



Cisco MDS 9000 Family 8-Gbps Fibre Channel Switching Modules

At-A-Glance

Cisco® MDS 9000 Family 8-Gbps Fibre Channel Switching Modules Highlights

Delivering 528 8-Gbps port density and twice the bandwidth of previous Cisco MDS Fibre Channel switching modules, Cisco MDS 9000 Family 8-Gbps Fibre Channel switching modules allow you to build consolidated Storage Area Networks (SANs) that require less space, power, and cooling, dramatically reducing your total cost of ownership (TCO).

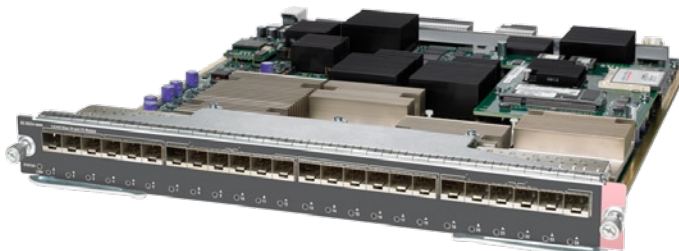
- Available in 3 configurations, the 8-Gbps Fibre Channel switching modules offer tiered connectivity to address the diverse requirements of storage subsystems, servers, and virtualized servers.
- Cisco MDS 9500 Family Director architecture provides the consistent, predictable performance required to support consolidation of diverse storage applications.
- The 8-Gbps Fibre Channel switching modules are compatible with all Cisco MDS 9500 Series Multilayer Directors, and they can coexist with 2- and 4-Gbps modules to protect your investment and lower your TCO.

Solutions

Providing the foundation for efficient consolidation and virtualization of large-scale SANs:

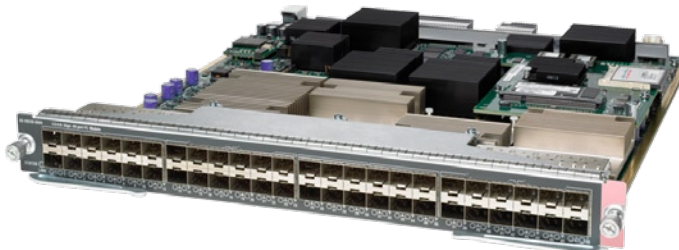
- **24-Port 8-Gbps Module** delivers high performance for high-end storage subsystems and Inter Switch Links (ISLs) connectivity.
- **48-Port 8-Gbps Module** provides the ideal balance of flexible performance and high port density for today's highly virtualized servers.
- **4/44-Port 8-Gbps Host-Optimized Module** offers a very cost-effective solution for consolidating standard servers into the smallest number of SAN switches, in many cases eliminating the need for core-edge topologies.

24-Port 8-Gbps Fibre Channel Switching Module



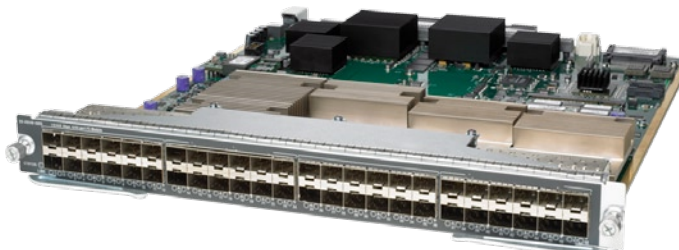
- Highest performance for high-end storage subsystems and ISLs
- 24 8-Gbps ports supporting 4-Gbps SFP and 8-Gbps SFP+ devices
- 192 Gbps of full-duplex bandwidth

48-Port 8-Gbps Fibre Channel Switching Module



- Optimized performance and port density for connection of highly virtualized servers
- 48 8-Gbps ports supporting 4-Gbps SFP and 8-Gbps SFP+ devices
- 192 Gbps of full-duplex bandwidth

4/44-Port 8-Gbps Host-Optimized Fibre Channel Switching Module



- Cost-effective solution for the vast majority of today's standard servers
- 4 8-Gbps ports and 44 4-Gbps ports
- 96 Gbps of full-duplex bandwidth



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Cisco MDS 9000 Family 8-Gbps Fibre Channel Switching Modules Features and Benefits

Feature: Port density and configuration flexibility—Provide 24-port, 48-port, and 4/44-port Host-Optimized configurations

Benefit: Optimize performance, port density, and flexibility

Feature: Autosensing—1/2/4/8-Gbps interfaces

Benefit: Provide high-performance connectivity and compatibility with existing devices.

Feature: Cisco Trusted Security (CTS) Fibre Channel Link Encryption—Transparent, hardware based, line rate encryption of Fibre Channel data in motion between any Cisco MDS 9000 Family 8-Gbps modules.

Benefit: Preserves the integrity and confidentiality of Fibre Channel traffic between MDS modular switches within a datacenter or across metro area networks.

Feature: Port Bandwidth Reservation—Enables switching bandwidth to be dedicated to a port.

Benefit: Provides flexible bandwidth allocation to support a wide range of applications on a single module.

Feature: High-performance inter-switch links (ISLs)—Support up to sixteen links in a single PortChannel; links can span any port on any module within a chassis.

Benefit: Added scalability and resilience.

Feature: Intelligent network services—Provide integrated support for VSAN technology, access control lists (ACLs) for hardware-based intelligent frame processing, and advanced traffic-management features.

Benefit: Enable migration from SAN islands to enterprise-wide storage networks. Also helps to scale and secure SANS.

Feature: Integrated hardware-based VSANs and Inter-VSAN Routing (IVR)—Provides line-rate routing between any ports within a system or fabric without the need for external routing appliances.

Benefit: Enables deployment of large-scale multisite and heterogeneous SAN topologies.

Feature: Advanced FICON services—Supports 1/2/4/8-Gbps FICON environments, including cascaded FICON fabrics, VSAN-enabled intermix of mainframe and open systems environments, and N_Port ID virtualization for mainframe Linux partitions.

Benefit: Enables ease of FICON integration and management

Feature: Comprehensive security framework—Supports RADIUS and TACACS+, Fibre Channel Security Protocol (FC-SP), Secure File Transfer Protocol (SFTP), Secure Shell (SSH) Protocol, and Simple Network Management Protocol Version 3 (SNMPv3) implementing Advanced Encryption Standard (AES), VSANs, hardware-enforced zoning, ACLs, and per-VSAN role-based access control.

Benefit: Enables end to end security.

Feature: Sophisticated diagnostics—Provides intelligent diagnostics, protocol decoding, and network analysis tools as well as integrated Call Home capability.

Benefit: Added reliability, faster problem resolution, and reduced service costs.

Powered by Cisco MDS 9000 NX-OS Software

The underlying system software for the Cisco MDS 9000 Family Multilayer Switches, Cisco MDS 9000 NX-OS Software 4.1(x) is designed for SANs to create a strategic SAN platform with superior reliability, performance, scalability, and features. In addition to providing all the essentials you expect in a storage network switch, it provides many unique features to help deliver low TCO and a quick return on investment Cisco NX-OS is fully compatible with SAN-OS and interoperates seamlessly with SAN-OS.

Management

Cisco Fabric Manager and Device Manager are easy-to-use Java applications with GUIs that provide an integrated approach to switch and fabric administration.

Cisco Fabric Manager offers fabricwide management capabilities including discovery, multiple switch configurations, real-time network monitoring, and historical performance monitoring for network traffic hotspot analysis and troubleshooting. This powerful approach greatly reduces switch setup times, increases overall fabric reliability, and provides extensive diagnostics for resolving configuration inconsistencies.

For More Information

For more information about the Cisco MDS 9000 Family 8-Gbps Fibre Channel Switching Modules, visit <http://www.cisco.com/go/storage>