

# hAP ac<sup>2</sup>



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The hAP is a simple home wireless access point. It is already configured, you can simply plug in your ISP cable and start using wireless internet. We recommend you to set up a password to secure your device.

## Powering

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

- direct-input power jack (5.5mm outside and 2mm inside, female, pin positive plug) accepts 12-30 V DC
- first Ethernet port accepts passive Power over Ethernet accepts 18-28 V DC (compensate for the loss on cable, so more than 12V recommended)

The power consumption under maximum load can reach 15 W.

## Setup

1. Connect your internet cable to the first port, and, if you have wired devices, connect them to the other ports
2. Set your computer IP configuration to automatic (DHCP).
3. From your PC or smartphone, connect to the wireless network name which starts with "MikroTik".
4. Once connected to the wireless network, open <https://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

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 to start here 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). For recovery purposes, it is possible to boot the device from the network, see section [Buttons and jumpers](#).

## Extension slots and ports

- The Ethernet ports are connected through a switch chip, can be configured individually and support automatic cross/straight cable correction (Auto MDI/X), so you can use either straight or cross-over cables for connecting to other network devices.
- The integrated wireless module which supports AP/CPE/P2P/Repeater modes.

## Buttons and jumpers

RouterBOOT reset button has the following functions:

- Hold the button before powering on the device, and at power-up, the button will force load the backup boot loader. Continue holding the button for the other two functions of this button.

- Release the button when green LED starts flashing, to reset RouterOS configuration. To not load the backup boot loader, you can start holding the button after power is already applied.
- Release the button after LED is no longer flashing (~20 seconds) to cause the device to look for Netinstall servers (required for reinstalling RouterOS over the network).

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 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: TV7RBD52-5ACD2ND

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

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.

## Industry Canada

IC: 7442A-D52ACThis 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.

## CE Declaration of Conformity

Manufacturer: Mikrotiks SIA, Brivibas gatve 214i Riga, Latvia, LV1039.

	<p>С настоящото MikroTikS SIA декларира, че този тип радиосъоръжение RouterBOARD е в съответствие с Директива 2014/53/ЕС. Цялостният текст на ЕС декларацията за съответствие може да се намери на следния интернет адрес:</p> <p><a href="https://mikrotik.com/products">https://mikrotik.com/products</a></p>
CS	<p>Tímto MikroTikS SIA prohlašuje, že typ rádiového zařízení RouterBOARD je v souladu se směrnicí 2014/53/EU. Úplné znění EU prohlášení o shodě je k dispozici na této internetové adrese:</p> <p><a href="https://mikrotik.com/products">https://mikrotik.com/products</a></p>
DA	<p>Hermed erklærer MikroTikS SIA , at radioudstyrstypen RouterBOARD er i overensstemmelse med direktiv 2014/53/EU. EU-overensstemmelseserklæringens fulde tekst kan findes på følgende internetadresse:</p> <p><a href="https://mikrotik.com/products">https://mikrotik.com/products</a></p>
DE	<p>Hiermit erklärt MikroTikS SIA , dass der Funkanlagentyp RouterBOARD der Richtlinie 2014/53/EU entspricht. Der vollständige Text der EU-Konformitätserklärung ist unter der folgenden Internetadresse verfügbar:</p> <p><a href="https://mikrotik.com/products">https://mikrotik.com/products</a></p>
EL	<p>Με την παρούσα ο/η MikroTikS SIA , δηλώνει ότι ο ραδιοεξοπλισμός RouterBOARD πληροί την οδηγία 2014/53/ΕΕ. Το πλήρες κείμενο της δήλωσης συμμόρφωσης ΕΕ διατίθεται στην ακόλουθη ιστοσελίδα στο διαδίκτυο:</p> <p><a href="https://mikrotik.com/products">https://mikrotik.com/products</a></p>
EN	<p>Hereby, MikroTikS 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:</p> <p><a href="https://mikrotik.com/products">https://mikrotik.com/products</a></p>
ES	<p>Por la presente, MikroTikS SIA declara que el tipo de equipo radioeléctrico RouterBOARD es conforme con la Directiva 2014/53/UE. El texto completo de la declaración UE de conformidad está disponible en la dirección Internet siguiente:</p> <p><a href="https://mikrotik.com/products">https://mikrotik.com/products</a></p>
ET	<p>Käesolevaga deklareerib MikroTikS SIA , et käesolev raadioseadme tüüp RouterBOARD vastab direktiivi 2014/53/EL nõuetele. ELi vastavusdeklaratsiooni täielik tekst on kättesaadav järgmisel internetiaadressil:</p> <p><a href="https://mikrotik.com/products">https://mikrotik.com/products</a></p>
FI	<p>MikroTikS SIA vakuuttaa, että radiolaitetyyppi RouterBOARD on direktiivin 2014/53/EU mukainen. EU-vaatimustenmukaisuusvakuutuksen täysimittainen teksti on saatavilla seuraavassa internetosoitteessa:</p> <p><a href="https://mikrotik.com/products">https://mikrotik.com/products</a></p>
FR	<p>Le soussigné, MikroTikS SIA , déclare que l'équipement radioélectrique du type RouterBOARD est conforme à la directive 2014/53/UE. Le texte complet de la déclaration UE de conformité est disponible à l'adresse internet suivante:</p> <p><a href="https://mikrotik.com/products">https://mikrotik.com/products</a></p>
HR	<p>MikroTikS SIA ovime izjavljuje da je radijska oprema tipa RouterBOARD u skladu s Direktivom 2014/53/EU. Cjeloviti tekst EU izjave o sukladnosti dostupan je na sljedećoj internetskoj adresi:</p> <p><a href="https://mikrotik.com/products">https://mikrotik.com/products</a></p>
HU	<p>MikroTikS SIA igazolja, hogy a RouterBOARD típusú rádióberendezés megfelel a 2014/53/EU irányelvnek. Az EU-megfelelőségi nyilatkozat teljes szövege elérhető a következő internetes címen:</p> <p><a href="https://mikrotik.com/products">https://mikrotik.com/products</a></p>
IT	<p>Il fabbricante, MikroTikS SIA , dichiara che il tipo di apparecchiatura radio RouterBOARD è conforme alla direttiva 2014/53/UE. Il testo completo della dichiarazione di conformità UE è disponibile al seguente indirizzo Internet:</p> <p><a href="https://mikrotik.com/products">https://mikrotik.com/products</a></p>
IS	<p>Hér með lýsir MikroTikS SIA yfir því að RouterBOARD er í samræmi við grunnkröfur og aðrar kröfur, sem gerðar eru í tilskipun 2014/53/EU. Fullur texti ESB samræmisfirlýsing er að finna á eftirfarandi netfangi:</p> <p><a href="https://mikrotik.com/products">https://mikrotik.com/products</a></p>

LT	<p>Aš, Mikrotikls SIA , patvirtinu, kad radijo įrenginių tipas RouterBOARD atitinka Direktyvą 2014/53/ES. Visas ES atitikties deklaracijos tekstas prieinamas šiuo interneto adresu:</p> <p><a href="https://mikrotik.com/products">https://mikrotik.com/products</a></p>
LV	<p>Ar šo Mikrotikls SIA deklarē, ka radioiekārta RouterBOARD atbilst Direktīvai 2014/53/ES. Pilns ES atbilstības deklarācijas teksts ir pieejams šādā interneta vietnē:</p> <p><a href="https://mikrotik.com/products">https://mikrotik.com/products</a></p>
MT	<p>B'dan, Mikrofikls SIA , niddikjara li dan it-tip ta' tagħmir tar-radju RouterBOARD 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:</p> <p><a href="https://mikrotik.com/products">https://mikrotik.com/products</a></p>
NL	<p>Hierbij verklaar ik, Mikrofikls SIA , dat het type radioapparatuur RouterBOARD conform is met Richtlijn 2014/53/EU. De volledige tekst van de EU-conformiteitsverklaring kan worden geraadpleegd op het volgende internetadres:</p> <p><a href="https://mikrotik.com/products">https://mikrotik.com/products</a></p>
NO	<p>Mikrofikls SIA erklærer herved at utstyret RouterBOARD 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:</p> <p><a href="https://mikrotik.com/products">https://mikrotik.com/products</a></p>
PL	<p>Mikrofikls SIA niniejszym oświadcza, że typ urządzenia radiowego RouterBOARD jest zgodny z dyrektywą 2014/53/UE. Pełny tekst deklaracji zgodności UE jest dostępny pod następującym adresem internetowym:</p> <p><a href="https://mikrotik.com/products">https://mikrotik.com/products</a></p>
PT	<p>O(a) abaixo assinado(a) Mikrofikls SIA declara que o presente tipo de equipamento de rádio RouterBOARD está em conformidade com a Diretiva 2014/53/UE. O texto integral da declaração de conformidade está disponível no seguinte endereço de Internet:</p> <p><a href="https://mikrotik.com/products">https://mikrotik.com/products</a></p>
RO	<p>Prin prezenta, Mikrofikls SIA declară că tipul de echipamente radio RouterBOARD este în conformitate cu Directiva 2014/53/UE. Textul integral al declaraiei UE de conformitate este disponibil la următoarea adresă internet:</p> <p><a href="https://mikrotik.com/products">https://mikrotik.com/products</a></p>
SK	<p>Mikrofikls SIA týmto vyhlasuje, že rádiové zariadenie typu RouterBOARD je v súlade so smernicou 2014/53/EÚ. Úplné EÚ vyhlásenie o zhode je k dispozícii na tejto internetovej adrese:</p> <p><a href="https://mikrotik.com/products">https://mikrotik.com/products</a></p>
SL	<p>Mikrofikls SIA potrjuje, da je tip radijske opreme RouterBOARD skladen z Direktivo 2014/53/EU. Celotno besedilo izjave EU o skladnosti je na voljo na naslednjem spletnem naslovu:</p> <p><a href="https://mikrotik.com/products">https://mikrotik.com/products</a></p>
SV	<p>Härmed försäkrar Mikrofikls SIA att denna typ av radioutrustning RouterBOARD överensstämmer med direktiv 2014/53/EU. Den fullständiga texten till EU-försäkran om överensstämmelse finns på följande webbadress:</p> <p><a href="https://mikrotik.com/products">https://mikrotik.com/products</a></p>

## 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.

## Frequency bands terms of use

Frequency range (for applicable models)	Channels used	Maximum Output Power (EIRP)	Restriction
2412-2472 MHz	1 - 13	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](http://www.mikrotik.com) for the most up to date version of this document.



: Свържете адаптера на захранване, за да включите устройството. Отворете 192.168.88.1 в уеб браузър, за да настроите продукта. Повече информация в [{}\(+\)https://mt.lv/help+](https://mt.lv/help+)

: Připojte napájecí adaptér k zapnutí přístroje. Otevřete 192.168.88.1 ve webovém prohlížeči pro konfiguraci produktu. Více informací najdete v [{}\(+\)https://mt.lv/help+](https://mt.lv/help+)

: Tilslut strømadapteren for at tænde for enheden. Åbn 192.168.88.1 i en webbrowser til at konfigurere produktet. Mere information i [{}\(+\)https://mt.lv/help+](https://mt.lv/help+)

: 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 [{}\(+\)https://mt.lv/help+](https://mt.lv/help+)

: 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 [{}\(+\)https://mt.lv/help+](https://mt.lv/help+)

: 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://mt.lv/help+)

: 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 [{}\(+\)https://mt.lv/help+](https://mt.lv/help+)

: Ühendage toiteadapter seadme sisselülitamiseks. Avatud 192.168.88.1 in veebilehitseja seadistada toodet. Rohkem teavet [{}\(+\)https://mt.lv/help+](https://mt.lv/help+)

: Kytke virtalähde päälle laitteen. Avaa 192.168.88.1 in selaimen määrittää tuotteen. Lisää tietoa [{}\(+\)https://mt.lv/help+](https://mt.lv/help+)

: 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 [{}\(+\)https://mt.lv/help+](https://mt.lv/help+)

: Priključite napajanje i uključite uređaj. Za konfiguraciju uređaja u pregledniku otvorite 192.168.88.1. Više informacija je na [{}\(+\)https://mt.lv/help+](https://mt.lv/help+)

: Csatlakoztassa a hálózati adaptert a készülék bekapcsolásához. Megnyitása 192.168.88.1 egy webböngészőben beállítani a terméket. Több információ [{}\(+\)https://mt.lv/help+](https://mt.lv/help+)

: Collegare l'adattore di alimentazione per accendere l'unità. Aprire 192.168.88.1 in un browser Web per configurare il prodotto.

Maggiori informazioni in [{}\(+\)https://mt.lv/help+](https://mt.lv/help+)

{}: Tengdu straumbreytirinn til að kveikja á tækinu. Opnaðu 192.168.88.1 í vafranum þínum til að stilla það. Nánari upplýsingar á [{}\(+\)https://mt.lv/help+](https://mt.lv/help+)

{}: Koble strømadapteren for å slå på enheten. Åpne 192.168.88.1 i nettleseren din for å konfigurere den. Mer informasjon på [{}\(+\)https://mt.lv/help+](https://mt.lv/help+)

: Prijunkite maitinimo adapterį įjunkite įrenginį. Į interneto naršyklę 192.168.88.1 Atidarykite galite konfigūruoti gaminį. Daugiau informacijos rasite [{}\(+\)https://mt.lv/help+](https://mt.lv/help+)

: Pievienojiet Strāvas adapteri, lai ieslēgtu ierīci. Atvērt 192.168.88.1 ar interneta pārlūku, lai konfigurētu produktu. Plašāka informācija [{}\(+\)https://mt.lv/help+](https://mt.lv/help+)

{}: Qabbad l-adapter tal-qawwa biex iddawwar it-tagħmir. Iftaħ 192.168.88.1 fil-web browser tiegħek, biex jiġi kkonfigurati. Aktar informazzjoni fuq <https://mt.lv/help+>

: 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 [{}\(+\)https://mt.lv/help+](https://mt.lv/help+)

: Podłącz adapter zasilania, aby włączyć urządzenie. Otwórz 192.168.88.1 w przeglądarce internetowej, aby skonfigurować urządzenie. Więcej informacji w [{}\(+\)https://mt.lv/help+](https://mt.lv/help+)

: 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 [{}\(+\)https://mt.lv/help+](https://mt.lv/help+)

: Conectai adaptorul de alimentare pentru a porni aparatul. Deschide 192.168.88.1 într-un browser web pentru a configura produsul. Mai multe informații în [{}\(+\)https://mt.lv/help+](https://mt.lv/help+)

: Priključite napajalnik za vklop naprave. Odprite 192.168.88.1 v spletnem brskalniku nastaviti izdelek. Več informacij v [{}\(+\)https://mt.lv/help+](https://mt.lv/help+)

: Pripojte napájací adaptér k zapnutiu prístroja. Otvorte 192.168.88.1 vo webovom prehliadači pre konfiguráciu produktu. Viac informácií nájdete v [{}\(+\)https://mt.lv/help+](https://mt.lv/help+)

: Anslut nätadaptern för att slå på enheten. Öppna 192.168.88.1 i en webbläsare för att konfigurera produkten. Mer information på [{}\(+\)https://mt.lv/help+](https://mt.lv/help+)

: Koble strømadapteren for å slå på enheten. Åpne 192.168.88.1 i en netleser for å konfigurere produktet. Mer informasjon på [{}\(+\)https://mt.lv/help+](https://mt.lv/help+)

<https://mt.lv/help+>

: подключите адаптер питания чтобы включить устройство. Откройте 192.168.88.1 в своем веб-браузере для конфигурации. Дополнительная информация: <https://mt.lv/help+>

连接电源适配器以打开设备。在Web浏览器中打开192.168.88.1进行配置。有关<https://mt.lv/help+>的更多信息