

# QSG RUTC50

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This Wiki page contains the online version of the **Quick Start Guide (QSG)** for the **RUTC50 5G Router with WI-FI 6**. Here you will find an overview of the various components on the front and back of a RUTC50 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

### Radio specifications

RF technologies 3G, 4G, 5G, GNSS, Wi-Fi 2.4 GHz, Wi-Fi 5 GHz

Max RF power 24 dBm@WCDMA, 23 dBm@LTE, 23 dBm@5G, 20 dBm@Wi-Fi 2.4G, 23 dBm@Wi-Fi 5G

Bundled accessories specifications\*

Power adapter	Input: 0.6A@100-240 VAC, Output: 12 VDC, 1.5A, 4-pin plug
Mobile antenna	617~960/1410~1610/1710~2690/3300~7125 MHz, 50 Ω, VSWR < 3, gain 4 dBi, omnidirectional, SMA male connector
GNSS antenna	1575.42~1602 MHz, 2.2~5 VDC, VSWR < 2, active gain 28 dB (typ.), RHCP polarization, SMA male connector
WiFi antenna	2400~2500/5100~5950 MHz, 50 Ω, VSWR < 2.5, gain 3.5 dBi, 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

RUTC50 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

<b>[BG] Bulgarian</b>	С настоящото TELTONIKA NETWORKS декларира, че този RUTC50 е в съответствие със съществените изисквания и други разпоредби на Директиви 2014/53/EU, 2011/65/EU, 2009/125/EC.
<b>[HR] Croatian</b>	Ovim TELTONIKA NETWORKS izjavljuje da je ovaj RUTC50 u skladu s bitnim zahtjevima i ostalim relevantnim odredbama Direktive 2014/53/EU, 2011/65/EU, 2009/125/EC.
<b>[CZ] Czech</b>	Společnost TELTONIKA NETWORKS tímto prohlašuje, že tento RUTC50 splňuje základní požadavky a další ustanovení směrnic 2014/53/EU, 2011/65/EU, 2009/125/EC.
<b>[DK] Danish</b>	TELTONIKA NETWORKS erklærer hermed, at denne RUTC50 er i overensstemmelse med de væsentlige krav og andre bestemmelser i direktiv 2014/53/EU, 2011/65/EU, 2009/125/EC.
<b>[NL] Dutch</b>	Hereby, TELTONIKA NETWORKS declares that this RUTC50 is in compliance with the essential requirements and other relevant provisions of Richtlijnen 2014/53/EU, 2011/65/EU, 2009/125/EC.
<b>[EE] Estonian</b>	Käesolevaga kinnitab TELTONIKA NETWORKS seadme RUTC50 vastavust Direktiivide 2014/53/EU, 2011/65/EU, 2009/125/EC põhinõuetele ja nimetatud direktiivist tulenevatele teistele asjakohastele sätetele.
<b>[FI] Finish</b>	TELTONIKA NETWORKS vakuuttaa täten että RUTC50 tyyppinen laite on Direktiivien 2014/53/EU, 2011/65/EU, 2009/125/EC oleellisten vaatimusten ja sitä koskevien direktiivin muiden ehtojen mukainen.
<b>[FR] French</b>	TELTONIKA NETWORKS déclare par la présente que ce RUTC50 est conforme aux exigences essentielles et autres dispositions des Directives 2014/53/EU, 2011/65/EU, 2009/125/EC.
<b>[DE] German</b>	TELTONIKA NETWORKS erklärt hiermit, dass dieses RUTC50 den grundlegenden Anforderungen und anderen Bestimmungen der Richtlinien 2014/53/EU, 2011/65/EU, 2009/125/EC entspricht.

<b>[GR] Greek</b>	H TELTONIKA NETWORKS δηλώνει ότι το παρόν RUTC50 συμμορφώνεται με τις βασικές απαιτήσεις και άλλες διατάξεις των Οδηγιών 2014/53/EU, 2011/65/EU, 2009/125/EC.
<b>[HU] Hungarian</b>	A TELTONIKA NETWORKS kijelenti, hogy ez a RUTC50 megfelel a 2014/53/EU, 2011/65/EU, 2009/125/EC irányelvek alapvető követelményeinek és egyéb rendelkezéseinek.
<b>[IE] Irish</b>	Leis seo, dearbhaíonn TELTONIKA NETWORKS go gcomhlíonann an RUTC50 seo bunriachtanais agus forálacha ábhartha eile Threoir 2014/53/EU, 2011/65/EU, 2009/125/EC.
<b>[IT] Italian</b>	Con la presente, TELTONIKA NETWORKS dichiara che questo RUTC50 è conforme ai requisiti essenziali e ad altre disposizioni pertinenti della Direttive 2014/53/EU, 2011/65/EU, 2009/125/EC.
<b>[LV] Latvian</b>	TELTONIKA NETWORKS ar šo paziņo, ka šis RUTC50 atbilst pamatprasībām un citiem Direktīvas 2014/53/EU, 2011/65/EU, 2009/125/EC noteikumiem.
<b>[LT] Lithuanian</b>	Šiuo dokumentu UAB TELTONIKA NETWORKS deklaruoja, kad šis RUTC50 atitinka esminius reikalavimus ir kitas 2014/53/EU, 2011/65/EU, 2009/125/EC Direktyvų nuostatas.
<b>[MT] Maltese</b>	TELTONIKA NETWORKS b'dan tiddikjara li dan RUTC50 jikkonforma mar-rekwiżiti essenzjali u dispożizzjonijiet oħra tad-Direttivi 2014/53/EU, 2011/65/EU, 2009/125/EC.
<b>[NO] Norwegian</b>	TELTONIKA NETWORKS erklærer herved at denne RUTC50 er i samsvar med de grunnleggende kravene og andre bestemmelser i Direktivene 2014/53/EU, 2011/65/EU, 2009/125/EC.
<b>[PL] Polish</b>	TELTONIKA NETWORKS niniejszym oświadcza, że niniejszy RUTC50 jest zgodny z zasadniczymi wymaganiami i innymi postanowieniami Dyrektyw 2014/53/EU, 2011/65/EU, 2009/125/EC.
<b>[PT] Portuguese</b>	A TELTONIKA NETWORKS declara que esta RUTC50 cumpre os requisitos essenciais e outras disposições das Directivas 2014/53/EU, 2011/65/EU, 2009/125/EC.
<b>[RO] Romanian</b>	TELTONIKA NETWORKS declară prin prezenta că acest RUTC50 este în conformitate cu cerințele esențiale și cu alte dispoziții ale Directivelor 2014/53/EU, 2011/65/EU, 2009/125/EC.
<b>[SK] Slovak</b>	Spoločnosť TELTONIKA NETWORKS týmto vyhlasuje, že tento RUTC50 spĺňa základné požiadavky a ďalšie ustanovenia smerníc 2014/53/EU, 2011/65/EU, 2009/125/EC.
<b>[SI] Slovenian</b>	TELTONIKA NETWORKS izjavlja, da je ta RUTC50 skladen z bistvenimi zahtevami in drugimi določbami Direktiv 2014/53/EU, 2011/65/EU, 2009/125/EC.
<b>[ES] Spanish</b>	TELTONIKA NETWORKS declara por la presente que este RUTC50 cumple los requisitos esenciales y otras disposiciones de las Directivas 2014/53/EU, 2011/65/EU, 2009/125/EC.
<b>[SE] Swedish</b>	TELTONIKA NETWORKS förklarar härmed att denna RUTC50 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](http://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.

Hereby, TELTONIKA NETWORKS declares that this RUTC50 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/RUTC50>.

Hereby, TELTONIKA NETWORKS declares that this RUTC50 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/RUTC50>.

## 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 RUTC50 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

WCDMA	24 dBm
LTE	23 dBm
Wi-Fi 2.4G	20 dBm
Wi-Fi 5G	23 dBm

-  In all EU member states, operation of 5150-5350 MHz is restricted to indoor use only.

## 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 1mm<sup>2</sup>.

## 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

### Front view



### Back view



### Connectors

#### POWER SOCKET PINOUT



### Hardware installation



## 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.

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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.

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## 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.

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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.

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

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5. Choose the   
wireless  
network  
RUTC50 \*\*\*\*  
from the list  
and click  
Connect. Enter  
the Wi-Fi  
password  
located on the  
device's label.

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## 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.

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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.