

# LtAP

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The LtAP is a wireless access point with two WiFi data for using with your own modem.

## Powering

- Direct-input power jack (5.5 mm outside and 2 mm inside, female, pin positive plug) accepts 12-30 V DC.
- Automotive port accepts 12-30 V powering.
- Ethernet port accepts passive and 802.3af/at Power over Ethernet 12-30 V DC (compensate for loss on cable, so more than 12 V recommended).

The power consumption under maximum load can reach 12 W.

## Mounting

It is possible to attach the device to a wall, using the provided screw holes on the sides of the unit. The device should be mounted in a way that the cable openings are pointing downward. The ports are protected with a small door, that is held in place with one screw. The door has cut-out places for all available ports, but please only break out the openings that you will use. The device can be used both indoors and outdoors.

## Setup

1. Set your computer IP configuration to automatic (DHCP).
2. From your PC or smartphone, connect to the wireless network name which starts with "MikroTik".
3. Once connected to the wireless network, open <http://192.168.88.1> in your web browser to start configuration, since there is no password by default, you will be logged in automatically. Set up your password in the screen that loads. Please also specify your country, to make sure local regulations are observed.

## Configuration

RouterOS includes many configuration options in addition to what is described in this document. We suggest to start here to get yourself accustomed to the possibilities: <http://mt.lv/help>. In case IP connection is not available, the Winbox tool (<http://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 boot the device from network, see section Buttons and jumpers.

## Extension slots and ports

- Built-in WiFi wireless access point module, AP/station/bridge/p2p modes are supported. Onboard PIF antennas built in.
- Built-in GPS module with a built in antenna. One uFL connector provided for an external antenna (available separately). To enable, set the port to serial0 (this disables the DB9 port on the unit).
- One 10/100/1000 ethernet port, supporting automatic cross/straight cable correction (Auto MDI/X). Straight or crossover cable can be used for connecting to other network devices. The ethernet port accepts 12-57 V DC powering from a passive PoE injector.
- One DB9 RS232 serial port for serial console access. Configured as 115200 bit/s, 8 data bits, 1 stop bit, no parity. Can't be used if built-in GPS is enabled on serial0.

## Buttons and jumpers

### Reset button

- 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 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.

### Mode button

The action of the mode buttons can be configured from RouterOS software to execute any user supplied RouterOS script. You can also disable this button. The mode button can be configured in RouterOS menu `/system routerboard mode-button`

## Operating system support

The device supports RouterOS software with the version number at or above what is indicated in the RouterOS menu `/system resource`. Other operating systems have not been tested.

# Federal Communication Commission Interference Statement

FCC ID: TV7LTAP2HND



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.

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.

## Industry Canada

IC: 7442A-LTAP2HND

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie 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, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

**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.

# CE Declaration of Conformity

Full Declaration of Conformity (DoC) may be obtained by visiting our product page on <https://mikrotik.com/products>  
Manufacturer: Mikrotikls SIA, Brivibas gatve 214i Riga, Latvia, LV1039.



EN	Hereby, Mikrotikls SIA declares that this RouterBOARD is in compliance with the essential requirements and other relevant provisions of directive 2014/53/EC.
BG	С настоящето, Mikrotikls SIA декларира, че RouterBOARD е в съответствие със съществените изисквания и другите приложими разпоредби на директива 2014/53/EC.
CS	Mikrotikls SIA tímto prohlašuje, že RouterBOARD splňuje základní požadavky a všechna příslušná ustanovení směrnice 2014/53/ES.
DA	Undertegnede Mikrotikls SIA erklærer herved, at følgende udstyr RouterBOARD overholder de væsentlige krav og øvrige relevante krav i direktiv 2014/53/EF.
DE	Hiermit erkläre Mikrotikls SIA dass sich das gerät RouterBOARD in übereinstimmung mit den grundlegenden anforderungen und den übrigen einschlägigen bestimmungen der richtlinie 2014/53/EG befindet.
ET	Käesolevaga kinnitab Mikrotikls SIA seadme RouterBOARD vastavust direktiivi 2014/53/EÜ põhinõuetele ja nimetatud direktiivist tulenevatele teistele asjakohastele sätetele.
EL	Με την παρούσα ο κατασκευαστής Mikrotikls SIA δηλώνει ότι RouterBOARD συμμορφώνεται προς τις ουσιαστικές απαιτήσεις και τις λοιπές σχετικές διατάξεις της οδηγίας 2014/53/ΕΚ
ES	Por la presente, Mikrotikls SIA declara que este RouterBOARD cumple con los requisitos esenciales y otras exigencias relevantes de la directiva 2014/53/EC.
FR	Le soussigné, Mikrotikls SIA, déclare que l'équipement radioélectrique du type RouterBOARD est conforme à la directive 2014/53/UE.
IT	Con la presente Mikrotikls SIA dichiara che questo RouterBOARD è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva 2014/53/CE.
LV	Ar šo Mikrotikls SIA deklarē, ka RouterBOARD atbilst direktīvas 2014/53/EK būtiskajām prasībām un citiem ar to saistītajiem noteikumiem.
LT	Šiuo Mikrotikls SIA deklaruoją, kad šis RouterBOARD atitinka esminius reikalavimus ir kitas 2014/53/EB direktyvos nuostatas
HU	A Mikrotikls SIA ezzenel kijelenti, hogy a RouterBOARD típusú berendezés teljesíti az alapvető követelményeket és más 2014/53/EK irányelvben meghatározott vonatkozó rendelkezéseket.
HR	Mikrotikls SIA ovime izjavljuje da je radijska oprema tipa RouterBOARD u skladu s Direktivom 2014/53/EU.
NL	Hierbij verklaart Mikrotikls SIA dat het toestel I RouterBOARD in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn 2014/53/EG.
PL	Niniejszym Mikrotikls SIA deklaruje że RouterBOARD jest zgodny z zasadniczymi wymaganiami i innymi właściwymi postanowieniami dyrektywy 2014/53/EC.
PT	Eu, Mikrotikls SIA declaro que o RouterBOARD cumpre os requisitos essenciais e outras provisões relevantes da directiva 2014/53/EC.
RO	Prin prezenta, Mikrotikls SIA declară că aparatul RouterBOARD este în conformitate cu cerințele esențiale și cu alte prevederi pertinente ale directivei 2014/53/CE.
SL	Mikrotikls SIA týmto vyhlasuje, že RouterBOARD splňa základné požiadavky a všetky príslušné ustanovenia smernice 2014/53/ES.
SI	Mikrotikls SIA izjavlja, da je ta RouterBOARD v skladu z bistvenimi zahtevami in drugimi relevantnimi določili direktive 2014/53/ES.
FI	Mikrotikls SIA vakuuttaa täten että RouterBOARD tyyppinen laite on direktiivin 2014/53/EY oleellisten vaatimusten ja sitä koskevien direktiivin muiden ehtojen mukainen.
SE	Härmed intygar Mikrotikls SIA att denna RouterBOARD är i överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 2014/53/EG.
NO	Mikrotikls SIA erklærer herved at RouterBOARD er i samsvar med de grunnleggende krav og øvrige relevante krav i direktiv 2014/53/EF.

**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://mt.lv/help> **BG. Инструкции:** Свържете адаптера на захранване, за да включите устройството. Отворете 192.168.88.1 в уеб браузър, за да настроите продукта. Повече информация в <http://mt.lv/help> **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://mt.lv/help> **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://mt.lv/help> **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://mt.lv/help> **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://mt.lv/help> **EE. Kasutusjuhend:** Ühendage toiteadapter seadme sisselülitamiseks. Avatud 192.168.88.1 in veebilehitseja seadistada toodet. Rohkem teavet <http://mt.lv/help> **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://mt.lv/help> **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://mt.lv/help> **LV. Lietošanas instrukcija:** Pievienojiet Strāvas adapteri, lai ieslēgtu ierīci. Atvērt 192.168.88.1 ar interneta pārlūku, lai konfigurētu produktu. Plašāka informācija <http://mt.lv/help> **LT. Naudojimosi instrukcija:** Prijunkite maitinimo adapterį įjunkite įrenginį. Į interneto naršyklę 192.168.88.1 Atidarykite galite konfigūruoti gaminį. Daugiau informacijos rasite <http://mt.lv/help> **HU. Használati utasítás:** Csatlakoztassa a hálózati adaptert a készülék bekapcsolásához. Megnyitása 192.168.88.1 egy webböngészőben beállítani a terméket. Több információ <http://mt.lv/help> **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://mt.lv/help> **PL. Instrukcja obsługi:** Podłącz adapter zasilania, aby włączyć urządzenie. Otwórz 192.168.88.1 w przeglądarce internetowej, aby skonfigurować urządzenie. Więcej informacji w <http://mt.lv/help> **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://mt.lv/help> **RO. Instrucțiuni de utilizare:** Conectați adaptorul de alimentare pentru a porni aparatul. Deschide 192.168.88.1 într-un browser web pentru a configura produsul. Mai multe informații în <http://mt.lv/help> **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://mt.lv/help> **SI. Navodila:** Priključite napajalnik za vklop naprave. Odprite 192.168.88.1 v spletnem brskalniku nastaviti izdelek. Več informacij v <http://mt.lv/help> **FI. Käyttöohje:** Kytke virtalähde päälle laitteen. Avaa 192.168.88.1 in selaimen määrittää tuotteen. Lisää tietoa <http://mt.lv/help> **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://mt.lv/help> **NO. Bruksanvisningen:** Koble strømadapteren for å slå på enheten. Åpne 192.168.88.1 i en netleser for å konfigurere produktet. Mer informasjon på <http://mt.lv/help> **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://mt.lv/help> **RU. Руководство по эксплуатации:** подключите адаптер питания чтобы включить устройство. Откройте 192.168.88.1 в своем веб-браузере для конфигурации. Дополнительная информация: <http://mt.lv/help> **HR. Uputa za uporabu:** Priključite napajanje i uključite uređaj. Za konfiguraciju uređaja u pregledniku otvorite 192.168.88.1. Više informacija je na <http://mt.lv/help>

## MPE statement

This equipment complies with EU radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with 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.



This device meets Maximum TX power limit per ETSI 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!  
Note. Information contained here is subject to change. Please visit the product page on [www.mikrotik.com](http://www.mikrotik.com) for the most up to date version of this document.