

# Layer 2/3 Stackable PoE+ Switch

CARRIER-LEVEL AGGREGATION LAYER 2/3 SWITCH WITH BVSS (VIRTUAL SWITCH SYSTEM)

Model: S5500-48T8SP



## Overview

FS S5500-48T8SP is a new generation PoE+ switch with 48 gigabit RJ45 ports and 8 10GE SFP+ ports.

It is targeted at the IP MAN (metropolitan area network), campus networks and enterprise networks. It is developed on the basis of high-performance hardware and FSOS - a software platform with FS own independent intellectual property rights. It supports multiple services like IPv6, VPN and network security based on L2/L3/L4 wire-speed switching service. It also supports nonstop upgrade, continuous forwarding, graceful restarting and redundancy protection.

## Benefits

- BVSS (Virtual Switch System)
- Up to 10G Uplinks and Stack Links
- Industry-standard CLI & Web Management
- 1+1 Redundant Power Supplies
- Intelligent Fan Management System
- Green Ethernet, Low Power Consumption

## Key Features

### Carrier-level High Reliability

Based on HPS (Hitless Protection System), the power module supports dual back-up, hot-swap, seamless switching in the downtime without manual intervention;

Support STP/RSTP/MSTP, VRRP, Ethernet ring protection, dual master-slave uplink protection and LACP link aggregation;

Support Ethernet OAM mechanism, 802.3ah, 802.1ag and ITU-Y.1731;

Support ISSU (In-Service Software Upgrade);

Support BFD mechanism;

High reliability (99.999%): MTTR of S5500-48T8SP is 50ms.

### Versatile IPv6 Solution

Supports the IPv6 protocol suite, IPv6 neighbor discovery, ICMPv6, path MTU discovery, DHCPv6, etc.;

Supports Ping, Traceroute, Telnet, SSH, ACL based on IPv6;

Supports MLD, MLD Snooping, IPv6 static routing, RIPng, OSPFv3 and BGP4+, etc.;

Supports IPv6 tunnel: manual tunnel, automatic tunnel, GRE tunnel, 6to4 tunnel, ISATAP;

Supports IPv4 transiting to IPv6: IPv6 manual tunnel, automatic tunnel, 6 to 4 tunnel, ISATAP tunnel.

### Varied Service Features

Supports layer2 and layer3 multicast routing protocol, which enable the device can access to IPTV, HD video surveillance and HD video conference;

Supports layer3 routing protocol and super-large routing table capacity, which enables the device is available in large campus networks, enterprise networks and industry networks.

### Innovative Energy-saving Design

Intelligent power management: The power system supports real-time monitoring the device and the slow-start. It is also power-saving;

Intelligent fan management system: The fan system supports automatic speed regulation, which efficiently slow the fan speed and mitigate the noise;

Comply with the international standard IEEE 802.3az.

### Security+

Equipment-level security: The advanced hardware infrastructure design realizes the level-based packet schedule and packet protection, prevents DoS-/TCP- related SYN Flood, UDP Flood, Broadcast Storm or large traffic attacks, and supports level-based command line protection, endowing different levels of users with different management permissions;

Perfect security authentication mechanisms: IEEE 802.1x, Radius and Tacacs+;

Supports storm/multicast/unicast limit, ensuring the normal running of equipment in harsh network conditions;

Supports perfect ring detection mechanism, ensuring the long-term stable running of network;

Supports port isolation within the same VLAN, DHCP-Snooping, and IP + MAC + Port binding.

## Technical Specification

S5500-48T8SP switch comes with advanced hardware architecture design and abundant L2 and L3 features. Here's a look at the details.

### CHARACTERISTICS

	S5500-48T8SP
<b>Port</b>	
Gigabit RJ45 Ports	48
10GE SFP+ Ports	8
Mini USB port	1
<b>Operating System</b>	
OS	FSOS
<b>Key Components</b>	
CPU	BCM53003
<b>Performance</b>	
Switch Class	Layer 2/3
Backplane	176 Gbps
Forwarding Rate	132 Mpps
Jumbo Frames	9K
Packet Buffer	3 MB
Flash Memory	32 MB
DRAM Capacity	512 MB
MAC Address Table Size	32K
Routing Table (IPv4)	32K
Routing Table (IPv6)	8K

## CHARACTERISTICS

### S5500-48T8SP

#### Performance

ARP Table (IPv4)	10K
ARP Table(IPv6)	5K
Total SVI	1K

#### Power

PoE Standard	Compliant with IEEE 802.3at/af
Power Supply (Hot-swap)	AC: 100V-240V, 50Hz±10%
Power Consumption (No-load)	< 38W
Max. Power Consumption(single-power)	500W
Max. Power Consumption(dual-power)	1000W
PoE Power Budget(single-power))	370W
PoE Power Budget (dual-power)	740W

#### Environment

Operating temperature	0°C -50°C
Operating humidity	10%-90% non-condensing
Storage temperature	-20°C -70°C
Storage humidity	5%-95% non-condensing

#### Physical and Environmental

Number of fan	3
Noise@25°C	45 dB
Dimensions (WxDxH)	440x350x44mm
Weight	5.5kg

## KEY FEATURES

Functionality	Description
<b>VLAN</b>	<ul style="list-style-type: none"> <li>• 4K Active VLAN, QinQ &amp; Selective QinQ, GVRP, Private VLAN, MVR</li> </ul>
<b>Spanning Tree</b>	<ul style="list-style-type: none"> <li>• 802.1D (STP), 802.1W (RSTP) and 802.1S (MSTP)</li> <li>• BPDU guard, root guard and loopback guard</li> </ul>
<b>Multicast</b>	<ul style="list-style-type: none"> <li>• PIM-SM, PIM-DM, IGMP v1/v2/v3, IGMP Snooping, IGMP Fast Leave, MVR, IGMP filter</li> </ul>
<b>IPv4</b>	<ul style="list-style-type: none"> <li>• Static routing, RIP v1/v2, OSPF, BGP, PBR, ECMP</li> <li>• BFD for OSPF, BGP</li> </ul>
<b>IPv6</b>	<ul style="list-style-type: none"> <li>• ICMPv6, DHCPv6, ACLv6 and IPv6 Telnet</li> <li>• IPv6 neighbor discovery, Path MTU discovery</li> <li>• MLD V1/V2, MLD snooping</li> <li>• IPv6 Static Routing, RIPng, OSPFv3, BGP4+</li> <li>• Manual tunnel, ISATAP tunnel, 6 to 4 tunnel</li> </ul>
<b>MPLS</b>	<ul style="list-style-type: none"> <li>• LDP protocol, Multi-VRF</li> <li>• MPLS L2 VPN</li> </ul>
<b>QoS</b>	<ul style="list-style-type: none"> <li>• CAR, HQoS, MAC/IP/TCP/UDP/VLAN/COS/DSCP/TOS based QoS, 802.1P/DSCP priority re-labeling, SP, WRR, and “SP+WRR”, Tail-Drop, WRED, flow monitoring and traffic shaping</li> </ul>
<b>Security</b>	<ul style="list-style-type: none"> <li>• Port isolation, Port security, and “IP+MAC+port” binding, MAC sticky</li> <li>• DHCP Snooping and option 82, DAI &amp; IP source guard, PPPoE+</li> <li>• IEEE 802.1x, Radius and BDTacacs+</li> <li>• L2/L3/L4 ACL flow identification and filtration</li> <li>• Anti-attack from DDoS, TCP’s SYN Flood, UDP Flood, etc.</li> <li>• Broadcast/multicast/unknown unicast storm-control</li> <li>• MD5, SHA-256, RSA-1024, AES256, etc.</li> </ul>

## KEY FEATURES

Functionality	Description
<b>Reliability</b>	<ul style="list-style-type: none"> <li>• Static/LACP link aggregation, Interface backup</li> <li>• BVSS virtual-stacking</li> <li>• EAPS and ERPS</li> <li>• URPF, LLDP</li> <li>• ISSU</li> <li>• VRRP</li> <li>• 1+1 power backup</li> </ul>
<b>Management</b>	<ul style="list-style-type: none"> <li>• Console, Telnet, SSH v1/2, HTTP, HTTPS</li> <li>• SNMP v1/v2/v3, RMON</li> <li>• TFTP, FTP, SFTP</li> <li>• NTP, SPAN, RSPAN</li> <li>• sFlow</li> </ul>

## Accessories



Console Cable \*1



Power Cords \*2



Rack Mount Brackets \*2



Screws \*6



Rubber Pads \*4

## Get started today

Getting started with FS S5500-48T8SP PoE+ switch is easy. In fact, you can explore and test without spending too much time. Try FS S5500-48T8SP PoE+ switch, bringing the scalability and agility to the network edge while also lowering total cost of ownership.



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