

A solid red circle.

FS S8550 Series Switches Data Sheet

Contents

Product overview	3
Product highlights	3
Platform details	4
Platform benefits	8
Product specifications	9
Quality certification	10
Warranty, service and support	11
Ordering information	11
Additional information	11
Document history	11

Product overview

FS S8550 Series Routing Switches are designed on a domestic high-performance Switch Chip, competently meets the requirements of Metro, Enterprise, Data Center, and Hyper converged infrastructure (HCI) networks.

S8550-6Q2C is a high-performance switch with 6x 40Gb QSFP+, and 2x 100Gb QSFP28 in a compact 1U form factor. The switch comes with the complete system software with comprehensive protocols and applications to facilitate the rapid service deployment and management for traditional Layer 2 and Layer 3 networks. It is packed with hot-swappable power supply, and hot-swappable smart fans for superior processing performance and network reliability. Supporting advanced features, including MLAG, VXLAN, QoS, ISIS, VRRP, GRE, MPLS, etc., this switch meets data center TOR, enterprise network core, campus network convergence, E-sports core, storage network and HCI (Hyper-Converged Infrastructure) networks requirements.

The S8550-32C 32-port 100Gb Ethernet layer 3 switch is a high-performance switch in a compact 1U form factor. The switch comes with complete system software, comprehensive protocols, and applications to facilitate the rapid service deployment and management for traditional Layer 2 and Layer 3 networks. It is packed with redundant hot-swappable power supplies, and 3+1 hot-swappable smart fans for superior processing performance and network reliability. Supporting advanced features, including MLAG, VXLAN, IPv4/IPv6, QOS, ISIS, VRRP, GRE, MPLS, etc., this switch meets next generation Metro and HCI (Hyper-Converged Infrastructure) networks, and it is also ideal for traditional or fully virtualized data center.

S8550-16Q8C is a high-performance switch with 16x 40Gb QSFP+ and 8x 100Gb QSFP28 ports, which makes it well-suited for spine-leaf architecture. The switch comes with complete system software, comprehensive protocols and applications to facilitate the rapid service deployment and management for traditional Layer 2 and Layer 3 networks. Supporting advanced features, including MLAG, VXLAN, IPv4/IPv6, SFLOW, SNMP, etc., this switch meets the next-generation Metro and enterprise network requirements, and it is also ideal for traditional or fully virtualized data centers.

Product highlights

- Support MLAG (Multi-Chassis Link Aggregation) for Networking Reliability
- 1+1 Hot-swappable Power Supplies, Smart Fans
- Support G.8031, G.8032, Ethernet OAM, MPLS, VPLS, VPWS, L3VPN
- Support OSPF/OSPFv3, BGP4/BGP4+, ISIS, BFD
- Support CLI/WEB/JSON-RPC and OVSDb for Flexible Operation
- Supports EVPN-VXLAN, PFC, and ECN for Cutting-edge Data Center Technologies
- Support SSH, ACL, AAA, 802.1X, RADIUS, TACACS+, etc. for Security
- IPv4/IPv6 Dual-stack and Tunnel for Future Network Expansion
- Support IEEE 1588v2 Precision Time Protocol TC and BC Mode (Only for S8550-32C-PE / S8550-32C / S8550-16Q8C)

Platform details

Switch models and configurations

Figures 1 through 3 show the FS S8550 series switches

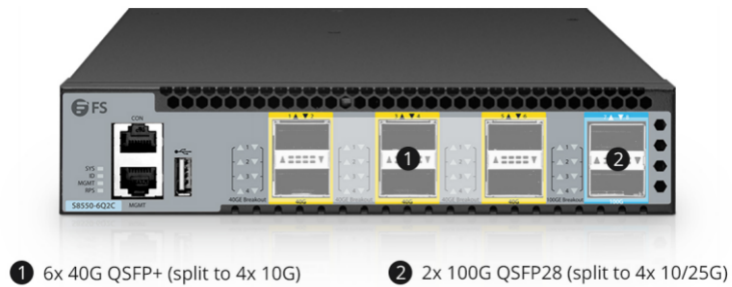


Figure 1.

S8550-6Q2C, 8-Port Ethernet L3 Switch, 6 x 40Gb QSFP+, with 2 x 100G QSFP28, Support MLAG

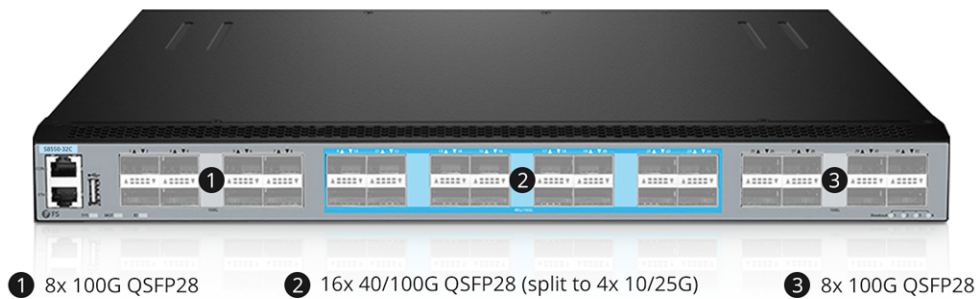


Figure 2.

S8550-32C, 32-Port Ethernet L3 Switch, 32 x 100Gb QSFP28, Support MLAG

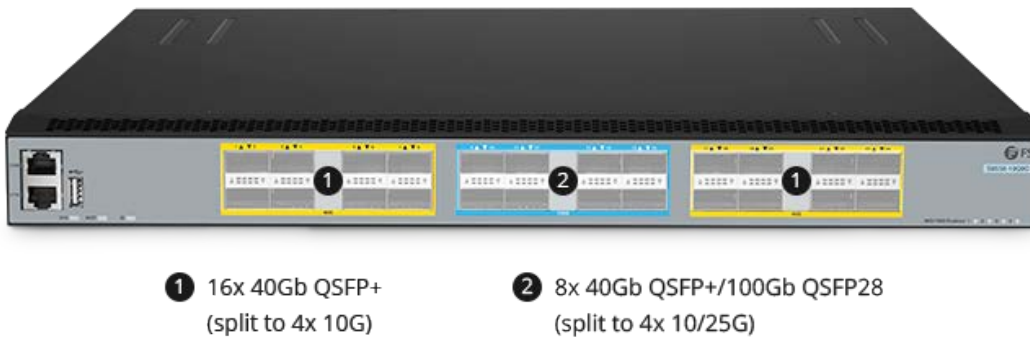


Figure 3.

S8550-16Q8C, 16-Port Ethernet L3 Switch, 16 x 40Gb QSFP+, with 8 x 100Gb QSFP28, Support MLAG

Switch configurations and port density

Table 1 shows the FS S8550 series configurations and port density.

Table 1. Switch configuration and port density

FS P/N	S8550-6Q2C	S8550-32C	S8550-16Q8C
Description	8-Port Ethernet L3 Switch, 6 x 40Gb QSFP+, with 2 x 100G QSFP28	32-Port Ethernet L3 Switch, 32 x 100Gb QSFP28	16-Port Ethernet L3 Switch, 16 x 40Gb QSFP+, with 8 x 100Gb QSFP28
Port			
40G port density	6	-	16
100G port density	2	32	8
10G port density with breakout cable	32	Up to 64(16*4)	Up to 96(24*4)
25G port density with breakout cable	8	Up to 64(16*4)	Up to 32(8*4)
40G port density with breakout cable	-	Up to 16	-
Management ports	1	1	1
Console port	1	1	1
USB port	1	1	1

Memory and processor

CPU	ARM A53 Dual-Core CPU, 1.2Ghz	Dual core/ARM A53	Dual core/ARM A53
DRAM	DDR4 16Gb	-	2GB
SDRAM	-	-	-
Flash memory	8GB	8GB	8GB
Latency	0.96μs	0.7μs	0.7μs
Packet buffer	9MB	36MB	36MB

Note:

QSFP+ can be used for 40G or 4x 10G connection.

QSFP28 can be used for 40G/100G or 4x10G/4x25G connection.

Power supplies and fans

Table 2 provides more details on the FS S8550 series power supplies and fan specifications.

Table 2. Power supply and fan specifications

Description	S8550-6Q2C	S8550-32C	S8550-16Q8C
Power supply	1 Hot-swappable	2 (1+1 Redundancy) Hot-swappable	2 (1+1 Redundancy) Hot-swappable
Fan number	2x Hot-swappable Fans	4 (2+2 Redundancy) Hot-swappable	4 (3+1 Redundancy) Hot-swappable
Airflow	Front-to-Back	Front-to-Back Back-to-Front (S8550-32C-PE)	Front-to-Back
Acoustic noise	47dB	61.7dB	61.7dB
Maximum fan speed	9000rpm	19500rpm	19500rpm
Max. power consumption	75W	224W	224W
Typical power consumption	60W	172W	112W
Input-voltage range and frequency	100-240VAC, 50-60Hz, 2A	90-264VAC, 47-63Hz 180-300VDC	90-264VAC, 47-63Hz 180-300VDC
Power supply efficiency	95%(220VAC 50% load)	95%(50% load)	95%(50% load)
Input current	3A (MAX) at 100V	7A(MAX) at 100- 127VAC	7A(MAX) at 100- 127VAC
Output ratings	-	Main output: +12V Standby output: +12V	-
Output holdup time	-	Main output: 12ms Standby output: 70ms	-
Power-supply input receptacles	C13	C13	C13
Power cord rating	10A	10A	10A

Switch performance

Table 3 shows performance specifications for the FS S8550 series switches.

Table 3. Performance specifications

Performance for all S8550 Series Switches	S8550-6Q2C	S8550-32C	S8550-16Q8C
Switching capacity	880Gbps	6.4Tbps	2.88Tbps
Forwarding rate	654.72Mpps	3571Mpps	2142.72Mpps
Total number of MAC addresses	98K	120K	122880
Total number of IPv4 routes (indirect routes)	57344	56000	60k
Total number of IPv4 host routes (direct routes and ARP)	12288	12288	16384
Total number of IPv6 routes (indirect routes)	4096	4096	4096
Total number of IPv6 host routes (direct routes and NDP)	2048	2048	2048
Total number of IPv4 multicast routes	1024	1024	1024
Total number of IPv6 multicast routes	512	512	512
QoS ACL scale	1532	6162	6162
Security ACL scale	1952	5949(ingress) 3949(egress)	5949(ingress) 3949(egress)
VLAN IDs	4094	4094	4094
STP virtual ports (port* VLANs) for MST	32752	64	64
Total switched virtual interfaces (SVIs)	256	-	-
Jumbo frame	9600 bytes	9600 bytes	9600 bytes

Platform benefits

Table 4 lists the software spotlights for the FS S8550 series switches.

Table 4. Software spotlights

Functionality	Description
Multi-Chassis Link Aggregation (MLAG)	All 40G/100G ports support MLAG Connects to other switches and servers by LAG or LACP without other proprietary protocols The software supports up to 63 MLAG members Support mixed configuration MLAG with S3950, S5800, S5850 and S8050 series switches
Metro Advanced License	Support advanced features of MPLS, LDP, MPLS-L2VPN, MPLS-L3VPN, VxLAN-BGP-EVPN LIC-FIX-MA license is required to enable the advanced features
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
High reliability	Support 64-way ECMP routing for load balancing Support LACP, ECMP, VRRP, VARP, STP, RSTP, MSTP, Smart Link, BFD, ERPS, G.8031, G.8032, Load-Balancing, etc Support the Spanning Tree Protocols Support STP Protocol Protection (BPDU Guard, Root Guard, Loop Guard, Anti TC-BPDU attack)
Multicast Efficiency	Support the IPv4 and IPv6 multicast functions Support IGMP v1/v2/v3, IGMP Snooping v1/v2/v3, MLD, PIM, PIM-SM, PIM-SSM
Data Center Features	Support EVPN-VXLAN, GENEVE, NVGRE Support Priority Flow Control (PFC) and Explicit Congestion Notification (ECN)
Easy Network Maintenance	Support CLI-based, using console ports Support SNMP (Managed by Zabbix) v1, v2, and v3 Support RPC-API for Software Defined Network (SDN)
QoS	Support Weighted Random Early Detection (WRED) Support Tail Drop (TD) Support Strict Priority (SP) scheduling Support Weighted Deficit Round Robin (WDRR) scheduling Support SP + WDRR mixed scheduling Support traffic classification based on COS/DSCP (simple classification)
Supported Optics and Cables	Support 40GBASE-SR4, CSR4, LX4, LR4, PLR4, PIR4, ER4 transceivers Support 100GBASE-SR4, IR4, EIR4, LR4, PIR4 transceivers Support 40G QSFP+ DAC and AOC cables Support 40G QSFP+ to 4x10G SFP+ DAC and AOC cables Support 100G QSFP28 DAC and AOC cables

Product specifications

Table 5 shows the product specifications for the FS S8550 series switches.

Table 5. Product specifications

Description	S8550-6Q2C	S8550-32C	S8550-16Q8C
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	-40 to 70°C (-40 to 158°F)	-40 to 70°C (-40 to 158°F)	-40 to 70°C (-40 to 158°F)
Operating humidity	10% to 90% (Non-condensing)	10% to 90% (Non-condensing)	10% to 90% (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	47dB	61.7dB	61.7dB
Physical specifications			
Dimensions (HxWxD)	1.73"x8.46"x13.9" (44×215×355mm)	1.7"x17.4"x 18.5" (43.18x442x471mm)	1.7"x17.4"x 18.5" (43.18x442x471mm)
Rack units (RU)	1U	1U	1U
Weight	7.26 lbs (3.3kg)	20.28 lbs (9.2kg)	19.84 lbs (9kg)
Distance	100M	100M	100M
Electrical			
Voltage (auto ranging)	100-240VAC	100-240VAC, 180-300VDC	100-240VAC, 180-300VDC
Frequency	50-60Hz	50-60Hz	50-60Hz
Current	2A	7A(MAX)	7A(MAX)
Power rating (maximum consumption)	75W	224W	171W
Mean-time between failures			
MTBF(hours)	>50,000 Hours	>158,045 Hours	>70,080 Hours

Description	S8550-6Q2C	S8550-32C	S8550-16Q8C
Connectors			
Connectors and cabling	QSFP+ transceivers: MPO and LC fiber connectors (single-mode or multimode fiber) QSFP28 transceivers: MPO and LC fiber connectors (single-mode or multimode fiber)		
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		
Standards			
Standards	802.1s, 802.1w, 802.1x, 802.1ad, 802.1d, 802.1p, 802.1q, RMON, SNMP, V1 V2 V3 100-240VAC		

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 S8550 Series Switches.



Figure 4.

Warranty, service and support

FS S8550 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 6 provides the ordering information for S8550 series switches.

Table 6. Ordering information

FS P/N	Product description
Switch hardware	
S8550-6Q2C	S8550-6Q2C, 8-Port Ethernet L3 Switch, 6 x 40Gb QSFP+, with 2 x 100G QSFP28, Support MLAG
S8550-32C	S8550-32C, 32-Port Ethernet L3 Switch, 32 x 100Gb QSFP28, Support MLAG
S8550-16Q8C	S8550-16Q8C, 16-Port Ethernet L3 Switch, 16 x 40Gb QSFP+, with 8 x 100Gb QSFP28, Support MLAG

Additional information

For more information about the S8550 Series Switches, contact your account manager or visit https://www.fs.com/search_result?keyword=S8550

Document history

New or revised topic	Described in	Date
Updates to FS S8550 Series Switches Data Sheet	Add S8550-16Q8C	10/20/2023
Updates to FS S8550 Series Switches Data Sheet	Updated all	10/17/2022



Shenzhen (China)

Address: 24F, Yingfeng Center, Haitian 2nd Rd,
Nanshan District, Shenzhen
Tel: +86 (755) 8357 1351
Email: sales@feisu.com

Delaware (United States)

Address: 380 Centerpoint Blvd, New Castle,
DE 19720, United States
Tel: +1 (888) 468 9910
Email: us@fs.com

Munich (Germany)

Address: NOVA Gewerbepark Building 7, Am
Gfild 7,85375 Neufahrn bei Munich, Germany
Tel: +49 (0) 8131 377 3008
Email: de@fs.com

Singapore

Address: 30A Kallang Pl, #11-10/11/12 Singapore
339213
Tel: +65 3138 1992
Email: sg@fs.com

Wuhan (China)

Address: 9-14F, Optical Valley Software Park
A7, Guanshan Ave, Wuhan
Tel: +86 (027) 8808 9195
Email: sales@feisu.com

Birmingham (United Kingdom)

Address: Regus Edmund House, 12-22 Newhall
Street, Birmingham, B3 3AS
Tel: +44 (0) 121 726 4775
Email: uk@fs.com

Melbourne (Australia)

Address: 57-59 Edison Rd, Dandenong South,
VIC 3175, Australia
Tel: +61 3 5909 9990
Email: au@fs.com

Tokyo (Japan)

Address: JS Progress Building, 4-1-23 Heiwajima,
Ota-ku, Tokyo 〒143-0006
Tel: +81 3 6897 9438
Email: jp@fs.com



FS has several offices around the world. Addresses, phone numbers are listed on the FS Website at https://www.fs.com/contact_us.html
FS and FS logo are trademarks or registered trademarks of FS in the U.S. and other countries.