

For
Small
Business



Cisco 500 Series Stackable Managed Switches

Advanced Features for Demanding Environments, at an Affordable Price

Your business is growing, and that means more customers, more opportunities, and more attention on your company. The only problem: Your network was built for a smaller operation. As you add more devices, applications, and users, your IT environment will become increasingly difficult and expensive to manage. Even worse, as the network becomes more complex and overloaded, your users are likely to see sluggish performance and even outages.

With more customers and employees depending on your business than ever before, a slow or unreliable network is simply not an option. You need an IT backbone that provides excellent performance, nonstop availability, and advanced security. The ideal network will be easy to manage, even as it supports more advanced features, and will be designed to grow with your company. And it is available at a price you can afford.

Cisco 500 Series Stackable Managed Switches

The Cisco® 500 Series Stackable Managed Switches (Figure 1) are a new line of stackable managed Ethernet switches that provide the advanced capabilities you need to support a more demanding network environment, at an affordable price. These switches provide 24 or 48 ports of Fast Ethernet and 24 to 52 ports of Gigabit Ethernet connectivity with optional 10 Gigabit uplinks, providing a solid foundation for your current business applications, as well as those you are planning for the future. At the same time, these switches are easy to deploy and manage, without a large IT staff.

Figure 1. Cisco 500 Series Stackable Managed Switches



Cisco 500 Series switches are designed to protect your technology investment as your business grows. Unlike switches that claim to be stackable but have elements which are administered and troubleshot separately, the Cisco 500 Series provides true stacking capability, allowing you to configure, manage, and troubleshoot multiple physical switches as a single device and more easily expand your network. The Cisco 500 Series switch offer models which are fanless making it one of the industry's first in stackable switches, thereby delivering increased reliability, power efficiency, and minimizing noise.

A true stack delivers a unified data and control plane, in addition to management plane, providing flexibility, scalability, and ease of use since the stack of units operate as a single entity constituting all the ports of the stack members. The switches also protect your technology investment with an enhanced warranty, dedicated technical support, and the ability to upgrade equipment in the future and receive credit for your Cisco 500 Series switch. Overall, the Cisco 500 Series provides the ideal technology foundation for a growing business.

Features and Benefits

Cisco 500 Series switches provide the advanced feature set that growing businesses require, and that high-bandwidth applications and technologies demand. These switches can improve the availability of your critical applications, protect your business information, and optimize your network bandwidth to more effectively deliver information and support applications. The switches provide the following benefits.

Easy Deployment and Use

Cisco 500 Series switches are designed to be easy to use and manage by small businesses or the partners that serve them. They feature:

- Simple-to-use graphical interfaces reduce the time required to deploy, troubleshoot, and manage the network and allow you to support sophisticated capabilities without increasing IT head count.
- You can manage the switches as individual devices or use Cisco Configuration Assistant (CCA) to discover, configure, and manage all Cisco devices in the network.
- The switches also support Textview, a full command-line interface (CLI) option for partners that prefer it.
- Using Auto Smartports intelligence, the switch can detect a network device connected to any port and automatically configure the optimal security, quality of service (QoS), and availability on that port.
- Cisco Discovery Protocol (CDP) discovers Cisco devices and allows devices to share critical configuration information, simplifying network setup and integration.
- Support for Simple Network Management Protocol (SNMP) allows you to set up and manage your switches and other Cisco devices remotely from a network management station, improving IT workflow and mass configurations.
- The Cisco FindIT utility, which works through a simple toolbar on the user's web browser, discovers Cisco devices in the network and displays basic information, such as serial numbers and IP addresses, to aid in configuration and deployment. (For more information, and to download this free utility, please visit www.cisco.com/go/findit.)

High Reliability and Resiliency

In a growing business where 24x7 availability is critical, you need to assure that employees can always access the data and resources they need. In these environments, stackable switches can play an important role in eliminating downtime and improving network resiliency. For example, if a switch within a Cisco 500 Series stack fails, another switch immediately takes over, keeping your network up and running. You can also replace individual devices in the stack without taking your network offline or affecting employee productivity.

The Cisco 500X models provide an additional layer of resiliency with support for the Virtual Router Redundancy Protocol (VRRP). VRRP lets you extend the same resiliency that stacking provides for individual switches to complete network domains. By running VRRP between two stacks, you can instantly cut over from one stack to another in the event of a problem, and continue operating even after a failure.

The Cisco 500 Series also supports dual images, allowing you to perform software upgrades without having to take the network offline or worry about the network going down during the upgrade.

Simplified IT Operation

Cisco 500 Series switches help optimize your IT operations with built-in features that simplify and streamline day-to-day network operation:

- True stacking allows you to troubleshoot, configure, and manage multiple physical switches as a single entity.
- Unlike other stacking switches that require uniform configurations, the Cisco 500 Series allows you to mix Fast Ethernet, Gigabit Ethernet, and 10 Gigabit Ethernet models in a single stack, providing total flexibility without sacrificing manageability.
- Cisco switches use common chipsets/software across all switching portfolios, so all Cisco switches within a category support the same feature set – making it easier to manage and support all switches across the network.

True Stacking

Some switches claim to support stacking but in practice support only “clustering” – meaning that each switch must still be managed and configured individually. Cisco 500 Series switches provide true stacking capability, allowing you to configure, manage, and troubleshoot all switches in a stack as a single unit, with a single IP address.

A true stack delivers a unified data and control plane, in addition to management plane, providing flexibility, scalability, and ease of use since the stack of units operate as a single entity constituting all the ports of the stack members. This capability can radically reduce complexity in a growing network environment while improving the resiliency and availability of network applications. True stacking also provides other cost savings and administrative benefits through features such as cross-stack QoS, VLANs, and port mirroring, which clustered switches can't support.

Strong Security

Cisco 500 Series switches provide the advanced security features you need to protect your business data and keep unauthorized users off the network:

- Embedded Secure Sockets Layer (SSL) encryption protects management data traveling to and from the switch.
- Extensive access control lists (ACLs) restrict sensitive portions of the network to keep out unauthorized users and guard against network attacks.
- Guest VLANs let you provide Internet connectivity to nonemployee users while isolating critical business services from guest traffic.
- Support for advanced network security applications such as IEEE 802.1X port security tightly limits access to specific segments of your network.

- Advanced defense mechanisms, including dynamic Address Resolution Protocol (ARP) inspection, IP Source Guard, and Dynamic Host Configuration Protocol (DHCP) snooping, detect and block deliberate network attacks. Combinations of these protocols are also referred to as IPMB (IP-MAC-port binding)
- Time based VLANs restrict access to the network during predesignated times, such as business hours.
- Uniform MAC address-based security can be applied automatically to mobile users as they roam between wireless access points.
- Secure Core Technology (SCT) helps ensure that the switch is able to process management traffic in the face of a denial of service attack.
- Private VLAN Edge (PVE) provides Layer 2 isolation between devices on the same VLAN.
- Storm control can be applied to broadcast, multicast, and unknown unicast traffic.

Networkwide Automatic Voice Deployment

Using a combination of CDP, LLDP-MED, Auto Smartports, and VSDP (Voice Services Discovery Protocol – a unique Cisco protocol), customers can deploy an end-to-end voice network dynamically. The switches in the network automatically converge around a single voice VLAN and QoS parameters and then propagate them out to the phones on the ports where they are discovered. For example, automated voice VLAN capabilities let you plug any IP phone (including third-party phones) into your IP telephony network and receive an immediate dial tone. The switch automatically configures the device with the right VLAN and QoS parameters to prioritize voice traffic.

High-Power Power over Ethernet Plus (PoE+)

Cisco 500 Series switches support the Power over Ethernet Plus (PoE+) standard (IEEE 802.3at), providing up to 30 watts per port. The power is managed in a smart fashion such that only the amount of power the endpoint needs is delivered to it and not wasted. As a result, the switches can support devices that require more power, such as dual-band 802.11n wireless access points, video-based IP phones, surveillance cameras, and more.

PoE capabilities simplify the deployment of advanced technologies by allowing you to connect and power network endpoints over a single Ethernet cable, without having to install separate power supplies. Cisco 500 Series switches are also fully backwards compatible with IEEE 802.11af PoE and previous-generation Cisco legacy PoE protocols.

IPv6 Support

As the IP address scheme evolves to accommodate a growing number of network devices, the Cisco 500 Series can support the transition to the next generation of networking and operating systems such as Windows 7, Vista, and Linux. These switches continue to support previous-generation IPv4, allowing you to evolve to the new IPv6 standard at your own pace, and helping ensure that your current network will continue to support your business applications in the future. Cisco 500 Series switches have successfully completed rigorous IPv6 testing and have received the USGv6 and IPv6 Gold certification.

Advanced Layer 3 Traffic Management

The Cisco 500 Series enables a more advanced set of traffic management capabilities to help growing businesses organize their networks more effectively and efficiently. For example, the switches provide static LAN Layer 3 routing, allowing you to segment your network into workgroups and communicate across VLANs without degrading application performance. With these capabilities, you can boost the

efficiency of your network by offloading internal traffic-handling tasks from your router and allowing it to manage primarily external traffic and security.

Cisco 500X models go even farther, providing dynamic Layer 3 routing features. With these capabilities, you can minimize the need to manually configure routing devices and simplify the ongoing operation of the network.

Power Efficiency

The Cisco 500 Series integrates a variety of power-saving features across all models, providing the industry's most extensive energy-efficient switching portfolio. These switches are designed to conserve energy by optimizing power use, which helps protect the environment and reduce your energy costs. They provide an eco-friendly network solution without compromising performance. Cisco 500 Series switches feature:

- Support for the Energy Efficient Ethernet (IEEE 802.3az) standard, which reduces energy consumption by monitoring the amount of traffic on an active link and putting the link into a sleep state during quiet periods
- The latest application-specific integrated circuits (ASICs), which use low-power 65-nanometer technology and low power high performance ARM CPUs
- Automatic power shutoff on PoE ports when a link is down
- Embedded intelligence to adjust signal strength based on the length of the connecting cable

Expandability

The Cisco 500 Series provides more ports per Gigabit Ethernet switch than traditional switch models, giving you more flexibility to connect and empower your business. Gigabit Ethernet models feature 28- and 52-port switches, versus traditional devices that offer 20 or 44 ports, with 4 shared ports giving you more value. The Cisco 500 models offers 1 or 5 Gigabit Ethernet expansion slots, and the Cisco 500X models offer 10 Gigabit Ethernet expansion slots. As your business adds new applications, devices, and more bandwidth, you retain the flexibility to expand and interconnect your network infrastructure intelligently and efficiently, and reduce bottlenecks.

Peace of Mind and Investment Protection

Cisco 500 Series switches offer the reliable performance and peace of mind you expect from a Cisco switch. When you invest in the Cisco 500 Series, you gain the benefit of:

- Limited lifetime warranty with next-business-day (NBD) advance replacement (where available, otherwise same day ship)
- A solution that has been rigorously tested to help ensure optimal network uptime to keep employees connected to key resources and productive
- A solution designed and tested to easily and fully integrate with other Cisco voice, unified communications, security, and networking products, as part of a comprehensive technology platform for your business

Cisco Limited Lifetime Hardware Warranty

Cisco 500 Series switches offer a limited lifetime hardware warranty with NBD advance replacement (where available; otherwise same day ship) and a limited lifetime warranty for fans and power supplies. In addition, Cisco offers software application updates for bug fixes for the warranty term, and telephone technical support at no charge for the first 12 months following the date of purchase. To download software updates, go to www.cisco.com/cisco/web/download/index.html.

Product warranty terms and other information applicable to Cisco products are available at www.cisco.com/go/warranty.

World-Class Service and Support

Your time is valuable, especially when you have a problem affecting your business. Cisco 500 Series switches are backed by the Cisco Small Business Support Service, which provides affordable peace-of-mind coverage. This subscription-based service helps you protect your investment and derive maximum value from Cisco Small Business products. Delivered by Cisco and backed by your trusted partner, this comprehensive service includes software updates and access to the Cisco Small Business Support Center, and it extends technical service to three years.

Cisco Small Business products are supported by professionals in the Cisco Small Business Support Center, a dedicated resource for small business customers and networks, with locations worldwide that are specifically trained to understand your needs. You also have access to extensive technical and product information through the Cisco Small Business Support Community, an online forum that enables you to collaborate with your peers and reach Cisco technical experts for support information.

Product Specifications

Table 1.

| Feature | Description | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|------------------------------------|------------------------------------|---------------------------|----------|------|------|-----------|------|------|----------|-------|------|-----------|-------|------|----------|-------|----|-----------|-------|----|----------|-------|-----|-----------|-------|-----|-----------|-------|-----|------------|-------|-----|-----------|--------|-----|------------|--------|-----|
| Performance | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Switching capacity and forwarding rate | <table border="1"> <thead> <tr> <th>Product Name</th> <th>Capacity in mpps (64-byte packets)</th> <th>Switching Capacity (Gbps)</th> </tr> </thead> <tbody> <tr> <td>SF500-24</td> <td>9.52</td> <td>28.8</td> </tr> <tr> <td>SF500-24P</td> <td>9.52</td> <td>28.8</td> </tr> <tr> <td>SF500-48</td> <td>13.10</td> <td>33.6</td> </tr> <tr> <td>SF500-48P</td> <td>13.10</td> <td>33.6</td> </tr> <tr> <td>SG500-28</td> <td>41.67</td> <td>72</td> </tr> <tr> <td>SG500-28P</td> <td>41.67</td> <td>72</td> </tr> <tr> <td>SG500-52</td> <td>77.38</td> <td>120</td> </tr> <tr> <td>SG500-52P</td> <td>77.38</td> <td>120</td> </tr> <tr> <td>SG500X-24</td> <td>95.24</td> <td>128</td> </tr> <tr> <td>SG500X-24P</td> <td>95.24</td> <td>128</td> </tr> <tr> <td>SG500X-48</td> <td>130.95</td> <td>176</td> </tr> <tr> <td>SG500X-48P</td> <td>130.95</td> <td>176</td> </tr> </tbody> </table> | Product Name | Capacity in mpps (64-byte packets) | Switching Capacity (Gbps) | SF500-24 | 9.52 | 28.8 | SF500-24P | 9.52 | 28.8 | SF500-48 | 13.10 | 33.6 | SF500-48P | 13.10 | 33.6 | SG500-28 | 41.67 | 72 | SG500-28P | 41.67 | 72 | SG500-52 | 77.38 | 120 | SG500-52P | 77.38 | 120 | SG500X-24 | 95.24 | 128 | SG500X-24P | 95.24 | 128 | SG500X-48 | 130.95 | 176 | SG500X-48P | 130.95 | 176 |
| | Product Name | Capacity in mpps (64-byte packets) | Switching Capacity (Gbps) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | SF500-24 | 9.52 | 28.8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | SF500-24P | 9.52 | 28.8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | SF500-48 | 13.10 | 33.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | SF500-48P | 13.10 | 33.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | SG500-28 | 41.67 | 72 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | SG500-28P | 41.67 | 72 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | SG500-52 | 77.38 | 120 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | SG500-52P | 77.38 | 120 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | SG500X-24 | 95.24 | 128 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | SG500X-24P | 95.24 | 128 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SG500X-48 | 130.95 | 176 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SG500X-48P | 130.95 | 176 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Layer 2 Switching | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Spanning Tree Protocol | Standard 802.1d Spanning Tree Support Fast convergence using 802.1w (Rapid Spanning Tree [RSTP]), enabled by default Multiple spanning tree instances using 802.1s (MSTP). 16 instances are supported | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Feature | Description |
|---|--|
| Port grouping/link aggregation | Support for IEEE 802.3ad Link Aggregation Control Protocol (LACP) <ul style="list-style-type: none"> Up to 8 groups Up to 8 ports per group with 16 candidate ports for each (dynamic) 802.3ad LAG |
| VLAN | Support for up to 4096 VLANs simultaneously Port-based and 802.1Q tag-based VLANs MAC-based VLAN Management VLAN PVE (Private VLAN Edge), also known as Protected Port, with multiple uplinks Guest VLAN Unauthenticated VLAN Protocol-based VLAN CPE VLAN |
| Voice VLAN | Voice traffic is automatically assigned to a voice-specific VLAN and treated with appropriate levels of QoS. Auto voice capabilities deliver network-wide zero touch deployment of voice endpoints and call control devices. |
| Multicast TV VLAN | Multicast VLAN used for video applications. |
| Q-in-Q | VLANs transparently cross over a service provider network while isolating traffic among customers. |
| GVRP/GARP | Generic VLAN Registration Protocol (GVRP) and Generic Attribute Registration Protocol (GARP) enable automatic propagation and configuration of VLANs in a bridged domain. |
| DHCP Relay at Layer 2 | Relay of DHCP traffic to DHCP server in a different VLAN. Works with DHCP Option 82. |
| IGMP (versions 1, 2, and 3) snooping | Internet Group Management Protocol (IGMP) limits bandwidth-intensive multicast traffic to only the requesters; supports 1000 multicast groups (source-specific multicasting is also supported). |
| IGMP querier | IGMP querier is used to support a Layer 2 multicast domain of snooping switches in the absence of a multicast router. |
| HOL blocking | Head-of-line (HOL) blocking. |
| Layer 3 | |
| IPv4 routing | Wirespeed routing of IPv4 packets Up to 128 static routes and up to 128 IP interfaces |
| CIDR | Support for Classless Inter-Domain Routing |
| RIP v2 (on 500X) | Support for Routing Information Protocol version 2, for dynamic routing |
| VRRP (on 500X) | Virtual Router Redundancy Protocol (VRRP) delivers improved availability in a Layer 3 network by providing redundancy of the default gateway servicing hosts on the network. VRRP versions 2 and 3 are supported. Up to 255 virtual routers are supported. |
| DHCP Relay at Layer 3 | Relay of DHCP traffic across IP domains. |
| User Datagram Protocol (UDP) Relay | Relay of broadcast information across Layer 3 domains for application discovery or relaying of BOOTP/DHCP packets. |
| Stacking | |
| Hardware stack | Up to 200 ports managed as a single system with hardware failover. |
| High availability | Fast stack failover delivers minimal traffic loss. |
| Plug-and-play stacking configuration/management | Master/backup for resilient stack control Auto-numbering Hot swap of units in stack Ring and chain stacking options Auto stacking port speed Flexible stacking port options |
| High-speed stack interconnects | Cost-effective 5G copper and high-speed 10G Fiber and Copper interfaces. |
| Mixed stacking support | A stack can consist of a mix of SF500 and SG500 models (mix of 10/100 and Gigabit in the same stack). |
| Hybrid stack (future) | A mix of SF500, SG500, and SG500X in the same stack (10/100, Gigabit, and 10 Gigabit). |
| Security | |
| SSH | Secure Shell (SSH) Protocol secures Telnet traffic to and from the switch. SSH versions 1 and 2 are supported. |

| Feature | Description |
|--|--|
| SSL | Secure Sockets Layer (SSL) encrypts all HTTPS traffic, allowing secure access to the browser-based management GUI in the switch. |
| IEEE 802.1X (Authenticator role) | RADIUS authentication and accounting, MD5 hash, guest VLAN, unauthenticated VLAN, single/multiple host mode and single/multiple sessions Supports time-based 802.1X Dynamic VLAN assignment |
| STP BPDU Guard | A security mechanism to protect the networks from invalid configurations. A port enabled for Bridge Protocol Data Unit (BPDU) Guard is shut down if a BPDU message is received on that port. |
| STP Root Guard | Prevents a port from being selected as a root port, effectively preventing bridges in the LAN segment connected to the port from being a root bridge. |
| DHCP snooping | Filters out DHCP messages with unregistered IP addresses and/or from unexpected or untrusted interfaces. |
| IP Source Guard (IPSG) | When IP Source Guard is enabled at a port, the switch filters out IP packets received from the port if the source IP addresses of the packets have not been statically configured or dynamically learned from DHCP snooping. |
| Dynamic ARP Inspection (DAI) | The switch discards ARP packets from a port if there is no static or dynamic IP/MAC bindings or if there is a discrepancy between the source or destination address in the ARP packet. |
| Secure Core Technology (SCT) | Ensures that the switch will receive and process management and protocol traffic no matter how much traffic is received. |
| Layer 2 isolation (PVE) with community VLAN* | Provides Layer 2 isolation between devices in the same VLAN; supports multiple uplinks. |
| Port security | Ability to lock MAC addresses to ports, and limit the number of learned MAC addresses. |
| RADIUS/TACACS+ | Supports RADIUS and TACACS authentication. Switch functions as a client. |
| RADIUS accounting | The RADIUS accounting functions allow data to be sent at the start and end of services, indicating the amount of resources (such as time, packets, bytes, and so on) used during the session. |
| Storm control | Broadcast, multicast, and unknown unicast. |
| DoS prevention | DoS attack prevention. |
| Congestion avoidance | A TCP congestion avoidance algorithm is required to minimize and prevent global TCP loss synchronization. |
| Multiple user privilege levels in CLI | Levels 1, 7, and 15 privilege levels. |
| ACLs | Support for up to 2000 rules on 500 Series and 3000 on 500X series. Drop or rate limit based on source and destination MAC, VLAN ID or IP address, protocol, port, DSCP/IP precedence, TCP/ User Datagram Protocol (UDP) source and destination ports, 802.1p priority, Ethernet type, Internet Control Message Protocol (ICMP) packets, Internet Group Management Protocol (IGMP) packets, TCP flag. Time-based ACLs supported. |
| Quality of Service | |
| Priority levels | 4 hardware queues (8 future) |
| Scheduling | Strict Priority and weighted round-robin (WRR) |
| Class of service | Port based; 802.1p VLAN priority based; IPv4/v6 IP precedence/ToS/DSCP based; DiffServ; classification and re-marking ACLs, Trusted QoS Queue assignment based on differentiated services code point (DSCP) and class of service (802.1p/CoS) |
| Rate limiting | Ingress policer; egress shaping and ingress rate control; per VLAN, per port, and flow based |
| Standards | |
| Standards | IEEE 802.3 10BASE-T Ethernet, IEEE 802.3u 100BASE-TX Fast Ethernet, IEEE 802.3ab 1000BASE-T Gigabit Ethernet, IEEE 802.3ad Link Aggregation Control Protocol, IEEE 802.3z Gigabit Ethernet, IEEE 802.3x Flow Control, IEEE 802.3ad LACP, IEEE 802.1D (STP, GARP and GVRP), IEEE 802.1Q/p VLAN, IEEE 802.1w Rapid STP, IEEE 802.1s Multiple STP, IEEE 802.1X Port Access Authentication, IEEE 802.3af, IEEE 802.3at, RFC 768, RFC 783, RFC 791, RFC 792, RFC 793, RFC 813, RFC 879, RFC 896, RFC 826, RFC 854, RFC 855, RFC 856, RFC 858, RFC 894, RFC 919, RFC 922, RFC 920, RFC 950, RFC 951, RFC 1042, RFC 1071, RFC 1123, RFC 1141, RFC 1155, RFC 1157, RFC 1350, RFC 1533, RFC 1541, RFC 1542, RFC 1624, RFC 1700, RFC 1867, RFC 2030, RFC 2616, RFC 2131, RFC 2132, RFC 3164, RFC 3411, RFC 3412, RFC 3413, RFC 3414, RFC 3415, RFC 2576, RFC 4330, RFC 1213, RFC 1215, RFC 1286, RFC 1442, RFC 1451, RFC 1493, RFC 1573, RFC 1643, RFC 1757, RFC 1907, RFC 2011, RFC 2012, RFC 2013, RFC 2233, RFC 2618, RFC 2665, RFC 2666, RFC 2674, RFC 2737, RFC 2819, RFC 2863, RFC 1157, RFC |

| Feature | Description | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------------|---|------------|--------------|------------------|--------------|---------------|-----------------------|---------------------|------------------------|-----------------|--------------|-----------------------|----------|------------------|--------------|----------------|----------|------------------------------|--------------|------------|-----------|-------------------|-----------|---------------|----------|---------------|----------|---------------------------------|----------|----------------|--------------------|------------------|--------------------|------------------|--------------|------------------|-----------------------|--------|----------------|------------------|-----------------|----------------|------------------------|--------|-------------|--------|------------|-----------------------|------------|-------------------|------------|-------------------|-----------|
| | 1493, RFC 1215, RFC 3416 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| IPv6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| IPv6 | IPv6 Host Mode IPv6 over Ethernet Dual IPv6/IPv4 stack IPv6 Neighbor and Router Discovery (ND) IPv6 Stateless Address Autoconfiguration Path MTU Discovery Duplicate Address Detection (DAD) ICMPv6 IPv6 over IPv4 network with ISATAP tunnel support USGv6 and IPv6 Gold Logo certified | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| IPv6 QoS | Prioritize IPv6 packets in hardware | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| IPv6 ACL | Drop or Rate Limit IPv6 packets in hardware | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MLD Snooping | Deliver IPv6 multicast packets only to the required receivers | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| IPv6 applications | Web/SSL, Telnet Server/SSH, Ping, Traceroute, SNMP, TFTP, RADIUS, Syslog, DNS client | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| IPv6 RFC supported | RFC 2463 – ICMPv6 RFC 3513 – IPv6 Address Architecture RFC 4291 – IP Version 6 Addressing Architecture RFC 2460 – IPv6 Specification RFC 2461 – Neighbor Discovery for IPv6 RFC 2462 – IPv6 Stateless Address Auto-configuration RFC 1981 – Path MTU Discovery RFC 4007 – IPv6 Scoped Address Architecture RFC 3484 – Default address selection mechanism RFC 4214 – ISATAP tunneling RFC 4293 – MIB IPv6: Textual Conventions and General Group RFC 3595 – Textual Conventions for IPv6 Flow Label | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Management | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Web user interface | Built-in switch configuration utility for easy browser-based device configuration (HTTP/HTTPS). Supports configuration, system dashboard, system maintenance and monitoring. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SNMP | SNMP versions 1, 2c, and 3 with support for traps, and SNMP v3 User-based Security Model (USM) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Standard MIBs | <table border="0"> <tr> <td>BRIDGE-MIB</td> <td>Q-BRIDGE-MIB</td> </tr> <tr> <td>DIFFSERV-DSCP-TC</td> <td>Q-BRIDGE-MIB</td> </tr> <tr> <td>DIFF-SERV-MIB</td> <td>RADIUS-ACC-CLIENT-MIB</td> </tr> <tr> <td>DISMAN-NSLOOKUP-MIB</td> <td>RADIUS-AUTH-CLIENT-MIB</td> </tr> <tr> <td>DISMAN-PING-MIB</td> <td>RFC-1155-SMI</td> </tr> <tr> <td>DISMAN-TRACEROUTE-MIB</td> <td>RFC-1212</td> </tr> <tr> <td>DNS-RESOLVER-MIB</td> <td>RFC-1213-MIB</td> </tr> <tr> <td>DNS-SERVER-MIB</td> <td>RFC-1215</td> </tr> <tr> <td>DRAFT-IETF-SYSLOG-DEVICE-MIB</td> <td>RFC-1389-MIB</td> </tr> <tr> <td>ENTITY-MIB</td> <td>RIPv2-MIB</td> </tr> <tr> <td>ENTITY-SENSOR-MIB</td> <td>RMON2-MIB</td> </tr> <tr> <td>EtherLike-MIB</td> <td>RMON-MIB</td> </tr> <tr> <td>EtherLike-MIB</td> <td>RSTP-MIB</td> </tr> <tr> <td>IANA-ADDRESS-FAMILY-NUMBERS-MIB</td> <td>SMON-MIB</td> </tr> <tr> <td>IANAifType-MIB</td> <td>SNMP-COMMUNITY-MIB</td> </tr> <tr> <td>IANA-RTPROTO-MIB</td> <td>SNMP-FRAMEWORK-MIB</td> </tr> <tr> <td>IEEE8021-PAE-MIB</td> <td>SNMP-MPD-MIB</td> </tr> <tr> <td>IEEE9023-LAG-MIB</td> <td>SNMP-NOTIFICATION-MIB</td> </tr> <tr> <td>IF-MIB</td> <td>SNMP-PROXY-MIB</td> </tr> <tr> <td>INET-ADDRESS-MIB</td> <td>SNMP-TARGET-MIB</td> </tr> <tr> <td>IP-FORWARD-MIB</td> <td>SNMP-USER-BASED-SM-MIB</td> </tr> <tr> <td>IP-MIB</td> <td>SNMPv2-CONF</td> </tr> <tr> <td>IP-MIB</td> <td>SNMPv2-MIB</td> </tr> <tr> <td>LLDP-EXT-DCBX-MIB.mib</td> <td>SNMPv2-MIB</td> </tr> <tr> <td>LLDP-EXT-DOT1-MIB</td> <td>SNMPv2-SMI</td> </tr> <tr> <td>LLDP-EXT-DOT3-MIB</td> <td>SNMPv2-TC</td> </tr> </table> | BRIDGE-MIB | Q-BRIDGE-MIB | DIFFSERV-DSCP-TC | Q-BRIDGE-MIB | DIFF-SERV-MIB | RADIUS-ACC-CLIENT-MIB | DISMAN-NSLOOKUP-MIB | RADIUS-AUTH-CLIENT-MIB | DISMAN-PING-MIB | RFC-1155-SMI | DISMAN-TRACEROUTE-MIB | RFC-1212 | DNS-RESOLVER-MIB | RFC-1213-MIB | DNS-SERVER-MIB | RFC-1215 | DRAFT-IETF-SYSLOG-DEVICE-MIB | RFC-1389-MIB | ENTITY-MIB | RIPv2-MIB | ENTITY-SENSOR-MIB | RMON2-MIB | EtherLike-MIB | RMON-MIB | EtherLike-MIB | RSTP-MIB | IANA-ADDRESS-FAMILY-NUMBERS-MIB | SMON-MIB | IANAifType-MIB | SNMP-COMMUNITY-MIB | IANA-RTPROTO-MIB | SNMP-FRAMEWORK-MIB | IEEE8021-PAE-MIB | SNMP-MPD-MIB | IEEE9023-LAG-MIB | SNMP-NOTIFICATION-MIB | IF-MIB | SNMP-PROXY-MIB | INET-ADDRESS-MIB | SNMP-TARGET-MIB | IP-FORWARD-MIB | SNMP-USER-BASED-SM-MIB | IP-MIB | SNMPv2-CONF | IP-MIB | SNMPv2-MIB | LLDP-EXT-DCBX-MIB.mib | SNMPv2-MIB | LLDP-EXT-DOT1-MIB | SNMPv2-SMI | LLDP-EXT-DOT3-MIB | SNMPv2-TC |
| BRIDGE-MIB | Q-BRIDGE-MIB | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DIFFSERV-DSCP-TC | Q-BRIDGE-MIB | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DIFF-SERV-MIB | RADIUS-ACC-CLIENT-MIB | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DISMAN-NSLOOKUP-MIB | RADIUS-AUTH-CLIENT-MIB | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DISMAN-PING-MIB | RFC-1155-SMI | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DISMAN-TRACEROUTE-MIB | RFC-1212 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DNS-RESOLVER-MIB | RFC-1213-MIB | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DNS-SERVER-MIB | RFC-1215 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DRAFT-IETF-SYSLOG-DEVICE-MIB | RFC-1389-MIB | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ENTITY-MIB | RIPv2-MIB | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ENTITY-SENSOR-MIB | RMON2-MIB | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EtherLike-MIB | RMON-MIB | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EtherLike-MIB | RSTP-MIB | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| IANA-ADDRESS-FAMILY-NUMBERS-MIB | SMON-MIB | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| IANAifType-MIB | SNMP-COMMUNITY-MIB | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| IANA-RTPROTO-MIB | SNMP-FRAMEWORK-MIB | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| IEEE8021-PAE-MIB | SNMP-MPD-MIB | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| IEEE9023-LAG-MIB | SNMP-NOTIFICATION-MIB | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| IF-MIB | SNMP-PROXY-MIB | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| INET-ADDRESS-MIB | SNMP-TARGET-MIB | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| IP-FORWARD-MIB | SNMP-USER-BASED-SM-MIB | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| IP-MIB | SNMPv2-CONF | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| IP-MIB | SNMPv2-MIB | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| LLDP-EXT-DCBX-MIB.mib | SNMPv2-MIB | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| LLDP-EXT-DOT1-MIB | SNMPv2-SMI | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| LLDP-EXT-DOT3-MIB | SNMPv2-TC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Feature | Description |
|--------------------------|--|
| | LLDP-EXT-MED-MIB LLDP-MIB MAU-MIB OSPF-MIB OSPF-TRAP-MIB P-BRIDGE-MIB P-BRIDGE-MIB POWER-ETHERNET-MIB SNMPv2-TM SNMP-VIEW-BASED-ACM-MIB TCP-MIB TUNNEL-MIB UDP-MIB UDP-MIB VRRPV3-MIB |
| Private MIBs | CISCO-CDP-MIB CISCOSB-1-BONJOUR-SERVICE-MIB CISCOSB-3SW2SWTABLES-MIB CISCOSB-AAA CISCOSB-BANNER-MIB CISCOSB-BaudRate-MIB CISCOSB-BONJOUR-MIB CISCOSB-BRGMACSWITCH-MIB CISCOSB-BRIDGEMIBOBJECTS-MIB CISCOSB-BRIDGE-SECURITY CISCOSB-CDB-MIB CISCOSB-CDP-MIB CISCOSB-CLI-MIB CISCOSB-COPY-MIB CISCOSB-CPU-COUNTERS-MIB CISCOSB-DEBUGCAPABILITIES-MIB CISCOSB-DEVICEPARAMS-MIB CISCOSB-DHCPCL-MIB CISCOSB-DHCP-MIB CISCOSB-DIGITALKEYMANAGE-MIB CISCOSB-Dif-MIB CISCOSB-DNSCL-MIB CISCOSB-DOT1X-MIB CISCOSB-EEE-MIB CISCOSB-EMBWEB-MIB CISCOSB-ENDOFMIB-MIB CISCOSB-ERRDISABLE-RECOVERY-MIB CISCOSB-EVENTS-MIB CISCOSB-File CISCOSB-GREEN-MIB CISCOSB-GVRP-MIB CISCOSB-HWENVIRONMENT CISCOSB-IP CISCOSB-ipatdacl-MIB CISCOSB-IpRouter CISCOSB-IPv6 CISCOSB-JUMBOFRAMES-MIB CISCOSB-LLDP-MIB CISCOSB-LOCALIZATION-MIB CISCOSB-MAC-BASE-PRIO CISCOSB-MIB CISCOSB-MIB CISCOSB-MIR-MIB CISCOSB-MNGINF-MIB CISCOSB-MULTISESSIONTERMINAL-MIB CISCOSB-PHY-MIB CISCOSB-Physicaldescription-MIB CISCOSB-POE-MIB CISCOSB-POLICY-MIB CISCOSB-ProtectedPorts-MIB CISCOSB-QOS-CLI-MIB CISCOSB-riBrgMcMngr-MIB CISCOSB-riBrgMulticast-MIB CISCOSB-riFft CISCOSB-riInterfaces CISCOSB-riLcli-MIB CISCOSB-RMOB CISCOSB-rndApplications CISCOSB-rndMng CISCOSB-SCT-MIB CISCOSB-SECURITY-SUITE CISCOSB-SENSORENTMIB CISCOSB-SMARTPORTS-MIB CISCOSB-SMON-MIB CISCOSB-SNMP-MIB CISCOSB-SOCKET-MIB CISCOSB-SpecialBpdu-MIB CISCOSB-SSH-MIB CISCOSB-SSL CISCOSB-STACK-MIB CISCOSB-STORMCTRL-MIB CISCOSB-SYSLOG-MIB CISCOSB-SYSMNG-MIB CISCOSB-TBI-MIB CISCOSB-TCPSESSIONS CISCOSB-TELNET-MIB CISCOSB-TIMESYNCHRONIZATION-MIB CISCOSB-TRACEROUTE-MIB CISCOSB-TRAPS-MIB CISCOSB-TRUNK-MIB CISCOSB-TUNNEL-MIB CISCOSB-Tunning CISCOSB-UDP CISCOSB-vlan-MIB CISCOSB-vlanVoice-MIB CISCOSB-VRRP CISCOSB-WeightedRandomTailDrop-MIB CISCO-SMI CISCO-TC CISCO-VTP-MIB |
| RMON | Embedded RMON software agent supports 4 RMON groups (history, statistics, alarms, and events) for enhanced traffic management, monitoring, and analysis |
| IPv4 and IPv6 Dual Stack | Coexistence of both protocol stacks to ease migration |
| Firmware upgrade | <ul style="list-style-type: none"> Web browser upgrade (HTTP/HTTPS) and Trivial File Transfer Protocol (TFTP) Upgrade can be initiated through console port as well |

| Feature | Description | | |
|--|---|-------------------------------|---|
| | <ul style="list-style-type: none"> Dual images for resilient firmware upgrades | | |
| Port mirroring | Traffic on a port can be mirrored to another port for analysis with a network analyzer or RMON probe. Up to 8 source ports can be mirrored to one destination port. | | |
| VLAN mirroring | Traffic from a VLAN can be mirrored to a port for analysis with a network analyzer or RMON probe. Up to 8 source VLANs can be mirrored to one destination port. | | |
| DHCP (Options 66, 67, 82, 129, and 150) | DHCP options facilitate tighter control from a central point (DHCP Server), to obtain IP address, auto configuration (with configuration file download), and DHCP relay. | | |
| Autoconfiguration with Secure Copy (SCP) file download | Enables secure mass deployment with protection of sensitive data. | | |
| Text-editable configs | Config files can be edited with a text editor and downloaded to another switch, facilitating easier mass deployment. | | |
| Smartports | Simplified configuration of QoS and security capabilities. | | |
| Auto Smartports | Automatically applies the intelligence delivered through the Smartports roles to the port based on the devices discovered over Cisco Discovery Protocol or LLDP-MED. This facilitates zero touch deployments. | | |
| Cisco Configuration Assistant Management | Manage devices from Cisco Configuration Assistant Management application. | | |
| Secure Copy (SCP) | Securely transfer files to and from the switch. | | |
| Textview CLI | Scriptable CLI. A full CLI as well as a menu CLI is supported. | | |
| Cloud Services | Support for Cisco Small Business FindIT network discovery utility. | | |
| Localization | Localization of GUI and documentation into multiple languages. | | |
| Login banner | Configurable login banners for web as well as CLI. | | |
| Time-based port operation | Link up or down based on user-defined schedule (when the port is administratively up). | | |
| Other management | Traceroute; single IP management; HTTP/HTTPS; SSH; RADIUS; port mirroring; TFTP upgrade; DHCP client; BOOTP; Simple Network Time Protocol (SNTP); Xmodem upgrade; cable diagnostics; Ping; syslog; Telnet client (SSH secure support); Automatic time settings from Management Station. | | |
| Green (Power Efficiency) | | | |
| Energy Detect | Automatically turns power off on Gigabit Ethernet RJ-45 port when detecting link down. Active mode is resumed without loss of any packets when the switch detects the link is up. | | |
| Cable length detection | Adjusts the signal strength based on the cable length. Reduces the power consumption for cable shorter than 10m. Supported on Gigabit Ethernet models. | | |
| EEE compliant (802.3az) | Supports IEEE 802.3az on all Gigabit copper ports. | | |
| General | | | |
| Jumbo frames | Frame sizes up to 10K. Bare supported on 10/100 and Gigabit Ethernet interfaces. The default MTU is 2K. | | |
| MAC table | 16,000 MAC addresses. | | |
| Discovery | | | |
| Bonjour | The switch advertises itself using the Bonjour protocol. | | |
| LLDP (802.1ab) with LLDP-MED extensions | Link Layer Discovery Protocol (LLDP) allows the switch to advertise its identification, configuration, and capabilities to neighboring devices that store the data in a MIB. LLDP-MED is an enhancement to LLDP that adds the extensions needed for IP phones. | | |
| Cisco Discovery Protocol | The switch advertises itself using the Cisco Discovery Protocol (CDP). It also learns the connected device and its characteristics via CDP. | | |
| Product Specifications | | | |
| Power over Ethernet (PoE) | | | |
| IEEE 802.3af and 802.3at PoE delivered over any of the RJ-45 ports within the listed power budgets | Switches support 802.2af, 802.3at, and Cisco pre-standard (legacy) PoE. Maximum power of 30W to any 10/100 or Gigabit base port. The total power available for PoE per switch is: | | |
| | Model Name | Power Dedicated to PoE | Number of Ports That Support PoE |
| | SF500-24 | N/A | 0 |
| | SF500-24P | 180W | 24 |
| | SF500-48 | N/A | 0 |
| SF500-48P | 375W | 48 | |

| Feature | Description | | | |
|-------------------|-------------------|-----------------------------------|--|------------------------------------|
| | SG500-28 | N/A | 0 | |
| | SG500-28P | 180W | 24 | |
| | SG500-52 | N/A | 0 | |
| | SG500-52P | 375W | 48 | |
| | SG500X-24 | N/A | 0 | |
| | SG500X-24P | 375W | 24 | |
| | SG500X-48 | N/A | 0 | |
| | SG500X-48P | 375W | 48 | |
| Power Consumption | Model Name | Green Power (mode) | Power Consumption (worst case) | Heat Dissipation (BTU/hr) |
| | SF500-24 | Energy Detect | 110V/0.226A/13.7W 220V/0.160A/14.8W | 46.5 |
| | SF500-24P | Energy Detect | 110V/0.256A/26.1W 220V/0.206A/27W | 84.8 |
| | SF500-48 | Energy Detect | 110V/0.445A/24.3W 220V/0.270A/24.8W | 77.9 |
| | SF500-48P | Energy Detect | 110V/0.481A/46.8W 220V/0.319A/47.5W | 149.2 |
| | SG500-28 | EEE + Short Reach + Energy Detect | 110V/0.0.443A/23.2W 220V/0.262A/23.6W | 74.2 |
| | SG500-28P | EEE + Short Reach + Energy Detect | 110V/0.333A/35W 220V/0.238A/35.9W | 112.8 |
| | SG500-52 | EEE + Short Reach + Energy Detect | 110V/0.439A/47W 220V/0.230A/47W | 147.7 |
| | SG500-52P | EEE + Short Reach + Energy Detect | 110V/0.647A/63.7W 220V/0.405A/64.7W | 203.3 |
| | SG500X-24 | EEE + Short Reach + Energy Detect | 110V/0.600A/36.5W 220V/0.348A/36.2W | 114.7 |
| | SG500X-24P | EEE + Short Reach + Energy Detect | 110V/0.576A/57.2W 220V/0.365A/57.9W | 181.9 |
| | SG500X-48 | EEE + Short Reach + Energy Detect | 110V/0.545A/60.3W 220V/0.378A/60.3W | 189.5 |
| | SG500X-48P | EEE + Short Reach + Energy Detect | 110V/0.735A/74.4W 220V/0.444A/75W | 235.7 |
| Ports | Model Name | Total System Ports | RJ-45 Ports | Combo Ports (RJ-45 + SFP) |
| | SF500-24 | 24FE + 4 GE (5G Stacking) | 24 FE | 2 combo GE + 2 1G/5G SFP |
| | SF500-24P | 24FE + 4 GE (5G Stacking) | 24 FE | 2 combo GE + 2 1G/5G SFP |
| | SF500-48 | 48FE + 4 GE (5G Stacking) | 48 FE | 2 combo GE + 2 1G/5G SFP |
| | SF500-48P | 48FE + 4 GE (5G Stacking) | 48 FE | 2 combo GE + 2 1G/5G SFP |
| | SG500-28 | 24GE + 4 GE (5G Stacking) | 24 GE | 2 combo GE + 2 1G/5G SFP |
| | SG500-28P | 24GE + 4 GE (5G Stacking) | 24 GE | 2 combo GE + 2 1G/5G SFP |
| | SG500-52 | 48GE + 4 GE (5G Stacking) | 48 GE | 2 combo GE + 2 1G/5G SFP |
| | SG500-52P | 48GE + 4 GE (5G Stacking) | 48 GE | 2 combo GE + 2 1G/5G SFP |
| | SG500X-24 | 24GE + 4 10GE | 24 GE | 4 XG SFP+ (Two combo 5G SFP slots) |
| | SG500X-24P | 24GE + 4 10GE | 24 GE | 4 XG SFP+ (Two combo 5G SFP slots) |
| | SG500X-48 | 48GE + 4 10GE | 48 GE | 4 XG SFP+ (Two combo 5G SFP slots) |
| | SG500X-48P | 48GE + 4 10GE | 48 GE | 4 XG SFP+ (Two combo 5G SFP slots) |

| Feature | Description | | | |
|-----------------------------|---|------------------------|--------------|-------------------------|
| Buttons | Reset button | | | |
| Cabling type | Unshielded twisted pair (UTP) Category 5 or better; Fiber options (SMF and MMF); Coaxial SFP+ for stacking purposes | | | |
| LEDs | System, Link/Act, PoE, Speed | | | |
| Flash | 32 MB | | | |
| 800 MHz ARM CPU memory | 256 MB | | | |
| Packet buffer | All numbers are aggregate across all ports, as the buffers are dynamically shared: | | | |
| | Model Name | Packet Buffer | | |
| | SF500-24 | 8Mb | | |
| | SF500-24P | 8Mb | | |
| | SF500-48 | 2*8Mb | | |
| | SF500-48P | 2*8Mb | | |
| | SG500-28 | 8Mb | | |
| | SG500-28P | 8Mb | | |
| | SG500-52 | 2*8Mb | | |
| | SG500-52P | 2*8Mb | | |
| | SG500X-24 | 12Mb | | |
| | SG500X-24P | 12Mb | | |
| | SG500X-48 | 2*12Mb | | |
| | SG500X-48P | 2*12Mb | | |
| Supported SFP/SFP+ Modules | SKU | Media | Speed | Typical Distance |
| | MFEFX1 | Multi-mode fiber | 100 Mbps | 2 km |
| | MFELX1 | Single-mode fiber | 100 Mbps | 10 km |
| | MFEBX1 | Single-mode fiber | 100 Mbps | 20 km |
| | MGBBX1 | Single-mode fiber | 1000 Mbps | 40 km |
| | MGBSX1 | Multi-mode fiber | 1000 Mbps | 300 m |
| | MGBLH1 | Single-mode fiber | 1000 Mbps | 40 km |
| | MGBLX1 | Single-mode fiber | 1000 Mbps | 10 km |
| | SFP-H10GB-CU1M | Copper coax | 5 Gig | 1 m |
| | SFP-H10GB-CU3M | Copper coax | 5 Gig | 3 m |
| | SFP-H10GB-CU5M | Copper coax | 5 Gig | 5 m |
| | SFP-10G-SR | Multi-mode fiber | 10 Gig | 300 m |
| | SFP-10G-LR | Single-mode fiber | 10 Gig | 10 km |
| | SFP-10G-LRM | Single-mode fiber | 10 Gig | 40 km |
| Environmental | | | | |
| Unit Dimensions (W x H x D) | Model Name | Unit Dimensions | | |
| | SF500-24 | 440 x 44 x 257 mm | | |
| | SF500-24P | 440 x 44 x 257 mm | | |
| | SF500-48 | 440 x 44 x 257 mm | | |
| | SF500-48P | 440 x 44 x 350 mm | | |
| | SG500-28 | 440 x 44 x 257 mm | | |
| | SG500-28P | 440 x 44 x 257 mm | | |
| | SG500-52 | 440 x 44 x 257 mm | | |
| SG500-52P | 440 x 44 x 350 mm | | | |

| Feature | Description | | | | |
|---|--|--|----------------------------|----------------------------|----------------------------|
| | SG500X-24 | 440 x 44 x 257 mm | | | |
| | SG500X-24P | 440 x 44 x 350 mm | | | |
| | SG500X-48 | 440 x 44 x 257 mm | | | |
| | SG500X-48P | 440 x 44 x 350 mm | | | |
| Unit weight | Model Name | Unit Weight | | | |
| | SF500-24 | 3.09 kg | | | |
| | SF500-24P | 3.73 kg | | | |
| | SF500-48 | 3.43 kg | | | |
| | SF500-48P | 5.61 kg | | | |
| | SG500-28 | 3.4 kg | | | |
| | SG500-28P | 3.95 kg | | | |
| | SG500-52 | 3.95 kg | | | |
| | SG500-52P | 5.61 kg | | | |
| | SG500X-24 | 3.45 kg | | | |
| | SG500X-24P | 5.25 kg | | | |
| | SG500X-48 | 4.01 kg | | | |
| | SG500X-48P | 5.74 kg | | | |
| Power | 100–240V 47–63 Hz, internal, universal | | | | |
| Certification | UL (UL 60950), CSA (CSA 22.2), CE mark, FCC Part 15 (CFR 47) Class A | | | | |
| Operating temperature | 32° to 104°F (0° to 40°C) | | | | |
| Storage temperature | –4° to 158°F (–20° to 70°C) | | | | |
| Operating humidity | 10% to 90%, relative, noncondensing | | | | |
| Storage humidity | 10% to 90%, relative, noncondensing | | | | |
| Acoustic noise and mean time between failures (MTBF) | Model Name | Fan (Number) | Acoustic Noise | MTBF @ 40°C (Hours) | MTBF @ 45°C (Hours) |
| | SF500-24 | No fan | N/A | 210,801.7 | 162,077 |
| | SF500-24P | 2 pcs/ 6300rpm No fan speed control | 41 dB | 260,626.2 | 198,687 |
| | SF500-48 | No fan | N/A | 131,127.2 | 103,602 |
| | SF500-48P | 3 pcs/9500rpm and fan speed control | 30°C=43dB 40°C=54.5dB | 147,998.3 | 113,497 |
| | SG500-28 | No fan | N/A | 141,161.0 | 109,796 |
| | SG500-28P | 2 pcs/6300rpm No fan speed control | 41.2 dB | 253,175.1 | 192,348 |
| | SG500-52 | 2 pcs/5000rpm No fan speed control | 41.3dB | 154,250.1 | 117,064 |
| | SG500-52P | 4 pcs/9500rpm and fan speed control | 30°C=41.1dB 40°C=54.8dB | 143,124.8 | 105,252 |
| | SG500X-24 | 1 pcs/6300rpm No fan speed control | 40.2dB | 246,188.2 | 190,535 |
| | SG500X-24P | 3 pcs/9500rpm and fan speed control | 30°C=40.1dB 40°C=52.2dB | 132,225.7 | 97,140 |
| | SG500X-48 | 2 pcs/5000rpm No fan speed control | 41.1dB | 166,796.4 | 126,041 |
| | SG500X-48P | 4 pcs/9500rpm and fan speed control | 30°C=40.9dB 40°C=54.2dB | 137,246.1 | 111,577 |
| Warranty | Limited lifetime with next-business-day advance replacement (where available, otherwise same day ship) | | | | |

| |
|---|
| Package Contents |
| <ul style="list-style-type: none"> • Cisco Small Business 500/500X Series Stackable Managed Switch • Power cord • Mounting hardware • Serial cable • CD-ROM with user documentation (PDF) included • Quick Start Guide |
| Minimum Requirements |
| <ul style="list-style-type: none"> • Web browser: Mozilla Firefox version 3.6 or later; Microsoft Internet Explorer version 7 or later • Category 5 Ethernet network cable • TCP/IP, network adapter, and network operating system (such as Microsoft Windows, Linux, or Mac OS X) installed |

*Support for these capabilities will be in a future firmware release.

Ordering Information

Table 2.

| Model Name | Product Order ID Number | Description |
|---|-------------------------|---|
| Fast Ethernet | | |
| SF500-24 | SF500-24-K9 | <ul style="list-style-type: none"> • 24 10/100 ports • 4 Gigabit Ethernet (2 combo* Gigabit Ethernet + 2 1GE/5GE SFP) |
| SF500-24P | SF500-24P-K9 | <ul style="list-style-type: none"> • 24 10/100 PoE ports • 4 Gigabit Ethernet (2 combo* Gigabit Ethernet + 2 1GE/5GE SFP) |
| SF500-48 | SF500-48-K9 | <ul style="list-style-type: none"> • 48 10/100 ports • 4 Gigabit Ethernet (2 combo* Gigabit Ethernet + 2 1GE/5GE SFP) |
| SF500-48P | SF500-48P-K9 | <ul style="list-style-type: none"> • 48 10/100 PoE ports • 4 Gigabit Ethernet (2 combo* Gigabit Ethernet + 2 1GE/5GE SFP) |
| Gigabit Ethernet | | |
| SG500-28 | SG500-28-K9 | <ul style="list-style-type: none"> • 24 10/100/1000 ports • 4 Gigabit Ethernet (2 combo* Gigabit Ethernet + 2 1GE/5GE SFP) |
| SG500-28P | SG500-28P-K9 | <ul style="list-style-type: none"> • 24 10/100/1000 PoE ports • 4 Gigabit Ethernet (2 combo* Gigabit Ethernet+ 2 1GE/5GE SFP) |
| SG500-52 | SG500-52-K9 | <ul style="list-style-type: none"> • 48 10/100/1000 ports • 4 Gigabit Ethernet (2 combo* Gigabit Ethernet + 2 1GE/5GE SFP) |
| SG500-52P | SG500-52P-K9 | <ul style="list-style-type: none"> • 48 10/100/1000 PoE ports • 4 Gigabit Ethernet (2 combo* Gigabit Ethernet+ 2 1GE/5GE SFP) |
| Gigabit Ethernet with 10 Gigabit Uplinks | | |
| SG500X-24 | SG500X-24-K9 | <ul style="list-style-type: none"> • 24 10/100/1000 ports • 4 10 Gigabit Ethernet SFP+ (1/5/10GE SFP+ modules) |
| SG500X-24P | SG500X-24P-K9 | <ul style="list-style-type: none"> • 24 10/100/1000 PoE ports • 4 10 Gigabit Ethernet SFP+ (1/5/10GE SFP+ modules) |
| SG500X-48 | SG500X-48-K9 | <ul style="list-style-type: none"> • 48 10/100/1000 ports • 4 10 Gigabit Ethernet SFP+ (1/5/10GE SFP+ modules) |
| SG500X-48P | SG500X-48P-K9 | <ul style="list-style-type: none"> • 48 10/100/1000 PoE ports • 4 10 Gigabit Ethernet SFP+ (1/5/10GE SFP+ modules) |

*Each combo mini-GBIC port has one 10/100/1000 copper Ethernet port and one mini-GBIC/SFP Gigabit Ethernet slot, with one port active at a time.

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Growth is never a bad thing. But as you gain new customers and a higher profile, you need a business technology platform capable of delivering a higher level of service and reliability. With more users, more devices and applications, and more exposure to security threats, a switching platform designed for a smaller operation simply cannot meet your growing needs. It's time for a network that will support your business as you take it to the next level. Cisco 500 and 500X Series switches provide the advanced feature set, reliability, and investment protection your business needs, today and in the future.

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