

# OmniTIK series

This User Manual covers OmniTik models:

RBOmniTikG-5HacD (OmniTIK 5 ac), RBOmniTikPG-5HacD (OmniTIK 5 PoE ac), RBOmniTikUPA-5HnD (OmniTIK 5 PoE), RBOmniTikU-5HnD (OmniTIK 5)



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 for 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+>](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 a 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, 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: <https://mt.lv/help>.

In case an IP connection is not available, the Winbox tool (<https://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 12-57 V DC .

The power consumption under maximum load can reach 14 W.

PoE version accepts 12-57 V DC with a maximum consumption of 18W, 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 (the 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 the 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 version number v6.46. at or above what is indicated in the RouterOS menu /system resource. Other operating systems have not been tested.

## Compliance Information

### Información México:

Rango de frecuencia: 5725-5850 MHz (30 dBm). Los canales de frecuencia disponibles pueden variar según el modelo y la certificación del producto.

Número de Certificado de Homologación (IFT): Ver la etiqueta del producto.

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>.

## Federal Communication Commission Interference Statement



This equipment has been tested and found to comply with the limits for a Class A digital device, under 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 by the instructions, 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.

Antenna Installation WARNING: It is the installer's responsibility to ensure that when using the authorized antennas in the USA (or where FCC rules apply); only those antennas certified with the product are to be used. The installer should configure the output power level of antennas, according to country regulations and per antenna type. Professional installation is required for equipment with connectors to ensure compliance with health and safety issues.

**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 30 cm between the radiator and any part of your body.

**LIST OF APPROVED 5 GHz ANTENNAS:**

8.5 dBi Omni Directional (Model: MT-482016/N/A)

24 dBi Panel Antenna (Model: PA58-24-ANT)

32 dBi Dish Antenna (Model: HDDA5W-32-DP2)

The same type of antenna and lower antenna gain than those listed above may also be used in accordance with certification.

## Innovation, Science and Economic Development Canada

This device contains license-exempt transmitter(s)/receiver(s) that comply with Innovation, Science, and Economic Development Canada's license-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 susceptible d'en compromettre le fonctionnement.

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

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

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

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 5 150 à 5 250 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.

Antenna Installation WARNING: It is the installer's responsibility to ensure that when using the authorized antennas in Canada (or where IC rules apply); only those antennas certified with the product are to be used. 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.

**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 30 cm between the radiator and any part of your body.

**LIST OF APPROVED 5 GHz ANTENNAS:**

8.5 dBi Omni Directional (Model: MT-482016/N/A)

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## CE Declaration of Conformity

|    |   |
|----|---|
| BG | С настоящото Mikrotikls SIA декларира, че този тип радиосъоръжение RouterBOARD е в съответствие с Директива 2014/53/ЕС. Цялостният текст на ЕС декларацията за съответствие може да се намери на следния интернет адрес: <a href="https://mikrotik.com/products">https://mikrotik.com/products</a>                    |
| CS | Tímto Mikrotikls SIA prohlašuje, že typ rádiového zařízení RouterBOARD je v souladu se směrnicí 2014/53/EU. Úplné znění EU prohlášení o shodě je k dispozici na této internetové adrese: <a href="https://mikrotik.com/products">https://mikrotik.com/products</a>  |
| DA | Hermed erklærer Mikrotikls SIA, at radioudstyrstypen RouterBOARD er i overensstemmelse med direktiv 2014/53/EU. EU-overensstemmelseserklæringens fulde tekst kan findes på følgende internetadresse: <a href="https://mikrotik.com/products">https://mikrotik.com/products</a>  |
| DE | Hiermit erklärt Mikrotikls SIA, dass der Funkanlagentyp RouterBOARD der Richtlinie 2014/53/EU entspricht. Der vollständige Text der EU-Konformitätserklärung ist unter der folgenden Internetadresse verfügbar: <a href="https://mikrotik.com/products">https://mikrotik.com/products</a>                             |
| EL | Με την παρούσα ο/η Mikrotikls SIA, δηλώνει ότι ο ραδιοεξοπλισμός RouterBOARD πληροί την οδηγία 2014/53/ΕΕ. Το πλήρες κείμενο της δήλωσης συμμόρφωσης ΕΕ διατίθεται στην ακόλουθη ιστοσελίδα στο διαδίκτυο: <a href="https://mikrotik.com/products">https://mikrotik.com/products</a>                                  |
| EN | Hereby, Mikrotikls SIA declares that the radio equipment type RouterBOARD is in compliance with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address: <a href="https://mikrotik.com/products">https://mikrotik.com/products</a>                     |
| ES | Por la presente, Mikrotikls SIA declara que el tipo de equipo radioeléctrico RouterBOARD es conforme con la Directiva 2014/53/UE. El texto completo de la declaración UE de conformidad está disponible en la dirección Internet siguiente: <a href="https://mikrotik.com/products">https://mikrotik.com/products</a> |
| ET | Käesolevaga deklareerib Mikrotikls SIA, et käesolev raadioseadme tüüp RouterBOARD vastab direktiivi 2014/53/EL nõuetele. ELi vastavusdeklaratsiooni täielik tekst on kättesaadav järgmisel internetiaadressil: <a href="https://mikrotik.com/products">https://mikrotik.com/products</a>                              |
| FI | Mikrotikls SIA vakuuttaa, että radiolaitetyyppi RouterBOARD on direktiivin 2014/53/EU mukainen. EU-vaatimustenmukaisuusvakuutuksen täysimittainen teksti on saatavilla seuraavassa internetosoitteessa: <a href="https://mikrotik.com/products">https://mikrotik.com/products</a>                                     |
| FR | Le soussigné, Mikrotikls SIA, déclare que l'équipement radioélectrique du type RouterBOARD est conforme à la directive 2014/53/UE. Le texte complet de la déclaration UE de conformité est disponible à l'adresse internet suivante: <a href="https://mikrotik.com/products">https://mikrotik.com/products</a>        |
| HR | Mikrotikls SIA ovime izjavljuje da je radijska oprema tipa RouterBOARD u skladu s Direktivom 2014/53/EU. Cjeloviti tekst EU izjave o sukladnosti dostupan je na sljedećoj internetskoj adresi: <a href="https://mikrotik.com/products">https://mikrotik.com/products</a>  |
| HU | Mikrotikls SIA igazolja, hogy a RouterBOARD típusú rádióberendezés megfelel a 2014/53/EU irányelvnek. Az EU-megfelelőségi nyilatkozat teljes szövege elérhető a következő internetes címen: <a href="https://mikrotik.com/products">https://mikrotik.com/products</a>   |
| IT | Il fabbricante, Mikrotikls SIA, dichiara che il tipo di apparecchiatura radio RouterBOARD è conforme alla direttiva 2014/53/UE. Il testo completo della dichiarazione di conformità UE è disponibile al seguente indirizzo Internet: <a href="https://mikrotik.com/products">https://mikrotik.com/products</a>        |
| IS | Hér með lýsir Mikrotikls SIA því yfir að RouterBOARD er í samræmi við grunnkröfur og aðrar kröfur, sem gerðar eru í tilskipun 2014/53/EU. Fullur texti ESB samræmisýfirlýsingar er að finna á eftirfarandi veffangi: <a href="https://mikrotik.com/products">https://mikrotik.com/products</a>                        |
| LT | Aš, Mikrotikls SIA, patvirtinu, kad radijo įrenginių tipas RouterBOARD atitinka Direktyvą 2014/53/ES. Visas ES atitikties deklaracijos tekstas prieinamas šiuo interneto adresu: <a href="https://mikrotik.com/products">https://mikrotik.com/products</a>  |
| LV | Ar šo Mikrotikls SIA deklarē, ka radioiekārta RouterBOARD atbilst Direktīvai 2014/53/ES. Pilns ES atbilstības deklarācijas teksts ir pieejams šādā interneta vietnē: <a href="https://mikrotik.com/products">https://mikrotik.com/products</a>  |
| MT | B'dan, Mikrotikls SIA, niddikjara li dan it-tip ta' taghmir tar-radju RouterBOARD huwa konformi mad-Direttiva 2014/53/UE. It-test kollu tad-dikjarazzjoni ta' konformità tal-UE huwa disponibbli f'dan l-indirizz tal-Internet li gej: <a href="https://mikrotik.com/products">https://mikrotik.com/products</a>      |
| NL | Hierbij verklaar ik, Mikrotikls SIA, dat het type radioapparatuur RouterBOARD conform is met Richtlijn 2014/53/EU. De volledige tekst van de EU-conformiteitsverklaring kan worden geraadpleegd op het volgende internetadres: <a href="https://mikrotik.com/products">https://mikrotik.com/products</a>              |
| NO | Mikrotikls SIA erklærer herved at utstyret RouterBOARD er i samsvar med de grunnleggende krav og øvrige relevante krav i direktiv 2014/53/EU. Den fulle teksten til EU-samsvarserklæringen er tilgjengelig på følgende internettadresse: <a href="https://mikrotik.com/products">https://mikrotik.com/products</a>    |

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| PL | MikroTiks SIA niniejszym oświadczam, że typ urządzenia radiowego RouterBOARD jest zgodny z dyrektywą 2014/53/UE. Pełny tekst deklaracji zgodności UE jest dostępny pod następującym adresem internetowym: <a href="https://mikrotik.com/products">https://mikrotik.com/products</a>  |
| PT | O(a) abaixo assinado(a) MikroTiks SIA declara que o presente tipo de equipamento de rádio RouterBOARD está em conformidade com a Diretiva 2014/53/UE. O texto integral da declaração de conformidade está disponível no seguinte endereço de Internet: <a href="https://mikrotik.com/products">https://mikrotik.com/products</a> |
| RO | Prin prezenta, MikroTiks SIA declară că tipul de echipamente radio RouterBOARD este în conformitate cu Directiva 2014/53/UE. Textul integral al declarației UE de conformitate este disponibil la următoarea adresă internet: <a href="https://mikrotik.com/products">https://mikrotik.com/products</a>                          |
| SK | MikroTiks SIA týmto vyhlasuje, že rádiové zariadenie typu RouterBOARD je v súlade so smernicou 2014/53/EÚ. Úplné EÚ vyhlásenie o zhode je k dispozícii na tejto internetovej adrese: <a href="https://mikrotik.com/products">https://mikrotik.com/products</a>   |
| SL | MikroTiks SIA potrjuje, da je tip radijske opreme RouterBOARD skladen z Direktivo 2014/53/EU. Celotno besedilo izjave EU o skladnosti je na voljo na naslednjem spletnem naslovu: <a href="https://mikrotik.com/products">https://mikrotik.com/products</a>  |
| SV | Härmed försäkrar MikroTiks SIA att denna typ av radioutrustning RouterBOARD överensstämmer med direktiv 2014/53/EU. Den fullständiga texten till EU-försäkran om överensstämmelse finns på följande webbadress: <a href="https://mikrotik.com/products">https://mikrotik.com/products</a>  |

**Warning! 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.**

## MPE statement

This equipment complies with EU radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance of 30 cm between the radiator and your body. In RouterOS you must specify your country, to make sure local wireless regulations are observed.

## Operating Frequency and Power

| Frequency range (for applicable models) | Channels used | Maximum Output Power (EIRP) |
|---|---------------|-----------------------------|
| 5470-5725 MHz                           | 100 - 140     | 27 dBm                      |



This MikroTik device meets Maximum transmit power limits per ETSI regulations. For more detailed information see the Declaration of Conformity above.