



## Cisco SLM224P 24-Port 10/100 + 2-Port Gigabit Smart Switch: SFPs/PoE

### Cisco Small Business Smart Switches

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

#### Highlights

- Connects up to 24 devices - PCs, printers, wireless access points, and servers - to share and transfer files and videos across your network
- Power over Ethernet easily and cost-effectively powers wireless access points, video cameras, and other network-connected endpoints
- Strong security protects network traffic to keep unauthorized users off the network
- Basic QoS helps ensure a consistent network experience and supports networked applications including voice, video, and data storage
- Easy-to-use Web browser interface makes installation quick and effortless

**Figure 1.** Cisco SLM224P 24-Port 10/100 + 2-Port Gigabit Smart Switch: SFPs/PoE



#### Product Overview

The 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 SLM224P 24-Port 10/100 + 2-Port Gigabit Smart Switch (Figure 1) offers twenty-four 10/100 copper ports with two shared Gigabit 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 that enables you to quickly utilize the comprehensive feature set of the switch, resulting in a better-optimized network.

The Cisco SLM224P 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 SLM224P limits IP multicast traffic (such as real-time presentations, video conferences, 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.

For wireless or voice over IP (VoIP) deployments, the Cisco SLM224P supports the IEEE 802.3af standard for Power over Ethernet (PoE). This eliminates the need for additional power cables or a nearby power outlet, making installation simple and inexpensive and allowing networking devices such as cameras and wireless access points to be positioned in optimal locations, like ceilings and walls - even outdoors.

Network security is an absolute requirement for any business, and preventing unauthorized access to the company network is critical. The Cisco SLM224P 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 switch'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 SLM224P enables you to monitor the type of traffic being transmitted on the network.

The Cisco SLM224P 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 switch 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 SLM224P's Spanning Tree Protocol (STP) support and storm control features 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 that severely limit its performance. With these features, you can confidently build a mesh of switches and quickly expand your network to support your growing workforce.

## Features

- Twenty-four 10/100 switched RJ-45 ports deliver up to 200 Mbps of throughput per port
- Two 10/100/1000 switched RJ-45 Gigabit uplink ports with two shared SFP ports (combo ports)
- PoE on twelve 10/100 ports (ports 1 through 6 and 13 through 18) compatible with IEEE 802.3af, with 100W dedicated internal power, enough to support 7.5W for 12 PoE ports or 15.4W on 6 ports
- 8.8-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
- Fully rack-mountable using the included rack-mounting hardware

## Specifications

Table 1 shows the specifications, package contents, and minimum requirements for the Cisco SLM224P 24-Port 10/100 + 2-Port Gigabit Smart Switch.

**Table 1.** Specifications for the Cisco SLM224P 24-Port 10/100 + 2-Port Gigabit Smart Switch: SFPs/PoE

Specifications	
<b>Ports</b>	<ul style="list-style-type: none"> <li>• 24 RJ-45 connectors for 10BASE-T/100BASE-TX, 2 combo ports with RJ-45 connectors for 10BASE-T/100BASE-TX/1000BASE-T, and mini Gigabit Interface Converter (mini-GBIC) /SFP slots</li> <li>• Auto medium dependent interface (MDI) and MDI crossover (MDI-X)</li> <li>• Auto-negotiate/manual setting</li> </ul>
<b>Buttons</b>	Reset
<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>	System, 10/100 Link/Act and PoE or Speed, Gigabit Link/Act and Speed
<b>PoE</b>	
	<ul style="list-style-type: none"> <li>• IEEE 802.3af compatible</li> <li>• Power can be dynamically allocated to the PoE ports according to the powered device's power demand and power priority setting.</li> </ul>
<b>Performance</b>	
<b>Switching capacity</b>	8.8 Gbps nonblocking
<b>Forwarding rate</b>	6.55 mpps wire-speed performance
<b>Layer 2</b>	
<b>MAC table size</b>	8000
<b>Number of VLANs</b>	128 active VLANs (4096 range)
<b>VLAN</b>	Port-based and 802.1Q tag-based VLANs Management VLAN
<b>Head-of-line (HOL) blocking</b>	HOL blocking prevention
<b>Management</b>	
<b>Web user interface</b>	Built-in web user interface for easy browser-based configuration (HTTP)
<b>Firmware upgrade</b>	Web browser upgrade (HTTP) and Trivial File Transfer Protocol (TFTP)
<b>Port mirroring</b>	Traffic on a port can be mirrored to another port for analysis with a network analyzer
<b>Other management</b>	<ul style="list-style-type: none"> <li>• Port mirroring</li> <li>• DHCP/BOOTP client</li> <li>• System log</li> <li>• Configuration upload and backup via HTTP or TFTP</li> </ul>
<b>Security</b>	
	<ul style="list-style-type: none"> <li>• 802.1X - RADIUS authentication; MD5 encryption</li> <li>• Port security - MAC-based filtering</li> <li>• Management access control</li> </ul>
<b>Availability</b>	
<b>Link aggregation</b>	Link aggregation using IEEE 802.3ad LACP Up to 4 groups with up to 8 ports per group

<b>Storm control</b>	Broadcast and multicast
<b>Spanning Tree</b>	IEEE 802.1D Spanning Tree and PortFast
<b>IGMP snooping</b>	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.
<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>	<ul style="list-style-type: none"> <li>• Port based</li> <li>• 802.1p VLAN priority based</li> <li>• IPv4/v6 IP DSCP based</li> </ul>
<b>Standards</b>	
<ul style="list-style-type: none"> <li>• 802.3 10BASE-T Ethernet</li> <li>• 802.3u 100BASE-TX Fast Ethernet</li> <li>• 802.3ab 1000BASE-T Gigabit Ethernet</li> <li>• 802.3z Gigabit Ethernet</li> <li>• 802.3x flow control</li> <li>• 802.3ad LACP</li> <li>• 802.3af PoE</li> <li>• 802.1D STP</li> <li>• 802.1Q/p VLAN</li> <li>• 802.1X port access authentication</li> </ul>	
<b>Environmental</b>	
<b>Dimensions W x H x D</b>	17.32 x 1.70 x 10.12 in. (440 x 43.2 x 257 mm)
<b>Weight</b>	7.28 lb (3.3 kg)
<b>Power</b>	Internal power, 100-240V
<b>Certification</b>	FCC Part 15 Class A, CE Class A, UL, cUL, CE mark, CB
<b>Operating temperature</b>	32° to 122°F (0° to 50°C)
<b>Storage temp.</b>	32° to 158°F (0° to 70°C)
<b>Operating humidity</b>	10% to 90%, noncondensing
<b>Storage humidity</b>	10% to 90%, noncondensing
<b>Package Contents</b>	
<ul style="list-style-type: none"> <li>• Cisco SLM224P 24-Port 10/100 + 2-Port Gigabit Smart Switch with 2 combo SFPs and PoE</li> <li>• AC power cord</li> <li>• Rack-mounting kits with bracket and hardware</li> <li>• CD with user guide in PDF format</li> <li>• Online registration card</li> </ul>	
<b>Minimum Requirements</b>	
<ul style="list-style-type: none"> <li>• Web-based utility: Microsoft Internet Explorer (version 5.5 or later)</li> <li>• Cat5 Ethernet network cable</li> </ul>	
<b>Product Warranty</b>	
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>.



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