

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 is 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.



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.

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. Username is admin and there is no password. The default IP address from the Ethernet port is 192.168.88.1 for configuration if connecting without WinBox, then set the IP address of your computer to 19.168.88.2.
8. Update the device to the latest RouterOS version, 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 <https://mikrotik.com/download>.
13. Choose (ARM) packages for this device and download it 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 security 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. 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>.

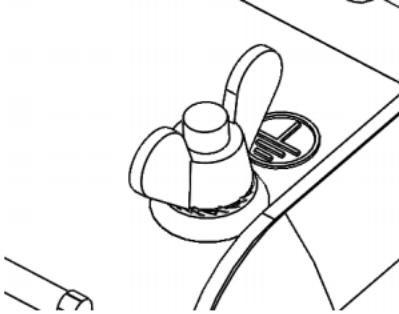
In case IP connection is not available, the Winbox tool (<https://mt.lv/winbox>) can be used to connect to the MAC address of the device from the LAN side (all access is blocked from the internet port by default).

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

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

Grounding

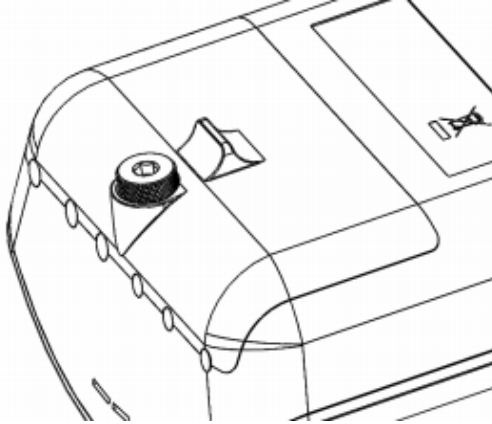
The installation infrastructure (towers and masts), as well as the router itself, must be properly grounded. The device includes a grounding wire attachment screw behind the case door. Attach your grounding wire to the grounding screw, then attach the other end of the grounding wire to the grounded mast.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

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.

Federal Communication Commission Interference Statement

FCC ID: TV7D2352AC

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 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 or more of the following measures:

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.

Innovation, Science and Economic Development Canada

IC: 7442A-D2352AC

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 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)

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

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CE Declaration of Conformity

BG	С настоящото Mikrotikls SIA декларира, че този тип радиосъоръжение RBD22UGS-5HPacD2HnD-15S е в съответствие с Директива 2014/53 /ЕС. Цялостният текст на ЕС декларацията за съответствие може да се намери на следния интернет адрес: https://mikrotik.com/products
CS	Tímto Mikrotikls SIA prohlašuje, že typ rádiového zařízení RBD22UGS-5HPacD2HnD-15S je v souladu se směrnicí 2014/53/EU. Úplné znění EU prohlášení o shodě je k dispozici na této internetové adrese: https://mikrotik.com/products
DA	Hermed erklærer Mikrotikls SIA , at radioudstyrstypen RBD22UGS-5HPacD2HnD-15S er i overensstemmelse med direktiv 2014/53/EU. EU-overensstemmelseserklæringens fulde tekst kan findes på følgende internetadresse: https://mikrotik.com/products
DE	Hiermit erkläre Mikrotikls SIA , dass der Funkanlagentyp RBD22UGS-5HPacD2HnD-15S der Richtlinie 2014/53/EU entspricht. Der vollständige Text der EU-Konformitätserklärung ist unter der folgenden Internetadresse verfügbar: https://mikrotik.com/products
EL	Με την παρούσα ο/η Mikrotikls SIA , δηλώνει ότι ο ραδιοεξοπλισμός RBD22UGS-5HPacD2HnD-15S πληροί την οδηγία 2014/53/ΕΕ. Το πλήρες κείμενο της δήλωσης συμμόρφωσης ΕΕ διατίθεται στην ακόλουθη ιστοσελίδα στο διαδίκτυο: https://mikrotik.com/products
EN	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
ES	Por la presente, Mikrotikls SIA declara que el tipo de equipo radioeléctrico RBD22UGS-5HPacD2HnD-15S es conforme con la Directiva 2014/53 /UE. El texto completo de la declaración UE de conformidad está disponible en la dirección Internet siguiente: https://mikrotik.com/products
ET	Käesolevaga deklareerib Mikrotikls SIA , et käesolev raadioseadme tüüp RBD22UGS-5HPacD2HnD-15S vastab direktiivi 2014/53/EL nõuetele. ELi vastavusdeklaratsiooni täielik tekst on kättesaadav järgmisel internetiaadressil: https://mikrotik.com/products
FI	Mikrotikls SIA vakuuttaa, että radiolaitetyyppi RBD22UGS-5HPacD2HnD-15S on direktiivin 2014/53/EU mukainen. EU-vaatimustenmukaisuusvakuutuksen täysimittainen teksti on saatavilla seuraavassa internetosoitteessa: https://mikrotik.com/products

FR	Le soussigné, MikroTiks SIA , déclare que l'équipement radioélectrique du type RBD22UGS-5HPacD2HnD-15S est conforme à la directive 2014/53 /UE. Le texte complet de la déclaration UE de conformité est disponible à l'adresse internet suivante: https://mikrotik.com/products
HR	MikroTiks SIA ovime izjavljuje da je radijska oprema tipa RBD22UGS-5HPacD2HnD-15S u skladu s Direktivom 2014/53/EU. Cjeloviti tekst EU izjave o sukladnosti dostupan je na sljedećoj internetskoj adresi: https://mikrotik.com/products
HU	MikroTiks SIA igazolja, hogy a RBD22UGS-5HPacD2HnD-15S típusú rádióberendezés megfelel a 2014/53/EU irányelvnek. Az EU-megfelelőségi nyilatkozat teljes szövege elérhető a következő internetes címen: https://mikrotik.com/products
IT	Il fabbricante, MikroTiks SIA , dichiara che il tipo di apparecchiatura radio RBD22UGS-5HPacD2HnD-15S è conforme alla direttiva 2014/53/UE. Il testo completo della dichiarazione di conformità UE è disponibile al seguente indirizzo Internet: https://mikrotik.com/products
IS	Hér með lýsir MikroTiks SIA því yfir að RBD22UGS-5HPacD2HnD-15S 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: https://mikrotik.com/products
LT	Aš, MikroTiks SIA , patvirtinu, kad radijo įrenginių tipas RBD22UGS-5HPacD2HnD-15S atitinka Direktyvą 2014/53/ES. Visas ES atitikties deklaracijos tekstas prieinamas šiuo interneto adresu: https://mikrotik.com/products
LV	Ar šo MikroTiks SIA deklarē, ka radioiekārta RBD22UGS-5HPacD2HnD-15S atbilst Direktīvai 2014/53/ES. Pilns ES atbilstības deklarācijas teksts ir pieejams šādā interneta vietnē: https://mikrotik.com/products
MT	B'dan, MikroTiks SIA , niddikjara li dan it-tip ta' tagħmir tar-radju RBD22UGS-5HPacD2HnD-15S 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 ġej: https://mikrotik.com/products
NL	Hierbij verklaar ik, MikroTiks SIA , dat het type radioapparatuur RBD22UGS-5HPacD2HnD-15S conform is met Richtlijn 2014/53/EU. De volledige tekst van de EU-conformiteitsverklaring kan worden geraadpleegd op het volgende internetadres: https://mikrotik.com/products
NO	MikroTiks SIA erklærer herved at utstyret RBD22UGS-5HPacD2HnD-15S 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 internetadresse: https://mikrotik.com/products
PL	MikroTiks SIA niniejszym oświadcza, że typ urządzenia radiowego RBD22UGS-5HPacD2HnD-15S jest zgodny z dyrektywą 2014/53/UE. Pełny tekst deklaracji zgodności UE jest dostępny pod następującym adresem internetowym: https://mikrotik.com/products
PT	O(a) abaixo assinado(a) MikroTiks SIA declara que o presente tipo de equipamento de rádio RBD22UGS-5HPacD2HnD-15S está em conformidade com a Diretiva 2014/53/UE. O texto integral da declaração de conformidade está disponível no seguinte endereço de Internet: https://mikrotik.com/products
RO	Prin prezenta, MikroTiks SIA declară că tipul de echipamente radio RBD22UGS-5HPacD2HnD-15S este în conformitate cu Directiva 2014/53/UE. Textul integral al declarației UE de conformitate este disponibil la următoarea adresă internet: https://mikrotik.com/products
SK	MikroTiks SIA týmto vyhlasuje, že rádiové zariadenie typu RBD22UGS-5HPacD2HnD-15S je v súlade so smernicou 2014/53/EÚ. Úplné EÚ vyhlásenie o zhode je k dispozícii na tejto internetovej adrese: https://mikrotik.com/products
SL	MikroTiks SIA potrjuje, da je tip radijske opreme RBD22UGS-5HPacD2HnD-15S skladen z Direktivo 2014/53/EU. Celotno besedilo izjave EU o skladnosti je na voljo na naslednjem spletnem naslovu: https://mikrotik.com/products
SV	Härmed försäkrar MikroTiks SIA att denna typ av radioutrustning RBD22UGS-5HPacD2HnD-15S överensstämmer med direktiv 2014/53/EU. Den fullständiga texten till EU-försäkran om överensstämmelse finns på följande webbadress: https://mikrotik.com/products

WLAN

Operating Frequency / Maximum output power	2400-2483.5 MHz / 20 dBm
Betriebsfrequenz / maximale Ausgangsleistung	5150-5250 MHz / 23 dBm
Fréquence de fonctionnement / puissance de sortie maximale	5250-5350 MHz / 20 dBm
Frequenza operativa / massima potenza di uscita	5470-5725 MHz / 27 dBm
Frecuencia de funcionamiento / potencia de salida máxima	
Рабочая частота / максимальная выходная мощность	

This MikroTik device meets Maximum WLAN and LTE transmit power limits per ETSI regulations. For more detailed information see Declaration of Conformity above / Dieses MikroTik-Gerät erfüllt die maximalen WLAN- und LTE-Sendeleistung Grenzwerte gemäß ETSI-Bestimmungen. Weitere Informationen finden Sie oben unter Konformitätserklärung / Cet appareil MikroTik respecte les limites maximales de puissance de transmission WLAN et LTE 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 e LTE 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 y LTE 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 и LTE 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.