

MikroTik CRS328-24P-4S+RM

MikroTik CRS328-24P-4S+RM 24-Port Gigabit Ethernet Router/Switch User Manual

Model: CRS328-24P-4S+RM

1. INTRODUCTION

This document provides comprehensive instructions for the installation, configuration, operation, and maintenance of the MikroTik CRS328-24P-4S+RM Cloud Router Switch. Please read this manual thoroughly before using the device to ensure proper functionality and safety.

2. PRODUCT OVERVIEW

The MikroTik CRS328-24P-4S+RM is a versatile 28-port independent switch designed for advanced networking environments. It features 24 Gigabit Ethernet ports with various Power over Ethernet (PoE) output options and four 10Gbps SFP+ ports for high-speed connectivity.

2.1 Key Features

- 24 Gigabit Ethernet ports with auto-sensing PoE output (Passive PoE, low voltage PoE, 802.3af/at Type 1 "PoE" / Type 2 "PoE+").
- Four 10Gbps SFP+ ports for high-speed fiber or Ethernet module connectivity (modules not included).
- 1U rackmount case design with an integrated 100-240 V AC 500 W power supply.
- Total PoE budget of 450 W (3x150 W per every 8 Ethernet ports), with each port capable of providing up to 30 W.
- Dual boot feature, allowing selection between RouterOS and SwOS operating systems.

2.2 Device Layout

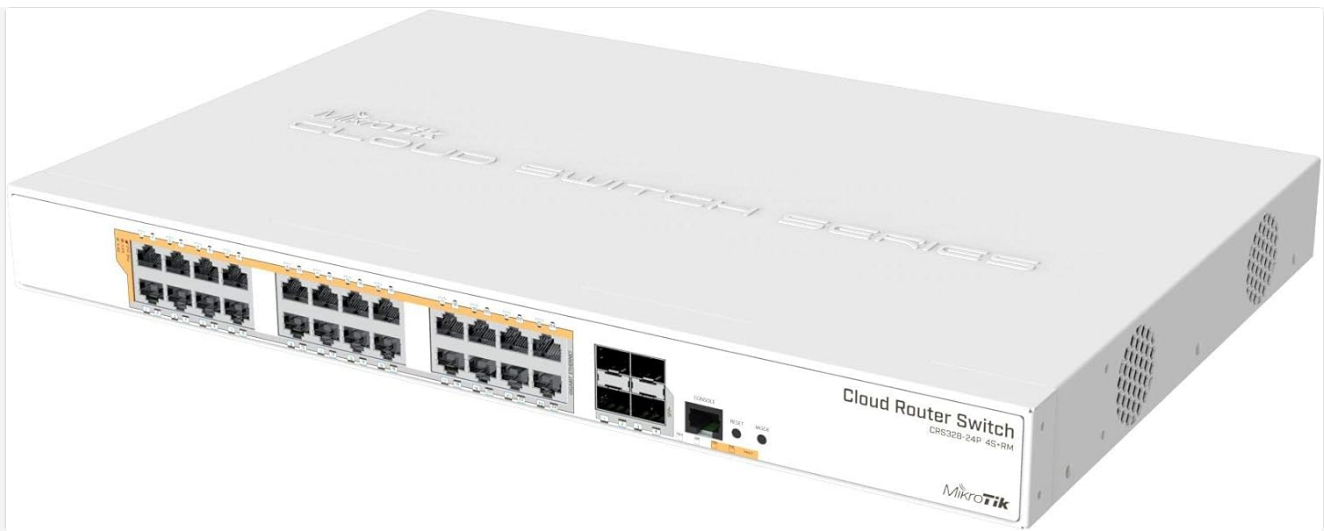


Figure 1: Angled front view of the MikroTik CRS328-24P-4S+RM Cloud Router Switch, showing the 24 Ethernet ports and 4 SFP+ ports.



Figure 2: Front view of the MikroTik CRS328-24P-4S+RM, highlighting the 24 Gigabit Ethernet ports with PoE capabilities and the four 10Gbps SFP+ ports.

2.3 Package Contents

The standard package for the CRS328-24P-4S+RM typically includes:

- MikroTik CRS328-24P-4S+RM Cloud Router Switch unit
- Power cable (IEC C13)
- Rackmount ears and screws

3. SETUP

3.1 Physical Installation

The CRS328-24P-4S+RM is designed for 1U rackmount installation. Follow these steps:

1. Attach the included rackmount ears to the sides of the device using the provided screws.
2. Secure the device into a standard 19-inch server rack using appropriate rack screws. Ensure adequate ventilation around the unit.
3. Connect your network cables to the desired Gigabit Ethernet ports and SFP+ ports.

3.2 Powering On

Connect the included power cable to the AC input on the rear of the device and then to a compatible power outlet

(100-240 V AC). The device will power on automatically.

3.3 Initial Configuration Access

The device can be configured via several methods:

- **WinBox Utility:** Download the WinBox utility from the official MikroTik website. Connect your computer to any Ethernet port on the switch. WinBox can discover the device and allow graphical configuration.
- **Web Interface (WebFig):** Open a web browser and navigate to the device's default IP address (typically 192.168.88.1).
- **Serial Console:** For advanced users, a serial console port is available for command-line interface (CLI) access.

Important: For security, it is highly recommended to change the default administrator password immediately after initial access.

4. OPERATING INSTRUCTIONS

4.1 Dual Boot Feature

The CRS328-24P-4S+RM supports dual boot, allowing you to choose between MikroTik's RouterOS (a full-featured routing operating system) and SwOS (a simpler, switch-optimized operating system). The desired OS can be selected during boot-up or configured via the management interface.

4.2 Ethernet Ports and PoE

The 24 Gigabit Ethernet ports support various Power over Ethernet (PoE) standards:

- **Passive PoE:** Provides power directly to compatible devices.
- **Low Voltage PoE:** For specific low-voltage applications.
- **802.3af/at (PoE/PoE+):** Auto-sensing for standard compliant devices.

PoE-Out is passed over mode B pins (4,5+)(7,8-). Each port can deliver up to 30 W of power, with a total guaranteed power budget of 450 W for connected PoE devices (distributed as 3x150 W per every 8 Ethernet ports).

4.3 SFP+ Ports

The four SFP+ ports provide 10 Gigabit per second connectivity. These ports require compatible SFP+ modules (not included) for either optical fiber or direct attach copper (DAC) Ethernet connections. Ensure modules are properly seated and locked into place.

4.4 Management Interfaces

The device offers flexible management options:

- **WinBox:** A dedicated Windows application for graphical configuration.
- **WebFig:** A web-based graphical user interface accessible via a standard web browser.
- **CLI (Command Line Interface):** Accessible via SSH, Telnet, or serial console for advanced configuration and scripting.

Refer to the MikroTik documentation for detailed instructions on configuring specific network functions such as VLANs, routing, firewall rules, and QoS.

5. MAINTENANCE

5.1 Firmware Updates

Regularly updating the device's firmware (RouterOS or SwOS) is crucial for security, stability, and access to new features. MikroTik provides updates through its official website. Always back up your configuration before performing a firmware upgrade.

1. Download the latest firmware package for your device model from the MikroTik website.
2. Upload the package to the device using WinBox, WebFig, or FTP.
3. Reboot the device to apply the update.

5.2 Cleaning

To maintain optimal performance, periodically clean the device. Use a soft, dry cloth to wipe the exterior. Ensure the device is powered off and disconnected from the power source before cleaning. Avoid using liquid cleaners or solvents.

6. TROUBLESHOOTING

If you encounter issues with your CRS328-24P-4S+RM, consider the following common troubleshooting steps:

- **No Power:** Verify the power cable is securely connected and the power outlet is functional. Check the power supply unit.
- **No Network Connectivity:** Check Ethernet cable connections. Verify port status LEDs. Ensure correct IP configuration on connected devices and the switch.
- **PoE Devices Not Powering On:** Confirm the connected device is PoE compatible. Check PoE settings on the switch ports. Ensure the total power consumption does not exceed the switch's PoE budget.
- **Slow Performance:** Check for network loops, excessive broadcast traffic, or misconfigured VLANs. Monitor CPU and memory usage via the management interface.
- **Access Issues (WinBox/WebFig):** Ensure your computer is on the same subnet as the switch. Temporarily disable firewalls on your computer. Try accessing via serial console if network access is completely lost.

For more detailed troubleshooting guides and solutions, refer to the official MikroTik documentation and community forums.

7. SPECIFICATIONS

Feature	Detail
Product Model	CRS328-24P-4S+RM
Ethernet Ports	24 x 10/100/1000 Mbps Gigabit Ethernet
SFP+ Ports	4 x 10 Gbps SFP+
PoE Output	Passive PoE, Low Voltage PoE, 802.3af/at (PoE/PoE+)
Max PoE Output per Port	30 W
Total PoE Budget	450 W (guaranteed)
Power Supply	100-240 V AC, 500 W (built-in)
Max Power Consumption	44 W (device only)
Operating System	RouterOS / SwOS (Dual Boot)
Dimensions (LxWxH)	12.01 x 17.44 x 1.73 inches (30.5 x 44.3 x 4.4 cm)
Weight	10.01 pounds (4.54 kg)
Rackmount	1U
Flash Memory Size	16 MB
UPC	708747435030

8. WARRANTY INFORMATION

For detailed warranty terms and conditions, please refer to the official MikroTik website or the warranty card included with your product. Warranty coverage typically includes manufacturing defects for a specified period from the date of purchase.

9. SUPPORT

For technical assistance, additional documentation, software downloads, and community forums, please visit the official MikroTik website:

www.mikrotik.com

It is recommended to consult the MikroTik Wiki and forums for advanced configurations and troubleshooting tips.