



CISCO MDS 9000 FAMILY SAN-OS RELEASE 2.1(2)

This product bulletin discusses the Cisco® MDS 9000 Family multilayer switches that run Cisco MDS 9000 Family SAN-OS Release 2.1(2). Descriptions provided are for hardware features supported (Table 1), software features available (Table 2), and software ordering information (Table 3).

SUPPORTED HARDWARE

Table 1. Software Release 2.1(2) Hardware Features

Product (Part Number)	Description
Cisco MDS 9509 Multilayer Director Switch (DS-C9509)	A 9-slot multilayer director; the modular chassis requires 2 slots for supervisor-engine modules with 7 slots available for switching modules; the supervisor-engine module consists of a control engine and an integrated crossbar
Cisco MDS 9506 Multilayer Director Switch (DS-C9506)	A 6-slot multilayer director; the modular chassis requires 2 slots for supervisor-engine modules with 4 slots available for switching modules; the supervisor-engine module consists of a control engine and an integrated crossbar
Cisco MDS 9216A Multilayer Fabric Switch (DS-C9216A-K9)	A 3-rack unit (RU) semimodular fabric switch with sixteen 2-Gbps Fibre Channel ports and an optional switching module or services module
Cisco MDS 9216i Multilayer Fabric Switch (DS-C9216i-K9)	A 3-RU semimodular multilayer fabric switch with fourteen 2-Gbps Fibre Channel ports, 2 Gigabit Ethernet ports, and an optional switching module or services module
Cisco MDS 9140 40-Port Multilayer Fabric Switch (DS-C9140-K9)	A 1-RU fixed-configuration multilayer fabric switch with forty 2-Gbps Fibre Channel ports
Cisco MDS 9120 20-Port Multilayer Fabric Switch (DS-C9120-K9)	A 1-RU fixed-configuration multilayer fabric switch with twenty 2-Gbps Fibre Channel ports
Cisco MDS 9500 Series Supervisor Module (DS-X9530-SF1-K9)	Supervisor-engine module for the Cisco MDS 9500 Series multilayer directors
Cisco MDS 9000 16-Port Fibre Channel Switching Module, Small Form-Factor Pluggable (SFP)/LC (DS-X9016)	16-port, 2-Gbps Fibre Channel switching module with SFP/LC connectors for the Cisco MDS 9200 Series multilayer fabric switches and Cisco MDS 9500 Series
Cisco MDS 9000 32-port Fibre Channel Switching Module, SFP/LC (DS-X9032)	32-port, 2-Gbps Fibre Channel switching module with SFP/LC connectors for the Cisco MDS 9200 and MDS 9500 series
Cisco MDS 9000 14/2-Port Multiprotocol Services Module (DS-X9302-14K9)	14-port, 2-Gbps Fibre Channel plus 2-port Gigabit Ethernet IP services and switching module with SFP/LC connectors for the Cisco MDS 9200 and MDS 9500 series
Cisco MDS 9000 8-Port IP Storage Services Module (DS-X9308-SMIP)	8-port Gigabit Ethernet IP SSM for the Cisco MDS 9200 and MDS 9500 series
Cisco MDS 9000 4-Port IP Storage Services Module (DS-X9304-SMIP)	4-port Gigabit Ethernet IP SSM for the Cisco MDS 9200 and MDS 9500 series
Cisco MDS 9000 Advanced Services Module (ASM) (DS-X9032-SMV)	32-port, 2-Gbps module for VERITAS with SFP/LC connectors for the Cisco MDS 9200 and MDS 9500 series
Cisco MDS 9000 Caching Services Module (DS-X9560-SMC)	Caching services module for the Cisco MDS 9200 and MDS 9500 series
Cisco MDS 9000 Storage Services Module (DS-X9032-SSM)	32-port, 2-Gbps storage services module with SFP/LC connectors for the Cisco MDS 9200 and MDS 9500 series

Product (Part Number)	Description
1- or 2-Gbps autosensing SFP/LC interface, shortwave (DS-SFP-FC-2G-SW)	SFP (LC type) for 1- or 2-Gbps Fibre Channel for shortwave mode for the Cisco MDS 9500, MDS 9200, and MDS 9100 Series
1- or 2-Gbps autosensing SFP/LC interface, longwave (DS-SFP-FC-2G-LW)	SFP (LC type) for 1- or 2-Gbps Fibre Channel for longwave mode for the Cisco MDS 9500, MDS 9200, and MDS 9100 Series
1-Gbps Ethernet and 1- or 2-Gbps Fibre Channel shortwave SFP/LC interface (DS-SFP-FCGE-SW)	SFP (LC type) for 1-Gbps Ethernet and 1- or 2-Gbps Fibre Channel for shortwave mode for the Cisco MDS 9500, MDS 9200, and MDS 9100 Series
1-Gbps Ethernet and 1- or 2-Gbps Fibre Channel longwave SFP/LC interface (DS-SFP-FCGE-LW)	SFP (LC type) for 1-Gbps Ethernet and 1- or 2-Gbps Fibre Channel for longwave mode for the Cisco MDS 9500, MDS 9200, and MDS 9100 Series
1-Gbps Ethernet SFP/HSSDC-2 interface (DS-SFP-T)	SFP (HSSDC-2 type) for Gigabit Ethernet over copper for the Cisco MDS 9500, MDS 9200, and MDS 9100 Series
Coarse wavelength-division multiplexing (CWDM) Gigabit Ethernet and 1- or 2-Gbps Fibre Channel SFP/LC interface (CWDM-SFP-xxxx-2G)	CWDM Gigabit Ethernet and 1- or 2-Gbps Fibre Channel SFP/LC for the Cisco MDS 9500, MDS 9200, and MDS 9100 Series, wherein the product number xxxx = 1470, 1490, 1510, 1530, 1550, 1570, 1590, or 1610 nm
4-wavelength add/drop multiplexer (ADM) (CWDM-MUX-4)	ADM for 4 CWDM wavelengths
Eight-wavelength ADM (CWDM-MUX-8)	ADM for 8 CWDM wavelengths
CWDM multiplexer chassis (CWDM-CHASSIS-2)	2-slot chassis for CWDM ADMs
300-WAC power supply (DS-CAC-300W)	AC power supply for Cisco MDS 9100 Series multilayer fabric switches
845-WAC power supply (DS-CAC-845W)	AC power supply for Cisco MDS 9200 Series
2500-WAC power supply (DS-CAC-2500W)	AC power supply for Cisco MDS 9509
2500-WDC power supply (DS-CDC-2500W)	DC power supply for Cisco MDS 9509
4000-WAC power supply (DS-CAC-4000W-US)	AC power supply for Cisco MDS 9509, for use in the United States (cable attached)
4000-WAC power supply (DS-CAC-4000W-INT)	AC power supply for Cisco MDS 9509, for international use (cable attached)
1900-WAC power supply (DS-CAC-1900W)	AC power supply for Cisco MDS 9506
1900-WDC power supply (DS-CDC-1900W)	DC power supply for Cisco MDS 9506
512-MB compact Flash memory (MEM-MDS-FLD512M)	Cisco MDS 9500 Series external 512-MB compact Flash memory for supervisor-engine module
Cisco MDS 9000 Port Analyzer Adapter (DS-PAA-2, DS-PAA)	Cisco MDS 9000 Port Analyzer Adapter for troubleshooting and analysis of Fibre Channel traffic

SOFTWARE FEATURES

Table 2. Software Version 2.1(2) Features

Software Feature	Description
Non-Disruptive SSM Software Upgrades	Software upgrades on the SSM are non-disruptive for configurations where the SSM is only used for Fibre Channel switching.
Inter-VSAN Routing (IVR) with Network Address Translation (NAT) Support for Persistent FC-Ids	Users may specify domain numbers or complete FC-IDs that persist across reboots for IVR with NAT, rather than allowing the Cisco SAN-OS to assign virtual FC IDs automatically.

Software Feature	Description
Cisco Fabric Manager Enhancements	Cisco Fabric Manger and Device Manager now support: • The Cisco MDS 9020 Fabric Switch • Java Run-time Environment (JRE) 5.0 • SAN Extension Tuner Wizard • Export Topology Map to Visio • Host Enclosure Auto-Creation
Cisco Fabric Manager Server (FMS) Enhancements	Cisco FMS has been enhanced to provide: • Custom reports • Performance roll-up by port groups and enclosures • Licenses inventory report • TACACS+ Authentication for Web Client • Traffic Analyzer discovery and access through the Web Client interface

ORDERABLE SOFTWARE IMAGES

Table 3 lists the software images and applicable software ordering information for the Cisco MDS 9000 Family.

Table 3. Software Ordering Information

Part Number	Description
M95S1K9-2.1.2	Cisco MDS 9500 Supervisor/Fabric-I, SAN-OS Software Release 2.1.2
M92S1K9-2.1.2	Cisco MDS 9216 Supervisor/Fabric-I, SAN-OS Software Release 2.1.2
M91S1K9-2.1.2	Cisco MDS 9100 Supervisor/Fabric-I, SAN-OS Software Release 2.1.2

For more detailed information about this Cisco Systems® software release, refer to the Cisco MDS 9000 Family release notes at:

http://www.cisco.com/en/US/products/hw/ps4159/ps4358/prod_release_notes_list.html

For more information about the Cisco MDS 9000 Family, refer to the product literature at:

http://www.cisco.com/en/US/products/hw/ps4159/ps4358/prod_literature.html

Note: For more details about licensed packages, refer to the fact sheets listed with the product literature.

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