

EMC Connectrix MDS 9509-V2 Director

The EMC® Connectrix® MDS 9509 version 2 director delivers the availability, scalability and performance characteristics essential to support the most demanding connectivity requirements within a storage area network. The Connectrix MDS 9509 multi-protocol-ready director supports up to 336 one-, two-, four-, or eight-gigabits-per-second auto-sensing Fibre Channel ports in a single chassis and offers intelligent network services such as VSANs, Access Control Lists (ACLs), Fibre Channel Congestion Control (FCC), and fabric-wide Quality of Service (QoS). The MDS 9509 also supports optional IP services modules which facilitates deployment in FCIP or iSCSI environments. In addition, the MDS 9509 supports mainframe FICON environments and Control Unit Port (CUP) to facilitate OS/390 management.



System Architecture

Fibre Channel Standards

FC-PH, FC-PH-2, FC-PH-3, FC-GS-2, FC-GS-3, FC-FLA, FC-FG, FC-SW-2, FC-AL, FC-AL-2, FC-PLDA, FC-VI, FC-FS, FC-P1

Fibre Channel Ports

24 to 336

Blades

12-, 24-, 48-port Fibre Channel
10 Gb 4-port Fibre Channel

Cascade Maximum

Up to 24 directors/switches, 3 hops, depending on configuration

Virtual SANs (VSANs)

Up to 20 VSANs

Performance

Full line-speed switching up to 8 Gb full duplex

Switch Core

Non-blocking, cross-bar design

Maximum Frame Size

2112

Classes of Service

Class 2, Class 3, Class F

Fibre Channel Port Types

E_Port, F_Port, and TE_Ports

Media Types

Hot-pluggable, industry-standard LC Small Form Factor Pluggable (SFP).

Fabric Services

Simple Name Server, Registered State Change Notification (RSCN), Login Services, Broadcast, Name Server Zoning

Hot-swappable Components

Supervisor modules, power supply, fan assembly, SFPs, 512MB compact flash card and switching modules

Installation Options

19-inch EIA-compliant rack or EMC EC-1500 cabinet

Optional Features

Enterprise Package
Fabric Manager Server
SAN Extension over IP
Mainframe Package
Storage Media Encryption



Availability Features

Redundant, hot-swappable supervisor modules
 Redundant AC Input
 Redundant, hot-swappable power supplies
 Online, non-disruptive software upgrades and activation
 Non-disruptive subsystem maintenance
 Stateful supervisor module failover
 Stateful process restart
 Automatic phone-home capability with EMC ControlCenter® and OnAlert™

Connectivity

Operating System Support

AIX, HP/UX, Microsoft Windows, Solaris

For complete details, refer to EMC Support Matrix on www.emc.com.

Management

Interface

- Cisco Fabric Manager—Java-based graphical user interface (GUI) provides interactive configuration and trouble-shooting.
- SNMP support
- Scriptable CLI

Access

Ethernet (RJ-45), RS-232 Console CLI (RJ-45 and DB-9)

Physical Specifications

MDS 9509 Director

Dimensions	Height (in/cm)	Width (in/cm)	Depth (in/cm)	Maximum Weight (lb/kg)
	24.5/62.3	17.25/43.9	18.4/46.8	170/77.11

Power Specifications

MDS 9509 Director

	North America	International
Input Voltage (VAC)	200–240 (±10% for full range)	Country Specific
Frequency (Hz)	50–60 nominal (±3 Hz for full range)	Country Specific
Circuit Breaker (Amps.)	Max 16A	Country Specific

Environmental Specifications

Operating Temperature (°F/°C)	32/0 to 104/40
Non-operating temperature (°F/°C)	40/–40 to 158/70
Operating altitude (ft/m)	Sea level to 6500/2000
Humidity (%), non-condensing operating	10–90

Regulatory Compliance

	EMI
United States	FCC PART 15B CLASS A
Canada	ICES-003 CLASS A
Australia/New Zealand	AS/NZS 3548
Japan	VCCI CLASS A
International	CISPR22 CLASS A
European Community	EN55022 CLASS A EN55024 CLASS A
Taiwan	CNS 13438

Connectrix MDS 9509 Director shall be UL Listed and CSA Certified (or C-UL Listed) to UL 60950/CSA 22.2 No. 60950 3rd Edition, TUV approved to EN 60950 3rd Edition, and have a CB Report to IEC 60950 3rd Edition.

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