

User Manual - Metal 52 ac

The RBMetalG-52SHPacn Metal comes preinstalled in an outdoor case, with a built-in wireless interface, an N-Male antenna connector, and one 10/100/1000 Ethernet connector which supports MDI-X auto-detection. The device is packaged with a 24 V power adapter, a PoE injector, and two mounting loops. Several models are available (dual-band, single band, AP and CPE variants).

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 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.

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.

Exposure to Radio Frequency Radiation: This MikroTik equipment complies with the FCC, IC, and European Union radiation exposure limits set forth for an uncontrolled environment. This MikroTik device should be installed and operated no closer than 20 centimeters from your body, occupational user, or the general public.

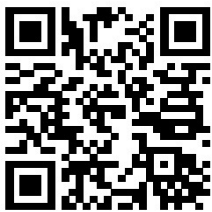
Connecting

1. Connect the antenna to the N-Male connector (see "[Antenna usage](#)");
2. Open the cover of the Ethernet port (see "[Opening Ethernet cover](#)");
3. Guide your cable through the cover and connect to the Ethernet port. (see "[Opening Ethernet cover](#)");
4. The device accepts 10-30 V Passive PoE from a PoE injector. The included injector should be connected with the "Data" end into a PC, the "Data + Power" port should be connected to the device, by using an Ethernet cable of the desired length (not included);
5. Use the provided rubber insulator to put on the Ethernet cable, and push it into the case opening, so that the opening is tightly closed;

6. Download the configuration tool <https://mt.lv/winbox>;
7. Open WinBox Neighbors tab;
8. Search for the device and connect using MAC address;
9. Default IP: 192.168.88.1, user name: *admin*, no password (or, for some models, check user and wireless passwords on the sticker);
10. Download the latest RouterOS software from <https://mikrotik.com/download>;
11. Choose MIPSBE packages, and save them to your PC;
12. Open WinBox and upload downloaded packages, drag and drop into any windows;
13. Restart the device;
14. Connect again and in *QuickSet* menu set your Country, to apply country regulation settings;
15. Secure your device and set a strong password;

MikroTik mobile app

Use the MikroTik smartphone app to configure your router in the field, or to apply the most basic initial settings for your MikroTik home access point.



1. Scan QR code and choose your preferred OS.
2. Install and open applications.
3. By default, the IP address and user name will be already entered.
4. Click Connect to establish a connection to your device through a wireless network.
5. Choose Quick setup and application will guide you through all basic configuration settings in a couple of easy steps.
6. An advanced menu is available to fully configure all necessary settings.

Powering

The device accepts powering from an Ethernet port (Passive PoE). Under maximum load, the power consumption of this device is 11 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.

Configuration

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 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).

Mounting

The device is to be mounted vertically so that the Ethernet cable points downwards.

Mounting and configuration of this device should be done by a qualified person.

If you wish to tighten the device to a pole, you can do it with the provided mounting loops. The device comes bundled with two mounting loops – guide the loops around the device through the provided edge markings, and around the pole where it will be mounted.

An electric tape can be used to increase friction between materials use it between clamps and the mounting surface. It will help to hold the device in place. The mounting hose clamp is provided with the package.



1. Guide hose clamp through the opening on the back of the device.
2. Attach to the pole or mast.
3. Align and secure by hose clamp screw using PH2 screwdriver.
The device should be placed by the antenna facing upwards.
You should avoid connecting a loose Ethernet cable to the Ethernet port, secure the cable to a wall or the pole, so that the cable weight is not pulling the port. It is recommended to secure the Ethernet cable

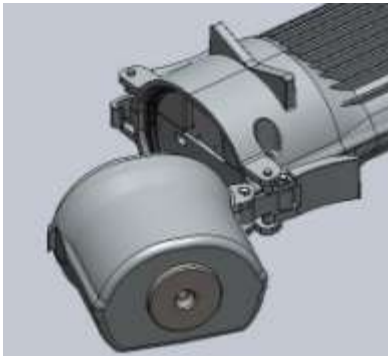
less than 2m from the device. This is to ensure that the cable doesn't damage the port by its weight or doesn't fall out.

When mounting, please ensure that cable feed is pointing downwards.

The IP rating scale of this device is IP54. We recommend using Cat6 shielded cables.

Warning! This equipment should be installed and operated with a minimum distance of 20 cm between the device and your body. Operation of this equipment in the residential environment could cause radio interference.

Opening Ethernet cover



1. To open the cover, release clips for both fasteners and cover will be free to open.
2. Guide your Ethernet cable through the rubber seal in the cover opening.
3. Crimp RJ-45 connector on the cable and connect with Ethernet port.

Antenna usage

Attach antenna by screwing it to the connector located on the device.



Please connect and disconnect the antenna, when the device is turned off!

Reset button

The reset button has three 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 RBMetalG-52SHPacn 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.

Specifications

For more information about this product, specification and pictures please visit our web page: <https://mikrotik.com/product/RBMetalG-52SHPacn>

RBMetalG-52SHPacn-US (USA) is factory locked for 2412-2462MHz, 5170-5250MHz and 5725-5835MHz frequencies. This lock can not be removed.

RBMetalG-52SHPacn (International) supports 2412-2484MHz and 5150MHz-5875MHz range (Specific frequency range can be limited by country regulations).

Accessories

Package includes the following accessories that come with the device:

- EU/US Switching Power Supply 24 V = 0.8A, 19.2 W.
- 2.4Ghz/5Ghz Dual Band OMNI Antenna 6 dBi for N FEMALE, Grey color, PVC housing, 285 mm length.
- Gigabit POE injector.
- Plastic tie strap fastener 2 pcs.
- Hose clamp 50 / 70 2 pcs.
- N-Male to N-Female Right Angle Adapter.

Operating system support

The device supports RouterOS software version 6.46. The specific factory-installed version number is indicated in the RouterOS menu /system resource. Other operating systems have not been tested.

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

Model	FCC ID
RBMetalG-52SHPacn	TV7MTLG52SHP N



This equipment has been tested and found to comply with the FCC 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.

Antenna Installation. WARNING: It is the 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 with 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 for equipment with connectors to ensure compliance with health and safety issues.

LIST OF APPROVED 2.4 GHz ANTENNAS:

- 24 dBi Dish DC 24-HD-PFIP
- 20 dBi Panel WLP-2450-20
- 17 dBi Sector SA 24-90-17-WB
- 15 dBi Omni Directional (pole) WL0-2450-15
- 13 dBi Omni Directional (hor. Polarization) HP, 0DH 24-13

LIST OF APPROVED 5GHz ANTENNAS:

- 8.5 dBi Omni MTI Wireless MT-482016NA
- 24 dBi Panel Pacific Wireless PA58-24
- 32 dBi Dish Pacific Wireless HDDA5W-32-DP

Antennas of the same type and lower gain than those listed above may be used in compliance with certification.

Innovation, Science and Economic Development Canada

Model	IC
RBMetalG-52SHPacn	7442A-MG52SHPAC

This device complies with Industry Canada licence-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 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.

UKCA marking



Eurasian Conformity Mark

Частотный диапазон	Мощность передатчика
2400-2483.5 МГц, 5150-5350 МГц, 5650-5850 МГц	≤100 мВт

*Доступные частотные каналы могут различаться в зависимости от модели продукта и сертификации.

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: Mikrotiks 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 ЕАС, как показано ниже:



Norma Oficial Mexicana

Rango de frecuencia (potencia de salida máxima): 2400-2483.5 MHz (30 dBm), 5725-5850 MHz (30 dBm). Los canales de frecuencia disponibles pueden variar según el modelo y la certificación 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>.

The National Commission for the State Regulation of Communications and Informatization by Ukraine

Виробник: Mikrotikls SIA, Brivibas gatve 214i Рига, Латвія, LV1039.


Робоча частота (Максимальна вихідна потужність): 2400-2483.5 МГц (30 дБм), 5150-5250 МГц (23 дБм), 5250-5350 МГц (20 дБм), 5470-5725 МГц (27 дБм).

Справжнім Mikrotikls SIA заявляє, що маршрутизатор відповідає основним вимогам та іншим відповідним положенням директиви 2014/53/ЕС, а також суттєвим вимогам Технічного регламенту радіообладнання, затвердженого постановою Кабінету Міністрів України від 24 травня 2017 року № 355.

Для експлуатації в Україні необхідно отримати дозвіл на експлуатацію у порядку, затвердженому рішенням НКРЗІ від 01.11.2012 № 559, зареєстрованому в Міністерстві юстиції України 03.01.2013 за № 57/22589.

CE Declaration of Conformity

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

Hereby, Mikrotikls SIA declares that the radio equipment type RBMetalG-52SHПacн is in compliance with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address: <https://mikrotik.com/products> 

Frequency bands terms of use

Frequency range (for applicable models)	Channels used	Maximum Output Power (EIRP)	Restriction

2412-2472 MHz	1 - 13	20 dBm	Without any restriction to use in all EU Member States
5150-5250 MHz	26 - 48	23 dBm	Restricted to indoor use only*
5250-5350 MHz	52 - 64	20 dBm	Restricted to indoor use only*
5470-5725 MHz	100 - 140	27 dBm	Without any restriction to use in all EU Member States

** 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!*

This MikroTik device meets Maximum WLAN transmit power limits per ETSI regulations. For more detailed information see Declaration of Conformity above / Dieses MikroTik-Gerät erfüllt die maximalen WLAN- Sendeleistung Grenzwerte gemäß ETSI-Bestimmungen. Weitere Informationen finden Sie oben unter Konformitätserklärung / Cet appareil MikroTik respecte les limites maximales de puissance de transmission WLAN conformément aux réglementations ETSI. Pour plus d'informations, voir la déclaration de conformité ci-dessus / Questo dispositivo MikroTik è conforme ai limiti massimi di potenza di trasmissione WLAN in conformità con le normative ETSI. Per ulteriori informazioni, consultare la dichiarazione di conformità sopra / Este dispositivo MikroTik cumple con los límites máximos de potencia de transmisión WLAN de acuerdo con las regulaciones ETSI. Para obtener más información, consulte la declaración de conformidad anterior / Это устройство MikroTik соответствует максимальным пределам мощности передачи WLAN в соответствии с правилами ETSI. Для получения дополнительной информации см. Декларацию соответствия выше.



The WLAN function for this device is restricted to indoor use only when operating in the 5150 to 5350 MHz frequency range. / Die WLAN-Funktion dieses Geräts ist nur für die Verwendung in Innenräumen im Frequenzbereich 5150 bis 5350 MHz beschränkt. / La fonction WLAN de cet appareil est limitée à une utilisation en intérieur uniquement lorsqu'il fonctionne dans la gamme de fréquences 5150 à 5350 MHz. / La funzione WLAN per questo dispositivo è limitata all'uso interno solo quando si opera nella gamma di frequenza da 5150 a 5350 MHz. / La función WLAN para este dispositivo está restringida al uso en interiores solo cuando se opera en el rango de frecuencia de 5150 a 5350 MHz. / Функция WLAN для этого устройства ограничена использованием внутри помещения только при работе в диапазоне частот от 5150 до 5350 МГц.

Note. The 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.