

A dark, atmospheric photograph of a server room with rows of server racks and overhead lighting.

FS S5500 Series Switches Data Sheet

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Product overview

S5500 series switches are new generation of aggregation ethernet routing switches with 1x Mini USB console port. It is targeted at the IP MAN (metropolitan area network), campus networks and enterprise networks.

S5500-24TF6S is a new generation of aggregation 10G switch supports up to 48 gigabit ports and 6 10GE ports. It is targeted at the IP MAN (metropolitan area network), campus networks and enterprise networks. It supports multiple services like IPv6, MPLS, 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.

The S5500-48T6S Ethernet layer 3 switch features 48x Gigabit RJ45 downlinks, and 6x 1G/10G SFP+ uplinks that all support virtual stacking. It is packed with redundant hot-swappable AC/DC power supplies and variable-speed axial fans for superior processing performance and network reliability. It also supports non-stop upgrade, continuous forwarding, graceful restarting and redundancy protection.

The S5500-48F6S is a new generation of aggregation 10G switches that features 48x 1G SFP downlinks and 6x 1G/10G SFP+ uplinks. Support multiple services like IPv6, VPN and network security based on L2/L3/L4 wire-speed switching service. It also supports non-stop upgrade, continuous forwarding, graceful restarting and redundancy protection.

I Product highlights

- Support 8 Units Virtual-stacking
- 1+1 Hot-swappable Power Supplies, Smart Fans
- Support Layer 3 Features (RIP, OSPF, VRRP, BGP, BFD,ect.)
- Support SSH, ACL, 802.1X, RADIUS, TACACS+, etc. for Security
- Support WEB/CLI/SNMP/SSH for Flexible Operation
- Support IPv4/IPv6 Dual-stack for Future Network Expansion

Platform details

Switch models and configurations

Figures 1 through 3 show the FS S5500 series switches.



Figure 1.

S5500-24TF6S, 48-Port Gigabit Ethernet L3 Switch, 24 x Gigabit RJ45, 24 x 1Gb SFP, with 6 x 10Gb SFP+ Uplinks, Support Stacking



Figure 2.

S5500-48T6S, 48-Port Gigabit Ethernet L3 Switch, 48 x Gigabit RJ45, with 6 x 10Gb SFP+ Uplinks, Support Stacking



Figure 3.

S5500-48F6S, 48-Port Gigabit Ethernet L3 Switch, 48 x 1G SFP, with 6 x 10Gb SFP+ Uplinks, Support Stacking

Switch configurations and port density

Table 1 shows the FS S5500 series switches configurations and port density.

Table 1. Switch configuration and port density

FS P/N	S5500-24TF6S	S5500-48T6S	S5500-48F6S
Description	48-Port Gigabit Ethernet L3 Switch, 24 x Gigabit RJ45, 24 x 1Gb SFP, with 6 x 10Gb SFP+ Uplinks	48-Port Gigabit Ethernet L3 Switch, 48 x Gigabit RJ45, with 6 x 10Gb SFP+ Uplinks, Support Stacking	48-Port Gigabit Ethernet L3 Switch, 48 x 1G SFP, with 6 x 10Gb SFP+ Uplinks, Support Stacking
Port			
10M/100M/1000M BASE-T RJ45	24	48	-
1G port density	24	-	48
10G port density	6	6	6
Management ports	-	-	-
Console port	1	1	1
Memory and processor			
CPU	Intel® Xeon® E-2275	RTL9311-CG	RTL9311-CG
OS	FSOS	FSOS	FSOS
RAM	16MB	16MB	16MB
DDRIII Capacity	512MB	512MB	512MB
Flash memory	16MB	16MB	16MB
Max./Min. Latency	877.9µs/45.4µs	1.65µs/1.52µs	80µs/4.05µs
Packet Buffer	2MB	2MB	2MB

Power supplies and fans

The FS S5500 series switches ship with the dual AC or DC power supply as default.

Table 2 provides more details on the FS S5500 series switches power supplies and fan specifications.

Table 2. Power supply and fan specifications

Description	S5500-24TF6S	S5500-48T6S	S5500-48F6S
Power supply	1+1 Hot-swappable (AC)	1+1 Hot-swappable (AC/DC)	1+1 Hot-swappable (AC/DC)
Fan number	2 Built-in	2 Built-in	3 Built-in
Airflow	Left-to-Right	Left-to-Right	Left-to-Right
Acoustic noise	45dB	45dB	45dB
Maximum fan speed	6200rpm	6200rpm	6200rpm
Max. power consumption	68W	AC Model: 49.8W DC Model: 49W	AC Model: 94W DC Model: 93W
Power max rating	75W	75W	75W
Input-voltage range and frequency	• Rated voltage range: 100-240VAC; 50-60Hz	• Rated voltage range: 100-240VAC; 50-60Hz • DC Input : -36V DC~-72V DC	• Rated voltage range: 100-240VAC; 50-60Hz • DC Input : -36V DC~-72V DC
Power supply efficiency	80%	AC Model: 91% DC Model: 82%	AC Model: 80% DC Model: 80%
Input current	2A	AC Model: 2A DC Model: 3A	AC Model: 3A DC Model: 6A
Output ratings	75W	75W	75W
Output holdup time	≥10ms	≥10ms	AC Model: ≥10ms DC Model: ≥3ms
Power-supply input receptacles	C13	AC Model: C13 DC Model: -	AC Model: C13 DC Model: -
Power cord rating	6A	AC Model: 10A 250V DC Model: -	AC Model: 10A 250V DC Model: -

Switch performance

Table 3 shows performance specifications for the FS S5500 series switches.

Table 3. Performance specifications

Performance	S5500-24TF6S	S5500-48T6S	S5500-48F6S
Switching capacity	216 Gbps	216 Gbps	216 Gbps
Forwarding rate	162 Mpps	162 Mpps	162 Mpps
Jumbo frame	9K	9K	9K
Total number of MAC addresses	32K	32K	32K
Total number of IPv4 routes (indirect routes)	12K	12K	12K
Total number of IPv4 host routes (direct routes and ARP)	8K	8K	8K
Total number of IPv6 routes (indirect routes)	4K	4K	4K
Total number of IPv6 host routes (direct routes and NDP)	2K	2K	2K
Total number of IPv4 multicast routes	2K	2K	2K
Total number of IPv6 multicast routes	2K	2K	2K
QoS ACL scale	2303	2303	2303
Security ACL scale	2303	2303	2303
VLAN IDs	4K	4K	4K
STP virtual ports (port* VLANs) for MST	54	54	54
Total switched virtual interfaces (SVIs)	1K	1K	1K

Platform benefits

Table 4 lists the software spotlights for the FS S5500 series switches.

Table 4. Software spotlights

Functionality	Description
VLAN	4K Active VLAN, QinQ & Selective QinQ, GVRP, Private VLAN, MVR
Spanning Tree	Support 802.1D (STP), 802.1W (RSTP) and 802.1S (MSTP) Support BPDU guard, root guard and loopback guard
Multicast	Support PIM-SM, PIM-DM, IGMP v1/v2/v3, IGMP Snooping, IGMP Fast Leave, MVR, IGMP filter
IPv4	Support Static routing, RIP v1/v2, OSPF, BGP, PBR, ECMP Support BFD for OSPF, BGP
IPv6	Support ICMPv6, DHCPv6, ACLv6 and IPv6 Telnet Support IPv6 neighbor discovery, Path MTU discovery Support MLD V1/V2, MLD snooping•IPv6 Static Routing, RIPng, OSPFv3, BGP4+ Support Manual tunnel, ISATAP tunnel, 6 to 4 tunnel
Security	Support Port isolation, Port security, and "IP+MAC+port" binding, MAC sticky DHCP Snooping and option 82, DAI & IP source guard, PPPoE+ Support IEEE 802.1x, Radius and Tacacs+ Support L2/L3/L4 ACL flow identification and filtration
QoS	Support 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
Easy Network Maintenance	Support . Console,Telnet, SSH v1/2,HTTP,HTTPS Support SNMP v1/v2/v3,RMON Support TFTP, FTP, SFTP Support NTP, SPAN, RSPAN
Reliability	Support Static/LACPlink aggregation,Interface backup Support BVSS virtual-stacking, up to 16 unitsper stack Support EAPS and ERPS. URPF, LLDP, ISSU Support VRRP Support 1+1 power backup, Dying gasp
DHCP	Support DHCP server/relay Support DHCP snooping/option 82

Software requirements

The FS S5500 series switches run on FS OS Software version.

Table 5 lists the latest software requirements for the switch models.

Table 5. Latest software requirements

FS P/N	Description	Latest software requirements
S5500-24TF6S	S5500-24TF6S, 48-Port Gigabit Ethernet L3 Switch, 24 x Gigabit RJ45, 24 x 1Gb SFP, with 6 x 10Gb SFP+ Uplinks, Support Stacking	-
S5500-48T6S	S5500-48F6S, 48-Port Gigabit Ethernet L3 Switch, 48 x Gigabit RJ45, with 6 x 10Gb SFP+ Uplinks, Support Stacking	-
S5500-48F6S	S5500-48F6S, 48-Port Gigabit Ethernet L3 Switch, 48 x 1G SFP, with 6 x 10Gb SFP+ Uplinks, Support Stacking	-

Product specifications

Table 6 shows the product specifications for the FS S5500 series switches.

Table 6. Product specifications

Description	S5500-24TF6S	S5500-48T6S	S5500-48F6S
Environmental			
Operating temperature	0 to 50°C (32 to 122°F)	0 to 45°C (32 to 113°F)	0 to 45°C (32 to 113°F)
Storage temperature	-20 to 70°C (-4 to 158°F)	-40 to 85°C (-40 to 185°F)	-40 to 85°C (-40 to 185°F)
Operating humidity	0% to 90% (Non-condensing)	5% to 95% (Non-condensing)	5% to 95% (Non-condensing)
Storage humidity	5% to 95% (Non-condensing)	5% to 95% (Non-condensing)	5% to 95% (Non-condensing)
Temperature alarm	Supported	Supported	Supported
Acoustic noise	45dB	45dB	45dB
Physical specifications			
Dimensions (HxWxD)	1.73"x17.32"x13.8" (44x440x350mm)	1.73"x17.3"x13.78" (44x440x350mm)	1.73"x17.3"x13.78" (44x440x350mm)
Rack units (RU)	1U	1U	1U
Weight	13.23 lbs (6.0kg)	13.67 lbs (6.2kg)	14.11 lbs (6.4kg)
Distance	100M	100M	100M

Description	S5500-24TF6S	S5500-48T6S	S5500-48F6S
Electrical			
Voltage (auto ranging)	100-240VAC	100-240VAC; -36~-72VDC	100-240VAC; -36~-72VDC
Frequency	50-60Hz	50-60Hz	50-60Hz
Current	2A	AC Model: 2A DC Model: 3A	AC Model: 3A DC Model: 6A
Power rating (maximum consumption)	75W	75W	75W
Mean-time between failures			
MTBF (hours)	>100,000	>200,000	>200,000
Connectors			
Connectors and cabling	1000BASE-T ports: RJ-45 connectors, 4-pair Cat 5E UTP cabling - Multigigabit-T ports: RJ-45 connectors, 4-pair Cat 5E, Cat 6, Cat 6A UTP cabling 1000BASE-T SFP-based ports: RJ-45 connectors, 4-pair Cat 5E UTP cabling - SFP transceivers: LC fiber connectors (single-mode or multimode fiber) - SFP+ transceivers: LC fiber connectors (single-mode or multimode fiber)Ethernet management port: RJ-45 connectors	1000BASE-T ports: RJ-45 connectors, 4-pair Cat 5E UTP cabling - Multigigabit-T ports: RJ-45 connectors, 4-pair Cat 5E, Cat 6, Cat 6A UTP cabling 1000BASE-T SFP-based ports: RJ-45 connectors, 4-pair Cat 5E UTP cabling - SFP transceivers: LC fiber connectors (single-mode or multimode fiber) - SFP+ transceivers: LC fiber connectors (single-mode or multimode fiber)Ethernet management port: RJ-45 connectors	1000BASE-T ports: RJ-45 connectors, 4-pair Cat 5E UTP cabling - Multigigabit-T ports: RJ-45 connectors, 4-pair Cat 5E, Cat 6, Cat 6A UTP cabling 1000BASE-T SFP-based ports: RJ-45 connectors, 4-pair Cat 5E UTP cabling - SFP transceivers: LC fiber connectors (single-mode or multimode fiber) - SFP+ transceivers: LC fiber connectors (single-mode or multimode fiber)Ethernet management port: RJ-45 connectors
Power connectors	- Customers can provide power to a switch by using the internal power at the back of the switch - Internal power supply connector: The internal power supply is an auto-ranging unit. It supports input voltages between 100 (115 for 1100WAC) and 240 VAC. Use the supplied AC power cord to connect the AC power connector to an AC power outlet	- Customers can provide power to a switch by using the internal power at the back of the switch - Internal power supply connector: The internal power supply is an auto-ranging unit. It supports input voltages between 100 (115 for 1100WAC) and 240 VAC. Use the supplied AC power cord to connect the AC power connector to an AC power outlet	- Customers can provide power to a switch by using the internal power at the back of the switch - Internal power supply connector: The internal power supply is an auto-ranging unit. It supports input voltages between 100 (115 for 1100WAC) and 240 VAC. Use the supplied AC power cord to connect the AC power connector to an AC power outlet
Standards			
Standards	802.1x, AAA, RMON, SNMPV1 V2 V3, HTTP Telnet, SSH		

Quality certification

At FS, our Quality Commitment lies in all aspects of processes, resources, and methods that enable us to build superior networks for our customers. Through a quality policy focusing on continuous improvement of products and services, we're able to achieve the highest levels of satisfaction for our customers. To that end, every FS employee is accountable for contributing to the value of the products and services we deliver.

Figure 4 shows some of the authoritative certifications obtained by FS S5500 series switches.



Figure 4.

Warranty, service and support

FS S5500 series switches enjoy 5 years limited warranty against defects in materials or workmanship. For more information for FS Returns & Refunds policy, visit <https://www.fs.com/policies/warranty.html> or https://www.fs.com/policies/day_return_policy.html

FS provides a personal account manager, free professional technical support, and 24/7 live customer service to each customer.[support.html](https://www.fs.com/customer-support.html)

- Professional Lab: Test each product with the latest and advanced networking equipment.
- Free Technical Support: Provide free & tailored solutions and services for your businesses.
- 80% Same-day Shipping: Immediate shipping for in-stock items.
- Fast Response: Direct and immediate assistance from an expert.

For more information, visit https://www.fs.com/service/fs_support.html

Ordering information

Table 7 provides the ordering information for S5500 series switches.

Table 7. Ordering information

FS P/N	Product description
Switch hardware	
S5500-24TF6S	S5500-24TF6S, 48-Port Gigabit Ethernet L3 Switch, 24 x Gigabit RJ45, 24 x 1Gb SFP, with 6 x 10Gb SFP+ Uplinks, Support Stacking
S5500-48T6S	S5500-48T6S, 48-Port Gigabit Ethernet L3 Switch, 48 x Gigabit RJ45, with 6 x 10Gb SFP+ Uplinks, Support Stacking
S5500-48F6S	S5500-48F6S, 48-Port Gigabit Ethernet L3 Switch, 48 x 1G SFP, with 6 x 10Gb SFP+ Uplinks, Support Stacking

Additional information

For more information about the S5500 Series Switches, contact your account manager or visit

https://www.fs.com/search_result?keyword=S5500

Document history

New or revised topic	Described in	Date
Updates to FS S5500 Series Switches Data Sheet	Updated all	6/8/2023
Updates to FS S5500-24TF6S Switch Data Sheet	Updated all	11/2/2022