



QSG TRB143 M-Bus LTE Gateway Instruction Manual

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QSG TRB143 M-Bus LTE Gateway



Product Information

Product	TRB143
Radio Specifications	
RF Technologies	2G, 3G, 4G
Max RF Power	33 dBm@GSM, 24 dBm@WCDMA, 23 dBm@LTE
Bundled Accessories Specifications	
Power Adapter	Input: 0.6 A@100-240 VAC, Output: 12VDC, 1.5 A, 4-pin plug
Mobile Antenna	699-868/1850-2690 MHz, 50 , VSWR

Product Usage Instructions

Before starting to operate the TRB143 device, please follow these safety precautions:

- Review the recommendations and precautions provided in the user manual to minimize the possibility of accidents.
- Ensure compliance with local safety regulations.
- When executing various operations on the device, fully follow the safety instructions and recommendations provided with the device.

To use the TRB143 device

1. Connect the power adapter to the device. The power adapter should be plugged into a power outlet with an input voltage of 100-240 VAC.
2. Connect the mobile antenna to the device. The mobile antenna supports frequencies in the range of 699-868/1850-2690 MHz
3. Once the device is powered on, it will support RF technologies including 2G, 3G, and 4G.

- Main Page > TRB Gateways > TRB143 > QSG TRB143
- This Wiki page contains the online version of the Quick Start Guide (QSG) for the TRB143 M-Bus LTE Gateway. Here you will find an overview of the various components on the front and back of a
- TRB143 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 2G, 3G, 4G
- Max RF power 33 dBm@GSM, 24 dBm@WCDMA, 23 dBm@LTE
 - Bundled accessories specifications*
- Power adapter Input: 0.6 A@100-240 VAC, Output: 12VDC, 1.5 A, 4-pin plug
- Mobile antenna 699-868/1850-2690 MHz, 50 Ω , VSWR<3, gain** 1 dBi, omnidirectional, SMA male connector
 - Order code dependent.
 - 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.
- TRB143 gateway 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.

Detailed compliance information is available at the following internet address:

wiki.teltonikanetworks.com/view/Certificates.

- This sign on the package 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.
- Hereby, TELTONIKA NETWORKS declares that this TRB143 is in compliance with the essential requirements and other relevant provisions of Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address: https://wiki.teltonika-networks.com/view/TRB143_CE/RED.
- Hereby, TELTONIKA NETWORKS declares that the radio equipment type TRB143 is in compliance with Radio Equipment Regulations 2017. The full text of the UK declaration of conformity is available at the following internet address: https://wiki.teltonika-networks.com/view/TRB143_UKCA.

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 TRB143 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.

Maximum transmission power

- GSM 33 dBm
- WCDMA 24 dBm
- LTE 23 dBm

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

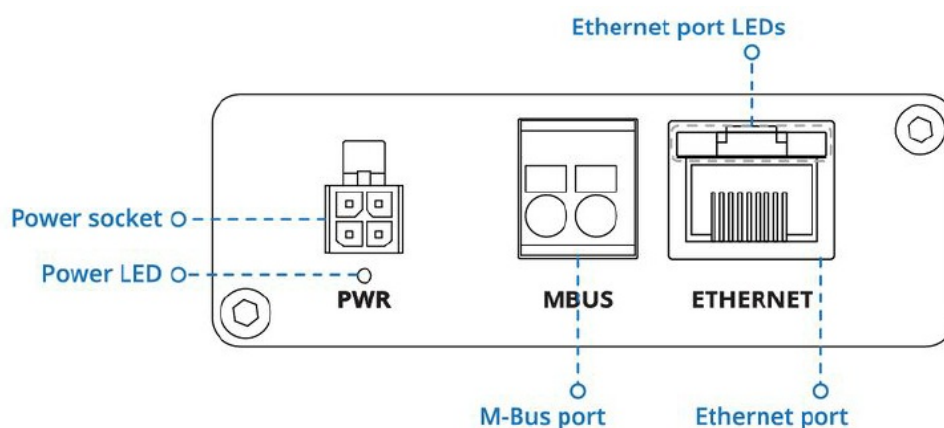
- Only use approved accessories.
- Do not connect with incompatible products or accessories.
- It is recommended to ground devices with grounding terminals before connecting them to power. Failure to ground appropriately might result in a shock hazard. The cross-sectional area of the protective grounding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

Product handling

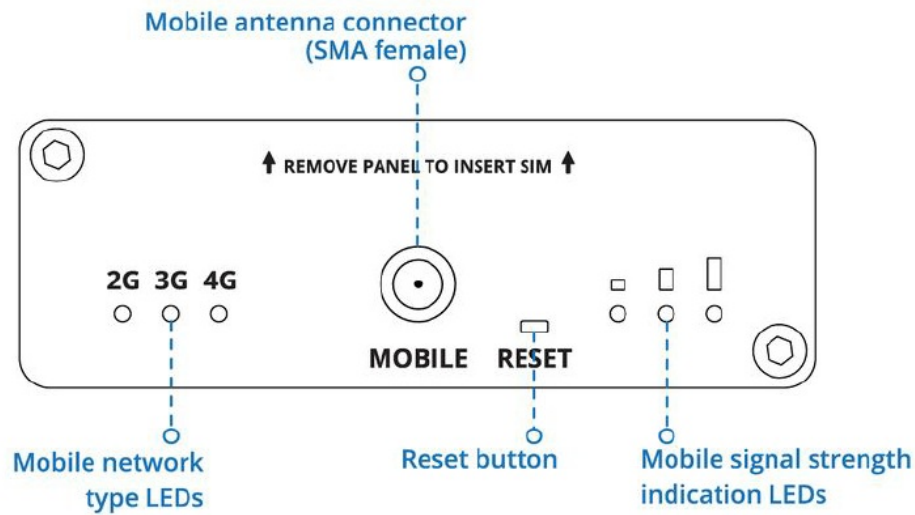
- You alone are responsible for how you use your device and any consequences related to its use.
- Use of your device is subject to safety measures designed to protect users and their environment.
- Always treat your device and its accessories with care and keep it in a clean and dust-free place.

- Do not expose your device or its accessories to open flames, 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.

Front view



Back view



Connectors

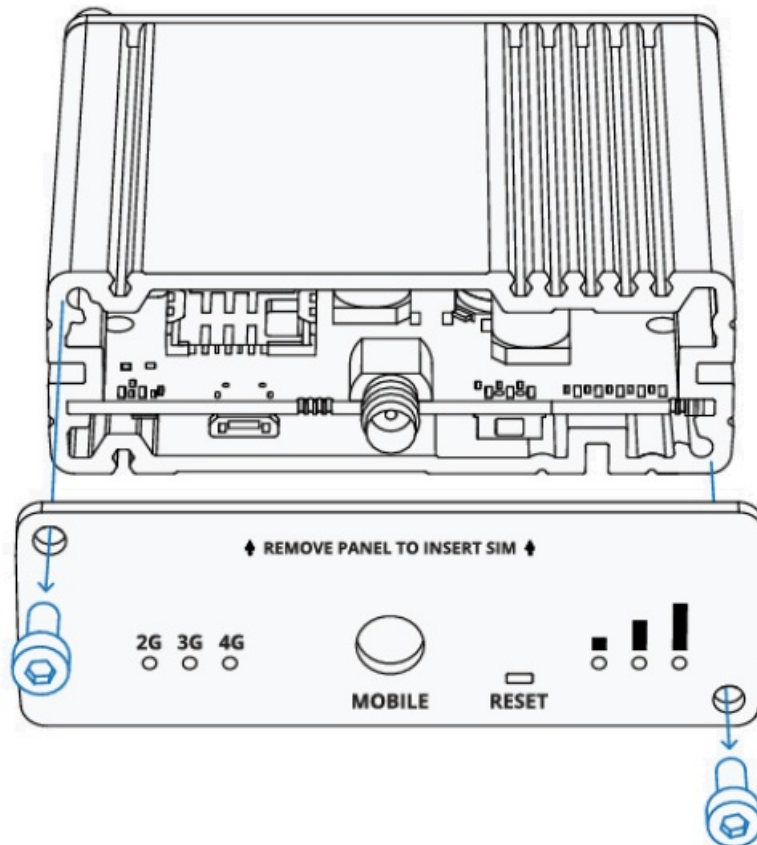
POWER SOCKET PINOUT

Video Quick Start Guide

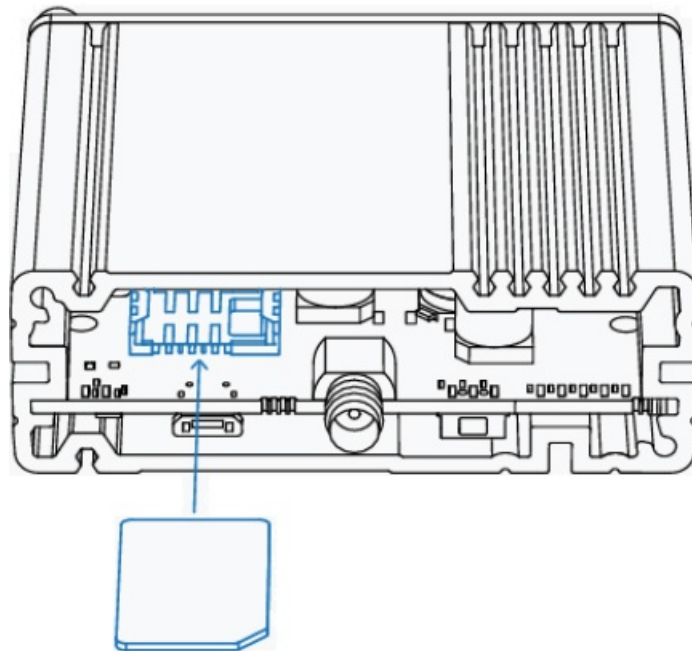
Need some help setting up your Tectonic Networks TRB143 M-BUS cellular gateway? Watch our quick start guide video and follow the step-by-step instructions to easily set up your new device for operation.

Hardware installation

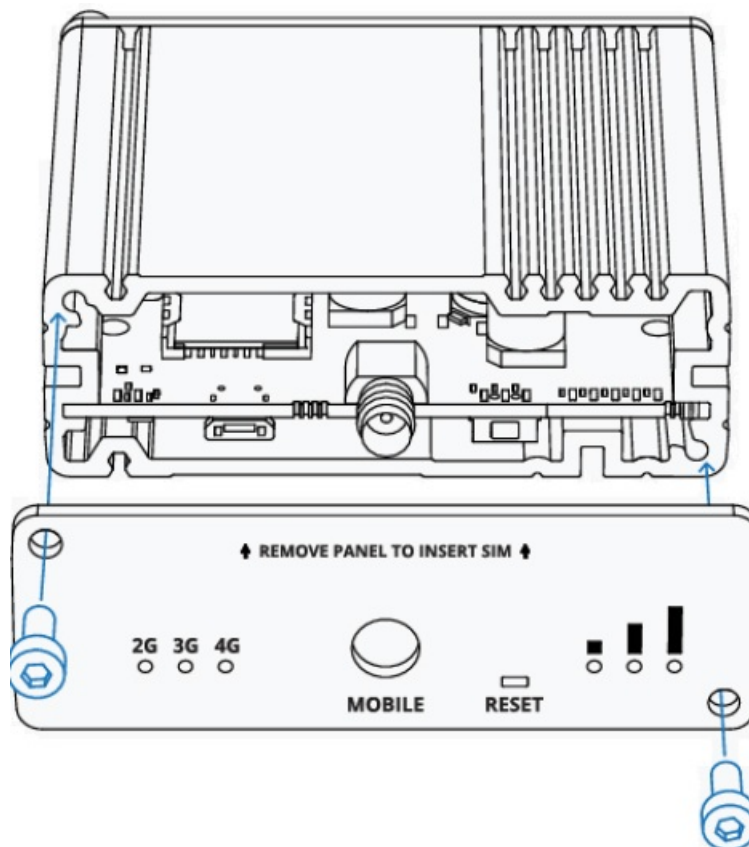
1. Unscrew the two hex bolts and remove the back panel.



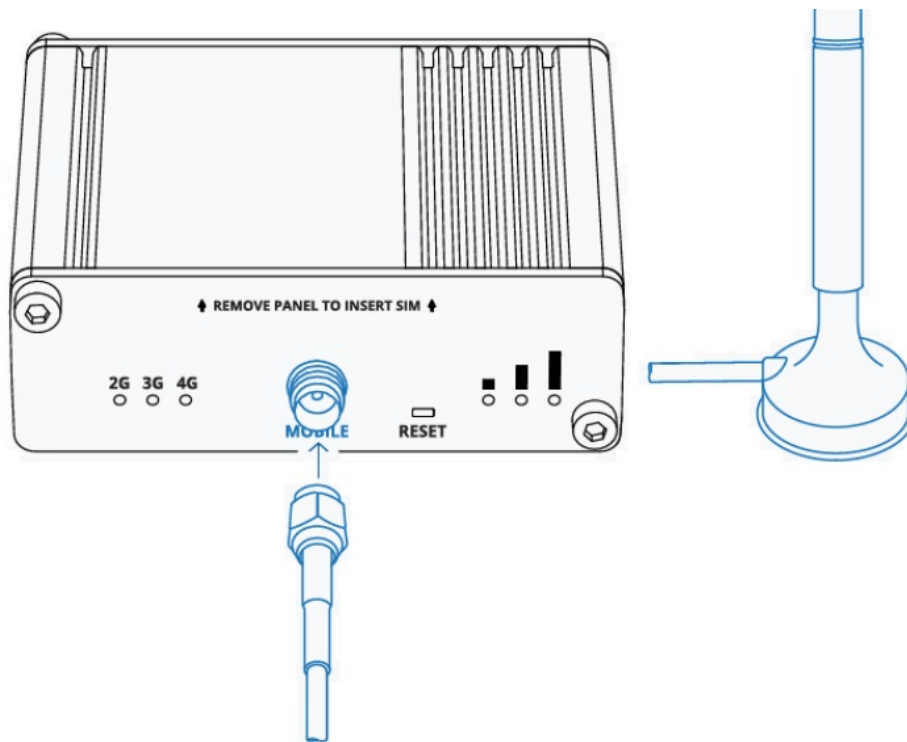
2. Insert your SIM card into the SIM socket.



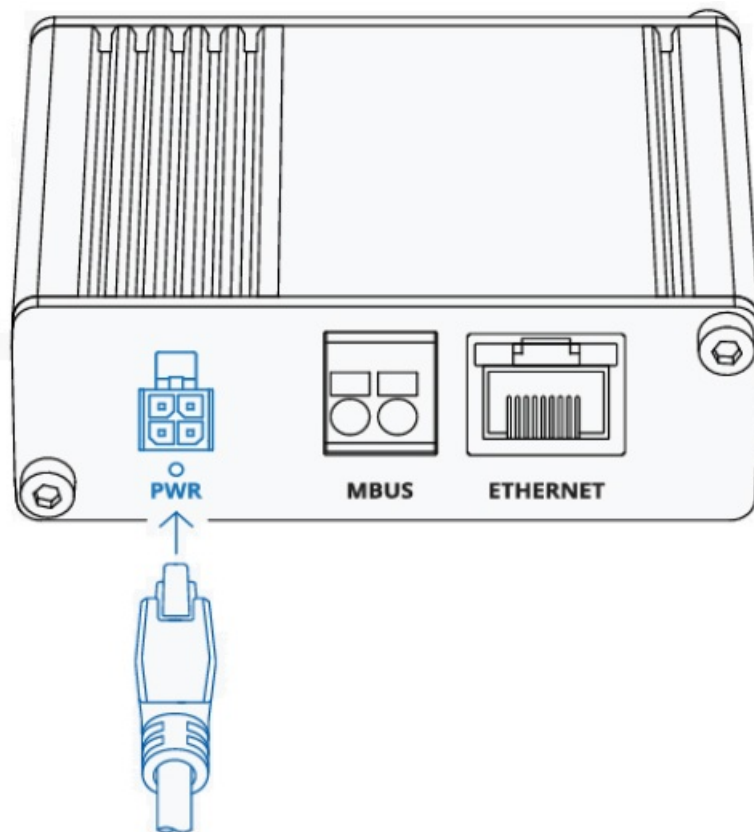
3. Re-attach the back panel and screw in the hex bolts.



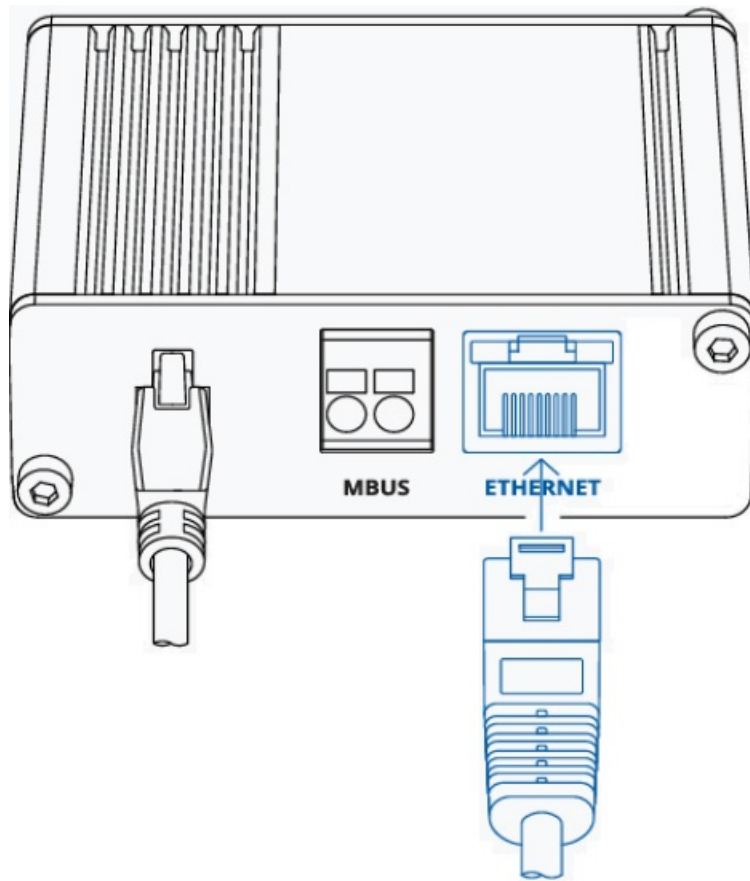
4. Attach the Mobile antenna to the connector labeled "MOBILE".



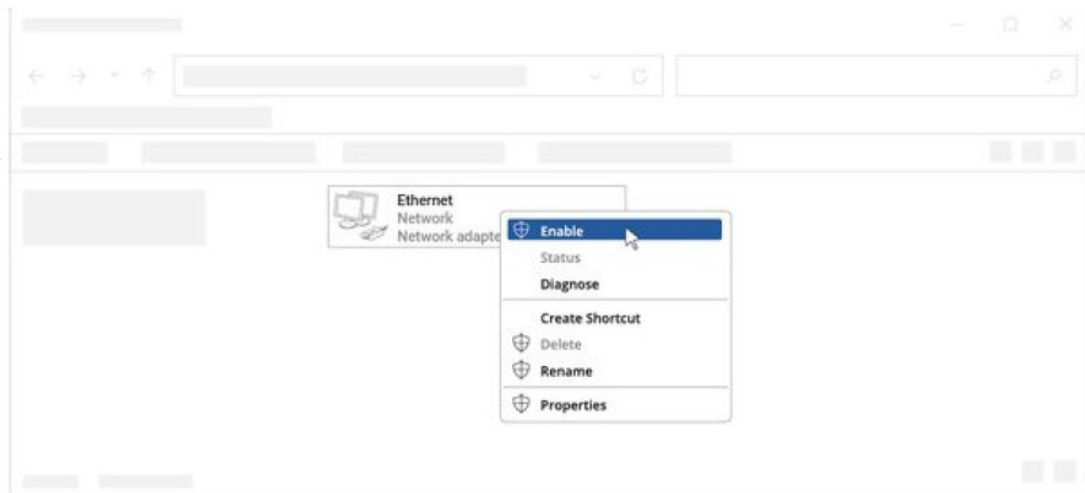
5. Connect the 4-pin connector to the power socket on the front of the device. Then plug the power adapter into an electric outlet.



Connect to the device with an Ethernet cable connected to the LAN port.



Configure your computer (Windows)



1. Ensure the Network connection is Enabled. Go to Start
 1. Control Panel
 2. Network and Internet
 3. Network and Sharing Center.
 4. 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.

Login to device


1. To enter the gateway's Web interface (WebUI), type <http://192.168.2.1> 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 gateway's WebUI until the default password is changed. The new password must consist of a minimum of 8 characters.
 1. **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 gateway'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.

https://wiki.teltonika-networks.com/view/QSG_TRB143

Documents / Resources

	<p>QSG TRB143 M-Bus LTE Gateway [pdf] Instruction Manual TRB143, TRB143 M-Bus LTE Gateway, M-Bus LTE Gateway, LTE Gateway, Gateway</p>
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References

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