

Metal 52 ac

The RouterBOARD Metal comes preinstalled in an outdoor case, with a built-in wireless interface, an N-Male antenna connector, and one 10/100/1000 Ethernet connector which supports MDI-X auto-detection. The device is packaged with a 24 V power adapter, a PoE injector, and two mounting loops. Several models are available (dual-band, single band, AP and CPE variants).

Connecting

1. Connect the antenna to the N-Male connector (see "[Metal 52 ac#Antenna usage](#)");
2. Open the cover of the Ethernet port (see "[Metal 52 ac#Opening Ethernet cover](#)");
3. Guide your cable through the cover and connect to the Ethernet port. (see "[Metal 52 ac#Opening Ethernet cover](#)");
4. The device accepts 10-30 V Passive PoE from a PoE injector. The included injector should be connected with the "Data" end into a PC, the "Data + Power" port should be connected to the device, by using an Ethernet cable of the desired length (not included);
5. Use the provided rubber insulator to put on the Ethernet cable, and push it into the case opening, so that the opening is tightly closed;
6. Download the configuration tool <https://mt.lv/winbox>;
7. Open WinBox Neighbors tab;
8. Search for the device and connect using MAC address;
9. Default IP: 192.168.88.1, user name: *admin*, no password;
10. Download the latest RouterOS software from <https://mikrotik.com/download>;
11. Choose MIPSBE packages, and save them to your PC;
12. Open WinBox and upload downloaded packages, drag and drop into any windows;
13. Restart the device;
14. Connect again and in *QuickSet* menu set your Country, to apply country regulation settings;
15. Secure your device and set a strong password;

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.



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

Powering

The device accepts powering from an Ethernet port (Passive PoE). Under maximum load, the power consumption of this device is 11 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

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 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

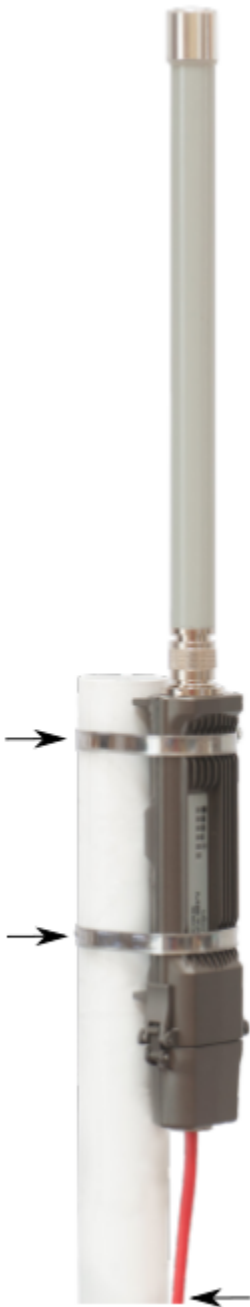
The device is to be mounted vertically so that the Ethernet cable points downwards.



Mounting and configuration of this device should be done by a qualified person.

If you wish to tighten the device to a pole, you can do it with the provided mounting loops. The device comes bundled with two mounting loops – guide the loops around the device through the provided edge markings, and around the pole where it will be mounted.

An electric tape can be used to increase friction between materials use it between clamps and the mounting surface. It will help to hold the device in place. The mounting hose clamp is provided with the package.



1. Guide hose clamp through the opening on the back of the device.
2. Attach to the pole or mast.
3. Align and secure by hose clamp screw using PH2 screwdriver.

The device should be placed by the antenna facing upwards.

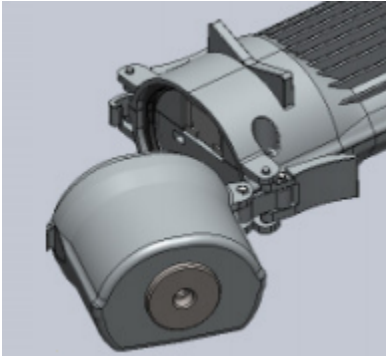
You should avoid connecting a loose Ethernet cable to the Ethernet port, secure the cable to a wall or the pole, so that the cable weight is not pulling the port. It is recommended to secure the Ethernet cable less than 2m from the device. This is to ensure that the cable doesn't damage the port by its weight or doesn't fall out.

i When mounting, please ensure that cable feed is pointing downwards.

The IP rating scale of this device is IP54. 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. Operation of this equipment in the residential environment could cause radio interference.

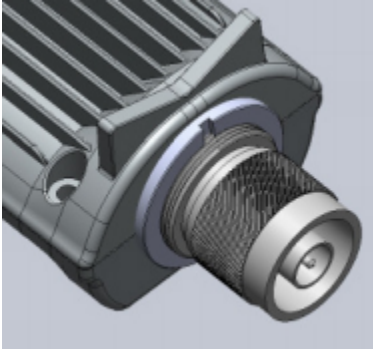
Opening Ethernet cover



1. To open the cover, release clips for both fasteners and cover will be free to open.
2. Guide your Ethernet cable through the rubber seal in the cover opening.
3. Crimp RJ-45 connector on the cable and connect with Ethernet port.

Antenna usage

Attach antenna by screwing it to the connector located on the device.



Please connect and disconnect the antenna, when the device is turned off!

Reset button

The reset button has three functions:

- 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 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.

Specifications

For more information about this product, specification and pictures please visit our web page: <https://mikrotik.com/product/RBMetalG-52SHPacn>
RBMetalG-52SHPacn-US (USA) is factory locked for 2412-2462MHz, 5170-5250MHz and 5725-5835MHz frequencies. This lock can not be removed.
RBMetalG-52SHPacn (International) supports 2412-2484MHz and 5150MHz-5875MHz range (Specific frequency range can be limited by country regulations).

Accessories

Package includes the following accessories that come with the device:

- EU/US Switching Power Supply 24 V 0.8A, 19.2 W.
- 2.4Ghz/5Ghz Dual Band OMNI Antenna 6 dBi for N FEMALE, Grey color, PVC housing, 285 mm length.
- Gigabit POE injector.
- Plastic tie strap fastener 2 pcs.
- Hose clamp 50 / 70 2 pcs.
- N-Male to N-Female Right Angle Adapter.

Operating system support

The device supports RouterOS software version 6.46. The specific factory-installed version number is indicated in the RouterOS menu /system resource. Other operating systems have not been tested.

Federal Communication Commission Interference Statement

FCC ID: TV7MTLG52SHPN. 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 20cm between the radiator and any part of your body.

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

LIST OF APPROVED 2GHz ANTENNAS:

- 24 dBi Dish DC 24-HD-PFIP
- 20 dBi Panel WLP-2450-20
- 17 dBi Sector SA 24-90-17-WB
- 15 dBi Omni Directional (pole) WL0-2450-15
- 13 dBi Omni Directional (hor. Polarization) HP, 0DH 24-13

LIST OF APPROVED 5GHz ANTENNAS:

- 8.5 dBi Omni MTI Wireless MT-482016NA
- 24 dBi Panel Pacific Wireless PA58-24
- 32 dBi Dish Pacific Wireless HDDA5W-32-DP

Antennas of the same type and lower gain than those listed above may be used in compliance with certification.

Industry Canada

7442A-MG52SHPAC. 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.

CE Declaration of Conformity

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

BG	<p>C настоящото Mikrotikls 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>https://mikrotik.com/products</p>
CS	<p>Tímto Mikrotikls 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>https://mikrotik.com/products</p>
DA	<p>Hermed erklærer Mikrotikls SIA, at radioudstyrstypen RouterBOARD er i overensstemmelse med direktiv 2014/53/EU. EU-overensstemmelseserklæringens fulde tekst kan findes på følgende internetadresse:</p> <p>https://mikrotik.com/products</p>
DE	<p>Hiermit erklärt Mikrotikls 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>https://mikrotik.com/products</p>
EL	<p>Με την παρούσα ο/η Mikrotikls 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>https://mikrotik.com/products</p>
EN	<p>Hereby, Mikrotikls 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>https://mikrotik.com/products</p>
ES	<p>Por la presente, Mikrotikls 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>https://mikrotik.com/products</p>
ET	<p>Käesolevaga deklareerib Mikrotikls SIA, et käesolev raadioseadme tüüp RouterBOARD vastab direktiivi 2014/53/EL nõuetele. ELi vastavusdeklaratsiooni täielik tekst on kättesaadav järgmisel internetiaadressil:</p> <p>https://mikrotik.com/products</p>
FI	<p>Mikrotikls SIA vakuuttaa, että radiolaitetyyppi RouterBOARD on direktiivin 2014/53/EU mukainen. EU-vaatimustenmukaisuusvakuutuksen täysimittainen teksti on saatavilla seuraavassa internetosoitteessa:</p> <p>https://mikrotik.com/products</p>
FR	<p>Le soussigné, Mikrotikls 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>https://mikrotik.com/products</p>
HR	<p>Mikrotikls 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>https://mikrotik.com/products</p>
HU	<p>Mikrotikls 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>https://mikrotik.com/products</p>
IT	<p>Il fabbricante, Mikrotikls 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>https://mikrotik.com/products</p>

IS	Hér með lýsir Mikrotíks SIA því yfir að RouterBOARD er í samræmi við grunnkröfur og aðrar kröfur, sem gerðar eru í tilskipun 2014/53/EU. Fullur texti ESB samræmisýfirlýsingar er að finna á eftirfarandi veffangi: https://mikrotik.com/products
LT	Aš, Mikrotíks SIA, patvirtinu, kad radijo įrenginių tipas RouterBOARD atitinka Direktyvą 2014/53/ES. Visas ES atitikties deklaracijos tekstas prieinamas šiuo interneto adresu: https://mikrotik.com/products
LV	Ar šo Mikrotíks SIA deklarē, ka radioiekārta RouterBOARD atbilst Direktīvai 2014/53/ES. Pilns ES atbilstības deklarācijas teksts ir pieejams šādā interneta vietnē: https://mikrotik.com/products
MT	B'dan, Mikrotíks 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: https://mikrotik.com/products
NL	Hierbij verklaar ik, Mikrotíks 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: https://mikrotik.com/products
NO	Mikrotíks 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: https://mikrotik.com/products
PL	Mikrotíks SIA niniejszym oświadczam, że typ urządzenia radiowego RouterBOARD jest zgodny z dyrektywą 2014/53/UE. Pełny tekst deklaracji zgodności UE jest dostępny pod następującym adresem internetowym: https://mikrotik.com/products
PT	O(a) abaixo assinado(a) Mikrotíks 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: https://mikrotik.com/products
RO	Prin prezenta, Mikrotíks SIA declară că tipul de echipamente radio RouterBOARD este în conformitate cu Directiva 2014/53/UE. Textul integral al declarației UE de conformitate este disponibil la următoarea adresă internet: https://mikrotik.com/products
SK	Mikrotíks 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: https://mikrotik.com/products
SL	Mikrotíks 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: https://mikrotik.com/products
SV	Härmed försäkrar Mikrotíks 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: 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 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. The 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.



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 [{}https://mt.lv/help-bg](https://mt.lv/help-bg)

CS. Návod k použití: 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-cs](https://mt.lv/help-cs)

DA. Instruktionsbog: 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-da](https://mt.lv/help-da)

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 [{}https://mt.lv/help-de](https://mt.lv/help-de)

EL. 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 [{}https://mt.lv/help-el](https://mt.lv/help-el)

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 [{}https://mt.lv/help](https://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 [{}https://mt.lv/help-es](https://mt.lv/help-es)

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

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

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 [{}https://mt.lv/help-fr](https://mt.lv/help-fr)

HR. Uputa za uporabu: Priključite napajanje i uključite uređaj. Za konfiguraciju uređaja u pregledniku otvorite 192.168.88.1. Više informacija je na [{}https://mt.lv/help-hr](https://mt.lv/help-hr)

HU. Használati utasítás: Csatlakoztassa a hálózati adaptert a készülék bekapcsolásához. Megnyitása 192.168.88.1 egy webböngészőben beállítani a terméket. Több információ [{}https://mt.lv/help-hu](https://mt.lv/help-hu)

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 [{}https://mt.lv/help-it](https://mt.lv/help-it)

IS. Notkunarleiðbeiningar: Tengdu straumbreytinn til að kveikja á tækinu. Opnaðu 192.168.88.1 í vafra til að stilla það. Nánari upplýsingar á [{}https://mt.lv/help-is](https://mt.lv/help-is)

NO. Instruksjonsmanual: 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-no](https://mt.lv/help-no)

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

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

MT. Manwal tal-istruzzjoni: Qabbad l-adapter tal-qawwa biex iddawwar it-tagħmir. Iftaħ 192.168.88.1 fil-web browser tiegħek, biex jiġi kkonfiguratur. Aktar informazzjoni fuq [{}https://mt.lv/help-mt](https://mt.lv/help-mt)

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 [{}https://mt.lv/help-nl](https://mt.lv/help-nl)

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

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 [{}https://mt.lv/help-pt](https://mt.lv/help-pt)

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 [{}https://mt.lv/help-ro](https://mt.lv/help-ro)

SK. Navodila: Priključite napajalnik za vklop naprave. Odprite 192.168.88.1 v spletnem brskalniku nastavitvi izdelek. Več informacij v

{+}<https://mt.lv/help-sk>

SL. Návod na použitie: 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-sl>

SV. Instruktionsmanual: 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-sv>

NO. Bruksanvisningen: Koble strømadapteren for å slå på enheten. Åpne 192.168.88.1 i en nettleser for å konfigurere produktet. Mer informasjon på {+}<https://mt.lv/help-no>

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

CN. 说明书。 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-zh>的更多信息