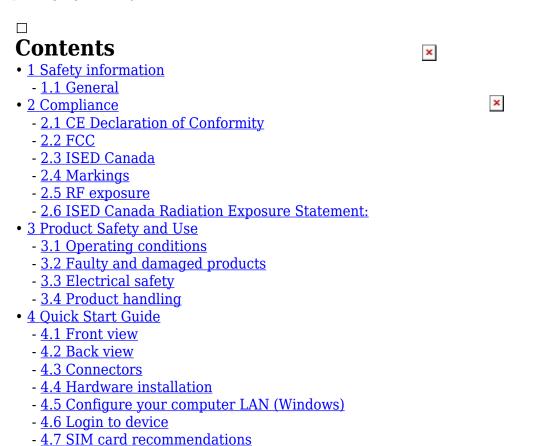
# **QSG TRB160**

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This Wiki page contains the online version of the **Quick Start Guide (QSG)** for the **TRB160 Gateway.** Here you will find an overview of the various components on the front and back of a TRB160 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.

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# **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**

RF technologies 3G, 4G

Max RF power 24 dBm@WCDMA, 23 dBm@LTE

Bundled accessories specifications\*

Power adapter Input: 0.45 A@100-240 VAC, Output: 9 VDC, 1A, 4-pin plug

Mobile antenna  $699 \sim 868 / 1850 \sim 2690$  MHz,  $50 \Omega$ , VSWR<3, gain\*\* 1 dBi, omnidirectional, SMA

male connector

[GR] Greek

## **Compliance**

TRB160 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.

### **CE Declaration of Conformity**

2009/125/EC.

[BG] Bulgarian	С настоящото TELTONIKA NETWORKS декларира, че този TRB160 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 TRB160 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 TRB160 splňuje základní požadavky a další ustanovení směrnic 2014/53/EU, 2011/65/EU, 2009/125/EC.
[DK] Danish	TELTONIKA NETWORKS erklærer hermed, at denne TRB160 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 TRB160 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 TRB160 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 TRB160 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 TRB160 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 TRB160 den grundlegenden Anforderungen und anderen Bestimmungen der Richtlinien 2014/53/EU, 2011/65/EU, 2009/125/EC entspricht.

Η TELTONIKA NETWORKS δηλώνει ότι το παρόν TRB160 συμμορφώνεται με τις

βασικές απαιτήσεις και άλλες διατάξεις των Οδηγιών 2014/53/EU, 2011/65/EU,

<sup>\*</sup> Order code dependant.

<sup>\*\*</sup> 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.

[HU] Hungarian	A TELTONIKA NETWORKS kijelenti, hogy ez a TRB160 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 TRB160 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 TRB160 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 TRB160 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 TRB160 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 TRB160 jikkonforma marrekwiżiti essenzjali u dispożizzjonijiet oħra tad-Direttivi 2014/53/EU, 2011/65/EU, 2009/125/EC.
[NO] Norwegian	TELTONIKA NETWORKS erklærer herved at denne TRB160 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 TRB160 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 TRB160 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 TRB160 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 TRB160 spĺňa základné požiadavky a ďalšie ustanovenia smerníc 2014/53/EU, 2011/65/EU, 2009/125/EC.
[SI] Slovenian	TELTONIKA NETWORKS izjavlja, da je ta TRB160 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 TRB160 cumple los requisitos esenciales y otras disposiciones de las Directivas 2014/53/EU, 2011/65/EU, 2009/125/EC.

#### **FCC**

[SE] Swedish

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

2011/65/EU, 2009/125/EC.

TELTONIKA NETWORKS förklarar härmed att denna TRB160 uppfyller de

grundläggande kraven och andra bestämmelser i Direktiven 2014/53/EU och

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.

#### **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.

### **Markings**

Detailed compliance information is available at the following internet address: <u>wiki.teltonika-networks.com/view/Certificates.</u>

- 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.
- Hereby, TELTONIKA NETWORKS declares that this TRB160 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: <a href="https://wiki.teltonika-networks.com/view/TRB160">https://wiki.teltonika-networks.com/view/TRB160</a>.
- Hereby, TELTONIKA NETWORKS declares that this TRB160 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: <a href="https://wiki.teltonika-networks.com/view/TRB160">https://wiki.teltonika-networks.com/view/TRB160</a>.

#### 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 TRB160 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.

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.

# **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, 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 wellventilated 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**

#### Front view



### **Back view**



#### **Connectors**

#### **POWER SOCKET PINOUT**





### **Hardware installation**

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## **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 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.

## Login to device

1. To enter the gateway's Web interface (WebUI), type <a href="http://192.168.2.1">http://192.168.2.1</a> 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. 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 <b>extreme temperatures</b> , <b>corrosive</b> or <b>extra humid climates</b> , or hard-to-reach locations.	