wAP LTE series

Quick start

1. Use a Phillips screwdriver to loosen the screw which secures the bottom lid. Once the screw snaps out of place, lid can be opened.
2. Power the unit using one of the methods described in the Powering section of this document
3. Wireless AP mode is enabled by default, you can connect from your computer to the SSID that begins with "MikroTik". The configuration interface is available via web browser. The address is http://192.168.88.1
4. The device is already preconfigured and ready to use, but we suggest to set a wireless password and a device password to secure your network and protect your device.

Powering

- The ethernet port accepts 9-30V passive PoE power. The box contains a 24V adapter and a PoE injector. Plug the included PoE injector into the first or internet port of the router that you will use in your LAN (or directly into your laptop) and attach an ethernet cable to the PoE injector. Connect the other end of this ethernet cable to the wAP LTE device. Plug the power supply into the PoE injector.
- Power jack (5.5mm outside and 2mm inside diameter, female, pin positive plug) supports 9-30V powering, the device comes with a 24V 0.8A power adapter.
- The automotive connector can be used to power the device from regular 12/24V connections in automobiles and buses.

Maximum power consumption at 24V is 4W without miniPCIe, and 7W with full load on the miniPCIe card.

Mounting

The device can be mounted in several ways: wall, ceiling or pole. The package includes a drill hole template, to help you with the ethernet cable installation and attachment to a ceiling or a wall. The package also includes a steel bracket to put on the other side of a dropdown ceiling tile and two screws and wall anchors.

To prepare the device for mounting, use a Philips screwdriver to remove the screw inside the unit, which will detach the mounting plate. Once the mounting plate is removed, use the drill hole template, to help you with cable installation and attachment to a ceiling or a wall. The template includes visual guides and instructions how to mount the unit.

Expansion slots and ports

- Built in 2GHz wireless access point module, AP/station/bridge/p2p modes are supported.
- One 10/100 ethernet port, supporting automatic cross/straight cable correction (Auto MDI/X). Either straight or crossover cable can be used for connecting to other network devices. The ethernet port accepts 9-30V DC powering from a passive PoE injector.
- miniPCIe slot and SIM slot (can't be used separately) to be used with a 3G/4G/LTE modem (some kits include it).

MiniPCIe slot usage

The device is equipped with a miniPCIe slot (a kit with preinstalled modem also available) to be used with an 3G/4G/LTE modem. A SIM slot is provided for use together with a miniPCIe modem. SIM slot is not usable separately.

To install the miniPCIe module, remove both screws below the power jack and slide out the wAP PCB board. Insert the miniPCIe modem, and secure it with two Philips screws which are already in place.

Attach the grey uFL connector to the MAIN antenna connector of the modem, attach the black cable to the other (or AUX) connector. It is possible to use external antennas for the modem, two SMA mounting holes are provided next to the reset button, or if you prefer to attach antennas to the case directly, SMA antennas can be mounted on the bottom of the case if you remove the two plastic hole covers first.

After you have reinserted the wAP board into the case, and secured it with the screws that were removed earlier, slide in the SIM card from your mobile operator into the SIM slot, with the chip facing up. The slot accepts miniSIM (2FF). The SIM slot protects the SIM card from falling out with a plastic latch. You can press the latch and then pull the SIM out using tweezers or a similar tool.

Buttons and jumpers

- **Loading the backup RouterBOOT loader**: Hold this button before applying power, release after three seconds since powering, to load backup boot loader. This might be necessary if the device is not operating because of a failed RouterBOOT upgrade. When you have started the device with the backup loader, you can either set RouterOS to force backup loader in the RouterBOARD settings, or have a chance to reinstall the failed RouterBOOT from an .fwf file (total 3 seconds).
- **Resetting the RouterOS configuration**: To reset RouterOS configuration keep holding this button for 2 more seconds until the LED light starts flashing, then release the button (total 5 seconds).
- **Enabling CAPs mode**: To connect this device to a wireless network managed by CAPsMAN, keep holding the button for 5 more seconds until the LED turns solid, release now to turn on CAPs mode (total 10 seconds).
- **Starting the RouterBOARD in Netinstall mode**: Keep holding the button for 5 more seconds until the LED turns off, then release it to make the RouterBOARD search for Netinstall servers. You can also keep the button pressed until the device shows up in the Netinstall window (total 15 seconds).

Configuration

Connect to wireless SSID that begins with "MikroTik" and open **http://192.168.88.1** in your web browser. Username is **admin** and there is no password. In case IP connection is not available, WinBox can be used to connect to the MAC address of the device.

More information here: **http://wiki.mikrotik.com/wiki/First_time_startup**

In case you wish to boot the device from network, for example using MikroTik Netinstall, hold the RESET button of the device when powering it on until the LED light turns off, and it will start to search for Netinstall servers. See below for more details.

More information about configuring your device can be found on MikroTik RouterOS documentation page: **http://mt.lv/help**

Operating system support

Currently tested operating system is MikroTik RouterOS (starting from version v6.38).

Federal communication commission interference statement

RBwAPR-2nD: FCC IDTV7WAPR2ND, IC ID 7442A-WAPR2ND

R11e-LTE: FCC ID TV7R11ELTE

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 operation in conjunction with any other antenna or transmitter.

IMPORTANT: Exposure to radio frequency radiation.

63 cm minimum distance has to be maintained between the antenna and the occupational user and 140 cm to general public. Under such configuration, the FCC radiation exposure limits set forth for a population/uncontrolled environment can be satisfied.

List of additional approved antennas:

- Omni Directional (fiberglass pole) WLO-2450-15 15 dBi
- Omni Directional (hor. polarization) HP, ODH 24-13 13 dBi
- Sector SA 24-90-17-WB 17 dBi
- Panel WLP-2450-20 20 dBi
- Dish DC 24-HD-PFIP 24 dBi

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

CE declaration of conformity

Full Declaration of Conformity (DoC) may be obtained on our web page: **http://routerboard.com/**

[EN] English	Hereby, MIKROTIKLS SIA declares that this ROUTERBOARD is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.
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EN. 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 http://wiki.mikrotik.com **BG. Инструкция**: Свържете адаптера на захранване, за да включите устройството. Отворете 192.168.88.1 в уеб браузър, за да настроите продукта. Повече информация в http://wiki.mikrotik.com **CZ. Návod k použití**: Připojte napájecí adaptér k zapnutí přístroje. Otevřete 192.168.88.1 ve webovém prohlížeči pro konfiguraci produktu. Více informací najdete v http://wiki.mikrotik.com **DK. Instruktionsbog**: Tilslut strømadapteren for at tænde for enheden. Åbn 192.168.88.1 i en webbrowser til at konfigurere produktet. Mere information i http://wiki.mikrotik.com **FR. Mode d'emploi**: Connectez l'adaptateur d'alimentation pour allumer l'appareil. Ouvrez 192.168.88.1 dans un navigateur Web pour configurer le produit. Plus d'informations dans http://wiki.mikrotik.com **DE. Bedienungsanleitung**: Verbinden Sie das Netzteil, um das Gerät einzuschalten. Öffnen Sie 192.168.88.1 in einem Web-Browser, um das Produkt zu konfigurieren. Weitere Informationen im http://wiki.mikrotik.com **EE. Kasutusjuhend**: Ühendage toiteadapter seadme sisselülitamiseks. Avatud 192.168.88.1 in veebilehitseja seadistada toodet. Rohkem teavet http://wiki.mikrotik.com **ES. Manual de instrucciones**: Conecte el adaptador de alimentación para encender la unidad. Abra 192.168.88.1 en un navegador web para configurar el producto. Más información en http://wiki.mikrotik.com **IT. Manuale di istruzioni**: Collegare l'adattatore di alimentazione per accendere l'unità. Aprire 192.168.88.1 in un browser Web per configurare il prodotto. Maggiori informazioni in http://wiki.mikrotik.com **LV. Lietošanas instrukcija**: Pievienojiet Strāvas adapteri, lai ieslēgtu ierīci. Atvērt 192.168.88.1 ar interneta pārlūku, lai konfigurētu produktu. Plašāka informācija http://wiki.mikrotik.com **LT. Naudojimosi instrukcija**: Prijunkite maitinimo adapterį įjunkite įrenginį. Į interneto naršyklę 192.168.88.1 Atidarykite galite konfigūruoti gaminį. Daugiau informacijos rasite http://wiki.mikrotik.com **HU. Használati utasítás**: Csatlakoztassa a hálózati adaptert a készülék bekapcsolásához. Megnyitása 192.168.88.1 egy webböngészőben beállítani a terméket. Több információ http://wiki.mikrotik.com **NL. Handleiding**: Sluit voedingsadapter aan op het apparaat in te schakelen. Open 192.168.88.1 in een webbrowser om het product te configureren. Meer informatie in http://wiki.mikrotik.com **PL. Instrukcja obsługi**: Podłącz adapter zasilania, aby włączyć urządzenie. Otwórz 192.168.88.1 w przeglądarce internetowej, aby skonfigurować urządzenie. Więcej informacji w http://wiki.mikrotik.com **PT. Manual de instruções**: Conecte o adaptador de alimentação para ligar o aparelho. Abra 192.168.88.1 em um navegador da web para configurar o produto. Mais informações em http://wiki.mikrotik.com **RO. Instrucţiuni de utilizare**: Conectaţi adaptorul de alimentare pentru a porni aparatul. Deschide 192.168.88.1 într-un browser web pentru a configura produsul. Mai multe informaţii în http://wiki.mikrotik.com **SK. Návod na použitie**: Pripojte napájací adaptér k zapnutiu prístroja. Otvorte 192.168.88.1 vo webovom prehliadači pre konfiguráciu produktu. Viac informácií nájdete v http://wiki.mikrotik.com **SI. Navodila**: Priključite napajalnik za vklop naprave. Odprite 192.168.88.1 v spletnem brskalniku nastaviti izdelek. Več informacij v http://wiki.mikrotik.com **FI. Käyttöohje**: Kytke virtalähde päälle laitteen. Avaa 192.168.88.1 in selaimen määrittää tuotteen. Lisää tietoa http://wiki.mikrotik.com **SE. Instruktionsmanual**: Anslut nätadaptern för att slå på enheten. Öppna 192.168.88.1 i en webbläsare för att konfigurera produkten. Mer information på http://wiki.mikrotik.com **NO. Bruksanvisningen**: Koble strømadapteren for å slå på enheten. Åpne 192.168.88.1 i en nettleser for å konfigurere produktet. Mer informasjon på http://wiki.mikrotik.com **GR. εγχειρίδιο οδηγιών**: Συνδέστε τον προσαρμογέα τροφοδοσίας για να ενεργοποιήσετε τη μονάδα. Ανοίξτε 192.168.88.1 σε ένα πρόγραμμα περιήγησης στο Web για να διαμορφώσετε το προϊόν. Περισσότερες πληροφορίες στο http://wiki.mikrotik.com