

Cisco SFE2000P 24-Port 10/100 Ethernet Switch: PoE Cisco Small Business Managed Switches

Secure, Flexible Switches for Small Business Network Foundations

Highlights

- Designed for small businesses that require speed, flexibility, and performance
- Power over Ethernet easily and cost-effectively powers wireless access points, video cameras, and other network-connected endpoints
- Resilient clustering provides the ability to manage several switches as a single switch to support growing businesses
- Enhanced QoS helps ensure a consistent network experience and supports networked applications including voice, video, and data storage
- Strong security protects network traffic to keep unauthorized users off the network

Figure 1. Cisco SFE2000P 24-Port 10/100 Ethernet Switch: PoE



Product Overview

The Cisco® SFE2000P 24-Port 10/100 Ethernet Switch (Figure 1) is optimized for maximizing system availability, with fully redundant stacking, redundant power options, and dual images for resilient firmware upgrades. The Cisco SFE2000P is able to secure the network through IEEE 802.1Q VLANs, IEEE 802.1X port authentication, access control lists (ACLs), denial-of-service (DoS) prevention, and MAC-based filtering. The enhanced QoS and traffic management features ensure clear and reliable voice and video communications.

For wireless or voice over IP (VoIP) deployments, the Cisco SFE2000P supports the IEEE 802.3af standard for Power over Ethernet (PoE). With automatic load sensing, the power control circuitry automatically detects PoE on the end device before providing power. For safety, each port has independent overload and short-circuit protection, along with LED indicators for power status. A maximum of 15.4W is available on the Fast Ethernet ports for powering PoE-enabled wireless access points or VoIP handsets, with a maximum per-device PoE delivery of 180W available for all ports.

The Cisco SFE2000P includes an intuitive, secure management interface, enabling you to better utilize the switch's comprehensive feature set, resulting in a better-optimized, more secure network.

Features

- Twenty-four 10/100 Ethernet ports plus four 10/100/100 copper ports
- Two Small Form-Factor Pluggable (SFP) slots (shared with two copper ports) for fiber Gigabit Ethernet expansion
- IEEE 802.3af PoE delivered over any of the twenty-four 10/100 ports
- Maximum per-switch PoE delivery of 180W for all
- Dual images for resilient firmware upgrades
- 12.8-Gbps, non-blocking, store-and-forward switching capacity
- Simplified quality of service (QoS) management using 802.1p, Differentiated Services (Diffserv), or type of service (ToS) traffic prioritization specifications
- Power redundancy when used with Cisco RPS1000 380W Redundant Power Supply Unit
- Fully resilient stacking provides optimized growth with simplified management
- ACLs for granular security and QoS implementation
- Can be configured and monitored from a standard web browser
- Secure remote management of the switch via Secure Shell (SSH) Protocol and Secure Sockets Layer (SSL) encryption
- 802.1Q-based VLANs enable segmentation of networks for improved performance and security
- Private VLAN Edge (PVE) for simplified network isolation of guest connections or autonomous networks
- Automatic configuration of VLANs across multiple switches through Generic VLAN Registration Protocol (GVRP) and Generic Attribute Registration Protocol (GARP)
- User/network port-level security via 802.1X authentication and MAC-based filtering
- Increased bandwidth and added link redundancy with link aggregation
- Enhanced rate-limiting capabilities, including back pressure, multicast, and broadcast flood control
- Port mirroring for noninvasive monitoring of switch traffic
- Mini jumbo frame support (1600 bytes)
- Simple Network Management Protocol (SNMP) v1, v2c, v3 and Remote Monitoring (RMON) support
- Fully rack-mountable using the included rack-mounting hardware
- Simple one-step automated installation and initial configuration

Specifications

Table 1 contains the specifications, package contents, and minimum requirements for the Cisco SFE2000P 24-Port 10/100 Ethernet Switch.

Table 1. Specifications for the Cisco SFE2000P 24-Port 10/100 Ethernet Switch: PoE

Specifications	
Ports	<ul style="list-style-type: none"> • 24 RJ-45 connectors for 10BASE-T/100BASE-TX • Four 10BASE-T/100BASE-TX/1000BASE-T with 2 Gigabit combo ports • Shared between mini Gigabit Interface Converter (mini-GBIC) ports • Console port • Auto medium dependent interface (MDI) and MDI crossover (MDI-X) • Auto negotiate/manual setting • RPS port for connecting to redundant power supply unit
Buttons	Reset button
Cabling type	<ul style="list-style-type: none"> • Unshielded twisted pair (UTP) Category 5 or better for 10BASE-T/100BASE-TX • UTP Category 5 Ethernet or better for 1000BASE-T
LEDs	PWR, Fan, Link/Act, PoE, Speed, RPS, Master, Stack ID 1 through 8
PoE	
<ul style="list-style-type: none"> • IEEE 802.3af PoE delivered over any of the twenty-four 10/100 ports • Power budget allows for max power of 15.4W on up to 12 ports simultaneously 	
Performance	
Switching capacity	Up to 12.8 Gbps, nonblocking
Forwarding rate (based on 64-byte packets)	Up to 9.5 mpps
Stacking	
Stack operation	<ul style="list-style-type: none"> • Up to 8 units in a stack (192 ports) • Hot insertion and removal • Ring and chain stacking options • Master and backup master for resilient stack control • Auto-numbering or manual configuration of units in stack
Layer 2	
MAC table size	8000
Number of VLANs	256 active VLANs (4096 range)
VLAN	<ul style="list-style-type: none"> • Port-based and 802.1Q tag-based VLANs • Protocol-based VLAN • Management VLAN • PVE • GVRP
Head-of-line (HOL) blocking	HOL blocking prevention
Layer 3	
Layer 3 options	<ul style="list-style-type: none"> • Static routing • Classless interdomain routing (CIDR) • 128 static routes • IPv4 • Forwarding in silicon - wire-speed forwarding of Layer 3 traffic
Management	
Web user interface	Built-in web user interface for easy browser-based configuration (HTTP/HTTPS)
SNMP	SNMP version 1, 2c, 3 with support for traps

SNMP MIBs	<ul style="list-style-type: none"> • RFC1213 MIB-2 • RFC2863 interface MIB • RFC2665 Ether-like MIB • RFC1493 Bridge MIB • RFC2674 Extended Bridge MIB (P-bridge, Q-bridge) • RFC2819 RMON MIB (groups 1,2,3,9 only) • RFC2737 Entity MIB • RFC 2618 RADIUS client MIB • RFC 1215 traps
RMON	Embedded RMON software agent supports four RMON groups (history, statistics, alarms, and events) for enhanced traffic management, monitoring, and analysis
Firmware upgrade	<ul style="list-style-type: none"> • Web browser upgrade (HTTP) and Trivial File Transfer Protocol (TFTP) • 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
Other management	<ul style="list-style-type: none"> • Traceroute • Single IP management • SSL security for web user interface • SSH • RADIUS • Port mirroring • TFTP upgrade • Dynamic Host Configuration Protocol (DHCP) client • BOOTP • Simple Network Time Protocol (SNTP) • Xmodem upgrade • Cable diagnostics • Ping • Syslog • Telnet client (SSH secure support)
Security	
IEEE 802.1X	<ul style="list-style-type: none"> • 802.1X: RADIUS authentication; MD5 hash • Guest VLAN • Single/multiple host mode
Access control	<ul style="list-style-type: none"> • ACLs: drop or rate limit based on: <ul style="list-style-type: none"> ◦ Source and destination MAC based ◦ Source and destination IP address ◦ Protocol ◦ Port ◦ VLAN ◦ Differentiated services code point (DSCP)/IP precedence ◦ TCP/User Datagram Protocol (UDP) source and destination ports ◦ 802.1p priority ◦ Ethernet type ◦ Internet Control Message Protocol (ICMP) packets ◦ Internet Group Management Protocol (IGMP) packets ◦ Up to 1018 rules
Availability	
Link aggregation	<ul style="list-style-type: none"> • Link aggregation using IEEE 802.3ad Link Aggregation Control Protocol (LACP) • Up to 8 ports in up to 8 groups
Storm control	Broadcast and multicast storm protection
DoS prevention	DoS attack prevention
Spanning Tree	IEEE 802.1D Spanning Tree, IEEE 802.1w Rapid Spanning Tree, IEEE 802.1s Multiple Spanning Tree, Fast Linkover
IGMP snooping	IGMP (v1/v2) snooping limits bandwidth-intensive video traffic to only the requestors. Supports 256 multicast groups
Power redundancy	Connection to redundant power supply unit for power redundancy

QoS	
Priority levels	4 hardware queues
Scheduling	Priority queuing and weighted round-robin (WRR)
Class of service	<ul style="list-style-type: none"> • Port based • 802.1p VLAN priority based • IPv4/v6 IP precedence/ToS/DSCP based • DiffServ • Classification and remarking ACLs
Rate limiting	<ul style="list-style-type: none"> • Ingress policer • Egress rate control
Standards	
<ul style="list-style-type: none"> • 802.3 10BASE-T Ethernet • 802.3u 100BASE-TX Fast Ethernet • 802.3ab 1000BASE-T Gigabit Ethernet • 802.3z Gigabit Ethernet • 802.3x flow control • 802.3ad LACP • 802.3af PoE • 802.1d Spanning Tree Protocol (STP) • 802.1Q/p VLAN • 802.1w Rapid STP • 802.1s Multiple STP • 802.1X port access authentication 	
Environmental	
Dimensions W x H x D	17.32 x 14.70 x 1.73 in. (440 x 375 x 44 mm)
Unit weight	10.89 lb (4.94 kg)
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 humidity, noncondensing
Storage humidity	10% to 95% relative humidity, noncondensing
Number of fans	2
Acoustic noise	50 dB max.
Power	100-240V AC, 50-60 Hz, internal, universal; also equipped with redundant power supply connector for external power supply 48V DC
Power consumption	<ul style="list-style-type: none"> • No PoE supplied: 12V @4A (48W) • 12 ports half-power (7.5W): 138W • 12 ports full-power (15 W): 225W • 24 ports half-power (7.5W): 225W
Package Contents	
<ul style="list-style-type: none"> • Cisco SFE2000P 24-Port 10/100 Ethernet Switch • Console cable • AC power cord • Rack-mount kit • Quick-start installation guide 	
Minimum Requirements	
<ul style="list-style-type: none"> • Web-based utility: web browser (Mozilla Firefox 1.5 or later, Internet Explorer 5.5 or later, Netscape 7.01 or later) • Category 5 Ethernet network cables • Operating system: Windows 2000, XP or later • Provider support for customer premises equipment (CPE) (software version 1.2 or later) 	
Product Warranty	
5-year limited hardware warranty with return to factory replacement and 90-day limited software warranty	

Cisco Limited Warranty for Cisco Small Business Series Products

This Cisco Small Business product comes with a 5-year limited hardware warranty with return to factory replacement and a 90-day limited software warranty. In addition, Cisco offers software application updates for bug fixes and telephone technical support at no charge for the first 12 months following the date of purchase. To download software updates, go to:

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