CRS317-1G-16S+RM

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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 in a rackmount cabinet or place on the flat surface (see "Mounting").
- Connect two powering units to the AC source using power cords.
- 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). In case the IP is not available please use Neighbors and connect with MAC.
- Update the device by clicking the "Check for updates" button to v6.46 or the latest RouterOS software to ensure the best performance and stability. The device needs to have an active internet connection.
- To manually update the device, go to our download page https://mikrotik.com/download
- Choose your architecture (ARM) and download the latest packages from any channel to your PC.
- Open Winbox and upload packages in the Files menu.
- Reboot the device.
- Updating software will ensure the latest security fixes and regulations set by local law.
- 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 the rackmount enclosure and align with the holes so that the device fits conveniently.
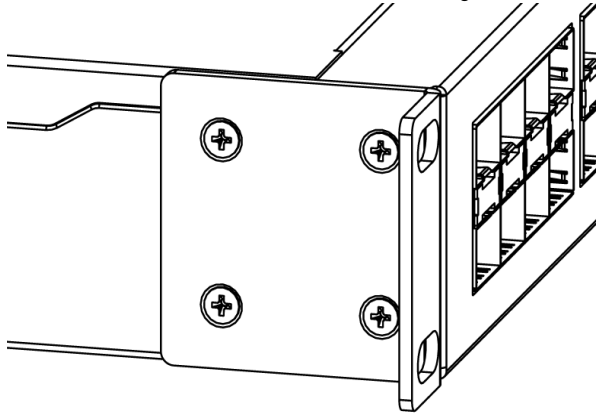
3. Tighten screws to secure it in place.

The IP rating scale for this device is IP0. The device has no protection from water contamination, please ensure the placement of the device in a dry and ventilated environment.
We recommend Cat6 cables for our devices.
The mounting and configuration of this device should be done by a qualified person.

Powering

The device accepts powering through two IEC C14 standard connectors and supports both AC 110/240 V . Only one PSU is active at the time, the second one is used for redundancy.
The PoE injector is not included. The power consumption of this device under maximum load is up to 44W.

Booting process

The device supports booting RouterOS (for complete 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".

The device is fitted with passive cooling heatsinks and under normal load will operate silently, but in emergencies, two redundant fans will automatically switch on to keep the device cool, if ambient temperatures are above normal. The device has been tested to operate in ambient temperatures from -20 ℃ to +60 ℃.

Configuration

Full RouterOS and SwOS documentation are located here: https://mt.lv/help.
This device is not preconfigured other than an IP address on the master Ethernet port. You can connect from any port, as all ports are switched together by default. Another configuration has to be applied according to the documentation manual linked above.
The Initial connection has to be done via the Ethernet cable, using the MikroTik Winbox utility. Winbox should be used to connect to the default IP address of 192.168.88.1 from any port, with the username admin and no password.
In case the IP connection is not available, the Winbox tool (https://mt.lv/winbox) can also be used to connect to the MAC address of the device. Applies only when the device has booted RouterOS.
The device is equipped with an RJ45 serial port, set by default to 115200bit/s, 8 data bits, 1 stop bit, no parity. Standard RJ45 to COM cable can be used, pinout can be found in the documentation.

Extension slots and ports

- One gigabit Ethernet port for management (With Auto MDI/X so you can use either straight or cross-over cables for connecting to other network devices). The Ethernet port (ETH/BOOT) can be used for network booting.
- 16 SFP+ cages, which accept both 1.25 Gb SFP and 10 Gb SFP+ modules.

- RJ45 serial port.

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.

SwOS Reset and Reinstall

CRS317-1G-16S+ has built-in backup SwOS firmware which can be loaded in case standard firmware breaks or upgrade fails:

- Holding the Reset button for few seconds while CRS317-1G-16S+ is booting resets configuration and loads backup firmware SwOS 2.3p.
- After loading back up firmware SwOS 2.3p it is possible to connect to 192.168.88.1 using a web browser and install new SwOS firmware.

Accessories

Package includes the following accessories that come with the device:

IEC cord   IEC cord   Rack ears

Please visit wiki pages for 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/crs317_1g_16s_rm

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.
https://wiki.mikrotik.com/wiki/SwOS

Safety Notice

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

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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, Riga, LV-1006, Латвия, 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 EAC, как показано ниже:

EAC

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 operacion no deseada.

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

País De Origen: Letonia; Lituania; China (Republica Popular); Estados Unidos De America; Mexico.

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 for the most up to date version of this document.