



mikroTIK LTE18 ax mANTBox 52 15s Routers and Wireless User Manual

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LTE18 ax mANTBox 52 15s Routers and Wireless



User Manual – mANTBox 52 15s

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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.

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

This equipment is to be installed by trained and qualified personnel, as per these installation instructions. The installer is responsible for obtaining any required local or national safety inspections of the structural integrity of the installation by the local authority/inspection department.

All installation methods for mounting an access point on any wall surface are subject to the acceptance of local jurisdiction.

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

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

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.

First use

1. Open cover (see Opening cover).
2. Connect the Ethernet cable from your PC to the Ethernet port.
3. Plug the device into the power source (see Powering).
4. Download the Winbox (see Configuration).
5. Open and search the MAC address in the Neighbors tab.
6. Click on the MAC address and connect.
7. The default IP is not set, the user name: is admin and there is no password (or, for some models, check user and wireless passwords on the sticker).
8. Update the device to the latest RouterOS version, and make sure that the device has an internet connection

<https://mt.lv/configuration>.

9. Set a Country, to make sure local regulations are observed.
10. Set the antenna gain, depending on the antenna used.
11. Set up your password.
12. To manually update the device, please go to <https://mikrotik.com/download>.
13. Choose (ARM) packages for this device and download them to your PC.
14. Upload downloaded packages to the (Winbox) (Files) menu and reboot the device.
15. Updating your RouterOS software to the latest version will ensure the best performance, stability, and updates, <https://mt.lv/upgrade>.

Powering

The device accepts power in the following ways:

- The Ethernet port accepts 802.3af/at PoE 12-57 V DC .
 - Direct-input power jack (5.5 mm outside and 2 mm inside, female, pin positive plug) accepts 12-57 V DC .
- The power consumption under maximum load can reach 21 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.

Mounting

The mANTbox comes with a QuickMount adapter that can be attached to a wall using the included screws, or attached to a pole, using the included metal mounting ring. The QuickMount allows the device to be adjusted horizontally and vertically.

1. Attach the quick mount to the back of the device.



2. Attach the device to the pole and secure it with a provided steel clamp. Clamping diameter 35 – 70 mm.



3. Please 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.

We recommend using Cat6 shielded cables.

Warning! This equipment should be installed and operated with a minimum distance of 25 cm between the device and your body. The operation of this equipment in the residential environment could cause radio interference.

Configuration

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>.

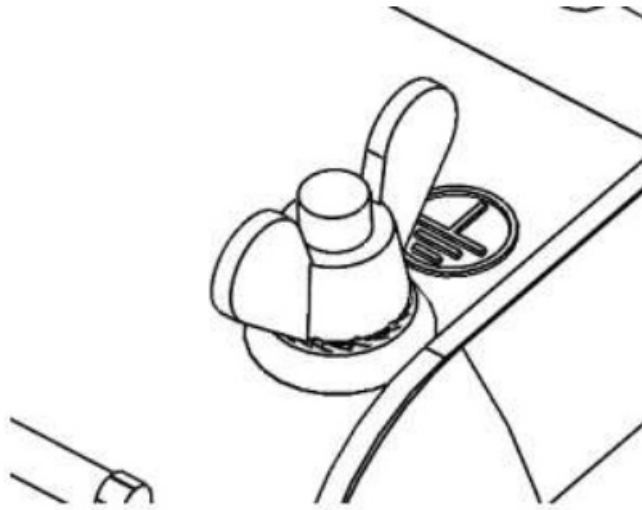
In case an IP connection is not available, the Winbox tool (<https://mt.lv/winbox>) can be used to connect to the MAC address of the device from the LAN side (all access is blocked from the internet port by default).

First-time configuration <https://mt.lv/configuration>;

The device upgrade <https://mt.lv/upgrade>;

Grounding

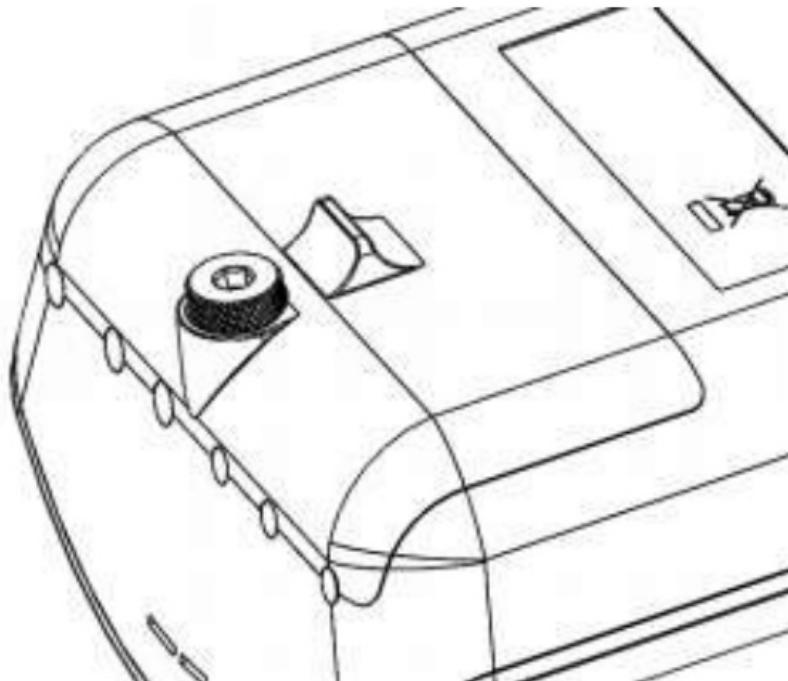
The installation infrastructure (towers and masts), as well as the router itself, must be properly grounded. The device includes a grounding wire attachment screw behind the case door. Attach your grounding wire to the grounding screw, then attach the other end of the grounding wire to the grounded mast. This is to substantially reduce the risk of ESD and lightning damage.



The device includes a grounding connection (marked).

Opening cover

To open the cover, please turn the captive screw by hand anti-clockwise and lift it.



Expansion Slots and Ports

- Built-in wireless interface 5 GHz and 2.4 GHz.
- One SFP port for 1.25Gbit modules, DDMI support.
- Gigabit Ethernet port, supporting automatic cross/straight cable correction (Auto MDI/X), so you can use either straight or crossover cable for connecting to other network devices.

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 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.

Accessories

The package includes the following accessories that come with the device:

- Switching Power Supply DC 24 V;
- Hose Clamp, 35-70 mm;
- Fastening set K-41;
- Gigabit POE injector cable with shielded connector;
- Mounting bracket.

Please visit wiki pages for the MikroTik SFP module compatibility table:

https://wiki.mikrotik.com/wiki/MikroTik_SFP_module_compatibility_table

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
RBD22UGS-5HPacD2HnD15S	TV7D2352A C

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.

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.

LIST OF APPROVED 2.4 GHz ANTENNAS:

3.6 dBi Dipole Antenna (Model: HGO-antenna-OUT)

5 dBi Dipole Antenna HP (Model: DA-2450-05RP-SMA-01 (ACOMNIRPSMA))

LIST OF APPROVED 5 GHz ANTENNAS:

6.68 dBi Dipole Antenna (Model: HGO-antenna-OUT)

19 dBi Sector Antenna (Model: MTAS-5G-19D120)

30 dBi Parabolic Dish Antenna (Model: MTAS-5G-30D3)

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

IMPORTANT: Exposure to Radio Frequency Radiation.

This equipment complies with the FCC 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.

Innovation, Science and Economic Development Canada

Model	IC
RBD22UGS-5HPacD2HnD15S	7442AD2352AC

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.

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

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

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 for equipment with connectors to ensure compliance with health and safety issues.

LIST OF APPROVED 2.4 GHz ANTENNAS:

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

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.

UKCA Marking



Eurasian Conformity Mark

CE Declaration of Conformity

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

Hereby, Mikrotikls SIA declares that the radio equipment type RBD22UGS-5HPacD2HnD-15S 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




The WLAN function for this device is restricted to indoor use only when operating in the 5150 to 5350 MHz frequency range.







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.



Documents / Resources

 <p>User Manual - mANTBox 52 15s</p> <p>Safety Warnings</p> <p>Read and understand the safety warnings and instructions before using the device. The device is not to be used in the following situations:</p> <ul style="list-style-type: none"> When the device is used in the vicinity of flammable or explosive materials. When the device is used in the vicinity of medical equipment. When the device is used in the vicinity of aircraft. When the device is used in the vicinity of power lines. When the device is used in the vicinity of other electronic equipment. <p>First use</p> <ol style="list-style-type: none"> Unpack the device from the box. Check the device for damage. Plug the device into the power source. 	<p>mikroTik LTE18 ax mANTBox 52 15s Routers and Wireless [pdf] User Manual</p> <p>LTE18 ax mANTBox 52 15s Routers and Wireless, LTE18, ax mANTBox 52 15s Routers and Wireless, 15s Routers and Wireless, Routers and Wireless</p>
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References

-  [MikroTik Routers and Wireless](#)
-  [MikroTik Routers and Wireless - Buy](#)
-  [MikroTik Routers and Wireless - Buy](#)
-  [MikroTik Routers and Wireless - Software](#)
-  [MikroTik Routers and Wireless - Products](#)
-  [MikroTik SFP module compatibility table - MikroTik Wiki](#)