

## Cisco A9K-MOD200-TR

# Cisco A9K-MOD200-TR ASR 9000 200G Modular Line Card User Manual

## 1. INTRODUCTION

This manual provides essential information for the safe and effective use of the Cisco A9K-MOD200-TR ASR 9000 200G Modular Line Card. This line card is designed to integrate into Cisco ASR 9000 Series Aggregation Services Routers, enhancing their capacity and functionality with 200 Gigabit Ethernet connectivity. It is crucial to read and understand all instructions before installation and operation to ensure proper functionality and system stability.

## 2. SAFETY INFORMATION

Observe the following safety precautions to prevent injury and damage to the equipment:

- **Electrical Safety:** Always disconnect power from the router chassis before installing or removing the line card.
- **Electrostatic Discharge (ESD):** Wear an ESD-preventive wrist strap connected to a grounded surface when handling the line card. Store the card in an anti-static bag when not installed.
- **Weight:** The line card weighs approximately 15 pounds (6.8 kg). Use proper lifting techniques and ensure secure handling during installation.
- **Ventilation:** Ensure adequate airflow around the router chassis to prevent overheating.
- **Qualified Personnel:** Installation and maintenance should only be performed by trained and qualified personnel.

## 3. PACKAGE CONTENTS

Verify that your package contains the following items:

- Cisco A9K-MOD200-TR ASR 9000 200G Modular Line Card
- Documentation CD (may contain software drivers or additional manuals)

If any items are missing or damaged, contact your supplier immediately.

## 4. PHYSICAL DESCRIPTION

The Cisco A9K-MOD200-TR is a modular line card designed for hot-swappable installation into compatible slots within the Cisco ASR 9000 Series router chassis. It features a robust metal casing for durability and efficient heat dissipation.

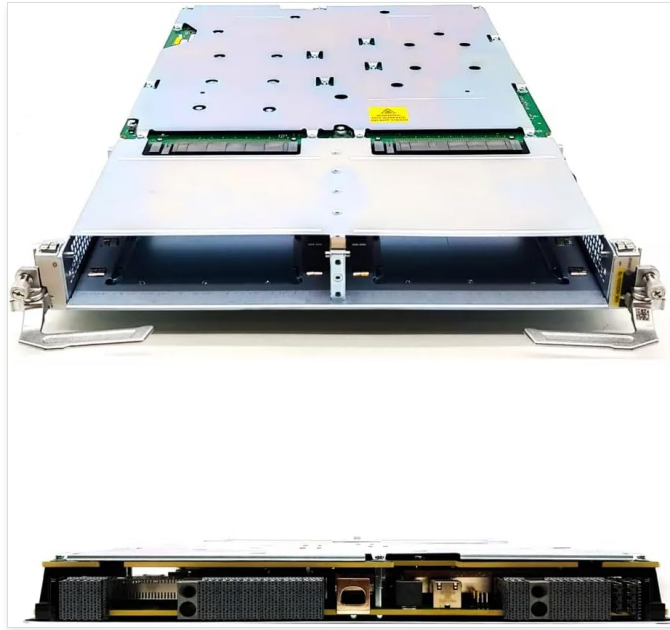


Figure 1: Cisco A9K-MOD200-TR ASR 9000 200G Modular Line Card. The image displays the line card from two perspectives. The upper view shows the top of the card, revealing internal components and the chassis structure. The lower view focuses on the rear panel, showcasing multiple high-density Ethernet ports and potentially a USB port, which are used for network connectivity and management within the router chassis.

The front panel (when installed) typically includes status indicator LEDs and potentially handles for insertion and extraction. The rear panel, visible in the lower part of Figure 1, houses the high-speed data connectors that interface with the router's backplane and external network cables.

## 5. INSTALLATION

Follow these general steps for installing the line card. Always refer to the specific Cisco ASR 9000 Series Router hardware installation guide for detailed, model-specific instructions.

1. **Prepare the Chassis:** Ensure the router chassis is powered off and disconnected from all power sources.
2. **ESD Protection:** Put on an ESD-preventive wrist strap and connect it to a grounded surface.
3. **Locate Slot:** Identify an available, compatible slot in the ASR 9000 chassis. Remove any blank filler panels from the slot.
4. **Insert Line Card:** Carefully align the line card with the guides in the chassis slot. Push the card firmly and evenly into the slot until it is fully seated.
5. **Secure Card:** Use the ejector levers or captive screws on the line card's front panel to secure it into the chassis.
6. **Connect Cables:** Connect appropriate network cables to the ports on the line card's front panel.
7. **Power On:** Reconnect power to the router chassis and power it on. Observe the status LEDs on the line card for proper initialization.

## 6. OPERATION AND CONFIGURATION

Once installed, the Cisco A9K-MOD200-TR line card becomes an integral part of the ASR 9000 router. Its operation is managed through the router's operating system, Cisco IOS XR.

- **Initial Boot-up:** The router will detect the new line card during boot-up or when inserted (if hot-swappable).
- **Configuration:** All configuration of the 200G Ethernet interfaces on the line card is performed via the router's Command-Line Interface (CLI) or a network management system. This includes setting IP addresses, routing protocols, VLANs, and other network parameters.
- **Monitoring:** Use CLI commands or network monitoring tools to check the status, performance, and traffic statistics of the line card's interfaces.

Refer to the Cisco IOS XR documentation for detailed configuration guides specific to your router model and software version.

## 7. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your line card:

- **Cleaning:** Periodically inspect the line card and router chassis for dust accumulation. Use compressed air to gently clean vents and surfaces. Ensure the router is powered off before cleaning.
- **Firmware Updates:** Keep the router's IOS XR software and line card firmware updated to the latest stable versions recommended by Cisco. Refer to Cisco's official website for update procedures and files.
- **Environmental Control:** Maintain the operating environment within specified temperature and humidity ranges to prevent hardware degradation.

## 8. TROUBLESHOOTING

If you encounter issues with the line card, consider the following troubleshooting steps:

- **Check Seating:** Ensure the line card is fully and securely seated in its slot. Re-seat if necessary (after powering off the chassis).
- **Status LEDs:** Observe the status LEDs on the line card. Consult the router's documentation for the meaning of different LED states (e.g., amber for fault, green for operational).
- **Console Messages:** Connect to the router's console port and check for any error messages or diagnostic output related to the line card.
- **Cable Connections:** Verify that all network cables are correctly connected and not damaged.
- **Software Configuration:** Review the router's configuration to ensure the interfaces on the line card are correctly configured and enabled.
- **Cisco Support:** For persistent issues, consult Cisco's official documentation, knowledge base, or contact Cisco Technical Assistance Center (TAC).

## 9. SPECIFICATIONS

Key technical specifications for the Cisco A9K-MOD200-TR ASR 9000 200G Modular Line Card:

Feature	Detail
Brand	Cisco
Model Number	A9K-MOD200-TR
Item Weight	15 Pounds (6.8 kg)
Hardware Interface	Ethernet

Feature	Detail
Data Link Protocol	Ethernet
Manufacturer	Cisco Systems
UPC	657768415951
Date First Available	April 24, 2023

## 10. WARRANTY AND SUPPORT

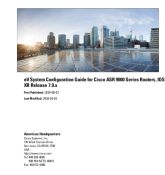

This Cisco A9K-MOD200-TR line card is listed as "Renewed."





- **Renewed Product Warranty:** For specific warranty details, please refer to the terms and conditions provided by the seller (Refurb Rack) or the Amazon Renewed program at the time of purchase. Renewed products typically come with a limited warranty from the seller or platform.
- **Manufacturer Support:** For original product documentation, technical specifications, and software downloads, please visit the official Cisco Systems website. Note that direct manufacturer support for renewed products may vary.

It is recommended to retain your purchase receipt and any warranty information provided by the seller for future reference.

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### Related Documents - A9K-MOD200-TR

	<p><a href="#">nV System Configuration Guide for Cisco ASR 9000 Series Routers, IOS XR 7.0.x</a></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><a href="#">Configuring the Satellite Network Virtualization (nV) System</a></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><a href="#">Cisco ASR 9000 Series 5th Generation 400 Gigabit Ethernet Multi-Rate Line Card Data Sheet</a></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><a href="#">Cisco ASR 9000 Series Ethernet Line Card Installation Guide</a></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><a href="#">Cisco ASR 9000 Series Line Card Quick Reference Guide</a></p> <p>A comprehensive guide for unpacking, installing, managing cables, and maintaining Cisco ASR 9000 Series Line Cards, ensuring optimal performance and longevity.</p>
	<p><a href="#">System Setup and Software Installation Guide for Cisco ASR 9000 Series Routers, IOS XR Release 7.1.x</a></p> <p>A comprehensive guide detailing the system setup and software installation procedures for Cisco ASR 9000 Series Routers running IOS XR Release 7.1.x. This document covers product overviews, virtual machine configurations, user management, system upgrades, and customization options.</p>