FS S5810-48TS-P and S5500-48T8SP Switch Competitive Comparison

S5810-48TS-P

S5500-48T8SP

Product Comparison Models

- S5810-48TS-P
- S5500-48T8SP

Contents

Product Software Function

Both of the S5810-48TS-P and S5500-48T8SP 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 stability and satisfy users with more choices.
- 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. It supports all downlink ports running on PoE+ for the high bandwidth demands of 10G uplinks.
- 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.
- 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 VRRP to effectively ensure network stability. It is suitable for financial, retail, call center and other scenarios.

The Difference Between S5810-48TS-P and S5500-48T8SP Switches in terms of Software

Compared with S5500-48T8SP, S5810-48TS-P switch

- Support Stacking[1] 8 units of the same version with different models.
- Green and energy-saving, supporting EEE (Efficient Energy-Efficient Ethernet) protocol, which can help customers reduce expenses while prolonging the service life of equipment.
- Support 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 interoperability between user networks.
- 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.

Compared with S5810-48TS-P, S5500-48T8SP switch

- Supports stacking 4 units of the same model and version.
- Support OAM, provide a more complete Ethernet OAM mechanism, monitor the network running status in real time, and quickly locate and detect faults.

Models	S5810-48TS-P	S5500-48T8SP
Stackability	Up to 8 Units	Up to 4 Units
Security	• Support ACL,AAA,DHCP snooping[2], DAI&IP source guard • Support CPP,NFPP, IEEE802.1X port/MAC based authentication.	• Support ACL,AAA,DHCP Snooping,DAI & IP source guard. • Support Port isolation, Port security.
Operation and Maintenance Method	• Support SNMP[3] v1/v2/v3 (Managed by Zabbix), RMON, log and configuration backup • Support Syslog, CLI, Web-based management, Telnet, etc. • Support ERSPAN, sFlow	• Console, Telnet, SSH[5] v1/2, HTTP, HTTPS • SNMP v1/v2/v3, RMON • TFTP, FTP, SFTP • NTP, SPAN, RSPAN • sFlow
Layer 3 Feature	• Supports the IPv6 protocol suite, IPv6 neighbor discovery • Support static routing, RIPv1/v2, OSPF[4]v2, IS-IS, BGP4, RIPng, OSPFv3, IS-ISv6 and BGP4+ • Supports IGMPv1/v2/v3, MLDv1/v2, PIM-DM/SM/SSM.	• Supports the IPv6 protocol suite, IPv6 neighbor discovery • Support static routing, RIPv1/v2, OSPFv2, BGP4, RIPng, OSPFv3, and BGP4+ • Supports IGMPv1/v2/v3, MLDv1/v2, PIM-DM/SM,MVR.
Type	Fully Managed Pro	Fully Managed Plus
ISSU	Yes	Yes
BFD	Yes	Yes
ERPS[6]	Yes	Yes
VRRP[7]	Yes	Yes
STP/RSTP/MSTP	Yes	Yes
LACP[8]	Yes	Yes
802.3ah	No	Yes
OAM	No	Yes
Voice Vlan[9]	Yes	Yes
MPLS	Yes	No
ISIS	Yes	No
EEE	Yes	No

Product Hardware

- Adopt modular power supplies to improve equipment stability and reliability. When the power supplies fail, they 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.
- Full 48-port PoE+ support. (When the PoE load is less than 370W, the device supports redundant power supply in the case of dual power supplies.)
- Works with IP phones, WLAN access points and HD camera access. The switch is equipped with a PoE button to check power status, current communication and power. You can view the status of all ports.

Compared with S5500-48T8SP, the hardware function of S5810-48TS-P has been greatly improved

- Having larger flash memory allows customers to save more configurations and systems etc. for easier maintenance, and larger SDRAM makes the device run better.
- Port lightning protection index reaches 6KV.

Models	S5810-48TS-P	S5500-48T8SP
Power Supply	2 (1+1 Redundancy) Hot-swappable	2 (1+1 Redundancy) Hot-swappable
Fan Number	3 (2+1 Redundancy) Built-in	3 Built-in
Flash Memory	512MB	16MB (NOR)
Lightning Protection	above 6KV	/
Power Budget	370W (Single-power); 740W (Dual- power)	370W (Single-power); 740W (Dual- power)
DRAM	1G (SDRAM)	512MB (DRAM)

Product Performance

- Compared with S5500-48T8SP, S5810-48TS-P adopts BCM56340 switch chip to ensure high performance. The MAC chip is highly integrated with the CPU, and has the characteristics of high stability, high reliability, and low power consumption.
- Compared with S5810-48TS-P, S5500-48T8SP adopts 512MB DRAM to prevent internal processing bottleneck and ensure stable and efficient transmission. All 8 10G ports can be used for stacking, with larger routing table, higher switching capacity and forwarding rate, and higher stacking bandwidth.

Models	S5810-48TS-P	S5500-48T8SP
RJ45 Ports	48x 1000BASE-T	48x 1000BASE-T
SFP+ Ports	4x 10G SFP+	8x 10G SFP+
Layer Type	L3	L3
Switching Capacity (Gbps)	176 Gbps	256 Gbps
Forwarding Rate(Mpps)	132 Mpps	192 Mpps
Packet Buffer	4MB	3MB
Routing Table	IPv4：12K IPv6：6K	IPv4：32K IPv6：8K
MAC Address	64K	32K
Switch Chip	BCM56340	BCM53003

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.

SNMP[3]: Simple Network Management Protocol (SNMP) is an Internet Standard protocol for collecting and organizing information about managed devices on IP networks and for modifying that information to change device behavior. Devices that typically support SNMP include cable modems, routers, switches, servers, workstations, printers, and more.

OSPF[4] (Open Shortest Path First): ensures an optimal access path. Suitable for scenarios such as finance, traffic, large office network, etc.

SSH[5] (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.

ERPS[6](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.

VRRP[7]: 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.

LACP[8]: Combining multiple network connections in parallel in order to increase throughput beyond what a single connection could sustain, and to provide redundancy in case one of the links should fail.

Voice VLAN[9]: 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

S5810-48TS-P Switch Datasheet: https://img-en.fs.com/file/datasheet/s5810-series-switches-datasheet.pdf

S5500-48T8SP Switch Datasheet: https://img-en.fs.com/file/datasheet/l3-stackable-poe+-switch-datasheet.pdf

https://www.fs.com

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