Cisco SLM2048 48-Port Gigabit Smart Switch
Cisco Small Business Smart Switches

Cost-Effective, Secure Switching with Simplified Management for Your Growing Business

Highlights

- Easy-to-use web browser interface makes installation quick and effortless

- High-speed conectivity supports bandwidth-intensive applications

- Security down to the switch port level keeps unauthroized users off the network

- Basic QoS helps ensure a consistent network experience and supports networked applications, including voice, video, and data storage

Figure 1.   Cisco SLM2048 48-Port Gigabit Smart Switch with 2 SFPs

Product Overview

Cisco® Small Business Smart Switches are cost-effective switching solutions that are ideal for small businesses, the network edge, or workgroups within larger organizations. These easy-to-install, high-speed switches offer many of the same quality-of-service (QoS) and security features found in more expensive full Layer 2 managed switches, but without their complexity. The Cisco SLM2048 48-Port Gigabit Smart Switch (Figure 1) offers forty-eight 10/100/1000 Gigabit over copper ports with two shared copper or optical Small Form-Factor Pluggable (SFP) uplink interfaces for connecting the switch to the core network. The simplified user interface is an intuitive management tool, enabling you to quickly use the comprehensive feature set of the switch, for a better-optimized network.

The Cisco SLM2048 includes numerous QoS features to help ensure that traffic is prioritized properly to deliver the best possible user experience for real-time applications such as voice and video or bandwidth-intensive graphic/video file uploads or downloads. With its Internet Group Management Protocol (IGMP) snooping feature, the Cisco SLM2048 limits IP multicast traffic (such as real-time presentations, videoconferences, and online gaming) to only the ports that have requested it, enabling the rest of the network to operate at peak efficiency. Additional QoS capabilities, such as IEEE 802.1p priority tagging, differentiated services code point (DSCP), and four hardware queues, also maintain quality for real-time applications such as voice and video. Network traffic can be optimized with the switch's 802.1Q VLAN support, which enables you to quickly segregate network traffic by department or workgroup. VLANs also provide an additional layer of security by keeping sensitive data separated from other workgroups on the network.

Network security is an absolute requirement for any business, and preventing unauthorized access to the company network is critical. The Cisco SLM2048 secures the network through 802.1X port authentication, which prompts end users to provide their username and password before they are permitted to pass data. User access can also be controlled through the SLM2048's MAC-based filtering capability, which allows network access only to those devices or workstations that have been authorized as identified by their MAC address. The many-to-one or one-to-one port mirroring feature of the Cisco SLM2048 enables you to monitor the type of traffic being transmitted on the network.

The Cisco SLM2048 includes features for quickly expanding and growing your network. To substantially increase network throughput speeds, especially useful for companies whose employees are routinely backing up their hard drives to a company server or storage platform, the Cisco SLM2048 supports link aggregation, which allows multiple high-bandwidth trunks between switches to be set up. Link aggregation also provides a level of availability and redundancy, as traffic will continue to flow even if one of the network links breaks. The Cisco SLM2048's Spanning Tree Protocol (STP) support and storm control feature help to control planned or inadvertent cable loops when switches are connected to one another. These loops can cause broadcast or multicast storms in the network, severely limiting its performance. With these features, you can confidently build a mesh of switches and quickly expand your network to support your growing workforce.

Features

- Forty-eight 10/100/1000 switched RJ-45 ports for up to 2000 Mbps of throughput per port
- 2 mini Gigabit Interface Converter (mini-GBIC) slots for fiber and copper Gigabit Ethernet expansion
- 96-Gbps nonblocking, store-and-forward switching mechanism
- Simplified QoS management enabled by advanced queuing techniques using 802.1p, IPv4/v6 Differentiated Services (DiffServ)/DSCP traffic prioritization specifications
- Configuration and monitoring from a standard web browser with a simplified management interface
- 802.1Q-based VLANs enable segmentation of networks for improved performance and security
- Port-level security via 802.1X authentication and MAC-based filtering
- Increased bandwidth (up to 8x) and added link redundancy with Link Aggregation Control Protocol (LACP)
- Multicast and broadcast storm control
- Port mirroring for noninvasive monitoring of switch traffic
- Jumbo frame support (9 KB)
- Fully rack-mountable using the included rack-mounting hardware

Specifications

Table 1 gives the specifications, package contents, and minimum requirements for the Cisco SLM2048 48-Port Gigabit Smart Switch.

Table 1.   Specifications for the Cisco SLM2048 48-Port Gigabit Smart Switch

Specifications	
Ports	• 48 RJ-45 connectors for 10BASE-T/100BASE-TX/1000BASE-T, including 2 combo Ports with mini-GBIC/SFP slots • Auto medium dependent interface (MDI) and MDI crossover (MDI-X) • Auto negotiate/manual setting
Buttons	Reset
Cabling type	Unshielded twisted pair (UTP) Category 5e or better for 1000BASE-T
LEDs	System, Gigabit Link/Act and Speed
Performance	
Switching capacity	96 Gbps nonblocking
Forwarding rate	71.42 Mpps wire-speed performance
Layer 2	
MAC table size	8000
Number of VLANs	128 active VLANs (4096 range)
VLAN	• Port-based and 802.1Q tag-based VLANs • Management VLAN
Head-of-line (HOL) blocking	HOL blocking prevention
Management	
Web user interface	Built-in web UI for easy browser-based configuration (HTTP)
Firmware upgrade	Web browser upgrade (HTTP) and Trivial File Transfer Protocol (TFTP)
Port mirroring	Traffic on a port can be mirrored to another port for analysis with a network analyzer
Other management	• Port mirroring • DHCP/BOOTP client • System log • Configuration upload and backup via HTTP or TFTP
Security	
• 802.1X - RADIUS authentication, MD5 encryption • Port security - MAC-based filtering • Management access control	
Availability	
Link aggregation	• Link aggregation using IEEE 802.3ad LACP • Up to 4 groups with up to 8 ports per group
Storm control	Broadcast and multicast
Spanning Tree	IEEE 802.1D Spanning Tree and PortFast
IGMP snooping	IGMP (v1/v2) snooping provides for fast client joins and leaves of multicast streams and limits bandwidth-intensive video traffic to only the requestors. Supports 32 multicast groups.
QoS	
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 DSCP based
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
- 802.1D Spanning Tree Protocol
- 802.1Q/p VLAN
- 802.1X port access authentication

Environmental	
Dimensions **W x H x D**	17.32 x 1.70 x 13.58 in. (440 x 43.2 x 345 mm)
Weight	10.14 lb (4.6 kg)
Power	Internal power, 100-240V
Certification	FCC Part 15 Class A, CE Class A, UL, cUL, CE mark, CB
Operating temperature	32°to 122℉ (0°to 50℃)
Storage temperature	32°to 158℉ (0°to 70℃)
Operating humidity	10% to 90%, noncondensing
Storage humidity	10% to 90%, noncondensing

Package Contents
- Cisco SLM2048 48-Port Gigabit Smart Switch with 2 combo SFPs - AC power cord - Rack-mounting kits with bracket and hardware - CD with user guide in PDF format - Online registration card

Minimum Requirements
- Web-based utility: Microsoft Internet Explorer (version 5.5 or later) web browser - Category 5 Ethernet network cable

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

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

For More Information

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

Americas Headquarters
Cisco Systems, Inc.
San Jose, CA

Asia Pacific Headquarters
Cisco Systems (USA) Pte. Ltd.
Singapore

Europe Headquarters
Cisco Systems International BV
Amsterdam, The Netherlands

Cisco has more than 200 offices worldwide. Addresses, phone numbers, and fax numbers are listed on the Cisco Website at www.cisco.com/go/offices.

Printed in USA

C78-500603-00 11/08