

Refurbished CISCO DS-C9718-FDAFLT Datasheet

CISCO > STORAGE-NETWORKING

Cisco MDS 9700 Series Multilayer Directors

Cisco MDS 9718 Multilayer Director Redundancy

Component	Redundancy
Supervisors	1+1 redundancy
Power supplies	Grid redundancy
Fabrics	N+1 redundancy

Technical Specifications for Cisco MDS 9718 Multilayer Director

Feature	
Product compatibility	Cisco MDS 9000 Family
Software compatibility	Cisco MDS NX-OS Software Release 7.3 or later
Indicators	Power supply LED FAN LED Supervisor LED Fabric LED Line-card module LED
Protocols	Fibre Channel standards FC-PH, Revision 4.3 (ANSI INCITS 230-1994) FC-PH, Amendment 1 (ANSI INCITS 230-1994/AM1-1996) FC-PH, Amendment 2 (ANSI INCITS 230-1994/AM2-1999) FC-PH-2, Revision 7.4 (ANSI INCITS 297-1997) FC-PH-3, Revision 9.4 (ANSI INCITS 303-1998) FC-PI, Revision 13 (ANSI INCITS 352-2002) FC-PI-2, Revision 10 (ANSI INCITS 404-2006) FC-PI-3, Revision 4 (ANSI INCITS 460-2011) FC-PI-4, Revision 8 (ANSI INCITS 450-2008) FC-PI-5, Revision 6 (ANSI INCITS 479-2011) FC-FS, Revision 1.9 (ANSI INCITS 373-2003) FC-FS-2, Revision 1.01 (ANSI INCITS 424-2007) FC-FS-2, Amendment 1 (ANSI INCITS 424-2007/AM1-2007) FC-FS-3, Revision 1.11 (ANSI INCITS 470-2011) FC-LS, Revision 1.62 (ANSI INCITS 433-2007) FC-LS-2, Revision 2.21 (ANSI INCITS 477-2011) FC-SW-2, Revision 5.3 (ANSI INCITS 355-2001) FC-SW-3, Revision 6.6 (ANSI INCITS 384-2004) FC-SW-4, Revision 7.5 (ANSI INCITS 418-2006) FC-SW-5, Revision 8.5 (ANSI INCITS 461-2010) FC-GS-3, Revision 7.01 (ANSI INCITS 348-2001) FC-GS-4, Revision 7.91 (ANSI INCITS 387-2004) FCP, Revision 12 (ANSI INCITS 269-1996) FCP-2, Revision 8 (ANSI INCITS 350-2003) FCP-3, Revision 4 (ANSI INCITS 416-2006) FCP-4, Revision 2b (ANSI INCITS 481-2011) FC-SB-2, Revision 2.1 (ANSI INCITS 349-2001) FC-SB-3, Revision 1.6 (ANSI INCITS 374-2003) FC-SB-3, Amendment 1 (ANSI INCITS 374-2003/AM1-2007) FC-SB-4, Revision 3.0 (ANSI INCITS 466-2011) FC-SB-5, Revision 2.00 (ANSI INCITS 485-2014) FC-BB-6, Revision 2.00 (ANSI INCITS 509-2014) FC-BB-2, Revision 6.0 (ANSI INCITS 372-2003) FC-BB-3, Revision 6.8 (ANSI INCITS 414-2006) FC-BB-4, Revision 2.7 (ANSI INCITS 419-2008) FC-BB-5, Revision 2.0 (ANSI INCITS 462-2010) FC-VI, Revision 1.84 (ANSI INCITS 357-2002) FC-SP, Revision 1.8 (ANSI INCITS 426-2007)

FC-SP-2, Revision 2.71 (ANSI INCITS 496-2012)
 FAIS, Revision 1.03 (ANSI INCITS 432-2007)
 FAIS-2, Revision 2.23 (ANSI INCITS 449-2008)
 FC-IFR, Revision 1.06 (ANSI INCITS 475-2011)
 FC-FLA, Revision 2.7 (INCITS TR-20-1998)
 FC-PLDA, Revision 2.1 (INCITS TR-19-1998)
 FC-Tape, Revision 1.17 (INCITS TR-24-1999)
 FC-MI, Revision 1.92 (INCITS TR-30-2002)
 FC-MI-2, Revision 2.6 (INCITS TR-39-2005)
 FC-MI-3, Revision 1.03 (INCITS TR-48-2012)
 FC-DA, Revision 3.1 (INCITS TR-36-2004)
 FC-DA-2, Revision 1.06 (INCITS TR-49-2012)
 FC-MSQS, Revision 3.2 (INCITS TR-46-2011)
 Fibre Channel classes of service: Class 2, Class 3, and Class F
 Fibre Channel standard port types: E, F, FL, and B
 Fibre Channel enhanced port types: SD, ST, and TE
 FCoE standard port types: VE and VF
 IEEE 802.1Qbb-2011: Priority-based flow control (PFC)
 IEEE 802.3db-2011: MAC address control frame for PFC
 IEEE 802.1Qaz-2011: Enhanced transmission selection for bandwidth sharing between traffic classes (ETS and DCBX)
 IP over Fibre Channel (RFC 2625)
 IPv6, IPv4, and Address Resolution Protocol (ARP) over Fibre Channel (RFC 4338)
 Extensive IETF-standards-based TCP/IP, SNMPv3, and remote monitoring (RMON) MIBs
 RFC 3643 and 3821 FCIP

Features and Functions

Fabric services	Name server Registered State Change Notification (RSCN) Login services Fabric configuration server (FCS) Broadcast In-order delivery
Advanced functions	VSAN IVR Port channel with multipath load balancing QoS: flow based and zone based N-port ID virtualization (NPIV)
Diagnostics and troubleshooting tools	POST diagnostics Online diagnostics Internal port loopbacks SPAN and RSPAN Fibre Channel traceroute Fibre Channel ping Fibre Channel debug Fabric Analyzer Syslog Online system health Port-level statistics Real-Time Protocol (RTP) debug
Network security	VSANs ACLs Per-VSAN RBAC Fibre Channel zoning N-port World Wide Name (WWN) N-port FC-ID Fx-port WWN Fx-port WWN and interface index Fx-port domain ID and interface index Fx-port domain ID and port number FC-SP DH-CHAP switch-to-switch authentication DH-CHAP host-to-switch authentication Port security and fabric binding Management access SSHv2 implementing Advanced Encryption Standard (AES) SNMPv3 implementing AES SFTP Cisco TrustSec Fibre Channel link encryption
Serviceability	Configuration file management Nondisruptive software upgrades for Fibre Channel interfaces Cisco Call Home Power-management LEDs Port beaconing System LEDs SNMP traps for alerts Network boot

Reliability and availability	Online, nondisruptive software upgrades Stateful nondisruptive supervisor module failover Hot-swappable redundant supervisor modules Hot-swappable redundant fabric modules Hot-swappable 2N redundant power Hot-swappable fan trays with integrated temperature and power management Hot-swappable Enhanced Small Form-Factor Pluggable (SFP+) optics (2/4/8/10/16/32-Gbps Fibre Channel and 10 Gigabit Ethernet). 2G speeds not supported on 32G switching module. Hot-swappable switching modules Stateful process restart Any module, any port configuration for port channels Fabric-based multipathing Per-VSAN fabric services Online diagnostics Port tracking Virtual Routing Redundancy Protocol (VRRP) for management
Network management	Access methods through Cisco MDS 9700 Series Supervisor-1E Module Out-of-band 10/100/1000 Ethernet port RS-232 serial console port In-band IP over Fibre Channel Access methods through Cisco MDS 9700 Series Fibre Channel switching module Access protocols CLI using console and Ethernet ports SNMPv3 using Ethernet port and in-band IP over Fibre Channel access Distributed device alias service Network security Per-VSAN RBAC using RADIUS-based and TACACS+-based authentication, authorization, and accounting (AAA) functions SFTP SSHv2 implementing AES SNMPv3 implementing AES Management applications Cisco MDS 9000 Family CLI Cisco DCNM
Programming interface	REST API-based NX-API Scriptable CLI Cisco DCNM web services API Cisco DCNM GUI
Power and cooling	Power supplies (3000W AC) Input: 100 to 240V AC nominal ($\pm 10\%$ for full range); 16A nominal; 50 to 60 Hz nominal (± 3 Hz for full range) Output: 1451W 50V $\pm 4\%$ 28A, 3.4V $\pm 4\%$ 15A (100 to 120V AC input), 3051W 50V $\pm 4\%$ 60A, and 3.4V $\pm 4\%$ 15A (200 to 240V AC input) Air flow The MDS 9718 provides 30 to 100 cubic feet per minute (CFM) total flow through each line-card slot depending on the line-card type and fan-speed setting. With the MDS 9718 using front-to-back cold-aisle and hot-aisle air flow, Cisco recommends that you maintain a minimum air space of 7 inches (17.78 cm) between walls, such as in a cabinet, on the sides, and on the top and bottom of the chassis. The chassis front air vents need a clearance of 12 inches, and the back air vents need a clearance of 36 inches from a solid obstruction such as a solid wall.
Environmental	Temperature, ambient operating: 32 to 104°F (0 to 40°C) Temperature, ambient nonoperating and storage: -40 to 158°F (-40 to 70°C) Relative humidity, ambient (noncondensing) operating: 10 to 90% Relative humidity, ambient (noncondensing) nonoperating and storage: 10 to 95% Altitude, operating: -197 to 6500 ft (-60 to 2000m)
Physical dimensions (H x W x D)	Chassis dimensions (26 rack units [26RU]): 45.25 x 17.3 x 35 in. (114.9 x 43.9 x 88.9 cm) Cisco MDS 9700 48-Port 16-Gbps Fibre Channel Switching Module: 1.75 x 15.9 x 21.8 in. (4.4 x 40.39 x 55.37 cm) Cisco MDS 9700 48-Port 32-Gbps Fibre Channel line card: 1.75 x 15.9 x 21.8 in. (4.4 x 40.39 x 55.37 cm) Power supply (3000W AC): 22.04 x 3.95 x 1.6 in. (55.98 x 10.03 x 4.06 cm) Power supply (3000W DC): 23.54 x 3.95 x 1.6 in. (59.79 x 10.03 x 4.06 cm) Fabric-1 module: 32.40 x 2.02 x 10.22 in. (82.3 x 5.13 x 25.96 cm) Supervisor-1E module: 2.04 x 7.94 x 21.85 in. (5.18 x 20.17 x 55.5 cm) Fan tray: 36.17 x 5.15 x 1.87 in. (91.87 x 13.08 x 4.75 cm) SFP+: 0.49 x 0.54 x 2.22 in. (1.25 x 1.36 x 5.65 cm)
Weight	Chassis (includes fans): 300 lb (136 kg) 48-port 16-Gbps Fibre Channel line card: 17 lb (7.71 kg) 48-port 32-Gbps Fibre Channel line card: 17.5 lb (7.94 kg) Power supply (3000W AC): 6 lb (2.7 kg) Fabric-1 module: 20 lb (9.07 kg) Supervisor-1E module: 8.5 lb (3.86 kg) Fan tray: 12.7 lb (5.76 kg) Supervisor blank cover: 1.1 lb (0.5 kg) Line-card blank cover: 4.5 lb (2.04 kg)
Approvals and compliance	Safety compliance

CE Marking
UL 60950
CAN/CSA-C22.2 No. 60950
EN 60950
IEC 60950
AS/NZS 3260
IEC60825
EN60825
21 CFR 1040
EMC compliance
FCC Part 15 (CFR 47) Class A
ICES-003 Class A
EN 55022 Class A
CISPR 22 Class A
AS/NZS 3548 Class A
VCCI Class A
EN 55024
EN 50082-1
EN 61000-6-1
EN 61000-3-2
EN 61000-3-3

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