



Cisco MDS 9134 Multilayer Fabric Switch

At-A-Glance

The Cisco® MDS 9134 Multilayer Fabric Switch (Figure 1) offers advanced storage networking capabilities for the midrange market, allowing organizations of all sizes to enjoy the benefits of intelligent storage area networks (SANs). It is ideally suited as a standalone or top-of-the-rack switch or in a stack using a 10-Gbps copper connection.

Figure 1. Cisco MDS 9134 Multilayer Fabric Switch



Product Highlights

The high-performance Cisco MDS 9134 offers the following features:

- Supports 32 line-rate 4-Gbps and 2 line-rate 10-Gbps dedicated Fibre Channel ports
- Has immediately active capabilities, including Quick Configuration Wizard support and task wizards, that allow it to be easily deployed in multiple topologies in any size of network
- Offers an on-demand port activation license, making port activation quick and easy
- Shares features and the same Cisco MDS 9000 NX-OS Software with the Cisco MDS 9500 Series Multilayer Directors and Cisco MDS 9200 and 9100 Series Multilayer Fabric Switches
- Offers competitive pricing with enterprise-class capabilities: VSANs, PortChannels, redundant power supplies and cooling fans, nondisruptive software upgrade, comprehensive security (authentication, authorization, and accounting [AAA], role-based access control [RBAC], etc.), troubleshooting, and diagnostics.

Solutions

The Cisco MDS 9134 can be used as the foundation of small standalone SANs, as a top-of-the-rack switch, or as an edge switch in large core-edge SAN infrastructures. Additionally, the Cisco MDS 9134 can be stacked in pairs to form a 48-port or 64-port 4-Gbps Fibre Channel switch.

Single-Switch SAN Deployments

The Cisco MDS 9134 is designed to address the needs of small and medium-sized businesses (SMBs), helping them deploy cost-effective yet scalable high-performance SANs. It is also ideal for branch offices and departments in large enterprises.

Data Center Core-Edge Deployments

The Cisco MDS 9134 is fully compatible with the Cisco MDS 9500 Series directors and Cisco MDS 9200 and 9100 Series switches for trans-parent, end-to-end service delivery in large data center core-edge deployments.

Product Features and Benefits

- **Exceptional flexibility and scalability:** The Cisco MDS 9134 offers up to 32 4-, 2-, and 1-Gbps autosensing Fibre Channel ports in a compact one-rack-unit (1RU) form-factor chassis. With 4 Gbps of dedicated bandwidth for each port, the Cisco MDS 9134 is designed to address the performance and scalability requirements for the most demanding environments.
- **Integrated IBM Fibre Connection (FICON) connectivity support.** The Cisco MDS 9134 supports IBM zSeries FICON and Linux environments. Qualified by IBM for attachment to all FICON-enabled devices in an IBM zSeries operating environment, the switch supports transport of the FICON protocol in cascaded fabrics, as well as intermix of FICON and open systems Fibre Channel Protocol (FCP) on the same switch.
- **On-demand port activation license:** The on-demand port activation license provides 24-port and 32-port configurations to optimize price and scalability.
- **Quick Configuration Wizard:** The Quick Configuration Wizard helps eliminate management complexity and create an immediately available SAN environment for SMB applications. The wizard allows server access to storage to be enabled quickly and easily in a single step, using an intuitive GUI.
- **Virtual SANs (VSANs) for segmentation and isolation:** VSAN, an industry standard for fabric virtualization capabilities, enables more efficient storage network utilization by creating hardware-based isolated environments within a single physical SAN fabric or switch.
- **Advanced traffic management for high-performance, resilient SANs:** Advanced traffic management capabilities integrated into the Cisco MDS 9134 switch simplify deployment and optimization of core-edge fabrics.
- **Advanced diagnostics and troubleshooting tools:** The Cisco MDS 9134 provides the integrated hardware functions required to implement diagnostic capabilities such as Fibre Channel Traceroute for tracing the exact path and timing of flows and Switched Port Analyzer (SPAN) to intelligently capture network traffic.
- **Comprehensive security:** In recognition of the need for stringent security in storage networks, the Cisco MDS 9134 offers an extensive security framework to protect highly sensitive data crossing today's enterprise networks.
- **High-availability platform for mission-critical environments:** Nondisruptive software upgrades, hot-swappable, redundant fans and power supplies, and the unique capability to automatically restart failed processes combine to define a new standard for fabric switch availability.
- **Simplified management:** The Cisco MDS 9134 provides three principal modes of management: Cisco MDS 9000 family command-line interface (CLI), Cisco Fabric Manager, and integration with third-party storage management tools.



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Product Specifications

Table 1 lists specifications for the Cisco MDS 9134. For detailed product specifications, see the Cisco MDS 9134 Multilayer Fabric Switch data sheet.

Table 1. Product Specifications

Item	Specification
Software Compatibility	Cisco MDS 9000 SAN-OS Software Release 3.2(1) or later Cisco MDS 9000 NX-OS Software Release 4.1(1) or later
Ports	<ul style="list-style-type: none">• 32 fixed autosensing 4-, 2-, and 1-Gbps Fibre Channel ports• 2 fixed 10-Gbps Fibre Channel ports• Base switch has 24-ports active; additional 8 ports or 2 10-Gbps ports activated on demand using the port license• SFPs sold separately for 4-Gbps ports (initial configuration can be set for SW (short wave), LW (long wave), or a mix of both)• For 10-Gbps ports, copper CX4 used for stacking and X2 optics used for connecting to SAN core
Performance	<ul style="list-style-type: none">• Port speed: 4-, 2-, and 1-Gbps autosensing, optionally configurable• 10 Gbps for 10-Gbps ports• Buffer credits: 16 per port for 4-Gbps ports and 64 per port for 10-Gbps ports• Ports per chassis: 32 4-Gbps ports and 2 10-Gbps Fibre Channel ports
Network Management	<ul style="list-style-type: none">• Access methods: Out-of-band 10/100 Ethernet port and RS-232 serial console port with DB-9• Access protocols: CLI through console and Ethernet ports and Simple Network Management Protocol Version 2 (SNMPv2) through Ethernet• Network security: Secure Shell Version 2 (SSHv2) and SNMPv2• Management applications: Cisco MDS 9134 CLI, Cisco Fabric Manager, and Cisco Device Manager
Power	<ul style="list-style-type: none">• Integral power supply• AC input characteristics: 100 to 240 VAC (10% range); 50 to 60 Hz (nominal)• Power consumption: 99W maximum; 0.99A at 100 VAC and 0.45A at 220 VAC

Ordering Information

Table 2 lists ordering information for the Cisco MDS 9134.

Table 2. Ordering Information

Product Description	Part Number
Cisco MDS 9134 32-Port Multilayer Fabric Switch with 24 4-Gbps active ports, VSANs, PortChannels, and Cisco Fabric Manager	DS-C9134-K9
Cisco MDS 9134 32-Port Multilayer Fabric Switch with 32 4-Gbps active ports, VSANs, PortChannels, and Cisco Fabric Manager	DS-C9134-1K9
Cisco MDS 9134 24-Port Multilayer Fabric Switch with VSANs, PortChannels, Cisco Fabric Manager, 2x10G License pre-installed, 2 copper X2 CX4 transceivers, and 1 copper cable. Must be ordered as a pair of units to enable 48-ports.	DS-9134G-K9
Cisco MDS 9134 32-Port Multilayer Fabric Switch with VSANs, PortChannels, Cisco Fabric Manager, 2x10G License pre-installed, 2 copper X2 CX4 transceivers, and 1 copper cable. Must be ordered as a pair of units to enable 64-ports.	DS-9134G-1K9

Product Description	Part Number
Small Form-Factor Pluggable (SFP) Optics Options	
Cisco MDS 9000 Family 4/2/1-Gbps Fibre Channel—SW, SFP, LC	DS-SFP-FC4G-SW
Cisco MDS 9000 Family 4/2/1-Gbps Fibre Channel—LW (4 km), SFP, LC	DS-SFP-FC4G-MR
Cisco MDS 9000 Family 4/2/1-Gbps Fibre Channel—LW (10 km), SFP, LC	DS-SFP-FC4G-LW
Cisco XXXX NM CWDM Gigabit Ethernet and 1/2-Gbps Fibre Channel SFP, spare (where XXXX=1470, 1490, 1510, 1530, 1550, 1570, 1590, 1610)	DS-CWDM-XXXX=
Cisco MDS 9000 Family 10-Gbps Fibre Channel-Shortwave, X2, SC	DS-X2-FC10G-SR
Cisco MDS 9000 Family 10-Gbps Fibre Channel-Longwave, X2, SC	DS-X2-FC10G-LR
Small Form-Factor Pluggable (SFP) Copper Options	
Cisco MDS 9000 Family 10-Gbps Fibre Channel—Copper CX4 X2 transceiver	DS-X2-FC10G-CX4
Spare Components	
Cisco MDS 9000 Family 4/2/1-Gbps Fibre Channel—SW, SFP, LC, Spare	DS-SFP-FC4G-SW=
Cisco MDS 9000 Family 4/2/1-Gbps Fibre Channel—SW, SFP, LC, 4-Pack, Spare	DS-SFP-4G-SW-4=
Cisco MDS 9000 Family 4/2/1-Gbps Fibre Channel—LW (4 km), SFP, LC, Spare	DS-SFP-FC4G-MR=
Cisco MDS 9000 Family 4/2/1-Gbps Fibre Channel—LW, SFP, LC, Spare	DS-SFP-FC4G-LW=
Cisco MDS 9000 Family 10-Gbps Fibre Channel-Shortwave, X2, SC, spare	DS-X2-FC10G-SR=
Cisco MDS 9000 Family 10-Gbps Fibre Channel-Longwave, X2, SC, spare	DS-X2-FC10G-LR=
Cisco MDS 9000 Family 10-Gbps Fibre Channel – Copper CX4 X2 transceiver, spare	DS-X2-FC10G-CX4=
15m cable for 10G copper transceiver, spare	DS-CAB-15M=
1m cable for 10G copper transceiver, spare	DS-CAB-1M=
Cisco MDS 91x4 300W AC power supply, spare	DS-C24-300AC=
Cisco MDS 9134 fan tray, spare	DS-C34-FAN=
Optional Licenses	
Cisco MDS 9134 On-Demand Port Activation License; activates increment of 8 ports	M9134PL8-4G=
Electronic Delivery version of Cisco MDS 9134 On-Demand Port Activation License; activates increment of 8 ports	L-M9134PL8-4G=
Cisco MDS 9134 On-Demand Port Activation License; activates 2 10Gbps ports	M134PL2-10G=
Electronic Delivery version of Cisco MDS 9134 On-Demand Port Activation License; activates 2 10Gbps ports	L-M9134PL2-10G=
Cisco MDS 9000 Family Enterprise Package	M9100ENT1K9=
Cisco MDS 9000 Family Fabric Manager Server Package	M9100FMS1K9=
Cisco MDS 9000 FICON License	MDS9100FIC1K9

For More Information

For more information about the Cisco MDS 9134, visit <http://www.cisco.com/go/storage> or contact your local account representative.