## GFS

## FS S3900 Series Switches Data Sheet

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## I Product overview

FS S3900 series switches are high-performance Gigabit Ethernet L2+/L3 Lite managed switches with $128 \mathrm{Gbps} / 176 \mathrm{Gbps}$ switching capacity. They are ideal Gigabit access switches for SMB, enterprise, and campus networks.

FS S3900-R series switches is a next-generation aggregation 10GE switch with 24 or 48 1G ports and 4 or 6 10G uplinks. It is targeted at the IP MAN (metropolitan area network), government and enterprise networks. It supports functions such as powerful ACL, flexible QinQ, 1:1 or N:1 VLAN switching, Ethernet OAM, carrier-level QoS and industry-level 10GE Ethering, ensuring this switch series meets application requirements in all kinds of complicated sites.

The S3900-24T4S, 24-port Ethernet L2+ stackable switch has $24 x$ Gigabit RJ45, with $4 x$ 10Gb SFP+ Uplinks. The S3900-48T4S, 48-port Ethernet L2+ stackable switch has 48 x Gigabit RJ45, with $4 x 10 G b$ SFP+ Uplinks. The S3900-24F4S, 20-port Ethernet L2+ stackable switch has 20x 1Gb SFP, 4x Gigabit Combo, with 4x 10Gb SFP+ Uplinks.

S3900 Series switches adopt the most cutting-edge Broadcom chip, can provide 128/176 Gbps switching capacity and 95/130 Mpps forwarding rate. With 1 and 10 Gb connections and advanced QoS to the edge of the network, while maintaining simple management. The S3900 series is an ideal Gigabit access and aggregation switch, designed for small and medium-sized enterprises, enterprises, mid-market and branch networks, which can reduce the total cost of ownership.

S3900-24T4S-R is an advanced Layer 2 Plus (Layer 3 Lite) Gigabit managed stackable switches with $24 x$ 10/100/1000BASE-T and 4x 10Gb SFP+ uplinks, dual redundant power supplies and the fanless design guarantees the switch always working silently, and ensures that the power supply of the switch will not be interrupted even if it fails, providing improved ease of use, highly secure business operations, improved sustainability, and a borderless network experience. S3900-24F4S-R is an advanced Layer 2 Plus (Layer 3 Lite) Gigabit managed stackable switches with 8x 1G RJ45/SFP Combo, 16x SFP ports, 4x 10G SFP+ uplinks, dual redundant power supplies and dual fans design guarantees the stable operation of the switch, providing improved ease of use, highly secure business operations, improved sustainability, and a borderless network experience. S3900-48T6S-R is an advanced Layer 2 Plus (Layer 3 Lite) Gigabit managed stackable switches with 48x 10/100/1000BASE-T and 6x 10Gb SFP+ uplinks, dual redundant power supplies and dual fans design ensures that the power supply of the switch will not be interrupted even if it fails, providing improved ease of use, highly secure business operations, improved sustainability, and a borderless network experience.

The S3900-R series switches support stacking capability with 1 and 10 Gigabit connectivity and advanced QoS to the network edge, while maintaining simple management. Ideal Gigabit access and aggregation switches designed for SMB, enterprise, midmarket, and branch office networks to provide lower total cost of ownership.

## | Product highlights

- Broadcom Chip, Support Up to 6 Units Stacking Between S3900 Series
- No Broadcom Chip, Support Stacking Between S3900-R Series
- 1+1 Redundant Power Supplies for S3900 Series
- Dual Power Supplies for S3900-R Series
- Support QoS, LACP, ACL, VLANs, DHCP, ERPS, etc.
- IPv4/IPv6 Dual Protocol Stack
- Support CLI/WEB/SNMP/SSH for Flexible Operation
- Network Monitoring through Sampled Flow (sFlow)
- Support SSH, ACL, 802.1X, RADIUS, TACACS+, etc. for Security
- Comprehensive Layer 2+ Functionality with No License Required


## | Platform details

## Switch models and configurations

Figures 1 through 3 show the FS S3900 series switches.


Figure 1.
S3900-24T4S, 24-Port Gigabit Ethernet L2+ Switch, $24 \times$ Gigabit RJ45, with $4 \times 10 G b$ SFP+ Uplinks, Stackable Switch, Broadcom Chip, Fanless


Figure 2.
S3900-24F4S, 20-Port Gigabit Ethernet L2+ Switch, $20 \times 1$ Gb SFP, $4 \times$ Gigabit RJ45/SFP Combo, with $4 \times 10 \mathrm{~Gb}$ SFP+ Uplinks, Stackable Switch, Broadcom Chip


Figure 3.
S3900-48T4S, 48-Port Gigabit Ethernet L2+ Switch, $48 \times$ Gigabit RJ45, with $4 \times 10 G b$ SFP+ Uplinks, Stackable Switch, Broadcom Chip

## | Platform details

## Switch models and configurations

Figures 4 through 6 show the FS 3900-R series switches.


Figure 4.
S3900-24T4S-R, 24-Port Gigabit Ethernet L2+ Switch, $24 \times$ Gigabit RJ45, with $4 \times 10 G b$ SFP+ Uplinks, Stackable Switch, Fanless


Figure 5.
S3900-24F4S-R, 16-Port Gigabit Ethernet L2+ Switch, 16x 1Gb SFP, with 8x Gigabit RJ45/SFP Combo, $4 \times 10 \mathrm{~Gb}$ SFP+ Uplinks, Stackable Switch


Figure 6.
S3900-48T6S-R, 48-Port Gigabit Ethernet L2+ Switch, $48 \times$ Gigabit RJ45, with $6 \times 10 G b$ SFP+ Uplinks, Stackable Switch

## Switch configurations and port density

Table 1 shows the FS S3900 series configurations and port density.
Table 1. Switch configuration and port density of S3900 Series Switches

| FS P/N | S3900-24T4S | S3900-24F4S | S3900-48T4S |
| :---: | :---: | :---: | :---: |
| Description | 24-Port Gigabit Ethernet L2+ Lan Access Switch, $24 \times$ Gigabit RJ45, with $4 \times 10 \mathrm{~Gb}$ SFP+ | 20-Port Gigabit Ethernet L2+ Lan Access Switch, $20 \times 1$ Gb SFP, $4 \times$ Gigabit RJ45/SFP Combo, with $4 x$ 10Gb SFP+ | 48-Port Gigabit Ethernet L2+ Lan Access Switch, $48 \times$ Gigabit RJ45, with $4 \times 10 \mathrm{~Gb}$ SFP+ |
| Port |  |  |  |
| 1G port density | 28 | 28 | 52 |
| 10G port density | 4 | 4 | 4 |
| Combo Ports | - | 4 (RJ45/SFP) | - |
| Management ports | 1 | 1 | 1 |
| Console port | 1 | 1 | 1 |
| Memory and processor |  |  |  |
| Switch chip | BCM56150 | BCM56151 | BCM56150 |
| OS | FSOS | FSOS | FSOS |
| RAM | 128MB | 128MB | 128MB |
| DDRIII Capacity | 512MB | 512MB | 512MB |
| Flash memory | 64MB | 64MB | 64MB |
| Packet Buffer | 1.5MB | 1.5MB | 1.5MB |

Table 2. Switch configuration and port density of S3900-R Series Switches

| FS P/N | S3900-24T4S-R | S3900-24F4S-R | S3900-48T6S-R |
| :---: | :---: | :---: | :---: |
| Description | 24-Port Gigabit Ethernet L2+ Lan Access Switch, $24 \times$ Gigabit RJ45, with $4 \times 10 \mathrm{~Gb}$ SFP+ | 16-Port Gigabit Ethernet L2+ Lan Access Switch, 16x 1Gb SFP, with 8x Gigabit RJ45/SFP Combo, 4 x 10Gb SFP+ | 48-Port Gigabit Ethernet L2+ Lan Access Switch, $48 \times$ Gigabit RJ45, with $6 \times 10 \mathrm{~Gb}$ SFP+ |
| Port |  |  |  |
| 10/100/1000BASE-T RJ45 port density | 24 | - | 48 |
| 1G port density | - | 16 | - |
| Combo ports density | - | 8 (RJ45/SFP) | - |
| 10G port density | 4 | 4 | 6 |
| Console port | 1 | 1 | 1 |
| Memory and processor |  |  |  |
| CPU | RTL9311-CG | RTL9301-CG | RTL9311-CG |
| OS | FSOS | FSOS | FSOS |
| RAM | 256MB | 256MB | 256MB |
| Flash memory | 16MB | 16MB | 16MB |
| Packet Buffer | 1.5MB | 1.5MB | 1.5MB |

Note:
RJ45 ports can be used as 10M/100M/1G ports for Ethernet connection. SFP ports are used for 1G connection. SFP+ ports can be used for 1/10G connection. RJ45/SFP Combo ports support one port active at a time.

## Power supplies and fans

The FS S3900 Series switches ship with the dual AC power supply as default.
Table 3 through 4 provide more details on the FS S3900 series power supplies and fan specifications.
Table 3. Power supply and fan specifications of S3900 Series Switches

| Description | S3900-24T4S | S3900-24F4S | S3900-48T4S |
| :--- | :--- | :--- | :--- |
| Power supply | $1+1$ redundant power supplies - <br> internaL | $1+1$ redundant power supplies - <br> internaL | $1+1$ redundant power supplies - <br> internaL |
| Fan number | Fanless | 2 built-in Fans | 1 built-in Fan |


| Description | S3900-24T4S | S3900-24F4S | S3900-48T4S |
| :---: | :---: | :---: | :---: |
| Airflow | - | Front-to-Back | Left-to-Right |
| Acoustic noise | OdB | 52 dB | 54 dB |
| Maximum fan speed | - | $13000 \pm 10 \%$ | $13000 \pm 10 \%$ |
| Max. power consumption | 21W | 43W | 45W |
| Power max rating | 24W | 60W | 60W |
| Input-voltage range and frequency | - Rated voltage range: $100-240 \mathrm{VAC} ; 50-60 \mathrm{~Hz}$ |  |  |
| Power supply efficiency | $\geq 75 \%$ | $\geq 75 \%$ | $\geq 75 \%$ |
| Input current | 0.8A | 1.5A | 1.5A |
| Output ratings | 12V | 12 V | 12 V |
| Power-supply input receptacles | C13 | C13 | C13 |
| Power cord rating | 10A | 10A | 10A |

Table 4. Power supply and fan specifications of S3900-R Series Switches

| Description | S3900-24T4S-R | S3900-24F4S-R | S3900-48T6S-R |
| :---: | :---: | :---: | :---: |
| Power supply | 2 built-in power supplies | 2 built-in power supplies | 2 built-in power supplies |
| Fan number | Fanless | 2 built-in fans | 2 built-in Fans |
| Airflow | - | Left-to-Right | Left-to-Right |
| Acoustic noise | OdB | 45 dB | 45dB |
| Maximum fan speed | $6200 \pm 10 \%$ | $6200 \pm 10 \%$ | $6200 \pm 10 \%$ |
| Max. power consumption | 37 W | 40W | 42W |
| Power max rating | 36W | 36W | 78W |
| Input-voltage range and frequency | - Rated voltage range: $100-240 \mathrm{VAC} ; 50-60 \mathrm{~Hz}$ |  |  |
| Power supply efficiency | $\geq 84 \%$ | 284\% | $\geq 82 \%$ |


| Description | S3900-24T4S-R | S3900-24F4S-R | S3900-48T6S-R |
| :---: | :---: | :---: | :---: |
| Input current | 1.2A | 1.2A | 2A |
| Output ratings | 12 V | 12 V | 12 V |
| Output holdup time | $\geq 10 \mathrm{~ms}$ | $\geq 10 \mathrm{~ms}$ | $\geq 10 \mathrm{~ms}$ |
| Power-supply input receptacles | C13 | C13 | C13 |
| Power cord rating | 250V 10A | 250V 10A | 250V 10A |

## Stacking

The FS S3900 Series switch models are designed for stacking switches as a single virtual switch, enabling customers to have a single management plane and control plane for up to 384 access ports.

Table 5 through 6 list the supported stacking options.
Table 5. Supported stacking options of S3900 Series Switches

| Part Name | S3900-24T4S | S3900-24F4S | S3900-48T4S |
| :--- | :--- | :--- | :--- |
| Stacking ports $27 \sim 28$ | Port 27~28 | Port 51~52 |  |
| Supported stack members | Stack with same models with the same <br> OS version | Stack with same models with <br> the same OS version | Stack with same models with the <br> same OS version |
| Maximum number of VSL <br> links | 2 | 2 | 2 |
| Number of members | 6 | 6 | 6 |

Table 6. Supported stacking options of S3900-R Series Switches

| Part Name | S3900-24T4S-R | S3900-24F4S-R | S3900-48T6S-R |
| :---: | :---: | :---: | :---: |
| Stacking ports | Port 25~28 | Port 25~28 | Port 49~54 |
| Supported stack members | Stack with other S3900-24F4S-R with the same OS version | Stack with other S3900- <br> 24T4S-R with the same OS version | Stack with same models with the same OS version |
| Maximum number of VSL links | 2 | 2 | 2 |
| Number of members | 8 | 8 | 6 |

## Switch performance

Table 7 through 8 show performance specifications for the FS S3900 series switches.
Table 7. Performance specifications of S3900 Series Switches

| Performance for all S3900 Series Switches | S3900-24T4S | S3900-24F4S | S3900-48T4S |
| :---: | :---: | :---: | :---: |
| Switching capacity | 128 Gbps | 128 Gbps | 176 Gbps |
| Forwarding rate | 95 Mpps | 95 Mpps | 130 Mpps |
| Total number of MAC addresses | 16000 | 16000 | 16000 |
| Total number of IPv4 routes (indirect routes) | 128 | 128 | 128 |
| Total number of IPv4 host routes (direct routes and ARP) | 512 | 512 | 512 |
| Total number of IPv6 routes (indirect routes) | 64 | 64 | 64 |
| Total number of IPv6 host routes (direct routes and NDP) | 256 | 256 | 256 |
| QoS ACL scale | 512 | 512 | 512 |
| Security ACL scale | 512 | 512 | 512 |
| VLAN IDs | 4000 | 4000 | 4000 |
| STP virtual ports (port* VLANs) for MST | 16 instance | 16 instance | 16 instance |
| Total switched virtual interfaces (SVIs) | 32 | 32 | 32 |
| Jumbo frame | 9216 bytes | 9216 bytes | 9216 bytes |

## Table 8. Performance specifications of S3900-R Series Switches

| Performance for all S3900 Series Switches | S3900-24T4S-R | S3900-24F4S-R | S3900-48T6S-R |
| :---: | :---: | :---: | :---: |
| Switching capacity | 128 Gbps | 128 Gbps | 216 Gbps |
| Forwarding rate | 96 Mpps | 96 Mpps | 162 Mpps |
| Total number of MAC addresses | 16000 | 16000 | 16000 |
| Total number of IPv4 routes (indirect routes) | 502 | 502 | 502 |
| Total number of IPv4 host routes (direct routes and ARP) | 2040 | 2036 | 512 |
| Total number of IPv6 routes (indirect routes) | 132 | 129 | 152 |
| Total number of IPv6 host routes (direct routes and NDP) | 1000 | 2040 | 152 |
| Total number of IPv4 multicast routes | 1024 | 1024 | 1024 |
| Total number of IPv6 multicast routes | 1024 | 1024 | 1024 |
| QoS ACL scale | 1407 | 1150 | 2174 |
| Security ACL scale | 1407 | 1150 | 2174 |
| VLAN IDs | 4000 | 4000 | 4000 |
| STP virtual ports (port* VLANs) for MST | 28 | 28 | 54 |
| Total switched virtual interfaces (SVIs) | 63 | 63 | 63 |
| Jumbo frame | 9216 bytes | 9216 bytes | 9216 bytes |

## Platform benefits

Table 9 lists the software spotlights for the FS S3900 series switches.

## Table 9. Software spotlights

| Functionality | Description |
| :---: | :---: |
| VLAN | Support 4K Active VLAN <br> Support GVRP <br> Support Voice VLAN |
| Virtual stacking for simplified management | up to 6 units stacking (Only for $\$ 3900$ Series) up to 8 units stacking (Only for S3900-R Series) <br> Simplified network management <br> Fault recovery within milliseconds <br> All 10G ports support stacking |
| Sound security protection policies | Support Local/Radius Authentication <br> Support Port-based Authentication <br> Support Mac-based Authentication HTTPS and SSL (v3) <br> Support DHCP snooping <br> Support IP Source guard <br> Support DoS Protection |
| High reliability and energy efficiency | Support IEEE 802.1D Spanning Tree Protocols (STPs) <br> Support IEEE 802.1w Rapid Spanning Tree Protocol (RSTP) <br> Support IEEE 802.1s Multiple Spanning Tree Protocol (MSTP) <br> Support BPDU Guard/filtering/transparent <br> Support Root Guard <br> Support Loopback Detection <br> Hardware architecture to reduce energy consumption and noise <br> Variable-speed axial fans to intelligently control the fan speed |
| Perfect compatibility performance | Support the spanning tree protocols (STPs) <br> Support virtual router redundancy protocol (VRRP) <br> Support rapid link detection protocol (RLDP) <br> Support rapid Ethernet uplink protection protocol (REUP) <br> Support bidirectional forwarding detection (BFD) |
| Perfect compatibility performance | Support IEEE802.3 standard protocols, enabling good interoperability with other brands of equipment at the forwarding level <br> Compatible with standard protocols such as STP/RSTP/MSTP/SNMP/DHCP/NTP of other equipment based on public agreement <br> Compatible with market main stream AP/camera/IP phone/optical module |
| Easy network maintenance | Support SNMP (Managed by Zabbix), RMON, HTTP, log Support Syslog, Web-based management, Telnet, SSH CLI style is similar to Cisco, easy to learn |
| IPv4/IPv6 dual-stack multi-layer switching | Support line-rate IPv4/IPv6 dual-stack multi-layer switching Support static routing |
| Access Control Lists (ACLs) | Robust L2/L3/L4 feature <br> Support traffic statistics <br> Support Global ACL <br> Support IPv4/IPv6/MAC/ARP ACL |
| Varied Service Support Capability | Support IGMP snooping <br> Support IPv6 Neighbor Discovery <br> Support IPv6 DHCP Snooping |

## \| Software requirements

The FS S3900 Series Switches run on FS OS Software version.
Table 10 lists the latest software requirements for the switch models.

## Table 10. Latest software requirements

| FS P/N | Description | Latest software requirements |
| :---: | :---: | :---: |
| S3900-24T4S | S3900-24T4S, 24-Port Gigabit Ethernet L2+ Switch, $24 \times$ Gigabit RJ45, with $4 \times$ 10Gb SFP+ Uplinks, Stackable Switch, Broadcom Chip, Fanless | FSOS MR V0173 Software |
| S3900-24F4S | S3900-24F4S, 20-Port Gigabit Ethernet L2+ Switch, $20 \times 1$ Gb SFP, $4 \times$ Gigabit RJ45/SFP Combo, with $4 \times 10 G b$ SFP+ Uplinks, Stackable Switch, Broadcom Chip | FSOS MR V0174 Software |
| S3900-48T4S | S3900-48T4S, 48-Port Gigabit Ethernet L2+ Switch, $48 \times$ Gigabit RJ45, with $4 \times$ 10Gb SFP+ Uplinks, Stackable Switch, Broadcom Chip | FSOS MR V0173 Software |
| S3900-24T4S-R | S3900-24T4S-R, 24-Port Gigabit Ethernet L2+ Switch, $24 \times$ Gigabit RJ45, with $4 \times$ 10Gb SFP+ Uplinks, Stackable Switch, Fanless | FSOS 2.2.0E 99013 Software |
| S3900-24F4S-R | S3900-24F4S-R, 16-Port Gigabit Ethernet L2+ Switch, 16x 1Gb SFP, with 8x Gigabit RJ45/SFP Combo, $4 \times 10 \mathrm{~Gb}$ SFP+ Uplinks, Stackable Switch | FSOS 2.2.0E 99013 Software |
| S3900-48T6S-R | S3900-48T6S-R, 48-Port Gigabit Ethernet L2+ Switch, $48 \times$ Gigabit RJ45, with $6 x$ 10Gb SFP+ Uplinks, Stackable Switch | FSOS 2.2.0E 99729 Software |

## I Product specifications

## Table 11. Product specifications of S3900 Series Switches

Table 11 through 12 show the product specifications for the FS S3900 series switches.

| Description | S3900-24T4S | S3900-24F4S | S3900-48T4S |
| :---: | :---: | :---: | :---: |
| Environmental |  |  |  |
| Operating temperature | $32^{\circ} \mathrm{F}$ to $122^{\circ} \mathrm{F}\left(0^{\circ} \mathrm{C}\right.$ to $\left.50^{\circ} \mathrm{C}\right)$ | $32^{\circ} \mathrm{F}$ to $113^{\circ} \mathrm{F}\left(0^{\circ} \mathrm{C}\right.$ to $\left.45^{\circ} \mathrm{C}\right)$ | $32^{\circ} \mathrm{F}$ to $113^{\circ} \mathrm{F}\left(0^{\circ} \mathrm{C}\right.$ to $\left.45^{\circ} \mathrm{C}\right)$ |
| Storage temperature | $-40^{\circ} \mathrm{F}$ to $158^{\circ} \mathrm{F}\left(-40^{\circ} \mathrm{C}\right.$ to $\left.70^{\circ} \mathrm{C}\right)$ | $-40^{\circ} \mathrm{F}$ to $158^{\circ} \mathrm{F}\left(-40^{\circ} \mathrm{C}\right.$ to $\left.70^{\circ} \mathrm{C}\right)$ | $-40^{\circ} \mathrm{F}$ to $158^{\circ} \mathrm{F}\left(-40^{\circ} \mathrm{C}\right.$ to $\left.70^{\circ} \mathrm{C}\right)$ |
| Operating humidity | 5\% to 90\% (Non-condensing) | 5\% to 90\% (Non-condensing) | 5\% to 90\% (Non-condensing) |
| Storage humidity | 10\% to 90\% (Non-condensing) | 10\% to 90\% (Non-condensing) | 10\% to 90\% (Non-condensing) |
| Temperature alarm | Not Supported | Not Supported | Not Supported |
| Acoustic noise | OdB | 52 dB | 54dB |


| Description | S3900-24T4S | S3900-24F4S | S3900-48T4S |
| :---: | :---: | :---: | :---: |
| Physical specifications |  |  |  |
| Dimensions (HxWxD) | 1.73"x17.32"x11.02" $(44 \times 440 \times 280 \mathrm{~mm})$ | 1.73"x17.32"x11.02" <br> ( $44 \times 440 \times 280 \mathrm{~mm}$ ) | 1.73"x17.32"x12.99" <br> (44×440x330mm) |
| Rack units (RU) | 1 U | 1 U | 1 U |
| Weight | 8.76 lbs ( 3.975 kg ) | $9.41 \mathrm{lbs}(4.27 \mathrm{~kg})$ | 10.8 lbs (4.9kg) |
| Distance | 100M | 100M | 100M |
| Electrical |  |  |  |
| Voltage (auto ranging) | 100-240VAC | 100-240VAC | 100-240VAC |
| Frequency | $50-60 \mathrm{~Hz}$ | $50-60 \mathrm{~Hz}$ | $50-60 \mathrm{~Hz}$ |
| Current | 0.8A Max | 1.5A Max | 1.5A Max |
| Power rating (maximum consumption) | 24W | 60W | 60W |

## Mean-time between failures

MTBF (hours) $\quad>100000>100000 \quad>100000$

## Connectors

Connectors and cabling

Power connectors

- 1/10GBASE-T ports: RJ-45 connectors, 4-pair Cat5E/Cat6/Cat6a UTP cabling
- SFP transceivers: LC fiber connectors (single-mode or multimode fiber)
- SFP+ transceivers: LC fiber connectors (single-mode or multimode fiber)
- FS StackWise stacking ports: copper-based FS StackWise cabling
- Ethernet management port: RJ-45 connectors, 4-pair Cat5 UTP cabling
- Management console port: RJ-45-to-DB9 cable for PC connections
- 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 1100 WAC ) and 240 VAC. Use the supplied AC power cord to connect the AC power connector to an AC power outlet

| Description | S3900-24T4S | S3900-24F4S | S3900-48T4S |
| :--- | :--- | :--- | :--- |

Standards

Standards
802.1x, AAA, RMON, SNMPV1 V2 V3, HTTP Telnet, SSH

Table 12. Product specifications of S3900-R Series Switches

| Description | S3900-24T4S-R | S3900-24F4S-R | S3900-48T6S-R |
| :---: | :---: | :---: | :---: |
| Environmental |  |  |  |
| Operating temperature | $-4^{\circ} \mathrm{F}$ to $149^{\circ} \mathrm{F}\left(-20^{\circ} \mathrm{C}\right.$ to $\left.65^{\circ} \mathrm{C}\right)$ | $-4^{\circ} \mathrm{F}$ to $149^{\circ} \mathrm{F}\left(-20^{\circ} \mathrm{C}\right.$ to $\left.65^{\circ} \mathrm{C}\right)$ | $-4^{\circ} \mathrm{F}$ to $149^{\circ} \mathrm{F}\left(-20^{\circ} \mathrm{C}\right.$ to $\left.65^{\circ} \mathrm{C}\right)$ |
| Storage temperature | $-4^{\circ} \mathrm{F}$ to $158^{\circ} \mathrm{F}\left(-20^{\circ} \mathrm{C}\right.$ to $\left.70^{\circ} \mathrm{C}\right)$ | $-4^{\circ} \mathrm{F}$ to $158^{\circ} \mathrm{F}\left(-20^{\circ} \mathrm{C}\right.$ to $\left.70^{\circ} \mathrm{C}\right)$ | $-4^{\circ} \mathrm{F}$ to $158^{\circ} \mathrm{F}\left(-20^{\circ} \mathrm{C}\right.$ to $\left.70^{\circ} \mathrm{C}\right)$ |
| 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 | OdB | 45 dB | 45 dB |
| Dimensions (HxWxD) | $\begin{aligned} & 1.73 " \times 17.32 " x 7.09 " \\ & (44 \times 440 \times 180 \mathrm{~mm}) \end{aligned}$ | 1.73"x17.32"x11.02" <br> ( $44 \times 440 \times 280 \mathrm{~mm}$ ) | $\begin{aligned} & 1.73 " \times 17.32 \text { "x11.02" } \\ & (44 \times 440 \times 280 \mathrm{~mm}) \end{aligned}$ |
| Rack units (RU) | 1 U | 1 U | 1 U |
| Power rating (maximum consumption) | 36W | 36W | 78W |
| Electrical |  |  |  |
| Voltage (auto ranging) | 100-240VAC | 100-240VAC | 100-240VAC |
| Frequency | $50-60 \mathrm{~Hz}$ | $50-60 \mathrm{~Hz}$ | $50-60 \mathrm{~Hz}$ |
| Current | 1.2A | 1.2A | 2A |


| Description | S3900-24T4S-R | S3900-24F4S-R | S3900-4 |
| :--- | :--- | :--- | :--- |
| Mean-time between failures |  |  |  |
| MTBF (hours) | $>50,000$ | $>50,000$ | $>50,000$ |

## Connectors

## Connectors and cabling

- 1/10GBASE-T ports: RJ-45 connectors, 4-pair Cat5E/Cat6/Cat6a UTP cabling
- SFP transceivers: LC fiber connectors (single-mode or multimode fiber)
- SFP+ transceivers: LC fiber connectors (single-mode or multimode fiber)
- FS StackWise stacking ports: copper-based FS StackWise cabling
- Ethernet management port: RJ-45 connectors, 4-pair Cat5 UTP cabling
- Management console port: RJ-45-to-DB9 cable for PC connections
- 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.

Figures 4 shows some of the authoritative certifications obtained by FS S3900 Series Switches.


Figure 7.

## | Optics supported

For details about the optical modules available, visit:
S3900-24T4S/S3900-24F4S/S3900-48T4S: Transceivers DACs and AOCs Supported on S3900 Series Switches

## I Warranty, service and support

FS S3900 Series Switches enjoy 4 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.

- 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 13 provides the ordering information for S 3900 series switches.

## Table 13. Ordering information

| FS P/N | Product description |
| :---: | :---: |
| Switch hardware |  |
| S3900-24T4S | S3900-24T4S, 24-Port Gigabit Ethernet L2+ Switch, $24 \times$ Gigabit RJ45, with $4 \times 10 G b$ SFP + Uplinks, Stackable Switch, Broadcom Chip, Fanless |
| S3900-24F4S | S3900-24F4S, 20-Port Gigabit Ethernet L2+ Switch, $20 \times 1$ Gb SFP, $4 \times$ Gigabit RJ45/SFP Combo, with $4 \times 10$ Gb SFP+ Uplinks, Stackable Switch, Broadcom Chip |
| S3900-48T4S | S3900-48T4S, 48-Port Gigabit Ethernet L2+ Switch, $48 \times$ Gigabit RJ45, with $4 \times 10$ Gb SFP+ Uplinks, Stackable Switch, Broadcom Chip |
| S3900-24T4S-R | S3900-24T4S-R, 24-Port Gigabit Ethernet L2+ Switch, $24 \times$ Gigabit RJ45, with $4 \times 10$ Gb SFP+ Uplinks, Stackable Switch, Fanless |
| S3900-24F4S-R | S3900-24F4S-R, 16-Port Gigabit Ethernet L2+ Switch, $16 x$ 1Gb SFP, with $8 x$ Gigabit RJ45/SFP Combo, $4 \times 10 \mathrm{~Gb}$ SFP+ Uplinks, Stackable Switch |
| S3900-48T6S-R | S3900-48T6S-R, 48-Port Gigabit Ethernet L2+ Switch, $48 \times$ Gigabit RJ45, with $6 \times 10 \mathrm{~Gb}$ SFP+ Uplinks, Stackable Switch |

## Additional information

For more information about the S3900 Series Switches, contact your account manager or visit https://www.fs.com/search_result?keyword=S3900

## I Document history

| New or revised topic | Described in | Date |
| :--- | :--- | :--- |
| Updates to FS S3900 Series Switches Data Sheet | Updated all | 11/11/2022 |

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