

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

FS N5860-48SC Switch Data Sheet

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Product overview

N5860-48SC is ideal for all sizes data centers and cloud computer services. It is a ToR high density switch in a compact 1U form factor with full line rate 48 1/10GbE and 8 40/100GbE ports, combining advantages of zero packet loss, low latency, and non-blocking performance for lossless Ethernet.

The layer 3 switch incorporates rich features incorporated, including industry-leading Broadcom chip, redundant hot-swappable AC and DC power supplies and fans, VXLAN, MLAG, PFC, ECN, RDMA, etc. for scalable and flexible data center leaf-spine designs.

Product highlights

- Support Ansible, OpenFlow, NETCONF, etc. Configuration and Automation Tools
- Flexible 1/10/25/40/100GbE Interface Speeds, Support Stacking
- Support MLAG, BGP4/BGP4+, EVPN-VXLAN, REUP, GR, BFD
- Low-latency, Zero Packet Loss with PFC, ECN, RDMA over Converged Ethernet (RoCE)
- 1+1 Hot-Swappable AC or DC Power Supplies, 3+1 Smart Fans
- Support SPAN/RSPAN/ERSPAN and In-band Network Telemetry (INT) for Visibility
- Support ACL, RADIUS, TACACS+, DHCP Snooping, etc. for Security
- Support SNMP v1/v2c/v3, CLI, Telnet, SSH

Platform details

Switch models and configurations

Figures 1 show the FS N5860-48SC Switch.

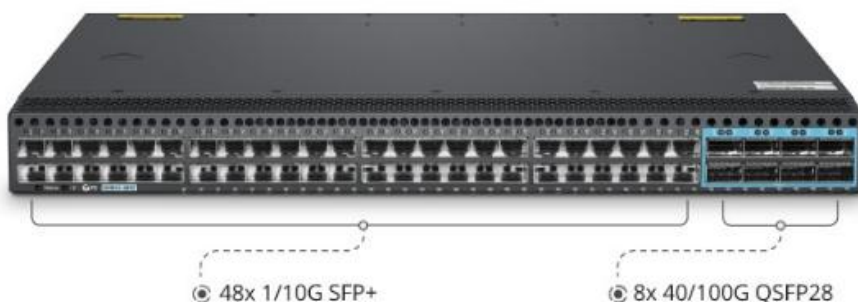


Figure 1.

N5860-48SC, 48-Port Ethernet L3 Data Center Switch, 48 x 10Gb SFP+, with 8 x 100Gb QSFP28, Support Stacking, Broadcom Chip, Software Installed

Switch configurations and port density

Table 1 shows the FS N5860-48SC configurations and port density.

Table 1. Switch configuration and port density

FS P/N	N5860-48SC
Description	48-Port Ethernet L3 Data Center Switch, 48 x 10Gb SFP+, with 8 x 100Gb QSFP28
Port	
1G port density	48
10G port density	48
40G port density	8
100G port density	8
10G port density with breakout cable	80
25G port density with breakout cable	32
40G port density with breakout cable	8
Management port	1
Console port	1
USB port	1

FS P/N	N5860-48SC
Memory and processor	
Switch chip	BCM56873
CPU	Cavium CN7130 (Quad-core, 1.2 GHz)
SDRAM	4GB
Flash memory	8GB
Latency	<1 μ s
Packet buffer	32MB

Notes:

SFP+ ports can be used for 1/10G connection.

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

Power supplies and fans

The FS N5860-48SC switch ship with the dual 1+1 redundant AC or DC power supply as default.

Table 2 provides more details on the FS N5860-48SC power supplies and fan specifications.

Table 2 Power supply and fan specifications

Description	N5860-48SC
Power supply	Dual 1+1 redundant power supplies (AC or DC)
Fan number	4x hot-swappable fans (3+1 redundancy)
Airflow	Front-to-back
Acoustic noise	<78dB
Maximum fan speed	18000rpm
Max.power consumption	300W
Power max rating	550W
Input-voltage range and frequency	<ul style="list-style-type: none"> • Rated voltage range: 100-240VAC; 50-60Hz • Maximum voltage range: <ul style="list-style-type: none"> -AC input: 90-264VAC; -High-Voltage DC input: 192 V DC to 288 V DC

Description	N5860-48SC
Power supply efficiency	94% @50Load
Input current	3.6A
Output ratings	11.4-12.6
Output holdup time	>10msec@70%load
Power-supply input receptacles	C13
Power cord rating	10A

Stacking

The FS N5860-48SC switch model is designed for stacking switches as a single virtual switch, enabling customers to have a single management plane and control plane.

Table 3 lists the supported stacking options.

Table 3. Supported stacking options

Part Name	N5860-48SC
Stacking ports	48x 10G+8x 100G
Supported stack members	N5860-48SC
Maximum number of VSL links	48
Number of members	2

Switch performance

Table 4 shows performance specifications for the FS N5860-48SC switch.

Table 4. Performance specifications

Performance	N5860-48SC
Switching capacity	2.56 Tbps
Forwarding rate	1920 Mpps
Total number of MAC addresses	96000
Total number of IPv4 routes (indirect routes)	128,000
Total number of IPv4 host routes (direct routes and ARP)	100,000
Total number of IPv6 routes (indirect routes)	64,000
Total number of IPv6 host routes (direct routes and NDP)	60000
Total number of IPv4 multicast routes	16000
Total number of IPv6 multicast routes	8000
QoS ACL scale	Input: 4500 Output: 2000
Security ACL scale	4500
VLAN IDs	4000
STP virtual ports (port*VLANs) for MST	64
Total switched virtual interfaces (SVIs)	4000
Jumbo frame	9000 bytes

Platform benefits

Table 5 lists the software spotlights for the FS N5860-48SC switch.

Table 5. Software spotlights

Functionality	Description
High availability and multi-service support	<ul style="list-style-type: none"> Support stacking Support virtual router redundancy protocol (VRRR) Support GR perfect restart, BFD fast forwarding detection and other mechanisms IPv4/IPv6 dual protocol stack Unicast routing Support hot swap without affecting normal operation of other devices
Error-free network configuration	<ul style="list-style-type: none"> Support EVPN-VXLAN Support ansible, openflow, NETCONF, etc. configuration and automation tools Support PFC, ECN, DCBX Realized lossless Ethernet low-latency forwarding based on RDMA (Remote Direct Memory Access) Support DHCP snooping Support hardware-based IPv6 ACLs
Secure and simplified access for users and LoT	<ul style="list-style-type: none"> Support SNMP (SNMPv1,v2c,v3), RMON, gRPC Support the Secure Shell (SSH) and SNMPv3 Support the source IP-based Telnet device access control Support In-band Network Telemetry (INT) Support Network Foundation Protection Policy (NFPP) Support hardware CPU protection mechanism

Software requirements

The FS N5860-48SC switch runs on FS OS Software version.

Table 6 lists the latest software requirements for the switch model.

Table 6. Latest software requirements

FS P/N	Description	Latest software requirements
N5860-48SC	N5860-48SC, 48-Port Ethernet L3 Data Center Switch, 48 x 10Gb SFP+, with 8 x 100Gb QSFP28, Support Stacking, Broadcom Chip, Software Installed	FSOS 11.0.5 B9P66S Software

Product specifications

Table 7 shows the product specifications for the FS N5860-48SC switch.

Table 7. Product specifications

Description	N5860-48SC
Environmental	
Operating temperature	0 to 45°C (32 to 113°F)
Storage temperature	-40 to 70°C (-40 to 158°F)
Operating humidity	10% to 90% (Non-condensing)
Storage humidity	10% to 95% (Non-condensing)
Temperature alarm	supported
Acoustic noise	<78dB
Physical specifications	
Dimensions (HxWxD)	1.73"x17.4"x16.5" (44x442x420mm)
Rack units (RU)	1 RU
Weight	17.6 lbs (8kg), with 2 installed PSUs and 4 Fans

Description	N5860-48SC
Electrical	
Voltage (auto ranging)	100-240VAC
Frequency	50-60Hz
Current	7.2A-3.5A
Power rating (maximum consumption)	300w
Mean-time between failures	
MTBF (hours)	>320000
Connectors	
Connectors and cabling	10G/25G/40G/100G module/DAC/AOC
Standards	
Standards	IEEE 802.3 -2005, IEEE 803.ab, IEEE802.3af, IEEE 802.1d, IEEE 802.1q, IEEE 802.3-2005 (802.3ae)、 IEEE 802.3ba (2010)802.1x

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 N5860-48SC Switch.



Figure 4.

Optics supported

For details about the optical modules available, visit:

N5860-48SC: [Transceivers DACs and AOCs Supported on N5860-48SC Switch](#)

Warranty, service and support

FS N5860-48SC Switch 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](#)

- 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 8 provides the ordering information for N5860-48SC switch.

Table 8. Ordering information

FS P/N	Product description
Switch hardware	
N5860-48SC (AC)	N5860-48SC, 48-Port Ethernet L3 Data Center Switch, 48 x 10Gb SFP+, with 8 x 100Gb QSFP28, Support MLAG/ Stacking, Broadcom Chip, Dual AC PSUs
GW-CRPS550N2C	Hot-swappable AC Power Module 550W, for N5860-48SC, N8560-48BC and N8560-32C
N5860-48SC (DC)	N5860-48SC, 48-Port Ethernet L3 Data Center Switch, 48 x 10Gb SFP+, with 8 x 100Gb QSFP28, Support MLAG/ Stacking, Broadcom Chip, Dual DC PSUs
U1D-D10800-DRB	Hot-swappable DC Power Module 800W, for N5860-48SC, N8560-48BC, N8560-32C

Additional information

For more information about the N5860-48SC Switch, contact your account manager or visit https://www.fs.com/search_result?keyword=N5860

Document history

New or revised topic	Described in	Date
Added Power Type: AC and DC	Updated Page 3, 5, 12	7/27/2023
Updates to FS N5860-48SC Switch Data Sheet	Updated all	12/6/2022



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