

Cisco MDS 9000 Series Switch



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Cisco MDS 9700 Series 64-Gbps Directors

Cisco Model	Cisco MDS 9706 multilayer director	Cisco MDS 9710 multilayer director	Cisco MDS 9718 multilayer director
Configuration	Chassis with 4-linecard capacity	Chassis with 8-linecard capacity	Chassis with 16-linecard capacity
Maximum 2/4/8/10/16/32-Gbps Fibre Channel ports per chassis	192	384	768

Cisco Model	Cisco MDS 9706 multilayer director	Cisco MDS 9710 multilayer director	Cisco MDS 9718 multilayer director
Maximum 10-Gbps Fibre Channel over Ethernet FCoE) ports per chassis	192	384	768
Chassis throughput	12.3Tbps	24.6Tbps	49.2Tbps
Maximum Fibre Channel over IP (FCIP) ports per chassis	32x1/10 GE 8x40 GE	64x1/10 GE 16x40 GE	128x1/10 GE 32x40 GE
Port speed	2/4/8/10/16/32/64-Gbps Fibre Channel 1/10/40-Gbps FCIP		
Port modules and Cisco part numbers	48-port 4/8/16/32-Gbps Fibre Channel switching module		DS-X9648-1536K9
	48-port 8/16/32/64-Gbps Fibre Channel switching module		DS-9748-3072K9
	24-port 2/4/8/10/16-Gbps Fibre Channel, 8-port 1/10 Gigabit Ethernet for FCIP, and 2-port 40 Gigabit Ethernet1 for FCIP		DS-X9334-K9
Supervisor Modules	DS-X97-SF4-K9		DS-X97-SF4-K9
Fabric Modules	DS-X9706-FAB3	DS-X9710-FAB3	DS-X9718-FAB3
Max/Min Fabric modules for 32G line rate performance	Minimum 3x Fabric-3	Minimum 3x Fabric-3	Minimum 3x Fabric-3

Cisco Model	Cisco MDS 9706 multilayer director	Cisco MDS 9710 multilayer director	Cisco MDS 9718 multilayer director
Maximum Power Supplies	4	8	16
Rack Units	9	14	26
Chassis per Rack	3	2	1
Power Supplies	DS-CAC97-3KW= AC PSU, DS-CDC97-3KW= DC PSU, DS-CHV-3.5KW= HVDC PSU		
Licensing	Advantage Tier License (includes Enterprise Package and DCNM Advanced license) Premier Tier license (includes Advantage tier and SAN Analytics license)		
FICON certification	Yes	Yes	No
Common Features	64G Fiber Channel Integrated SAN analytics4 NVMe/FC Automation using Ansible, Restful API, Openstack Virtual Machine awareness Anti-counterfeit technology with secure boot Native on-switch RESTAPI and Python interpreter Multi-protocol support Simplified Management		

Cisco MDS 9000 Series 64-Gbps Fabric Switches

Cisco Model	Cisco MDS 9148V 64G Multilayer Fabric Switch	Cisco MDS 9124V 64G Multilayer Fabric Switch	Cisco MDS 9396V 64G Multilayer Fabric Switch
			
Configuration	Fixed 1RU chassis; 48 ports pre-configured	Fixed 1RU chassis; 24 ports pre-configured	Fixed 2RU chassis; 48 ports are pre-configured
Ports	48x8/16/32/64-Gbps Fibre channel (line rate) fixed switch	24x8/16/32/64-Gbps Fibre channel (line rate) fixed switch	96x8/16/32/64-Gbps Fibre channel (line rate) fixed switch
Port speed	8/16/32/64-Gbps Fibre Channel	8/16/32/64-Gbps Fibre Channel	8/16/32/64-Gbps Fibre Channel
Licensing	MDS Premier Software Subscription License bundle for a period of 1-,3,5-,7 year option* MDS Advantage Software Subscription License bundle for a period of 1-,3,5-,7 year option Port Activation license		

Cisco Model	Cisco MDS 9148V 64G Multilayer Fabric Switch	Cisco MDS 9124V 64G Multilayer Fabric Switch	Cisco MDS 9396V 64G Multilayer Fabric Switch
Features	<ul style="list-style-type: none">Modular high availabilityAutozone featureNVMe/FCVirtual Machine awarenessExtended BB_Credits (Upto 16,000 per port/24,000 per port group)Native on-switch REST API and PYTHON interpreterFC Trustsec Link encryptionPower-On Auto Provisioning (POAP) and intelligent diagnosticsCisco In-Service Software Upgrade (ISSU) and downgrade (ISSD)Redundant hot-swappable power supplies and fan traysAnti-counterfeit technology with secure boot		

Cisco MDS 9000 Series 32-Gbps Fabric Switches

Cisco Model	Cisco MDS 9132T 32G Multilayer Fabric Switch	Cisco MDS 9148T 32G Multilayer Fabric Switch	Cisco MDS 9396T 32G Multilayer Fabric Switch
			
Configuration	Semi-modular 1RU chassis; configurable to 8, 16, 24 or 32 ports	Fixed 1RU chassis; configurable to 24, 32, 40 or 48 ports	Fixed 2RU chassis; configurable to 48, 64, 80 or 96 ports
Ports	16x4/8/16/32-Gbps Fibre channel (line rate) base switch 16x4/8/16/32-Gbps Fibre channel (line rate) expansion module	48x4/8/16/32-Gbps Fibre channel (line rate) fixed switch	96x4/8/16/32-Gbps Fibre channel (line rate) fixed switch
Port speed	4/8/16/32-Gbps Fibre Channel sp	4/8/16/32-Gbps Fibre Channel sp	4/8/16/32-Gbps Fibre Channel sp
Port activation license	8/16-Port	8-Port	16-Port
Licensing	MDS Premier Software Subscription License bundle for a period of 1-,3,5-,7 year option* MDS Advantage Software Subscription License bundle for a period of 1-,3,5-,7 year option Port Activation license		

Cisco Model	Cisco MDS 9132T 32G Multilayer Fabric Switch	Cisco MDS 9148T 32G Multilayer Fabric Switch	Cisco MDS 9396T 32G Multilayer Fabric Switch
Features	<ul style="list-style-type: none">Integrated SAN AnalyticsModular high availabilityAutozone featureNVMe/FC readyVirtual Machine awarenessExtended BB_Credits (Upto 8270 per port/8300 per port group)Native on-switch REST API and PYTHON interpreterFC Trustsec Link encryptionPower-On Auto Provisioning (POAP) and intelligent diagnosticsCisco In-Service Software Upgrade (ISSU) and downgrade (ISSD)Redundant hot-swappable power supplies and fan traysAnti-counterfeit technology with secure boot		

Cisco MDS 9000 Series Software License Packages

Licensed package	Features
Premier Tier Subscription (contains SAN Analytics)	This package includes features that enable On-board SAN Telemetry, SAN Insights DCNM visualization and SAN Telemetry Streaming to 3rd Party tools for Visualization. SAN Insights is included in DCNM advanced license when switches have SAN Analytics license installed.
Advantage Tier Subscription (contains Enterprise license)	<p>This package includes advanced traffic engineering and advanced security features for enterprise SANs like:</p> <ul style="list-style-type: none"> ▪ Advanced traffic management ▪ Inter-VSAN Routing (IVR) ▪ Quality of Service (QoS) ▪ Extended buffer-to-buffer credits ▪ Security ▪ Switch-to-switch and host-to-switch authentication ▪ Port security ▪ VSAN-based access control ▪ IP Security (IPsec) for Internet Small Computer Systems Interface and FCIP ▪ Internet Key Exchange (IKE) digital certificates ▪ Fabric binding for Fibre Channel
Advantage Tier Subscription (contains Cisco Data Center Network Manager (DCNM) license)	Data Center Network Manager is designed to help customers efficiently implement and manage next-generation virtualized data centers. It provides timely management support for data center hardware platforms and Cisco NX-OS Software innovations. Nexus Dashboard is the replacement for DCNM and leverages the same license for entitlement.

Licensed package	Features
Mainframe license (Included in NX-OS base functionality starting with 9.4(1a))	<p>This package includes features required in mainframe environments. FICON is an architecture for high- speed connectivity between mainframe and I/O devices</p> <ul style="list-style-type: none"> • VSAN for FICON and Fibre Channel Protocol (FCP) intermode channel-to-channel operations • FICON Control Unit Protocol (CUP) • Fabric binding • Switch cascading • IBM Total Storage virtual tape server • IBM Total Storage Extended Remote Copy (XRC) • FICON native mode and native mixing operation • Persistent FICON FCID assignment • Port swapping for host channel cable connectors • FICON tape acceleration <p>(This license is applicable to MDS 9706, MDS 9710 and MDS 9220i only.)</p>

Cisco MDS 9000 Series Software Subscription License Bundles

License bundle	Details
MDS Advantage Software Subscription License bundle	<ul style="list-style-type: none"> • Includes Enterprise license and Cisco Nexus® Dashboard Fabric Controller (NDFC; formerly DCFM) license • 1-, 3-, 5- and 7-year subscription options
MDS Premier Software Subscription License bundle	<ul style="list-style-type: none"> • Includes Enterprise license and Cisco Nexus® Dashboard Fabric Controller (NDFC; formerly DCFM) license and SAN Analytics license • 1-, 3-, 5- and 7-year subscription options