

# CRS312-4C+8XG-RM

## CRS312-4C+8XG-RM



CRS312-4C+8XG is an 8-port Gigabit Ethernet switch with four 10g Ethernet / SFP+, combo ports. Includes all basic functionality for a managed switch and more.

## Safety Warnings

Before you work on any equipment, be aware of the hazards involved with electrical circuitry, and be familiar with standard practices for preventing accidents.

Ultimate disposal of this product should be handled according to all national laws and regulations.

The Installation of the equipment must comply with local and national electrical codes.

This unit is intended to be installed in the rackmount. Please read the mounting instructions carefully before beginning installation. Failure to use the correct hardware or to follow the correct procedures could result in a hazardous situation to people and damage to the system.

This product is intended to be installed indoors. Keep this product away from water, fire, humidity or hot environments.

Use only the power supply and accessories approved by the manufacturer, and which can be found in the original packaging of this product.

Read the installation instructions before connecting the system to the power source.

We cannot guarantee that no accidents or damage will occur due to the improper use of the device. Please use this product with care and operate at your own risk!

In the case of device failure, please disconnect it from power. The fastest way to do so is by unplugging the power plug from the power outlet.

It is the customer's responsibility to follow local country regulations, including operation within legal frequency channels, output power, cabling requirements, and Dynamic Frequency Selection (DFS) requirements. All MikroTik devices must be professionally installed.

## Quick start

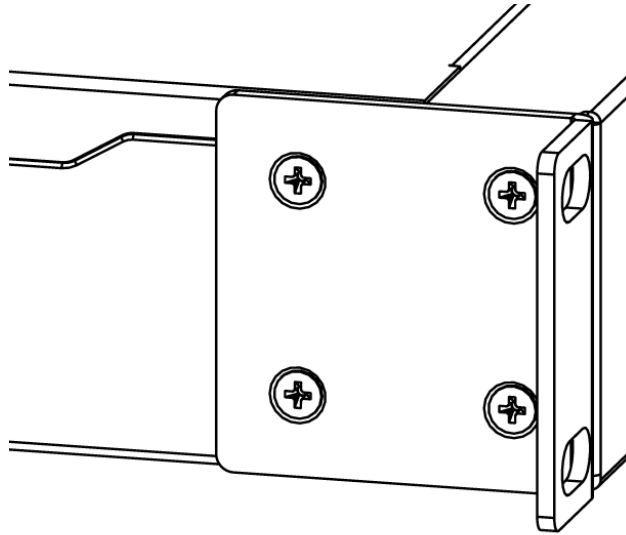
- Mount unit or place on the flat surface, please see [Mounting](#) paragraph for instructions.
- Connect two powering units to the AC source.
- The Initial connection has to be done via the Ethernet cable, using the MikroTik Winbox utility.
- Use Winbox to connect to the default IP address of 192.168.88.1 from any port, with the username admin and no password (or, for some models, check user and wireless passwords on the sticker).
- We recommend clicking the "Check for updates" button and updating your system software to the latest version to ensure the best performance and stability.
- Set up your password to secure the device.

## Mounting

The device is designed to use indoors and it can be mounted in a rackmount enclosure using provided rack mounts, or it can be placed on the desktop.

Please attach rubber pegs on the bottom of the router if the desired placement is on the flat surface or use a Phillips screwdriver to attach rackmount ears on both sides of the device if designated use is for rackmount enclosure:

1. Attach rack ears to both sides of the device and tighten four screws to secure them in place, as shown in the picture.
2. Place the device in a rackmount enclosure and align with the holes so that the device fits conveniently.



3. Tighten screws to secure it in place.

The IP rating scale for this device is IPX0. The device has no protection from water contamination, please ensure the placement of the device in a dry and ventilated environment. We recommend shielded Cat5/6 cables for our devices. *Mounting and configuration of this device should be done by a qualified person.*

## Configuration

The device is set up as a switch, with 192.168.88.1 as the management IP of the bridge interface. The switch supports booting RouterOS (for routing and switching configuration) or SwOS (for only using as a switch). By default, the device will boot RouterOS, but you can reboot into the other operating system in the following ways:

- From SwOS: In the System menu, click the "Boot RouterOS" button on the bottom of the page.
- From RouterOS: in the System, RouterBOARD menu, click "Settings" and there select "Boot OS".

It is also possible to select the OS and configure other boot settings via the serial console menu.

Serial console for configuration for RS-232 serial port, set by default to 115200 bit/s, 8 data bits, 1 stop bit, no parity. Standard RJ45 to COM cable can be used. To find detailed serial console configuration and pinout please visit serial console section in our wiki pages here: [https://wiki.mikrotik.com/wiki/Manual:System/Serial\\_Console](https://wiki.mikrotik.com/wiki/Manual:System/Serial_Console)

RouterOS includes many configuration options in addition to what is described in this document. We suggest starting here to get yourself accustomed to the possibilities: <https://mt.lv/help>. In case the IP connection is not available, the Winbox tool (<https://mt.lv/winbox>) can be used to connect to the MAC address of the device.

For recovery purposes, it is possible to boot the device from the network, see the [Reset button](#) section.

## Powering

The device accepts power from two alternative current inputs at range AC 100-240 V. Dual power supplies for redundancy with IEC power connectors. The power consumption under maximum load can reach 60 W.

## Expansion slots and ports

- 1x RJ45 console port (set at 115200bits/s, 8 data bits, 1 stop bit no parity).
- 1x 10/100Mbit Ethernet port for management access.
- Eight 2.5G/5G/10G Ethernet ports.
- Four 10g Ethernet / SFP+, combo ports.
- One USB type-A slot.
- Four cooling fans with automatic fan speed control.

## Combo interface

The four combo interfaces each have two physical connectors of which the only one can be used at the same time. The ports will be automatically represented as combo 1-4 in RouterOS. It is possible to select which physical port will be used in the RouterOS software ethernet menu. If left to default "auto", and both F/T have cables plugged in, SFP will take priority. For example, if you have plugged an Ethernet cable into the 1T port and an SFP module in the 1F port, you will have to choose in RouterOS which one to use. Double click the respective combo interface in RouterOS GUI to see which socket is used.

## Reset button

The RouterBOOT reset button has the following functions. Press the button and apply the power, then:

- Release the button when green LED starts flashing, to reset RouterOS configuration to defaults.
- Release the button when the LED turns solid green to clear all configuration and defaults.
- Release the button after LED is no longer lit (~20 seconds) to cause a device to look for Netinstall servers (required for reinstalling RouterOS over the network).

Regardless of the above option used, the system will load the backup RouterBOOT loader if the button is pressed before power is applied to the device. Useful for RouterBOOT debugging and recovery.

## Operating system support

The device supports dual boot SwOS software version 2.9 and RouterOS v6. The specific factory-installed version number is indicated in the RouterOS menu /system resource. Other operating systems have not been tested.

## Accessories

Package includes the following accessories that come with the device:

- Fastening set for rackmount case K-57.
- AC EU/US power cord, D03+QT3 H05VV-F 3x0.75 mm2 1.83 m RoHS.
- Mounting kit 1U rackmount bracket white, 2 pcs.

Please visit wiki pages for MikroTik SFP module compatibility table: [https://wiki.mikrotik.com/wiki/MikroTik\\_SFP\\_module\\_compatibility\\_table](https://wiki.mikrotik.com/wiki/MikroTik_SFP_module_compatibility_table)

## Specifications

For more information about this product, specification and pictures please visit our web page: [https://mikrotik.com/product/crs312\\_4c\\_8xg\\_rm](https://mikrotik.com/product/crs312_4c_8xg_rm)

## Safety Notice

Electric shock hazard. This equipment is to be serviced by trained personnel only.



To avoid pollution of the environment, please separate the device from household waste and dispose of it in a safe manner, such as in designated waste disposal sites. Familiarize yourself with the procedures for the proper transportation of the equipment to the designated disposal sites in your area.

## Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a commercial installation.



This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Note: This unit was tested with shielded cables on the peripheral devices. Shielded cables must be used with the unit to ensure compliance.

## Innovation, Science and Economic Development Canada

This device complies with Industry Canada's license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes: (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

This Class A digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe [A] est conforme à la norme NMB-003 du Canada.

CAN ICES-003 (A) / NMB-003 (A)

## UKCA marking



## Eurasian Conformity Mark

Информация о дате изготовления устройства указана в конце серийного номера на его наклейке через дробь. Первая цифра означает номер года (последняя цифра года), две последующие означают номер недели.

Изготовитель: Mikrotikls SIA, Aizkraukles iela 23, Rīga, LV-1006, Латвия, [support@mikrotik.com](mailto:support@mikrotik.com). Сделано в Китае, Латвии или Литве. См. на упаковке.

Для получения подробных сведений о гарантийном обслуживании обратитесь к продавцу. Информация об импортерах продукции MikroTik в Российскую Федерацию: <https://mikrotik.com/buy/europe/russia>

Продукты MikroTik, которые поставляются в Евразийский таможенный союз, оцениваются с учетом соответствующих требований и помечены знаком ЕАС, как показано ниже:



## Norma Oficial Mexicana

EFICIENCIA ENERGETICA CUMPLE CON LA NOM-029-ENER-2017.

La operacion de este equipo esta sujeta a las siguientes dos condiciones:

- Es posible que este equipo o dispositivo no cause interferencia perjudicial y.
- Este equipo debe aceptar cualquier interferencia, incluyendo la que pueda causar su operación no deseada.


Fabricante: Mikrotikls SIA, Brivibas gatve 214i, Riga, LV-1039, Latvia.

País De Origen: Letonia; Lituania; China (República Popular); Estados Unidos De América; México.

Por favor contacte a su distribuidor local para preguntas regionales específicas. La lista de importadores se puede encontrar en nuestra página de inicio – <https://mikrotik.com/buy/latinamerica/mexico>.

## CE Declaration of Conformity

Manufacturer: Mikrotikls SIA, Brivibas gatve 214i Riga, Latvia, LV1039.

The full text of the EU Declaration of Conformity is available at the following internet address: <https://mikrotik.com/products> 



*Information contained here is subject to change. Please visit the product page on [www.mikrotik.com](http://www.mikrotik.com) for the most up to date version of this document.*