

LHGG LTE6 kit



LHGG LTE6 kit (RBLHGGR&R11e-LTE6)

Quickstart

1. Open the Ethernet port door;
2. Insert the SIM card into the slot, with the chip facing UP;
3. Connect the device to the included PoE injector with Ethernet cable to the data+power end;
4. Connect the data end of the PoE injector into the computer;
5. Connect the power adapter to the PoE injector;
6. Open the <https://192.168.88.1> in your web browser;
7. User name: *admin*, and there is no password;
8. Enter the PIN code, if required by your mobile network operator;
9. Use the check for update option to upgrade the device to the latest version. You must have an active SIM card with available data;
10. The device will reboot;
11. Connect again and in the *QuickSet* menu set a strong password.

Case assembly

1. Attach the two legs to the LHG case by sliding them onto the respective sides, legs are different and cannot be exchanged (when looking at the product place it that cover for Ethernet port is in front of you, leg marked R is for the right side, leg marked L is for the left side).
2. Snap the assembled LHG unit to the grid in the appropriate central location.
3. Fix the two legs in place with included two self thread screws (Phillips screwdriver PH2).

The package also contains a grounding cable connector and a 5-degree angle adapter, for easier up or downward tilt adjustment.

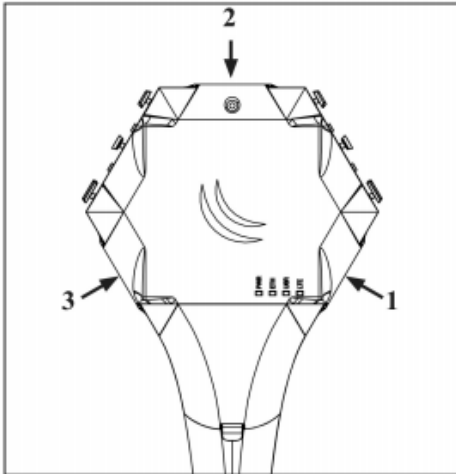
Opening the case cover

Optional - to access the miniPCle slot, the opening of the unit top cover is required. As an opening tool, you can use a large size flat head screwdriver or a small coin. Be extremely cautious when opening, because the incorrect opening of the clip can break it off!

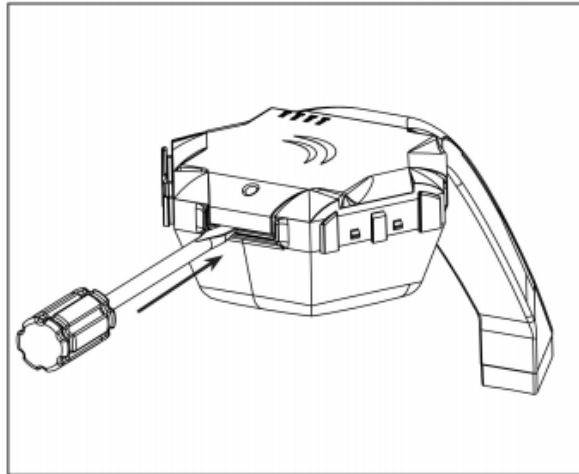
Mounting and configuration of this device should be done by a qualified person.

Follow these steps:

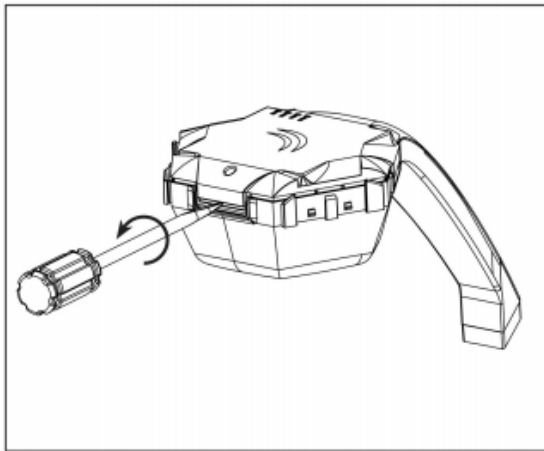
1. Follow this order when opening the unit.



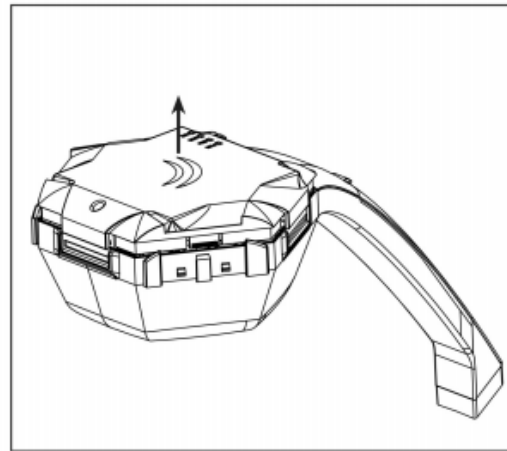
2. Insert a screwdriver into the first slot.



3. Turn the screwdriver, until one side pops open. Continue in the above order.



4. Lift cover to access the card.



Additional Caution when lifting up the cover, do not force it with sharp objects.

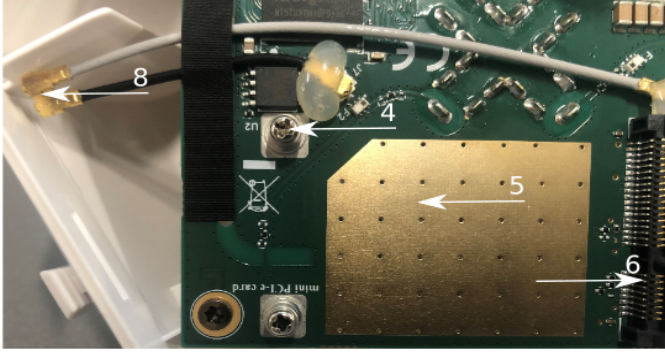
miniPCle slot usage

The device is equipped with a miniPCle slot and has already installed an LTE6 modem. One SIM slot is provided for use together with a miniPCle modem. The SIM slot is not used separately.

Replacing a miniPCle 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. Open the upper cover as shown in instruction previously;



3. The antenna is located underneath PCB;
4. Locate the miniPCIe slot on the PCB and remove two factory attached screws;
5. Attach provided a thick thermal pad to the card, and install the card into miniPCIe slot so that thermal pad is between PCB and card;
6. Insert your desired card;
7. The secure card in place using previously removed two screws;
8. Attach the grey uFL connector to the MAIN antenna connector of the modem, attach the black cable to the secondary (or AUX) connector;
9. Attach a thinner thermal pad to the top of the card;
10. Reassemble.

After reassembly, slide in the SIM card from your mobile operator into the SIM slot, with the chips facing up as shown on the port label. The slot accepts MicroSIM (3FF).

Powering

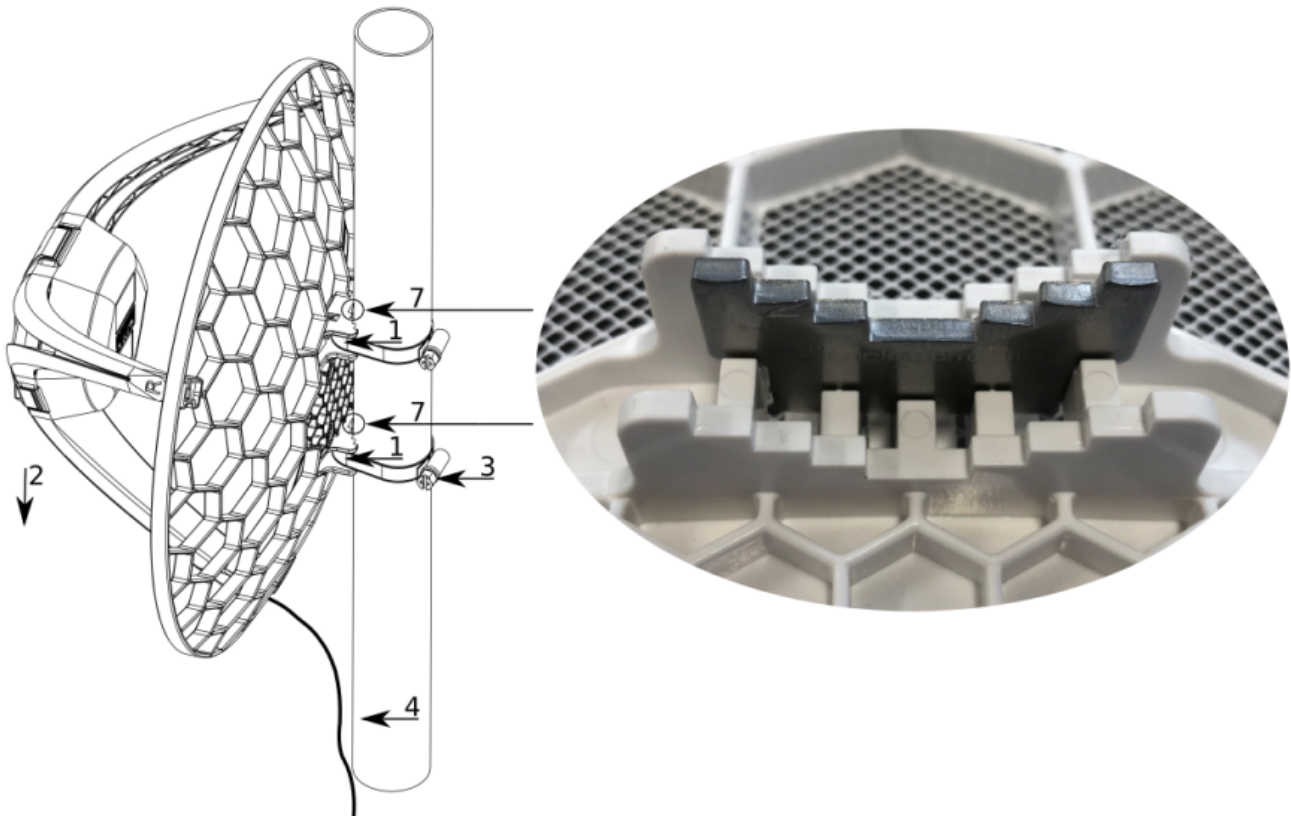
The device can be powered from 12-57 V 802.3af/at sources and also Passive PoE injectors (one power supply and PoE injector are included).

Maximum power consumption 6 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.

Mounting



1. Slide the included metallic mounting rings into the two slots on the back of the antenna dish.
2. Attach the unit to a pole, with the Ethernet port pointing downward.
3. Use a PH2 screwdriver to tighten the rings.
4. Fix the Ethernet cable to the pole using zip ties, less than one meter from the unit, to avoid the cable being pulled out of the port.
5. Check mounting angle and positioning.
6. Optional: If required, before mounting the unit, you can insert the included 5-degree adjustment adapter into the top or bottom slot where the mounting ring is inserted. This will create an additional upward or downward angle when the unit is tightened to a vertical pole.
7. Insert a 5-degree angle adapter to one of the slots and remount the unit.

When mounting outdoors, please ensure that any cable openings are directed downwards. Use POE injector and proper grounding, this device has a specially designed grounding connector under the port cover. Recommended using shielded Cat5/6 cable. The IP rating scale for this device is IP54. *Warning! This equipment should be installed and operated with a minimum distance of 120 cm between the device and your body. Operation of this equipment in the residential environment could cause radio interference.*

Configuration

Once logged in, we recommend clicking the "Check for updates" button in the QuickSet menu, as updating your RouterOS software to the latest version ensures the best performance and stability. For wireless models, please make sure you have selected the country where the device will be used, to conform with local regulations.

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).

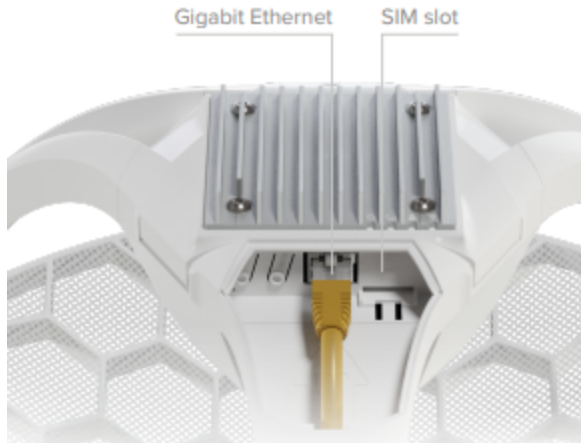
Accessories

Package includes the following accessories and parts that come with the device:

- ADAPT1_EU/US Switching Power Supply 24V, 0.8A;
- CLAMP1,2_Hose Clamp SUS304 (philips type; 9mm; clamping diameter range 25-70mm) with EPE bag;

- POE1_ Gigabit POE injector;
- K-SET_K_Set for LHGGR&R11e-LTE6;
- CASE1_ LHG-LTE-RHLEG-R0;
- CASE2_ LHG-LTE-LHLEG-R0;
- CASE10_ LHG-5G-390mm Dish 3,0x2.5x0,5mm;
- Assembled LHGGR main leg.

Expansion slots and ports



- One Gigabit 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 9-30 V DC powering from a passive PoE injector.
- MiniPCIe slot with LTE6 modem.
- SIM slot (can't be used separately).

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.

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 version 6.46. 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. This is a class A device, operating it near residential radio equipment could cause radio interference.

Federal Communication Commission Interference Statement

Model	Contains FCC ID
RBLHGGR&R11e-LTE6	TV7R11ELTE6

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a commercial installation.



This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

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.

Innovation, Science and Economic Development Canada

Model	Contains IC
RBLHGGR&R11e-LTE6	7442A-R11ELTE6

This device contains license-exempt transmitter(s)/receiver(s) that comply with Innovation, Science, and Economic Development Canada's license-exempt RSS(s). Operation is subject to the following two conditions: (1) This device may not cause interference. (2) This device must accept any interference, including interference that may cause undesired operation of the device.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique 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; 2) L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

This Class A digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe [A] est conforme à la norme NMB-003 du Canada.

CAN ICES-003 (A) / NMB-003 (A)

CE Declaration of Conformity

BG	С настоящото Mikrotikls SIA декларира, че този тип радиосъоръжение RBLHGGR&R11e-LTE6 е в съответствие с Директива 2014/53/EC. Цялостният текст на ЕС декларацията за съответствие може да се намери на следния интернет адрес: https://mikrotik.com/products
CS	Tímto Mikrotikls SIA prohlašuje, že typ rádiového zařízení RBLHGGR&R11e-LTE6 je v souladu se směrnicí 2014/53/EU. Úplné znění EU prohlášení o shodě je k dispozici na této internetové adrese: https://mikrotik.com/products
DA	Hermed erklærer Mikrotikls SIA, at radioudstyrtypen RBLHGGR&R11e-LTE6 er i overensstemmelse med direktiv 2014/53/EU. EU-overensstemmelseserklæringens fulde tekst kan findes på følgende internetadresse: https://mikrotik.com/products
DE	

	Hiermit erklärt MikroTikSIA, dass der Funkanlagentyp RBLHGGR&R11e-LTE6 der Richtlinie 2014/53/EU entspricht. Der vollständige Text der EU-Konformitätserklärung ist unter der folgenden Internetadresse verfügbar: https://mikrotik.com/products
EL	Με την παρούσα ο/η MikroTikSIA, δηλώνει ότι ο ραδιοεξοπλισμός RBLHGGR&R11e-LTE6 πληροί την οδηγία 2014/53/ΕΕ. Το πλήρες κείμενο της δήλωσης συμμόρφωσης ΕΕ διατίθεται στην ακόλουθη ιστοσελίδα στο διαδίκτυο: https://mikrotik.com/products
EN	Hereby, MikroTikSIA declares that the radio equipment type RBLHGGR&R11e-LTE6 is in compliance with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address: https://mikrotik.com/products
ES	Por la presente, MikroTikSIA declara que el tipo de equipo radioeléctrico RBLHGGR&R11e-LTE6 es conforme con la Directiva 2014/53/UE. El texto completo de la declaración UE de conformidad está disponible en la dirección Internet siguiente: https://mikrotik.com/products
ET	Käesolevaga deklareerib MikroTikSIA, et käesolev raadioseadme tüüp RBLHGGR&R11e-LTE6 vastab direktiivi 2014/53/EL nõuetele. ELi vastavusdeklaratsiooni täielik tekst on kättesaadav järgmisel internetiaadressil: https://mikrotik.com/products
FI	MikroTikSIA vakuuttaa, että radiolaitetyypin RBLHGGR&R11e-LTE6 on direktiivin 2014/53/EU mukainen. EU-vaatimustenmukaisuusvakuutuksen täysimittainen teksti on saatavilla seuraavassa internetosoitteessa: https://mikrotik.com/products
FR	Le soussigné, MikroTikSIA, déclare que l'équipement radioélectrique du type RBLHGGR&R11e-LTE6 est conforme à la directive 2014/53/UE. Le texte complet de la déclaration UE de conformité est disponible à l'adresse internet suivante: https://mikrotik.com/products
HR	MikroTikSIA ovime izjavljuje da je radijska oprema tipa RBLHGGR&R11e-LTE6 u skladu s Direktivom 2014/53/EU. Cjeloviti tekst EU izjave o sukladnosti dostupan je na sljedećoj internetskoj adresi: https://mikrotik.com/products
HU	MikroTikSIA igazolja, hogy a RBLHGGR&R11e-LTE6 típusú rádióberendezés megfelel a 2014/53/EU iránelyvnek. Az EU-megfelelőségi nyilatkozat teljes szövege elérhető a következő internetes címen: https://mikrotik.com/products
IT	Il fabbricante, MikroTikSIA, dichiara che il tipo di apparecchiatura radio RBLHGGR&R11e-LTE6 è conforme alla direttiva 2014/53/UE. Il testo completo della dichiarazione di conformità UE è disponibile al seguente indirizzo Internet: https://mikrotik.com/products
IS	Hér með lýsir MikroTikSIA því yfir að RBLHGGR&R11e-LTE6 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, MikroTikSIA, patvirtinu, kad radijo įrenginių tipas RBLHGGR&R11e-LTE6 atitinka Direktyvą 2014/53/ES. Visas ES atitikties deklaracijos tekstas prieinamas šiuo interneto adresu: https://mikrotik.com/products
LV	Ar šo MikroTikSIA deklarē, ka radioiekārta RBLHGGR&R11e-LTE6 atbilst Direktīvai 2014/53/ES. Pilns ES atbilstības deklarācijas teksts ir pieejams šādā interneta vietnē: https://mikrotik.com/products
MT	B'dan, MikroTikSIA, niddikjara li dan it-tip ta' tagħmir tar-radju RBLHGGR&R11e-LTE6 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, MikroTikSIA, dat het type radioapparatuur RBLHGGR&R11e-LTE6 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	MikroTikSIA erklærer herved at utstyret RBLHGGR&R11e-LTE6 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	MikroTikSIA niniejszym oświadcza, że typ urządzenia radiowego RBLHGGR&R11e-LTE6 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) MikroTikSIA declara que o presente tipo de equipamento de rádio RBLHGGR&R11e-LTE6 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, MikroTikSIA declară că tipul de echipamente radio RBLHGGR&R11e-LTE6 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	MikroTikSIA týmto vyhlasuje, že rádiové zariadenie typu RBLHGGR&R11e-LTE6 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	MikroTikSIA potrjuje, da je tip radijske opreme RBLHGGR&R11e-LTE6 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 MikroTikSIA att denna typ av radioutrustning RBLHGGR&R11e-LTE6 överensstämmer med direktiv 2014/53/EU. Den fullständiga texten till EU-försäkran om överensstämmelse finns på följande webbadress: https://mikrotik.com/products

	E-GSM-900	900 MHz / 33dBm
	DCS-1800	1800 MHz / 30dBm
Operating Frequency / Maximum output power	WCDMA Band I	1922.4 MHz / 24dBm ± 2.7 dB
Betriebsfrequenz / maximale Ausgangsleistung	WCDMA Band VIII	882.4 MHz / 24dBm ± 2.7 dB
Fréquence de fonctionnement / puissance de sortie maximale	LTE Band 1	2100 MHz / 23dBm ± 2.7 dB
Frequenza operativa / massima potenza di uscita	LTE Band 3	1700 MHz / 23dBm ± 2.7 dB
Frecuencia de funcionamiento / potencia de salida máxima	LTE Band 7	2600 MHz / 23dBm ± 2.7 dB
Рабочая частота / максимальная выходная мощность	LTE Band 8	900 MHz / 23dBm ± 2.7 dB
	LTE Band 20	800 MHz / 23dBm ± 2.7 dB
	LTE Band 38	2600 MHz / 23dBm ± 2.7 dB
	LTE Band 40	2300 MHz / 23dBm ± 2.7 dB

This MikroTik device meets Maximum TX power limits per ETSI regulations. For more detailed information see Declaration of Conformity above / Dieses MikroTik-Gerät erfüllt die maximalen Sendeleistungsgrenzwerte gemäß ETSI-Bestimmungen. Weitere Informationen finden Sie oben in der Konformitätserklärung. Nähere Informationen finden Sie oben in der Konformitätserklärung / Cet appareil MikroTik respecte les limites de puissance TX maximale via les réglementations ETSI. Pour plus d'informations, voir la déclaration de conformité ci-dessus / Questo dispositivo MikroTik soddisfa i limiti di potenza massima TX tramite le normative ETSI. Per informazioni più dettagliate consultare la Dichiarazione di conformità sopra / Este dispositivo MikroTik cumple con los límites máximos de potencia TX a través de las normas ETSI. Para obtener información más detallada, consulte la Declaración de conformidad anterior / Это устройство MikroTik соответствует ограничениям максимальной мощности передачи согласно правилам ETSI. Для получения более подробной информации см. Декларацию соответствия выше.