

MikroTik CCR1009-7G-1C-1S+

MikroTik Cloud Core Router CCR1009-7G-1C-1S+ User Manual

1. INTRODUCTION

This manual provides essential information for the proper installation, configuration, and operation of your MikroTik Cloud Core Router CCR1009-7G-1C-1S+. Please read this document thoroughly before using the device to ensure optimal performance and safety.

The MikroTik CCR1009-7G-1C-1S+ is a powerful Cloud Core Router designed for advanced networking environments, featuring multiple Gigabit Ethernet ports, SFP/SFP+ cages, and a robust CPU for high-performance routing tasks.

2. SAFETY INFORMATION

- Always disconnect power before performing any maintenance or installation procedures.
- Ensure the device is placed in a well-ventilated area to prevent overheating.
- Use only the power cables and adapters specified by the manufacturer.
- Do not expose the device to water, moisture, or extreme temperatures.
- This device is intended for indoor use only.
- Installation should be performed by qualified personnel in accordance with local electrical codes.

3. PACKAGE CONTENTS

Verify that all items are present in your package:

- MikroTik Cloud Core Router CCR1009-7G-1C-1S+ unit
- 1U rackmount ears
- Power cables (x2)
- Quick Start Guide

4. PRODUCT OVERVIEW

4.1 Front Panel



The front panel of the CCR1009-7G-1C-1S+ typically features the LCD display, various status LEDs, and the primary network ports including Gigabit Ethernet ports and SFP/SFP+ cages. The LCD panel provides real-time information about the device status and network activity.

4.2 Rear Panel



The rear panel includes the dual power inputs for redundancy, cooling fans, and a Micro-SD card slot. The dual power supplies ensure continuous operation even if one power source fails. The Micro-SD slot can be used for additional storage or RouterOS installation.

- **POWER 1 & POWER 2:** Dual AC power inputs (100-240V ~ 2A; 50-60Hz) for redundant power supply.
- **Fans:** Integrated cooling fans for thermal management.
- **MICRO-SD:** Micro-SD card slot for storage or system recovery.

5. SETUP

5.1 Rackmount Installation

1. Attach the provided rackmount ears to the sides of the router using the included screws.
2. Secure the router into a standard 1U rack space using appropriate rack screws (not included).

5.2 Power Connection

1. Connect the first power cable to the 'POWER 1' input on the rear panel and plug it into a suitable AC power outlet.
2. For power redundancy, connect the second power cable to the 'POWER 2' input and plug it into a separate AC power outlet or an uninterruptible power supply (UPS).
3. The device will power on automatically. Observe the LCD panel for boot-up status.

5.3 Initial Configuration Access

1. Connect a computer to any of the Gigabit Ethernet ports on the router using an Ethernet cable.
2. Open a web browser and navigate to the default IP address (usually <http://192.168.88.1>).
3. Alternatively, use the WinBox utility for Windows, available from the MikroTik website, to connect to the router via its MAC address or IP address.
4. Log in using the default credentials (username: **admin**, no password). It is highly recommended to set a strong password immediately after the first login.

6. OPERATING INSTRUCTIONS

6.1 RouterOS Basics

The CCR1009-7G-1C-1S+ runs on MikroTik's RouterOS, a highly versatile and powerful operating system. RouterOS offers extensive configuration options for routing, firewall, VPN, QoS, and more.

- **WebFig:** A web-based graphical user interface (GUI) accessible via a web browser for configuration.
- **WinBox:** A dedicated Windows application providing a comprehensive GUI for managing RouterOS devices.
- **CLI (Command Line Interface):** Accessible via SSH, Telnet, or the console port for advanced configuration and scripting.

6.2 Basic Network Configuration

1. **Internet Connection:** Configure your WAN interface (e.g., ether1) with appropriate IP settings (DHCP client, static IP, PPPoE) as provided by your Internet Service Provider.
2. **Local Network:** Set up IP addresses for your LAN interfaces and configure a DHCP server to assign IP addresses to devices on your local network.

3. **Firewall:** Implement basic firewall rules to protect your network from unauthorized access.
4. **NAT:** Configure Network Address Translation (NAT) to allow devices on your local network to access the internet.

For detailed configuration guides and advanced features, refer to the official MikroTik documentation available on their website.

7. MAINTENANCE

7.1 Firmware Updates

Regularly update RouterOS to the latest stable version to benefit from new features, performance improvements, and security patches. Updates can be performed via WinBox or WebFig by downloading the appropriate package from the MikroTik website.

7.2 Cleaning

Periodically clean the device, especially the ventilation openings, to ensure proper airflow and prevent dust buildup. Use a soft, dry cloth. Do not use liquid cleaners or aerosols.

7.3 Environmental Considerations

Maintain the operating environment within the specified temperature and humidity ranges to ensure the longevity and stable operation of the device.

8. TROUBLESHOOTING

- **No Power:** Check both power cables and outlets. Ensure the power inputs are securely connected.
- **No Network Connectivity:** Verify Ethernet cable connections. Check IP configurations on both the router and connected devices. Ensure firewall rules are not blocking traffic.
- **Slow Performance:** Check CPU and memory usage via RouterOS. Review network traffic and identify potential bottlenecks. Ensure firmware is up to date.
- **Cannot Access RouterOS:** Try connecting via a different port or using WinBox with MAC address discovery. If default IP is changed, try to reset configuration (refer to MikroTik documentation for safe reset procedures).
- **Device Overheating:** Ensure proper ventilation and clean any dust from the fan vents.

9. SPECIFICATIONS

Feature	Value
Brand	MikroTik
Model Name	CCR1009

Feature	Value
Model Number	CCR1009-7G-1C-1S+
Operating System	RouterOS L6
CPU Frequency	9 cores x 1.2 GHz
RAM Memory Installed	2 GB
Number of Ports	7x Gigabit Ethernet, 1x Combo port (SFP or Gigabit Ethernet), 1x SFP+ cage
Connectivity Technology	Ethernet
Data Transfer Rate	100 Megabits Per Second (LAN Port Bandwidth: 100Mbps)
Maximum Upstream Data Transfer Rate	7000 Megabits Per Second
Power Supply	Dual, 100-240V ~ 2A; 50-60Hz
Item Weight	2 Pounds
Special Feature	WPS (Note: RouterOS typically uses its own configuration methods, WPS might refer to a general capability or a specific RouterOS feature)
Security Protocol	WPA2-Enterprise
Compatible Devices	Personal Computer
Recommended Uses For Product	Home (Note: This device is typically used in more advanced/enterprise settings)
Control Method	App (WinBox, WebFig)
SmartCard Slot	Yes

10. WARRANTY AND SUPPORT

MikroTik products are covered by a limited manufacturer's warranty. For specific warranty terms and conditions, please refer to the documentation included with your purchase or visit the official MikroTik website. Technical support and additional resources, including detailed documentation and forums, are available on the MikroTik website (mikrotik.com).

