Data Sheet

Cisco SFE2010P 48-Port 10/100 Ethernet Switch: PoE
Cisco Small Business Managed Switches

Secure, Reliable Switching to Support Growing Businesses

Highlights

- Connects up to 48 network devices - PCs, printers, and servers - to share and transfer files and videos across your network
- Resilient Clustering provides the ability to add more switches as needed to support growing business with capability to manage a stack as a single switch
- Power over Ethernet easily and cost-effectively powers wireless access points, video cameras, and other network-connected endpoints
- Advanced security protects network traffic to keep unauthorized users off the network

Figure 1.   Cisco SFE2010P 48-Port 10/100 Ethernet Switch: PoE

Product Overview

The Cisco® SFE2010P 48-Port 10/100 Ethernet Switch (Figure 1) allows you to expand your network securely. It is optimized for maximum system availability, with fully redundant stacking, redundant power options, and dual images for resilient firmware upgrades. Network security is provided through IEEE 802.1Q VLANs, IEEE 802.1X port authentication, access control lists (ACLs), denial-of-service (DoS) prevention, and MAC-based filtering. Web-based configuration is secured using SSL. The enhanced quality of service (QoS) and traffic-management features help ensure clear and reliable voice and video communications.

For wireless or voice over IP (VoIP) deployments, the Cisco SFE2010P supports the IEEE 802.3af standard for Power over Ethernet (PoE). Automatic load sensing in the power-control circuitry detects PoE on the end device before providing power. For safety, each port has independent overload and short-circuit protection, along with LED indicators to show power status. The switch provides 15W of available PoE power on up to 24 of the Fast Ethernet ports for powering PoE-enabled wireless access points or VoIP handsets. The maximum PoE available per switch for all ports is 360W

The Cisco SFE2010P provides resilient stacking for up to four units, or 192 ports. A stack of units is managed as a single switch with one web management interface. The SFE2010P switch can coexist in a stack with the Cisco SFE2000 and SFE2000P 24-Port 10/100 Ethernet Switches and the Cisco SFE2010 48-Port 10/100 Ethernet Switch, for a maximum of 192 ports in a stack. The stacking capability includes master/backup unit behavior, ring and chain architecture, and hot insertion and removal of units.

Software running on the Cisco SFE2010P switch interacts with provisioning, management, and security software on both the site's services router and the service provider's equipment. This interaction provides simple, one-step installation and access to web-administered features for the administrator and users. Simple, affordable network operations throughout the network's lifetime are the result.

Features

- Forty-eight 10/100 Ethernet ports
- Two 10/100/1000 Ethernet ports (used as stacking ports if operated in stacking mode)
- Two mini Gigabit Interface Converter (mini-GBIC) slots for fiber Gigabit Ethernet expansion
- IEEE 802.3af PoE delivered over any of the forty-eight 10/100 ports
- 15.4W available power to the Fast Ethernet ports for PoE-enabled wireless access points or VoIP handsets (maximum per-switch PoE delivery of 360W available for all ports)
- Dual images for resilient firmware upgrades
- 17.6-Gbps, nonblocking, store-and-forward switching capacity
- Simplified QoS management enabled by queuing techniques using 802.1p, Differentiated Services (DiffServ), or type of service (ToS) traffic prioritization
- Power redundancy when used with the Cisco RPS1000 380W Redundant Power Supply Unit
- Fully resilient stacking for optimized growth with simplified management
- ACLs for granular security and QoS implementation
- Configuration and monitoring from a standard web browser
- Secure remote management of the switch via Secure Shell (SSH) and SSL encryption
- 802.1Q-based VLANs enable segmentation of networks for improved performance and security
- Private VLAN Edge (PVE) simplifies 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 Control Protocol (LACP)
- Enhanced rate-limiting capabilities, including back pressure and multicast and broadcast flood control
- Port mirroring for noninvasive monitoring of switch traffic
- Mini jumbo frame support (1632 bytes)

- Simple Network Management Protocol (SNMP) versions 1, 2c, and 3 and Remote Monitoring (RMON) support
- Fully rack mountable using included rack-mounting hardware

Specifications

Table 1 gives the specifications, package contents, and minimum requirements for the Cisco SFE2010P 48-Port 10/100 Ethernet Switch.

Table 1. Specifications for the Cisco SFE2010P 48-Port 10/100 Ethernet Switch: PoE

Specifications	
Ports	48 RJ-45 connectors for 10BASE-T/100BASE-TX; two 10BASE-T/100BASETX/1000BASE-T ports; 2 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	Unshielded twisted pair (UTP) Category 5 or better for 10BASE-T/100BASE-TX; UTP Category 5e or better for 1000BASE-T
LEDs	PWR, Fan, Link/Act, PoE, Speed, RPS, Master, Stack ID 1 through 8
Power over Ethernet	
• IEEE 802.3af PoE delivered over any of the forty-eight 10/100 ports • Maximum power of 15.4W to a Fast Ethernet port - 360W total available to all Fast Ethernet ports with regular AC power, 280W total available with a redundant power supply unit	
Performance	
Switching capacity	17.6 Gbps nonblocking
Forwarding capacity	13 mpps (64-byte packets)
Stacking	
Stack operation	• Up to 192 ports in a stack • 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	Port-based and 802.1Q tag-based VLANs, protocol-based VLAN, management VLAN, multicast TV VLAN, PVE, GVRP
Head-of-line (HOL) blocking	HOL blocking prevention
Layer 3	
Layer 3 options	Static routing; classless interdomain routing (CIDR); 60 static routes; IPv4 and IPv6; forwarding in silicon - wire-speed forwarding of Layer 3 traffic
IPv6	
IPv6 options	IPv6 over Ethernet, dual stack, IPv6 over IPv4 network with Intra-Site Automatic Tunnel Addressing Protocol (ISATAP) tunnel, IPv6 neighbor discovery, IPv6 stateless address configuration, maximum transmission unit (MTU) discovery, WEB, SSL, Telnet, Ping, Traceroute, Simple Network Time Protocol (SNTP), Trivial File Transfer Protocol (TFTP), Simple Network Management Protocol (SNMP), RADIUS, ACL, QoS, protocol-based VLANs
Management	
Web user interface	Built-in web user interface for easy browser-based configuration (HTTP/HTTPS)
SNMP	SNMP versions 1, 2c, and 3 with support for traps
SNMP MIBs	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, and 9 only), RFC2737 entity MIB, RFC 2618 RADIUS client MIB, RFC 1215 traps

RMON	Embedded RMON software agent supports 4 RMON groups (history, statistics, alarms, and events) for enhanced traffic management, monitoring, and analysis)
Firmware upgrade	• Web browser upgrade (HTTP/HTTPS) and 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	Traceroute; single IP management; SSL security for web user interface; SSH; RADIUS; port mirroring; TFTP upgrade; Dynamic Host Configuration Protocol (DHCP) client; BOOTP; SNTP; Xmodem upgrade; cable diagnostics; Ping; syslog; Telnet client (SSH secure support)
Security	
IEEE 802.1X	802.1X - RADIUS authentication, MD5 hash; guest VLAN; single/multiple host mode
ACLs	• Drop or rate limit based on source and destination MAC or IP address, protocol, port, VLAN, 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, DHCP snooping, Address Resolution Protocol (ARP) inspection, and IP source address guard • Up to 1018 rules
Availability	
Link aggregation	Using IEEE 802.3ad LACP, up to 8 ports in up to 8 groups
Storm control	Broadcast, multicast, and unknown unicast
Spanning Tree	IEEE 802.1D Spanning Tree, IEEE 802.1w Rapid Spanning Tree, IEEE 802.1s Multiple Spanning Tree, and Fast Linkover
DoS prevention	DoS attack prevention
IGMP (versions 1 and 2) snooping	Limits bandwidth-intensive multicast traffic to only the requestors; supports 256 multicast groups
Power redundancy	Connection to redundant power supply unit for power redundancy
Quality of Service	
Priority levels	4 hardware queues
Scheduling	Priority queuing and weighted round-robin (WRR)
Class of service	Port based; 802.1p VLAN priority based; IPv4/v6 IP precedence/ToS/DSCP based; DiffServ; classification and re-marking ACLs
Rate limiting	Ingress policer; egress rate control; per VLAN
Statistics	16 meters
Standards	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)
Power	100-240V 47-63 Hz, internal, universal; also equipped with external redundant power supply connector for external power supply, -48V DC
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 95%, relative, noncondensing
Package Contents	

- Cisco SFE2010P 48-Port 10/100 Ethernet Switch
- AC power adapter with power cord
- 2 rack-mounting kits with 8 screws
- CD-ROM with user documentation (PDF) included
- Registration card
- Console cable

Minimum Requirements

- Web browser: Mozilla Firefox version 1.5 or later; Microsoft Internet Explorer version 5.5 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

Product Warranty

5-year limited hardware warranty with return to factory replacement and 90-day limited software warranty

Check the product package and contents for specific features supported. Specifications are subject to change without notice.

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: http://www.cisco.com/go/smallbiz.

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