion and dust.

Compared with S5850-48S2Q4C, S5860-48SC has a great improvement in hardware

- Having larger flash memory allows customers to save more configurations and systems etc. for easier maintenance, and larger SDRAM makes the device run better.

Models	S5860-48SC	S5850-48S2Q4C
Power Supply	2 (1+1 Redundancy) Hot-swappable	2 (1+1 Redundancy) Hot-swappable
Fan Number	4x Hot-swappable Fans (3+1 Redundancy)	4 (3+1 Redundancy) Hot-swappable
Flash Memory	8GB (EMMC)	2GB (NAND)
RAM	4GB (SDRAM)	1GB (RAM)

Product Hardware

- Compared with the S5850-48S2Q4C, the S5860-48SC switch has a switching capacity of up to 2.56 Tbps, a forwarding rate of up to 1,904 Mpps, and a packet buffer of up to 32MB, which is much higher than that of the S5850-48S2Q4C. It also uses the BCM56873 Chip to ensure high performance and stability .
- Compared with S5860-48SC, S5850-48S2Q4C learned more MAC address.

Models	S5860-48SC	S5850-48S2Q4C
SFP+ Ports	48x 10G SFP+	48x 10G SFP+
25G/40G/100G Ports	8x 100G QSFP28	2x 40G QSFP+, 4x 100G QSFP28
Layer Type	L3	L3
Switching Capacity (Gbps)	2.56 Tbps	1.92 Tbps
Forwarding Rate(Mpps)	1,904 Mpps	1071.4 Mpps
Packet Buffer	32MB	9MB
Routing Table	IPv4:16K IPv6:14K	/
MAC Address	32,000	65,000
Switch Chip	Broadcom BCM56873 Chip	/

Features Explanation

Stacking[1]: The switch has the ability to be connected to other switches and operate together as a single unit, which is useful for quickly increasing the capacity of a network.

DHCP Snooping[2]: DHCP snooping is a security feature that acts like a firewall between untrusted hosts and trusted DHCP servers. The fundamental use case for DHCP snooping is to prevent unauthorized (rogue) DHCP servers offering IP addresses to DHCP clients.

SSH[3] (Secure Shell): SSH uses the key login function to encrypt and verify network data, provide secure remote access connections, and can effectively guarantee the normal development of users' network services. SSH protocol provides secure remote access.

VRRP[4]: The Virtual Router Redundancy Protocol is a computer networking protocol that provides for automatic assignment of available Internet Protocol (IP). Suitable for scenarios such as finance, retail, call center, etc.

ERPS[5] (Ethernet Ring Protection Switching): ERPS implements loop blocking and link recovery faster than STP on the main device, and can effectively add redundancy and up-time protection to any network.ERPS enables failover protection in sub-50ms.

Voice VLAN[6]**:** The Voice VLAN feature enables access ports to carry IP voice traffic from an IP phone. When the switch is connected to an IP Phone, the phone sends voice traffic with Layer 3 IP precedence and Layer 2 class of service (CoS) values.

Online Resources

S5860-48SC Switch Datasheet: https://img-en.fs.com/file/datasheet/s5810-series-switches-datasheet.pdf

S5850-48S2Q4C Switch Datasheet: https://img-en.fs.com/file/datasheet/s5850-series-switches-datasheet.pdf

https://www.fs.com

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