

Refurbished CISCO DS-C32S-FAN-E Datasheet

CISCO > STORAGE-NETWORKING

Cisco MDS 9100 Series Multilayer Fabric Switches

Product specifications

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-PI-6 (ANSI INCITS 512-2015)
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-FS-4
FC-LS, Revision 1.62 (ANSI INCITS 433-2007)
FC-LS-2, Revision 2.21 (ANSI INCITS 477-2011)
FC-LS-3, Includes revision 3.53
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-SW-6
FC-GS-3, Revision 7.01 (ANSI INCITS 348-2001)
FC-GS-4, Revision 7.91 (ANSI INCITS 387-2004)
FC-GS-5, Revision 8.51 (ANSI INCITS 427-2007)
FC-GS-6, Revision 9.4 (ANSI INCITS 463-2010)
FC-GS-7, Includes revision 10.8
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, and B
Fibre Channel enhanced port types: SD, ST, and TE
NVMe/FC
In-band management using 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
Fibre Channel ports	Fixed switch form factor with 16 SFP+ ports base and one 16 SFP+ port expansion slot Entry-level 8-port preactivated base model with flexibility to turn on any 8 ports Incremental ports On the 8-port base model, with the 8-Port On- Demand Activation license to activate up to 16 ports on the base switch On the 8-port base model, with the 16-port expansion module to activate up to 24 ports On the 16-port configuration, with the 16-port expansion module to activate up to 32 ports On the 24-port configuration, with the 8-Port On- Demand Activation license to activate up to 32 ports
Security	VSAN fabric isolation Intelligent packet inspection @ port level Hardware zoning by Access Control Lists (ACLs) FC-SP switch-to-switch authentication FC-SP host-to-switch authentication RBAC using RADIUS, TACACS+ or LDAP Authentication, Authorization, and Accounting (AAA) functions Secure FTP (SFTP) Secure Shell Version 2 (SSHv2) Simple Network Management Protocol Version 3 (SNMPv3) implementing Advanced Encryption Standard (AES) Control-plane security Cisco TrustSec payload encryption Secure Boot and Anti-counterfeit technology
Performance	Port speed: 4/8/16/32-Gbps autosensing with 32 Gbps of dedicated bandwidth per port Aggregate bandwidth of 1024 Gbps end-to-end full duplex Buffer credits: Up to 8300 for a group of 16 ports, with a default of 500 buffer credits per port and a maximum of 8270 buffer credits for a single port in the group Port channel: Up to 16 load-balanced physical links grouped in one port channel
Diagnostics	Power-on-Self-Test (POST) diagnostics Online Health Management System (OHMS) diagnostics Internal loopbacks SPAN Fibre Channel traceroute Fibre Channel ping Fibre Channel debug Cisco Fabric Analyzer Syslog Port-level statistics Link Diagnostics (ISL Diagnostics and HBA Diagnostics) Read Diagnostic Parameter
Serviceability	Configuration file management Call Home Port beaconing Link Cable Beacon System LEDs SNMP traps for alerts
Reliability and availability	Cisco In-Service Software Upgrade (ISSU) Hot-swappable, dual redundant power supplies Hot-swappable fan tray with switch integrated temperature and power management Hot-swappable SFP+ optics Stateful process restart Any port configuration for port channels Fabric-based multi pathing Per-VSAN fabric services Port tracking VRRP for management IP interface
Network management	Management access through 2 out-of-band 10/100/1000 Mbps Ethernet ports mgmt0: 10/100/1000BASE-T port mgmt1: 10/100/1000BASE-T port RS-232 serial console port USB power-on auto-provision port Access protocols Command-Line Interface (CLI) using the console and Ethernet port SNMPv3 using the Ethernet port and in-band IP over Fibre Channel access Storage Networking Industry Association (SNIA) Storage Management Initiative Specification (SMI-S) NX-API for restful access via HTTPS Distributed device alias service Network security Per-VSAN Role-Based Access Control (RBAC) using LDAP, RADIUS and TACACS+-based Authentication, Authorization, and Accounting (AAA) functions SFTP SSHv2 implementing AES SNMPv3 implementing AES Cisco Data Center Network Manager

Programming interfaces	Scriptable CLI Cisco DCNM web services API NX-API restful interfaces On-board Python interpreter Cisco Embedded Event Manager Cisco NX-OS Software scheduler
Physical dimensions (HxWxD) and weight	1RU (1.72 inches x 17.3 inches x 20.11 inches) excluding Power Supply Unit (PSU) and fan tray handles 9.1 kg with 16 activated ports 9.82 kg with all 32 activated ports
Power	80 Plus Platinum certified power supplies Power supply options 650W AC in base model, port-side exhaust variant (up to 2 per switch) 650W AC in base model, port-side intake variant (up to 2 per switch) Power cord IEC60320 C14 plug on 650W power supply connecting to a notched C15 socket connector (check Table 6 for power cords specific to regions) AC input: 100 to 240V AC (10% range) Frequency: 50 to 60 Hz (nominal) Typical power consumption 72W for idle base switch with 16 ports activated without SFPs 43W for idle expansion module with 16 ports activated without SFPs 80W for 8 ports activated with 32G SFPs with traffic at 25°C Airflow Back to front (toward ports) using port-side exhaust fans Front to back (inward from ports) using port-side intake fans 50 Cubic Feet per Minute (CFM) through system fan assembly at 25°C 100 CFM maximum
Temperature range	Temperature, ambient operating: 32 to 104°F (0 to 45°C) with port-side exhaust airflow variant 32 to 131°F (0 to 55°C) with port-side intake airflow variant 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)
Approvals and compliance	Safety compliance CE Marking UL 60950 CAN/CSA-C22.2 No. 60950 EN 60950 IEC 60950 TS 001 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
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 Flow-based and zone-based QoS
Supported Cisco optics, media, and transmission distances	For detailed information about all supported transceivers, see Cisco MDS 9000 Family pluggable transceivers documentation

Base modules

Description	Part number
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MDS 9132 32G 1 RU FC switch, w/ 8 active FC ports, 2 Fans, 1 PSU, Port Side Exhaust	DS-C9132T-MEK9
MDS 9132 32G 1 RU FC switch, w/ 8 active FC ports, 2 Fans, 1 PSU, Port Side Intake	DS-C9132T-MIK9
MDS 9132T 32G FC switch 8 Port Activation License for Base	M9132T-PL8
MDS 32G FC Port Expansion module, w/ 16 active ports for Base	M9XT-FC1632

Spare modules

Description	Part number
MDS 9132 32G 1 RU FC switch, w/ 8 active FC ports, 2 Fans, 1 PSU, Port Side Exhaust, spare	DS-C9132T-MEK9=
MDS 9132 32G 1 RU FC switch, w/ 8 active FC ports, 2 Fans, 1 PSU, Port Side Intake, spare	DS-C9132T-MIK9=
MDS 32G FC 16-Port expansion module, w/ 16 active ports, spare	M9XT-FC1632=
MDS 9132T 32G FC switch 8 Port Activation License, spare	M9132T-PL8=
AC PSU Port side Exhaust, spare	DS-CAC-650W-E=
AC PSU Port side Intake, spare	DS-CAC-650W-I=
MDS 9132T FAN tray, port side Exhaust, spare	DS-C32S-FAN-E=
MDS 9132T FAN tray, port side Intake, spare	DS-C32S-FAN-I=

Bundled configurations

Description	
Description	Part number
MDS 9132T 32G FC switch, w/ 8 active ports + 8x16G SW Optics, 2 Fans, 1 PSUs, Port Side Exhaust	DS-C9132T-8PMESK9
MDS 9132T 32G FC switch, w/ 8 active ports + 8x16G SW Optics, 2 Fans, 1 PSUs, Port Side Intake	DS-C9132T-8PMISK9
MDS 9132T 32G FC Enterprise switch, w/ 24 active ports + 24x16G SW Optics, 4 Fans, 2 PSUs, Enterprise license, Port Side Exhaust	DS-C9132T-24PESK9
MDS 9132T 32G FC Enterprise switch, w/ 24 active ports + 24x16G SW Optics, 4 Fans, 2 PSUs, Enterprise license, Port Side Intake	DS-C9132T-24PISK9
MDS 9132T 32G FC switch, w/ 8 active ports + 8x32G SW Optics, 2 Fans, 1 PSUs, Port Side Exhaust	DS-C9132T-8PMETK9
MDS 9132T 32G FC switch, w/ 8 active ports + 8x32G SW Optics, 2 Fans, 1 PSUs, Port Side Intake	DS-C9132T-8PMITK9
MDS 9132T 32G FC switch, w/ 24 active ports + 24x32G SW Optics, 4 Fans, 2 PSUs, Port Side Exhaust (Enterprise license not included)	DS-C9132T-24PETK9

MDS 9132T 32G FC switch, w/ 24 active ports + 24x32G SW Optics, 4 Fans, 2 PSUs, Port Side Intake (Enterprise license not included) DS-C9132T-24PITK9

Power cords

Description	
Description	Part number
Power Cord, 250VAC 10A IRAM 2073 Plug, Argentina	CAB-9K10A-AR
Power Cord, 250VAC 10A 3112 Plug, Australia	CAB-9K10A-AU
Power Cord, 250VAC 10A GB1002 Plug, China	CAB-9K10A-CH
Power Cord, 250VAC 10A CEE 7/7 Plug, EU	CAB-9K10A-EU
Power Cord, 250VAC 10A SI16S3 Plug, Israel	CAB-9K10A-ISR
Power Cord, 250VAC 10A CEI 23-16/VII Plug, Italy	CAB-9K10A-IT
Power Cord, 125VAC 13A KSC8305 Plug, Korea	CAB-9K10A-KOR
Power Cord, 250VAC 10A SABS 164/1 Plug, South Africa	CAB-9K10A-SA
Power Cord, 250VAC 10A, Straight C15, MP232 Plug, SWITZ	CAB-9K10A-SW
Power Cord, 125VAC 15A CNS10917-2, Taiwan	CAB-9K10A-TWN
Power Cord, 250VAC 10A BS1363 Plug (13 A fuse), UK	CAB-9K10A-UK
Power Cord, 125VAC 13A NEMA 5-15 Plug, North America	CAB-9K12A-NA
Power Cord, 250VAC 10A, Brazil	CAB-250V-10A-BR
Cabinet Jumper Power Cord, 250 VAC 13A, C14-C15 Connectors	CAB-C15-CBN
Cabinet Jumper Power Cord, 250 VAC 13A, C14-C15 Connectors, China, Republic of Korea	CAB-C15-CBN-CK
Cabinet Jumper Power Cord, 250 VAC 13A, C14-C15 Connectors, EU, Russian Federation, Belarus, Kazakhstan and Australia	CAB-C15-CBN-EURA

Transceivers

Description	Part number
32G FC Shortwave Optics	DS-SFP-FC32G-SW
32G FC Longwave Optics	DS-SFP-FC32G-LW=
16G FC Shortwave Optics	DS-SFP-FC16G-SW
16G FC Longwave Optics	DS-SFP-FC16G-LW=
8G FC Shortwave Optics	DS-SFP-FC8G-SW=
8G FC Longwave Optics	DS-SFP-FC8G-LW=

System requirements

Item	Requirement
Cisco NX-OS Software for switch	Cisco MDS NX-OS 8.2(1) or later
Cisco Data Center Network Manager	Cisco DCNM 10.4(1) or later

Accessories

Description	Part number
MDS 9132T Accessory Kit for Cisco	DS-9132T-KIT-CSCO
MDS 9132T Accessory Kit for Cisco, spare	DS-9132T-KIT-CSCO=
MDS 9132T Accessory Kit for Dell/EMC	DS-9132T-KIT-EM
MDS 9132T Accessory Kit for HDS	DS-9132T-KIT-HDS
MDS 9132T Accessory Kit for IBM	DS-9132T-KIT-IBM
MDS 9132T Accessory Kit for HPE	DS-9132T-KIT-HP

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