

For
Small
Business



Cisco 200E Series Smart Switches Cisco Small Business

Build a Powerful, Easy-to-Use Basic Business Network at an Affordable Price

The key to succeeding in today's competitive business environment is investing resources wisely – knowing how to separate the essential from the extraneous and get the most value for your dollars. As the backbone of your business and productivity applications, the small business network clearly falls into the “essential” category. But that doesn't mean you need the most advanced feature set on the market.

Figure 1. Cisco 200E 24-Port 10/100 Smart Switch



With Cisco® 200E Series Smart Switches, you can achieve business-class network security and performance without paying for advanced network management features that you will not need. When you need a reliable solution to share network resources and connect computers, printers, and servers, but low cost is a top priority, Cisco 200E Series Smart Switches provide the ideal solution.

Cisco 200E Series Smart Switches

Cisco 200E Series Smart Switches are a series of affordable smart switches that combine powerful network performance and reliability with the essential network management features you need for a solid business network. These scalable switches provide enhanced management, security, and quality-of-service (QoS) features beyond those of an unmanaged switch, at a lower cost than managed switches. And with an easy-to-use web user interface and the Cisco FindIT Network Discovery Tool, you can deploy and configure a rock-solid business network in minutes.

Business Applications

Whether you need basic high-speed connectivity for your computers and servers or a comprehensive voice, data, and wireless technology solution, Cisco 200E Series switches can meet your business needs. Possible deployment scenarios include:

- **High-speed desktop connectivity.** Cisco 200E Series switches can quickly and securely connect employees working in small offices with one another and with all of the servers, printers, and other device they use. High performance and reliable connectivity help speed up file transfers and data processing, improve network uptime, and keep your employees connected and productive.

- **Secure wireless connectivity.** Cisco 200E Series switches work with Cisco and third-party wireless solutions to extend the reach of your network. Employees can work productively from conference rooms and common areas, collaborate in any office, and access business applications from wherever they are. Power over Ethernet (PoE) enables the switch to send power over the network cable to power wireless access points and simplifies the wireless deployment. And with embedded security, your employees can work with confidence, knowing that only authorized users can access the network and network applications.
- **Unified communications.** The Cisco 200E Series provides QoS features to enable you to prioritize delay-sensitive traffic in your network and let you converge all of your communications solutions – such as IP telephony and video surveillance – over a single Ethernet network. Cisco offers a complete portfolio of IP telephony and other unified communications products designed for small businesses, and Cisco 200E Series switches have been rigorously tested to help ensure easy integration and full compatibility with these and other vendor products.

Features and Benefits

Cisco 200E Series Switches provide all of the features you need to create a basic business-class network at an affordable price. These features include:

- **Easy configuration and management:** Cisco 200E Series switches are designed to be easy to deploy and use by small businesses or the partners that serve them. Simple-to-use web-based interfaces reduce the time it takes to deploy, manage, and troubleshoot your network. Key features include:
 - **Cisco FindIT Network Discovery Utility** works through a simple toolbar on the user's web browser to discover Cisco devices on the network and display basic information, such as serial numbers and IP addresses, to aid in the configuration and speed the deployment of Cisco Small Business products. For more information, and to download the utility, visit www.cisco.com/go/findit.
- **Performance and reliability:** Cisco 200E Series switches have been tested to deliver the high availability and performance you would expect from a Cisco switch and help you prevent costly downtime. The switches speed file transfer times, improve slow and sluggish networks, keep your vital business applications available, and help your employees respond more quickly to customers and each other. With a network based on Cisco 200E Series switches, you can address all of your business communication and connectivity needs and reduce the total cost of ownership of your technology infrastructure.
- **Power over Ethernet (PoE):** Cisco 200E Series switches are available with PoE. This capability simplifies the deployment of IP telephony, wireless, video surveillance, and other solutions by allowing you to send data and power to network endpoints over the same network cable. With no need for separate power supplies or outlets for IP phones, IP cameras, or wireless access points, you can speed up deployment and installation and take advantage of advanced communications technologies quickly, and at a lower cost.
- **Network security:** Cisco 200E Series switches provide enhanced security and network management features, such as 802.1x and SSH, that you need to maintain a level of security for your business, keep unauthorized users off the network, and protect your business data.
- **IP telephony support:** Cisco 200E Series switches include QoS features 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, Auto Voice VLAN and LLDP-MED

automatically detect voice devices and configures the right VLAN and QoS parameters to prioritize voice traffic.

- **IPv6 support:** Internet service providers worldwide are moving to the latest version of Internet Protocol to accommodate the growing number of network devices. Cisco 200E Series switches provide native support for IPv6 alongside traditional IPv4. That means you can take full advantage of IPv6-enabled operating systems and applications in the future, without having to upgrade your network equipment.
- **Enhanced management:** Supports Simple Network Management Protocol (SNMP), TextView CLI, Telnet, SSH, remote monitoring (RMON), Link-Layer Discovery Protocol (LLDP)-MED, and Dynamic Host Configuration Protocol (DHCP) Option 66/67 for increased traffic management, configuration, monitoring, and analysis.
- **Optimal energy-efficient solution:** Cisco 200E Series switches are designed to be eco-friendly without compromising performance. They help conserve energy by optimizing power use, which helps protect the environment and lowers your energy costs. Power-saving features include:
 - Automatic power down on ports when a link is not active
 - Fanless design in most models, which reduces power consumption, increases reliability, and provides quieter operation
- **Peace of mind:** Cisco 200E Series Switches offer the reliable performance, quality, and peace of mind you expect from a Cisco switch. When you invest in the Cisco 200E Series, you gain the benefit of:
 - Cisco limited lifetime warranty
 - Rigorous testing to help ensure easy integration and compatibility with other Cisco networking and communications products, including the complete Cisco Small Business portfolio
- **World-class service and support:** Your time is valuable, especially when you have a problem that is affecting your business. The Cisco 200E Series switches come with Cisco Limited Lifetime Hardware Warranty. The limited lifetime hardware warranty with return to factory replacement and a 1-year limited warranty for fans and power supplies, and a 90-day limited software warranty. In addition, Cisco offers software 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.

To extend the support coverage beyond warranty, choose the Cisco Small Business Support Service which helps you get the most value from Cisco Small Business solutions, providing peace of mind at an affordable price. The subscription-based service offers software upgrades and updates, access to the Cisco Small Business Support Center, next business day hardware replacement (if needed), and telephone and online chat support. To learn more, visit www.cisco.com/go/smbservices.

To find out where Cisco Small Business Service and Support is available by country, go to <https://supportforums.cisco.com/community/netpro/small-business/sbcountrysupport>.

- **Multiple language options:** The Cisco 200E Series is available in six languages: English, French, German, Italian, Spanish, and simplified Chinese. All product documentation and most user interfaces are translated, giving you the ability to select your preferred language.

Product Specifications

Table 1 gives the product specifications for the Cisco 200E Series Switches.

Table 1. Product Specifications

Feature	SF200E-24	SF200E-24P	SF200E-48	SF200E-48P
Performance				
Switching capacity and forwarding rate				
Capacity in Millions of Packets per Second (mpps) (64-byte packets)	6.55	6.55	10.12	10.12
Layer 2 Switching				
Spanning Tree Protocol (STP)	Standard 802.1d STP support Fast convergence using 802.1w (Rapid Spanning Tree [RSTP]), enabled by default Multiple Spanning Tree instances using 802.1s (MSTP)			
Link Aggregation	Support for IEEE 802.3ad Link Aggregation Control Protocol (LACP) <ul style="list-style-type: none"> Up to 4 groups Up to 8 ports per group with 16 candidate ports for each (dynamic) 802.3ad link aggregation 			
VLAN	Support for up to 256 VLANs simultaneously (out of 4096 VLAN IDs). Port-based and 802.1Q tag-based VLANs Port-based and 802.1Q tag-based VLANs			
Voice VLAN	Voice traffic is automatically assigned to a voice-specific VLAN and treated with appropriate levels of QoS			
Internet Group Management Protocol (IGMP) versions 1 and 2 snooping	IGMP limits bandwidth-intensive multicast traffic to only the requesters; supports 128 multicast groups			
Head-of-line (HOL) blocking	HOL blocking prevention			
Security				
IEEE 802.1X (Authenticator role)	802.1X: RADIUS authentication, and, MD5 hash			
Port security	Locks MAC addresses to ports, and limits the number of learned MAC addresses			
Storm control	Broadcast, multicast, and unknown unicast			
Quality of Service				
Priority levels	8 hardware queues			
Scheduling	Strict priority and weighted round-robin (WRR) Queue assignment based on differentiated services code point (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)			
Rate limiting	Ingress policer, per VLAN and per port			
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), IEEE 802.1Q/p VLAN, IEEE 802.1w RSTP, IEEE 802.1s Multiple STP, IEEE 802.1X Port Access Authentication, IEEE 802.3af, 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 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 1215, RFC 3416			

Feature	SF200E-24	SF200E-24P	SF200E-48	SF200E-48P
IPv6				
IPv6	IPv6 host mode IPv6 over Ethernet Dual IPv6/IPv4 stack IPv6 neighbor and router discovery (ND) IPv6 stateless address auto-configuration DHCP v6 Client Path maximum transmission unit (MTU) discovery Duplicate address detection (DAD) Internet Control Message Protocol (ICMP) version 6			
IPv6 QoS	Prioritize IPv6 packets in hardware			
Multicast Listener Discovery (MLD) snooping	Deliver IPv6 multicast packets only to the required receivers			
IPv6 applications	Web, ping, Trivial File Transfer Protocol (TFTP), DNS client, TELNET, SSH, Bonjour			
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 maximum transmission unit (MTU) discovery			
Management				
Web user interface	Built-in switch configuration utility for easy browser-based device configuration (HTTP). 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)			
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) and TFTP			
Port mirroring	Traffic on a port can be mirrored to another port for analysis with a network analyzer or RMON probe. Up to 4 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 4 source VLANs can be mirrored to one destination port. A single session is supported.			
DHCP (Options 66 and 67)	Dynamic Host Configuration Protocol (DHCP) options facilitate tighter control from a central point (DHCP server) to obtain IP address, auto-configuration (with configuration file download)			
Textview CLI	Scriptable command-line interface			
Localization	Localization of GUI and documentation into multiple languages			
Other management	HTTP, RADIUS, port mirroring, TFTP upgrade, DHCP client, BOOTP, SNTP, ping, syslog, SSH; cable diagnostics; Telnet client (SSH secure support)			
Power Efficiency				
Energy Detect	Automatically turns off power on RJ-45 port when the switch detects a link down Active mode is resumed without loss of any packets when the switch detects the link is back up			
General				
MAC table	Up to 8192 MAC addresses			
Discovery				
Link Layer Discovery Protocol (LLDP) (802.1ab) with LLDP-MED extensions	LLDP allows the switch to advertise its identification, configuration, and capabilities to neighboring devices, which store the data in an MIB. LLDP-MED is an enhancement to LLDP that adds the extensions needed for IP phones.			

Feature	SF200E-24	SF200E-24P	SF200E-48	SF200E-48P
Power over Ethernet (PoE)				
IEEE 802.3af PoE delivered on half of the RJ-45 ports within the listed power budgets	Maximum power of 15.4W to any 10/100 Ethernet base port. The total power available for PoE per switch is as follows:			
Power Dedicated to PoE	–	100W	–	180W
Number of Ports That Support PoE	–	12	–	24
Power consumption				
Power Savings Mode	Energy Detect		Energy Detect	
Power Consumption: Worst Case	110V/P=16.8W 220V/P=17.3W	110V/P=19.5W 220V/P=19.7W	110V/P=35.51W 220V/P=35.04W	110V/P=48.99W 220 /P=46.84W
Heat Dissipation (BTU/hr)	59.03	69.04	121.1	159.8
Ports				
Total System Ports	24 Fast Ethernet 2 Gigabit Ethernet	24 Fast Ethernet 2 Gigabit Ethernet	48 Fast Ethernet 2 Gigabit Ethernet	48 Fast Ethernet 2 Gigabit Ethernet
RJ-45 Ports	24 Fast Ethernet	24 Fast Ethernet	48 Fast Ethernet	48 Fast Ethernet
Combo Ports (RJ-45 + SFP)	2 Gigabit Ethernet combo	2 Gigabit Ethernet combo	2 Gigabit Ethernet combo	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			
Flash	8 MB			
CPU memory	64 MB			
Packet buffer	All numbers are aggregate across all ports, as the buffers are dynamically shared:			
	64Mb		1 Mb	
Supported Small Form-Factor Pluggable (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
Environmental				
Dimensions (W x H x D)	440 x 44 x 202.5 mm 17.35 x 1.74 x 7.99 in.	440 x 44 x 350 mm 17.35 x 1.74 x 13.8 in.	440 x 44 x 350 mm 17.35 x 1.74 x 13.8 in.	440 x 44 x 350 mm 17.35 x 1.74 x 13.8 in.
Unit weight	3.34 kg 7.36 lbs.	5.05 kg 11.13 lbs	4.75 kg 10.47 lbs	5.72 kg 12.61 lbs
Power	100V–240V 1.0-.05A 50–60 HZ	100V–240V 2.0-1.0A 50–60 HZ	100V-240V 1.0-0.5A 50-60 HZ	100V-240V 3.0-1.5A 50-60 HZ
Certification	UL (UL 60950), CSA (CSA 22.2), CE mark, FCC Part 15 (CFR 47) Class A			
Operating temperature	32° to 104°F (0° to 40°C)			
Storage temperature	–4° to 158°F (–20° to 70°C)			
Operating humidity	10% to 90%, relative, noncondensing			
Storage humidity	10% to 90%, relative, noncondensing			

Feature	SF200E-24	SF200E-24P	SF200E-48	SF200E-48P
Acoustic noise and mean time between failures (MTBF)				
Fan (Number)	No	1	No	1
Acoustic Noise	N/A	N/A	N/A	N/A
MTBF @ 40°C (hours)	74,082	97,338	12,6766	51,866
Warranty	Limited Lifetime	Limited Lifetime	Limited Lifetime	Limited Lifetime
Package Contents				
<ul style="list-style-type: none"> • Cisco 200E Series Smart Switch • Power cord • Mounting hardware • Serial Console Cable • CD-ROM with user documentation (PDF) included • Quick-start guide 				
Minimum Requirements				
<ul style="list-style-type: none"> • 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 200E Series Smart Switches. Table 3 gives ordering information for the MFE and MGE transceivers.

Table 2. Cisco 200E Series Switches Ordering Information

Model Name	Product Ordering Number	Description
Fast Ethernet		
SF200E-24	SF200E-24-xx	<ul style="list-style-type: none"> • 24 10/100 ports • 2 combo mini-GBIC ports*
SF200E-24P	SF200E-24P-xx	<ul style="list-style-type: none"> • 24 10/100 ports • 2 combo mini-GBIC ports • PoE
SF200E-48	SF200E-48-xx	<ul style="list-style-type: none"> • 48 10/100 ports • 2 combo mini-GBIC ports
SF200E-48P	SF200E-48P-xx	<ul style="list-style-type: none"> • 48 10/100 ports • 2 combo mini-GBIC ports • PoE

*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. MFE and MGE Transceiver Ordering Information

Product Ordering Number	Description
MFE Transceivers	
MFEBX1	100BASE-BX-20U SFP transceiver for single-mode fiber, 1310 nm wavelength, supports up to 20 km
MFELX1	100BASE-LX SFP transceiver for single-mode fiber, 1310 nm wavelength, supports up to 2 km
MFEFX1	100BASE-FX SFP transceiver for multimode fiber, 1310 nm wavelength, supports up to 10 km
MGE Transceivers	
MGBBX1	1000BASE-BX-20U SFP transceiver for single-mode fiber, 1310 nm wavelength, supports up to 40 km
MGBLH1	1000BASE-LH SFP transceiver for single-mode fiber, 1310 nm wavelength, supports up to 40 km
MGBLX1	1000BASE-LX SFP transceiver for single-mode fiber, 1310 nm wavelength, supports up to 10 km
MGBSX1	1000BASE-SX SFP transceiver for multimode fiber, 850 nm wavelength, supports up to 550 m

A Powerful Foundation for the Basic Business Network

As you strive to make your business more competitive and efficient, every dollar counts. Cisco 200E Series Smart Switches give you just the right features, performance, and reliability you need, without making you pay for advanced features you don't. With Cisco 200E Series switches, you can rest assured that your business applications and communications tools are resting on a strong technology foundation, so you can focus on achieving your business goals.

For More Information

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



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