

## Cisco SFE2010 48-Port 10/100 Ethernet Switch Cisco Small Business Managed Switches

For  
Small  
Business



### Secure, Reliable Switching for Growing Small 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, with the ability to manage a stack as a single switch to support growing businesses
- Intelligent 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
- Simplified, web-based management for easy installation and configuration
- Limited lifetime warranty

**Figure 1.** Cisco SFE2010 48-Port 10/100 Ethernet Switch



#### Product Overview

The Cisco® SFE2010 48-Port 10/100 Ethernet Switch (Figure 1) allows you to expand your network securely. Web-based configuration of the switch is secured using SSL.

The Cisco SFE2010 is optimized for maximum system availability, with fully redundant stacking, and dual images for resilient firmware upgrades. The switch helps 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 quality of service (QoS) and traffic-management features help ensure clear and reliable voice and video communications.

The Cisco SFE2010 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 SFE2010 switch can coexist in a stack with the Cisco SFE2000 and SFE2000P 24-Port 10/100 Ethernet Switches and the Cisco SFE2010P 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.

An intuitive, highly secure management interface provides access to the comprehensive feature set of the Cisco SFE2010, for a better-optimized, more secure network.

## 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
- 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
- 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

## Specifications

Table 1 contains the specifications, package contents, and minimum requirements for the Cisco SFE2010 48-Port 10/100 Ethernet Switch.

**Table 1.** Specifications for the Cisco SFE2010 48-Port 10/100 Ethernet Switch

Feature	Description
<b>Specifications</b>	
<b>Ports</b>	48 RJ-45 connectors for 10BASE-T/100BASE-TX; two 10BASE-T/100BASE-TX/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
<b>Buttons</b>	Reset button
<b>Cabling type</b>	Unshielded twisted pair (UTP) Category 5 or better for 10BASE-T/100BASE-TX; UTP Category 5 Ethernet or better for 1000BASE-T
<b>LEDs</b>	PWR, Fan, Link/Act, Speed, RPS, Master, Stack ID 1 through 8
<b>Performance</b>	
<b>Switching capacity</b>	17.6 Gbps nonblocking
<b>Forwarding capacity</b>	13 mpps (64-byte packets)
<b>Stacking</b>	
<b>Stack operation</b>	<ul style="list-style-type: none"> <li>• Up to 192 ports in a stack</li> <li>• Hot insertion and removal</li> <li>• Ring and chain stacking options</li> <li>• Master and backup master for resilient stack control</li> <li>• Auto-numbering or manual configuration of units in stack</li> </ul>
<b>Layer 2</b>	
<b>MAC table size</b>	8000
<b>Number of VLANs</b>	256 active VLANs (4096 range)
<b>VLAN</b>	Port-based and 802.1Q tag-based VLANs; protocol-based VLAN; management VLAN; multicast TV VLAN; PVE; Generic VLAN Registration Protocol (GVRP)
<b>Head-of-line (HOL) blocking</b>	HOL blocking prevention
<b>Layer 3</b>	
<b>Layer 3 options</b>	Static routing; classless interdomain routing (CIDR); 60 static routes; IPv4; forwarding in silicon – wire-speed forwarding of Layer 3 traffic

Feature	Description
<b>IPv6</b>	
<b>IPv6</b>	IPv6 Host Mode IPv6 over Ethernet Dual IPv6/IPv4 stack IPv6 Neighbor and Router Discovery (ND) IPv6 Stateless Address Autoconfiguration Path MTU Discovery Duplicate Address Detection (DAD) ICMPv6 IPv6 over IPv4 network with ISATAP tunnel support
<b>IPv6 QoS</b>	Prioritize IPv6 packets in hardware
<b>IPv6 ACL</b>	Drop or Rate Limit IPv6 packets in hardware
<b>MLD Snooping</b>	Deliver IPv6 multicast packets only to the required receivers
<b>IPv6 Applications</b>	Web/SSL, Telnet Server/SSH, Ping, Traceroute, SNTP, TFTP, Radius, Syslog, DNS Client
<b>IPv6 RFCs Supported</b>	RFC2463 – ICMPv6 RFC3513 – IPv6 Address architecture RFC 4291 – IP Version 6 Addressing Architecture RFC 2460 – Internet Protocol v6 (IPv6) Specification RFC 2461 – Neighbor Discovery for IPv6 RFC 2462 – IPv6 Stateless Address Auto-configuration RFC 1981 – Path MTU Discovery RFC 4007 – IPv6 Scoped Address Architecture RFC3484 – Default address selection mechanism is described by RFC3484 RFC4214 – ISATAP tunneling RFC4293 – MIB IPv6: Textual Conventions and General Group RFC 3595 – Textual Conventions for IPv6 Flow Label
<b>Management</b>	
<b>Web user interface</b>	Built-in web user interface for easy browser-based configuration (HTTP/HTTPS)
<b>SNMP</b>	SNMP versions 1, 2c, and 3 with support for traps
<b>SNMP MIBs</b>	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
<b>Remote Monitoring (RMON)</b>	Embedded RMON software agent supports 4 RMON groups (history, statistics, alarms, and events) for enhanced traffic management, monitoring, and analysis
<b>Firmware upgrade</b>	Web browser upgrade (HTTP/HTTPS) and TFTP dual images for resilient firmware upgrades
<b>Port mirroring</b>	Traffic on a port can be mirrored to another port for analysis with a network analyzer or RMON probe
<b>Other management</b>	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)
<b>Security</b>	
<b>IEEE 802.1X</b>	802.1X-RADIUS authentication, MD5 hash; guest VLAN; single/multiple host mode
<b>ACLs</b>	Drop or rate limit based on source and destination MAC or 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, DHCP snooping, Address Resolution Protocol (ARP) inspection, and IP source address guard, up to 1018 rules
<b>Availability</b>	
<b>Link aggregation</b>	Using IEEE 802.3ad Link Aggregation Control Protocol (LACP), up to 8 ports in up to 8 groups
<b>Storm control</b>	Broadcast, multicast, and unknown unicast
<b>DoS prevention</b>	DoS attack prevention
<b>Spanning Tree</b>	IEEE 802.1D Spanning Tree, IEEE 802.1w Rapid Spanning Tree, IEEE 802.1s Multiple Spanning Tree, and Fast Linkover
<b>IGMP (versions 1 and 2) snooping</b>	Limits bandwidth-intensive multicast traffic to only the requestors and supports 256 multicast groups

Feature	Description
<b>QoS</b>	
<b>Priority levels</b>	4 hardware queues
<b>Scheduling</b>	Priority queuing and weighted round-robin (WRR)
<b>Class of service</b>	Port based; 802.1p VLAN priority based; IPv4/v6 IP precedence/ToS/DSCP based; DiffServ; classification and re-marking ACLs
<b>Rate limiting</b>	Ingress policer; egress rate control; per VLAN
<b>Statistics</b>	16 meters
<b>Standards</b>	
<ul style="list-style-type: none"> <li>• 802.3 10BASE-T Ethernet, 802.3u 100BASE-TX Fast Ethernet</li> <li>• 802.3ab 1000BASE-T Gigabit Ethernet, 802.3z Gigabit Ethernet</li> <li>• 802.3x flow control, 802.3ad; 802.1D Spanning Tree Protocol (STP), 802.1Q/p VLAN</li> <li>• 802.1w Rapid STP, 802.1s Multiple STP, 802.1x port access authentication</li> </ul>	
<b>Environmental</b>	
<b>Dimensions (W x D x H)</b>	17.32 x 14.70 x 1.73 in. (440 x 375 x 44 mm)
<b>Weight</b>	10.89 lb (4.94 kg)
<b>Power</b>	100–240V 47–63 Hz, internal, universal; also equipped with external redundant power supply connector for external power supply, –48V DC
<b>Certification</b>	UL (UL 60950), CSA (CSA 22.2), CE mark, FCC Part 15 (CFR 47)
<b>Operating temperature</b>	32° to 104°F (0° to 40°C)
<b>Storage temperature</b>	–4° to 158°F (–20° to 70°C)
<b>Operating humidity</b>	10% to 90%, relative, noncondensing
<b>Storage humidity</b>	10% to 95%, relative, noncondensing
<b>Package Contents</b>	
<ul style="list-style-type: none"> <li>• Cisco SFE2010 48-Port 10/100 Ethernet Switch</li> <li>• AC power adapter with power cord</li> <li>• Two 2 rack-mounting kits with eight screws</li> <li>• CD-ROM with user documentation (PDF)</li> <li>• Registration card</li> <li>• Console cable</li> </ul>	
<b>Minimum Requirements</b>	
<ul style="list-style-type: none"> <li>• Web browser: Mozilla Firefox version 1.5 or later; Microsoft Internet Explorer version 5.5 or later</li> <li>• Category 5 Ethernet network cable</li> <li>• TCP/IP, network adapter, and network operating system (such as Microsoft Windows, Linux, or Mac OS X) installed on each computer in the network</li> </ul>	
<b>Product Warranty</b>	
Limited lifetime warranty with return to factory replacement, one year telephone support and software fixes for the warranty term.	

## Service & Support

Cisco Small Business switches are backed by the Cisco Small Business Support Service, which provides affordable peace-of-mind coverage. This subscription-based service helps you protect your investment and derive maximum value from Cisco Small Business products. Delivered by Cisco and backed by your trusted partner, this comprehensive service includes software updates, access to the Cisco Small Business Support Center, and expedited hardware replacement.

Cisco Small Business products are supported by professionals in Cisco Small Business Support Center locations worldwide who are specifically trained to understand your needs. The Cisco Small Business Support Community, an online forum, enables you to collaborate with your peers and reach Cisco technical experts for support information.

## Cisco Limited Lifetime Hardware Warranty

This Cisco Small Business product offers a limited lifetime hardware warranty with return to factory replacement and a 1-year limited warranty for fans and power supplies. In addition, Cisco offers telephone technical support at no charge for the first 12 months following the date of purchase and software bug fixes for the warranty term. To download software updates, go to: <http://www.cisco.com/cisco/web/download/index.html>.

Product warranty terms and other information applicable to Cisco products are available at [www.cisco.com/go/warranty](http://www.cisco.com/go/warranty).

## For More Information

For more information on Cisco Small Business products and solutions, visit: [www.cisco.com/smallbusiness](http://www.cisco.com/smallbusiness).



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