

# FS S5860 Series PicOS® Switches Data Sheet

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## Product overview

FS S5860 Series PicOS® Switches are high-performance and strong-security 10G L3 enterprise switch with advanced switching capacity. FS S5860-20SQ, S5860-24XB-U, S5860-48XMG-U, S5860-48MG-U, S5860-24MG-U, S5860-24XMG and S5860-48XMG are based on Broadcom® BCM56170.

The S5860-20SQ, a next-gen L3 switch with 20x 1G/10G downlinks, 4x 10G/25G SFP28 and 2x 40G QSFP+ (can be split into 4x 10G SFP+) uplinks. This managed enterprise switch adopts cutting-edge Broadcom chips to deliver 760 Gbps switching capacity and 565 Mpps forwarding rate. It is packed with redundant hot-swappable power supplies, dual hot-swappable smart fans, and a hardware-level dual-flash chip, equipped with MLAG features for superior processing performance and network reliability. FS agile S5860-20SQ managed switch is ideal for large-scale campus network aggregations, and small and medium-sized network cores, can be used for scenarios that require high-speed transmission and long-distance connectivity, such as data centers, remote offices, and WAN extensions. Pre-loaded with PicOS, equipped with comprehensive SDN features and compatible AmpCon management software, offering high network flexibility.

The S5860-24XB-U is FS-developed next-generation L3 multi-gigabit hybrid optical/electrical switch. This switch features 24x 100M/1000M/2.5G/5G/10GBase-T and 4x 1/10G SFP+ with 4x 10G/25G SFP28 uplinks. With wired and wireless convergence, it also complies with PoE++ standard. This managed enterprise switch support virtual stacking, adopts cutting-edge Broadcom chips to deliver 760 Gbps switching capacity and 565 Mpps forwarding rate. It is packed with redundant hot-swappable power supplies, hot-swappable smart fans for superior processing performance and network reliability. It is ideal for campus network access/aggregation, 10 GE data center server access, and high-speed wireless device access.Pre-loaded with PicOS, equipped with comprehensive SDN features and compatible AmpCon management software, offering high network flexibility.

The S5860-24MG-U is FS-developed next-generation multi-gigabit ethernet switch. This switch features 24x 100M/1000M/2.5G/5GBase-T with 4x 10G/25G SFP28 uplinks, catering for demands of high-density access and high-performance aggregation. It delivers robust performance, sound end-to-end service quality, and rich security functions for the aggregation layer of large-scale networks, the core layer of small- and medium-scale networks, and campus data centers. This satisfies requirements on high speed, security, and intelligence for enterprise campus networks.Pre-loaded with PicOS, equipped with comprehensive SDN features and compatible AmpCon management software, offering high network flexibility.

The S5860-48MG-U is FS-developed next-generation multi-gigabit ethernet switch. This switch features 48x 100M/1000M/2.5G/5GBase-T, 4x 25Gb SFP28, with 2x 40Gb QSFP+ Uplinks, catering for demands of high-density access and high-performance aggregation. It delivers robust performance, sound end-to- end service quality, and rich security functions for the aggregation layer of large-scale networks, the core layer of small- and medium-scale networks, and campus data centers. This satisfies requirements on high speed, security, and intelligence for enterprise campus networks.Pre-loaded with PicOS, equipped with comprehensive SDN features and compatible AmpCon management software, offering high network flexibility.

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S5860-48XMG-U is FS-developed next-generation multi-gigabit ethernet switch. This switch features 48 x 100M/1000M/2.5G/5G/10GBase-T, 4x 25Gb SFP28, with 2x 40Gb QSFP+ Uplinks, catering for demands of high-density access and high-performance aggregation. It delivers robust performance, sound end-to-end service quality, and rich security functions for the aggregation layer of large-scale networks, the core layer of small- and medium-scale networks, and campus data centers. This satisfies requirements on high speed, security, and intelligence for enterprise campus networks.Pre-loaded with PicOS, equipped with comprehensive SDN features and compatible AmpCon management software, offering high network flexibility.

S5860-24XMG is FS-developed next-generation multi-gigabit ethernet switch, which features 24x 100M/1000M/2.5G/5G/10GBase-T, 4 x 10Gb SFP+ and 2 x 25Gb SFP28 Uplinks. This managed enterprise switch adopts cutting-edge Broadcom chips to deliver 760 Gbps switching capacity and 565 Mpps forwarding rate. It is packed with redundant hot-swappable power supplies, dual hot-swappable smart fans and hardware-level dual-flash chip for superior processing performance and network reliability. FS agile S5860-24XMG managed switch is ideal for large-scale campus network aggregations, small and medium-sized network cores to meet the needs of high-density access and high-performance aggregation. Pre-loaded with PicOS, equipped with comprehensive SDN features and compatible AmpCon management software, offering high network flexibility.

S5860-48XMG is FS-developed next-generation multi-gigabit ethernet switch, which features 48x 100M/1000M/2.5G/5G/10GBase-T, 4x 25Gb SFP28 and 2x 40Gb QSFP+ Uplinks. This managed enterprise switch adopts cutting-edge Broadcom chips to deliver 760 Gbps switching capacity and 565 Mpps forwarding rate. It is packed with redundant hot-swappable power supplies, dual hot-swappable smart fans and hardware-level dual-flash chip for superior processing performance and network reliability. FS agile S5860-48XMG managed switch is ideal for large-scale campus network aggregations, small and medium-sized network cores to meet the needs of high-density access and high-performance aggregation. Pre-loaded with PicOS, equipped with comprehensive SDN features and compatible AmpCon management software, offering high network flexibility.

## Product highlights

- Broadcom Chip, Advanced Switching Capacity
- 1+1 Hot-swappable Power Supplies, Smart Fans
- With Resilient, Programmable, and Scalable Operating System PicOS®
- Support AmpCon™ Management Platform for Zero Touch Provisioning (ZTP)
- Support Ansible, OpenFlow, NETCONF, etc. Configuration and Automation Tools
- Support MLAG, ERPS, STPs, VRRP, BFD functions
- Support SNMP, CLI, PTP (Only support E2ETC) for Flexible Operation
- Support SSH, ACL, 802.1X, RADIUS, TACACS+, etc. for Security
- Up to 24 PoE++ Ports, Total Budget 740W (Only for S5860-24XB-U)
- Up to 24 PoE++ Ports, Total Budget 370W (Only for S5860-24MG-U)
- Up to 48 PoE++ Ports, Total Budget 1600W (Only for S5860-48MG-U and S5860-48XMG-U)

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# Platform details

## Switch models and configurations

Figures 1 through 7 show the FS S5860 series switches.

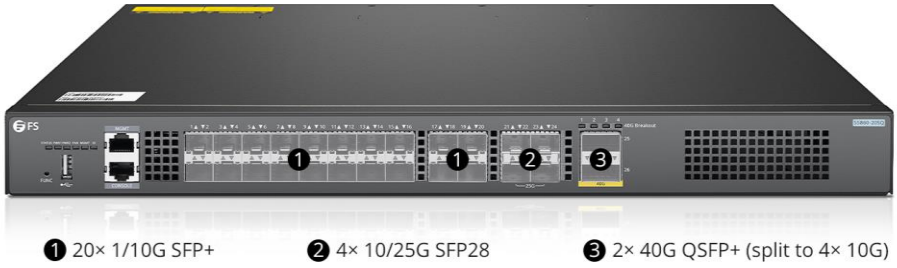



**Figure 1.**
S5860-20SQ, 24-Port Ethernet L3 Switch, 20 x 10Gb SFP+, with 4 x 25Gb SFP28 and 2 x 40Gb QSFP+, PicOS®, Support MLAG, Broadcom Chip




**Figure 2.**
S5860-24XB-U, 24-Port Ethernet L3 PoE++ Switch, 24 x 10GBASE-T/Multi-Gigabit, 4 x 10Gb SFP+, with 4 x 25Gb SFP28 Uplinks, PicOS®, Support MLAG, Broadcom Chip

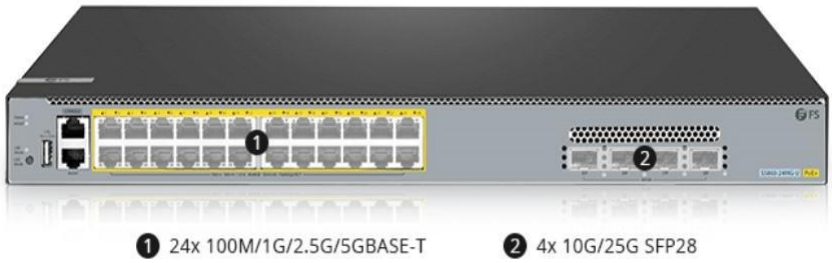



**Figure 3.**
S5860-24MG-U, 24-Port Ethernet L3 PoE++ Switch, 24 x 5GBASE-T/Multi-Gigabit Ports, with 4 x 25Gb SFP28 Uplinks, PicOS®, Support MLAG, Broadcom Chip

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# Platform details

## Switch models and configurations

Figures 1 through 7 show the FS S5860 series switches.

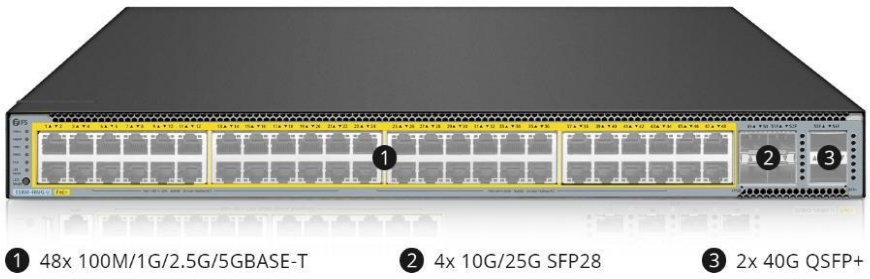



**Figure 4.**
S5860-48MG-U, 48-Port Ethernet L3 PoE++ Switch, 48 x 5GBASE-T/Multi-Gigabit Ports, 4 x 25Gb SFP28, with 2 x 40Gb QSFP+ Uplinks, PicOS®, Support MLAG, Broadcom Chip

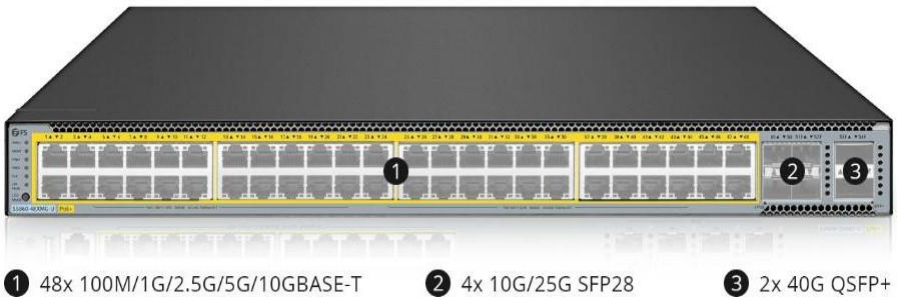



**Figure 5.**
S5860-48XMG-U, 48-Port Ethernet L3 PoE++ Switch, 48 x 10GBASE-T/Multi-Gigabit Ports, 4 x 25Gb SFP28 Uplinks, with 2 x 40Gb QSFP+ Uplinks, PicOS®, Support MLAG, Broadcom Chip

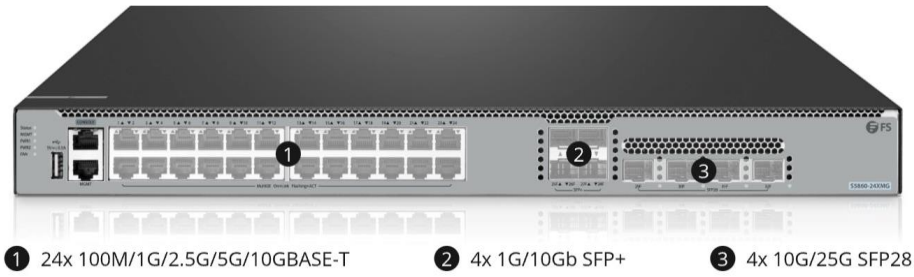



**Figure 6.**
S5860-24XMG, 24-Port Ethernet L3 Switch, 24 x 10GBASE-T/Multi-Gigabit Ports, 4 x 10Gb SFP+, with 4 x 25Gb SFP28 Uplinks, PicOS®, Support MLAG, Broadcom Chip

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# Platform details

## Switch models and configurations

Figures 1 through 7 show the FS S5860 series switches.

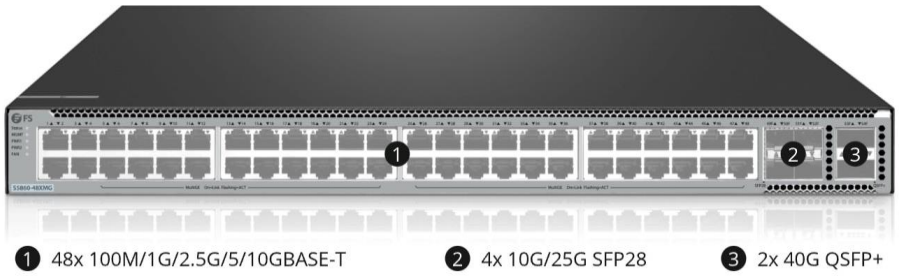



**Figure 7.**

S5860-48XMG, 48-Port Ethernet L3 Switch, 48 x 10GBASE-T/Multi-Gigabit Ports, 4 x 25Gb SFP28, with 2 x 40Gb QSFP+ Uplinks, PicOS®, Support MLAG, Broadcom Chip

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## Switch configurations and port density

Table 1 through 2 show the FS S5860 series configurations and port density.

**Table 1. Switch configuration and port density**

| FS P/N | S5860-20SQ | S5860-24XB-U | S5860-24MG-U |
|---|---|---|---|
| Description | S5860-20SQ, 24-Port Ethernet L3 Switch, 20 x 10Gb SFP+, with 4 x 25Gb SFP28 and 2 x 40Gb QSFP+, PicOS®, Support MLAG, Broadcom Chip | S5860-24XB-U, 24-Port Ethernet L3 PoE++ Switch, 24 x 10GBASE-T/Multi-Gigabit, 4 x 10Gb SFP+, with 4 x 25Gb SFP28 Uplinks, PicOS®, Support MLAG, Broadcom Chip | S5860-24MG-U, 24-Port Ethernet L3 PoE++ Switch, 24 x 5GBASE-T/Multi-Gigabit Ports, with 4 x 25Gb SFP28 Uplinks, PicOS®, Support MLAG, Broadcom Chip |
| **Port** | | | |
| 1G port density | 20 | 28 | - |
| 2.5/5G port density | - | - | 24 |
| 10G port density | 24 | 32 | 4 |
| 25G port density | 4 | 4 | 4 |
| 40G port density | 2 | - | - |
| 10G port density with breakout cable | 32 | 32 | - |
| 25G port density with breakout cable | 4 | 4 | - |
| 40G port density with breakout cable | 2 | - | - |
| Management ports | 1 | 1 | 1 |
| Console port | 1 | 1 | 1 |
| USB port | 1 | 1 | 1 |
| **Memory and processor** | | | |
| Switch chip | BCM56170 | BCM56170 | BCM56170 |
| CPU | ARM A9 Single-Core CPU, 1.25GHz | ARM A9 Single-Core CPU, 1.25GHz | ARM A9 Single-Core CPU, 1.25GHz |
| DRAM | 1GB | 1GB | 1GB |
| SDRAM | 1GB | 1GB | 1GB |
| Flash memory | 1GB | 1GB | 1GB |
| Packet buffer | 4MB | 4MB | 4MB |

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**Table 2. Switch configuration and port density**

| FS P/N | S5860-48MG-U | S5860-48XMG-U (S5860-48XMG) | S5860-24XMG |
|---|---|---|---|
| Description | S5860-48MG-U, 48-Port Ethernet L3 PoE++ Switch, 48 x 5GBASE-T/Multi-Gigabit Ports, 4 x 25Gb SFP28, with 2 x 40Gb QSFP+ Uplinks, PicOS®, Support MLAG, Broadcom Chip | 48-Port Ethernet L3 (PoE++) Switch, 48 x 10GBASE-T/Multi-Gigabit Ports, 4 x 25Gb SFP28, with 2 x 40Gb QSFP+ Uplinks, PicOS®, Support MLAG, Broadcom Chip | S5860-24XMG, 24-Port Ethernet L3 Switch, 24 x 10GBASE-T/Multi-Gigabit Ports, 4 x 10Gb SFP+, with 4 x 25Gb SFP28 Uplinks, PicOS®, Support MLAG, Broadcom Chip |
| **Port** | | | |
| 2.5/5G port density | 48 | 48 | 24 |
| 10G port density | 4 | 52 | 32 |
| 25G port density | 4 | 4 | 4 |
| 40G port density | 2 | 2 | - |
| Management ports | 1 | 1 | 1 |
| Console port | 1 | 1 | 1 |
| USB port | 1 | 1 | 1 |
| **Memory and processor** | | | |
| Switch chip | BCM56170 | BCM56170 | BCM56170 |
| CPU | ARM A9 Quad-Core CPU, 1.2GHz | ARM A9 Single-Core CPU, 1.25GHz | ARM A9 Single-Core CPU, 1.25GHz |
| DRAM | 2GB | 2GB | 2GB |
| SDRAM | 2GB | 2GB | 2GB |
| Flash memory | 1GB | 1GB | 1GB |
| Packet buffer | 4MB | 4MB | 4MB |

**Note:**

RJ45 ports can be used as 100M/1/2.5/5/10G ports for Ethernet connection, does not support 1G-T copper transceivers.

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

SFP28 can be used for 10/25G connection.

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

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

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## Power supplies and fans

The FS S5860 Series switches ship with the dual 1+1 redundant power supply as default.

Table 3 through 4 provide more details on the FS S5860 series power supplies and fan specifications.

**Table 3. Power supply and fan specifications**

| Description | S5860-20SQ | S5860-24XB-U | S5860-24MG-U |
|---|---|---|---|
| Power supply | Dual 1+1 redundant power supplies (AC) | Dual 1+1 redundant power supplies (AC) | Dual 1+1 redundant power supplies (AC) |
| Fan number | 2x Hot-swappable Fans | 3x Hot-swappable Fans (2+1 Redundancy) | 2 Hot-swappable Fans |
| Airflow | Front-to-Back | Front-to-Back and Left-to-Back | Front-to-Back and Left-to-Back |
| Acoustic noise | <78dB | <78dB | <78dB |
| Maximum fan speed | 18000rpm | 18000rpm | 18000rpm |
| Max. power consumption | 85W | 120W (without PDs) 860W (with PDs) | 460W |
| Power max rating | 150W | 515W | AC input: 90-290V, 45/65Hz |
| Input-voltage range and frequency | • Rated voltage range: 100-240VAC; 50-60Hz<br>• Maximum voltage range:<br>-AC input: 90-264VAC; 47-63Hz; | | |
| Power supply efficiency | 85% (220Vac 50% load) | 90% (230Vac 100% load) | 92% (220Vac 50% load) |
| Input current | 3A (MAX) at 90V | 7A (MAX) at 90V | 6A (MAX) at 90V |
| Output ratings | Main output: 12V 12.5A | Main output: 12V 12.5A<br>Standby output: 53.5V 7.11A | Main output: 56V 8.22A |
| Output holdup time | 20ms | 11ms | 20ms |
| Power-supply input receptacles | C13 | C13 | C13 |
| Power cord rating | 10A | 10A | 10A |
| PoE standard | - | IEEE 802.3af/at/bt | IEEE 802.3af/at/bt |
| PoE power budget | - | 370W (single-power);<br>740W (dual-power) | 370W (single-power) |

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## Table 4. Power supply and fan specifications

| Description | S5860-48MG-U | S5860-48XMG-U (S5860-48XMG) | S5860-24XMG |
|---|---|---|---|
| Power supply | Dual 1+1 redundant power supplies (AC) | Dual 1+1 redundant power supplies (AC) | Dual 1+1 redundant power supplies (AC) |
| Fan number | 2+1 Hot-swappable Fans | 2+1 Hot-swappable Fans | 2+1 Hot-swappable Fans |
| Airflow | Front-to-Back and Left-to-Back | Front-to-Back and Left-to-Back | Front-to-Back and Left-to-Back |
| Acoustic noise | <78dB | <78dB | <78dB |
| Maximum fan speed | 18000rpm | 18000rpm | 18000rpm |
| Max. power consumption | 2000W | 2000W (240W) | 120W |
| Power max rating | AC Input: 90-264V, 47/63 Hz | AC Input: 90-264V, 47/63 Hz | AC Input: 90-264V, 47/63 Hz |
| Input-voltage range and frequency | • Rated voltage range: 100-240VAC; 50-60Hz<br>• Maximum voltage range:<br>-AC input: 90-264VAC; 47-63Hz; | | |
| Power supply efficiency | 92% (220Vac 50% load) | 92% (220Vac 50% load) | 92% (220Vac 50% load) |
| Input current | 8A (MAX) at 90V | 8A (MAX) at 90V | 8A (MAX) at 90V |
| Output ratings | Main output: 56V 17.36A<br>Standby output: 56V 16.61A | Main output: 56V 17.36A<br>Standby output: 56V 16.61A<br>(Main output: 56V 8.22A<br>Standby output: 56V 16.61A) | Main output: 56V 8.22A<br>Standby output: 56V 16.61A |
| Output holdup time | 20ms | 20ms | 20ms |
| Power-supply input receptacles | C13 | C13 | C13 |
| Power cord rating | 10A | 10A | 10A |
| PoE standard | IEEE 802.3af/at/bt | IEEE 802.3af/at/bt<br>(Only for S5860-48XMG-U) | - |
| PoE power budget | 1600W (dual-power) | 1600W (dual-power)<br>(Only for S5860-48XMG-U) | - |

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## Switch performance

Table 5 through 6 show performance specifications for the FS S5860 series switches.

**Table 5. Performance specifications**

| Performance for all S5860 Series Switches | S5860-20SQ | S5860-24XB-U | S5860-24MG-U |
|---|---|---|---|
| Switching capacity | 760 Gbps | 760 Gbps | 440 Gbps |
| Forwarding rate | 565 Mpps | 565 Mpps | 327 Mpps |
| Total number of MAC addresses | 32768 | 32768 | 32768 |
| IPv4 Routes | 16000 | 16000 | 16000 |
| IPv6 Routes | 8000 | 8000 | 8000 |
| Jumbo frame | 9216 bytes | 9216 bytes | 9216 bytes |

**Table 6. Performance specifications**

| Performance for all S5860 Series Switches | S5860-48MG-U | S5860-48XMG-U (S5860-48XMG) | S5860-24XMG |
|---|---|---|---|
| Switching capacity | 840 Gbps | 1320 Gbps | 760 Gbps |
| Forwarding rate | 625 Mpps | 982 Mpps (for S5860-48XMG-U)<br>565 Mpps (for S5860-48XMG) | 565 Mpps |
| Total number of MAC addresses | 32768 | 32768 | 32768 |
| IPv4 Routes | 16000 | 16000 | 16000 |
| IPv6 Routes | 8000 | 8000 | 8000 |
| Jumbo frame | 9216 bytes | 9216 bytes | 9216 bytes |

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# Platform benefits

Table 7 lists the software spotlights for the FS S5860 series switches.

**Table 7. Software spotlights**

| Functionality | Description |
|---|---|
| High Availability | • Static BFD, Single-Hop BFD, Multi-Hop BFD, Dynamic BFD, BFD for BGP, BFD for OSPF, BFD for PIM-SM<br>• Uplink Failure Detection (UFD)<br>• Multi-Chassis Link Aggregation (MLAG)<br>• Virtual Router Redundancy Protocol (VRRP) v2/v3, VRRP Active-Standby, VRRP Active-Active, preempt mode, priority, authentication, accept mode, load-balance<br>• OSPFv2/OSPFv3 GR |
| IP Routing | • PBR (Policy-Based Routing)<br>• IPv4/v6 Addressing, SVI, Routed interface<br>• IPv4/IPv6 static routing, Multiple nexthop static route<br>• RIP, RIPng, OSPF v2/v3<br>• IPv4/IPv6 BGP<br>• Route Map<br>• PBR (Policy-Based Routing)<br>• IS-IS |
| Multicast | • IGMP v2/v3 query<br>• Protocol Independent Multicast-Sparse Mode (PIM-SM), Static RP, PIM Source-Specific Mode (PIM-SSM), PIM over GRE Tunnel<br>• PIM-SM Inter-domain Multicast Using MSDP, Anycast RP<br>• Multicast routing and forwarding<br>• Multicast VLAN Registration (MVR)<br>• IGMP v2/v3 snooping, mrouter port, static group, unregistered flood |
| Ethernet Switching | • Loopback Detection<br>• Ethernet Ports Management Configuration<br>• Static MAC entries and Dynamic MAC Address Learning<br>• Static Link Aggregation (LAG) Configuration<br>• VLAN Port Mode: ACCESS, Trunk<br>• VLAN: Port-based VLAN, MAC Trace, MAC-based VLAN<br>• QinQ: Basic QinQ, Flexible QinQ<br>• VLAN registration: GVRP, MVRP<br>• Private VLAN<br>• Voice VLAN<br>• Spanning Tree Protocol (STP): STP, RSTP, MSTP, PVST+, BPDU Filter, BPDU Root Guard, BPDU TCN-Guard, BPDU-Guard, Root Guard, Edge port, Manual forwarding<br>• Ethernet Ring Protection Switching (ERPS) : ERPS v2<br>• Unidirectional Link Detection (UDLD)<br>• Loopback Detection |
| Security | • IP Source Guard (IPSG)<br>• AAA Radius/TACACS+, Console Login, OUT-band/INBAND Login, Local Authentication, local authentication fallback<br>• NAC: 802.1X, MAC authentication, CWA authentication<br>• Enable or disabel port security<br>• Dynamic Address Resolution Protocol (ARP) inspection (DAI)<br>• Trust Port, ARP Packets Validity Checking, User Legitimacy Checking, ARP Inspection Access List<br>• Control Plane Policing (CoPP)<br>• IP Source Guard (IPSG)<br>• IPv6 Source Guard<br>• IPv6 DHCP Guard<br>• IPv6 DHCP Snooping |
| Quality of Service | • Queue scheduler: SP WRR WFQ<br>• Traffic policing: guaranteed-rate, max-rate, Traffic classifier<br>• Congestion management: WRED<br>• Congestion avoidance: ECN |

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| Functionality | Description |
| --- | --- |
| Access Control List | • Downloadable ACL<br>• Dynamic ACL<br>• Match field: destination-address-ipv4, destination-address-ipv6, destination-mac-address, destination-port, ether-type, first-fragment, ip, is-fragment, protocol, source-address-ipv4, source-address-ipv6, source-mac-address, source-port, time-range, vlan<br>• ACL-based Traffic Policer<br>• ACL-based QoS<br>• ACL-based remarked |
| Device Management | • Hardware management: power supply, fan<br>• Syslog management<br>• Power-on diagnostics<br>• Recovery procedure<br>• Device configuration method: Manual configuration, Zero Day configuration<br>• Local file management, Configuration file management<br>• File operations via FTP/TFTP/HTHP<br>• Install from a local directory, Automatically install<br>• Certificate Configuration<br>• User management: console interface configuration, VTY interface configuration, Username, password, and permission configuration<br>• User login: console, SSH, telnet<br>• Time configuration: Manual time configuration, Network Time Protocol (NTP)<br>• Domain Name System (DNS)<br>• NETCONF, RESTCONF, OpenFlow, RMON, sFlow<br>• Simple Network Management Protocol (SNMP) |
| IP Service | • IPv4 Basic Configuration<br>• Address Resolution Protocol (ARP): Static ARP, Dynamic ARP, ARP Proxy<br>• Dynamic Host Configuration Protocol (DHCP): DHCP server and DHCP client, DHCP relay and DHCP relay option82, DHCPv6 Relay, DHCP snooping, DHCP snooping trust-port, DHCP snooping option82<br>• Equal-Cost Multipath Routing (ECMP): Max path, Load balancing, Symmetric<br>• Virtual Routing and Forwarding (VRF): Base VRF, Management VRF and VRF Route Leaking<br>• IPv6: IPv6 DHCP Relay, IPv6 NDP, IPv6 ECMP, Path MTU Discovery |

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# Product specifications

Table 8 through 9 show the product specifications for the FS S5860 series switches.

**Table 8. Product specifications**

| Description | S5860-20SQ | S5860-24XB-U |
|---|---|---|
| **Environmental** | | |
| Operating temperature | 0 to 50°C (32 to 122°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) |
| Operating humidity | 10% to 90% (Non-condensing) | 10% to 90% (Non-condensing) |
| Storage humidity | 5% to 95% (Non-condensing) | 5% to 95% (Non-condensing) |
| Temperature alarm | Supported | Supported |
| Acoustic noise | <78dB | <78dB |
| **Physical specifications** | | |
| Dimensions (HxWxD) | 1.72"x17.32"x12.99" (43.6x440x330mm) | 1.74"x17.32"x17.81" (44.1x440x452.5mm) |
| Rack units (RU) | 1 RU | 1 RU |
| Weight | 10.14 lbs (4.6kg) | 21.6 lbs (9.8kg) |
| Distance | - | - |
| **Electrical** | | |
| Voltage (auto ranging) | 100-240VAC | 100-240VAC |
| Frequency | 50-60Hz | 50-60Hz |
| Current | 3A Max | 3A Max |
| Power rating (maximum consumption) | 85W | 515W (single-power); 1030W (dual-power) |
| **Mean-time between failures** | | |
| MTBF (hours) | >366000 | >233000 |

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| Description | S5860-20SQ | S5860-24XB-U |
|---|---|---|

## Connectors

| | |
|---|---|
| **Connectors and cabling** | • 1/10GBASE-T ports: RJ45 connectors, 4-pair Cat5E/Cat6/Cat6a UTP cabling<br>• SFP transceivers: LC fiber connectors (single-mode or multimode fiber)<br>• SFP+ transceivers: LC fiber connectors (single-mode or multimode fiber)<br>• SFP28 transceivers: LC fiber connectors (single-mode or multimode fiber)<br>• QSFP+ transceivers: MPO and LC fiber connectors (single-mode or multimode fiber)<br>• QSFP28 transceivers: MPO and LC fiber connectors (single-mode or multimode fiber)<br>• Ethernet management port: RJ45 connectors, 4-pair Cat5 UTP cabling<br>• Management console port: RJ45-to-DB9 cable for PC connections |
| **Power connectors** | • Customers can provide power to a switch by using the internal power at the back of the switch<br>• 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, SNMPV1 V2 V3 |

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## Table 9. Product specifications

| Description | S5860-24MG-U | S5860-48MG-U | S5860-48XMG-U (S5860-48XMG) | S5860-24XMG |
|---|---|---|---|---|
| **Environmental** | | | | |
| Operating temperature | 0 to 45°C (32 to 113°F ) | 0 to 45°C (32 to 113°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) | –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) | 10% to 90% (Non-condensing) |
| Storage humidity | 5% to 95% (Non-condensing) | 5% to 95% (Non-condensing) | 5% to 95% (Non-condensing) | 5% to 95% (Non-condensing) |
| Temperature alarm | Supported | Supported | Supported | Supported |
| Acoustic noise | <78dB | <78dB | <78dB | <78dB |
| **Physical specifications** | | | | |
| Dimensions (HxWxD) | 1.72''x17.4''x16.5'' (43.6x442x420mm) | 1.72''x17.4''x16.5'' (43.6x442x420mm) | 1.72''x17.4''x16.5'' (43.6x442x420mm) | 1.72''x17.4''x16.5'' (43.6x442x420mm) |
| Rack units (RU) | 1 RU | 1 RU | 1 RU | 1 RU |
| Weight | 8.2 lbs (3.7kg) | 17.8 lbs (8.1kg) | 17.8 lbs (8.1kg) | 17.8 lbs (8.1kg) |
| Distance | 100M | 100M | 100M | 100M |
| **Electrical** | | | | |
| Voltage (auto ranging) | 100-240VAC | 100-240VAC | 100-240VAC | 100-240VAC |
| Frequency | 50-60Hz | 50-60Hz | 50-60Hz | 50-60Hz |
| Current | 6A Max | 8A Max | 8A Max | 8A Max |
| Power rating (maximum consumption) | 460W | 2000W | 2000W (240W) | 120W |

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| Description | S5860-24MG-U | S5860-48MG-U | S5860-48XMG-U (S5860-48XMG) | S5860-24XMG |
|---|---|---|---|---|
| **Mean-time between failures** | | | | |
| MTBF (hours) | >194,297 | >236,695 | >236,695 | >236,695 |
| **Connectors** | | | | |
| Connectors and cabling | • 1/10GBASE-T ports: RJ-45 connectors, 4-pair Cat5E/Cat6/Cat6a UTP cabling<br>• SFP transceivers: LC fiber connectors (single-mode or multimode fiber)<br>• SFP+ transceivers: LC fiber connectors (single-mode or multimode fiber)<br>• SFP28 transceivers: LC fiber connectors (single-mode or multimode fiber)<br>• QSFP+ transceivers: MPO and LC fiber connectors (single-mode or multimode fiber)<br>• QSFP28 transceivers: MPO and LC fiber connectors (single-mode or multimode fiber)<br>• Ethernet management port: RJ-45 connectors, 4-pair Cat5 UTP cabling<br>• Management console port: RJ-45-to-DB9 cable for PC connections | | | |
| Power connectors | • Customers can provide power to a switch by using the internal power at the back of the switch<br>• 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, SNMPV1 V2 V3 | | | |

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## 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 9 shows some of the authoritative certifications obtained by FS S5860 Series Switches.




**Figure 9**

## Warranty, service and support

FS S5860 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

- 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

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# Ordering information

Table 10 provides the ordering information for S5860 series switches.

**Table 10. Ordering information**

| FS P/N | Product description |
|---|---|
| **Switch hardware** | |
| S5860-20SQ | S5860-20SQ, 24-Port Ethernet L3 Switch, 20 x 10Gb SFP+, with 4 x 25Gb SFP28 and 2 x 40Gb QSFP+, PicOS®, Support MLAG, Broadcom Chip |
| S5860-24XB-U | S5860-24XB-U, 24-Port Ethernet L3 PoE++ Switch, 24 x 10GBASE-T/Multi-Gigabit, 4 x 10Gb SFP+, with 4 x 25Gb SFP28 Uplinks, PicOS®, Support MLAG, Broadcom Chip |
| S5860-24MG-U | S5860-24MG-U, 24-Port Ethernet L3 PoE++ Switch, 24 x 5GBASE-T/Multi-Gigabit Ports, with 4 x 25Gb SFP28 Uplinks, PicOS®, Support MLAG, Broadcom Chip |
| S5860-48MG-U | S5860-48MG-U, 48-Port Ethernet L3 PoE++ Switch, 48 x 5GBASE-T/Multi-Gigabit Ports, 4 x 25Gb SFP28, with 2 x 40Gb QSFP+ Uplinks, PicOS®, Support MLAG, Broadcom Chip |
| S5860-48XMG-U | S5860-48XMG-U, 48-Port Ethernet L3 PoE++ Switch, 48 x 10GBASE-T/Multi-Gigabit Ports, 4 x 25Gb SFP28 Uplinks, with 2 x 40Gb QSFP+ Uplinks, PicOS®, Support MLAG, Broadcom Chip |
| S5860-24XMG | S5860-24XMG, 24-Port Ethernet L3 Switch, 24 x 10GBASE-T/Multi-Gigabit Ports, 4 x 10Gb SFP+, with 4 x 25Gb SFP28 Uplinks, PicOS®, Support MLAG, Broadcom Chip |
| S5860-48XMG | S5860-48XMG, 48-Port Ethernet L3 Switch, 48 x 10GBASE-T/Multi-Gigabit Ports, 4 x 25Gb SFP28, with 2 x 40Gb QSFP+ Uplinks, PicOS®, Support MLAG, Broadcom Chip |
| **Power supplies** | |
| PSM-C150WAC | Hot-swappable AC Power Module 150W, for S5860-20SQ, S5810-48FS Switches |
| P1D-K0150-B | Hot-swappable DC Power Module 150W, for S5810-48FS |
| PSM-C515WACP | Hot-swappable AC Power Module 515W, for S5860-24XB-U |
| **Fan Module** | |
| M1SFAN-I-F | Hot-swappable Fan Module, Front-to-Back Airflow through the S5860-20SQ |

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## Additional information

For more information about the S5860 Series PicOS® Switches, contact your account manager or visit https://www.fs.com/search_result?keyword=S5860

## Document history

| New or revised topic | Described in | Date |
|---|---|---|
| **Updates to FS S5860 Series Switches Data Sheet** | Updated Platform Benefits | 2024-07-26 |
| **Updates to FS S5860 Series Switches Data Sheet** | Updated Platform Benefits | 2024-07-16 |
| **Updates to FS S5860 Series Switches Data Sheet** | Updated Product Highlights and Description | 2024-06-06 |
| **Updates to FS S5860 Series Switches Data Sheet** | Updated all | 2024-02-01 |

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