

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 troubleshot 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.
- 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 <http://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. Web based authentication provides a consistent interface to authenticate all types of host devices and operating systems, without the complexity of deploying IEEE 802.1X clients on each endpoint.
- 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).

- IPv6 First Hop Security extends the advanced threat protection to IPv6. This comprehensive security suite includes ND inspection, RA guard, DHCPv6 guard and neighbor binding integrity check, providing unparalleled protection against a vast range of address spoofing and man in the middle attack on IPv6 networks.
- Time based ACLs and Port Operation 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.
- Protection of management sessions using Radius, TACACS+ and local database authentication as well as secure management sessions over SSL, SSH, and SNMPv3.
- DoS (denial-of-service) attack prevention maximizes network uptime in the presence of an attack.

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. at), 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 ports when a link is down
- LEDs can be turned off to save power
- 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 offer 1G and 1G/5G 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 <http://www.cisco.com/cisco/web/download/index.html>.

Product warranty terms and other information applicable to Cisco products are available at <http://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. Product Specifications

Feature	Description		
Performance			
Switching capacity and forwarding rate All switches are wire-speed and non-blocking.	Product Name	Capacity in mpps (64-byte packets)	Switching Capacity (Gbps)
	SF500-24	9.52	28.8
	SF500-24P	9.52	28.8
	SF500-24MP	9.52	28.8
	SF500-48	13.10	33.6
	SF500-48P	13.10	33.6
	SF500-48MP	13.10	33.6
	SG500-28	41.67	72
	SG500-28P	41.67	72
	SG500-28MPP	41.67	72
	SG500-52	77.38	120
	SG500-52P	77.38	120
	SG500-52MP	77.38	120
	SG500X-24	95.24	128
	SG500X-24P	95.24	128
SG500X-24MPP	95.24	128	

Feature	Description		
	SG500X-48	130.95	176
	SG500X-48P	130.95	176
	SG500X-48MP	130.95	176
	SG500XG-8F8T	238.1	320
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		
Port grouping/link aggregation	Support for IEEE 802.3ad Link Aggregation Control Protocol (LACP) <ul style="list-style-type: none"> Up to 32 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 Dynamic VLAN assignment via Radius server along with 802.1x client authentication		
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 TV VLAN allows the single multicast VLAN to be shared in the network while subscribers remain in separate VLANs. This feature is also known as Multicast VLAN Registration (MVR).		
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.		
Unidirectional Link Detection (UDLD)	UDLD monitors physical connection to detect unidirectional links caused by incorrect wiring or port faults to prevent forwarding loops and blackholing of traffic in switched networks		
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 1K (1024) and 4K (for SG500X in native mode) 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.		
Jumbo Frames	Frames up to 9K (9216) bytes in length.		
Layer 3			
IPv4 routing	Wirespeed routing of IPv4 packets Up to 2K (2048) static routes and up to 256 IP interfaces		
Wirespeed IPv6 Static Routing	Up to 2K (2048) static routes and up to 128 IPv6 interfaces		
Layer 3 Interface	Configuration of layer 3 interface on physical port, LAG, VLAN interface or Loopback interface		
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 Server	Switch functions as an IPv4 DHCP Server serving IP addresses for multiple DHCP pools/scopes Support for DHCP options		
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.		

Feature	Description				
	SF500-48P	Energy Detect	110V=46.8W 220V=47.5W	110V=437W 220V=429.5W	1465.51
	SF500-48MP	Energy Detect	110V=60.48W 220V=60.21W	110V=853.04W 220V=826.62W	2910
	SG500-28	EEE + Short Reach + Energy Detect	110V=23.2W 220V=23.6W	N/A	74.2
	SG500-28P	EEE + Short Reach + Energy Detect	110V=35W 220V=35.9W	110V=227W 220V=221.5W	755.79
	SG500-28MPP	EEE + Short Reach + Energy Detect	110V=40.38W 220V=41.0W	110V=803.6W 220V=808.6W	2729.06
	SG500-52	EEE + Short Reach + Energy Detect	110V=47W 220V=47W	N/A	147.7
	SG500-52P	EEE + Short Reach + Energy Detect	110V=63.7W 220V=64.7W	110V=460.5W 220V=452W	1542.29
	SG500-52MP	EEE + Short Reach + Energy Detect	110V=70.3W 220V=70.5W	110V=873.5W 220V=857.3W	2807.51
	SG500X-24	EEE + Short Reach + Energy Detect	110V=36.5W 220V=36.2W	N/A	114.7
	SG500X-24P	EEE + Short Reach + Energy Detect	110V=57.2W 220V=57.9W	110V=456W 220V=438W	1494.52
	SG500X-24MPP	EEE + Short Reach + Energy Detect	110V=64.75W 220V=65.13W	110V=851.08W 220V=825.91W	2904
	SG500X-48	EEE + Short Reach + Energy Detect	110V=60.3W 220V=60.3W	N/A	189.5
	SG500X-48P	EEE + Short Reach + Energy Detect	110V=74.4W 220V=75W	110V=474W 220V=462W	1576.41
	SG500X-48MP	EEE + Short Reach + Energy Detect	110V=87.33W 220V=85.43W	110V=880.75W 220V=855.13W	3006
	SG500XG-8F8T	EEE + Short Reach + Energy Detect	110V=93.7W 220V=94.33W	N/A	321.87
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	
	SF500-24MP	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	
	SF500-48MP	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	
	SG500-28MPP	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	
	SG500-52MP	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)	

Feature	Description			
	SG500X-24MPP	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)
	SG500X-48MP	48GE + 4 10GE	48 GE	4 XG SFP+ (Two combo 5G SFP slots)
	SG500XG-8F8T	8 XG Copper + 8 XG SFP+ plus 1 GE Management	8 XG + 1 GE Mgmt	8 XG SFP+
Buttons	Reset button			
Cabling type	Unshielded twisted pair (UTP) Category 5 or better; Fiber options (SMF and MMF); Coaxial SFP+ for stacking purposes			
LEDs	LED power savings, 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		
	SF500-24MP	8Mb		
	SF500-48	2 8Mb		
	SF500-48P	2 8Mb		
	SF500-48MP	2 8Mb		
	SG500-28	8Mb		
	SG500-28P	8Mb		
	SG500-28MPP	8Mb		
	SG500-52	2 8Mb		
	SG500-52P	2 8Mb		
	SG500-52MP	2 8Mb		
	SG500X-24	12Mb		
	SG500X-24P	12Mb		
	SG500X-24MPP	12Mb		
	SG500X-48	2 12Mb		
	SG500X-48P	2 12Mb		
	SG500X-48MP	2 12Mb		
	SG500XG-8F8T	16Mb		
Supported SFP/SFP+ Modules	SKU	Media	Speed	Maximum Distance
Note: Gigabit (MGBxxx) and 10-Gigabit (SFP-xxx) modules also work in the SG500XG-8F8T Ten Gigabit switch model.	MFEX1	Multi-mode fiber	100 Mbps	2 km
	MFELX1	Single-mode fiber	100 Mbps	15 km
	MFEBX1	Single-mode fiber	100 Mbps	20 km
	MGBBX1	Single-mode fiber	1000 Mbps	10 km
	MGBSX1	Multi-mode fiber	1000 Mbps	500 m
	MGBLH1	Single-mode fiber	1000 Mbps	40 km
	MGBLX1	Single-mode fiber	1000 Mbps	10 km

Feature	Description			
	MGBT1	UPT cat 5	1000 Mbps	100 m
	SFP-H10GB-CU1M	Copper coax	5G (Sx500)/10G (SG500X)	1 m
	SFP-H10GB-CU3M	Copper coax	5G (Sx500)/10G (SG500X)	3 m
	SFP-H10GB-CU5M	Copper coax	5G (Sx500)/10G (SG500X)	5 m
	SFP-10G-SR	Multi-mode fiber	10 Gig	400 m
	SFP-10G-LR	Single-mode fiber	10 Gig	10 km
	SFP-10G-LRM	Single-mode/multi-mode fiber	10 Gig	300 m
Stack Connection Options				
	500		500X	
500	5G copper - SFP-H10GB-CUxM 1G fiber or copper - MGBxxx 1G Base-T - embedded RJ45 (S1/S2)		5G copper - SFP-H10GB-CUxM 1G fiber or copper - MGBxxx	
500X	5G copper - SFP-H10GB-CUxM 1G fiber or copper - MGBxxx		10G copper - SFP-H10GB-CUxM 10G Fiber - SFP-10G-xx 1G fiber or copper - MGBxxx	
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	
	SF500-24MP		440 x 44 x 257 mm	
	SF500-48		440 x 44 x 257 mm	
	SF500-48P		440 x 44 x 350 mm	
	SF500-48MP		440 x 44 x 350 mm	
	SG500-28		440 x 44 x 257 mm	
	SG500-28P		440 x 44 x 257 mm	
	SG500-28MPP		440 x 44 x 350 mm	
	SG500-52		440 x 44 x 257 mm	
	SG500-52P		440 x 44 x 350 mm	
	SG500-52MP		440 x 44 x 350 mm	
	SG500X-24		440 x 44 x 257 mm	
	SG500X-24P		440 x 44 x 350 mm	
	SG500X-24MPP		440 x 44 x 350 mm	
	SG500X-48		440 x 44 x 257 mm	
	SG500X-48P		440 x 44 x 350 mm	
	SG500X-48MP		440 x 44 x 350 mm	
	SG500XG-8F8T		440 x 44 x 350 mm	
Unit weight	Model Name		Unit Weight	
	SF500-24		3.09 kg	
	SF500-24P		3.73 kg	
	SF500-24MP		4.35 kg	
	SF500-48		3.43 kg	
	SF500-48P		5.61 kg	
	SF500-48MP		5.52 kg	

Feature	Description			
	SG500-28	3.4 kg		
	SG500-28P	3.95 kg		
	SG500-28MPP	5.28 kg		
	SG500-52	3.95 kg		
	SG500-52P	5.61 kg		
	SG500-52MP	5.6 kg		
	SG500X-24	3.45 kg		
	SG500X-24P	5.25 kg		
	SG500X-24MPP	4.61 kg		
	SG500X-48	4.01 kg		
	SG500X-48P	5.74 kg		
	SG500X-48MP	5.43 kg		
	SG500XG-8F8T	5.25 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	SF500-24, SF500-24P, SF500-48, SF500-48P, SG500-28, SG500-28P, SG500-52, SG500-52P, SG500X-24, SG500X-24P, SG500X-48, SG500X-48P 32°to 104°F (0°to 40°C) SG500-28MPP, SG500-52MP, SG500XG-8F8T, SF500-24MP, SF500-48MP, SG500X-24MPP, SG500X-48MP 32°to 122°F (0°to 50°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)
	SF500-24	No fan	N/A	210,801.7
	SF500-24P	2 pcs/6300rpm No fan speed control	41 dB	260,626.2
	SF500-24MP	2pcs	44 dB	514157 (at 50C)
	SF500-48	No fan	N/A	131,127.2
	SF500-48P	3 pcs/9500rpm and fan speed control	30°C=43dB 40°C=54.5dB	147,998.3
	SF500-48MP	3 pcs	46.9 dB	322111 (at 50C)
	SG500-28	No fan	N/A	141,161.0
	SG500-28P	2 pcs/6300rpm No fan speed control	41.2 dB	253,175.1
	SG500-28MPP	2 pcs/6300rpm No fan speed control	41.2 dB	188,722 (at 50C)
	SG500-52	2 pcs/5000rpm No fan speed control	41.3dB	154,250.1
	SG500-52P	4 pcs/9500rpm and fan speed control	30°C=41.1dB 40°C=54.8dB	143,124.8
	SG500-52MP	4 pcs/9500rpm and fan speed control	30°C=41.1dB 40°C=54.8dB	186,968 (at 50C)
	SG500X-24	1 pcs/6300rpm No fan speed control	40.2dB	246,188.2
	SG500X-24P	3 pcs/9500rpm and fan speed control	30°C=40.1dB 40°C=52.2dB	132,225.7

Feature	Description			
	SG500X-24MPP	3pcs	46.4 dB	428,088 (at 50C)
	SG500X-48	2 pcs/5000rpm No fan speed control	41.1dB	166,796.4
	SG500X-48P	4 pcs/9500rpm and fan speed control	30°C=40.9dB 40°C=54.2dB	137,246.1
	SG500X-48MP	4 pcs	46.4 dB	307978 (at 50C)
	SG500XG-8F8T	4 pcs/9500rpm and fan speed control	30°C=41.7dB 40°C=55.3dB	131,290 (at 50C)
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 kit included with all models • 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 8 or later; Microsoft Internet Explorer version 7 or later, Safari, Chrome • Category 5 Ethernet network cable • TCP/IP, network adapter, and network operating system (such as Microsoft Windows, Linux, or Mac OS X) installed

Ordering Information

Table 2. Cisco 500 Series Switches Ordering Information

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)
SF500-24MP	SF500-24MP-K9	<ul style="list-style-type: none"> • 24 10/100 POE+ ports with 370W power budget • 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)
SF500-48MP	SF500-48MP-K9	<ul style="list-style-type: none"> • 48 10/100 POE+ ports with 740W power budget • 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 with 180W power budget • 4 Gigabit Ethernet (2 combo[*] Gigabit Ethernet+ 2 1GE/5GE SFP)
SG500-28MPP	SG500-28MPP-K9	<ul style="list-style-type: none"> • 24 10/100/1000 PoE+ ports with 740W power budget • 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)

Model Name	Product Order ID Number	Description
SG500-52P	SG500-52P-K9	<ul style="list-style-type: none"> • 48 10/100/1000 PoE+ ports with 375W power budget • 4 Gigabit Ethernet (2 combo* Gigabit Ethernet+ 2 1GE/5GE SFP)
SG500-52MP	SG500-52MP-K9	<ul style="list-style-type: none"> • 48 10/100/1000 PoE+ ports with 740W power budget • 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+ (2*10 GE+ 2*10GE/5GE-Stacking Combo)
SG500X-24P	SG500X-24P-K9	<ul style="list-style-type: none"> • 24 10/100/1000 PoE+ ports with 375W power budget • 4*10 Gigabit Ethernet SFP+ (2*10 GE+ 2*10GE/5GE-Stacking Combo)
SG500X-24MPP	SG500X-24MPP-K9	<ul style="list-style-type: none"> • 24 10/100/1000 PoE+ ports with 740W power budget • 4*10 Gigabit Ethernet SFP+ (2*10 GE+ 2*10GE/5GE-Stacking Combo)
SG500X-48	SG500X-48-K9	<ul style="list-style-type: none"> • 48 10/100/1000 ports • 4*10 Gigabit Ethernet SFP+ (2*10 GE+ 2*10GE/5GE-Stacking Combo)
SG500X-48P	SG500X-48P-K9	<ul style="list-style-type: none"> • 48 10/100/1000 PoE+ ports with 375W power budget • 4*10 Gigabit Ethernet SFP+ (2*10 GE+ 2*10GE/5GE-Stacking Combo)
SG500X-48MP	SG500X-48MP-K9	<ul style="list-style-type: none"> • 48 10/100/1000 PoE+ ports with 740W power budget • 4*10 Gigabit Ethernet SFP+ (2*10 GE+ 2*10GE/5GE-Stacking Combo)
10 Gigabit Ethernet		
SG500XG-8F8T	SG500XG-8F8T-K9	<ul style="list-style-type: none"> • 8*10 Gigabit Ethernet 10GBase-T copper port • 8*10 Gigabit Ethernet SFP+ (dedicated) • 1 Gigabit Ethernet management port

* 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.

An Advanced Technology Backbone for Growing Businesses

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.

Cisco Capital

Financing to Help You Achieve Your Objectives

Cisco Capital can help you acquire the technology you need to achieve your objectives and stay competitive. We can help you reduce CapEx. Accelerate your growth. Optimize your investment dollars and ROI. Cisco Capital financing gives you flexibility in acquiring hardware, software, services, and complementary third-party equipment. And there's just one predictable payment. Cisco Capital is available in more than 100 countries. [Learn more.](#)

For More Information

To find out more about the Cisco 500 Series, visit <http://www.cisco.com/go/500switches>.

To learn about other products and solutions in the Cisco Small Business portfolio, visit <http://www.cisco.com/go/smallbusiness>.