For Small Business

Cisco 300 Series Switches
Cisco Small Business

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

To stay ahead in a competitive marketplace, small 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 impact on your bottom line. 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 300 Series.

Cisco 300 Series Switches

The Cisco 300 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 300 Series provides the ideal combination of affordability and capabilities for small businesses, and helps you create a more efficient, better-connected workforce.

The Cisco 300 Series is 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 300 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 300 Series offers a solution to meet your needs. Possible deployment scenarios include:

- **Secure desktop connectivity:** Cisco 300 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 helps speed file transfers and data processing, improves network uptime, and keeps your employees connected and productive.
- **Secure wireless connectivity:** Cisco 300 Series Switches allow employees to work productively from conference rooms and common areas, collaborate in any office, and access business applications from wherever they are. Gigabit Ethernet connectivity helps ensure that your employees have the bandwidth and performance they need to make the most of mobile productivity. And with embedded security, your employees can work with confidence, knowing that only authorized users can access applications and network devices.
- **Unified communications:** As a managed network solution, the Cisco 300 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 small businesses. Cisco 300 Series Switches have been rigorously tested to help ensure easy integration and full compatibility with these and other products, providing a complete small business solution.
- **Highly secure guest connectivity.** Cisco 300 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 300 Series Switches provide security, performance, traffic management, and other capabilities – optimized and customized, and at the right price for small businesses. The Cisco 300 Series provides:

- **High performance and reliability:** Cisco 300 Series Switches have been rigorously tested to deliver the high availability and performance you expect from a Cisco switch. The solutions speed up file transfer times and improve slow, sluggish networks, while keeping your vital business applications available and preventing costly downtime. As a managed switching solution, the Cisco 300 Series also gives you the flexibility to manage and prioritize high-bandwidth traffic such as voice. That means you can empower your employees with state-of-the-art communication and productivity solutions, without draining the performance of your other business applications.
- **Fast, easy setup and configuration:** Cisco 300 Series Switches are designed to be easy to use and manage by small businesses and the partners who serve them. The included device manager software provides an intuitive, web-based interface to simplify setup, security, and quality of service (QoS) traffic prioritization, allowing even users without IT expertise to configure the switch in minutes. Cisco also provides a Cisco FindIT Network Discovery Utility. This utility that works through a simple toolbar on the user's web browser to discover Cisco devices in the network and display basic information, such as serial numbers and IP addresses, to aid in the configuration and deployment of Cisco Small Business products. For more information, and to download the utility, please visit

www.cisco.com/go/findit. These switches use Cisco Discovery Protocol as well as Link Layer Discovery Protocol (LLDP-MED) to automatically detect all the devices connected to your network, and then automatically configure themselves for the appropriate connectivity and instructs the devices to use appropriate voice VLAN or QoS parameters. For more advanced capabilities and hands-on control, the switches support Smartport roles which configure the ports with specific levels of Security, QoS, and availability according to the type of connected device, based on Cisco best practices and pretested configurations. The Auto Smartports feature applies the intelligence delivered through the Smartport roles and applies it automatically to the port based on the devices discovered over CDP or LLDP-MED. This facilitates zero touch deployments. Although the Cisco 300 Series is designed to be deployed without using a command-line interface (CLI), Cisco Textview is available for those who prefer to use text-based configuration. Together, these features reduce the time your staff must devote to network deployment, management, and troubleshooting.

- **Strong security:** The Cisco 300 Series Switches provide a high level of security and give you fine-grained control to safeguard your network from unauthorized users. Advanced security features include:
  - Embedded security to protect management data traveling to and from the switch and encrypt network communications
  - Extensive access control lists (ACLs) to restrict sensitive portions of the network from unauthorized users and guard against network attacks
  - Guest virtual LANs (VLANs) to 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 to tightly limit access to specific segments of your network
  - Time based ACLs and Port Operation restrict access to the network during predesignated times, such as business hours.
  - Security mechanisms such as, Bridge Protocol Data Unit (BPDU) Guard and broadcast/multicast/unknown unicast storm control, protect the network from invalid configurations or malicious intent.
  - Secure Core Technology (SCT) helps ensure that the switch will receive and process management and protocol traffic no matter how much traffic is received.
  - Advanced defense mechanisms, including Dynamic ARP Inspection (DAI), 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)
  - DOS (denial-of-service) attack prevention maximizes network uptime in the presence of an attack
  - Protection of management sessions using Radius, TACACS+ and local database authentication as well as secure management sessions over SSL, SSH, and SNMPv3.
- **Power over Ethernet:** Cisco 300 Series Switches are available with up to 48 PoE ports of Fast Ethernet or 28 PoE ports of Gigabit Ethernet connectivity. 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.
- **IP telephony support:** Cisco 300 Series Switches include embedded QoS intelligence to prioritize delay-sensitive services such as voice and video, simplify unified communications deployments, and

help ensure consistent network performance for all services. 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.

- **Networkwide Automatic Voice Deployment:** Using a combination of CDP, LLDP-MED, Auto Smartports, and VSDP (Voice Services Discovery Protocol – a unique patent-pending 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.
- **Advanced network management capabilities:** As managed switches, the Cisco 300 Series lets you use a variety of advanced features to control traffic over your network. Features include:
  - *Static routing/Layer 3 switching between VLANs:* This capability allows you to segment your network into separate workgroups and communicate across VLANs without degrading application performance. As a result, you can manage internal routing with your switches and dedicate your router to external traffic and security, helping your network run more efficiently.
  - *IPv6 support:* As the IP network addressing scheme evolves to accommodate more devices, you can make sure that your network is ready. The Cisco 300 Series provides native support for IPv6, the newest version of the Internet Protocol, as well as the previous IPv4 standard. As a result, you will be able to move up to the next generation of networking applications and operating systems without an extensive equipment upgrade.
  - *Dual image support:* With the ability to maintain dual images of your switches, you can perform software upgrades without having to take the network offline and without worrying about an outage during an upgrade.
  - *Dual Configuration files support*: Allows configuring the device, validating that it is configured correctly and then saving this configuration to become effective after reboot. Additionally, a mirror configuration file, providing automatic back-up of the latest stable configuration file maximizes network uptime.
  - *Remote management:* Using Simple Network Management Protocol (SNMP), you can set up and manage all switches and other Cisco devices in your network remotely, instead of having to directly connect to them.
  - *Additional management options:* The switches can be fully managed using the Web GUI or using a full command-line interface (CLI).
- **Optimal energy efficiency:** Cisco 300 Series Switches are designed with a variety of power-saving features across all models, providing the industry's broadest portfolio of "green" switches. These switches optimize power use to protect the environment and reduce energy costs, without compromising performance. Power-saving features include:
  - The latest application-specific integrated circuits (ASICs), using low-power 65-nanometer technology (these chipsets allow for lower power consumption and thinner, more efficient designs)
  - 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

  - Automatic power shutoff on ports when a link is down
  - Embedded intelligence to adjust signal strength based on cable length
  - Fanless design in most models, which reduces power consumption, increases reliability, and provides quieter operation
  - LEDs can be turned off to conserve power
- **Expansion ports:** The Cisco 300 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 four shared ports giving you more value. The Cisco 300 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.
- **Multiple languages:** The Cisco 300 Series is available in seven languages: English, French, German, Italian, Spanish, Japanese, and simplified Chinese. All product user interfaces and documentation are translated, giving you the ability to select your preferred language.
- **Peace of mind and investment protection:** Cisco 300 Series Switches offer the reliable performance, investment protection, and peace of mind you expect from a Cisco switch. When you invest in the Cisco 300 Series, you gain the benefit of:
  - Cisco limited lifetime warranty with next business day advance replacement (where available)
  - Cisco Small Business Investment Protection program, which lets you upgrade your Cisco 300 Series to another Cisco Small Business or Cisco Catalyst® switch in the future and receive credit for the value of the switch (available only in the United States and Canada)
  - Rigorous testing to help ensure easy integration and compatibility with other Cisco networking and communications products, including the complete Cisco Small Business portfolio
- **Service and Support:** Cisco 300 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, access to the Cisco Small Business Support Center, and extends technical service to three years.

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

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

Product Specifications

Table 1 gives the product specifications for the Cisco 300 Series Switches.

Table 1. Product Specifications

Feature	Description		
Performance			
Switching capacity and forwarding rate	**Model Name**	**Capacity in Millions of Packets per Second (mpps) (64-byte packets)**	**Switching Capacity in Gigabits per Second (Gbps)**
	SF300-08	1.19	1.6
	SF302-08	4.17	5.6
	SF302-08P	4.17	5.6
	SF302-08MP	4.17	5.6
	SF300-24	9.52	12.8
	SF300-24P	9.52	12.8
	SF300-48	13.10	17.6
	SF300-48P	13.10	17.6
	SG300-10	14.88	20.0
	SG300-10P	14.88	20.0
	SG300-10MP	14.88	20.0
	SG300-20	29.76	40.0
	SG300-28	41.67	56.0
	SG300-28P	41.67	56.0
	SG300-52	77.38	104.0
Layer 2 Switching			
Spanning Tree Protocol (STP)	Standard 802.1d Spanning Tree support Fast convergence using 802.1w (Rapid Spanning Tree [RSTP]), enabled by default 16 instances are supported Multiple Spanning Tree instances using 802.1s (MSTP)		
Port grouping	Support for IEEE 802.3ad Link Aggregation Control Protocol (LACP) • 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 Guest VLAN Unauthenticated VLAN Dynamic VLAN assignment via Radius server along with 802.1x client authentication Protocol-based VLAN CPE VLAN		
Voice VLAN	Voice traffic is automatically assigned to a voice-specific VLAN and treated with appropriate levels of QoS Auto voice capabilities deliver network-wide zero touch deployment of voice endpoints and call control devices.		
Multicast TV VLAN	Multicast VLAN used for video applications (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		

Feature	Description
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
Jumbo Frames	Up to 10K in length
Layer 3	
IPv4 routing	Wirespeed routing of IPv4 packets Up to 32 static routes and up to 32 IP interfaces
Classless Inter-Domain Routing (CIDR)	Support for CIDR
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
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
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	Prevents a port from being selected as a root port, effectively preventing bridges in the LAN segment connected to the port from being a root bridge.
DHCP snooping	Filters out DHCP messages with unregistered IP addresses and/or from unexpected or untrusted interfaces. This prevents rogue devices from behaving as a DHCP Server.
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 is no static or dynamic IP/MAC bindings or if there is a discrepancy between the source or destination address in the ARP packet. This prevents man-in-the-middle attacks.
IP/Mac/Port Binding (IPMB)	The features (DHCP Snooping, IP Source Guard, and Dynamic ARP Inspection) above work together to prevent DOS attacks in the network, thereby increasing network availability
Secure Core Technology (SCT)	Ensures 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, etc) 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	Locks 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	DoS attack prevention
Congestion avoidance	A TCP congestion avoidance algorithm is required to minimize and prevent global TCP loss synchronization.

Feature	Description
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	4 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 re-marking ACLs, trusted QoS
Rate limiting	Ingress policer; egress shaping and rate control; per VLAN, per port, and flow based
Standards	
Standards	IEEE 802.3 10BASE-T Ethernet, IEEE 802.3u 100BASE-TX Fast Ethernet, IEEE 802.3ab 1000BASE-T Gigabit Ethernet, IEEE 802.3ad 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 951, RFC 1042, RFC 1071, RFC 1123, RFC 1141, RFC 1155, RFC 1157, RFC 1350, RFC 1533, RFC 1541, RFC 1542, RFC 1624, RFC 1700, RFC 1867, RFC 2030, RFC 2616, RFC 2131, RFC 2132, RFC 3164, RFC 3411, RFC 3412, RFC 3413, RFC 3414, RFC 3415, RFC 2576, RFC 4330, RFC 1213, RFC 1215, RFC 1286, RFC 1442, RFC 1451, RFC 1493, RFC 1573, RFC 1643, RFC 1757, RFC 1907, RFC 2011, RFC 2012, RFC 2013, RFC 2233, RFC 2618, RFC 2665, RFC 2666, RFC 2674, RFC 2737, RFC 2819, RFC 2863, RFC 1157, RFC 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 auto-configuration Path maximum transmission unit (MTU) discovery Duplicate address detection (DAD) ICMP version 6 IPv6 over IPv4 network with Intra-Site 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
Multicast Listener Discovery (MLD) 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, protocol-based VLANs
IPv6 RFCs supported	RFC 2463 – ICMP version 6 RFC 3513 – IPv6 address architecture RFC 4291 – IPv6 addressing architecture RFC 2460 – IPv6 specification RFC 2461 – Neighbor discovery for IPv6 RFC 2462 – IPv6 stateless address auto-configuration RFC 1981 – Path MTU discovery RFC 4007 – IPv6 scoped address architecture RFC 3484 – Default address selection mechanism RFC 4214 – ISATAP tunneling RFC 4293 – MIB IPv6: Textual conventions and general group RFC 3595 – Textual conventions for IPv6 flow label

Feature	Description	
Management		
Web user interface	Built-in switch configuration utility for easy browser-based device configuration (HTTP/HTTPS). Supports configuration, system dashboard, system maintenance, and monitoring	
SNMP	SNMP versions 1, 2c, and 3 with support for traps, and SNMP version 3 user-based security model (USM)	
Standard MIBs	BRIDGE-MIB DIFFSERV-DSCP-TC DIFF-SERV-MIB DISMAN-NSLOOKUP-MIB DISMAN-PING-MIB DISMAN-TRACEROUTE-MIB DNS-RESOLVER-MIB DNS-SERVER-MIB DRAFT-IETF-SYSLOG-DEVICE-MIB ENTITY-MIB ENTITY-SENSOR-MIB EtherLike-MIB EtherLike-MIB IANA-ADDRESS-FAMILY-NUMBERS-MIB IANAifType-MIB IANA-RTPROTO-MIB IEEE8021-PAE-MIB IEEE9023-LAG-MIB IF-MIB INET-ADDRESS-MIB IP-FORWARD-MIB IP-MIB IP-MIB LLDP-EXT-DCBX-MIB.mib LLDP-EXT-DOT1-MIB LLDP-EXT-DOT3-MIB LLDP-EXT-MED-MIB LLDP-MIB MAU-MIB OSPF-MIB OSPF-TRAP-MIB P-BRIDGE-MIB	POWER-ETHERNET-MIB Q-BRIDGE-MIB Q-BRIDGE-MIB RADIUS-ACC-CLIENT-MIB RADIUS-AUTH-CLIENT-MIB RFC1155-SMI RFC-1212 RFC1213-MIB RFC-1215 RFC1389-MIB RMON2-MIB RMON-MIB RSTP-MIB SMON-MIB SNMP-COMMUNITY-MIB SNMP-FRAMEWORK-MIB SNMP-MPD-MIB SNMP-NOTIFICATION-MIB SNMP-PROXY-MIB SNMP-TARGET-MIB SNMP-USER-BASED-SM-MIB SNMPv2-CONF SNMPv2-MIB SNMPv2-MIB SNMPv2-SMI SNMPv2-TC SNMPv2-TM SNMP-VIEW-BASED-ACM-MIB TCP-MIB TUNNEL-MIB UDP-MIB
Private MIBs	CISCO-CDP-MIB CISCO-SMI CISCO-TC CISCO-VTP-MIB CISCOSB-1-BONJOUR-SERVICE-MIB CISCOSB-3SW2SWTABLES-MIB CISCOSB-AAA CISCOSB-BANNER-MIB CISCOSB-BaudRate-MIB CISCOSB-BONJOUR-MIB CISCOSB-BRGMACSWITCH-MIB CISCOSB-BRIDGEMIBOBJECTS-MIB CISCOSB-BRIDGE-SECURITY CISCOSB-CDB-MIB CISCOSB-CDP-MIB CISCOSB-CLI-MIB CISCOSB-COPY-MIB CISCOSB-CPU-COUNTERS-MIB CISCOSB-DEBUGCAPABILITIES-MIB CISCOSB-DEVICEPARAMS-MIB	CISCOSB-MNGINF-MIB CISCOSB-MULTISESSIONTERMINAL-MIB CISCOSB-PHY-MIB CISCOSB-Physicaldescription-MIB CISCOSB-POE-MIB CISCOSB-POLICY-MIB CISCOSB-ProtectedPorts-MIB CISCOSB-QOS-CLI-MIB CISCOSB-rlBrgMcMngr-MIB CISCOSB-rlBrgMulticast-MIB CISCOSB-rlFft CISCOSB-rlInterfaces CISCOSB-rlLcli-MIB CISCOSB-RMOB CISCOSB-rndApplications CISCOSB-rndMng CISCOSB-SCT-MIB CISCOSB-SECURITY-SUITE CISCOSB-SENSORENTMIB CISCOSB-SMARTPORTS-MIB

Feature	Description	
	CISCOSB-DHCPCL-MIB	CISCOSB-SMON-MIB
	CISCOSB-DHCP-MIB	CISCOSB-SNMP-MIB
	CISCOSB-Dlf-MIB	CISCOSB-SOCKET-MIB
	CISCOSB-DNSCL-MIB	CISCOSB-SpecialBpdu-MIB
	CISCOSB-DOT1X-MIB	CISCOSB-SSH-MIB
	CISCOSB-EEE-MIB	CISCOSB-SSL
	CISCOSB-EMBWEB-MIB	CISCOSB-STORMCTRL-MIB
	CISCOSB-ENDOFMIB-MIB	CISCOSB-SYSLOG-MIB
	CISCOSB-ERRDISABLE-RECOVERY-MIB	CISCOSB-SYSMNG-MIB
	CISCOSB-EVENTS-MIB	CISCOSB-TBI-MIB
	CISCOSB-File	CISCOSB-TCPSESSIONS
	CISCOSB-GREEN-MIB	CISCOSB-TELNET-MIB
	CISCOSB-GVRP-MIB	CISCOSB-TIMESYNCHRONIZATION-MIB
	CISCOSB-HWENVIROMENT	CISCOSB-TRACEROUTE-MIB
	CISCOSB-IP	CISCOSB-TRAPS-MIB
	CISCOSB-IpRouter	CISCOSB-TRUNK-MIB
	CISCOSB-IPv6	CISCOSB-TUNNEL-MIB
	CISCOSB-JUMBOFRAMES-MIB	CISCOSB-Tunning
	CISCOSB-LLDP-MIB	CISCOSB-UDP
	CISCOSB-LOCALIZATION-MIB	CISCOSB-vlan-MIB
	CISCOSB-MAC-BASE-PRIO	CISCOSB-vlanVoice-MIB
	CISCOSB-MIB	CISCOSB-WeightedRandomTailDrop-MIB
	CISCOSB-MIR-MIB	CISCOSMB-MIB
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	• Web browser upgrade (HTTP/HTTPS) and TFTP • 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, auto-configuration (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 CDP 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	
Cloud services	Support for Cisco Small Business FindIT Network and Cisco OnPlus	
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; SNTP; 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).	
Login banner	Configurable login banners for web as well as CLI.	

<table>
<tr><th>Feature</th><th>Description</th></tr>
<tr><td colspan="2">Power Efficiency</td></tr>
<tr><td>EEE Compliant (802.3az)</td><td>Supports 802.3az on all copper ports (SG300 models).</td></tr>
<tr><td>Energy Detect</td><td>Automatically turns off 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</td></tr>
<tr><td>Cable length detection</td><td>Adjusts the signal strength based on the cable length for Gigabit Ethernet models. Reduces the power consumption for cables shorter than 10m.</td></tr>
<tr><td>Disable port LEDs</td><td>LEDs can be manually turned off to save on Energy</td></tr>
<tr><td colspan="2">General</td></tr>
<tr><td>Jumbo frames</td><td>Frame sizes up to 10 KB supported on 10/100 and Gigabit interfaces</td></tr>
<tr><td>MAC table</td><td>Up to 16000 MAC addresses</td></tr>
<tr><td colspan="2">Discovery</td></tr>
<tr><td>Bonjour</td><td>The switch advertises itself using the Bonjour protocol.</td></tr>
<tr><td>Link Layer Discovery Protocol (LLDP) (802.1ab) with LLDP-MED extensions</td><td>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.</td></tr>
<tr><td>Cisco Discovery Protocol</td><td>The switch advertises itself using the Cisco Discovery Protocol.</td></tr>
<tr><td colspan="2">Power over Ethernet (PoE)</td></tr>
<tr><td>IEEE 802.3af PoE delivered over any of the RJ-45 ports within the listed power budgets</td><td>Maximum power of 15.4W to any 10/100 or Gigabit Ethernet base port. The total power available for PoE per switch is as follows:
<table>
<tr><th>Model Name</th><th>Power Dedicated to PoE</th><th>Number of Ports That Support PoE</th></tr>
<tr><td>SF302-08P</td><td>62W</td><td>8</td></tr>
<tr><td>SF302-08MP</td><td>124W</td><td>8</td></tr>
<tr><td>SF300-24P</td><td>180W</td><td>24</td></tr>
<tr><td>SF300-48P</td><td>375W</td><td>48</td></tr>
<tr><td>SG300-10P</td><td>62W</td><td>8</td></tr>
<tr><td>SG300-10MP</td><td>124W</td><td>8</td></tr>
<tr><td>SG300-28P</td><td>180W</td><td>24</td></tr>
</table></td></tr>
<tr><td>Power consumption</td><td>
<table>
<tr><th>Model Name</th><th>Power Savings Mode</th><th>System Power Consumption</th><th>Power Consumption: Case (with POE)</th><th>Heat Dissipation Worst Case (BTU/hr)</th></tr>
<tr><td>SF300-08</td><td>Energy Detect</td><td>110V=6.1W
220V=7.2W</td><td>N/A</td><td>24.57</td></tr>
<tr><td>SF302-08</td><td>Energy Detect</td><td>110V=8.0W
220V=8.6W</td><td>N/A</td><td>29.34</td></tr>
<tr><td>SF302-08P</td><td>Energy Detect</td><td>110V=10.3W
220V=11.5W</td><td>110V=81.3W
220V=82.1W</td><td>280.13</td></tr>
<tr><td>SF302-08MP</td><td>Energy Detect</td><td>110V=9.5W
220V=10.3W</td><td>110V=150.1W
220V=149.9W</td><td>512.14</td></tr>
<tr><td>SF300-24</td><td>Energy Detect</td><td>110V=16.4W
220V=17.1W</td><td>N/A</td><td>58.35</td></tr>
<tr><td>SF300-24P</td><td>Energy Detect</td><td>110V=25.8W
220V=27.3W</td><td>110V=223W
220V=217.9W</td><td>760.88</td></tr>
<tr><td>SF300-48</td><td>Energy Detect</td><td>110V=24W
220V=24.8W</td><td>N/A</td><td>84.62</td></tr>
<tr><td>SF300-48P</td><td>Energy Detect</td><td>110V=46.4W
220V=46.3W</td><td>110V=465W
220V=449W</td><td>1531.99</td></tr>
<tr><td>SG300-10</td><td>Energy Detect
Short Reach</td><td>110V=10.33W
220V=10.27W</td><td>N/A</td><td>35.25</td></tr>
<tr><td>SG300-10P</td><td>Energy Detect
Short Reach</td><td>110V=13.13W
220V=13.48W</td><td>110V=81.44W
220V=81.16W</td><td>277.87</td></tr>
</table></td></tr>
</table>

Feature	Description				
	SG300-10MP	Energy Detect Short Reach	110V=12.21W 220V=12.25W	110V=154.36W 220V=152.42W	526.68
	SG300-20	Energy Detect Short Reach	110V=16.05W 220V=16.26W	N/A	55.48
	SG300-28	Energy Detect Short Reach	110V=19.8W 220V=20.6W	N/A	70.29
	SG300-28P	Energy Detect Short Reach	110V=29.7W 220V=30.7W	110V=214.4W 220V=210W	731.53
	SG300-52	Energy Detect Short Reach	110V=45.9W 220V=45.3W	N/A	156.61

Ports	**Model Name**	**Total System Ports**	**RJ-45 Ports**	**Combo Ports (RJ-45 + SFP)**
	SG300-20	20 Gigabit Ethernet	18 Gigabit Ethernet	2 Gigabit Ethernet combo
	SG300-28	28 Gigabit Ethernet	26 Gigabit Ethernet	2 Gigabit Ethernet combo
	SG300-28P	28 Gigabit Ethernet	26 Gigabit Ethernet	2 Gigabit Ethernet combo
	SG300-52	52 Gigabit Ethernet	50 Gigabit Ethernet	2 Gigabit Ethernet combo
	SF300-24	24 Fast Ethernet + 4 Gigabit Ethernet	24 Fast Ethernet 2 Gigabit Ethernet	2 Gigabit Ethernet combo
	SF300-24P	24 Fast Ethernet + 4 Gigabit Ethernet	24 Fast Ethernet 2 Gigabit Ethernet	2 Gigabit Ethernet combo
	SF300-48	48 Fast Ethernet + 4 Gigabit Ethernet	48 Fast Ethernet 2 Gigabit Ethernet	2 Gigabit Ethernet combo
	SF300-48P	48 Fast Ethernet + 4 Gigabit Ethernet	48 Fast Ethernet 2 Gigabit Ethernet	2 Gigabit Ethernet combo
	SG300-10	10 Gigabit Ethernet	8 Gigabit Ethernet	2 Gigabit Ethernet combo
	SG300-10P	10 Gigabit Ethernet	8 Gigabit Ethernet	2 Gigabit Ethernet combo
	SG300-10MP	10 Gigabit Ethernet	8 Gigabit Ethernet	2 Gigabit Ethernet combo
	SF300-08	8 Fast Ethernet	8 Fast Ethernet	N/A
	SF302-08	8 Fast Ethernet + 2 Gigabit Ethernet	8 Fast Ethernet	2 Gigabit Ethernet combo
	SF302-08P	8 Fast Ethernet + 2 Gigabit Ethernet	8 Fast Ethernet	2 Gigabit Ethernet combo
	SF302-08MP	8 Fast Ethernet + 2Gigabit Ethernet	8 Fast Ethernet	2 Gigabit Ethernet combo

Buttons	Reset button
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	16 MB
CPU memory	128 MB

Feature	Description			
Packet buffer	All numbers are aggregate across all ports as the buffers are dynamically shared:			
	Model Name	**Packet Buffer**		
	SG300-20	8 Mb		
	SG300-10	8 Mb		
	SG300-10P	8 Mb		
	SG300-10MP	8 Mb		
	SF300-08	8 Mb		
	SF302-08	8 Mb		
	SF302-08P	8 Mb		
	SF302-08MP	8 Mb		
	SG300-28	8 Mb		
	SG300-28P	8 Mb		
	SG300-52	8 Mb*2		
	SF300-24	8 Mb		
	SF300-24P	8 Mb		
	SF300-48	8 Mb*2		
	SF300-48P	8 Mb*2		
Supported SFP modules	**SKU**	**Media**	**Speed**	**Typical Distance**
	MFEFX1	Multimode fiber	100 Mbps	2 km
	MFELX1	Single-mode fiber	100 Mbps	10 km
	MFEBX1	Single-mode fiber	100 Mbps	20 km
	MGBBX1	Single-mode fiber	1000 Mbps	40 km
	MGBSX1	Multimode fiber	1000 Mbps	300 m
	MGBLH1	Single-mode fiber	1000 Mbps	40 km
	MGBLX1	Single-mode fiber	1000 Mbps	10 km
	MGBT1	UTP cat 5	1000 Mbps	100 m
Environmental				
Dimensions (W x H x D)	SF300-08, SF302-08, SF302-08P, SF302-08MP, SG300-10, SG300-10P, SG300-10MP 11 x 1.45 x 6.7 in. (279.4 x 44.45 x 170 mm) SG300-20 17.3 x 1.45 x 7.97 in. (440 x 44.45 x 202.5 mm) SF300-24, SF300-24P, SF300-48, SG300-28, SG300-28P, SG300-52 17.3 x 1.45 x 10.1 in. (440 x 44.45 x 257 mm) SF300-48P 17.3 x 1.45 x 13.78 in. (440 x 44.45 x 350 mm)			
Unit weight	SF300-08: 2.56 lb (1.16 kg) SF302-08: 2.6 lb (1.18 kg) SF302-08P: 2.67 lb (1.21 kg) SF302-08MP: 2.67 lb (1.21 kg) SG300-10: 2.56 lb (1.16 kg) SG300-10P: 2.73 lb (1.24 kg) SG300-10MP: 2.73 lb (1.24 kg) SG300-20: 4.78 lb (2.17 kg) SF300-24: 6.81 lb (3.09 kg) SF300-24P: 8.22 lb (3.73 kg) SF300-48: 7.47 lb (3.39 kg) SF300-48P: 12.94 lb (5.87 kg) SG300-24: 7.23 lb (3.28 kg) SG300-24P: 9.06 lb (4.11 kg) SG300-52 : 8.62 lb (3.91 kg)			
Power	100-240V 47-63 Hz, internal, universal – SF300-24, SF300-24P, SG300-20, SG300-28, SG300-28P, SG300-52 100-240V 50-60 Hz, 0.5A, external – SF300-08, SF302-08, SG300-10 100-240V 50-60 Hz, 2A, external – SF302-08P, SG300-10P 100-240V 50-60 Hz, 2.5A, external – SF302-08MP, SG300-10MP			

Feature	Description			
Certification	UL (UL 60950), CSA (CSA 22.2), CE mark, FCC Part 15 (CFR 47) Class A			
Operating temperature	32°to 104℉ (0°to 40℃)			
Storage temperature	–4°to 158℉ (–20°to 70℃)			
Operating humidity	10% to 90%, relative, noncondensing			
Storage humidity	10% to 90%, relative, noncondensing			
Acoustic Noise and MTBF	**Model Name**	**FAN (Number)**	**Acoustic Noise**	**MTBF @40C (hr)**
	SG300-20	Fanless	N/A	144,237
	SG300-10	Fanless	N/A	74,294
	SG300-10P	Fanless	N/A	67,009
	SG300-10MP	Fanless	N/A	67,008
	SF300-08	Fanless	N/A	71,006
	SF302-08	Fanless	N/A	69,825
	SF302-08P	Fanless	N/A	65,527
	SF302-08MP	Fanless	N/A	63,569
	SG300-28	Fanless	N/A	179141.0
	SG300-28P	2 pcs	40.6 dB	187334.9
	SG300-52	2 pcs	40.1dB	206005.6
	SF300-24	Fanless	N/A	282775.3
	SF300-24P	2 pcs	41.0 dB	241995.9
	SF300-48	Fanless	N/A	199664.2
	SF300-48P	3 pcs w/ Fan speed control	43.1dB at 30C 54.3dB at 40C	182540.0
Warranty	Limited lifetime with next business day advance replacement (where available)			

Package Contents
• Cisco 300-series Ethernet Switch • Power Cord (Power Adapter for 8-port SKUs) • Mounting Hardware • Serial Cable • CD-ROM with user documentation (PDF) included • Quick Start Guide
Minimum Requirements
• Web browser: Mozilla Firefox version 2.5 or later; Microsoft Internet Explorer version 6 or later • Category 5 Ethernet network cable • TCP/IP, network adapter, and network operating system (such as Microsoft Windows, Linux, or Mac OS X) installed on each computer in the network

Ordering Information

Table 2 provides ordering information for the Cisco 300 Series Switches.

Table 2. Cisco 300 Series Switches Ordering Information

Model Name	Order Product ID Number	Description
Fast Ethernet		
SF300-08	SRW208-K9	• 8 10/100 ports

Model Name	Order Product ID Number	Description
SF302-08	SRW208G-K9	• 8 10/100 ports • 2 combo* mini-GBIC ports
SF302-08P	SRW208P-K9	• 8/10/100 PoE ports • 2 combo mini-GBIC ports
SF302-08MP	SRW208MP-K9	• 8 10/100 Maximum PoE ports • 2 combo mini-GBIC ports
SF300-24	SRW224G4-K9	• 24 10/100 ports • 2 10/100/1000 ports • 2 combo mini-GBIC ports
SF300-24P	SRW224G4P-K9	• 24 10/100 PoE ports • 2 10/100/1000 ports • 2 combo mini-GBIC ports
SF300-48	SRW248G4-K9	• 48 10/100 ports • 2 10/100/1000 ports • 2 combo mini-GBIC
SF300-48P	SRW248G4P-K9	• 48 10/100 PoE ports • 2 10/100/1000 ports • 2 combo mini-GBIC ports
Gigabit Ethernet		
SG300-10	SRW2008-K9	• 8 10/100/1000 ports • 2 combo mini-GBIC ports
SG300-10P	SRW2008P-K9	• 8 10/100/1000 PoE ports • 2 Combo mini-GBIC ports
SG300-10MP	SRW2008MP-K9	• 8 10/100/1000 Maximum PoE ports • 2 combo mini-GBIC ports
SG300-20	SRW2016-K9	• 18 10/100/1000 ports • 2 combo mini-GBIC ports
SG300-28	SRW2024-K9	• 26 10/100/1000 ports • 2 combo mini-GBIC ports
SG300-28P	SRW2024P-K9	• 26 10/100/1000 PoE ports • 2 combo mini-GBIC ports
SG300-52	SRW2048-K9	• 50 10/100/1000 ports • 2 combo mini-GBIC 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.

Table 3. Service and Support Ordering Information

Service Ordering Number	Description
CON-SBS-SVC2	3 years support, software updates, Small Business Support Center access via online, telephone, or community, next business day advanced replacement

Table 4. MFE and MGE Transceiver Ordering Information

MFE Transceivers	
MFEBX1	100BASE-BX-20U SFP transceiver for single-mode fiber, 1310 nm wavelength, support up to 20 km
MFELX1	100BASE-LX SFP transceiver, for single-mode fiber, 1310 nm wavelength, support up to 2 km
MFEFX1	100BASE-FX SFP transceiver, for multimode fiber, 1310 nm wavelength, support up to 10 km
MGE Transceivers	
MGBBX1	1000BASE-BX-20U SFP transceiver, for single-mode fiber, 1310 nm wavelength, support up to 40 km
MGBLH1	1000BASE-LH SFP transceiver, for single-mode fiber, 1310 nm wavelength, support up to 40 km
MGBLX1	1000BASE-LX SFP transceiver, for single-mode fiber, 1310 nm wavelength, support up to 10 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 an ever more vital part 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 300 Series portfolio of managed switches provides the reliability, performance, security, and capabilities you need to power your business.

For More Information

To find out more about the Cisco 300 Series, visit www.cisco.com/go/300switches.

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

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