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› MikroTik CRS109-8G-1S-2HnD-IN Cloud Router Switch User Manual

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MikroTik CRS109-8G-1S-2HnD-IN Cloud Router Switch User Manual

Comprehensive instructions for installation, operation, and maintenance.

1. PRODUCT OVERVIEW

The MikroTik CRS109-8G-1S-2HnD-IN is a Cloud Router Switch designed for small to medium network environments. It combines the functionality of a fully managed Layer 3 switch with the routing capabilities of MikroTik's RouterOS. This device features eight Gigabit Ethernet ports, one SFP port for fiber connectivity, and integrated 2.4GHz 802.11b/g/n wireless capabilities. It is powered by an Atheros AR9344 CPU and includes 128MB of RAM, an LCD panel, and supports PoE input.

2. PACKAGE CONTENTS

- MikroTik CRS109-8G-1S-2HnD-IN unit
- Power supply unit (PSU)
- Two 2.4GHz antennas

3. HARDWARE INSTALLATION

Follow these steps for proper hardware installation:

1. **Mounting:** Place the device on a stable, flat surface or mount it in a suitable rack/enclosure. Ensure adequate ventilation.
2. **Antenna Connection:** Attach the two included 2.4GHz antennas to the antenna connectors on the device.
3. **Ethernet Connections:** Connect your network devices (computers, other switches, etc.) to the Gigabit Ethernet ports (1-8) on the rear panel.
4. **SFP Connection:** If using fiber optic connectivity, insert a compatible SFP module into the SFP 1 port and connect the fiber cable.
5. **Power Connection:** Connect the provided power supply unit to the DC input jack (DC13-48V) on the device. Alternatively, the device supports Passive PoE input on port 1.
6. **Initial Access:** Connect a computer directly to one of the Ethernet ports (e.g., port 1) for initial configuration.



Figure 1: Rear panel of the MikroTik CRS109-8G-1S-2HnD-IN showing the RESET button, DC power input, Console port, USB port, eight Gigabit Ethernet ports (with PoE In on port 1), SFP 1 port, and ACT/LINK indicator.

4. INITIAL CONFIGURATION AND OPERATING INSTRUCTIONS

The CRS109-8G-1S-2HnD-IN runs MikroTik's RouterOS. Initial configuration is typically performed via a web browser (WebFig) or WinBox utility.

4.1. Accessing RouterOS

1. Ensure your computer is connected to one of the Ethernet ports.
2. Open a web browser and navigate to the default IP address (usually <http://192.168.88.1>).
3. Log in using the default username (admin) and no password (if not set previously).
4. Alternatively, download and run the WinBox utility from the MikroTik website (mikrotik.com/download) to connect to the device.

4.2. Basic Operations

- **Switching:** By default, the Ethernet ports are configured as a Layer 2 switch. You can manage VLANs, port isolation, and other switch features via the "Bridge" or "Switch" menus in RouterOS.
- **Routing:** Ports can be removed from the switch configuration and used for Layer 3 routing. Configure IP addresses, static routes, and dynamic routing protocols as needed.
- **Wireless AP:** The integrated 2.4GHz wireless access point can be configured under the "Wireless" menu. Set up SSIDs, security protocols (WPA2 recommended), and channel settings.
- **LCD Panel:** The front LCD panel displays real-time information such as CPU load, interface status, and other system metrics. Navigate through the menus using the buttons next to the display.

5. MAINTENANCE

- **Firmware Updates:** Regularly check for and install RouterOS updates from the MikroTik website to ensure optimal performance and security. This can be done via WinBox or WebFig.
- **Configuration Backup:** Periodically back up your device configuration. This allows for quick restoration in case of issues.
- **Cleaning:** Keep the device free from dust. Use a soft, dry cloth for cleaning. Do not use liquid cleaners. Ensure ventilation openings are clear.

6. TROUBLESHOOTING

- **No Power:**
 - Verify the power adapter is securely connected to both the device and a working power outlet.
 - If using PoE, ensure the PoE source is active and providing sufficient power.
- **No Network Connectivity:**
 - Check Ethernet cable connections.
 - Verify IP address settings on your computer and the router.
 - Ensure the correct ports are enabled and configured in RouterOS.
- **Wireless Issues:**
 - Confirm antennas are properly attached.
 - Check wireless interface status in RouterOS.
 - Verify SSID, security settings, and channel.
- **Device Unresponsive (Hard Reset):**
 - Locate the **RESET** button on the rear panel (refer to Figure 1).
 - To reset to factory defaults: With the device powered off, press and hold the RESET button, then power on the device. Continue holding until the LED starts flashing, then release.
 - To enter Netinstall mode: With the device powered off, press and hold the RESET button, then power on the device. Continue holding until the LED turns off, then release.

7. SPECIFICATIONS

Feature	Detail
Product Model	CRS109-8G-1S-2HnD-IN
CPU	Atheros AR9344
RAM	128 MB
Ethernet Ports	8x Gigabit Ethernet
SFP Ports	1x SFP
Wireless	2.4 GHz 802.11b/g/n, Dual Chain, 1000mW output power
Operating System	RouterOS Level 5
PoE Input	Passive PoE (10-57V), 802.3af/at compliant
Dimensions	200 x 142 x 44 mm (7.87 x 5.71 x 1.77 inches)
Weight	1.94 Pounds
Special Features	LCD panel, PCB temperature and Voltage monitor

8. WARRANTY AND SUPPORT

This MikroTik product is covered by a manufacturer's warranty. For detailed warranty information, please refer to the documentation included with your purchase or visit the official MikroTik website.

For technical support, firmware downloads, and additional resources, please visit the MikroTik support portal:

<https://mikrotik.com/support>

