

Cisco A9K-MPA-4X10GE=

Cisco ASR 9000 4-Port 10-Gigabit Ethernet Modular Port Adapter User Manual

Model: [A9K-MPA-4X10GE=](#)

1. INTRODUCTION

The Cisco ASR 9000 4-Port 10-Gigabit Ethernet Modular Port Adapter (MPA) is a high-performance networking component designed for the Cisco ASR 9000 Series Modular Line Cards. This port adapter provides four XFP expansion slots, enabling robust 10-Gigabit Ethernet connectivity for data networking and optical network applications. It is engineered to deliver reliable and efficient data transfer rates of up to 10000 Megabits Per Second, making it suitable for demanding enterprise and service provider environments.



Figure 1: Cisco ASR 9000 4-Port 10-Gigabit Ethernet Modular Port Adapter. This image displays the front view of the module, highlighting its four XFP ports and the model number 'A9K-MPA-4X10GE=' on yellow labels. The module features a metallic casing with an exposed circuit board on top.

2. SETUP AND INSTALLATION

Follow these steps for proper installation of the modular port adapter into a compatible Cisco ASR 9000 Series chassis:

1. **Safety First:** Ensure the chassis is powered off and disconnected from the power source before handling any components. Wear an anti-static wrist strap to prevent electrostatic discharge (ESD) damage.
2. **Identify Slot:** Locate an available and compatible modular port adapter slot on your Cisco ASR 9000 Series Line Card. Refer to your chassis documentation for specific slot compatibility.
3. **Insert MPA:** Carefully align the MPA with the chosen slot. Gently slide the MPA into the slot until it is fully seated. Avoid forcing the module.
4. **Secure Module:** Once seated, use the ejector levers or captive screws (if present) to firmly secure the MPA in

place. This ensures proper electrical connection and physical stability.

5. **Connect Cables:** Install appropriate XFP transceivers into the four XFP ports and connect the necessary fiber optic cables. Ensure all connections are clean and secure.
6. **Power On:** Reconnect the chassis to the power source and power it on. Observe the system and module status indicators for proper initialization.

3. OPERATION

Once installed and powered on, the Cisco ASR 9000 4-Port 10-Gigabit Ethernet MPA operates as an integral part of your network infrastructure. Key operational aspects include:

- **Link Status:** Monitor the LED indicators on the MPA or through the chassis management interface to confirm link status for each 10-Gigabit Ethernet port. A steady green light typically indicates a healthy link.
- **Data Flow:** Verify data traffic flow through the ports using network monitoring tools. Ensure that data is being transmitted and received without errors.
- **Configuration:** Network configuration, such as IP addressing, VLANs, and routing protocols, is performed at the chassis level through the Cisco IOS XR operating system. Refer to the Cisco ASR 9000 Series documentation for detailed configuration guides.
- **Hot Swapping:** This module may support hot-swapping, allowing replacement without powering down the entire chassis. Consult the chassis documentation to confirm this feature and proper hot-swap procedures.

4. MAINTENANCE

Regular maintenance helps ensure the longevity and optimal performance of your MPA:

- **Environmental Control:** Ensure the operating environment maintains stable temperature and humidity levels as specified by Cisco. Proper airflow within the rack and chassis is crucial.
- **Dust Prevention:** Keep the networking environment clean and free of dust. Dust accumulation can lead to overheating and component failure. Use compressed air to gently clean the module's exterior if necessary, ensuring the chassis is powered off.
- **Cable Management:** Maintain organized and properly routed fiber optic cables to prevent accidental disconnections or damage.
- **Firmware Updates:** Periodically check Cisco's official website for firmware updates for the MPA and the ASR 9000 Series chassis. Applying updates can improve performance, add features, and address security vulnerabilities.
- **Inspection:** Routinely inspect the module for any signs of physical damage, loose connections, or unusual odors.

5. TROUBLESHOOTING

This section provides solutions to common issues you might encounter:

Problem	Possible Cause	Solution
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Problem	Possible Cause	Solution
Module not recognized by chassis	Improper seating, incompatible slot, or power issue.	Reseat the module firmly. Verify slot compatibility. Check chassis power supply.
Link LED is off or amber	No fiber connection, faulty transceiver, or cable issue.	Check fiber optic cable connections. Verify XFP transceiver is properly installed and functional. Test with a known good cable/transceiver.
Poor data transfer performance	Cable quality, network congestion, or configuration error.	Inspect fiber optic cables for damage. Check network load. Review chassis and port configuration.
Module overheating	Insufficient ventilation or dust accumulation.	Ensure proper airflow in the rack and chassis. Clean dust from the module and chassis vents.

6. TECHNICAL SPECIFICATIONS

Detailed specifications for the Cisco ASR 9000 4-Port 10-Gigabit Ethernet Modular Port Adapter:

Attribute	Value
Brand	Cisco
Model Number	A9K-MPA-4X10GE=
Product Dimensions	7 x 7 x 2 inches
Item Weight	1.92 pounds (870 Grams)
Manufacturer	CISCO - ASR9K
Hardware Interface	Ethernet
Compatible Devices	Desktop (Cisco ASR 9000 Series Modular Line Cards)
Data Link Protocol	Gigabit Ethernet
Data Transfer Rate	10000 Megabits Per Second
Expansion Slots	4 x XFP
Application/Usage	Data Networking, Optical Network
UPC	882658465376, 740616468329

7. WARRANTY INFORMATION

This Cisco product is covered by Cisco's standard hardware warranty. For specific details regarding warranty terms, duration, and coverage, please refer to the official Cisco warranty documentation provided with your purchase or visit the [Cisco Warranty Information page](#) on their official website. Keep your proof of purchase for warranty claims.




8. SUPPORT




For technical assistance, product inquiries, or further support, please utilize the following resources:

- **Cisco Support Website:** Visit the official Cisco Support website for extensive documentation, downloads, and knowledge base articles.
- **Technical Assistance Center (TAC):** If you have a service contract, contact Cisco's Technical Assistance Center for expert support.
- **Authorized Resellers:** Your Cisco authorized reseller can also provide support and service for your product.

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Related Documents - A9K-MPA-4X10GE=

	<p>nV System Configuration Guide for Cisco ASR 9000 Series Routers, IOS XR 7.0.x</p> <p>Detailed configuration guide for Cisco's nV System, enabling Satellite Network Virtualization on ASR 9000 Series Routers with IOS XR Release 7.0.x. Covers setup, features, and management.</p>
	<p>Cisco ASR 9000 Series Ethernet Line Card Installation Guide</p> <p>Comprehensive guide for installing and removing Cisco ASR 9000 Series Ethernet line cards and transceiver modules, covering safety, compatibility, and troubleshooting.</p>
	<p>Cisco ASR 9000 Series Fixed-Port Routers Hardware Installation Guide</p> <p>Official hardware installation guide for Cisco ASR 9000 Series Fixed-Port Routers, covering preparation, unpacking, installation, and troubleshooting for models like ASR 9902, 9903, 9901, and 9001. Essential for network engineers and technicians.</p>

	<p>Configuring the Satellite Network Virtualization (nV) System</p> <p>This guide provides comprehensive instructions for configuring the Satellite Network Virtualization (Satellite nV) system on Cisco ASR 9000 Series Aggregation Services Routers, detailing network topologies, features, and implementation for advanced Cisco networking infrastructures.</p>
	<p>Cisco ASR 9000 Series 5th Generation 400 Gigabit Ethernet Multi-Rate Line Card Data Sheet</p> <p>Data sheet for the Cisco ASR 9000 Series 5th Generation 400 Gigabit Ethernet Multi-Rate Line Card, detailing its features, specifications, compatibility, and ordering information for high-density, high-performance networking.</p>
	<p>Cisco ASR 9000 Series IOS XR Software Release 4.3.2 Release Notes</p> <p>Comprehensive release notes for Cisco IOS XR Software Release 4.3.2, detailing features, system requirements, hardware support, and caveats for Cisco ASR 9000 Series Aggregation Services Routers. Note: This product has reached end-of-life status.</p>