

# Cisco MDS 9000 I/O Accelerator Package

## Product Overview

The Cisco® MDS 9000 I/O Accelerator (IOA) Package is deployed as a fabric service to optimize the performance and throughput of Small Computer System Interface (SCSI)-based tape and virtual tape backup and disk replication solutions over long-distance metropolitan area network (MAN) and WAN connections.

## Features

The Cisco MDS 9000 IOA Package provides the following features:

- **Transport independence:** The Cisco MDS 9000 IOA Package provides a unified solution to accelerate I/O operations over MANs and WANs.
- **IOA as a fabric service:** IOA service engines (interfaces) can be located anywhere in the fabric and can provide acceleration service to any port in the fabric.
- **Speed independence:** IOA can accelerate 1-, 2-, 4-, 8-, 16-, and 10-Gbps links and consolidate traffic over 8-, 16-, and 10-Gbps Inter-Switch Links (ISLs).
- **Write acceleration:** IOA provides disk write acceleration for Fibre Channel or Fibre Channel over IP (FCIP) networks. Write acceleration significantly reduces latency and extends network distance for disk replication.
- **Tape acceleration:** IOA provides tape read and write acceleration for Fibre Channel or FCIP networks. Tape acceleration improves the performance of tape devices and enables remote tape vaulting over extended distances for data backup for disaster-recovery purposes.
- **Compression:** Compression in IOA increases the effective MAN and WAN bandwidth without costly infrastructure upgrades, thereby shrinking backup and replication windows. By integrating data compression in IOA, more efficient Fibre Channel- and FCIP-based business-continuity and disaster-recovery solutions can be implemented without the need to add or manage a separate device.
- **High-availability and resiliency:** IOA combines PortChannels or Equal-Cost Multipath (ECMP) with disk and tape acceleration for higher availability and resiliency. This feature can prevent backup and replication jobs from failing when a failure occurs on one of the links between sites.
- **Lightweight Reliable Transport Protocol (LRTP):** IOA uses LRTP to protect higher-level applications against packet losses caused by physical link failures. LRTP provides retransmit capability to recover from error conditions, and it provides reliability and in-order delivery to protect against any packet loss so that the end application is not affected.
- **Service clustering:** IOA service engines can be clustered to deliver redundancy and load balancing for I/O acceleration.
- **Transparent insertion:** IOA requires no fabric reconfiguration or rewiring and can be transparently turned on by enabling the Cisco MDS 9000 IOA Package license for each service engine.

- **Intuitive provisioning:** IOA can be easily provisioned using Cisco Data Center Network Manager (DCNM) for SAN (formerly Cisco Fabric Manager), which provides a GUI to provision IOA. Provisioning can also be performed using the Cisco MDS 9000 NX-OS Software command-line interface (CLI).

## Supporting Hardware

The Cisco MDS 9000 IOA Package is supported on the following hardware platforms:

- Cisco MDS 9000 18/4-Port Multiservice Module
- Cisco MDS 9000 16-Port Storage Services Node
- Cisco MDS 9222i Multiservice Modular Switch
- Cisco MDS 9250i Multilayer Fabric Switch

## Software Release

To use the Cisco MDS 9000 IOA Package features on the Cisco MDS 9000 18/4-Port MSM, Cisco MDS 9000 NX-OS Release 4.2(1) or later must be installed on a Cisco MDS 9000 Family switch. To use the IOA Fibre Channel compression feature, Cisco MDS 9000 NX-OS Release 4.2(3) or later must be installed. To use the Cisco MDS IOA package on the Cisco MDS 9250i, Cisco MDS 9000 NX-OS Release 6.2(2) or later is required.

## License Information

The Cisco MDS 9000 IOA Package is licensed per service engine and is tied to the chassis. The number of licenses required is equal to the number of service engines on which the IOA application is used.

## Ordering Information

The part numbers associated with this package are as follows:

- On Cisco MDS 9000 18/4-Port MSM:
  - M92IOA184= Cisco MDS 9000 Family I/O Accelerator Package license for MSM-18/4 on Cisco MDS 9200, spare
  - M95IOA184= Cisco MDS 9000 Family I/O Accelerator Package license for MSM-18/4 on Cisco MDS 9500, spare
- On Cisco MDS 9000 16-Port SSN:
  - M92IOASSN= Cisco I/O Accelerator license (1 engine) for SSN-16 on Cisco MDS 9200, spare
  - M95IOASSN= Cisco I/O Accelerator license (1 engine) for SSN-16 on Cisco MDS 9500, spare
- On Cisco MDS 9222i base switch
  - M9222IOA= Cisco I/O Accelerator license for Cisco MDS 9222i base switch, spare
- On Cisco MDS 9250i Multilayer Fabric Switch
  - M9250IOA= Cisco I/O Accelerator License for MDS 9250i, Spare
  - M9250IOA Cisco I/O Accelerator License for MDS 9250i

## For More Information

The Cisco MDS 9000 NX-OS Software data sheets are available at [http://www.cisco.com/en/US/products/hw/ps4159/ps4358/products\\_data\\_sheets\\_list.html](http://www.cisco.com/en/US/products/hw/ps4159/ps4358/products_data_sheets_list.html). For more information

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about Cisco MDS 9000 NX-OS Software and Cisco storage products, visit <http://www.cisco.com/go/nxos> and <http://www.cisco.com/go/storage>.




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