

# RouterBOARD M33G

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## First use

- Insert the miniPCle and M.2 cards (not included) and secure them with the included screws. [Only one 802.11 wireless card can be used at once]. It is suggested to use the other slot for LTE modems. Please see [MiniPCle slot usage](#) paragraph.
- (Optional) Install the device in a case.
- Connect cables to wireless cards and Ethernet ports.
- Plug in power cable (directly or through the PoE injector) to turn on the device, please see [powering](#) paragraph.
- The Initial connection has to be done via the Ethernet cable, using the MikroTik Winbox utility. Winbox should be used to connect to the default IP address of 192.168.88.1 with the username admin and no password.
- We recommend clicking the “Check for updates” button and updating your RouterOS software to the latest version to ensure the best performance and stability,
- Choose your country, to apply country regulation settings (if applicable) and set up your password in the screen that loads.

## Assembly

M33G for professional use. Each of the devices comes in ESD protective packaging. When handling electrical equipment please observe the following safety precautions:

- use a wrist grounding strap when unpacking and working with electrical components to avoid electrical discharge (ESD) damage,
- after unpacking please place the router on the anti-static mat,
- when mounting unit make sure there are no objects that can damage or touch the PCB plate,
- note that ETH, USB and other ports are extending over the perimeter of PCB plate.

The device can be mounted in your desired location using the factory provided four holes in a PCB plate, located on each side of the device.

## Mounting

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

The IP rating scale for this device is IPX0.

We recommend shielded Cat5/6 cables for our devices.

The installation infrastructure (towers and masts), as well as the router itself, must be properly grounded.

## Powering

The device accepts power with the following modes:

- Passive 11-30 V DC == PoE to J1 Ethernet port. The Higher voltage needed to compensate for power loss on long cables at least 18 V is suggested.
- Direct input to the power jack DC == 11-30 V.

Max total power consumption with all interfaces loaded is 24 W. Maximum power to each extension card is 3 A.

Connecting to a POE Adapter:

1. Connect the Ethernet cable from the device to the POE port of the POE adapter.
2. Connect an Ethernet cable from your LAN to the LAN port of the POE adapter, please mind arrows for data and power flow.
3. Connect the power cord to the adapter, and then plug the power cord into a power outlet.

## Booting process

RouterOS is the operating system of all RouterBOARD routers. Please see documentation: <http://mt.lv/help>

This device is not preconfigured other than an IP address on the Ethernet port. Other configurations has to be applied according to the documentation manual linked above.

In case you wish to boot the device from the network, for example to use MikroTik Netinstall, hold the reset button of the device when starting it until the LED light turns off, and the device will start to look for Netinstall servers.

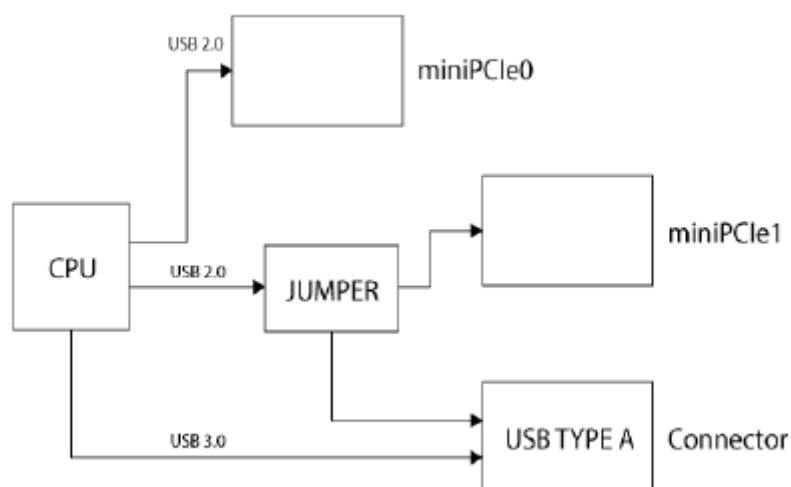
In case IP connection is not available, the Winbox utility can also be used to connect to the MAC address of the device. More information in the documentation.

## Extension slots and ports

- Three gigabit Ethernet ports (With Auto MDI/X so you can use either straight or cross-over cables for connecting to other network devices). The J1 (first from the left) Ethernet port accepts 11-30 V DC powering from a passive PoE injector.
- Two miniPCIe slots for either a 802.11 wireless card or a 3G/LTE modem. Mini SIM 2FF slots available for miniPCIe 3G/LTE modems and have no functionality when a modem is not installed.
- One M.2 (M key) slot for PCI-e SSD disk or other devices. The mounting hole is for 2242 size cards, for other sizes, an extender is suggested. Any speed M.2 cards will operate at 1x PCIe speed.
- One microSD slot for a storage card.
- One DB9 RS232 serial port for serial console access. Configured as 115200 bit/s, 8 data bits, 1 stop bit, no parity.

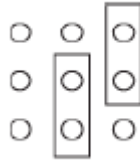
## USB jumper

Located right next to the USB 3.0 port. When loaded, the jumper enables the USB 3.0 port. Remove the jumper to switch the USB 2.0 lines to the J10 (central) miniPCIe slot (USB 3.0 lines remain enabled to the USB port). This is required if you need to use two cellular modems in the device. Normally you can use the LTE modem in the J8 (left-hand side) slot, and use a 802.11 wireless card in the J10 slot. In this case, you can leave the jumper on, as most wireless cards operate on a PCI express. Removing the jumper enables the use of a secondary cellular modem in the central J10 slot, but disables the USB 2.0 functionality of the USB port, while USB 3.0 can still be used on the USB port. Refer to the diagram below:



## Boot configuration jumpers

Default jumper configuration for MikroTik RouterOS boot:



## MiniPCIe slot usage

Installing a miniPCIe module should be done by a qualified person, please follow safety precautions when handling electrical equipment:

1. Use a wrist grounding strap when unpacking and working with electrical components to avoid electrical discharge (ESD) damage.
2. Place PCB board on the anti-static mat.
3. Locate the miniPCIe slot on the PCB and remove two factory attached screws.
4. Attach a thick thermal pad to the card, and install the card into miniPCIe slot so that thermal pad is between PCB and card.
5. Secure card in place using previously removed two screws.
6. Attach the grey uFL connector to the MAIN antenna connector of the modem, attach the black cable to the secondary (or AUX) connector.
7. Attach a thinner thermal pad to the top of the card.

Slide in the SIM cards from your mobile operator into the SIM slots. The slot accepts miniSIM (2FF).

## Buttons and jumpers

**RouterBOOT reset button.** This button has the following 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 CAPs mode (total 10 seconds).
- 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.

## Accessories

Package includes the following accessories that come with the device:

- K-25 set.

## Specifications

For more information about this product, specification and pictures please visit our web page:

<https://mikrotik.com/product/rbm33g>

## 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.

## Safety Notice

Electric shock hazard. This equipment is to be serviced by trained personnel only.



## 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.



## Federal Communication Commission Interference Statement

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.

Note: This unit was tested with shielded cables on the peripheral devices. Shielded cables must be used with the unit to ensure compliance.

### Industry Canada

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	С 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: <a href="https://mikrotik.com/products">https://mikrotik.com/products</a>
CS	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: <a href="https://mikrotik.com/products">https://mikrotik.com/products</a>
DA	Hermed erklærer Mikrotikls SIA, at radioudstyrstypen RouterBOARD er i overensstemmelse med direktiv 2014/53/EU. EU-overensstemmelseserklæringens fulde tekst kan findes på følgende internetadresse: <a href="https://mikrotik.com/products">https://mikrotik.com/products</a>
DE	Hiermit erkläre Mikrotikls SIA, dass der Funkanlagentyp RouterBOARD der Richtlinie 2014/53/EU entspricht. Der vollständige Text der EU-Konformitätserklärung ist unter der folgenden Internetadresse verfügbar: <a href="https://mikrotik.com/products">https://mikrotik.com/products</a>
EL	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: <a href="https://mikrotik.com/products">https://mikrotik.com/products</a>
EN	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: <a href="https://mikrotik.com/products">https://mikrotik.com/products</a>
ES	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: <a href="https://mikrotik.com/products">https://mikrotik.com/products</a>
ET	Käesolevaga deklareerib Mikrotikls SIA, et käesolev raadioseadme tüüp RouterBOARD vastab direktiivi 2014/53/EL nõuetele. ELi vastavusdeklaratsiooni täielik tekst on kättesaadav järgmisel internetiaadressil: <a href="https://mikrotik.com/products">https://mikrotik.com/products</a>
FI	Mikrotikls SIA vakuuttaa, että radiolaitetyyppi RouterBOARD on direktiivin 2014/53/EU mukainen. EU-vaatimustenmukaisuusvakuutuksen täysimittainen teksti on saatavilla seuraavassa internetosoitteessa: <a href="https://mikrotik.com/products">https://mikrotik.com/products</a>
FR	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: <a href="https://mikrotik.com/products">https://mikrotik.com/products</a>
HR	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: <a href="https://mikrotik.com/products">https://mikrotik.com/products</a>
HU	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: <a href="https://mikrotik.com/products">https://mikrotik.com/products</a>
IT	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: <a href="https://mikrotik.com/products">https://mikrotik.com/products</a>
IS	Hér með lýsir Mikrotikls 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: <a href="https://mikrotik.com/products">https://mikrotik.com/products</a>
LT	Aš, Mikrotikls SIA, patvirtinu, kad radijo įrenginių tipas RouterBOARD atitinka Direktyvą 2014/53/ES. Visas ES atitikties deklaracijos tekstas prieinamas šiuo interneto adresu: <a href="https://mikrotik.com/products">https://mikrotik.com/products</a>
LV	Ar šo Mikrotikls SIA deklarē, ka radioiekārta RouterBOARD atbilst Direktīvai 2014/53/ES. Pilns ES atbilstības deklarācijas teksts ir pieejams šādā interneta vietnē: <a href="https://mikrotik.com/products">https://mikrotik.com/products</a>
MT	B'dan, Mikrotikls SIA, niddikjara li dan it-tip ta' taghmir 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: <a href="https://mikrotik.com/products">https://mikrotik.com/products</a>
NL	Hierbij verklaar ik, Mikrotikls 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: <a href="https://mikrotik.com/products">https://mikrotik.com/products</a>
NO	Mikrotikls 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: <a href="https://mikrotik.com/products">https://mikrotik.com/products</a>
PL	Mikrotikls 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: <a href="https://mikrotik.com/products">https://mikrotik.com/products</a>
PT	O(a) abaixo assinado(a) Mikrotikls 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: <a href="https://mikrotik.com/products">https://mikrotik.com/products</a>
RO	Prin prezenta, Mikrotikls 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: <a href="https://mikrotik.com/products">https://mikrotik.com/products</a>
SK	Mikrotikls 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: <a href="https://mikrotik.com/products">https://mikrotik.com/products</a>
SL	Mikrotikls 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: <a href="https://mikrotik.com/products">https://mikrotik.com/products</a>
SV	Härmed försäkrar Mikrotikls 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: <a href="https://mikrotik.com/products">https://mikrotik.com/products</a>

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.



**BG. Инструкции:** Съвръжете адаптера на захранване, за да включите устройството. Отворете 192.168.88.1 в уеб браузър, за да настроите продукта. Поечте информация в <http://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 <http://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 <http://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 <http://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 <http://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 <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-es>

**ET. Kasutusjuhend:** Ühendage toiteadapter seadme sisselülitamiseks. Avatud 192.168.88.1 in veebilehitseja seadistada toodet. Rohkem teavet <http://mt.lv/help-et>

**FI. Käyttöohje:** Kytke virtalähde päälle laitteen. Avaa 192.168.88.1 in selaimen määrittää tuotteen. Lisää tietoa <http://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 <http://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 <http://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 <http://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 <http://mt.lv/help-it>

**IS. Notkunarleiðbeiningar:** Tengdu straumbreytinn til að kveikja á tækinu. Opnaðu 192.168.88.1 í vafrá til að stilla það. Nánari upplýsingar á <http://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 <http://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 <http://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 <http://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 kkonfigurati. Aktar informazzjoni fuq <http://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 <http://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 <http://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 <http://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 <http://mt.lv/help-ro>

**SK. Navodila:** Priključite napajalnik za vklop naprave. Odprite 192.168.88.1 v spletnem brskalniku nastavi izdelak. Več informacij v <http://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 <http://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 <http://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 <http://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 <http://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 <http://mt.lv/help-zh> 的更多信息