QSG RUT271

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This revision of the page has been set as the approved version.

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This Wiki page contains the online version of the **Quick Start Guide (QSG)** for the **RUT271 RedCap 5G Router**. Here you will find an overview of the various components on the front and back of a RUT271 device, hardware installation instructions, first login information, device specifications, and general safety information. It is highly recommended to acquaint yourself with the Quick Start Guide before using the device. You can also locate a printed version of the Quick Start Guide in the packaging box of your device.


Safety information

Before starting operating the device, please review recommendations and precautions to minimize the possibility of accidents. Safety precautions presented are supplementary and subject to the local safety regulations. When various operations are executed on the device, the user must fully follow the safety instructions and recommendations provided with the device.

General

Radio specifications	
RF technologies	4G, 5G, Wi-Fi
Max RF power	25 dBm@LTE, 28 dBm@LTE(HPUE: B38/40/41/42/43), 25 dBm@5G, 28 dBm@5G(HPUE: n38/40/41/77/78), 20 dBm@WiFi 2.4GHz
Bundled accessories specifications*	
Power adapter	Input: 0.45A@100-240 VAC, Output: 9 VDC, 1A, 4-pin plug
Mobile antenna	617~960 / 1710~2690 / 3300~6000 MHz, 50 Ω, VSWR<3, gain** 5 dBi, omnidirectional, SMA male connector
WiFi antenna	2400~2500 MHz, 50Ω, VSWR<2.5, gain** 5dBi, omnidirectional, RP-SMA male connector

* Order code dependant.

** Higher gain antenna can be connected to compensate for cable attenuation when a cable is used. The user is responsible for the compliance with the legal regulations.

Compliance

RUT271 router must be used in compliance with any and all applicable national and international laws and with any special restrictions regulating the utilization of the communication module in prescribed applications and environments.

CE Declaration of Conformity

[BG] Bulgarian	С настоящото TELTONIKA NETWORKS декларира, че този RUT271 е в съответствие със съществените изисквания и други разпоредби на Директиви 2014/53/EU, 2011/65/EU, 2009/125/EC.
[HR] Croatian	Ovim TELTONIKA NETWORKS izjavljuje da je ovaj RUT271 u skladu s bitnim zahtjevima i ostalim relevantnim odredbama Direktive 2014/53/EU, 2011/65/EU, 2009/125/EC.
[CZ] Czech	Společnost TELTONIKA NETWORKS tímto prohlašuje, že tento RUT271 splňuje základní požadavky a další ustanovení směrnic 2014/53/EU, 2011/65/EU, 2009/125/EC.
[DK] Danish	TELTONIKA NETWORKS erklærer hermed, at denne RUT271 er i overensstemmelse med de væsentlige krav og andre bestemmelser i direktiv 2014/53/EU, 2011/65/EU, 2009/125/EC.
[NL] Dutch	Hereby, TELTONIKA NETWORKS declares that this RUT271 is in compliance with the essential requirements and other relevant provisions of Richtlijnen 2014/53/EU, 2011/65/EU, 2009/125/EC.
[EE] Estonian	Käesolevaga kinnitab TELTONIKA NETWORKS seadme RUT271 vastavust Direktiivide 2014/53/EU, 2011/65/EU, 2009/125/EC põhinõuetele ja nimetatud direktiivist tulenevatele teistele asjakohastele sätetele.
[FI] Finish	TELTONIKA NETWORKS vakuuttaa täten että RUT271 tyyppinen laite on Direktiivien 2014/53/EU, 2011/65/EU, 2009/125/EC oleellisten vaatimusten ja sitä koskevien direktiivin muiden ehtojen mukainen.
[FR] French	TELTONIKA NETWORKS déclare par la présente que ce RUT271 est conforme aux exigences essentielles et autres dispositions des Directives 2014/53/EU, 2011/65/EU, 2009/125/EC.
[DE] German	TELTONIKA NETWORKS erklärt hiermit, dass dieses RUT271 den grundlegenden Anforderungen und anderen Bestimmungen der Richtlinien 2014/53/EU, 2011/65/EU, 2009/125/EC entspricht.
[GR] Greek	Η TELTONIKA NETWORKS δηλώνει ότι το παρόν RUT271 συμμορφώνεται με τις βασικές απαιτήσεις και άλλες διατάξεις των Οδηγιών 2014/53/EU, 2011/65/EU, 2009/125/EC.
[HU] Hungarian	A TELTONIKA NETWORKS kijelenti, hogy ez a RUT271 megfelel a 2014/53/EU, 2011/65/EU, 2009/125/EC irányelvek alapvető követelményeinek és egyéb rendelkezéseinek.
[IE] Irish	Leis seo, dearbhaíonn TELTONIKA NETWORKS go gcomhlíonann an RUT271 seo bunriachtanais agus forálacha ábhartha eile Threoir 2014/53/EU, 2011/65/EU, 2009/125/EC.
[IT] Italian	Con la presente, TELTONIKA NETWORKS dichiara che questo RUT271 è conforme ai requisiti essenziali e ad altre disposizioni pertinenti della Direttive 2014/53/EU, 2011/65/EU, 2009/125/EC.
[LV] Latvian	TELTONIKA NETWORKS ar šo paziņo, ka šis RUT271 atbilst pamatprasībām un citiem Direktīvas 2014/53/EU, 2011/65/EU, 2009/125/EC noteikumiem.
[LT] Lithuanian	Šiuo dokumentu UAB TELTONIKA NETWORKS deklaruoja, kad šis RUT271 atitinka esminius reikalavimus ir kitas 2014/53/EU, 2011/65/EU, 2009/125/EC Direktyvų nuostatas.
[MT] Maltese	TELTONIKA NETWORKS b'dan tiddikjara li dan RUT271 jikkonforma mar-rekwiżiti essenzjali u dispożizzjonijiet oħra tad-Direttivi 2014/53/EU, 2011/65/EU, 2009/125/EC.
[NO] Norwegian	TELTONIKA NETWORKS erklærer herved at denne RUT271 er i samsvar med de grunnleggende kravene og andre bestemmelser i Direktivene 2014/53/EU, 2011/65/EU, 2009/125/EC.
[PL] Polish	TELTONIKA NETWORKS niniejszym oświadcza, że niniejszy RUT271 jest zgodny z zasadniczymi wymaganiami i innymi postanowieniami Dyrektyw 2014/53/EU, 2011/65/EU, 2009/125/EC.
[PT] Portuguese	A TELTONIKA NETWORKS declara que esta RUT271 cumpre os requisitos essenciais e outras disposições das Directivas 2014/53/EU, 2011/65/EU, 2009/125/EC.

[RO] Romanian	TELTONIKA NETWORKS declară prin prezenta că acest RUT271 este în conformitate cu cerințele esențiale și cu alte dispoziții ale Directivelor 2014/53/EU, 2011/65/EU, 2009/125/EC.
[SK] Slovak	Spoločnosť TELTONIKA NETWORKS týmto vyhlasuje, že tento RUT271 spĺňa základné požiadavky a ďalšie ustanovenia smerníc 2014/53/EU, 2011/65/EU, 2009/125/EC.
[SI] Slovenian	TELTONIKA NETWORKS izjavlja, da je ta RUT271 skladen z bistvenimi zahtevami in drugimi določbami Direktiv 2014/53/EU, 2011/65/EU, 2009/125/EC.
[ES] Spanish	TELTONIKA NETWORKS declara por la presente que este RUT271 cumple los requisitos esenciales y otras disposiciones de las Directivas 2014/53/EU, 2011/65/EU, 2009/125/EC.
[SE] Swedish	TELTONIKA NETWORKS förklarar härmed att denna RUT271 uppfyller de grundläggande kraven och andra bestämmelser i Direktiven 2014/53/EU och 2011/65/EU, 2009/125/EC.

Markings

Detailed compliance information is available at the following internet address: wiki.teltonika-networks.com/view/Certificates (https://wiki.teltonika-networks.com/view/Certificates).

This sign means that it is necessary to read the User's Manual before you start using the device.

This sign on the package means that all used electronic and electric equipment should not be mixed with general household waste.

CE Hereby, TELTONIKA NETWORKS declares that this RUT271 is in compliance with the essential requirements and other relevant provisions of Directives 2014/53/EU, 2011/65/EU, 2009/125/EC. The full text of the EU Declaration of Conformity is available at the following internet address: https://wiki.teltonika-networks.com/view/RUT271.

UK CA Hereby, TELTONIKA NETWORKS declares that this RUT271 is in compliance with Radio Equipment Regulations 2017, The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012, The Ecodesign for Energy-Related Products and Energy Information (Amendment) (EU Exit) Regulations 2019. The full text of the UK Declaration of Conformity is available at the following internet address: https://wiki.teltonika-networks.com/view/RUT271.

FCC

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.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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 or more 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: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

ISED Canada

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, mźme si le brouillage est.

RF exposure

This device meets the official requirements for exposure to radio waves. This device is designed and manufactured not to exceed the emission limits for exposure to radio frequency (RF) energy set by authorized agencies. The device must be used with a minimum separation of 20 cm from a person's body to ensure compliance with RF exposure guidelines. Failure to observe these instructions could result in your RF exposure exceeding the applicable limits.

External antennas used with RUT271 must be installed to provide a distance of at least 20 cm from any people and must not be co-located or operated in conjunction with any other antenna or transmitter.

Any external antenna gain must meet RF exposure and maximum radiated output power limits of the applicable rule section.

Operating Frequency / Maximum transmission power		
LTE-FDD	B1	1920-1980, 2110-2170 MHz, 25 dBm
	B2	1850–1910, 1930–1990 MHz, 25 dBm
	B3	1710-1785, 1805-1880 MHz, 25 dBm
	B4	1710–1755, 2110–2155 MHz, 25 dBm
	B5[1]	824-849, 869-894 MHz, 25 dBm
	B7	2500-2570, 2620-2690 MHz, 25 dBm
	B8	880-915, 925-960 MHz, 25 dBm
	B12	699–716, 729–746 MHz, 25 dBm
	B13	777–787, 746–756MHz, 25 dBm
	B14	788–798, 758–768 MHz, 25 dBm
	B17	704–716, 734–746 MHz, 25 dBm
	B20	832-862, 791-821 MHz, 25 dBm
	B25	1850–1915, 1930–1995 MHz, 25 dBm
	B26	814–849, 859–894 MHz, 25 dBm
	B28	703-748, 758-803 MHz, 25 dBm
	B30	2305–2315, 2350–2360 MHz, 24 dBm
	B66	1710–1780, 2110-2200 MHz, 25 dBm
	B70	1695–1710, 1995–2020 MHz, 25 dBm
	B71	663-698, 617-652 MHz, 25 dBm
LTE-TDD	B34	2010–2025 MHz, 25 dBm
	B38	2570-2620 MHz, 28 dBm
	B40	2300-2400 MHz, 28 dBm
	B41[2]	2496-2690 MHz, 28 dBm
	B42	3400–3600 MHz, 28 dBm
	B43	3600–3800 MHz, 28 dBm
	B48	3550–3700 MHz, 25 dBm
5G NR SA	n1	1920-1980, 2110-2170 MHz, 25 dBm
	n2	1850–1910, 1930–1990 MHz, 25 dBm
	n3	1710-1785, 1805-1880 MHz, 25 dBm
	n5	824-849, 869-894 MHz, 25 dBm
	n7	2500-2570, 2620-2690 MHz, 25 dBm
	n8	880-915, 925-960 MHz, 25 dBm
	n12	699–716, 729–746 MHz, 25 dBm
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	n28	703-748, 758-803 MHz, 25 dBm
	n30	2305–2315, 2350–2360 MHz, 24 dBm
	n38	2570-2620 MHz, 28 dBm
	n40	2300-2400 MHz, 28 dBm
	n41	2496-2690 MHz, 28 dBm
	n66	1710–1780, 2110-2200 MHz, 25 dBm
	n70	1695–1710, 1995–2020 MHz, 25 dBm
	n71	663-698, 617-652 MHz, 25 dBm
	n77	3300-4200 MHz, 28dBm
	n78	3300-3800 MHz, 28 dBm
Wi-Fi 2.4 GHz	2412-2472 MHz, 20 dBm	

[1] – Not supported in Europe region.

[2] – Not supported in Europe and Oceania regions.

FCC Radiation Exposure Statement

This device complies with the relevant FCC RF radiation exposure limit set forth for an uncontrolled environment. The antenna(s) used for this transmitter must not be co-located or operating in conjunction with any other antenna or transmitter and must be installed to provide a separation distance of at least 20 cm from all persons.

ISED Canada Radiation Exposure Statement

This equipment complies with IC RSS-102 radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20 cm between the radiator and your body.

Cet équipement est conforme aux limites d'exposition aux radiations IC CNR-102 établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec une distance minimale de 20 cm entre le radiateur et votre corps.

This radio transmitter **IC: 26511-RUT271** has been approved by Innovation, Science and Economic Development Canada to operate with the antenna types listed below, with the maximum permissible gain indicated. Antenna types not included in this list that have a gain greater than the maximum gain indicated for any type listed are strictly prohibited for use with this device.

Antenna type	Maximum antenna gain (dBi)	Impedance (ohm)
Mobile antenna	5.00	50
WiFi antenna	4.81	50

Le présent émetteur radio **IC: 26511-RUT271** a été approuvé par Innovation, Sciences et Développement économique Canada pour fonctionner avec les types d'antenne énumérés ci-dessous et ayant un gain admissible maximal. Les types d'antenne non inclus dans cette liste, et dont le gain est supérieur au gain maximal indiqué pour tout type figurant sur la liste, sont strictement interdits pour l'exploitation de l'émetteur.

Type d'antenne	Gain d'antenne maxima (dBi)	Impédance (ohm)
Antenne mobile	5.00	50
Antenne WiFi	4.81	50

Product Safety and Use

Operating conditions

- Operating temperature: -40° to +75° Celsius
- Humidity should be in the range of 10% to 90% (non-condensing). Only use the device in dry environments.
- Out of direct sunlight
- Away from heat source, corrosive substances, salts, and flammable gases

Attention: operation outside the permissible range can considerably shorten the service life of the device.

Faulty and damaged products

- Do not attempt to disassemble the device or its accessories.
- Only qualified personnel must service or repair the device or its accessories.
- If your device or its accessories have been submerged in water punctured or subjected to a severe fall, do not use until they have been checked at an authorized service center.

Electrical safety

- Only use approved accessories.
- Do not connect with incompatible products or accessories.
- It is recommended to ground devices with grounding terminals before connecting them to power. Failure to ground appropriately might result in a shock hazard. The cross-sectional area of the protective grounding conductor should be at least 1mm2.

Product handling

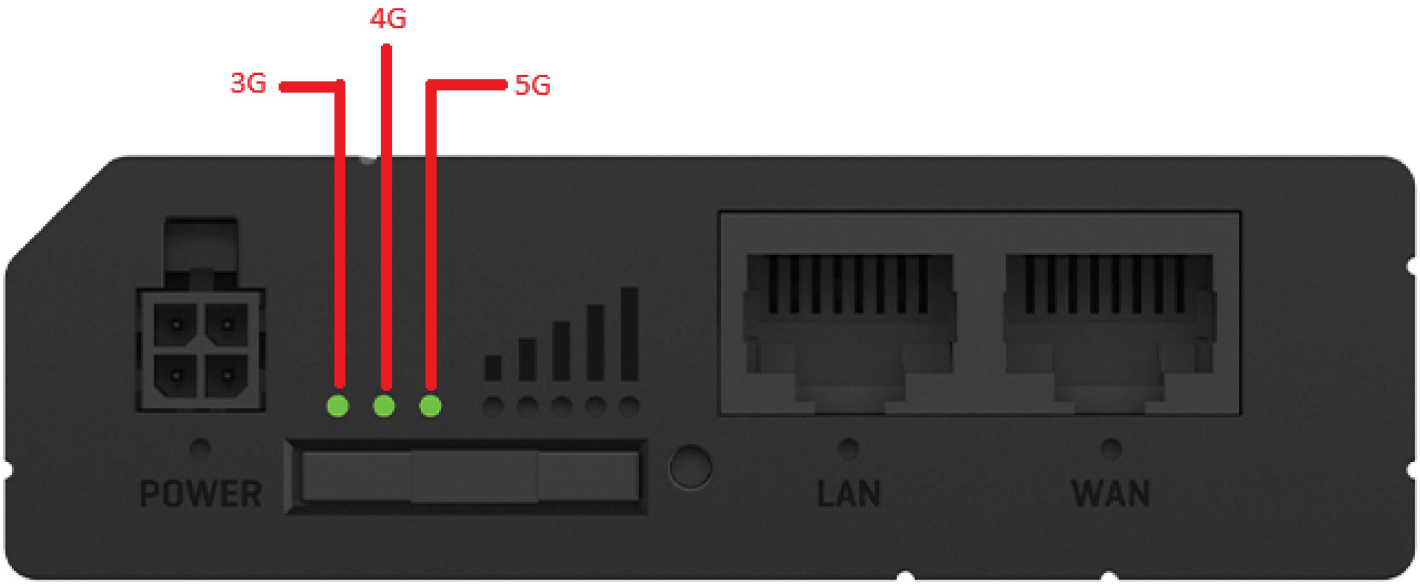
- You alone are responsible for how you use your device and any consequences related to its use.

- Use of your device is subject to safety measures designed to protect users and their environment.
- Always treat your device and its accessories with care and keep it in a clean and dust-free place.
- Do not expose your device or its accessories to open flames or lit tobacco products, liquid, moisture, or high humidity.
- Do not drop, throw or try to bend your device or its accessories.
- Do not use harsh chemicals, cleaning solvents, or aerosols to clean the device or its accessories.
- Do not paint your device or its accessories.
- Do not attempt to disassemble your device (exemptions for devices that require disassembly for SIM insertion) or its accessories: it does not contain any user-serviceable parts. For safety reasons, the equipment should be opened only by qualified personnel.
- Make sure to use ESD personal protective equipment while the equipment is serviced.
- Do not use your device in an enclosed environment where heat dissipation is poor.
- Prolonged use in such space may cause excessive heat and raise ambient temperature, which will lead to the automatic shutdown of your device or the disconnection of the mobile network connection for your safety. To use your device again after such a shutdown, cool it in a well-ventilated place before turning it on.
- Please check all national laws and local regulations for the disposal of electronic products.
- Do not operate the device where ventilation is restricted.
- Do not use or install this product near water to avoid fire or shock hazards.
- Avoid exposing the equipment to rain or damp areas.
- Arrange power and Ethernet cables so that they are not likely to be stepped on or have items placed on them.
- Ensure that the voltage and the rated current of the power source match the device's requirements. Do not connect the device to an inappropriate power source.
- During a thunderstorm, no operations should be carried out on the device and cables.
- The unit must be powered off where blasting is in progress and explosive atmospheres are present or near medical life support equipment.
- Do not leave your device and its accessories within reach of small children or allow them to play with it. They could hurt themselves or others and could accidentally damage the device. Your device contains small parts with sharp edges that may cause an injury choking hazard.
- Like any wireless device, this device operates using radio signals, which cannot guarantee connection in all conditions. Therefore, you must never rely solely on any wireless device for emergency communications or otherwise use the device in situations where the interruption of data connectivity could lead to death, personal injury, property damage, data, or other loss.
- The device may become warm during regular use.

Quick Start Guide

Connection status LEDs

The connection status LEDs are located on the left side of the front panel, between the power connector and the signal strength indication LEDs:

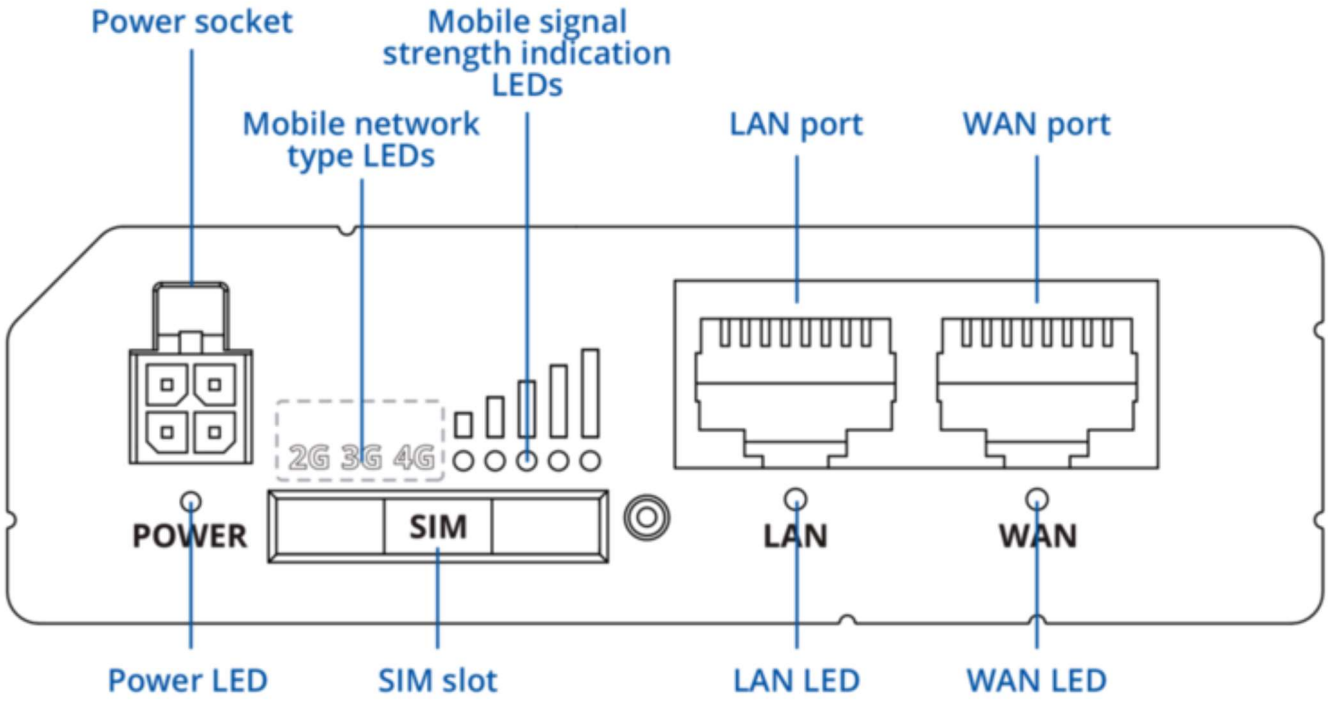


The LED displays the router's current connection state and network type among a few other things

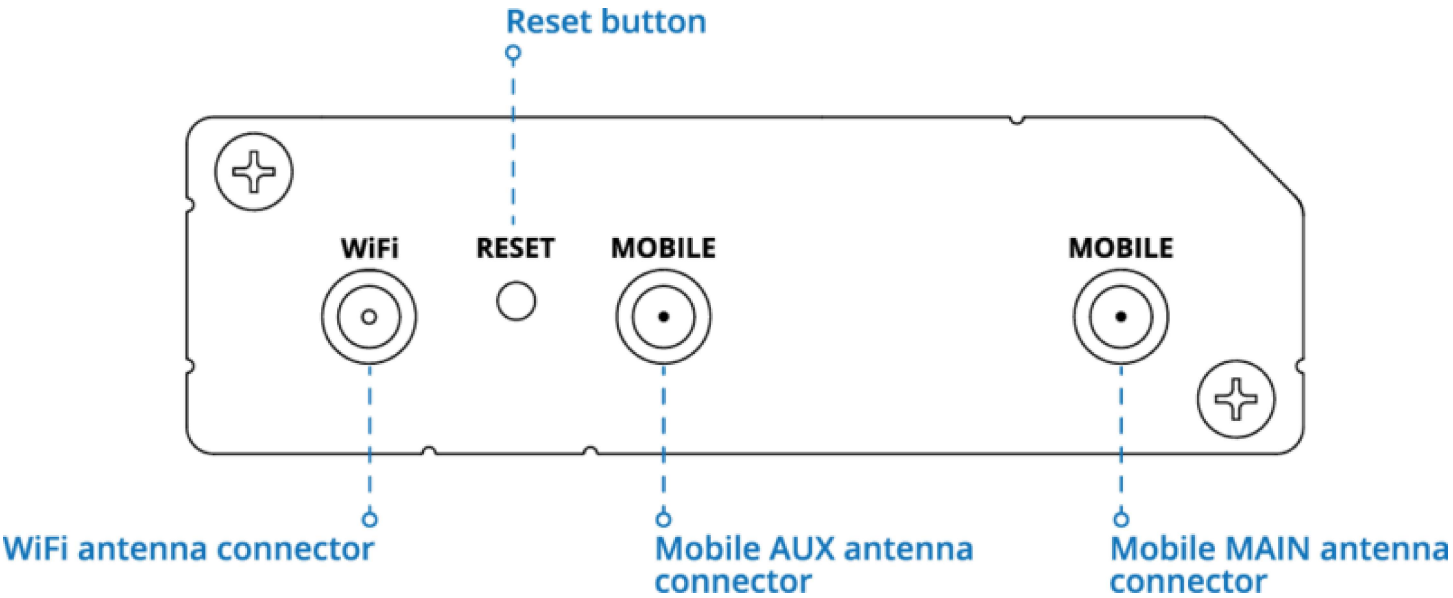
ACTION	DESCRIPTION
4G and 5G LEDs blinking every 1 second	No SIM or bad PIN
Blinking from 4G LED to 5G LED repeatedly	Attempting to connect to a mobile network operator
4G/5G LED blinking every 1 sec	Connected to 4G/5G, no data session established
4G/5G LED turned on	Connected to 4G/5G with data session
4G/5G LED blinking rapidly	Connected to 4G/5G with data session and data is being transferred

* Device is temporarily manufactured with different panel. As a result, the LED labelled 3G/4G actually indicates 4G/5G functionality respectively. Future revision will have the correct panel.

Front view



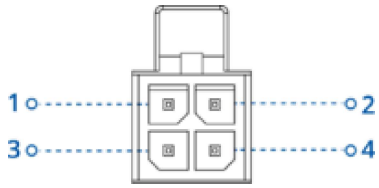
Back view



Connectors

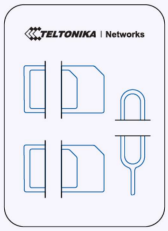
POWER SOCKET PINOUT

NO.	DESCRIPTION	WIRE COLOR
1	Power	Red
2	Ground	Black
3	I/O	Green
4	I/O	White

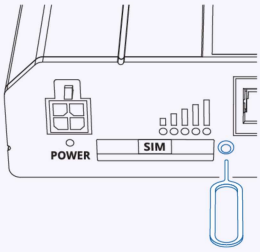


Hardware installation

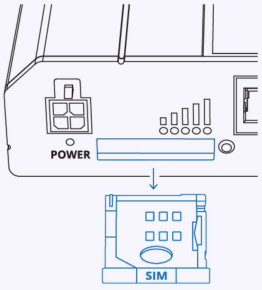
1. Locate the SIM Adapter kit



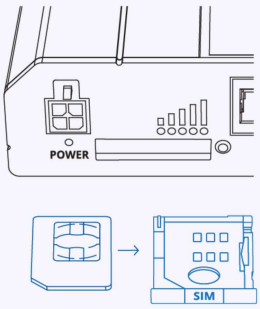
2. Push the SIM holder button with the SIM needle.



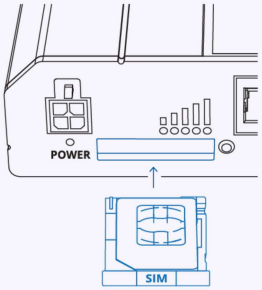
2. Pull out the SIM holder.



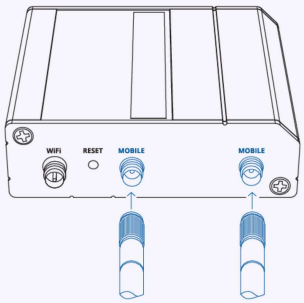
3. Insert your SIM card into the SIM holder.



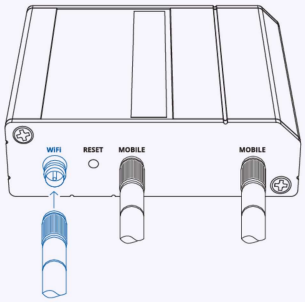
4. Slide the SIM holder back into the router.



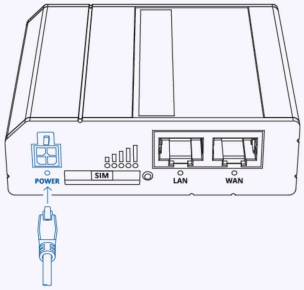
5. Attach both MAIN and AUX mobile antennas to connectors labeled “Mobile”.



6. Attach WiFi antenna to the connector labeled “WiFi”.

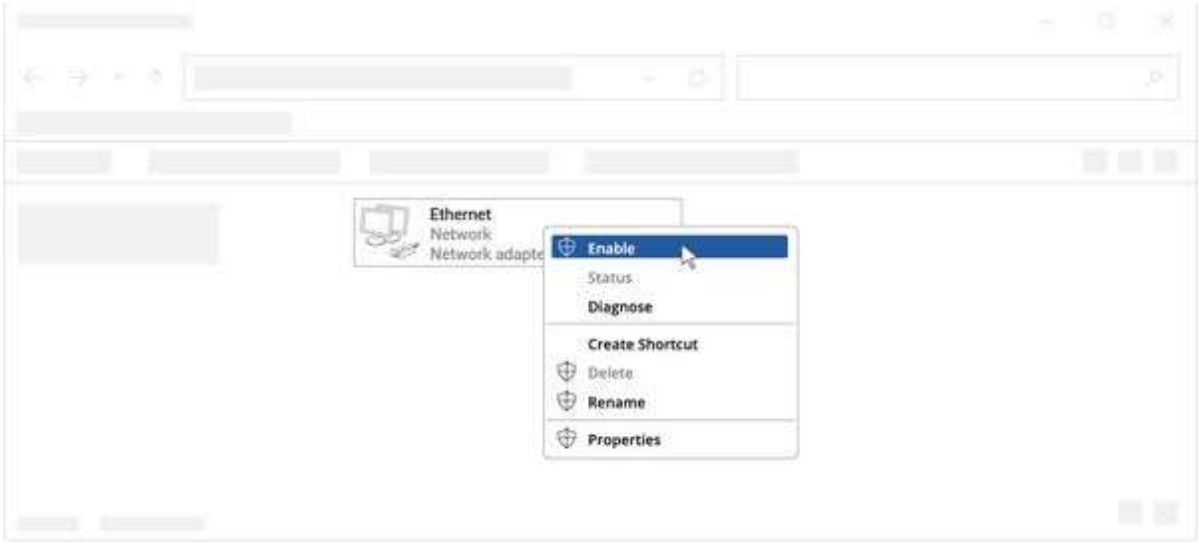


7. Connect the 4-pin connector to the power socket on the front of the device. then plug the power adapter into an electric outlet.

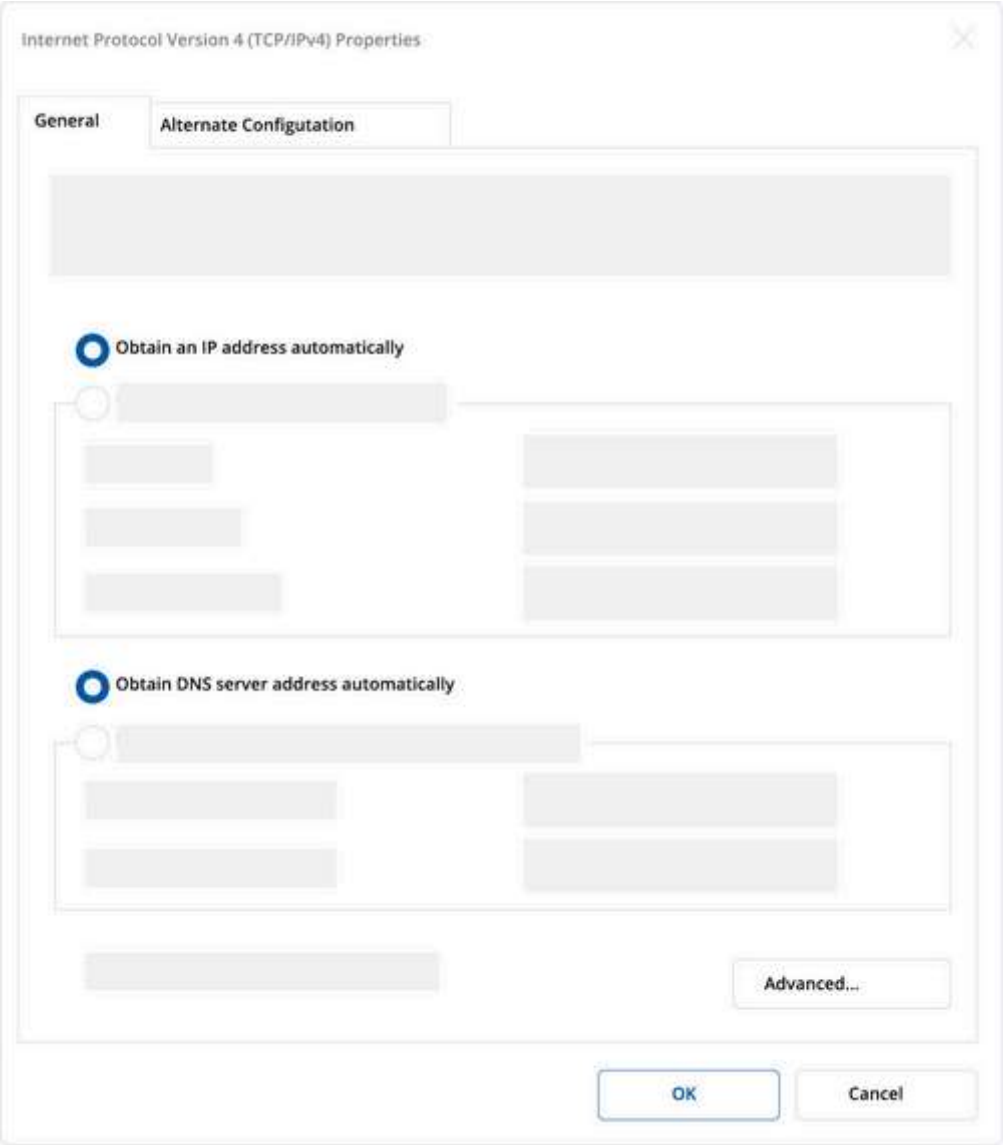


Configure your computer LAN (Windows)

1. Ensure the Network connection is Enabled. Go to Start — Control Panel — Network and Internet — Network and Sharing Center. Click on the **Change adapter settings** in the left panel, then right-click on Network Adapter, and select Enable.



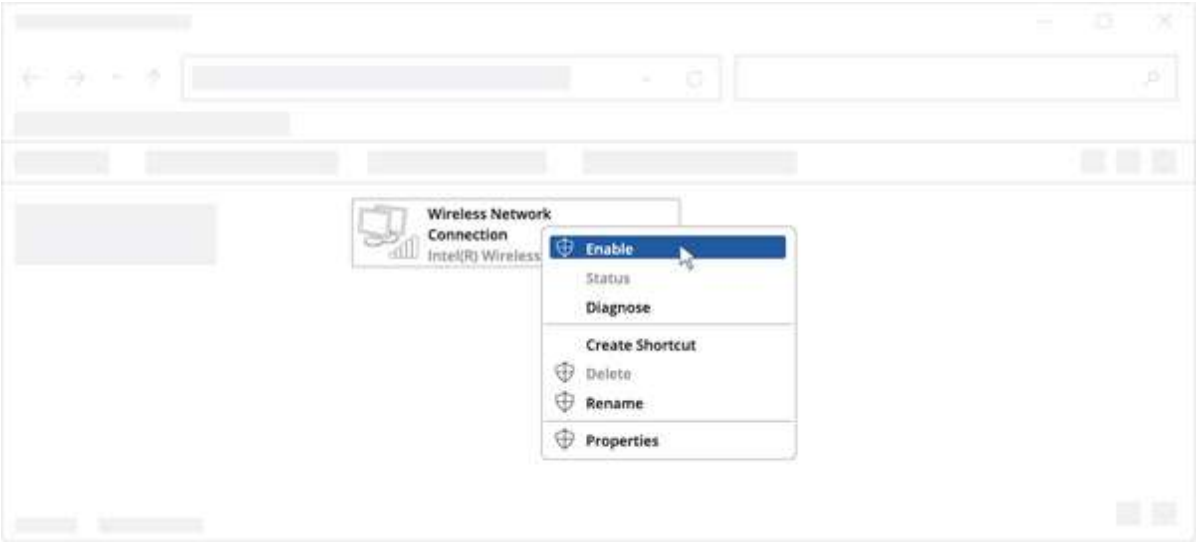
2. Check if IP and DNS are obtained automatically. Right-click on Network Adapter and select Properties. Then select **Internet Protocol Version 4** and click Properties.
3. If not selected, check to **obtain an IP address** and **obtain DNS server address automatically**. Click OK.



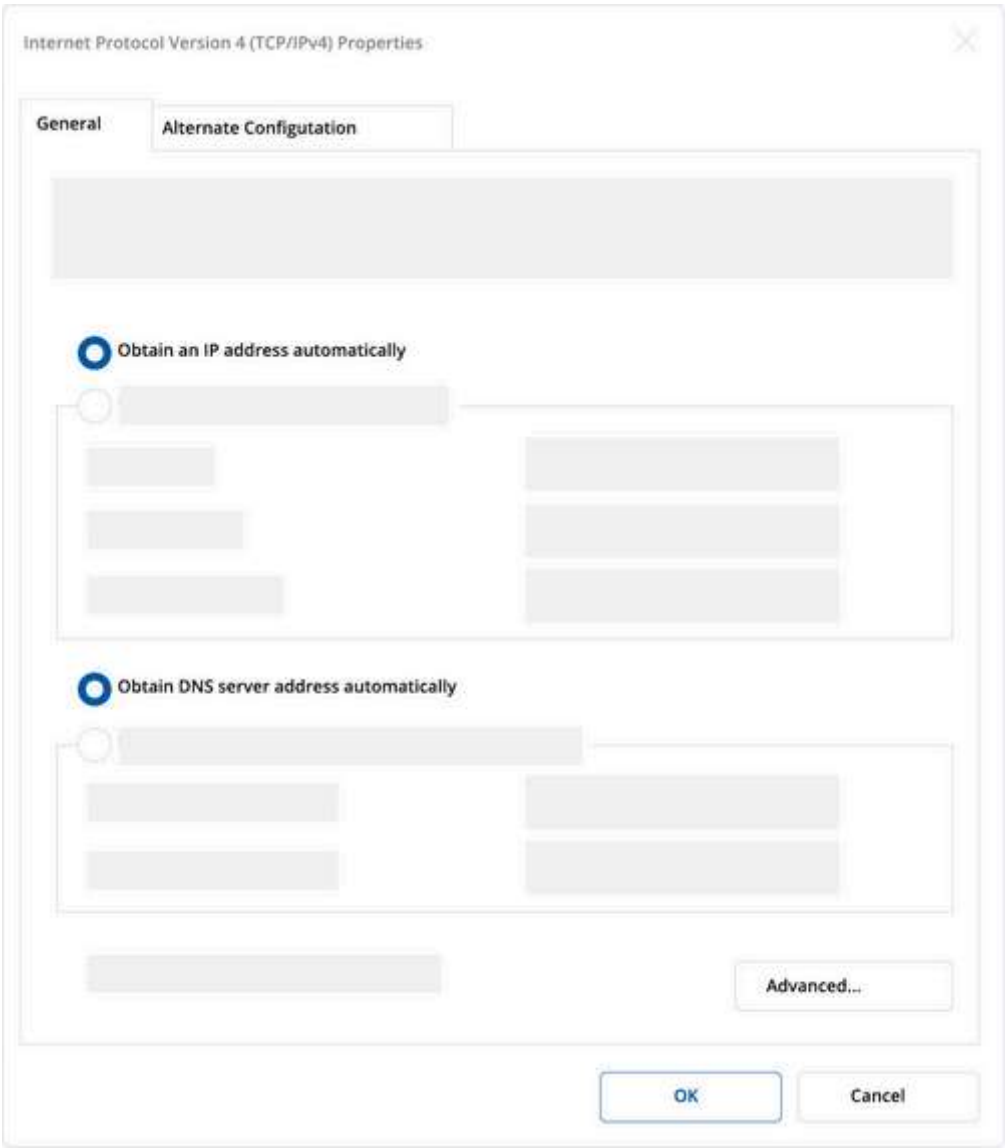
Configure your computer Wi-Fi (Windows)

1. Ensure the Wireless network connection is Enabled. Go to Start — Control Panel — Network and Internet — Network and Sharing

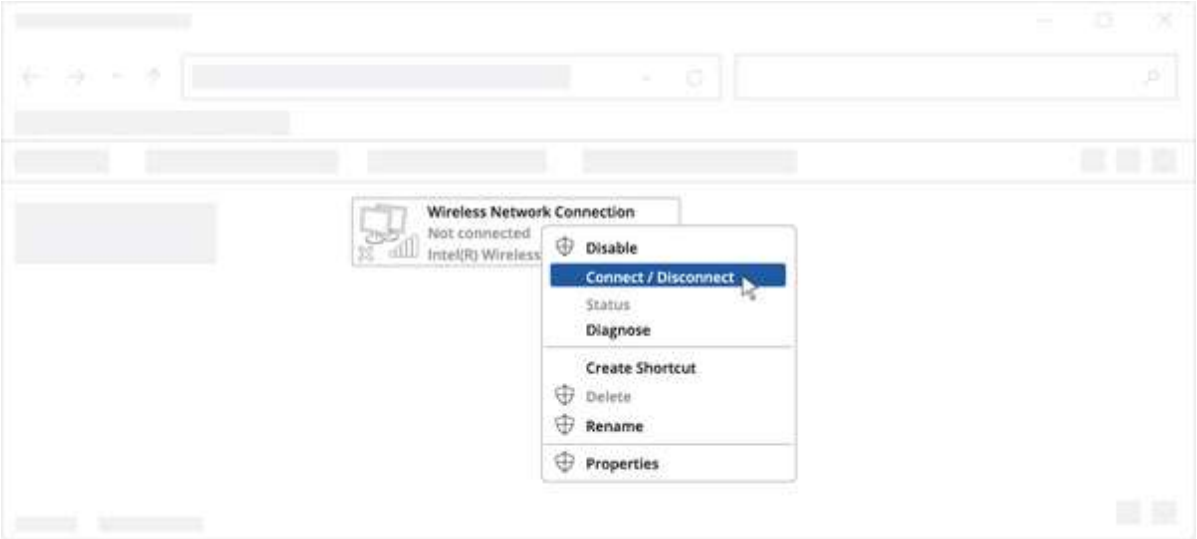
Center. Click on the **Change adapter settings** in the left panel, then right-click on Wireless Network Adapter, and select Enable.



2. Check if IP and DNS are obtained automatically. Right-click on Wireless Network Adapter and select Properties. Then select **Internet Protocol Version 4** and click Properties.
3. If not selected, check to **obtain an IP address** and **obtain DNS server address automatically**. Click OK.



4. Connect to a wireless network by right-clicking on Wireless Network Adapter and selecting Connect.

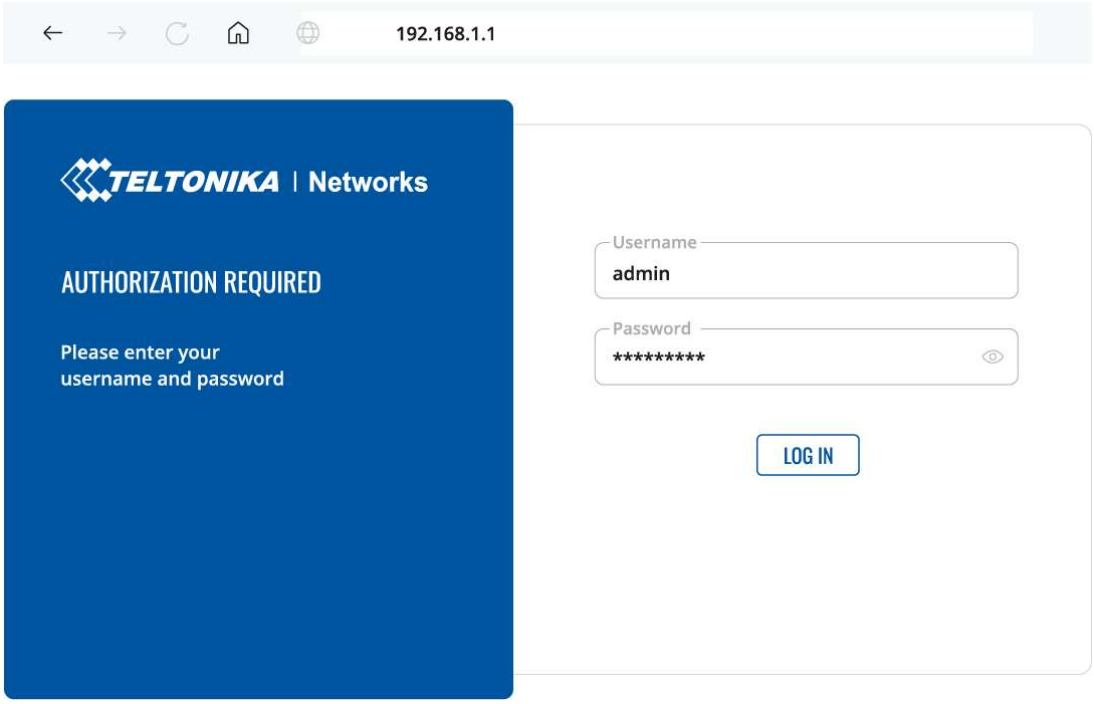


5. Choose the wireless network RUT271 **** from the list and click Connect. Enter the Wi-Fi password located on the device's label.

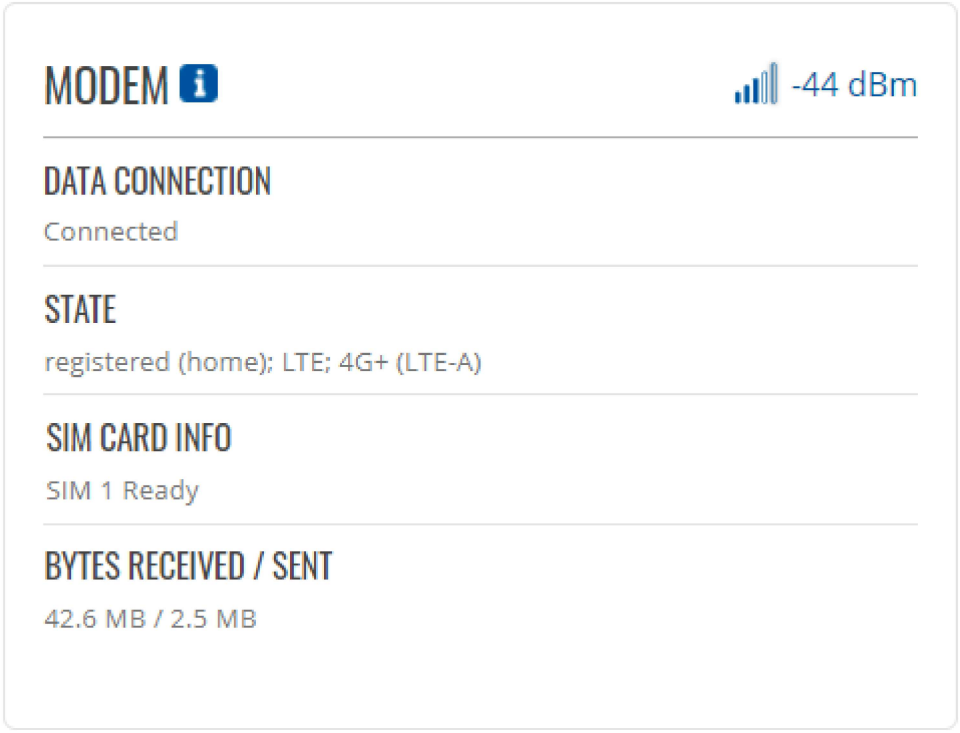
Login to device

1. To enter the router's Web interface (WebUI), type http://192.168.1.1 into the URL field of your Internet browser.

2. When prompted for authentication enter the username admin and enter the password located on the device information label/engraving.



3. After logging in, you must set a new password for security reasons. You will not be able to interact with the router's WebUI until the default password is changed. The new password must consist of a minimum of **8 characters**. Requirements: one uppercase letter, one lowercase letter, and one digit.



4. Next, the Configuration Wizard will start to help you set up some of the router's main operational parameters.

5. Finally, let's verify the Mobile signal strength. Go to the **Status — Network** page and pay

attention to the **Signal Strength** indication.

To achieve the best signal conditions and maximize cellular performance, try adjusting the antennas or changing the location of your device. You can find information on signal strength recommendations here.

SIM card recommendations

- Before installing the SIM cards, please apply a thin layer of dielectric grease to the SIM card contacts for devices used in environments with **high-vibration levels**. This will help avoid SIM cards losing touch with the SIM slot and prevent unexpected failures.
- Industrial Grade SIM cards are recommended for devices requiring a long lifespan used in environments with **extreme temperatures**, **corrosive** or **extra humid climates**, or hard-to-reach locations.