OmniTik series

This device needs to be upgraded to RouterOS v6.46 or the latest version to ensure compliance with local authority regulations.

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

Safety Information:

• Before you work on any MikroTik equipment, be aware of the hazards involved with electrical circuitry and be familiar with standard practices for preventing accidents. The installer should be familiar with RouterOS software and RouterBOARD products, network structures, terms, and concepts.
• Use only the power supply and accessories approved by the manufacturer, and which can be found in the original packaging of this product.
• This equipment is to be installed by trained and qualified personnel, as per these installation instructions. The installer is responsible for making sure, that the Installation of the equipment is compliant with local and national electrical codes. Do not attempt to disassemble, repair, or modify the device.
• This product is intended to be mounted outdoors on a pole. Please read the mounting instructions carefully before beginning installation. Failure to use the correct hardware and configuration or to follow the correct procedures could result in a hazardous situation to people and damage to the system.
• 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!
• This is a Class A product. In a domestic environment, this product might cause radio interference in which case the user might be required to take adequate measures.

Technical specifications, brochures and more info about products at https://mikrotik.com/products
Configuration manual for software with additional information can be found at https://mt.lv/help
MikroTik devices are for professional use, if you do not have qualifications please seek a consultant https://mikrotik.com/consultants

First use

First Ethernet is always configured as WAN port (protected by a firewall, enabled DHCP client and disabled MAC connection/discovery). Other Ethernet ports and wireless interfaces are added to the local LAN bridge with 192.168.88.1/24 address set and configured DHCP server.

• Open the bottom lid.
• Connect your PC or LAN cables to the Ethernet ports.
• Connect power source as described in the Powering section.
• Set LAN computer IP configuration to automatic (DHCP).
• The Default IP address of the unit is 192.168.88.1, open this address in your web browser to start the configuration. The username is admin and there is no password.
• We recommend clicking the “Check for updates” button and updating your RouterOS software to the latest version to ensure the best performance and stability.
• Choose your country, to apply country regulation settings and set up your password on the screen that loads.

We recommend clicking the “Check for updates” button and updating your RouterOS software to the latest version to ensure the best performance and stability. RouterOS includes many configuration options in addition to what is described in this document. We suggest visiting the RouterOS documentation page to get yourself accustomed to the possibilities: http://mt.lv/help.

In case IP connection is not available, the Winbox tool (http://mt.lv/winbox) can be used to connect to the MAC address of the device from the LAN side (all access is blocked from the internet port by default).
**Powering**

The device accepts power in the following ways:

- Ethernet port accepts passive PoE 10-57 V DC ⎓.

The power consumption under maximum load can reach 14 W.

PoE version accepts 12-57 V DC with maximum consumption 18 W, with attachments 66 W.

Connecting to a PoE Adapter:

1. Connect the Ethernet cable from the device to the PoE+DATA port of the PoE adapter;
2. Connect an Ethernet cable from your local network (LAN) to the PoE adapter;
3. Connect the power cord to the adapter, and then plug the power cord into a power outlet.

**Power output**

*Applies only to OmniTik 5 PoE ac:* This device can supply PoE power to external devices from its Ethernet ports. This is convenient as you don't need any additional PoE injectors to power other devices. The output voltage will be the same as the input voltage. The Maximum power output of each Ethernet port in this mode is 1A (total maximum for all ports is 2A). To reach maximum output power it is recommended to use a high voltage adapter together with the included PoE injector to power the OmniTik unit (48/56V), because 802.3af/at the input is limited to 30W and OmniTik will consume up to 15W by itself. Once Power Output is enabled in RouterOS, the Ethernet LED adds red color to it (green means Ethernet link is made, red means power but no link, red and green both means there is link and power).

**Mounting**

On the back of the device, slide the included pole mount adapter with the clip facing forward, until the clip clicks into place.

Use the included hose clamp to attach the unit to a pole or mast. Adjustable QuickMount adapters are available separately.

The OmniTik has a locking screw that secures the port door, it can be closed with a 5mm hex screwdriver.
Grounding

The installation infrastructure (towers and masts), must be properly grounded.
Please secure all loose Ethernet cables and antenna cables to the pole or mast approximately 30cm from the device, so that the cable weight is not pulling the ports and connectors.

Safety Notice

Electric shock hazard. This equipment is to be serviced by trained personnel only. This is a class A device, operating it near residential radio equipment could cause radio interference.

Extension slots and ports

- Five Gigabit Ethernet ports, supporting automatic cross/straight cable correction (Auto MDI/X), so you can use either straight or cross-over cables for connecting to other network devices.
- One integrated wireless 5GHz 802.11a/n/ac, 2x2 MIMO with built in grid antenna, max gain 7.5dBi.

Buttons and Jumpers

The reset button has the following functions:

- Hold this button during boot time until LED light starts flashing, release the button to reset RouterOS configuration (total 5 seconds).
- Keep holding for 5 more seconds, LED turns solid, release now to turn on CAP mode. The device will now look for a CAPsMAN server (total 10 seconds).
- Or Keep holding the button for 5 more seconds until LED turns off, then release it to make the RouterBOARD look for Netinstall servers (total 15 seconds).

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 RouterOS software with the version number v6.46. at or above what is indicated in the RouterOS menu /system resource. Other operating systems have not been tested.
Federal Communication Commission Interference Statement

FCC ID: TV7OMNITIKPG5HACD

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

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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. This device and its antenna must not be co-located or operation in conjunction with any other antenna or transmitter.

IMPORTANT: Exposure to Radio Frequency Radiation.

This equipment complies with the FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 cm between the radiator and any part of your body.

Antenna Installation. WARNING: It is installer’s responsibility to ensure that when using the authorized antennas in the United States (or where FCC rules apply); only those antennas certified with the product are used. The use of any antenna other than those certified with the product is expressly forbidden in accordance to FCC rules CFR47 part 15.204. The installer should configure the output power level of antennas, according to country regulations and per antenna type. Professional installation is required of equipment with connectors to ensure compliance with health and safety issues.
Innovation, Science and Economic Development Canada

IC 7442A-OMNTKG5AC

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada’s licence-exempt RSS(s). Operation is subject to the following two conditions:

1. This device may not cause interference;
2. This device must accept any interference, including interference that may cause undesired operation of the device.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique 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;
2. L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est.

IMPORTANT: Exposure to Radio Frequency Radiation.

This equipment complies with the IC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 cm between the radiator and any part of your body.

Cet équipement est conforme aux limites d'exposition au rayonnement IC définies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé à une distance minimale de 20 cm entre le radiateur et toute partie de votre corps.

CAN ICES-3 (A)/NMB-3(A)

The device for operation in the band 5150–5250 MHz is only for indoor use to reduce the potential for harmful interference to co-channel mobile satellite systems.

les dispositifs fonctionnant dans la bande de 5150 à 5250 MHz sont réservés uniquement pour une utilisation à l'intérieur afin de réduire les risques de brouillage préjudiciable aux systèmes de satellites mobiles utilisant les mêmes canaux.
5470-5725 MHz
5250-5350 MHz
5150-5250 MHz

Frequency range

Channels used

Maximum Output Power (EIRP)

Restriction

2412-2472 MHz
1 - 13
20 dBm
Without any restriction to use in all EU Member States

2412-2472 MHz
14 - 24
13 dBm
Restricted to indoor use only

* 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 radio devices must be professionally installed!

Note: 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.