QSG RUTM50

North America
Japan

This Wiki page contains the online version of the **Quick Start Guide (QSG)** for the **RUTM50 5G Router**. Here you will find an overview of the various components on the front and back of a RUTM50 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	GNSS/4G/5G/Wi-Fi
Max RF power	23 dBm@LTE, 23 dBm@5G, 20 dBm@WiFi 2.4G, 23 dBm@WiFi 5G
Bundled accessories specifications*	
Power adapter	Input: 0.6A@100-240 VAC, Output: 12 VDC, 1.5A, 4-pin plug
Mobile antenna	617~960 / 1710~2690 / 3300~6000 MHz, 50 Ω, VSWR<3, gain** 4 dBi, omnidirectional, SMA male connector
GNSS antenna	1575.42~1602 MHz, 2.2~5 VDC, VSWR<1.5, active total gain** 28 dB (typ.), RHCP polarization, SMA male connector
WiFi antenna	2400~2500 /4950~5850 MHz, 50Ω, VSWR<2, gain** 3dBi, omnidirectional, RP-SMA male connector

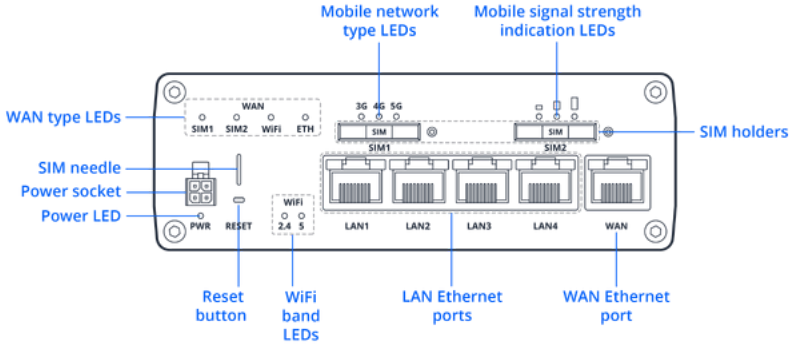
* Order code dependant.

** 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.

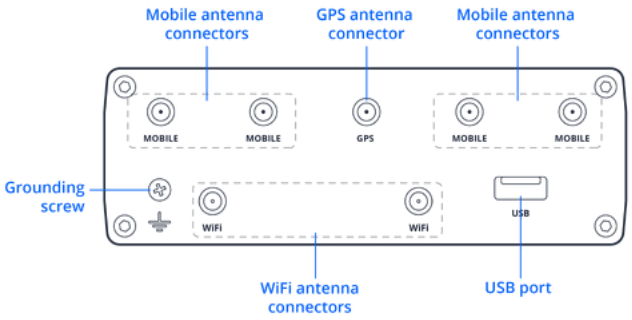
RUTM50 router must be used in compliance with any and all applicable national and international laws and with any special restrictions regulating the utilization of the communication module in prescribed applications and environments.

Quick Start Guide

Front view

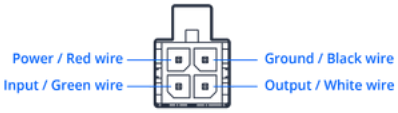


Back view



Connectors

POWER SOCKET PINOUT



Video Quick Start Guide

Need some help setting up your new Teltonika Networks RUTM50 Industrial 5G Router? Watch our quick start guide video and follow the step by step instructions to easily set up your new router for operation.

Load video

YouTube

Hardware installation

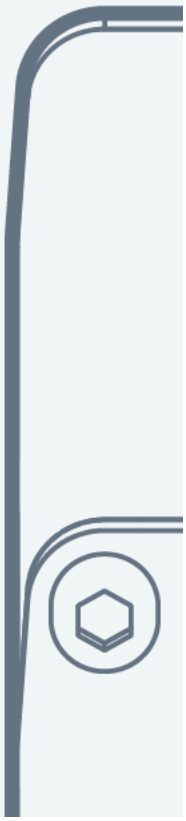
1. Locate the S

3. Pull out the





5. Slide the SIM



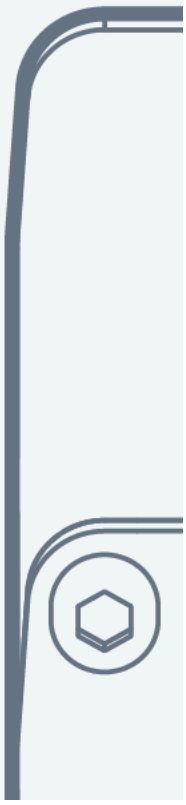


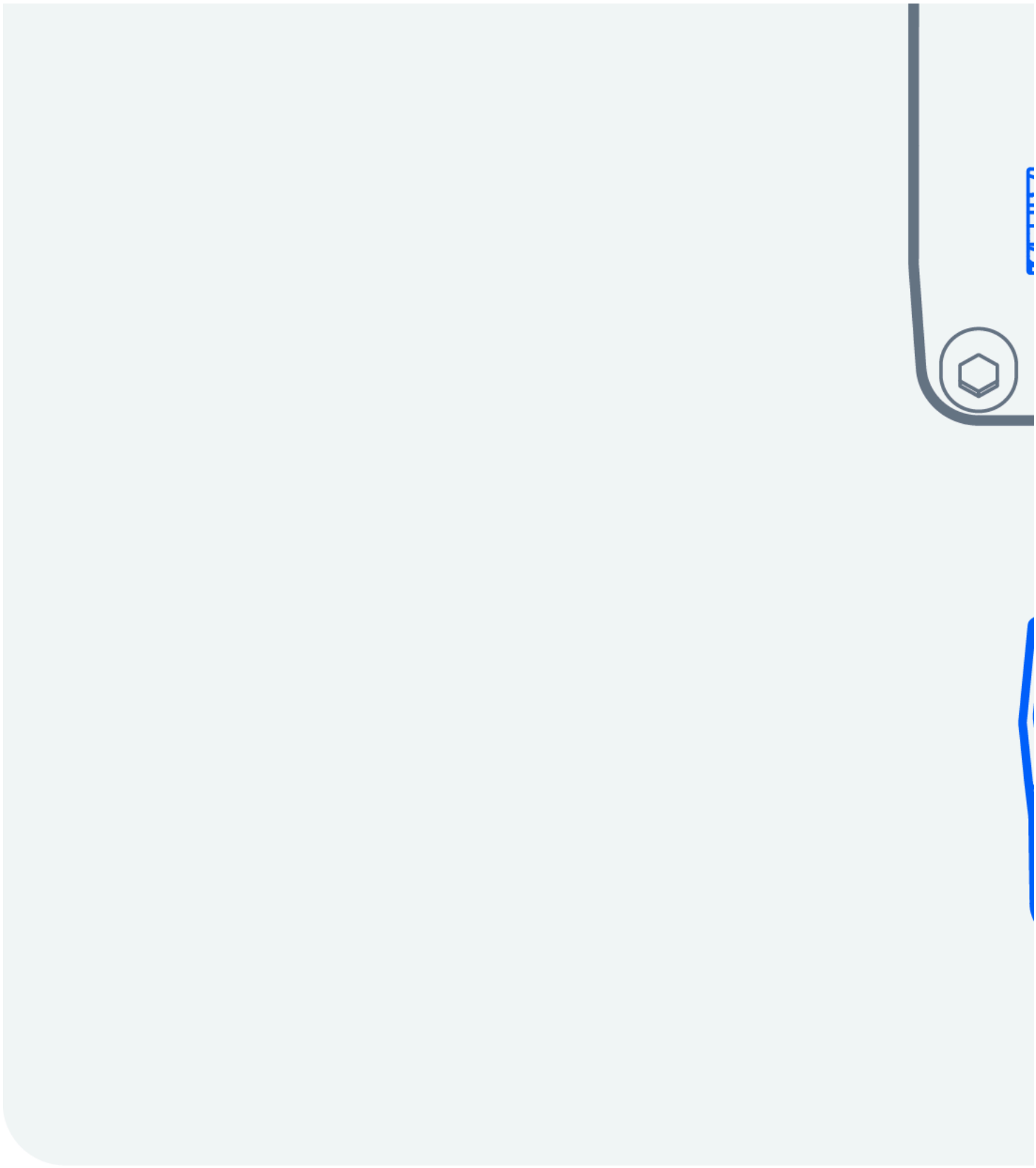
7. Attach the W
"WiFi".





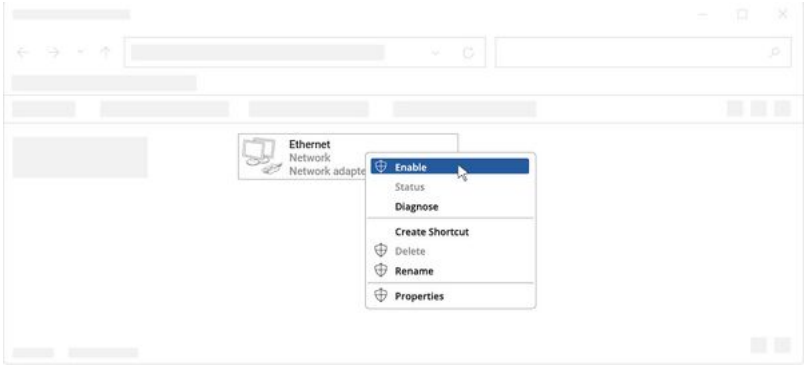
9. Power up th
to the socket i
electric outlet.





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.

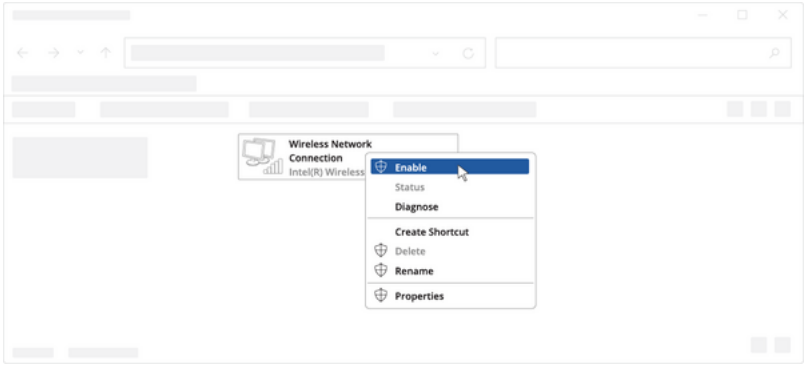


2. Check if IP and DNS are obtained automatically. Right-click on Network Adapter and select Properties. Then select **Internet Protocol Version 4** and click Properties.
3. If not selected, check to **obtain an IP address** and **obtain DNS server address automatically**. Click OK.



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.

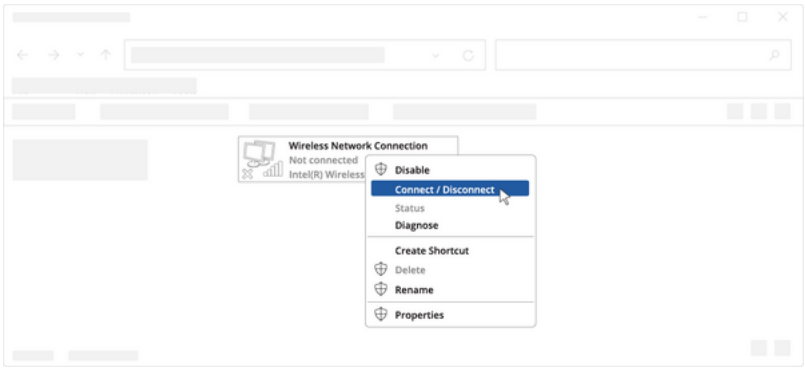


2. Check if IP and DNS are obtained automatically. Right-click on Wireless Network Adapter and select Properties. Then select **Internet Protocol Version 4** and click Properties.

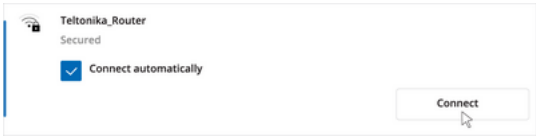
3. If not selected, check to **obtain an IP address** and **obtain DNS server address automatically**. Click OK.



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



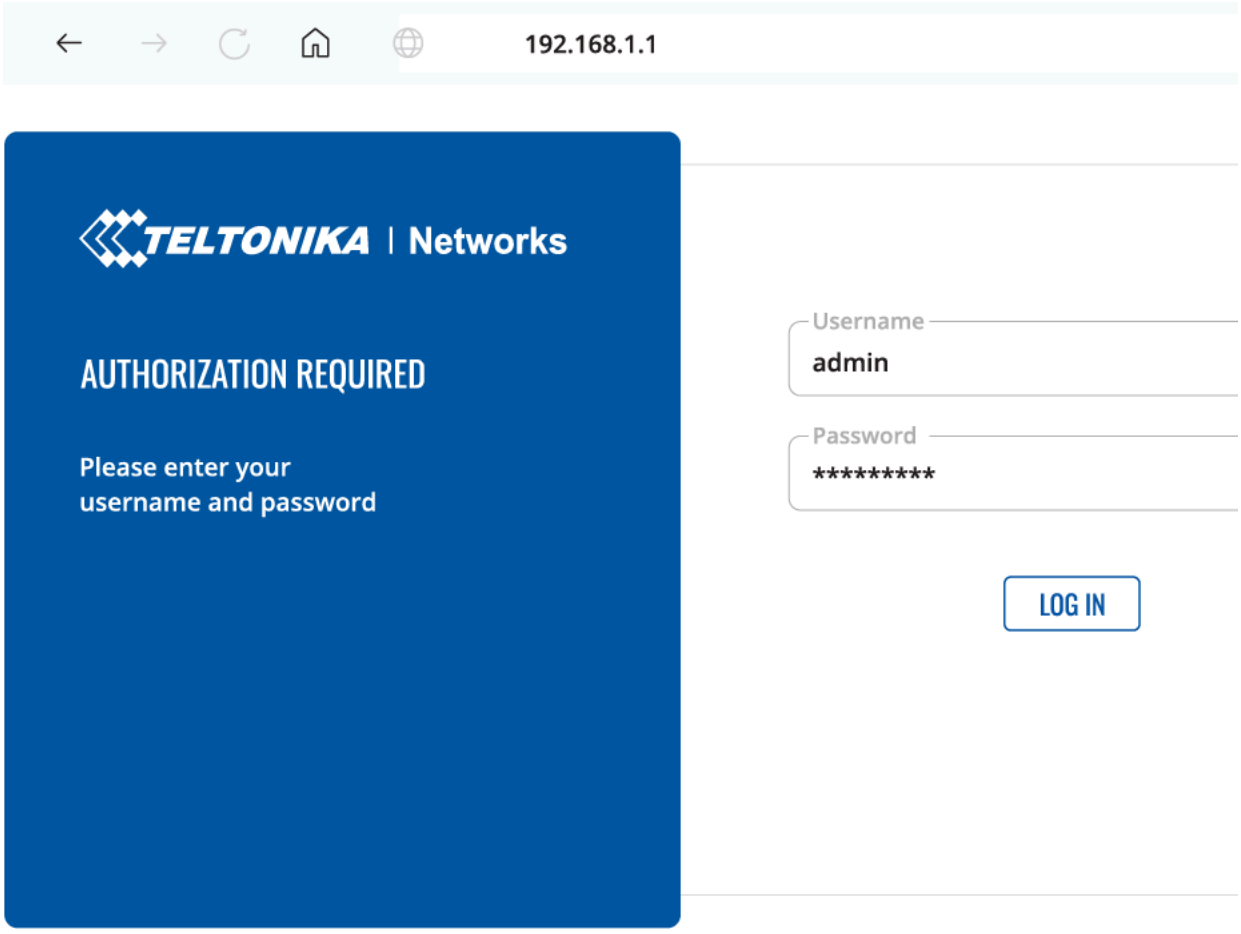
5. Choose the wireless network RUTM50 **** from the list and click Connect. Enter the Wi-Fi password located on the device's label.



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.

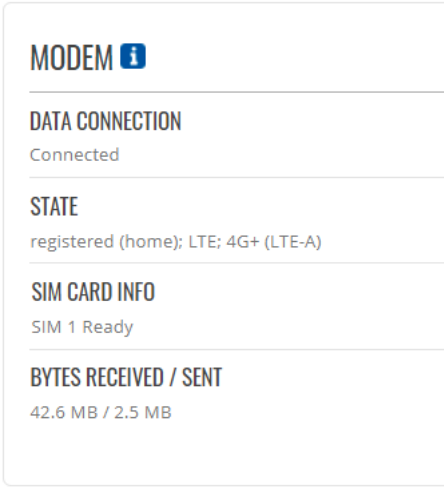
2. When prompted for authentication enter the username admin and enter the password located on the device information label/engraving.



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.

Device security and maintenance

To protect your RUTM50 device against unauthorized access and ensure reliable operation, follow these essential security and maintenance practices.

- **Review the security guidelines** - Before using the device, review the RUTM50 Device Security manual and identify the security settings applicable to your network and use case.
- **Change the default password** - After powering on the device, log in to the WebUI and immediately set a strong, unique administrator password.
- **Keep firmware up to date** - Update RutOS to the latest stable firmware version to receive the latest security patches, bug fixes, and improvements. See the Firmware Downloads page for the latest version.
- **Configure device security** - Apply the recommended security settings according to the Device Security guidelines, your network infrastructure, and the intended use of the device.
- **Maintain proper operating conditions** - Install the device in a secure, well-ventilated location and protect it from excessive dust, moisture, extreme temperatures, and unstable power.

For additional device maintenance recommendations, please refer to the Product Maintenance Policy.

Compliance

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.
2. This device must accept any interference received, including interference that may cause undesired operation.

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.

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 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.

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 RUTM50 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.

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 Statements:

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-RUTM50** 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	4.5	50
WiFi antenna	3.59	50

Le présent émetteur radio **IC: 26511-RUTM50** 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	4.5	50
Antenne WiFi	3.59	50

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1. The device for operation in the band 5150–5250 MHz is only for indoor use to reduce the potential for harmful interference to co-channel mobile satellite systems.

2. For devices with detachable antenna(s), the maximum antenna gain permitted for devices in the bands 5250-5350 MHz and 5470-5725 MHz shall be such that the equipment still complies with the e.i.r.p. limit.

3. For devices with detachable antenna(s), the maximum antenna gain permitted for devices in the band 5725-5850 MHz shall be such that the equipment still complies with the e.i.r.p. limits as appropriate.

1. Les dispositifs fonctionnant dans la bande de 5 150 à 5 250 MHz sont réservés uniquement pour une utilisation à l'intérieur afin de réduire les risques de brouillage préjudiciable aux systèmes de satellites mobiles utilisant les mêmes canaux.

2. Pour les dispositifs munis d'antennes amovibles, le gain maximal d'antenne permis pour les dispositifs utilisant les bandes de 5 250 à 5 350 MHz et de 5 470 à 5 725 MHz doit être conforme à la limite de la p.i.r.e.

3. Pour les dispositifs munis d'antennes amovibles, le gain maximal d'antenne permis (pour les dispositifs utilisant la bande de 5 725 à 5 850 MHz) doit être conforme à la limite de la p.i.r.e. spécifiée.

Operating conditions

- Operating temperature: -40° to +40° 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.

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