Cisco MDS 9396S 16G Multilayer Fabric Switch

Contents

Product Overview

The Cisco® MDS 9396S 16G Multilayer Fabric Switch (Figure 1) is the next generation of the high performance, high density and highly reliable Cisco MDS Series Fabric switches. It combines high performance with exceptional flexibility and cost effectiveness. This powerful, compact, 2-rack-unit (2RU) switch scales from 48 to 96 line-rate 16-Gbps Fibre Channel ports.

The Cisco MDS 9396S is excellent for:

- A standalone SAN in large departmental storage environments

- A middle-of-row or top-of-rack switch in medium-sized redundant fabrics

- An edge switch in enterprise data center core-edge topologies

The Cisco MDS 9396S is powered by Cisco NX-OS Software and Cisco Prime™ Data Center Network Manager (DCNM) software. It delivers advanced storage networking features and functions with ease of management and compatibility with the entire Cisco MDS 9000 Family portfolio for reliable end-to-end connectivity.

Figure 1.
Cisco MDS 9396S 16G Multilayer Fabric Switch

Main Features

High Performance and Flexibility at Lower Cost

Up to 96 autosensing Fibre Channel ports are capable of speeds of 2, 4, 8, 10, and 16 Gbps, with 16 Gbps of dedicated bandwidth for each port. The base switch model comes with 48 or 96 ports enabled. The 48-port base model can be upgraded as needed with the 12-port Cisco MDS 9396S On-Demand Port Activation license to also support configurations of 60, 72, 84, and 96 enabled ports. Only the Cisco MDS 9396S scales from 48 to 96 high-performance Fibre Channel ports in a 2RU compact form factor. The Cisco MDS 9396S switch is a high-end fabric switch. It offers more buffer-to-buffer credits than the previous generation fabric switches and also supports a much greater number of VSANs, making it an excellent choice for standalone small and midsize business (SMB) Fibre Channel networks. The 16-Gbps MDS 9396S is the first generation of NVMe over Fibre Channel ready 2RU switches1. When deployed as an N-Port virtualization (NPV) node or as an N-Port ID Virtualization (NPIV) core connecting legacy Fibre channel switches or multi-protocol Nexus NPV switches, it provides a flexible and scalable option for host connectivity.

High-Availability Platform for Mission-Critical Deployments

In environments in which downtime is intolerable, the Cisco MDS 9396S offers In-Service Software Upgrades (ISSU). With this feature, Cisco NX-OS Software can be upgraded while the Fibre Channel ports carry traffic. The Cisco MDS 9396S includes dual redundant hot-swappable power supplies and fan trays, PortChannels for Inter-Switch Link (ISL) resiliency, and F-port channeling for resiliency on uplinks from a Cisco MDS 9396S operating in N-Port Virtualization (NPV) mode. New hardware-based slow-port detection and recovery provide enhanced performance and monitoring capabilities.

Simplified Storage Management with Sophisticated Diagnostics

The Cisco MDS 9396S offers built-in storage network management and SAN plug-and-play capabilities. All features are available through a Command-Line Interface (CLI) or Cisco Prime DCNM for SAN Essentials Edition, a centralized management tool. Cisco DCNM task-based wizards simplify management of single or multiple switches and fabrics. For virtual infrastructure, it manages the entire path: from the virtual machine and switch to the physical storage. The Cisco MDS 9396S also supports Power On Auto Provisioning (POAP) to automate software image upgrades and configuration file installation on newly deployed switches. Additionally, it provides intelligent diagnostics, protocol decoding, network analysis tools, and Cisco Call Home for added reliability, faster problem resolution, and reduced service costs.

Intelligent Network Services and Advanced Traffic Management

The Cisco MDS 9396S uses virtual SAN (VSAN) technology for hardware-enforced, isolated environments within a physical fabric. It offers Access Control Lists (ACLs) for hardware-based, intelligent frame processing. Advanced traffic management features, such as fabricwide quality of service (QoS) and Inter-VSAN Routing (IVR), are included in the optional Cisco MDS 9000 Family Enterprise Package. QoS prioritizes application data traffic for better and more predictable network service. Zone-based QoS simplifies configuration and administration by using the familiar zoning concept. IVR facilitates resource sharing across VSANs without compromising scalability, reliability, availability, or network security.

Comprehensive Network Security Framework

An extensive set of innovative and powerful security features and functions is available with the optional Cisco MDS 9000 Family Enterprise Package. It offers fabricwide, per-VSAN role-based authentication, authorization, and accounting (AAA) services using RADIUS, Lightweight Directory Access Protocol (LDAP), Microsoft Active Directory (AD), and TACACS+. It also deploys VSAN fabric isolation, intelligent port-level packet inspection, Fibre Channel Security Protocol (FC-SP) host-to-switch and switch-to-switch authentication, Cisco Trustsec Link encryption, Secure File Transfer Protocol (SFTP), Secure Shell Version 2 (SSHv2), and Simple Network Management Protocol Version 3 (SNMPv3) implementing Advanced Encryption Standard (AES). Other security features include control-plane security, hardware-enforced zoning and management access.

Table 1 summarizes the main features and benefits of the Cisco MDS 9396S.

Table 1.   Features and Benefits

Feature	Benefit
Common software across all platforms	Reduce Total Cost Of Ownership (TCO) by using Cisco NX-OS and Cisco Prime DCNM for consistent provisioning, management, and diagnostic capabilities across the fabric
POAP	Automate deployment and upgrade of software images
Smart zoning	Reduce consumption of hardware resources and administrative time needed to create and manage zones
Intelligent diagnostics and hardware-based slow-port detection	Enhance reliability, accelerate problem resolution, and reduce service costs by using Fibre Channel ping and traceroute to identify exact path and timing of flows, as well as Cisco Switched Port Analyzer (SPAN) and Remote SPAN (RSPAN) and Cisco Fabric Analyzer to capture and analyze network traffic
Virtual output queuing	Help ensure line-rate performance on each port by eliminating head-of-line blocking

Feature	Benefit
High-performance ISLs	Optimize bandwidth utilization by aggregating up to 16 physical ISLs into a single logical PortChannel bundle with multipath load balancing
ISSU	Reduce downtime for planned maintenance and software upgrades

Platform Compatibility

For detailed information about hardware and software compatibility as well as product interoperability, see https://www.cisco.com/c/en/us/td/docs/switches/datacenter/mds9000/interoperability/matrix/intmatrx.pdf.

Licensing

Table 2 describes optional licenses that can be purchased to enable additional features and capabilities on the Cisco MDS 9396S.

Table 2.   Optional Licenses

License	Description
Cisco MDS 9396S 12-port On-Demand Activation	Enables 12 additional Fibre Channel ports (up to 96 total ports on the switch)
Cisco MDS 9300 Family Enterprise Package	Includes advanced traffic-engineering and network security features such as IVR, QoS and zone-based QoS, FC-SP, port security, VSAN-based access control, and fabric binding for open systems Licensed per switch for all the ports on the switch
Cisco Prime DCNM for SAN Advanced Edition for Cisco MDS 9300 Series	Includes advanced management capabilities such as VMware vCenter integration, performance trending, advanced provisioning, backup, and dashboards Licensed per switch for all the ports on the switch. License is hosted on a server
Cisco MDS 9300 Family Enterprise and DCNM Package Bundle	Includes both Cisco MDS 9300 Family Enterprise Package and Cisco Prime DCNM for SAN Advanced Edition for Cisco MDS 9300 Series

Product Specifications

Table 3 lists technical specifications for the Cisco MDS 9396S.

Table 3.   Product Specifications

Item	Specification
Protocols	• 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)

Item	Specification
	• 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, Revision 1.10
	• FC-LS, Revision 1.62 (ANSI INCITS 433-2007)
	• FC-LS-2, Revision 2.21 (ANSI INCITS 477-2011)
	• FC-LS-3, Revision 3.10
	• 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, Revision 1.8
	• FC-GS-3, Revision 7.01 (ANSI INCITS 348-2001)
	• FC-GS-4, Revision 7.91 (ANSI INCITS 387-2004)
	• FC-GS-7, Revision 10.3
	• 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-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-BB-6, Revision 2.00 (ANSI INCITS 509-2014)
	• 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)
	• FC-SP-2, Amendment 1 (ANSI INCITS 496-2012/AM1-2014)
	• 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 FL
	• Fibre Channel enhanced port types: SD, ST, and TE
	• FC-NVMe
	• 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
	• FC-AL, Revision 4.5 (ANSI/INCITS 272-1996)[#]
	• FC-AL-2, Revision 7.0 (ANSI/INCITS 332-1999)[#]
	• FC-AL-2, Amendment 1 (ANSI/INCITS 332-1999/AM1-2003)[#]
	• FC-AL-2, Amendment 2 (ANSI/INCITS 332-1999/AM2-2006)[#]

Item	Specification
Ports	• Available in a 48-port or 96-port base configuration • Enable incremental ports on the 48-port base model, with the 12-port On-Demand Activation license
Security	• VSAN fabric isolation • Hardware zoning by Access Control Lists (ACLs) • Fibre Channel Security Protocol (FC-SP) switch-to-switch authentication • FC-SP host-to-switch authentication • Role-based access control (RBAC) using RADIUS, TACACS+, or Lightweight Directory Access Protocol (LDAP) Authentication, Authorization, and Accounting (AAA) functions • Secure FTP (SFTP) • Secure Shell Protocol Version 2 (SSHv2) • Simple Network Management Protocol Version 3 (SNMPv3) implementing Advanced Encryption Standard (AES) • Control-plane security • Cisco TrustSec® payload encryption
Performance	• Port speed: 2/4/8/10/16-Gbps autosensing with 16-Gbps of dedicated bandwidth per port • Buffer credits: Up to 500 per port without Enterprise license and up to 4095 per port with optional Enterprise license • PortChannel: Up to 16 physical links
Reliability and availability	• ISSU • Hot-swappable, dual redundant power supplies • Hot-swappable fan tray with integrated temperature and power management • Hot-swappable Enhanced Small Form-Factor Pluggable (SFP+) optics • Passive backplane • Stateful process restart • Any port configuration for PortChannels • Fabric-based multipathing • Per-VSAN fabric services • Port tracking • Virtual Router Redundancy Protocol (VRRP) for management connections • Online diagnostics

Network management	• Access methods
	  ◦ Out-of-band 10/100/1000 Ethernet port
	  ◦ RS-232 serial console port
	  ◦ USB
	• Access protocols
	  ◦ CLI using the console and Ethernet ports
	  ◦ SNMPv3 using the Ethernet port and in-band IP over Fibre Channel access
	  ◦ Storage Networking Industry Association (SNIA) Storage Management Initiative Specification (SMI-S)
	• Distributed device alias service
	• Network security
	  ◦ Per-VSAN role-based access control (RBAC) using RADIUS and TACACS+-based AAA functions
	  ◦ SFTP
	  ◦ SSHv2 implementing AES
	  ◦ SNMPv3 implementing AES
	• Management applications
	  ◦ Cisco MDS 9000 Family CLI
	  ◦ Cisco Prime DCNM

Programming interfaces	• Scriptable CLI • Cisco Prime DCNM web services API
Physical dimensions	• Dimensions (H x W x D): 3.4 x 17.42 x 22.28 in. (8.64 x 44.25 x 56.59 cm), 2RU • Rack-mountable in standard 19-inch Electronic Industries Alliance [EIA] rack • Weight of fully configured chassis: 39.24 lb (17.8 kg)

Item	Specification

Power	• Power Supplies supported on this switch are 80 PLUS Platinum Certified
	• Power supply: 1200W with 180 to 264V AC input; and 800W with 90 to 180V AC input (2 per switch)
	• Power supply: Power grid redundancy (1+1) with 180 to 264V AC input only
	• Power cord: Notched C15 socket connector connecting to C16 plug on power supply
	• AC input: 100 to 240V AC (10% range)
	• Frequency: 50 to 60 Hz (nominal)
	• Maximum power consumption
	  ◦ 700W (on base model configuration running 16-Gbps 100% traffic load at 25°C)
	  ◦ 800W (on fully populated configuration running 16-Gbps 100% traffic load at 25°C)
	• Airflow: Port-side exhaust (air flows from back to front) and Port-side intake (air flows from front to back)
	• Airflow
	  ◦ Maximum 255 cubic feet per minute (CFM)
	  ◦ Nominal 110 CFM
	• Cisco recommends maintaining a minimum air space of 2.5 in. (6.4 cm) between walls and chassis air vents, and a minimum horizontal separation of 6 in. (15.2 cm) between 2 chassis to prevent overheating

Temperature range	• 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)
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) • Public loop • Broadcast • In-order delivery
Advanced functions	• VSAN • IVR • NPV • PortChannel with multipath load balancing • Flow-based and zone-based QoS

Item	Specification
Supported Cisco optics, media, and transmission distances	For detailed information about all supported transceivers, see Cisco MDS 9000 Family pluggable transceivers

#Supported only at 8G FC speed

System Requirements

Table 4 lists system requirements for the Cisco MDS 9396S.

Table 4.   System Requirements

Software	System Requirements
Software	Port-side exhaust: Cisco MDS 9000 NX-OS Software Release 6.2 (13) or later and Cisco Prime DCNM Software Release 7.2 or later Port-side intake: Supported on Cisco MDS 9000 NX-OS Release 6.2.(15). Not supported on Cisco NX-OS Release 7.3 (0) D1 (1).

Warranty Information

Find warranty information on Cisco.com at the Product Warranties page.

Ordering Information

Table 5 indicates all part numbers and associated configurable options for the Cisco MDS 9396S. To place an order, visit the Cisco Ordering homepage. To download software, visit the Cisco Platform Suite.

Table 5.   Ordering Information

Product Name	Part Number
Base Model Options (See Note 2)	
Cisco MDS 9396S 16G FC switch, w/ 48 active ports (port-side exhaust)	DS-C9396S-48EK9
Cisco MDS 9396S 16G FC switch, w/ 48 active ports (port-side intake)	DS-C9396S-48IK9
Cisco MDS 9396S 16G FC switch, w/ 96 active ports (port-side exhaust)	DS-C9396S-96EK9
Cisco MDS 9396S 16G FC switch, w/ 96 active ports (port-side intake)	DS-C9396S-96IK9
Cisco MDS 9396S 16G FC switch, w/ 48 active ports (port-side exhaust) + 16G SW SFPs	DS-C9396S-48ESK9
Cisco MDS 9396S 16G FC switch, w/ 96 active ports (port-side exhaust) + 16G SW SFPs	DS-C9396S-96ESK9
Cisco MDS 9396S 16G FC switch, w/ 48 active ports (port-side exhaust) + 8G SW SFPs	DS-C9396S-48E8K9
Cisco MDS 9396S 16G FC switch, w/ 96 active ports (port-side exhaust) + 8G SW SFPs	DS-C9396S-96E8K9
Component Spares	

Product Name	Part Number
Cisco MDS 9396S 16G FC switch, w/ 48 active ports, no PSU, no FAN, spare	DS-C9396S-K9=
Cisco 1200W AC Power Supply (port-side exhaust), spare	DS-CAC-1200W-E=
Cisco 1200W AC Power Supply (bi-directional), spare	DS-CAC-1200W=
Cisco MDS 9396S Fan Tray (port-side exhaust), spare	DS-C96S-FAN-E=
Cisco MDS 9396S Fan Tray (port-side intake), spare	DS-C96S-FAN-I=
Configure-to-Order Port License Options (See Note 2)	
Cisco MDS 9396S 16G FC 12-port upgrade license	M9396S-PL12
Cisco MDS 9396S 16G FC 12-port upgrade license + 16G SW SFPs	M9396S-PL12-S
Cisco MDS 9396S 16G FC 12-port upgrade license + 8G SW SFPs	M9396S-PL12-8
Spare Port Licenses (See Note 1 and Note 2)	
Cisco MDS 9396S 16G FC 12-port upgrade license, spare	M9396S-PL12=
Cisco MDS 9396S 16G FC 12-port upgrade license + 16G SW SFPs, spare	M9396S-PL12-S=
Cisco MDS 9396S 16G FC 12-port upgrade license + 8G SW SFPs, spare	M9396S-PL12-8=
Cisco MDS 9396S 16G FC 12-port upgrade license (eDelivery)	L-M9396S-PL12=
Cisco MDS 9396S 16G FC 12-port upgrade Smart license, spare	M9396S-PL12-SL=
Configure-to-Order Optics Options (See Note 2)	
Cisco MDS 4/8/16-Gbps Fibre Channel SW SFP+, LC	DS-SFP-FC16G-SW
Cisco MDS 2/4/8-Gbps Fibre Channel SW SFP+, LC	DS-SFP-FC8G-SW
Spare Optics (See Note 2)	
Cisco MDS 4/8/16-Gbps Fibre Channel SW SFP+, LC, spare	DS-SFP-FC16G-SW=
Cisco MDS 4/8/16-Gbps Fibre Channel LW SFP+, LC, spare	DS-SFP-FC16G-LW=
Cisco MDS 2/4/8-Gbps Fibre Channel SW SFP+, LC, spare	DS-SFP-FC8G-SW=
Cisco MDS 2/4/8-Gbps Fibre Channel LW SFP+, LC, spare	DS-SFP-FC8G-LW=
Cisco MDS 2/4/8-Gbps Fibre Channel Extended Reach SFP+, LC, spare	DS-SFP-FC8G-ER=
Cisco MDS 2/4/8-Gbps CWDM Long Distance SFP, LC, spare	DS-CWDM8Gxxxx=
Configure-to-Order Accessory Kit Options	
Cisco MDS 9396S Accessory Kit for Cisco	DS-9396S-KIT-CSCO

Product Name	Part Number
Cisco MDS 9396S Accessory Kit for EMC	DS-9396S-KIT-EM
Cisco MDS 9396S Accessory Kit for HDS	DS-9396S-KIT-HDS
Cisco DS 9396S Accessory Kit for IBM	DS-9396S-KIT-IBM
Accessory Kit Spare	
Cisco MDS 9396S Accessory Kit for Cisco, spare	DS-9396S-KIT-CSCO=
Configure-to-Order Power Cord Options	
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
Spare Power Cords	
Power Cord, 250VAC 10A IRAM 2073 Plug, Argentina, spare	CAB-9K10A-AR=
Power Cord, 250VAC 10A 3112 Plug, Australia, spare	CAB-9K10A-AU=
Power Cord, 250VAC 10A GB1002 Plug, China, spare	CAB-9K10A-CH=
Power Cord, 250VAC 10A CEE 7/7 Plug, EU, spare	CAB-9K10A-EU=
Power Cord, 250VAC 10A SI16S3 Plug, Israel, spare	CAB-9K10A-ISR=
Power Cord, 250VAC 10A CEI 23-16/VII Plug, Italy, spare	CAB-9K10A-IT=

Product Name	Part Number
Power Cord, 125VAC 13A KSC8305 Plug, Korea, spare	CAB-9K10A-KOR=
Power Cord, 250VAC 10A SABS 164/1 Plug, South Africa, spare	CAB-9K10A-SA=
Power Cord, 250VAC 10A, Straight C15, MP232 Plug, SWITZ, spare	CAB-9K10A-SW=
Power Cord, 125VAC 15A CNS10917-2, Taiwan, spare	CAB-9K10A-TWN=
Power Cord, 250VAC 10A BS1363 Plug (13 A fuse), UK, spare	CAB-9K10A-UK=
Power Cord, 125VAC 13A NEMA 5-15 Plug, North America, spare	CAB-9K12A-NA=
Power Cord, 250VAC 10A, Brazil, spare	CAB-250V-10A-BR=
Cabinet Jumper Power Cord, 250 VAC 13A, C14-C15 Connectors, spare	CAB-C15-CBN=
Configure-to-Order Advanced Software Package Options (See Note 3)	
Cisco Enterprise Software Package License for MDS 9300 Series	M9300ENT1K9
DCNM SAN Adv. Features for MDS 9300	DCNM-SAN-M93-K9
DCNM SAN Adv. Features for MDS 9300 Switch based	DCNM-SAN-M93X-K9
Enterprise + DCNM SAN Adv. Features for MDS 9300 Switch based	M93ENTDCNMX-K9
Enterprise + DCNM SAN Adv. Features for MDS 9300	M93ENTDCNM-K9
Cisco NX-OS Software Release 6.2.13	M93S5K9-6.2.13
Cisco NX-OS NPE Software Release 6.2.13	M93S5K9-NPE-6.2.13
Spare Advanced Software Packages (See Note 1 and Note 3)	
Cisco Enterprise Software Package License for MDS 9300 Series, spare	M9300ENT1K9=
Cisco Enterprise Software Package License for MDS 9300 Series, eDelivery	L-M9300ENT1K9=
DCNM SAN Adv. Features for MDS 9300, spare	DCNM-SAN-M93-K9=
DCNM SAN Adv. Features for MDS 9300 Switch based, spare	DCNM-SAN-M93X-K9=
Enterprise + DCNM SAN Adv. Features for MDS 9300 Switch based, spare	M93ENTDCNMX-K9=
Enterprise + DCNM SAN Adv. Features for MDS 9300, spare	M93ENTDCNM-K9=
DCNM SAN Adv. Features for MDS 9300, eDelivery	L-DCNM-S-M93-K9=
DCNM SAN Adv. Features for MDS 9300 Switch based, eDelivery	L-DCNM-S-M93X-K9=
Enterprise + DCNM SAN Adv. Features for MDS 9300 Switch based, eDelivery	L-M93ENTDCNMX-K9=
Enterprise + DCNM SAN Adv. Features for MDS 9300, eDelivery	L-M93ENTDCNM-K9=

Note: Spare licenses are delivered uninstalled. A product authorization key (PAK) is sent (either physically or electronically) for customer license key file obtainment and installation. For more information on obtaining and installing licenses, see https://www.cisco.com/en/US/docs/storage/san_switches/mds9000/sw/rel_2_x/san-os/configuration/guide/lic.html.

Note: For detailed information about all supported transceivers, see Cisco MDS 9000 Family pluggable transceivers. Bundled and configure-to-order optical transceivers are shipped installed in the port cages on the unit. Spares ship separately.

Note: For detailed information about the optional Cisco MDS Enterprise Package, see https://www.cisco.com/c/en/us/products/collateral/storage-networking/mds-9000-software-licensing/product_data_sheet09186a00801ca6ac.html; for Cisco Prime DCNM, see https://www.cisco.com/go/dcnm. Advanced Software Packages are delivered uninstalled. A PAK is sent (either physically or electronically) for customer license key file obtainment and installation.

Cisco Services

Cisco Services make networks, applications, and the people who use them work better together.

Today, the network is a strategic platform in a world that demands better integration of people, information, and ideas. The network works better when services, together with products, create solutions aligned with business needs and opportunities.

The unique Cisco Lifecycle approach to services defines the requisite activities at each phase of the network lifecycle to help ensure service excellence. With a collaborative delivery methodology that joins the forces of Cisco, our skilled network of partners, and our customers, we achieve the best results. Cisco does not recommend the removal of its products batteries due to safety reasons. Please utilize the Cisco take back program.

Cisco Capital

Financing to Help You Achieve Your Objectives

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For More Information

For more information about the Cisco MDS 9396S 16G Multilayer Fabric Switch, visit https://www.cisco.com/c/en/us/products/storage-networking/mds-9396s-16g-multilayer-fabric-switch/index.html or contact your local account representative.

[1] Requires NX-OS software version 8.2(1) or higher.

Document history

New or Revised Topic	Described In	Date
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