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# Cisco Business 350 Series Managed Switches

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#### Critical Building Block for Any Small Office Network

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 networking features and security for your digital transformation yet value is still a top consideration, you're ready for the new generation of managed switches: the Cisco® Business 350 Series Switches (Figure 1).



**Figure 1.**Cisco Business 350 Series Managed Switches

## Cisco business 350 series switches

The Cisco Business 350 Series Switches, part of the Cisco Business line of network solutions, is a portfolio of affordable managed switches that provides a critical building block for any small office network. Intuitive dashboard simplifies network setup, and advanced features accelerate digital transformation, while pervasive security protects business critical transactions. The Cisco Business 350 Series Switches provide the ideal combination of affordability and capabilities for small office and helps you create a more efficient, betterconnected workforce.

The Cisco Business 350 Series Switches is a family of fixed-configuration managed Ethernet switches. Models are available with 8 to 48 ports of Gigabit Ethernet connectivity and Gigabit or 10-Gigabit uplinks, providing optimal flexibility to create exactly the right building block for small office networks. However, unlike other small business switching solutions that provide managed network capabilities only in the costliest models, all Cisco Business 350 Series Switches support the advanced security management capabilities and network features you need to support enterprise-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 Business Series Switches offer a solution to meet your needs. Possible deployment scenarios include:

- Small office networking: The versatility and affordability of the Cisco Business 350 Series Switches
  provide an ideal enterprise-class networking foundation for small offices with limited IT support and
  budget.
- Secure office connectivity: Cisco Business 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 networking 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.
- Unified communications: As a managed network solution, the Cisco Business 350 Series Switches
  provide 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 Business 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 Business 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 Business 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 Business 350 Series Switches are designed to be easy to use and manage by commercial customers or the partners that serve them, including the following features:

- Cisco Business Dashboard is designed to manage Cisco Business switches, routers, and wireless access
  points. Cisco Business Dashboard simplifies traditional challenges in deploying and managing business
  networks while automating the deployment, monitoring, and lifecycle management of the network. Cisco
  Business 350 Series switches support embedded probe for Cisco Business Dashboard, eliminating the
  need to set up a separate hardware or virtual machine on site. For more information, visit
  <a href="https://www.cisco.com/go/cbd">https://www.cisco.com/go/cbd</a>
- The intuitive user 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 Text view, a full Command-Line Interface (CLI) option for partners that prefer
  it.

 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 ensure business continuity and that employees can always access the data and resources they need. The Cisco Business 350 Series Switches support 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 Business 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.
- 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.
- 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.

#### **Power over Ethernet**

Cisco Business 350 Series Switches are available with up to 48 Power over Ethernet (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 and 802.3at PoE+.

#### **Networkwide Automatic Voice Deployment**

Using a combination of Cisco Discovery Protocol, Link Layer Discovery Protocol-Media Endpoint Discovery (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 Virtual Local Area Network (VLAN) and Quality of Service (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 Business 350 Series Switches can support the transition to the next generation of networking. 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 Business 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 Business 350 Series Switches enable 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.

#### **Compact Design**

The sleek and compact design for the Cisco Business 350 Series Switches provide additional deployment flexibility, including outside wiring closet installation such as retail stores, open plan offices, and classrooms without disturbing the environment.

#### **Power Efficiency**

The Cisco Business 350 Series Switches integrate 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 protects the environment and reduce your energy costs. They provide an eco-friendly network solution without compromising performance. Cisco Business 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
- · Automatic power shutoff on ports when a link is down
- Embedded intelligence to adjust signal strength based on the length of the connecting cable
- Fanless design in most models, which reduces power consumption, increases reliability, and provides quieter operation

#### **Peace of Mind and Investment Protection**

Cisco Business 350 Series Switches offer the reliable performance and peace of mind you expect from a Cisco switch. A solution that has been rigorously tested to help ensure optimal network uptime to ensure business continuity. Complementary one-year access to our Small Business Support Center for ongoing support. Limited lifetime warranty with Next-Business-Day (NBD) advance replacement (where available) keeps your business running smoothly.

## Product specifications

Table 1 gives the product specifications for the Cisco Business 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<br>Millions of Packets<br>per Second (mpps)<br>(64-byte packets) | Switching Capacity in Gigabits per Second (Gbps) |
| C   | CBS350-8T-E-2G  | 14.88  | 20.0   |
|   | CBS350-8P-2G    | 14.88  | 20.0   |
|   | CBS350-8P-E-2G  | 14.88  | 20.0   |
|   | CBS350-8FP-2G   | 14.88  | 20.0   |
|   | CBS350-8FP-E-2G | 14.88  | 20.0   |
|   | CBS350-16T-2G   | 26.78  | 36.0   |
|   | CBS350-16T-E-2G | 26.78  | 36.0   |
|   | CBS350-16P-2G   | 26.78  | 36.0   |
|   | CBS350-16P-E-2G | 26.78  | 36.0   |
|   | CBS350-16FP-2G  | 26.78  | 36.0   |
|   | CBS350-24T-4G   | 41.66  | 56.0   |
|   | CBS350-24P-4G   | 41.66  | 56.0   |
|   | CBS350-24FP-4G  | 41.66  | 56.0   |
|   | CBS350-48T-4G   | 77.38  | 104.0  |
|   | CBS350-48P-4G   | 77.38  | 104.0  |
|   | CBS350-48FP-4G  | 77.38  | 104.0  |
|   | CBS350-24T-4X   | 95.23  | 128.0  |
|   | CBS350-24P-4X   | 95.23  | 128.0  |
|   | CBS350-24FP-4X  | 95.23  | 128.0  |
|   | CBS350-48T-4X   | 130.94   | 176.0  |
|   | CBS350-48P-4X   | 130.94   | 176.0  |

| Feature   | Description  |                          |   |
|---|--|--------------------------|---|
|   | CBS350-48FP-4X   | 130.94                   | 176.0   |
| Layer 2 Switching   |  |                          |   |
| Spanning Tree Protocol  | Standard 802.1d Spanning Tree support  |                          |   |
|   | Fast convergence using   | 802.1w (Rapid Spann      | ing Tree [RSTP]), enabled by default  |
|   | Multiple Spanning Tree i   | nstances using 802.1s    | s (MSTP); 8 instances are supported   |
|   | Per-VLAN Spanning Tressupported  | e Plus (PVST+) and Ra    | apid PVST+ (RPVST+); 126 instances are  |
| Port grouping/link  | Support for IEEE 802.3ad   | d Link Aggregation Co    | entrol Protocol (LACP)  |
| aggregation   | • 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 4,094  | VLANs simultaneously     | 1   |
|   | Port-based and 802.1Q subnet-based VLAN  | tag-based VLANs; M       | AC-based VLAN; protocol-based VLAN; IP  |
|   | Management VLAN  |                          |   |
|   | Private VLAN with promi  | scuous, isolated, and    | community port  |
|   | 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                        |                          |   |
|   | CPE VLAN   |                          |   |
| Voice VLAN  |  | e capabilities deliver r | ce-specific VLAN and treated with appropriate network wide zero-touch deployment of voice       |
| Multicast TV VLAN   |  |                          | VLAN to be shared in the network while sature is also known as Multicast VLAN                   |
| VLAN Translation  |  | Ns (C-VLANs) are map     | AN One-to-One Mapping, on an edge oped to service provider VLANs (S-VLANs) the specified S-VLAN |
| Q-in-Q  | VLANs transparently crocustomers   | ss a service provider ı  | network while isolating traffic among   |
| Selective Q-in-Q  |  |                          | sic Q-in-Q feature and provides, per edge<br>ANs to separate S-VLANs                            |
|   | Selective Q-in-Q also allows configuring of Ethertype (Tag Protocol Identifier [TPID]) of the S-VLAN tag |                          |   |
|   | Layer 2 protocol tunnelin  | ng over Q-in-Q is also   | supported   |
| Generic VLAN Registration<br>Protocol (GVRP)/Generic<br>Attribute Registration<br>Protocol (GARP) |  |                          | nd Generic Attribute Registration Protocol<br>nfiguration of VLANs in a bridged domain          |
| Unidirectional Link   | UDLD monitors physical   | connection to detect     | unidirectional links caused by incorrect wiring   |

| Feature   | Description   |
|---|---|
| Detection (UDLD)  | or cable/port faults to prevent forwarding loops and black holing of traffic in switched networks   |
| Dynamic Host<br>Configuration Protocol<br>(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 2K 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 |
| Layer 3   |   |
| IPv4 routing  | Wirespeed routing of IPv4 packets   |
|   | Up to 990 static routes and up to 128 IP interfaces   |
| IPv6 routing  | Wirespeed routing of IPv6 packets   |
| Layer 3 Interface   | Configuration of Layer 3 interface on physical port, Link Aggregation (LAG), VLAN interface, or loopback interface  |
| Classless Interdomain<br>Routing (CIDR)                                 | Support for classless interdomain routing   |
| Policy-Based Routing (PBR)  | Flexible routing control to direct packets to different next hop based on IPv4 or IPv6 Access Control List (ACL)  |
| DHCP Server   | Switch functions as an IPv4 DHCP server serving IP addresses for multiple DHCP pools/scopes Support for DHCP options  |
| DHCP relay at Layer 3   | Relay of DHCP traffic across IP domains   |
| User Datagram Protocol (UDP) relay                                      | Relay of broadcast information across Layer 3 domains for application discovery or relaying of Bootstrap Protocol (BOOTP)/DHCP packets  |

| Feature   | Description   |
|---|---|
| Stacking  |   |
| Hardware stack                                  | Up to 4 units in a stack. Up to 192 ports managed as a single system with hardware failover   |
| High availability                               | Fast stack failover delivers minimal traffic loss. Support link aggregation across multiple units in a stack  |
| Plug-and-play stacking configuration/management | Master/backup for resilient stack control Autonumbering Hot swap of units in stack Ring and chain stacking options, auto stacking port speed, flexible stacking port options  |
| High-speed stack interconnects                  | Cost-effective high-speed 10G fiber interfaces.   |
| Security  |   |
| Secure Shell (SSH) Protocol                     | SSH is a secure replacement for Telnet traffic. Secure Copy Protocol (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<br>(Authenticator role)             | 802.1X: Remote Authentication Dial-In User Service (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<br>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. This avoids accidental topology loops   |
| STP Root Guard                                  | This prevents edge devices not in the network administrator's control from becoming Spanning Tree Protocol root nodes   |
| STP loopback guard                              | Provides additional protection against Layer 2 forwarding loops (STP loops)   |
| 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                          | Makes sure that the switch will receive and process management and protocol traffic no  |

| Feature   | Description   |
|---|---|
| (SCT)   | 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.  |
| Trustworthy systems   | Trustworthy systems provide a highly secure foundation for Cisco products  Run-time defenses (Executable Space Protection [X-Space], Address Space Layout Randomization [ASLR], Built-In Object Size Checking [BOSC])   |
| Private VLAN  | Private VLAN provides security and isolation between switch ports, which helps ensure that users cannot snoop on other users' traffic; supports multiple uplinks  |
| Layer 2 isolation Private<br>VLAN Edge (PVE) with<br>community VLAN | PVE (also known as protected ports) provides Layer 2 isolation between devices in the same VLAN, supports multiple uplinks  |
| Port security   | 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   |
| RADIUS accounting   | The RADIUS accounting functions allow data to be sent at the start and end of services, indicating the amount of resources (such as time, packets, bytes, and so on) used during the session  |
| Storm control   | Broadcast, multicast, and unknown unicast   |
| DoS prevention  | Denial-of-Service (DOS) attack prevention   |
| Multiple user privilege levels in CLI                               | Level 1, 7, and 15 privilege levels   |
| ACLs  | Support for up to 1,024 rules  Drop or rate limit based on source and destination MAC, VLAN ID, IPv4 or IPv6 address, IPv6 flow label, protocol, port, Differentiated Services Code Point (DSCP)/IP precedence, Transmission Control Protocol/User Datagram Protocol (TCP/UDP) source and destination ports, 802.1p priority, Ethernet type, Internet Control Message Protocol (ICMP) packets, IGMP packets, TCP flag; ACL can be applied on both ingress and egress sides  Time-based ACLs supported |

| Feature                    | Description   |
|----------------------------|---|
| Quality of Service         |   |
| Priority levels            | 8 hardware queues   |
| Scheduling                 | Strict priority and Weighted Round-Robin (WRR)  |
| 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  |
|                            | Queue assignment based on DSCP and class of service (802.1p/CoS)  |
| Rate limiting              | Ingress policer; egress shaping and rate control; per VLAN, per port, and flow based; 2R3C policing   |
| Congestion avoidance       | A TCP congestion avoidance algorithm is required to minimize and prevent global TCP loss synchronization  |
| iSCSI traffic optimization | A mechanism for giving priority to iSCSI traffic over other types of traffic  |
| Standards                  |   |
| Standards                  | IEEE 802.3 10BASE-T Ethernet, IEEE 802.3u 100BASE-TX Fast Ethernet, IEEE 802.3ab 1000BASE-T Gigabit Ethernet, IEEE 802.3ad Link Aggregation Control Protocol, IEEE 802.3z Gigabit Ethernet, IEEE 802.3ae 10 Gbit/s Ethernet over fiber for LAN, IEEE 802.3an 10GBase-T 10 Gbit/s Ethernet over copper twisted pair cable, IEEE 802.3x Flow Control, IEEE 802.1D (STP, GARP, and GVRP), IEEE 802.1Q/p VLAN, IEEE 802.1w Rapid STP, IEEE 802.1s Multiple STP, IEEE 802.1x Port Access Authentication, IEEE 802.3af, IEEE 802.3af, IEEE 802.1AB Link Layer Discovery Protocol, IEEE 802.3az Energy Efficient Ethernet, RFC 768, RFC 783, RFC 791, RFC 792, RFC 793, RFC 813, RFC 826, RFC 879, RFC 896, RFC 854, RFC 855, RFC 856, RFC 858, RFC 894, RFC 919, RFC 920, RFC 922, RFC 950, RFC 951, RFC 1042, RFC 1071, RFC 1123, RFC 1141, RFC 1155, RFC 1157, RFC 1213, RFC 1215, RFC 1286, RFC 1350, RFC 1442, RFC 1451, RFC 1493, RFC 1533, RFC 1541, RFC 1542, RFC 1573, RFC 1624, RFC 1643, RFC 1700, RFC 1757, RFC 1867, RFC 1907, RFC 2011, RFC 2012, RFC 2013, RFC 2030, RFC 2131, RFC 2132, RFC 2233, RFC 2576, RFC 2616, RFC 2618, RFC 2665, RFC 2666, RFC 2674, RFC 2737, RFC 2819, RFC 2863, RFC 3164, RFC 3176, RFC 3411, RFC 3412, RFC 3413, RFC 3414, RFC 3415, RFC 3416, RFC 4330 |
| 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); ICMP version 6 DHCPv6 stateful client IPv6 over IPv4 network with Intrasite Automatic Tunnel Addressing Protocol (ISATAP) tunnel support USGv6 and IPv6 Gold Logo certified   |
| IPv6 QoS                   | Prioritize IPv6 packets in hardware   |
| IPv6 ACL                   | Drop or rate limit IPv6 packets in hardware   |
| II VU AUL                  | DIOP OF TALE HITHER IT VO PACKETS HE HATUWATE   |

| Feature  | Description  |
|--|--|
| IPv6 First Hop Security                                | RA guard  ND inspection  DHCPv6 guard  Neighbor binding table (snooping and static entries)  Neighbor binding integrity check  |
| Multicast Listener<br>Discovery (MLD v1/2)<br>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, Domain Name System (DNS) client, Telnet Client, DHCP Client, DHCP Autoconfig, IPv6 DHCP Relay, Terminal Access Controller Access Control System Plus (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 simple and advanced mode, configuration, wizards, customizable dashboard, system maintenance, monitoring, online help, and universal search  |
| SNMP   | SNMP versions 1, 2c, and 3 with support for traps, and SNMP version 3 User-based Security Model (USM)  |

| Feature   | Description     |   |
|---|-----------------|---|
| Standard Management<br>Information Bases (MIBs) | IIdp-MIB        | rfc2668-MIB                             |
|   | IIdpextdot1-MIB | rfc2737-MIB                             |
|   | IIdpextdot3-MIB | rfc2925-MIB                             |
|   | IIdpextmed-MIB  | rfc3621-MIB                             |
|   | rfc2674-MIB     | rfc4668-MIB                             |
|   | rfc2575-MIB     | rfc4670-MIB                             |
|   | rfc2573-MIB     | trunk-MIB                               |
|   | rfc2233-MIB     | tunnel-MIB                              |
|   | rfc2013-MIB     | udp-MIB                                 |
|   | rfc2012-MIB     | draft-ietf-bridge-8021x-MIB             |
|   | rfc2011-MIB     | draft-ietf-bridge-rstpmib-04-MIB        |
|   | RFC-1212        | draft-ietf-hubmib-etherif-mib-v3-00-MIB |
|   | RFC-1215        | draft-ietf-syslog-device-MIB            |
|   | SNMPv2-CONF     | ianaaddrfamnumbers-MIB                  |
|   | SNMPv2-TC       | ianaifty-MIB                            |
|   | p-bridge-MIB    | ianaprot-MIB                            |
|   | q-bridge-MIB    | inet-address-MIB                        |
|   | rfc1389-MIB     | ip-forward-MIB                          |
|   | rfc1493-MIB     | ip-MIB                                  |
|   | rfc1611-MIB     | RFC1155-SMI                             |
|   | rfc1612-MIB     | RFC1213-MIB                             |
|   | rfc1850-MIB     | SNMPv2-MIB                              |
|   | rfc1907-MIB     | SNMPv2-SMI                              |
|   | rfc2571-MIB     | SNMPv2-TM                               |
|   | rfc2572-MIB     | RMON-MIB                                |
|   | rfc2574-MIB     | rfc1724-MIB                             |
|   | rfc2576-MIB     | dcb-raj-DCBX-MIB-1108-MIB               |
|   | rfc2613-MIB     | rfc1213-MIB                             |
|   | rfc2665-MIB     | rfc1757-MIB                             |

| Feature      | Description                      |                                      |
|--------------|----------------------------------|--------------------------------------|
| Private MIBs | CISCOSB-IIdp-MIB                 | CISCOSB-ip-MIB                       |
|              | CISCOSB-brgmulticast-MIB         | CISCOSB-iprouter-MIB                 |
|              | CISCOSB-bridgemibobjects-MIB     | CISCOSB-ipv6-MIB                     |
|              | CISCOSB-bonjour-MIB              | CISCOSB-mnginf-MIB                   |
|              | CISCOSB-dhcpcl-MIB               | CISCOSB-Icli-MIB                     |
|              | CISCOSB-MIB                      | CISCOSB-localization-MIB             |
|              | CISCOSB-wrandomtaildrop-MIB      | CISCOSB-mcmngr-MIB                   |
|              | CISCOSB-traceroute-MIB           | CISCOSB-mng-MIB                      |
|              | CISCOSB-telnet-MIB               | CISCOSB-physdescription-MIB          |
|              | CISCOSB-stormctrl-MIB            | CISCOSB-PoE-MIB                      |
|              | CISCOSB-ssh-MIB                  | CISCOSB-protectedport-MIB            |
|              | CISCOSB-socket-MIB               | CISCOSB-rmon-MIB                     |
|              | CISCOSB-sntp-MIB                 | CISCOSB-rs232-MIB                    |
|              | CISCOSB-smon-MIB                 | CISCOSB-SecuritySuite-MIB            |
|              | CISCOSB-phy-MIB                  | CISCOSB-snmp-MIB                     |
|              | CISCOSB-multisessionterminal-MIB | CISCOSB-specialbpdu-MIB              |
|              | CISCOSB-mri-MIB                  | CISCOSB-banner-MIB                   |
|              | CISCOSB-jumboframes-MIB          | CISCOSB-syslog-MIB                   |
|              | CISCOSB-gvrp-MIB                 | CISCOSB-TcpSession-MIB               |
|              | CISCOSB-endofmib-MIB             | CISCOSB-traps-MIB                    |
|              | CISCOSB-dot1x-MIB                | CISCOSB-trunk-MIB                    |
|              | CISCOSB-deviceparams-MIB         | CISCOSB-tuning-MIB                   |
|              | CISCOSB-cli-MIB                  | CISCOSB-tunnel-MIB                   |
|              | CISCOSB-cdb-MIB                  | CISCOSB-udp-MIB                      |
|              | CISCOSB-brgmacswitch-MIB         | CISCOSB-vlan-MIB                     |
|              | CISCOSB-3sw2swtables-MIB         | CISCOSB-ipstdacl-MIB                 |
|              | CISCOSB-smartPorts-MIB           | CISCOSB-eee-MIB                      |
|              | CISCOSB-tbi-MIB                  | CISCOSB-ssl-MIB                      |
|              | CISCOSB-macbaseprio-MIB          | CISCOSB-qosclimib-MIB                |
|              | CISCOSB-policy-MIB               | CISCOSB-digitalkeymanage-MIB         |
|              | CISCOSB-env_mib                  | CISCOSB-tbp-MIB                      |
|              | CISCOSB-sensor-MIB               | CISCOSMB-MIB                         |
|              | CISCOSB-aaa-MIB                  | CISCOSB-secsd-MIB                    |
|              | CISCOSB-application-MIB          | CISCOSB-draft-ietf-entmib-sensor-MIB |
|              | CISCOSB-bridgesecurity-MIB       | CISCOSB-draft-ietf-syslog-device-MIB |
|              | CISCOSB-copy-MIB                 | CISCOSB-rfc2925-MIB                  |
|              | CISCOSB-CpuCounters-MIB          | CISCO-SMI-MIB                        |

| Feature  | Description  |                               |
|--|--|-------------------------------|
|  | CISCOSB-Custom1BonjourService-MIB  | CISCOSB-DebugCapabilities-MIB |
|  | CISCOSB-dhcp-MIB   | CISCOSB-CDP-MIB               |
|  | CISCOSB-dlf-MIB  | CISCOSB-vlanVoice-MIB         |
|  | CISCOSB-dnscI-MIB  | CISCOSB-EVENTS-MIB            |
|  | CISCOSB-embweb-MIB   | CISCOSB-sysmng-MIB            |
|  | CISCOSB-fft-MIB  | CISCOSB-sct-MIB               |
|  | CISCOSB-file-MIB   | CISCO-TC-MIB                  |
|  | CISCOSB-greeneth-MIB   | CISCO-VTP-MIB                 |
|  | CISCOSB-interfaces-MIB   | CISCO-CDP-MIB                 |
|  | CISCOSB-interfaces_recovery-MIB  |                               |
| Remote Monitoring (RMON)                               | Embedded RMON software agent supports 4 events) for enhanced traffic management, mo  |                               |
| IPv4 and IPv6 dual stack                               | Coexistence of both protocol stacks to ease n  | nigration                     |
| Firmware upgrade                                       | Web browser upgrade (HTTP/HTTPS) and TFTP and upgrade over SCP running over SSH  |                               |
|  | Dual images for resilient firmware upgrades  |                               |
| Port mirroring   | Traffic on a port can be mirrored to another port for analysis with a network analyzer or RMON probe. Up to 8 source ports can be mirrored to one destination port.  |                               |
| VLAN mirroring   | Traffic from a VLAN can be mirrored to a port for analysis with a network analyzer or RMON probe. Up to 8 source VLANs can be mirrored to one destination port.  |                               |
| DHCP (options 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 User privilege levels 1, 7, and 15 are supported   |                               |
| Cloud services   | Support for Cisco Business Dashboard and Cisco Active Advisor  |                               |
| Embedded Probe for Cisco<br>Business Dashboard         | Support for embedded probe for Cisco Busine Eliminates the need to set up a separate hardy Dashboard Probe on site.  |                               |

| Feature   | Description  |
|---|--|
| Cisco Network Plug and Play (PnP) agent                                       | The Cisco Network Plug and Play solution provides a simple, secure, unified, and integrated offering to ease new branch or campus device rollouts or for provisioning updates to an existing network. The solution provides a unified approach to provision Cisco routers, switches, and wireless devices with a near-zero-touch deployment experience |
|   | Supports Cisco PnP Connect   |
| Localization  | Localization of GUI and documentation into multiple languages  |
| Login banner  | Configurable multiple banners for web as well as CLI   |
| 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); automatic time settings from Management Station  |
| Green (power efficiency)  |  |
| Energy Detect   | Automatically turns power off on 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. Reduces the power consumption for shorter cables.   |
| EEE Compliant (802.3az)   | Supports IEEE 802.3az on all copper Gigabit Ethernet ports   |
| Disable port LEDs   | LEDs can be manually turned off to save on energy  |
| Time-based port operation   | Link up or down based on user-defined schedule (when the port is administratively up)  |
| Time-based PoE  | PoE power can be on or off based on user-defined schedule to save energy   |
| General   |  |
| Jumbo frames  | Frame sizes up to 9K bytes. The default MTU is 2K bytes  |
| MAC table   | 16K addresses  |
| Discovery   |  |
| Bonjour   | The switch advertises itself using the Bonjour protocol  |
| Link Layer Discovery<br>Protocol (LLDP) (802.1ab)<br>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  |

#### **Description Feature Power over Ethernet (PoE)** 802.3at PoE+ and 802.3af The following switches support 802.3at PoE+, 802.3af, and Cisco prestandard (legacy) PoE. Maximum power of 30.0W to any network port, until the PoE budget for the switch is PoE delivered over any of reached. The total power available for PoE per switch is as follows: the RJ-45 ports within the listed power budgets **Model Name Power Dedicated to PoE Number of Ports That Support PoE** CBS350-8P-2G 67W 8 8 CBS350-8P-E-2G 67W CBS350-8FP-2G 120W 8 CBS350-8FP-E-2G 8 120W CBS350-16P-2G 120W 16 CBS350-16P-E-2G 120W 16 240W 16 CBS350-16FP-2G CBS350-24P-4G 195W 24 370W CBS350-24FP-4G 24 CBS350-48P-4G 370W 48 CBS350-48FP-4G 740W 48 24 CBS350-24P-4X 195W CBS350-24FP-4X 370W 24 CBS350-48P-4X 370W 48 CBS350-48FP-4X 740W 48 **Power consumption System Power Power Consumption Heat Dissipation** Model (with PoE) (BTU/hr) (worst case) Consumption CBS350-8T-E-2G 110V=12.55W N/A 42.86 220V=12.56W CBS350-8P-2G 110V=17.35W 110V=83.17W 283.79 220V=17.95W 220V=82.63W CBS350-8P-E-2G 110V=13.84W 110V=80.79W 275.91 220V=14.31W 220V=80.86W CBS350-8FP-2G 110V=17.29W 110V=148.12W 505.41 220V=17.88W 220V=146.36W

| Feature | Description     |                            |                              |          |
|---------|-----------------|----------------------------|------------------------------|----------|
|         | CBS350-8FP-E-2G | 110V=17.07W<br>220V=16.68W | 110V=147.48W<br>220V=145.26W | 503.22   |
|         | CBS350-16T-2G   | 110V=18.63W<br>220V=18.37W | N/A                          | 64.46    |
|         | CBS350-16T-E-2G | 110V=19.63W<br>220V=19.32W | N/A                          | 65.92    |
|         | CBS350-16P-2G   | 110V=24.51W<br>220V=25.01W | 110V=156.4W<br>220V=154.5W   | 124.20   |
|         | CBS350-16P-E-2G | 110V=23.65W<br>220V=23.68W | 110V=150.1W<br>220V=148.8W   | 102.71   |
|         | CBS350-16FP-2G  | 110V=27.53W<br>220V=26.68W | 110V=284W<br>220V=279.8W     | 150.13   |
|         | CBS350-24T-4G   | 110V=25.91W<br>220V=25.63W | N/A                          | 89.13    |
|         | CBS350-24P-4G   | 110V=34.42W<br>220V=33.09W | 110V=239.7W<br>220V=236.4W   | 152.52   |
|         | CBS350-24FP-4G  | 110V=46.60W<br>220V=46.35W | 110V=449.7W<br>220V=438.3W   | 271.95   |
|         | CBS350-48T-4G   | 110V=48.27W<br>220V=48.64W | N/A                          | 165.96   |
|         | CBS350-48P-4G   | 110V=60.77W<br>220V=59.73W | 110V=451.95W<br>220V=445.85W | 1,542.12 |
|         | CBS350-48FP-4G  | 110V=73.79W<br>220V=74.03W | 110V=886.42W<br>220V=859.50W | 3,024.59 |
|         | CBS350-24T-4X   | 110V=27.54W<br>220V=27.25W | N/A                          | 93.32    |
|         | CBS350-24P-4X   | 110V=35.72W<br>220V=34.53W | 110V=240.4W<br>220V=236.9W   | 154.91   |
|         | CBS350-24FP-4X  | 110V=47.14W<br>220V=47.01W | 110V=451.8W<br>220V=437.4W   | 279.11   |
|         | CBS350-48T-4X   | 110V=51.01W<br>220V=50.58W | N/A                          | 174.06   |

| Feature | Description     |                            |                              |  |  |
|---------|-----------------|----------------------------|------------------------------|--|--|
|         | CBS350-48P-4X   | 110V=61.53W<br>220V=60.73W | 110V=471.90W<br>220V=463.32W | 1,610.19   |  |
|         | CBS350-48FP-4X  | 110V=76.18W<br>220V=76.22W | 110V=889.35W<br>220V=865.02W | 3,034.59   |  |
| Ports   | Model Name      | Total System<br>Ports      | RJ-45 Ports                  | Combo Ports(RJ 45 + Small form-factor pluggable [SFP]) |  |
|         | CBS350-8T-E-2G  | 10 Gigabit<br>Ethernet     | 8 Gigabit Ethernet           | 2 Gigabit Ethernet combo                               |  |
|         | CBS350-8P-2G    | 10 Gigabit<br>Ethernet     | 8 Gigabit Ethernet           | 2 Gigabit Ethernet combo                               |  |
|         | CBS350-8P-E-2G  | 10 Gigabit<br>Ethernet     | 8 Gigabit Ethernet           | 2 Gigabit Ethernet combo                               |  |
|         | CBS350-8FP-2G   | 10 Gigabit<br>Ethernet     | 8 Gigabit Ethernet           | 2 Gigabit Ethernet combo                               |  |
|         | CBS350-8FP-E-2G | 10 Gigabit<br>Ethernet     | 8 Gigabit Ethernet           | 2 Gigabit Ethernet combo                               |  |
|         | CBS350-16T-2G   | 18 Gigabit<br>Ethernet     | 16 Gigabit Ethernet          | 2 SFP  |  |
|         | CBS350-16T-E-2G | 18 Gigabit<br>Ethernet     | 16 Gigabit Ethernet          | 2 SFP  |  |
|         | CBS350-16P-2G   | 18 Gigabit<br>Ethernet     | 16 Gigabit Ethernet          | 2 SFP  |  |
|         | CBS350-16P-E-2G | 18 Gigabit<br>Ethernet     | 16 Gigabit Ethernet          | 2 SFP  |  |
|         | CBS350-16FP-2G  | 18 Gigabit<br>Ethernet     | 16 Gigabit Ethernet          | 2 SFP  |  |
|         | CBS350-24T-4G   | 28 Gigabit<br>Ethernet     | 24 Gigabit Ethernet          | 4 SFP  |  |
|         | CBS350-24P-4G   | 28 Gigabit<br>Ethernet     | 24 Gigabit Ethernet          | 4 SFP  |  |
|         | CBS350-24FP-4G  | 28 Gigabit<br>Ethernet     | 24 Gigabit Ethernet          | 4 SFP  |  |
|         | CBS350-48T-4G   | 52 Gigabit<br>Ethernet     | 48 Gigabit Ethernet          | 4 SFP  |  |
|         | CBS350-48P-4G   | 52 Gigabit<br>Ethernet     | 48 Gigabit Ethernet          | 4 SFP  |  |
|         | CBS350-48FP-4G  | 52 Gigabit                 | 48 Gigabit Ethernet          | 4 SFP  |  |

| Feature       | Description   |  |                         |               |  |
|---------------|---|--|-------------------------|---------------|--|
|               |   | Ethernet   |                         |               |  |
|               | CBS350-24T-4X   | 24 Gigabit<br>Ethernet + 4<br>10Gigabit Ethernet | 24 Gigabit Ethernet     | 4 SFP+        |  |
|               | CBS350-24P-4X   | 24 Gigabit<br>Ethernet + 4<br>10Gigabit Ethernet | 24 Gigabit Ethernet     | 4 SFP+        |  |
|               | CBS350-24FP-4X  | 24 Gigabit<br>Ethernet + 4<br>10Gigabit Ethernet | 24 Gigabit Ethernet     | 4 SFP+        |  |
|               | CBS350-48T-4X   | 48 Gigabit<br>Ethernet + 4<br>10Gigabit Ethernet | 48 Gigabit Ethernet     | 4 SFP+        |  |
|               | CBS350-48P-4X   | 48 Gigabit<br>Ethernet + 4<br>10Gigabit Ethernet | 48 Gigabit Ethernet     | 4 SFP+        |  |
|               | CBS350-48FP-4X  | 48 Gigabit<br>Ethernet + 4<br>10Gigabit Ethernet | 48 Gigabit Ethernet     | 4 SFP+        |  |
| Console port  | Cisco Standard mini USB Type-B / RJ45 console port                                  |  |                         |               |  |
| USB slot      | USB Type-A slot on the front panel of the switch for easy file and image management |  |                         |               |  |
| Buttons       | Reset button  |  |                         |               |  |
| Cabling type  | Unshielded Twisted Pair (UTP) Category 5e or better for 1000BASE-T                  |  |                         |               |  |
| LEDs          | System, Link/Act, PoE, Speed  |  |                         |               |  |
| Flash         | 256 MB  |  |                         |               |  |
| CPU           | 800 MHz ARM   |  |                         |               |  |
| DRAM          | 512 MB  |  |                         |               |  |
| Packet buffer | All numbers are aggregat  | te across all ports as                           | the buffers are dynamic | cally shared: |  |
|               | Model Name  |  | Packet Buffer           |               |  |
|               | CBS350-8T-E-2G  |  | 1.5 MB                  |               |  |
|               | CBS350-8P-2G  |  | 1.5 MB                  |               |  |
|               | CBS350-8P-E-2G  |  | 1.5 MB                  |               |  |
|               | CBS350-8FP-2G   |  | 1.5 MB                  |               |  |
|               | CBS350-8FP-E-2G   |  | 1.5 MB                  |               |  |
|               | CBS350-16T-2G   |  | 1.5 MB                  |               |  |

| Feature               | Description     |                   |           |                     |  |
|-----------------------|-----------------|-------------------|-----------|---------------------|--|
|                       | CBS350-16T-E-2G |                   | 1.5 MB    |                     |  |
|                       | CBS350-16P-2G   | CBS350-16P-2G     |           | 1.5 MB              |  |
|                       | CBS350-16P-E-2G |                   | 1.5 MB    |                     |  |
|                       | CBS350-16FP-2G  |                   | 1.5 MB    |                     |  |
|                       | CBS350-24T-4G   |                   | 1.5 MB    |                     |  |
|                       | CBS350-24P-4G   |                   | 1.5 MB    |                     |  |
|                       | CBS350-24FP-4G  |                   | 1.5 MB    |                     |  |
|                       | CBS350-48T-4G   |                   | 3 MB      |                     |  |
|                       | CBS350-48P-4G   |                   | 3 MB      |                     |  |
|                       | CBS350-48FP-4G  |                   | 3 MB      |                     |  |
|                       | CBS350-24T-4X   |                   | 1.5 MB    |                     |  |
|                       | CBS350-24P-4X   |                   | 1.5 MB    |                     |  |
|                       | CBS350-24FP-4X  |                   | 1.5 MB    |                     |  |
|                       | CBS350-48T-4X   |                   | 3 MB      |                     |  |
|                       | CBS350-48P-4X   |                   | 3 MB      |                     |  |
|                       | CBS350-48FP-4X  |                   | 3 MB      |                     |  |
| Supported SFP modules | SKU             | Media             | Speed     | Maximum<br>Distance |  |
|                       | MGBSX1          | Multimode fiber   | 1000 Mbps | 500 m               |  |
|                       | MGBLX1          | Single-mode fiber | 1000 Mbps | 10 km               |  |
|                       | MGBLH1          | Single-mode fiber | 1000 Mbps | 40 km               |  |
|                       | MGBT1           | UTP cat 5e        | 1000 Mbps | 100 m               |  |
|                       | GLC-SX-MMD      | Multimode fiber   | 1000 Mbps | 550 m               |  |
|                       | GLC-LH-SMD      | Single-mode fiber | 1000 Mbps | 10 km               |  |
|                       | GLC-BX-U        | Single-mode fiber | 1000 Mbps | 10 km               |  |

| Feature                        | Description     |                   |   |                  |
|--------------------------------|-----------------|-------------------|---|------------------|
|                                | GLC-BX-D        | Single-mode fiber | 1000 Mbps                                   | 10 km            |
|                                | GLC-TE          | UTP cat 5e        | 1000 Mbps                                   | 100 m            |
|                                | SFP-H10GB-CU1M  | Copper coax       | 10 Gig                                      | 1 m              |
|                                | SFP-H10GB-CU3M  | Copper coax       | 10 Gig                                      | 3 m              |
|                                | SFP-H10GB-CU5M  | Copper coax       | 10 Gig                                      | 5 m              |
|                                | SFP-10G-SR      | Multimode fiber   | 10 Gig                                      | 26 m - 400 m     |
|                                | SFP-10G-LR      | Single-mode fiber | 10 Gig                                      | 10 km            |
|                                | SFP-10G-SR-S    | Multimode fiber   | 10 Gig                                      | 26 m - 400 m     |
|                                | SFP-10G-LR-S    | Single-mode fiber | 10 Gig                                      | 10 km            |
| Environmental                  |                 |                   |   |                  |
| Unit dimensions<br>(W x H x D) | Model Name      |                   | Unit Dimensions                             |                  |
| (WXHXD)                        | CBS350-8T-E-2G  |                   | 268 x 185 x 44 mm (10.56 x 7.28 x 1.73 in)  |                  |
|                                | CBS350-8P-2G    |                   | 268 x 323 x 44 mm (10.56 x 12.73 x 1.73 in) |                  |
|                                | CBS350-8P-E-2G  |                   | 268 x 185 x 44 mm (10.56 x 7.28 x 1.73 in)  |                  |
|                                | CBS350-8FP-2G   |                   | 268 x 323 x 44 mm (10.56 x                  | 12.73 x 1.73 in) |
|                                | CBS350-8FP-E-2G |                   | 268 x 185 x 44 mm (10.56 x 7.28 x 1.73 in)  |                  |
|                                | CBS350-16T-2G   |                   | 268 x 272 x 44 mm (10.56 x 10.69 x 1.73 in) |                  |
|                                | CBS350-16T-E-2G |                   | 268 x 210 x 44 mm (10.56 x 8.26x 1.73 in)   |                  |
|                                | CBS350-16P-2G   |                   | 268 x 297 x 44 mm (10.56 x 11.69 x 1.73 in) |                  |
|                                | CBS350-16P-E-2G |                   | 268 x 210 x 44 mm (10.56 x 8.26x 1.73 in)   |                  |
|                                | CBS350-16FP-2G  |                   | 268 x 308 x 44 mm (10.56 x 12.14 x 1.73 in) |                  |
|                                | CBS350-24T-4G   |                   | 445 x 240 x 44 mm (17.5 x 9.45 x 1.73 in)   |                  |
|                                | CBS350-24P-4G   |                   | 445 x 299 x 44 mm (17.5 x 11.76 x 1.73 in)  |                  |
|                                | CBS350-24FP-4G  |                   | 445 x 345 x 44 mm (17.5 x 13.59 x 1.73 in)  |                  |
|                                | CBS350-48T-4G   |                   | 445 x 273 x 44 mm (17.5 x 10.73 x 1.73 in)  |                  |
|                                | CBS350-48P-4G   |                   | 445 x 350 x 44 mm (17.5 x 13.78 x 1.73 in)  |                  |
|                                | CBS350-48FP-4G  |                   | 445 x 350 x 44 mm (17.5 x 13                | 3.78 x 1.73 in)  |

| Feature     | Description     |  |
|-------------|-----------------|--|
|             | CBS350-24T-4X   | 445 x 240 x 44 mm (17.5 x 9.45 x 1.73 in)  |
|             | CBS350-24P-4X   | 445 x 299 x 44 mm (17.5 x 11.76 x 1.73 in) |
|             | CBS350-24FP-4X  | 445 x 345 x 44 mm (17.5 x 13.59 x 1.73 in) |
|             | CBS350-48T-4X   | 445 x 273 x 44 mm (17.5 x 10.73 x 1.73 in) |
|             | CBS350-48P-4X   | 445 x 350 x 44 mm (17.5 x 13.78 x 1.73 in) |
|             | CBS350-48FP-4X  | 445 x 350 x 44 mm (17.5 x 13.78 x 1.73 in) |
| Unit weight | Model Name      | Unit Weight                                |
|             | CBS350-8T-E-2G  | 1.7 kg (3.75 lb)                           |
|             | CBS350-8P-2G    | 3.5 kg (7.72 lb)                           |
|             | CBS350-8P-E-2G  | 3.5 kg (7.72 lb)                           |
|             | CBS350-8FP-2G   | 3.5 kg (7.72 lb)                           |
|             | CBS350-8FP-E-2G | 3.5 kg (7.72 lb)                           |
|             | CBS350-16T-2G   | 1.78 kg (3.92 lb)                          |
|             | CBS350-16T-E-2G | 1.42 kg (3.13 lb)                          |
|             | CBS350-16P-2G   | 2.38 kg (5.25 lb)                          |
|             | CBS350-16P-E-2G | 1.42 kg (3.13 lb)                          |
|             | CBS350-16FP-2G  | 2.49 kg (5.49 lb)                          |
|             | CBS350-24T-4G   | 2.63 kg (5.80 lb)                          |
|             | CBS350-24P-4G   | 3.53 kg (7.78 lb)                          |
|             | CBS350-24FP-4G  | 4.6 kg (10.14 lb)                          |
|             | CBS350-48T-4G   | 3.95 kg (8.71 lb)                          |
|             | CBS350-48P-4G   | 5.43 kg (11.97 lb)                         |
|             | CBS350-48FP-4G  | 5.82 kg (12.83 lb)                         |
|             | CBS350-24T-4X   | 2.78 kg (6.13 lb)                          |
|             | CBS350-24P-4X   | 3.68 kg (8.11 lb)                          |
|             | CBS350-24FP-4X  | 4.6 kg (10.14 lb)                          |
|             | CBS350-48T-4X   | 3.95 kg (8.71 lb)                          |

| Feature   | Description  |              |                         |                       |  |
|---|--|--------------|-------------------------|-----------------------|--|
|   | CBS350-48P-4X  |              | 5.43 kg (11.97 lb)      |                       |  |
|   | CBS350-48FP-4X   |              | 5.82 kg (12.83 lb)      |                       |  |
| Power   | 100-240V 50-60 Hz, internal, universal: CBS350-8P-2G, CBS350-8FP-2G, CBS350-16T-2G, CBS350-16P-2G, CBS350-16FP-2G, CBS350-24T-4G, CBS350-24P-4G, CBS350-24FP-4G, CBS350-48T-4G, CBS350-48FP-4G, CBS350-24T-4X, CBS350-24P-4X, CBS350-24FP-4X, CBS350-24FP-4X, CBS350-48T-4X, CBS350-48P-4X, CBS350-48FP-4X  100-240V 50-60 Hz, external: CBS350-8T-E-2G, CBS350-8P-E-2G, CBS350-8FP-E-2G, CBS350-16T-E-2G, CBS350-16P-E-2G |              |                         |                       |  |
| Certification   | UL (UL 60950), CSA (CS   |              | CC Part 15 (CFR 47) Cla | ss A                  |  |
| Operating temperature                                     | 23° to 122°F (-5° to 50°   |              |                         |                       |  |
| Storage temperature                                       | -13° to 158°F (-25° to   | •            |                         |                       |  |
| Operating humidity  | 10% to 90%, relative, no   | ncondensing  |                         |                       |  |
| Storage humidity  | 10% to 90%, relative, no   | ncondensing  |                         |                       |  |
| Acoustic noise and Mean<br>Time Between Failure<br>(MTBF) | Model Name   | FAN (Number) | Acoustic Noise          | MTBF at 25° C (hours) |  |
| (WITDF)   | CBS350-8T-E-2G   | Fanless      | N/A                     | 2,171,669             |  |
|   | CBS350-8P-2G   | Fanless      | N/A                     | 1,786,412             |  |
|   | CBS350-8P-E-2G   | Fanless      | N/A                     | 1,706,649             |  |
|   | CBS350-8FP-2G  | Fanless      | N/A                     | 1,786,412             |  |
|   | CBS350-8FP-E-2G  | Fanless      | N/A                     | 1,706,649             |  |
|   | CBS350-16T-2G  | Fanless      | N/A                     | 2,165,105             |  |
|   | CBS350-16T-E-2G  | Fanless      | N/A                     | 2,165,105             |  |
|   | CBS350-16P-2G  | Fanless      | N/A                     | 706,983               |  |
|   | CBS350-16P-E-2G  | Fanless      | N/A                     | 706,983               |  |
|   | CBS350-16FP-2G   | Fanless      | N/A                     | 706,983               |  |
|   | CBS350-24T-4G  | Fanless      | N/A                     | 2,026,793             |  |
|   | CBS350-24P-4G  | Fanless      | N/A                     | 698,220               |  |
|   | CBS350-24FP-4G   | 1            | 25°C: 34.8 dBA          | 698,220               |  |
|   | CBS350-48T-4G  | 1            | 25°C: 29.7 dBA          | 1,452,667             |  |
|   | CBS350-48P-4G  | 1            | 25° C: 37.3 dBA         | 856,329               |  |

| Feature  | Description   |         |                |           |
|----------|---|---------|----------------|-----------|
|          | CBS350-48FP-4G  | 1       | 25° C:48.7 dBA | 856,301   |
|          | CBS350-24T-4X   | Fanless | N/A            | 2,026,793 |
|          | CBS350-24P-4X   | Fanless | N/A            | 698,220   |
|          | CBS350-24FP-4X  | 1       | 25°C: 34.8 dBA | 698,220   |
|          | CBS350-48T-4X   | 1       | 25°C: 29.7 dBA | 1,452,667 |
|          | CBS350-48P-4X   | 1       | 25° C:37.3 dBA | 856,329   |
|          | CBS350-48FP-4X  | 1       | 25°C:48.7 dBA  | 856,301   |
| Warranty | Limited lifetime with next business day advance replacement (where available) |         |                |           |

#### **Package Contents**

- Cisco Business 350 Series Managed Switch
- Power Cord (Power adapter for select 8-port and 16-port SKUs)
- Mounting Kit
- Quick Start Guide

#### **Minimum Requirements**

- Web browser: Chrome, Firefox, Edge, Safari
- Category 5e Ethernet network cable
- TCP/IP, network adapter, and network operating system (such as Microsoft Windows, Linux, or Mac OS X) installed

## Ordering information

Table 2 provides ordering information.

 Table 2.
 Cisco Business 350 Series Switches Ordering Information

| Model Name       | Order Product ID Number | Description   |
|------------------|-------------------------|---|
| Gigabit Ethernet |                         |   |
| CBS350-8T-E-2G   | CBS350-8T-E-2G-xx       | <ul><li> 8 10/100/1000 ports</li><li> 2 Gigabit copper/SFP combo ports</li></ul>                              |
| CBS350-8P-2G     | CBS350-8P-2G-xx         | <ul><li>8 10/100/1000 PoE+ ports with 67W power budget</li><li>2 Gigabit copper/SFP combo ports</li></ul>     |
| CBS350-8P-E-2G   | CBS350-8P-E-2G-xx       | <ul><li>8 10/100/1000 PoE+ ports with 67W power budget</li><li>2 Gigabit copper/SFP combo ports</li></ul>     |
| CBS350-8FP-2G    | CBS350-8FP-2G-xx        | <ul> <li>8 10/100/1000 PoE+ ports with 120W power budget</li> <li>2 Gigabit copper/SFP combo ports</li> </ul> |
| CBS350-8FP-E-2G  | CBS350-8FP-E-2G-xx      | <ul><li>8 10/100/1000 PoE+ ports with 120W power budget</li><li>2 Gigabit copper/SFP combo ports</li></ul>    |

| Model Name                | Order Product ID Number | Description  |
|---------------------------|-------------------------|--|
| CBS350-16T-2G             | CBS350-16T-2G-xx        | <ul><li>16 10/100/1000 ports</li><li>2 Gigabit SFP</li></ul>                                 |
| CBS350-16T-E-2G           | CBS350-16T-E-2G-xx      | <ul><li>16 10/100/1000 ports</li><li>2 Gigabit SFP</li></ul>                                 |
| CBS350-16P-2G             | CBS350-16P-2G-xx        | <ul><li>16 10/100/1000 PoE+ ports with 120W power budget</li><li>2 Gigabit SFP</li></ul>     |
| CBS350-16P-E-2G           | CBS350-16P-E-2G-xx      | <ul><li>16 10/100/1000 PoE+ ports with 120W power budget</li><li>2 Gigabit SFP</li></ul>     |
| CBS350-16FP-2G            | CBS350-16FP-2G-xx       | <ul><li>16 10/100/1000 PoE+ ports with 240W power budget</li><li>2 Gigabit SFP</li></ul>     |
| CBS350-24T-4G             | CBS350-24T-4G-xx        | <ul><li>24 10/100/1000 ports</li><li>4 Gigabit SFP</li></ul>                                 |
| CBS350-24P-4G             | CBS350-24P-4G-xx        | <ul><li>24 10/100/1000 PoE+ ports with 195W power budget</li><li>4 Gigabit SFP</li></ul>     |
| CBS350-24FP-4G            | CBS350-24FP-4G-xx       | <ul><li>24 10/100/1000 PoE+ ports with 370W power budget</li><li>4 Gigabit SFP</li></ul>     |
| CBS350-48T-4G             | CBS350-48T-4G-xx        | <ul><li>48 10/100/1000 ports</li><li>4 Gigabit SFP</li></ul>                                 |
| CBS350-48P-4G             | CBS350-48P-4G-xx        | <ul><li>48 10/100/1000 PoE+ ports with 370W power budget</li><li>4 Gigabit SFP</li></ul>     |
| CBS350-48FP-4G            | CBS350-48FP-4G-xx       | <ul><li>48 10/100/1000 PoE+ ports with 740W power budget</li><li>4 Gigabit SFP</li></ul>     |
| Gigabit Ethernet with 100 | G Uplinks               |  |
| CBS350-24T-4X             | CBS350-24T-4X-xx        | <ul><li>24 10/100/1000 ports</li><li>4 10 Gigabit SFP+</li></ul>                             |
| CBS350-24P-4X             | CBS350-24P-4X-xx        | <ul><li>24 10/100/1000 PoE+ ports with 195W power budget</li><li>4 10 Gigabit SFP+</li></ul> |
| CBS350-24FP-4X            | CBS350-24FP-4X-xx       | <ul><li>24 10/100/1000 PoE+ ports with 370W power budget</li><li>4 10 Gigabit SFP+</li></ul> |
| CBS350-48T-4X             | CBS350-48T-4X-xx        | <ul><li>48 10/100/1000 ports</li><li>4 10 Gigabit SFP+</li></ul>                             |
| CBS350-48P-4X             | CBS350-48P-4X-xx        | <ul><li>48 10/100/1000 PoE+ ports with 370W power budget</li><li>4 10 Gigabit SFP+</li></ul> |
| CBS350-48FP-4X            | CBS350-48FP-4X-xx       | <ul><li>48 10/100/1000 PoE+ ports with 740W power budget</li><li>4 10 Gigabit SFP+</li></ul> |

<sup>\*</sup>Each combo port has one 10/100/1000 Ethernet port and one 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 CBS350-24P-4G for the United States is CBS350-24P-4G-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    | USA, Canada, Mexico, Colombia, Chile and rest of Latin America   |
| -BR    | Brazil   |
| -AR    | Argentina  |
| -EU    | European Economic Area, Russia, Ukraine, Israel, United Arab Emirates, Turkey, Egypt, South Africa, Indonesia, Philippines, Vietnam, Thailand, Korea |
| -UK    | United Kingdom, Saudi Arabia, Qatar, Kuwait, Singapore, Hong Kong, Malaysia  |
| -AU    | Australia, New Zealand   |
| -CN    | China  |
| -IN    | India  |
| -JP    | Japan  |
| -KR    | 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 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.

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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 Business 350 series managed switches provides the reliability, performance, security, and capabilities you need to power your business.

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| Sustainability topic   | Reference        |
|--|------------------|
| Information on product material content laws and regulations                                       | <u>Materials</u> |
| Information on electronic waste laws and regulations, including products, batteries, and packaging | WEEE compliance  |

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#### For more information

To find out more about the Cisco Business 350 Series switches, visit <a href="https://www.cisco.com/c/en/us/products/switches/business-350-series-managed-switches/index.html">https://www.cisco.com/c/en/us/products/switches/business-350-series-managed-switches/index.html</a>.

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