mAP 2nD Small Wireless AP Device User Manual

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The mAP 2nD is a small wireless AP device with 2 Ethernet ports, Ether1 supports powering by PoE, Ether2 supports PoE output for powering another device. Depending on software configuration, it can function as a wireless client, an access point or a repeater.

Contents

Quick Start

1. Connect your Internet cable to Ether1, and your PC to Ether2. If using the mAP to power another router using the PoE output feature, connect the router to Ether2, and use the built-in wireless AP to configure the mAP.
2. Set computer/router IP configuration to automatic (DHCP).
3. Wireless AP mode is enabled by default, you can connect to the SSID “MikroTik”. Log into your router from your web browser by opening 192.168.88.1 in the address bar.
4. We recommend clicking the “Check for updates” button and updating your RouterOS software to the latest version to ensure the best performance and stability.
5. Choose your country, to apply country regulation settings, and set up your password on the screen that loads.
6. The Ether2 port supports PoE output, with the auto-detection feature. This means you can connect Laptops and other non-PoE devices without damaging them. The PoE on Ether2 outputs approximately 2V below input voltage and supports up to 0.5 A (So provided 24V PSU will provide 22 V / 0.5 A output to the Ether2 PoE port).

Powering

The device accepts power from the power jack or the first Ethernet port (Passive PoE):

- DC power jack (5.5 mm outside and 2 mm inside diameter, female, pin positive plug) accepts 8-57 V DC .
- The first Ethernet port accepts passive Power over Ethernet 11-57 V DC .
- The mAP can also be powered with the built-in micro USB port, using the USB 5 V power.

Under maximum load, the power consumption of this device is 4W (when not using PoE output)
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.

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.

https://mikrotik.com/mobile_app

1. Scan QR code and choose your preferred OS.
2. Install and open application.
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 the 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.

Booting process

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 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). For recovery purposes, it is possible to boot the device for reinstallation network, see section Buttons and jumpers

Extension Slots and Ports

Two 10/100 Ethernet ports, supporting automatic cross/straight cable connection (Auto MDI/X), so you can use either straight or cross-over cables for connecting to other
network devices.
One Integrated Wireless 2.4GHz 802.11b/g/n 2×2 dual chain MIMO, Onboard PIF antennas, max gain 1.2dBi.
One micro USB 2.0 port.

Mounting

The device is designed to be used indoors and placed on a flat surface with all needed cables connecting to the front of the unit.
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. The operation of this equipment in the residential environment could cause radio interference.
https://help.mikrotik.com/docs/display/UM/mAP

Buttons and jumpers

RouterBOOT reset button has the following functions:

Hold this button during boot time until the LED light starts flashing, release the button to reset the 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 6. The specific factory-installed version number is indicated in the RouterOS menu /system resource. Other operating systems have not been tested.

Notice

- The Frequency band 5.470-5.725 GHz isn't allowed for commercial use.
- In case WLAN devices work with different ranges than the above regulations, then a customized firmware version from the manufacturer/supplier is required to be applied to the end-user equipment and also prevent the end-user from reconfiguration.
- For Outdoor Usage: End-user requires approval/license from the NTRA.
- Datasheet for any device is available on the official manufacturer website.
- Products with the letters "EG" at the end of their serial number have their wireless frequency range limited to 2.400 – 2.4835 GHz, the TX power is limited to 20dBm (EIRP).
- Products with the letters "EG" at the end of their serial number have their wireless frequency range limited to 5.150 – 5.250 GHz, the TX power is limited to 23dBm (EIRP).
- Products with the letters "EG" at the end of their serial number have their wireless frequency range limited to 5.250 – 5.350 GHz, the TX power is limited to 20dBm (EIRP).

 Please make sure the device has a locking package (firmware version from the manufacturer) which is required to be applied to the end-user equipment to prevent the end-user from reconfiguration. The product will be marked with country code "-EG". This device needs to be upgraded to 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.

Federal Communication Commission Interference Statement

FCC ID: TV7MAPL2ND
This equipment has been tested and found to comply with the 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 operated in conjunction with any other antenna or transmitter.
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 20 cm between the radiator and any part of your body.
Innovation, Science and Economic Development Canada
IC:7442A-MAP2ND
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. 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.
Cet equipement est conforme aux limites d'exposition au rayonnement IC definies pour un environnement non controle. Cet equipement doit etre installe et utilise a une distance minimale de 20 cm entre le radiateur et toute partie de votre corps.
CAN ICES-3 (B)/NMB-3(B)FCC
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.
CE Declaration of Conformity

Hereby, Mikrotīkls 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:
https://mikrotik.com/products

MPE statement

This equipment complies with EU 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 your body, unless specifically stated otherwise in page 1 of this document. In RouterOS you must specify your country, to make sure local wireless regulations are observed. **https://help.mikrotik.com/docs/display/UM/mAP**

Frequency bands terms of use

Frequency range (for applicable model	Channels used	Maximum Output Power (EIRP)	Restriction
2412-2472 MHz	13-Jan	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!
Note. 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.

Instruction manual: Connect the power adapter to turn on the device. Open 192.168.88.1 in your web browser, to configure it. More information on {+}https://mt.lv/help+ https://help.mikrotik.com/docs/display/UM/mAP

Documents / Resources

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