# mANTBox  ax 15s

mANTBox  ax 15s (L22UGS-5HaxD2HaxD-15S)

## 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 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 device needs to be upgraded to RouterOS v7 or the latest version to ensure compliance with local authority regulations.

The mANTBox is a weatherproof outdoor device with a high-power wireless interface, and one Gigabit Ethernet connector, which supports MDI-X auto-detection. The device has a built-in sectoral antenna. The device is packaged with a power adapter, a PoE injector, and a mounting kit.

**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. Unscrew the lid screw by hand;
2. The device accepts 12-28 V Passive PoE from a PoE injector (please compensate voltage for loss due to cable length) or from the power jack;
3. Connect the device to the included PoE injector with Ethernet cable;
4. Connect the PoE injector into the computer;
5. Connect the power adapter to the PoE injector;
6. Download the WinBox configuration tool https://mt.lv/winbox;
7. There is no default IP address set, user name: *admin* and there is no password (or, for some models, check user and wireless passwords on the sticker), use the Neighbors tab and connect through the MAC address;
8. Once connected configure the device, so it has an active Internet connection https://mt.lv/configuration;
9. Upload downloaded packages to the WinBox Files menu and reboot the device. By upgrading your RouterOS software to the latest version, you can ensure optimal performance, stability, and security updates;
10. In the wifi-interface menu set up the following: Choose your country, to apply country regulation settings; SSID; mode; See the manual page: WiFi
11. Set up your wireless network security profile;

# Powering

The device comes with a 24 V 1.2 A power adapter. It can be used with the included PoE injector or the power jack. The device accepts 12-28 V for both methods. The maximum power consumption of the device is 11 W at 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.

# Configuration

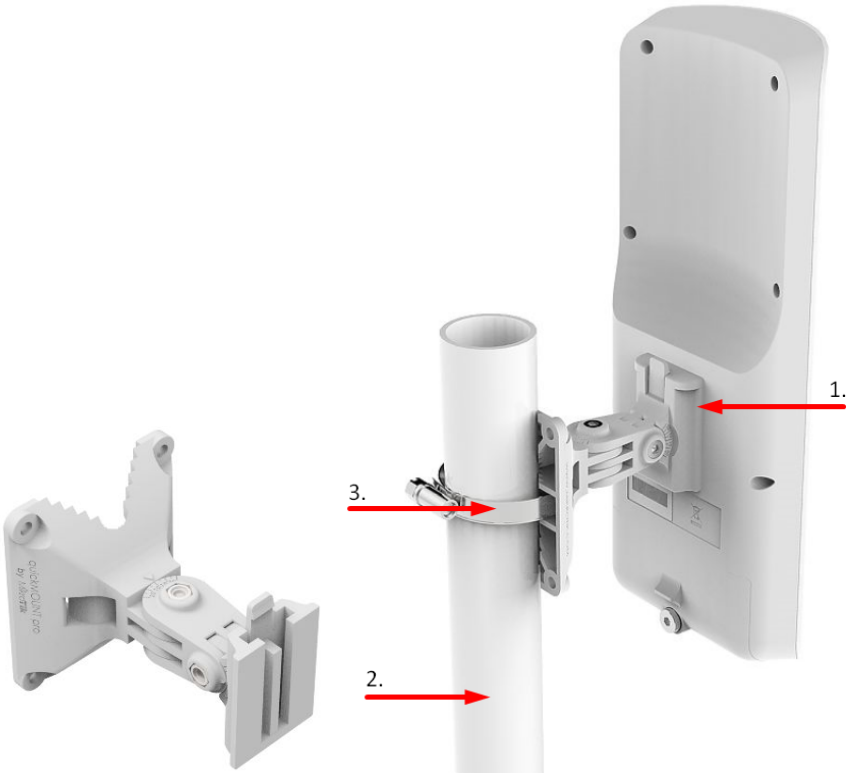
We recommend clicking the "Check for updates" button and updating your RouterOS software to the latest version to ensure the best performance and stability. RouterOS includes many configuration options in addition to what is described in this document. We suggest visiting the RouterOS documentation page 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).

# Mounting

The mANTbox 12s and 15s come 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.
3. Attach the device to the pole.
4. Secure it with a provided steel clamp. Clamping diameter 35 – 70 mm.

5. 
6. 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.

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. It is possible to connect a grounding wire to the device, by opening the lid, a grounding screw is provided there.

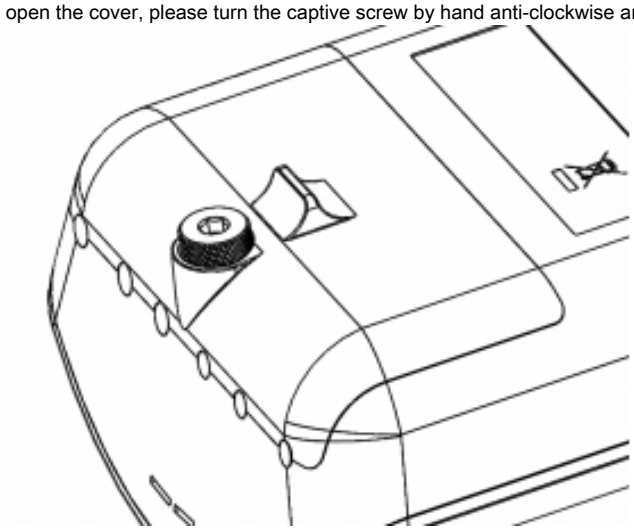
# Grounding

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

- Product code: L22UGS-5HaxD2HaxD-15S
- CPU: IPQ-5010 800 MHz
- CPU architecture: ARM
- CPU core count: 2
- Size of RAM: 256 MB
- RAM type: DDR3L
- Storage: 128 MB, NAND
- Operating system: RouterOS (License level 4)
- One 10/100/1000 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. The Ethernet port accepts 12-28V DC powering from a passive PoE injector.
- One SFP port for 2.5GBit modules, DDMI support.
- Built-in wireless interface, 2x2 MIMO, AP (RouterOS level 4 license)
- Wireless interface model: IPQ-5010 (2.4 GHz), QCN-6102 (5 GHz)
- Wireless: 2.4 GHz 802.11b/g/n/ax dual-chain; 5 GHz 802.11a/n/ac/ax dual-chain
- Antenna gain 2.4 GHz: 12 dBi
- Antenna gain 5 GHz: 15 dBi
- Wireless 5 GHz generation: Wi-Fi 6
- Dimensions 349 x 140 x 68 mm
- Operating temperature -40°C to +70°C
- IP 55

# 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 version 7. 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.