

Cisco 350 Series Managed Switches

Easy-to-Use Managed Switches That Provide the Ideal Combination of Features and Affordability

To stay ahead in a competitive marketplace, businesses need to make every dollar count. That means getting the most value from your technology investments, but it also means making sure that employees have fast, reliable access to the business tools and information they need. Every minute an employee waits for an unresponsive application and every minute your network is down has an effect on your profits. The importance of maintaining a strong and dependable business network only grows as your business adds more employees, applications, and network complexity.

When your business needs advanced security and features but value is still a top consideration, you're ready for the new generation of Cisco® Small Business managed switches: the Cisco 350 Series (Figure 1).

Figure 1. Cisco 350 Series Managed Switches



Cisco 350 Series Switches

The Cisco 350 Series, part of the Cisco Small Business line of network solutions, is a portfolio of affordable managed switches that provides a reliable foundation for your business network. These switches deliver the features you need to improve the availability of your critical business applications, protect your sensitive information, and optimize your network bandwidth to deliver information and applications more effectively. Easy to set up and use, the Cisco 350 Series provides the ideal combination of affordability and capabilities for small businesses and helps you create a more efficient, better-connected workforce.

The Cisco 350 Series is a broad portfolio of fixed-configuration managed Ethernet switches. Models are available with 8 to 48 ports of Fast Ethernet and 10 to 52 ports of Gigabit Ethernet connectivity, providing optimal flexibility to create exactly the right network foundation for your business. However, unlike other small business switching solutions that provide managed network capabilities only in the costliest models, all Cisco 350 Series Switches support the advanced security management capabilities and network features you need to support business-class data, voice, security, and wireless technologies. At the same time, these switches are simple to deploy and configure, allowing you to take advantage of the managed network services your business needs.

Business Applications

Whether you need a basic high-performance network to connect employee computers or a solution to deliver data, voice, and video services, the Cisco 350 Series offers a solution to meet your needs. Possible deployment scenarios include:

- **Secure desktop connectivity:** Cisco 350 Series Switches can simply and securely connect employees working in small offices with each other and with all of the servers, printers, and other devices they use. High performance and reliable connectivity help speed file transfers and data processing, improve network uptime, and keep your employees connected and productive.
- **Secure wireless connectivity:** With its advanced security features, Power over Ethernet, Auto Smartports, QoS, VLAN, and access control features, the Cisco 350 Series Switches are the perfect foundation to add business-grade wireless to a business network.
- **Unified communications:** As a managed network solution, the Cisco 350 Series provides the performance and advanced traffic-handling intelligence you need to deliver all communications and data over a single network. Cisco offers a complete portfolio of IP telephony and other unified communications products designed for businesses. Cisco 350 Series Switches have been rigorously tested to help ensure easy integration and full compatibility with these and other products, providing a complete business solution.
- **Highly secure guest connectivity.** Cisco 350 Series Switches let you extend highly secure network connectivity to guests in a variety of settings, such as a hotel, an office waiting room, or any other area open to nonemployee users. Using powerful but easy-to-configure security and traffic segmentation capabilities, you can isolate your vital business traffic from guest services and keep guests' network sessions private from each other.

Features and Benefits

Cisco 350 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.

Ease of Management and Deployment

Cisco 350 Series switches are designed to be easy to use and manage by commercial customers or the partners that serve them. They feature:

- Cisco Smart Network Application (SNA) is an innovative network-level monitoring and management tool embedded in Cisco 100 to 500 Series switches. It can discover network topology, display link status, monitor events, apply configurations, and upgrade software images across multiple switches in the network.
- The FindIT Network Manager and Probe are designed to manage Cisco 100 to 500 Series switches, routers, and wireless access points. The Manager lets you proactively manage the network instead of just reacting to events. FindIT Network Management is the perfect addition to your business network. For more information, visit <https://www.cisco.com/go/findit>.
- The Cisco FindIT Network Discovery Utility works through a simple toolbar on your web browser to discover Cisco devices on the network and display basic device information, inventory, and new firmware updates to aid in the configuration and speed the deployment of Cisco Small Business products. For more information, visit <https://www.cisco.com/go/findit>.

- The USB port on the front panel of the switch enables easy image and configuration transfer for faster deployment or upgrade.
- 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 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.

High Reliability and Resiliency

In a growing business where availability 24 hours a day, 7 days a week is critical, you need to assure that employees can always access the data and resources they need. The Cisco 350 Series 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.

Strong Security

Cisco 350 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 IP-MAC port binding (IPMB).
- 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 attacks 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 (DoS) 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 occurs using RADIUS, TACACS+, and local database authentication as well as secure management sessions over SSL, SSH, and SNMPv3.
- DoS attack prevention maximizes network uptime in the presence of an attack.

Power over Ethernet

Cisco 350 Series Switches are available with up to 48 PoE ports. This capability simplifies advanced technology deployments such as IP telephony, wireless, and IP surveillance by allowing you to connect and power network endpoints over a single Ethernet cable. With no need to install separate power supplies for IP phones or wireless access points, you can take advantage of advanced communications technologies more quickly and at a lower cost. Models support 802.3af PoE, 802.3at PoE+, and 60 Watt PoE.

Multigigabit Performance

Network needs are changing quickly. Thanks to evolving wireless standards and the rising number of wireless devices, keeping up with data rates and growing traffic can be a challenge. Your traditional Ethernet infrastructure can support speeds up to 1 Gigabit per second (Gbps), but competing today requires much more capacity. One option is completely replacing your older cabling infrastructure and upgrading your hardware. But wouldn't it be better to increase network speed and traffic capacity in a way that's quick, inexpensive, and efficient?

Cisco's new Multigigabit Ethernet switches offer just that: an easy-to-deploy, budget-friendly solution that allows you to increase network speed and bandwidth using your existing cables. By partnering with other industry leaders to form the NBASE-T Alliance, Cisco uses NBASE-T technology to help you get more out of your existing infrastructure. Save time and money by avoiding upgrades and extending the life of your installed cable plants. And discover the benefits of meeting consumer demand for increased bandwidth and speeds without a large initial investment.

Multigigabit Ethernet technology uses capabilities in your existing cabling infrastructure to meet bandwidth requirements and provide up to five times the performance. The technology enables intermediate data rates of 2.5 and 5 Gbps to ease the jump between traditional rates of 1 Gbps and 10 Gbps. These intermediate rates run on most installed cables and preserve older UTP wiring, which is good for 802.11ac wireless LAN applications.

The technology also supports Power over Ethernet (PoE) forms, including PoE+ and 60W PoE. Cisco Multigigabit Ethernet switches help you avoid having to run multiple cables between switches and access points and let your networks welcome next-generation traffic speeds and data rates.

Networkwide Automatic Voice Deployment

Using a combination of Cisco Discovery Protocol, LLDP-MED, Auto Smartports, and Voice Services Discovery Protocol (or VSDP, 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.

IPv6 Support

As the IP address scheme evolves to accommodate a growing number of network devices, the Cisco 350 Series can support the transition to the next generation of networking and operating systems such as Windows 8, 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 350 Series switches have successfully completed rigorous IPv6 testing and have received the USGv6 and IPv6 Gold certification.

Advanced Layer 3 Traffic Management

The Cisco 350 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.

Additionally, Cisco 350 models provide static 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 350 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 350 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)
- Automatic power shutoff on ports when a link is down
- LEDs that can be turned off to save power
- Embedded intelligence to adjust signal strength based on the length of the connecting cable

Expansion Ports

The Cisco 350 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 offer 28 to 52 ports to give you more value, versus the 24-port or 48-port varieties with four shared ports that's common in the market. The Cisco 350 Series also offers mini gigabit interface converter (mini-GBIC) expansion slots that give you the option to add fiber-optic or Gigabit Ethernet uplink connectivity to the switch. With the ability to increase the connectivity range of the switches, you have more flexibility to design your network around your unique business environment and to easily connect switches on different floors or across the business.

Peace of Mind and Investment Protection

Cisco 350 Series switches offer the reliable performance and peace of mind you expect from a Cisco switch. When you invest in the Cisco 350 Series, you gain the benefits 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 primary 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.
- Complimentary software updates for bug fixes for the warranty term. To download software updates, go to <https://www.cisco.com/cisco/web/download/index.html>.
- Telephone technical support at no charge for the first 12 months following the date of purchase.
- Product warranty terms and other information applicable to Cisco products are available at <https://www.cisco.com/go/warranty>.
- Cisco Small Business products are supported by professionals in Cisco Small Business Support Center locations worldwide who are specifically trained to understand your needs. The Cisco Small Business Support Community, an online forum, enables you to collaborate with your peers and reach Cisco technical experts for support information.

Cisco Limited Lifetime Hardware Warranty

Cisco 350 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 <https://software.cisco.com/download/navigator.html>.

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

World-Class Service and Support

Your time is valuable, especially when you have a problem affecting your business. Cisco 350 Series switches are backed by Cisco SMARTnet[®] Total Care[™] which provides affordable peace-of-mind coverage. Delivered by Cisco and backed by your trusted partner, this comprehensive service includes software updates and access to the Cisco Support Center, and it extends technical service to three years.

Cisco SMB products are supported by professionals in the Cisco 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 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 gives the product specifications for the Cisco 350 Series Switches.

Table 1. Product Specifications

Feature	Description		
Performance			
Switching capacity and forwarding rate All switches are wire speed and nonblocking	Model Name		
	Capacity in Millions of Packets per Second (mpps) (64-byte packets)		
	Switching Capacity in Gigabits per Second (Gbps)		
	SF350-08	1.19	1.6
	SF352-08	4.17	5.6
	SF352-08P	4.17	5.6
	SF352-08MP	4.17	5.6
	SF350-24	9.52	12.8
	SF350-24P	9.52	12.8
	SF350-24MP	9.52	12.8
	SF350-48	13.09	17.6
	SF350-48P	13.09	17.6
	SF350-48MP	13.09	17.6
	SG350-8PD	46.13	62.0
	SG350-10	14.88	20.0
	SG350-10P	14.88	20.0
	SG350-10MP	14.88	20.0
	SG355-10MP	14.88	20.0
	SG350-10SFP	14.88	20.0
	SG350-20	29.76	40.0
SG350-28	41.66	56.0	
SG350-28P	41.66	56.0	
SG350-28MP	41.66	56.0	
SG350-28SFP	41.66	56.0	
SG350-52	77.38	104.0	
SG350-52P	77.38	104.0	
SG350-52MP	77.38	104.0	
USB slot	For file-management purposes		
Layer 2 Switching			
Spanning Tree Protocol	Standard 802.1d Spanning Tree support Fast convergence using 802.1w (Rapid Spanning Tree [RSTP]), enabled by default 8 instances are supported Multiple Spanning Tree instances using 802.1s (MSTP)		
Port grouping	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 link aggregation 		
VLAN	Support for up to 4096 VLANs simultaneously Port-based and 802.1Q tag-based VLANs MAC-based VLAN Management VLAN Private VLAN Edge (PVE), also known as protected ports, with multiple uplinks		

Feature	Description
	<p>Guest VLAN</p> <p>Unauthenticated VLAN</p> <p>Dynamic VLAN assignment via RADIUS server along with 802.1x client authentication</p> <p>CPE VLAN</p>
Voice VLAN	Voice traffic is automatically assigned to a voice-specific VLAN and treated with appropriate levels of QoS Auto voice capabilities deliver networkwide 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 (also known as MVR)
Q-in-Q VLAN	VLANs transparently cross a service provider network while isolating traffic among customers
Generic VLAN Registration Protocol (GVRP)/Generic Attribute Registration Protocol (GARP)	Protocols for automatically propagating and configuring VLANs in a bridged domain
Unidirectional Link Detection (UDLD)	UDLD monitors physical connection to detect unidirectional links caused by incorrect wiring or cable/port faults to prevent forwarding loops and blackholing of traffic in switched networks
Dynamic Host Configuration Protocol (DHCP) Relay at Layer 2	Relay of DHCP traffic to DHCP server in different VLAN; works with DHCP Option 82
Internet Group Management Protocol (IGMP) versions 1, 2, and 3 snooping	IGMP limits bandwidth-intensive multicast traffic to only the requesters; supports 1K 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
Head-Of-Line (HOL) blocking	HOL blocking prevention
Loopback Detection	Loopback detection provides protection against loops by transmitting loop protocol packets out of ports on which loop protection has been enabled. It operates independently of STP
Jumbo frames	Up to 9K (9216) bytes
Layer 3	
IPv4 routing	Wirespeed routing of IPv4 packets Up to 1K static routes and up to 128 IP interfaces
IPv6 routing	Wirespeed routing of IPv6 packets
Classless Interdomain Routing (CIDR)	Support for CIDR
Layer 3 Interface	Configuration of Layer 3 interface on physical port, LAG, VLAN interface, or loopback interface
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
DHCP Server	Switch functions as an IPv4 DHCP server serving IP addresses for multiple DHCP pools/scopes Support for DHCP options
Security	
Secure Shell (SSH) Protocol	SSH is a secure replacement for Telnet traffic. SCP also uses SSH. SSH v1 and v2 are supported
Secure Sockets Layer (SSL)	SSL support: Encrypts all HTTPS traffic, allowing highly secure access to the browser-based management GUI in the switch
IEEE 802.1X (Authenticator role)	802.1X: 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
Web-based authentication	Web based authentication provides network admission control through web browser to any host devices and operating systems
STP Bridge Protocol Data Unit (BPDU) Guard	A security mechanism to protect the network from invalid configurations. A port enabled for BPDU Guard is shut down if a BPDU message is received on that port
STP Root Guard	This prevents edge devices not in the network administrator's control from becoming Spanning Tree Protocol root nodes

Feature	Description
DHCP snooping	Filters out DHCP messages with unregistered IP addresses and/or from unexpected or untrusted interfaces. This prevents rogue devices from behaving as DHCP Servers
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. This prevents IP Address Spoofing
Dynamic ARP Inspection (DAI)	The switch discards ARP packets from a port if there are no static or dynamic IP/MAC bindings or if there is a discrepancy between the source or destination addresses in the ARP packet. This prevents man-in-the-middle attacks
IP/MAC/Port Binding (IPMB)	The preceding features (DHCP Snooping, IP Source Guard, and Dynamic ARP Inspection) work together to prevent DOS attacks in the network, thereby increasing network availability
Secure Core Technology (SCT)	Makes sure that the switch will receive and process management and protocol traffic no matter how much traffic is received
Secure Sensitive Data (SSD)	A mechanism to manage sensitive data (such as passwords, keys, and so on) securely on the switch, populating this data to other devices, and secure autoconfig. Access to view the sensitive data as plaintext or encrypted is provided according to the user-configured access level and the access method of the user
Layer 2 isolation Private VLAN Edge (PVE) with community VLAN	PVE (also known as protected ports) provides Layer 2 isolation between devices in the same VLAN, supports multiple uplinks
Port security	The ability to lock source MAC addresses to ports and limits the number of learned MAC addresses
RADIUS/TACACS+	Supports RADIUS and TACACS authentication. Switch functions as a client
Storm control	Broadcast, multicast, and unknown unicast
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
DoS prevention	Denial-Of-Service (DOS) attack prevention
ACLs	Support for up to 512 rules Drop or rate limit based on source and destination MAC, VLAN ID or IP address, protocol, port, Differentiated Services Code Point (DSCP)/IP precedence, TCP/UDP source and destination ports, 802.1p priority, Ethernet type, Internet Control Message Protocol (ICMP) packets, IGMP packets, TCP flag, time-based ACLs supported
Quality of Service	
Priority levels	8 hardware queues
Scheduling	Strict priority and Weighted Round-Robin (WRR) Queue assignment based on DSCP and class of service (802.1p/CoS)
Class of service	Port based; 802.1p VLAN priority based; IPv4/v6 IP precedence/Type of Service (ToS)/DSCP based; Differentiated Services (DiffServ); classification and remarking ACLs, trusted QoS
Rate limiting	Ingress policer; egress shaping and rate control; per VLAN, per port, and flow based
Congestion avoidance	A TCP congestion avoidance algorithm is required to minimize and prevent global TCP loss synchronization
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 LACP, IEEE 802.3z Gigabit Ethernet, IEEE 802.3x Flow Control, IEEE 802.1D (STP, GARP, and GVRP), IEEE 802.1Q/p VLAN, IEEE 802.1w RSTP, 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 1042, RFC 1071, RFC 1123, RFC 1141, RFC 1155, RFC 1157, RFC 1350, RFC 1533, RFC 1541, 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 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 Maximum Transmission Unit (MTU) discovery Duplicate Address Detection (DAD)

Feature	Description																																										
	ICMP version 6 IPv6 over IPv4 network with Intrasite Automatic Tunnel Addressing Protocol (ISATAP) support USGv6 and IPv6 Gold Logo certified																																										
IPv6 QoS	Prioritize IPv6 packets in hardware																																										
IPv6 ACL	Drop or rate limit IPv6 packets in hardware																																										
IPv6 First Hop Security	RA guard ND inspection DHCPv6 guard Neighbor binding table (snooping and static entries) Neighbor binding integrity check																																										
Multicast Listener Discovery (MLD v1/2) snooping	Deliver IPv6 multicast packets only to the required receivers																																										
IPv6 applications	Web/SSL, Telnet server/SSH, ping, traceroute, Simple Network Time Protocol (SNTP), Trivial File Transfer Protocol (TFTP), SNMP, RADIUS, syslog, DNS client, Telnet Client, DHCP Client, DHCP Autoconfig, IPv6 DHCP Relay, TACACS																																										
IPv6 RFCs supported	RFC 4443 (which obsoletes RFC2463): ICMP version 6 RFC 4291 (which obsoletes RFC 3513): IPv6 address architecture RFC 4291: IPv6 addressing architecture RFC 2460: IPv6 specification RFC 4861 (which obsoletes RFC 2461): neighbor discovery for IPv6 RFC 4862 (which obsoletes RFC 2462): IPv6 stateless address autoconfiguration RFC 1981: path MTU discovery RFC 4007: IPv6 scoped address architecture RFC 3484: default address selection mechanism RFC 5214 (which obsoletes 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																																										
Smart Network Application	Smart Network Application (SNA) is an innovative network-level monitoring and management tool embedded in Cisco 100 to 500 Series switches. It can discover network topology, display link status, monitor events, apply configurations, and upgrade software images across multiple switches in the network (Note: Management of your network using Smart Network Application requires the use of either a 350, 350X, or 550X Series switch model as a part of your network)																																										
SNMP	SNMP versions 1, 2c, and 3 with support for traps, and SNMP version 3 User-based Security Model (USM)																																										
Standard MIBs	<table border="0"> <tr> <td>draft-ietf-bridge-8021x-MIB</td> <td>rfc2011-MIB</td> </tr> <tr> <td>draft-ietf-bridge-rstpmib-04-MIB</td> <td>draft-ietf-entmib-sensor-MIB</td> </tr> <tr> <td>draft-ietf-hubmib-etherif-MIB-v3-00-MIB</td> <td>lldp-MIB</td> </tr> <tr> <td>draft-ietf-syslog-device-MIB</td> <td>lldpextdot1-MIB</td> </tr> <tr> <td>ianaaddrfamnumbers-MIB</td> <td>lldpextdot3-MIB</td> </tr> <tr> <td>ianaifty-MIB</td> <td>lldpextmed-MIB</td> </tr> <tr> <td>ianaprot-MIB</td> <td>p-bridge-MIB</td> </tr> <tr> <td>inet-address-MIB</td> <td>q-bridge-MIB</td> </tr> <tr> <td>ip-forward-MIB</td> <td>rfc1389-MIB</td> </tr> <tr> <td>ip-MIB</td> <td>rfc1493-MIB</td> </tr> <tr> <td>RFC1155-SMI</td> <td>rfc1611-MIB</td> </tr> <tr> <td>RFC1213-MIB</td> <td>rfc1612-MIB</td> </tr> <tr> <td>SNMPv2-MIB</td> <td>rfc1850-MIB</td> </tr> <tr> <td>SNMPv2-SMI</td> <td>rfc1907-MIB</td> </tr> <tr> <td>SNMPv2-TM</td> <td>rfc2571-MIB</td> </tr> <tr> <td>RMON-MIB.my</td> <td>rfc2572-MIB</td> </tr> <tr> <td>dcb-raj-DCBX-MIB-1108-MIB</td> <td>rfc2574-MIB</td> </tr> <tr> <td>rfc1724-MIB</td> <td>rfc2576-MIB</td> </tr> <tr> <td>RFC-1212.my_for_MG-Soft</td> <td>rfc2613-MIB</td> </tr> <tr> <td>rfc1213-MIB</td> <td>rfc2665-MIB</td> </tr> <tr> <td>rfc1757-MIB RFC-</td> <td>rfc2668-MIB</td> </tr> </table>	draft-ietf-bridge-8021x-MIB	rfc2011-MIB	draft-ietf-bridge-rstpmib-04-MIB	draft-ietf-entmib-sensor-MIB	draft-ietf-hubmib-etherif-MIB-v3-00-MIB	lldp-MIB	draft-ietf-syslog-device-MIB	lldpextdot1-MIB	ianaaddrfamnumbers-MIB	lldpextdot3-MIB	ianaifty-MIB	lldpextmed-MIB	ianaprot-MIB	p-bridge-MIB	inet-address-MIB	q-bridge-MIB	ip-forward-MIB	rfc1389-MIB	ip-MIB	rfc1493-MIB	RFC1155-SMI	rfc1611-MIB	RFC1213-MIB	rfc1612-MIB	SNMPv2-MIB	rfc1850-MIB	SNMPv2-SMI	rfc1907-MIB	SNMPv2-TM	rfc2571-MIB	RMON-MIB.my	rfc2572-MIB	dcb-raj-DCBX-MIB-1108-MIB	rfc2574-MIB	rfc1724-MIB	rfc2576-MIB	RFC-1212.my_for_MG-Soft	rfc2613-MIB	rfc1213-MIB	rfc2665-MIB	rfc1757-MIB RFC-	rfc2668-MIB
draft-ietf-bridge-8021x-MIB	rfc2011-MIB																																										
draft-ietf-bridge-rstpmib-04-MIB	draft-ietf-entmib-sensor-MIB																																										
draft-ietf-hubmib-etherif-MIB-v3-00-MIB	lldp-MIB																																										
draft-ietf-syslog-device-MIB	lldpextdot1-MIB																																										
ianaaddrfamnumbers-MIB	lldpextdot3-MIB																																										
ianaifty-MIB	lldpextmed-MIB																																										
ianaprot-MIB	p-bridge-MIB																																										
inet-address-MIB	q-bridge-MIB																																										
ip-forward-MIB	rfc1389-MIB																																										
ip-MIB	rfc1493-MIB																																										
RFC1155-SMI	rfc1611-MIB																																										
RFC1213-MIB	rfc1612-MIB																																										
SNMPv2-MIB	rfc1850-MIB																																										
SNMPv2-SMI	rfc1907-MIB																																										
SNMPv2-TM	rfc2571-MIB																																										
RMON-MIB.my	rfc2572-MIB																																										
dcb-raj-DCBX-MIB-1108-MIB	rfc2574-MIB																																										
rfc1724-MIB	rfc2576-MIB																																										
RFC-1212.my_for_MG-Soft	rfc2613-MIB																																										
rfc1213-MIB	rfc2665-MIB																																										
rfc1757-MIB RFC-	rfc2668-MIB																																										

Feature	Description	
	1215.my SNMPv2-CONF.my SNMPv2-TC.my rfc2674-MIB rfc2575-MIB rfc2573-MIB rfc2233-MIB rfc2013-MIB rfc2012-MIB	rfc2737-MIB rfc2925-MIB rfc3621-MIB rfc4668-MIB rfc4670-MIB trunk-MIB tunnel-MIB udp-MIB
Private MIBs	CISCOB-lldp-MIB CISCOB-brgmulticast-MIB CISCOB-bridgemibobjects-MIB CISCOB-bonjour-MIB CISCOB-dhcpcl-MIB CISCOB-MIB CISCOB-wrandomtaildrop-MIB CISCOB-traceroute-MIB CISCOB-telnet-MIB CISCOB-stormctrl-MIB CISCOB-ssh-MIB CISCOB-socket-MIB CISCOB-sntp-MIB CISCOB-smon-MIB CISCOB-phy-MIB CISCOB-multisessionterminal-MIB CISCOB-mri-MIB CISCOB-jumbframes-MIB CISCOB-gvrp-MIB CISCOB-endofmib-MIB CISCOB-dot1x-MIB CISCOB-deviceparams-MIB CISCOB-cli-MIB CISCOB-cdb-MIB CISCOB-brgmacswitch-MIB CISCOB-3sw2swtables-MIB CISCOB-smartPorts-MIB CISCOB-tbi-MIB CISCOB-macbaseprio-MIB CISCOB-policy-MIB CISCOB-env_mib CISCOB-sensor-MIB CISCOB-aaa-MIB CISCOB-application-MIB CISCOB-bridgesecurity-MIB CISCOB-copy-MIB CISCOB-CpuCounters-MIB CISCOB-Custom1BonjourService-MIB CISCOB-dhcp-MIB CISCOB-dif-MIB CISCOB-dnsc-MIB CISCOB-embweb-MIB CISCOB-fft-MIB CISCOB-file-MIB CISCOB-greeneth-MIB CISCOB-interfaces-MIB CISCOB-interfaces_recovery-MIB	CISCOB-ip-MIB CISCOB-iprouter-MIB CISCOB-ipv6-MIB CISCOB-mnginf-MIB CISCOB-lic-MIB CISCOB-localization-MIB CISCOB-mcmngr-MIB CISCOB-mng-MIB CISCOB-physdescription-MIB CISCOB-Poe-MIB CISCOB-protectedport-MIB CISCOB-rmon-MIB CISCOB-rs232-MIB CISCOB-SecuritySuite-MIB CISCOB-snmp-MIB CISCOB-specialbpdu-MIB CISCOB-banner-MIB CISCOB-syslog-MIB CISCOB-TcpSession-MIB CISCOB-traps-MIB CISCOB-trunk-MIB CISCOB-tuning-MIB CISCOB-tunnel-MIB CISCOB-udp-MIB CISCOB-vlan-MIB CISCOB-ipstdacl-MIB CISCO-SMI-MIB CISCOB-DebugCapabilities-MIB CISCOB-CDP-MIB CISCOB-vlanVoice-MIB CISCOB-EVENTS-MIB CISCOB-sysmng-MIB CISCOB-sct-MIB CISCO-TC-MIB CISCO-VTP-MIB CISCO-CDP-MIB CISCOB-eee-MIB CISCOB-ssl-MIB CISCOB-qosclimib-MIB CISCOB-digitalkeymanage-MIB CISCOB-tbp-MIB CISCOB-MIB CISCOB-secsd-MIB CISCOB-draft-ietf-entmib-sensor-MIB CISCOB-draft-ietf-syslog-device-MIB CISCOB-rfc2925-MIB

Feature	Description
Remote Monitoring (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 TFTP and upgrade over SCP running over SSH • Upgrade can be initiated through console port as well • 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. A single session is supported
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. A single session is supported
DHCP (options 12, 66, 67, 82, 129, and 150)	DHCP options facilitate tighter control from a central point (DHCP server) to obtain IP address, autoconfiguration (with configuration file download), DHCP relay, and hostname
Secure Copy (SCP)	Securely transfer files to and from the switch
Autoconfiguration with Secure Copy (SCP) file download	Enables secure mass deployment with protection of sensitive data
Text-editable config files	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	Applies the intelligence delivered through the Smartport roles and applies it automatically to the port based on the devices discovered over Cisco Discovery Protocol or LLDP-MED. This facilitates zero-touch deployments
Textview CLI	Scriptable command-line interface. A full CLI as well as a menu-based CLI is supported. User privilege levels 1, 7, and 15 are supported for the CLI
Cloud services	Support for Cisco Small Business FindIT Network
Localization	Localization of GUI and documentation into multiple languages
Other management	Traceroute; single IP management; HTTP/HTTPS; SSH; RADIUS; port mirroring; TFTP upgrade; DHCP client; BOOTP; SNMP; Xmodem upgrade; cable diagnostics; ping; syslog; Telnet client (SSH secure support)
Time-based port operation	Link up or down based on user-defined schedule (when the port is administratively up)
Time-based PoE	Capability for power to be on or off based on a user-defined schedule to save energy
Login banner	Configurable multiple banners for web as well as CLI
Power Efficiency	
EEE Compliant (802.3az)	Supports 802.3az on all copper ports (SG350 models)
Energy Detect	Automatically turns power off on Gigabit Ethernet and 10/100 RJ-45 port when detecting link down Active mode is resumed without loss of any packets when the switch detects the link up
Cable length detection	Adjusts the signal strength based on the cable length for Gigabit Ethernet models. Reduces the power consumption for cables shorter than 10m
Disable port LEDs	LEDs can be manually turned off to save on energy
General	
Jumbo frames	Frame sizes up to 9K (9216) bytes supported on 10/100 and Gigabit interfaces
MAC table	Up to 16K (16384) MAC addresses
Discovery	
Bonjour	The switch advertises itself using the Bonjour protocol
Link Layer Discovery Protocol (LLDP) (802.1ab) with LLDP-MED extensions	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. It also learns the connected device and its characteristics via Cisco Discovery Protocol

Feature	Description																																																													
Power over Ethernet (PoE)																																																														
802.3af PoE, 802.3at PoE+, and 60W PoE power are delivered over any of the RJ-45 ports within the listed power budgets	Switches support 802.3at PoE+, 802.3af, 60W PoE, and Cisco prestandard (older) PoE. Maximum power of 60W to any 10/100 or Gigabit Ethernet port for PoE+ supported devices and 15.4W for PoE supported devices, until the PoE budget for the switch is reached. The total power available for PoE per switch is as follows:																																																													
	<table border="1"> <thead> <tr> <th>Model Name</th> <th>Power Dedicated to PoE</th> <th>Number of Ports That Support PoE</th> </tr> </thead> <tbody> <tr> <td>SF352-08P</td> <td>62W</td> <td>8</td> </tr> <tr> <td>SF352-08MP</td> <td>128W</td> <td>8</td> </tr> <tr> <td>SF350-24P</td> <td>185W</td> <td>24</td> </tr> <tr> <td>SF350-24MP</td> <td>375W</td> <td>24</td> </tr> <tr> <td>SF350-48P</td> <td>382W</td> <td>48</td> </tr> <tr> <td>SF350-48MP</td> <td>740W</td> <td>48</td> </tr> <tr> <td>SG350-8PD</td> <td>124W</td> <td>8</td> </tr> <tr> <td>SG350-10P</td> <td>62W</td> <td>8</td> </tr> <tr> <td>SG355-10P</td> <td>62W</td> <td>8</td> </tr> <tr> <td>SG350-10MP</td> <td>124W</td> <td>8</td> </tr> <tr> <td>SG350-28P</td> <td>195W</td> <td>24</td> </tr> <tr> <td>SG350-28MP</td> <td>382W</td> <td>24</td> </tr> <tr> <td>SG350-52P</td> <td>375W</td> <td>48</td> </tr> <tr> <td>SG350-52MP</td> <td>740W</td> <td>48</td> </tr> </tbody> </table>	Model Name	Power Dedicated to PoE	Number of Ports That Support PoE	SF352-08P	62W	8	SF352-08MP	128W	8	SF350-24P	185W	24	SF350-24MP	375W	24	SF350-48P	382W	48	SF350-48MP	740W	48	SG350-8PD	124W	8	SG350-10P	62W	8	SG355-10P	62W	8	SG350-10MP	124W	8	SG350-28P	195W	24	SG350-28MP	382W	24	SG350-52P	375W	48	SG350-52MP	740W	48																
	Model Name	Power Dedicated to PoE	Number of Ports That Support PoE																																																											
	SF352-08P	62W	8																																																											
	SF352-08MP	128W	8																																																											
	SF350-24P	185W	24																																																											
	SF350-24MP	375W	24																																																											
	SF350-48P	382W	48																																																											
	SF350-48MP	740W	48																																																											
	SG350-8PD	124W	8																																																											
	SG350-10P	62W	8																																																											
	SG355-10P	62W	8																																																											
	SG350-10MP	124W	8																																																											
	SG350-28P	195W	24																																																											
	SG350-28MP	382W	24																																																											
SG350-52P	375W	48																																																												
SG350-52MP	740W	48																																																												
PoE powered device and PoE passthrough	In addition to AC power, compact switch models can work as PoE powered devices and be powered by PoE switches connected to the uplink ports. The switch can also pass through the power to downstream PoE end devices if required																																																													
	Maximum of 60W can be drawn per uplink port if the peer PoE switch supports 60W PoE. When multiple uplink ports are connected to PoE switches, the power drawn from these ports is combined																																																													
	When AC power is connected and functioning properly, it will have priority over the PoE powered device function. The PoE powered device function will then act as a backup power source to the AC power. The PoE powered device function will be the primary power source for the switch if AC power is not connected																																																													
	<table border="1"> <thead> <tr> <th>Model</th> <th>Power Option</th> <th>Available PoE Power (W)</th> <th>Can Switch Be Powered with Uplinks?</th> </tr> </thead> <tbody> <tr> <td rowspan="7">SG350-10P</td> <td>1 PoE uplink</td> <td>0W</td> <td>Yes</td> </tr> <tr> <td>2 PoE uplink</td> <td>0W</td> <td>Yes</td> </tr> <tr> <td>1 PoE+ uplink</td> <td>0W</td> <td>Yes</td> </tr> <tr> <td>2 PoE+ uplink</td> <td>22W</td> <td>Yes</td> </tr> <tr> <td>1 60W PoE uplink</td> <td>22W</td> <td>Yes</td> </tr> <tr> <td>2 60W PoE uplink</td> <td>50W</td> <td>Yes</td> </tr> <tr> <td>AC power</td> <td>62W</td> <td>Yes</td> </tr> <tr> <td rowspan="7">SG350-10MP</td> <td>1 PoE uplink</td> <td>0W</td> <td>Yes</td> </tr> <tr> <td>2 PoE uplink</td> <td>0W</td> <td>Yes</td> </tr> <tr> <td>1 PoE+ uplink</td> <td>0W</td> <td>Yes</td> </tr> <tr> <td>2 PoE+ uplink</td> <td>22W</td> <td>Yes</td> </tr> <tr> <td>1 60W PoE uplink</td> <td>22W</td> <td>Yes</td> </tr> <tr> <td>2 60W PoE uplink</td> <td>50W</td> <td>Yes</td> </tr> <tr> <td>AC power</td> <td>128W</td> <td>Yes</td> </tr> <tr> <td rowspan="4">SG355-10P</td> <td>1 PoE uplink</td> <td>0W</td> <td>Yes</td> </tr> <tr> <td>2 PoE uplink</td> <td>0W</td> <td>Yes</td> </tr> <tr> <td>1 PoE+ uplink</td> <td>0W</td> <td>Yes</td> </tr> <tr> <td>2 PoE+ uplink</td> <td>22W</td> <td>Yes</td> </tr> </tbody> </table>	Model	Power Option	Available PoE Power (W)	Can Switch Be Powered with Uplinks?	SG350-10P	1 PoE uplink	0W	Yes	2 PoE uplink	0W	Yes	1 PoE+ uplink	0W	Yes	2 PoE+ uplink	22W	Yes	1 60W PoE uplink	22W	Yes	2 60W PoE uplink	50W	Yes	AC power	62W	Yes	SG350-10MP	1 PoE uplink	0W	Yes	2 PoE uplink	0W	Yes	1 PoE+ uplink	0W	Yes	2 PoE+ uplink	22W	Yes	1 60W PoE uplink	22W	Yes	2 60W PoE uplink	50W	Yes	AC power	128W	Yes	SG355-10P	1 PoE uplink	0W	Yes	2 PoE uplink	0W	Yes	1 PoE+ uplink	0W	Yes	2 PoE+ uplink	22W	Yes
	Model	Power Option	Available PoE Power (W)	Can Switch Be Powered with Uplinks?																																																										
	SG350-10P	1 PoE uplink	0W	Yes																																																										
		2 PoE uplink	0W	Yes																																																										
		1 PoE+ uplink	0W	Yes																																																										
		2 PoE+ uplink	22W	Yes																																																										
		1 60W PoE uplink	22W	Yes																																																										
		2 60W PoE uplink	50W	Yes																																																										
		AC power	62W	Yes																																																										
	SG350-10MP	1 PoE uplink	0W	Yes																																																										
		2 PoE uplink	0W	Yes																																																										
		1 PoE+ uplink	0W	Yes																																																										
		2 PoE+ uplink	22W	Yes																																																										
		1 60W PoE uplink	22W	Yes																																																										
2 60W PoE uplink		50W	Yes																																																											
AC power		128W	Yes																																																											
SG355-10P	1 PoE uplink	0W	Yes																																																											
	2 PoE uplink	0W	Yes																																																											
	1 PoE+ uplink	0W	Yes																																																											
	2 PoE+ uplink	22W	Yes																																																											

Feature		Description			
		1 60W PoE uplink	22W	Yes	
		2 60W PoE uplink	50W	Yes	
		AC power	62W	Yes	
Model	Green Power (mode)	System Power Consumption	Power Consumption (with PoE)	Heat Dissipation (BTU/hr)	
SF350-08	Energy Detect	110V=5.6W 220V=5.8W	N/A	30.0	
SF352-08	Energy Detect	110V=6.9W 220V=6.9W	N/A	23.5	
SF352-08P	Energy Detect	110V=10.4W 220V=11.2W	110V=78.7W 220V=79.3W	207.4	
SF352-08MP	Energy Detect	110V=10.4W 220V=11.2W	110V=157.2W 220V=156.2W	536.1	
SF350-24	Energy Detect	110V=10.6W 220V=10.9W	110V=240W 220V=230W	43.3	
SF350-24P	Energy Detect	110V=10.6W 220V=10.9W	110V=240W 220V=230W	684.1	
SF350-24MP	Energy Detect	110V=29.2W 220V=28.3W	110V=238W 220V=233W	1333.0	
SF350-48	Energy Detect	110V=23.4W 220V=24.2W	N/A	82.6	
SF350-48P	Energy Detect	110V=50.8W 220V=52.1W	110V=464.3W 220V=453.1W	1584.3	
SF350-48MP	Energy Detect	110V=58.4W 220V=58.5W	110V=866.7W 220V=843.5W	2957.3	
SG350-8PD	EEE, Energy Detect, Short Reach	110V=29.8W 220V=31.3W	110V=167W 220V=165.2W	569.5	
SG350-10	EEE, Energy Detect, Short Reach	110V=9.0W 220V=9.8W	N/A	33.4	
SG350-10P	EEE, Energy Detect, Short Reach	110V=13.0W 220V=13.5W	110V=84.7W 220V=83.5W	289.0	
SG355-10P	EEE, Energy Detect, Short Reach	110V=12.4W 220V=12.6W	110V=83.5W 220V=83.4W	284.8	
SG350-10MP	EEE, Energy Detect, Short Reach	110V=13.2W 220V=13.5W	110V=152.8W 220V=151.6W	521.5	
SG350-10SFP	EEE, Energy Detect, Short Reach	110V=11.1W 220V=11.9W	N/A	40.6	
SG350-20	EEE, Energy Detect, Short Reach	110V=14.5W 220V=15.2W	N/A	51.8	
SG350-28	EEE, Energy Detect, Short Reach	110V=19.7W 220V=19.9W	N/A	67.9	
SG350-28P	EEE, Energy Detect, Short Reach	110V=35.7W 220V=36.9W	110V=263W 220V=255.1W	897.4	
SG350-28MP	EEE, Energy Detect, Short Reach	110V=41.3W 220V=42.1W	110V=261.1W 220V=451.2W	1573.3	
SG350-28SFP	EEE, Energy Detect, Short Reach	110V=32.0W 220V=34.3W	N/A	117.0	

Feature		Description			
	SG350-52	EEE, Energy Detect, Short Reach	110V=40.4W 220V=40.6.8W	N/A	136.4
	SG350-52P	EEE, Energy Detect, Short Reach	110V=62.4W 220V=61.8W	110V=440.0W 220V=431.0W	1429.4
	SG350-52MP	EEE, Energy Detect, Short Reach	110V=72.5W 220V=73.6W	110V=858.0W 220V=833.0W	2674.8
Ports	Model Name	Total System Ports	RJ-45 Ports	Combo Ports (RJ-45 + SFP)	
	SF350-08	8 Fast Ethernet	8 Fast Ethernet		
	SF352-08	8 Fast Ethernet + 2 Gigabit Ethernet	8 Fast Ethernet	2 Gigabit Ethernet combo	
	SF352-08P	8 Fast Ethernet + 2 Gigabit Ethernet	8 Fast Ethernet	2 Gigabit Ethernet combo	
	SF352-08MP	8 Fast Ethernet + 2 Gigabit Ethernet	8 Fast Ethernet	2 Gigabit Ethernet combo	
	SF350-24	24 Fast Ethernet + 4 Gigabit Ethernet	24 Fast Ethernet	2 Gigabit Ethernet combo + 2 SFP	
	SF350-24P	24 Fast Ethernet + 4 Gigabit Ethernet	24 Fast Ethernet	2 Gigabit Ethernet combo + 2 SFP	
	SF350-24MP	24 Fast Ethernet + 4 Gigabit Ethernet	24 Fast Ethernet	2 Gigabit Ethernet combo + 2 SFP	
	SF350-48	48 Fast Ethernet + 4 Gigabit Ethernet	48 Fast Ethernet 2 Gigabit Ethernet	2 SFP slots, 2 Gigabit Ethernet	
	SF350-48P	48 Fast Ethernet + 4 Gigabit Ethernet	48 Fast Ethernet 2 Gigabit Ethernet	2 SFP slots, 2 Gigabit Ethernet	
	SF350-48MP	48 Fast Ethernet + 4 Gigabit Ethernet	48 Fast Ethernet 2 Gigabit Ethernet	2 SFP slots, 2 Gigabit Ethernet	
	SG350-8PD	6 Gigabit Ethernet + 2 2.5G	8 Gigabit Ethernet	2 Gigabit Ethernet combo	
	SG350-10	10 Gigabit Ethernet	8 Gigabit Ethernet	2 Gigabit Ethernet combo	
	SG350-10P	10 Gigabit Ethernet	8 Gigabit Ethernet	2 Gigabit Ethernet combo	
	SG355-10P	10 Gigabit Ethernet	8 Gigabit Ethernet	2 Gigabit Ethernet combo	
	SG350-10MP	10 Gigabit Ethernet	8 Gigabit Ethernet	2 Gigabit Ethernet combo	
	SG350-10SFP	10 Gigabit Ethernet	8 Gigabit SFP Slots	2 Gigabit Ethernet combo	
	SG350-20	20 Gigabit Ethernet	16 Gigabit Ethernet	2 SFP slots, 2 Gigabit Ethernet combo	
	SG350-28	28 Gigabit Ethernet	24 Gigabit Ethernet	2 SFP slots, 2 Gigabit Ethernet combo	
	SG350-28P	28 Gigabit Ethernet	24 Gigabit Ethernet	2 SFP slots, 2 Gigabit Ethernet combo	
	SG350-28MP	28 Gigabit Ethernet	24 Gigabit Ethernet	2 SFP slots, 2 Gigabit Ethernet combo	
	SG350-28SFP	28 Gigabit Ethernet	24 Gigabit SFP slots	2 Gigabit Ethernet combo	
	SG350-52	52 Gigabit Ethernet	48 Gigabit Ethernet	2 SFP slots, 2 Gigabit Ethernet combo	
	SG350-52P	52 Gigabit Ethernet	48 Gigabit Ethernet	2 SFP slots, 2 Gigabit Ethernet combo	
	SG350-52MP	52 Gigabit Ethernet	48 Gigabit Ethernet	2 SFP slots, 2 Gigabit Ethernet combo	
Buttons	Reset button				

Feature	Description			
Cabling type	Unshielded Twisted Pair (UTP) Category 5 or better for 10BASE-T/100BASE-TX; UTP Category 5 Ethernet or better for 1000BASE-T			
LEDs	System, Link/Act, PoE, Speed, LED power saving option			
Flash	256 MB			
CPU memory	512 MB			
Packet buffer	All numbers are aggregate across all ports as the buffers are dynamically shared:			
	Model Name	Packet Buffer		
	SF350-08	12 Mb		
	SF352-08	1.5 Mb		
	SF352-08P	1.5 Mb		
	SF352-08MP	1.5 Mb		
	SF350-24	12 Mb		
	SF350-24P	12 Mb		
	SF350-24MP	12 Mb		
	SF350-48	24 Mb		
	SF350-48P	24 Mb		
	SF350-48MP	24 Mb		
	SG350-8PD	12 Mb		
	SG350-10	12 Mb		
	SG350-10P	12 Mb		
	SG355-10P	12 Mb		
	SG350-10SFP	1.5 Mb		
	SG350-20	1.5 Mb		
	SG350-10MP	12 Mb		
	SG350-28	12 Mb		
	SG350-28P	12 Mb		
	SG350-28MP	12 Mb		
	SG350-28SFP	12 Mb		
SG350-52	24 Mb			
SG350-52P	24 Mb			
SG350-52MP	24 Mb			
Supported SFP modules	SKU	Media	Speed	Maximum Distance
	MGBSX1	Multimode fiber	1000 Mbps	350 m
	MGBLH1	Single-mode fiber	1000 Mbps	40 km
	MGBT1	UTP cat 5	1000 Mbps	100 m
Environmental				
Unit dimensions (W x H x D)	Model Name	Unit Dimensions		
	SF350-08	279.4 x 44 x 170 mm (11.0 x 1.45 x 6.69 in)		
	SF352-08	279.4 x 44 x 170 mm (11.0 x 1.45 x 6.69 in)		
	SF352-08P	279.4 x 44 x 170 mm (11.0 x 1.45 x 6.69 in)		
	SF352-08MP	279.4 x 44 x 170 mm (11.0 x 1.45 x 6.69 in)		
	SF350-24	440 x 44 x 202 mm (17.3 x 1.45 x 7.95 in)		
SF350-24P	440 x 44 x 257 mm (17.3 x 1.45 x 10.12 in)			

Feature	Description	
	SF350-24MP	440 x 44 x 257 mm (17.3 x 1.45 x 10.12 in)
	SF350-48	440 x 44 x 257 mm (17.3 x 1.45 x 10.12 in)
	SF350-48P	440 x 44 x 350 mm (17.3 x 1.45 x 13.78 in)
	SF350-48MP	440 x 44 x 350 mm (17.3 x 1.45 x 13.78 in)
	SG350-8PD	344.4 x 44 x 252.5 (13.6 x 1.45 x 9.94 in)
	SG350-10	280 x 44 x 170 mm (11.0 x 1.45 x 6.69 in)
	SG350-10P	280 x 44 x 170 mm (11.0 x 1.45 x 6.69 in)
	SG355-10P	440 x 44 x 203 mm (17.3 x 1.45 x 7.99 in)
	SG350-10MP	160 x 30 x 128 mm (6.3 x 1.18 x 5.04 in)
	SG350-10SFP	279.4 x 44 x 170 mm (11.0 x 1.45 x 6.69 in)
	SG350-20	440 x 44 x 203 mm (17.3 x 1.45 x 7.99 in)
	SG350-28	440 x 44 x 202 mm (17.3 x 1.45 x 7.95 in)
	SG350-28P	440 x 44 x 257 mm (17.3 x 1.45 x 10.12 in)
	SG350-28MP	440 x 44 x 257 mm (17.3 x 1.45 x 10.12 in)
	SG350-28SFP	440 x 44 x 257 mm (17.3 x 1.45 x 10.12 in)
	SG350-52	440 x 44 x 257 mm (17.3 x 1.45 x 10.12 in)
	SG350-52P	440 x 44 x 350 mm (17.3 x 1.45 x 13.78 in)
	SG350-52MP	440 x 44 x 350 mm (17.3 x 1.45 x 13.78 in)
Unit weight	Model Name	Unit Weight
	SF350-08	1.18 kg (2.60 lb)
	SF352-08	1.06 kg (2.34 lb)
	SF352-08P	1.16 kg (2.56 lb)
	SF352-08MP	1.16 kg (2.56 lb)
	SF350-24	2.72 kg (6.0 lb)
	SF350-24P	4.08 kg (8.99 lb)
	SF350-24MP	4.12 kg (9.08 lb)
	SF350-48	3.58 kg (7.89 lb)
	SF350-48P	5.59 kg (12.32 lb)
	SF350-48MP	5.61 kg (12.37 lb)
	SG350-8PD	2.5 kg (5.51 lb)
	SG350-10	1.09 kg (2.40 lb)
	SG350-10P	1.19 kg (2.62 lb)
	SG355-10P	2.36 kg (5.20 lb)
	SG350-10MP	1.19 kg (2.62 lb)
	SG350-10SFP	2.08 kg (4.59 lb)
	SG350-20	2.12 kg (4.67 lb)
	SG350-28	2.75 kg (6.06 lb)
	SG350-28P	3.83 kg (8.44 lb)
	SG350-28MP	3.37 kg (7.43 lb)
	SG350-28SFP	2.7 kg (5.95 lb)
	SG350-52	2.75 kg (6.06 lb)
	SG350-52P	3.81 kg (8.40 lb)
	SG350-52MP	3.83 kg (8.44 lb)

Feature	Description																																																																																																
Power	100-240V 50-60 Hz, internal, universal: SF350-24, SF350-24P, SF350-24MP, SF350-48, SF350-48P, SF350-48MP, SG350-20, SG350-28, SG350-28P, SG350-28MP, SG350-28SFP, SG350-52, SG350-52P, SG350-52MP 100-240V 50-60 Hz, 0.5A, external: SF350-08 100-240V 50-60 Hz, 0.7A, external: SF352-08, SG350-8PD 100-240V 50-60 Hz, 0.7A, external: SG350-10 100-240V 50-60 Hz, 1.5A, external: SG350-10P 100-240V 50-60 Hz, internal, universal: SG355-10P 100-240V 50-60 Hz, 2.0A, external: SF352-08P, SF352-08MP, SG350-10MP																																																																																																
Certification	UL (UL 60950), CSA (CSA 22.2), CE mark, FCC Part 15 (CFR 47) Class A																																																																																																
Operating temperature	32° to 113°F (0° to 45°C): SG350-08PD 32° to 122°F (0° to 50°C): SF350-08, SF352-08, SF352-08P, SF352-08MP, SF350-24, SF350-24P, SF350-24MP, SF350-48, SF350-48P, SF350-48MP, SG350-10, SG350-10P, SG355-10P, SG350-10MP, SG350-10SFP, SG350-20, SG350-28, SG350-28P, SG350-28MP, SG350-28SFP, SG350-52, SG350-52P, SG350-52MP																																																																																																
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 MTBF	<table border="1"> <thead> <tr> <th>Model Name</th> <th>FAN (Number)</th> <th>Acoustic Noise</th> <th>MTBF @40C (hr)</th> </tr> </thead> <tbody> <tr><td>SF350-08</td><td>Fanless</td><td>N/A</td><td>644,573</td></tr> <tr><td>SF352-08</td><td>Fanless</td><td>N/A</td><td>532,704</td></tr> <tr><td>SF352-08P</td><td>Fanless</td><td>N/A</td><td>530,716</td></tr> <tr><td>SF352-08MP</td><td>Fanless</td><td>N/A</td><td>478,335</td></tr> <tr><td>SF350-24</td><td>Fanless</td><td>N/A</td><td>562,313</td></tr> <tr><td>SF350-24P</td><td>2</td><td>52.2 dB at 40C</td><td>293,029</td></tr> <tr><td>SF350-24MP</td><td>2</td><td>52.2 dB at 40C</td><td>272,127</td></tr> <tr><td>SF350-48</td><td>Fanless</td><td>N/A</td><td>277,653</td></tr> <tr><td>SF350-48P</td><td>3</td><td>53.7 dB at 40C</td><td>182,270</td></tr> <tr><td>SF350-48MP</td><td>4</td><td>49.8 dB at 40C</td><td>191,951</td></tr> <tr><td>SG350-10</td><td>Fanless</td><td>N/A</td><td>308,196</td></tr> <tr><td>SG350-10P</td><td>Fanless</td><td>N/A</td><td>205,647</td></tr> <tr><td>SG355-10P</td><td>Fanless</td><td>N/A</td><td>296,426</td></tr> <tr><td>SG350-10MP</td><td>Fanless</td><td>N/A</td><td>80,093</td></tr> <tr><td>SG350-10SFP</td><td>Fanless</td><td>N/A</td><td>851,827</td></tr> <tr><td>SG350-20</td><td>Fanless</td><td>N/A</td><td>1,400,007</td></tr> <tr><td>SG350-28</td><td>Fanless</td><td>N/A</td><td>367,209</td></tr> <tr><td>SG350-28P</td><td>2</td><td>47.9 dB at 40C</td><td>396,687</td></tr> <tr><td>SG350-28MP</td><td>2</td><td>49.6 dB at 40C</td><td>213,373</td></tr> <tr><td>SG350-28SFP</td><td>1</td><td>43.6 dB at 50C</td><td>101,523</td></tr> <tr><td>SG350-52</td><td>1</td><td>48.0 dB at 40C</td><td>301,297</td></tr> <tr><td>SG350-52P</td><td>3</td><td>54.2 dB at 40C</td><td>195,746</td></tr> <tr><td>SG350-52MP</td><td>4</td><td>51.7 dB at 40C</td><td>163,704</td></tr> </tbody> </table>	Model Name	FAN (Number)	Acoustic Noise	MTBF @40C (hr)	SF350-08	Fanless	N/A	644,573	SF352-08	Fanless	N/A	532,704	SF352-08P	Fanless	N/A	530,716	SF352-08MP	Fanless	N/A	478,335	SF350-24	Fanless	N/A	562,313	SF350-24P	2	52.2 dB at 40C	293,029	SF350-24MP	2	52.2 dB at 40C	272,127	SF350-48	Fanless	N/A	277,653	SF350-48P	3	53.7 dB at 40C	182,270	SF350-48MP	4	49.8 dB at 40C	191,951	SG350-10	Fanless	N/A	308,196	SG350-10P	Fanless	N/A	205,647	SG355-10P	Fanless	N/A	296,426	SG350-10MP	Fanless	N/A	80,093	SG350-10SFP	Fanless	N/A	851,827	SG350-20	Fanless	N/A	1,400,007	SG350-28	Fanless	N/A	367,209	SG350-28P	2	47.9 dB at 40C	396,687	SG350-28MP	2	49.6 dB at 40C	213,373	SG350-28SFP	1	43.6 dB at 50C	101,523	SG350-52	1	48.0 dB at 40C	301,297	SG350-52P	3	54.2 dB at 40C	195,746	SG350-52MP	4	51.7 dB at 40C	163,704
Model Name	FAN (Number)	Acoustic Noise	MTBF @40C (hr)																																																																																														
SF350-08	Fanless	N/A	644,573																																																																																														
SF352-08	Fanless	N/A	532,704																																																																																														
SF352-08P	Fanless	N/A	530,716																																																																																														
SF352-08MP	Fanless	N/A	478,335																																																																																														
SF350-24	Fanless	N/A	562,313																																																																																														
SF350-24P	2	52.2 dB at 40C	293,029																																																																																														
SF350-24MP	2	52.2 dB at 40C	272,127																																																																																														
SF350-48	Fanless	N/A	277,653																																																																																														
SF350-48P	3	53.7 dB at 40C	182,270																																																																																														
SF350-48MP	4	49.8 dB at 40C	191,951																																																																																														
SG350-10	Fanless	N/A	308,196																																																																																														
SG350-10P	Fanless	N/A	205,647																																																																																														
SG355-10P	Fanless	N/A	296,426																																																																																														
SG350-10MP	Fanless	N/A	80,093																																																																																														
SG350-10SFP	Fanless	N/A	851,827																																																																																														
SG350-20	Fanless	N/A	1,400,007																																																																																														
SG350-28	Fanless	N/A	367,209																																																																																														
SG350-28P	2	47.9 dB at 40C	396,687																																																																																														
SG350-28MP	2	49.6 dB at 40C	213,373																																																																																														
SG350-28SFP	1	43.6 dB at 50C	101,523																																																																																														
SG350-52	1	48.0 dB at 40C	301,297																																																																																														
SG350-52P	3	54.2 dB at 40C	195,746																																																																																														
SG350-52MP	4	51.7 dB at 40C	163,704																																																																																														
Warranty	Limited lifetime with next business day advance replacement (where available)																																																																																																

Feature	Description
Package Contents	
<ul style="list-style-type: none"> • Cisco 350 Series Switch • Power Cord (Power Adapter for Desktop SKUs) • Mounting Kit included in all SKUs, including desktop models • Console Cable • 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 on each computer in the network 	

Ordering Information

Table 2 provides ordering information for the Cisco 350 Series Switches. Table 3 gives region- and country-specific information, and Table 4 provides MFE and MGE transceiver ordering information.

Table 2. Cisco 350 Series Switches Ordering Information

Model Name	Order Product ID Number	Description
Fast Ethernet		
SF350-08	SF350-08-K9-xx	<ul style="list-style-type: none"> • 8 10/100 ports
SF352-08	SF352-08-K9-xx	<ul style="list-style-type: none"> • 8 10/100 ports • 2 Gigabit copper/SFP combo
SF352-08P	SF352-08P-K9-xx	<ul style="list-style-type: none"> • 8 10/100 ports with 62W power budget • 2 Gigabit copper/SFP combo
SF352-08MP	SF352-08MP-K9-xx	<ul style="list-style-type: none"> • 8 10/100 ports with 128W power budget • 2 Gigabit copper/SFP combo
SF350-24	SF350-24-K9-xx	<ul style="list-style-type: none"> • 24 10/100 ports • 2 Gigabit copper/SFP combo + 2 SFP ports
SF350-24P	SF350-24P-K9-xx	<ul style="list-style-type: none"> • 24 10/100 PoE+ ports with 185W power budget • 2 Gigabit copper/SFP combo + 2 SFP ports
SF350-24MP	SF350-24MP-K9-xx	<ul style="list-style-type: none"> • 24 10/100 PoE+ ports with 375W power budget • 2 Gigabit copper/SFP combo + 2 SFP ports
SF350-48	SF350-48-K9	<ul style="list-style-type: none"> • 48 10/100 ports • 2 Gigabit copper/SFP combo + 2 SFP ports
SF350-48P	SF350-48P-K9	<ul style="list-style-type: none"> • 48 10/100 PoE+ ports with 382W power budget • 2 Gigabit copper/SFP combo + 2 SFP ports
SF350-48MP	SF350-48MP-K9	<ul style="list-style-type: none"> • 48 10/100 PoE+ ports with 740W power budget • 2 Gigabit copper/SFP combo + 2 SFP ports
Gigabit Ethernet		
SG350-8PD	SG350-8PD-K9	<ul style="list-style-type: none"> • 8 10/100/1000 ports • 2 2.5G ports • 2 combo mini-GBIC ports
SG350-10	SG350-10-K9	<ul style="list-style-type: none"> • 8 10/100/1000 ports • 2 combo mini-GBIC ports
SG350-10P	SG350-10P-K9	<ul style="list-style-type: none"> • 8 10/100/1000 PoE ports with 62W power budget • 2 Combo mini-GBIC ports
SG350-10MP	SG350-10MP-K9	<ul style="list-style-type: none"> • 8 10/100/1000 PoE ports with 128W power budget • 2 Combo mini-GBIC ports

Model Name	Order Product ID Number	Description
SG355-10P	SG355-10P-K9	<ul style="list-style-type: none"> • 8 10/100/1000 PoE+ ports with 62W power budget • 2 Combo mini-GBIC ports
SG350-10SFP	SG350-10SFP-K9	<ul style="list-style-type: none"> • 8 SFP Gigabit slots • 2 Gigabit copper/SFP combo
SG350-20	SG350-20-K9	<ul style="list-style-type: none"> • 16 10/100/1000 ports • 2 Gigabit copper/SFP combo + 2 SFP ports
SG350-28	SG350-28-K9	<ul style="list-style-type: none"> • 24 10/100/1000 ports • 2 Gigabit copper/SFP combo + 2 SFP ports
SG350-28P	SG350-28P-K9	<ul style="list-style-type: none"> • 24 10/100/1000 ports (24 PoE ports with 195W power budget) • 2 Gigabit copper/SFP combo + 2 SFP ports
SG350-28MP	SG350-28MP-K9	<ul style="list-style-type: none"> • 24 10/100/1000 ports (24 PoE+ ports with 382W power budget) • 2 Gigabit copper/SFP combo + 2 SFP ports
SG350-28SFP	SG350-28SFP-K9	<ul style="list-style-type: none"> • 24 SFP Gigabit slots • 2 Gigabit copper/SFP combo
SG350-52	SG350-52-K9-xx	<ul style="list-style-type: none"> • 48 10/100/1000 ports • 2 Gigabit copper/SFP combo + 2 SFP ports
SG350-52P	SG350-52P-K9-xx	<ul style="list-style-type: none"> • 48 10/100/1000 ports • 2 Gigabit copper/SFP combo + 2 SFP ports
SG350-52MP	SG350-52MP-K9-xx	<ul style="list-style-type: none"> • 48 10/100/1000 ports • 2 Gigabit copper/SFP combo + 2 SFP ports

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

The -xx in the Product Order ID Number is a country-/region-specific suffix. For example, the complete PID of SG350-28P for the United States is SG350-28P-K9-NA. Please refer to Table 2 for the correct suffix to use for your country/region.

Table 3. Country/Region Suffix for Product Order ID Number

Suffix	Country/Region
-NA	<ul style="list-style-type: none"> • USA, Canada, Mexico, Colombia, Chile and rest of LATAM
-BR	<ul style="list-style-type: none"> • Brazil
-AR	<ul style="list-style-type: none"> • Argentina
-EU	<ul style="list-style-type: none"> • EU, Russia, Ukraine, Israel, UAE, Turkey, Egypt, South Africa, Indonesia, Philippines, Vietnam, Thailand, India, Korea
-UK	<ul style="list-style-type: none"> • United Kingdom, Saudi Arabia, Qatar, Kuwait, Singapore, Hong Kong, Malaysia
-AU	<ul style="list-style-type: none"> • Australia, New Zealand
-CN	<ul style="list-style-type: none"> • China
-IN	<ul style="list-style-type: none"> • India
-JP	<ul style="list-style-type: none"> • Japan
-KR	<ul style="list-style-type: none"> • Korea

The products may also be available in a country/region not listed in Table 3. Not all product models are offered in all countries/regions. For India, either -EU or -IN suffix will be used depending on product models. For Korea, either -EU or -KR suffix will be used depending on product models. Please consult with your local Cisco sales representative or Cisco partners for more details.

Table 4. MFE and MGE Transceiver Ordering Information

MGE Transceivers	
MGBLH1	1000BASE-LH SFP transceiver, for single-mode fiber, 1310 nm wavelength, support up to 40 km
MGBSX1	1000BASE-SX SFP transceiver, for multimode fiber, 850 nm wavelength, support up to 550 m

A Powerful, Affordable Foundation for Your Small Business Network

As you strive to make your employees as productive and effective as possible, your business applications and information and the network that delivers them become ever more vital parts of your business. You need a technology foundation that can meet your business’s needs today and in the future and that delivers the right feature set at the right price. The Cisco 350 Series portfolio of managed switches provides the reliability, performance, security, and capabilities you need to power your business.

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 350 Series, visit <https://www.cisco.com/go/350switches>.



Americas Headquarters
Cisco Systems, Inc.
San Jose, CA

Asia Pacific Headquarters
Cisco Systems (USA) Pte. Ltd.
Singapore

Europe Headquarters
Cisco Systems International BV Amsterdam,
The Netherlands

Cisco has more than 200 offices worldwide. Addresses, phone numbers, and fax numbers are listed on the Cisco Website at <https://www.cisco.com/go/offices>.

Cisco and the Cisco logo are trademarks or registered trademarks of Cisco and/or its affiliates in the U.S. and other countries. To view a list of Cisco trademarks, go to this URL: <https://www.cisco.com/go/trademarks>. Third-party trademarks mentioned are the property of their respective owners. The use of the word partner does not imply a partnership relationship between Cisco and any other company. (1110R)