SCOUT®

Professional Marine Antennas Made In Italy

Wifi onBoard - 4G/LTE dual sim Router + 10 dB WiFi antenna

Code: PF AN NWIFI12

4G onBoard - 4G/LTE dual sim Router + 4 dB 4G/LTE antenna

Code: PF AN NWIFI13

4G onBoard Plus - 4G/LTE dual sim Router + 2x 4 dB 4G/LTE antenna

Code: PF AN NWIFI11

WiFi + 4G onBoard - 4G/LTE dual sim Router + 10 dB WiFi antenna + 4 dB 4G/LTE antenna

Code: PF AN NWIFI08

WiFi + 4G onBoard Plus - 4G/LTE dual sim Router + 10 dB WiFi antenna + 2x 4 dB 4G/LTE antenna

Code: PF AN NWIFI14

Thank you for purchasing a Scout product. This guide refers to all the WiFi/4G systems listed above, before installing the router and the antenna(s) please read carefully all instructions. Customer comments are welcome.

To avoid burning and voltage caused traumas, of the personnel working with the device, please follow these safety requirements:

⚠️ The device is intended for supply from a Limited Power Source (LPS) that power consumption should not exceed 15VA and current rating of over current protective device should not exceed 2A.

⚠️ The highest transient over voltage in the output (secondary circuit) of used PSU shall not exceed 36V peak.

⚠️ The device can be used with the Personal Computer (first safety class) or Notebook (second safety class). Associated equipment: PSU (power supply unit) (LPS) and personal computer (PC) shall comply with the requirements of standard EN 60950-1.

⚠️ Do not mount or service the device during a thunderstorm.

⚠️ To avoid mechanical damages to the device it is recommended to transport it packed in a damage-proof pack.

⚠️ Protection in primary circuits of associated PC and PSU (LPS) against short circuits and earth faults of associated PC shall be provided as part of the building installation.

To avoid mechanical damage to the device it is recommended to transport it packed in a damageproof pack. When using the device it should be placed so that its indicating LEDs would be visible as they inform in which working mode the device is in and if it has any working problems.

Protection against over current, short circuiting and earth faults should be provided as a part of the building installation.

Signal level of the device depends on the environment in which it is working in. In case the device starts working insufficiently, please refer to qualified personnel in order to repair this product. We recommend forwarding it to a repair center or the manufacturer. There are no exchangeable parts inside the device.

Router info

On the back of the router there's a label as shown in the example below.

```
SERIAL          9999999999  BATCH NO:999

IMEI           99999999999999
LAN MAC          AABBCCDDEEFF
WIFI SSID         XX9999_9999
WIFI PASSWORD        99999999
USERNAME                admin
PASSWORD             99999999
```
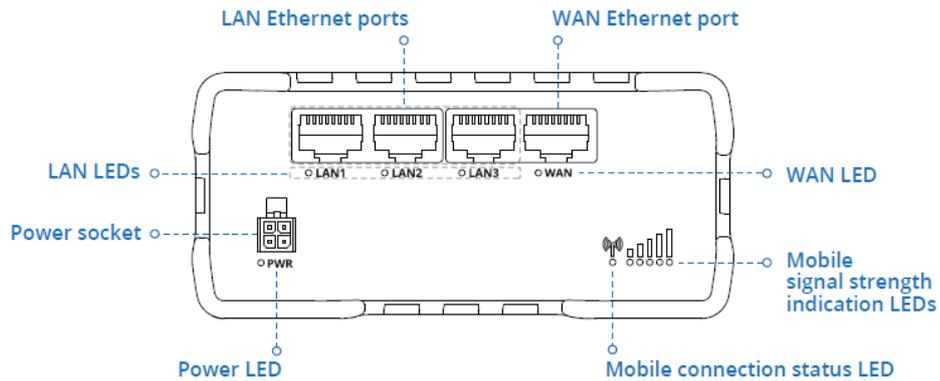
Please take note of these important info before installing the router.
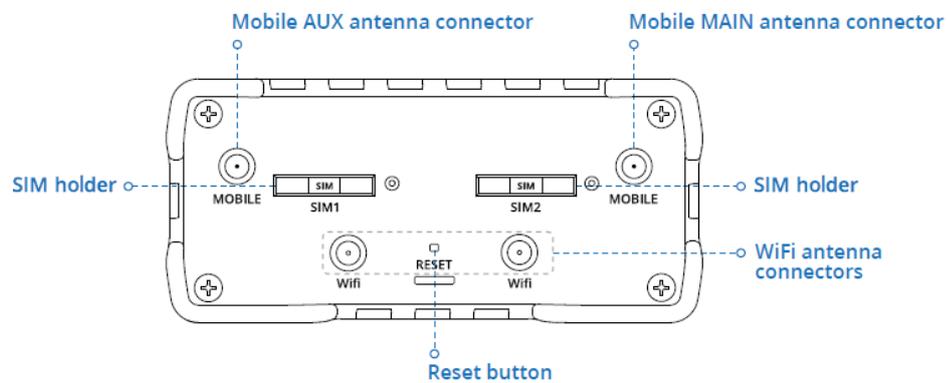
These info are requested in case of router reset and to enable the remote management system. Please copy the info down here:

SERIAL   _____

IMEI   _____

LAN MAC   _____

WIFI SSID   _____

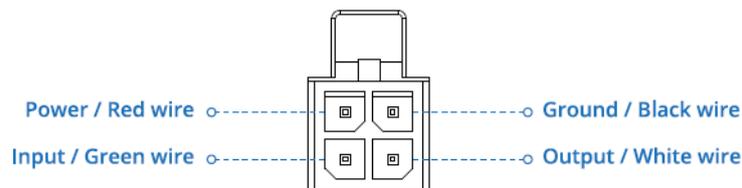WIFI PASSWORD   _____

USERNAME   _____

PASSWORD   _____

Router front view

LAN Ethernet ports

WAN Ethernet port

LAN LEDs

○ LAN1   ○ LAN2   ○ LAN3   ○ WAN

WAN LED

Power socket

○ PWR

Mobile
signal strength
indication LEDs

Power LED

Mobile connection status LED

Router back view

Mobile AUX antenna connector

Mobile MAIN antenna connector

SIM holder

MOBILE
SIM1

SIM2
MOBILE

SIM holder

WiFi antenna
connectors

RESET
Wifi   Wifi

Reset button

Power socket pinout

Power / Red wire ○

Ground / Black wire

Input / Green wire ○
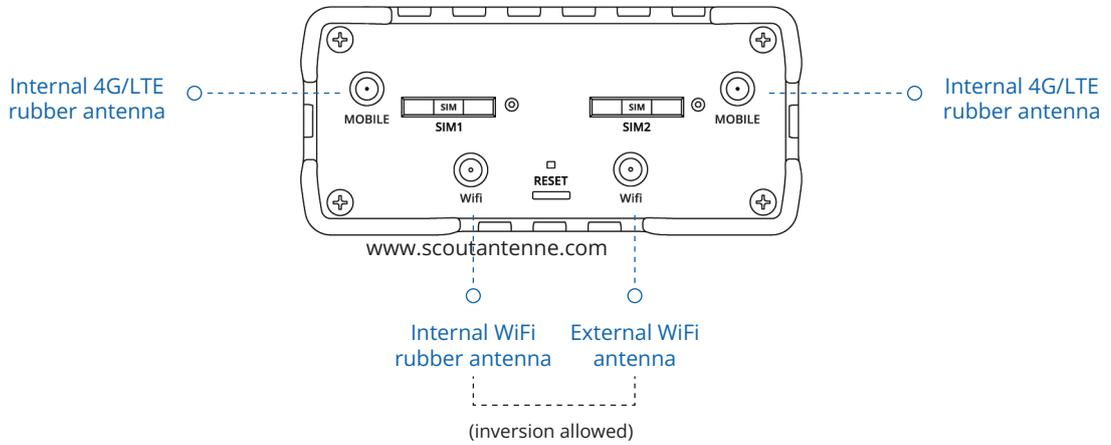
Output / White wire

Hardware installation

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

2. Pull out the SIM holder.

3. Insert you SIM card into the SIM holder.

4. Slide the SIM holder back into the router.

5. Connect 4G/LTE and WiFi antennas (see next page for the detailed description).

6. Connect the power adapter to the socket on the front device. Then plug the other end of the power adapter into a power outlet.

7. Connect the device wirelessly (SSID: RUT950_****(unique to each device)) or use an Ethernet cable (connected to LAN port).
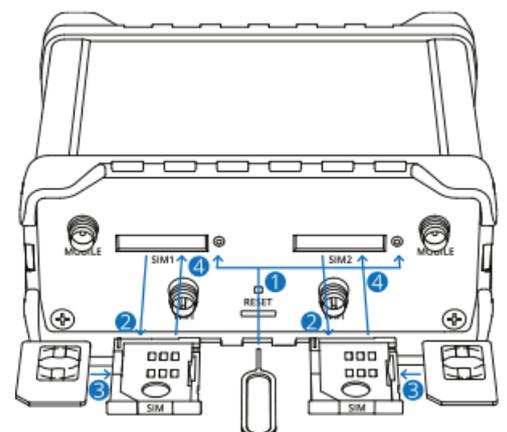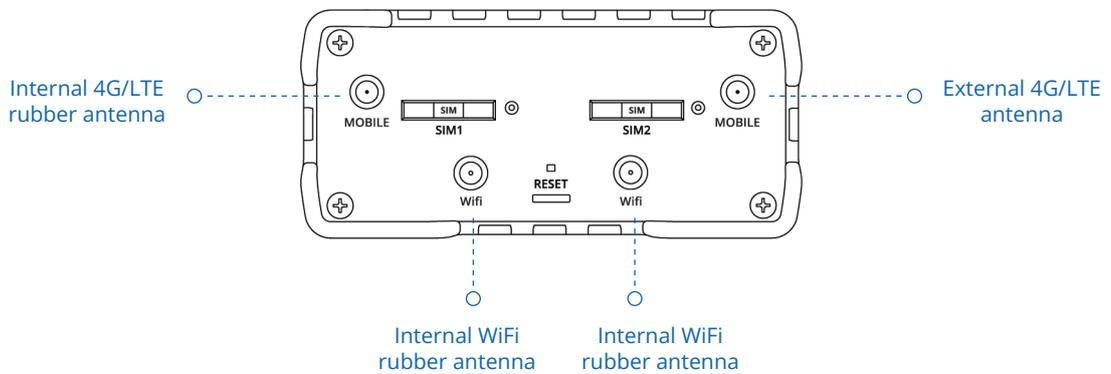
Antennas connection

WiFi onBoard

- connect the two internal 4G/LTE rubber antennas marked "Mobile" to the Mobile antenna connectors;

- connect the external WiFi antenna to one of the two WiFi antenna connectors;

- connect one internal WiFi rubber antenna to the other WiFi antenna connector.

Internal 4G/LTE rubber antenna

Internal 4G/LTE rubber antenna

MOBILE SIM1 SIM2 MOBILE

Wifi RESET Wifi

www.scoutantenne.com

Internal WiFi rubber antenna

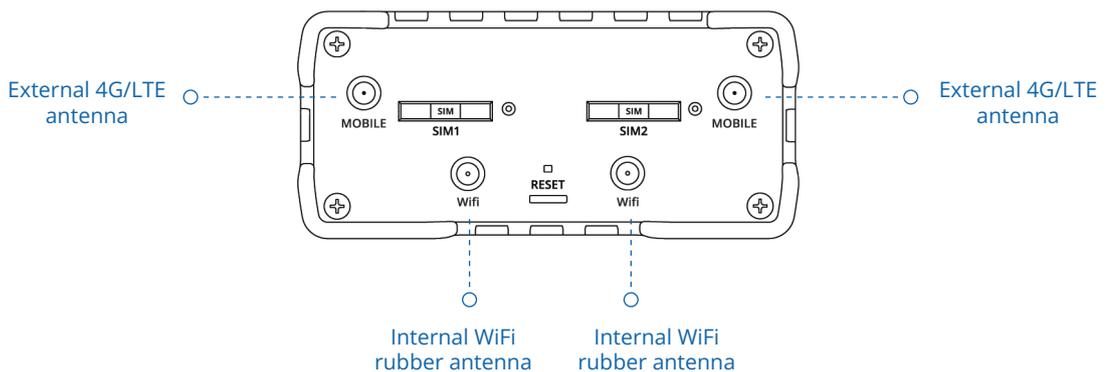External WiFi antenna

(inversion allowed)

4G onBoard

- connect one internal 4G/LTE rubber antenna marked "Mobile" to the Mobile AUX antenna connector;

- connect the external 4G/LTE antenna to the Mobile MAIN antenna connector;

- connect the two internal WiFi rubber antennas to the WiFi antenna connectors.

Internal 4G/LTE rubber antenna

External 4G/LTE antenna

MOBILE SIM1 SIM2 MOBILE

Wifi RESET Wifi

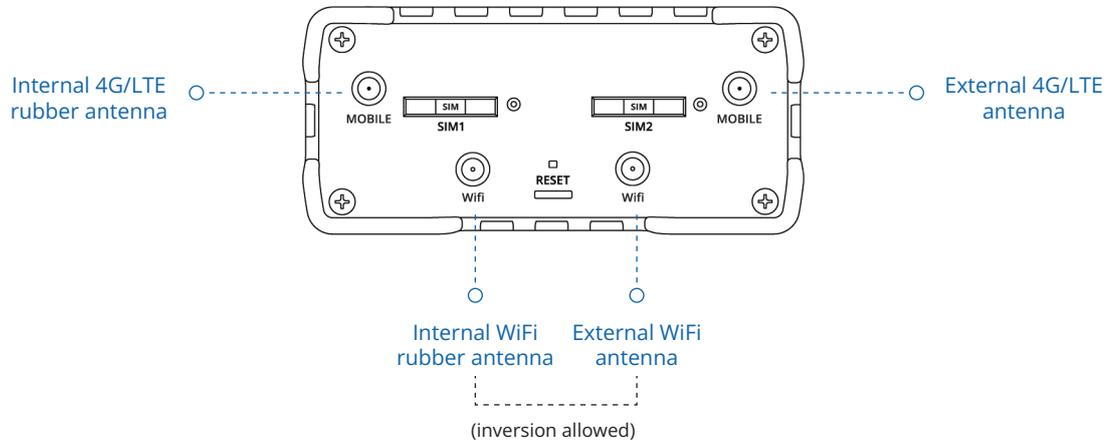Internal WiFi rubber antenna

Internal WiFi rubber antenna

4G onBoard Plus

- connect the two external 4G/LTE antennas to the Mobile antenna connectors;

- connect the two internal WiFi rubber antennas to the WiFi antenna connectors.
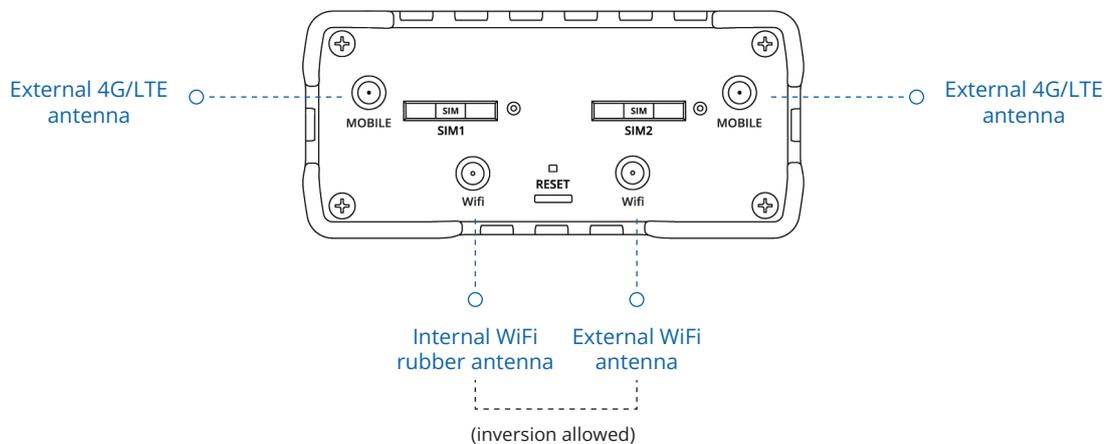
External 4G/LTE antenna

External 4G/LTE antenna

MOBILE SIM1 SIM2 MOBILE

Wifi RESET Wifi

Internal WiFi rubber antenna

Internal WiFi rubber antenna

WiFi + 4G onBoard

- connect one internal 4G/LTE rubber antenna marked "Mobile" to the Mobile AUX antenna connector;

- connect the external 4G/LTE antenna to the Mobile MAIN antenna connector;

- connect the external WiFi antenna to one of the two WiFi antenna connectors;

- connect one internal WiFi rubber antenna to the other WiFi antenna connector.

Internal 4G/LTE rubber antenna

External 4G/LTE antenna

MOBILE   SIM1   RESET   SIM2   MOBILE

Wifi   Wifi

Internal WiFi rubber antenna

External WiFi antenna

(inversion allowed)

WiFi + 4G onBoard Plus

- connect the two external 4G/LTE antennas to the Mobile antenna connectors;

- connect the external WiFi antenna to one of the two WiFi antenna connectors;

- connect one internal WiFi rubber antenna to the other WiFi antenna connector.

External 4G/LTE antenna

External 4G/LTE antenna

MOBILE   SIM1   RESET   SIM2   MOBILE

Wifi   Wifi

Internal WiFi rubber antenna

External WiFi antenna

(inversion allowed)

Antennas reference

Internal WiFi rubber antenna

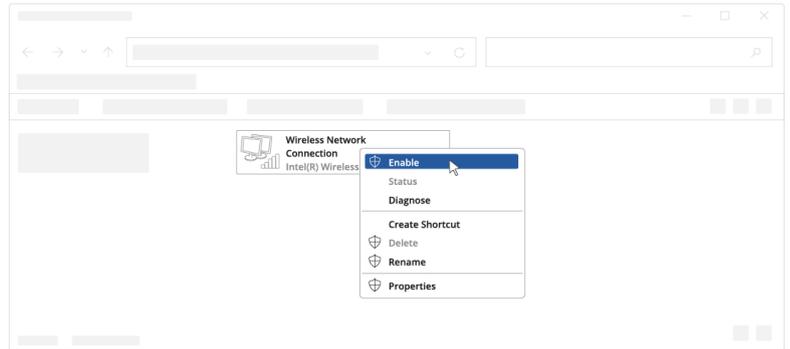Internal 4G/LTE rubber antenna

External 4G/LTE antenna

External WiFi antenna

Configure your computer (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.
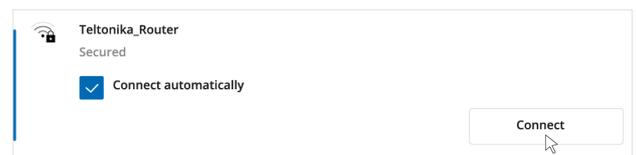
3. If not selected, check to **obtain an IP address** and **obtain DNS server address automatically**. Click OK.
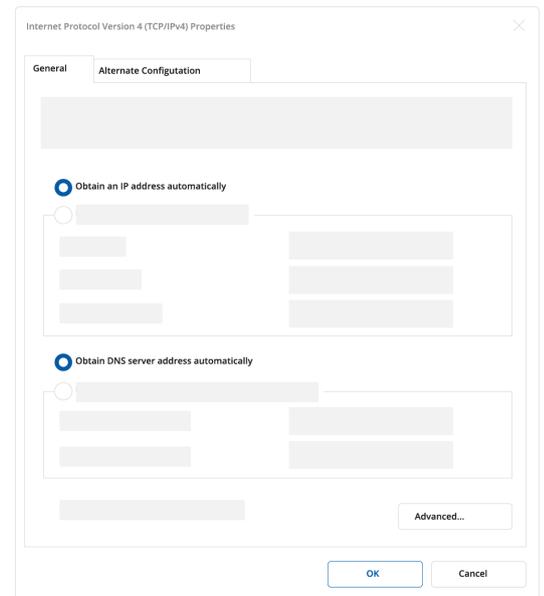
4. Connect to a wireless network by right-clicking on Wireless Network Adapter and selecting Connect.
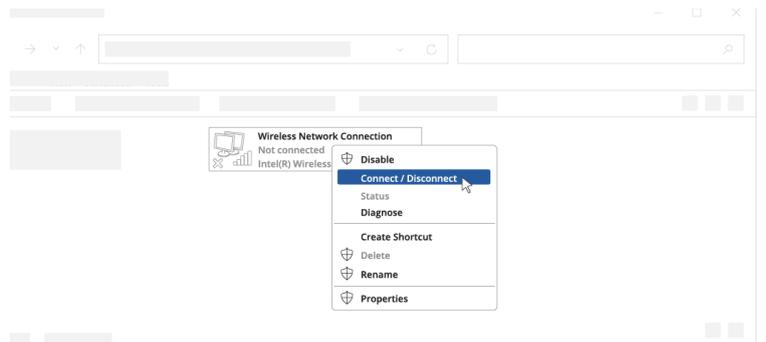
5. Choose the wireless network RUTX50 **** from the list and click Connect. Enter the WiFi password located on the device's label.

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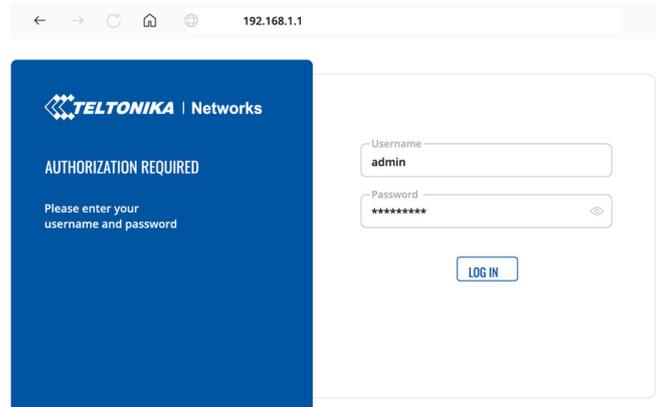
3. After logging in, you must set a new password for security reasons. You will not be able to interact with the router's WebUI until the default password is changed. The new password must consist of a minimum of **8 characters**. Requirements: one uppercase letter, one lowercase letter, and one digit.

4. Next, the Configuration Wizard will start to help you set up some of the router's main operational parameters (see page 7).

5. Finally, let's verify the Mobile signal strength. Go to the **Status — Network** page and pay attention to the **Signal Strength** indication.
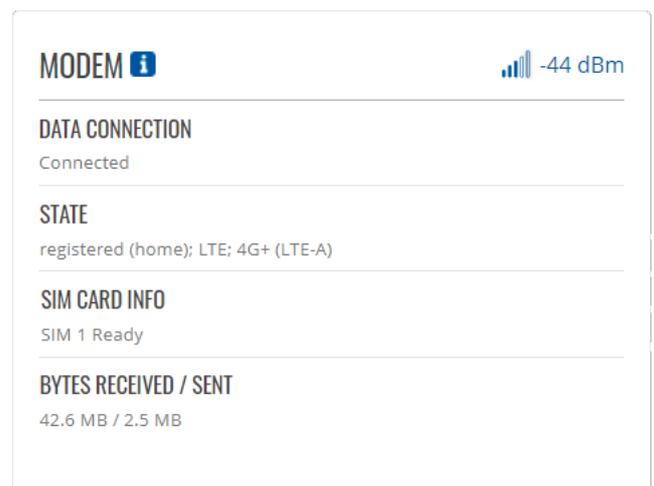
To achieve the best signal conditions and maximize cellular performance, try adjusting the antennas or changing the location of your device.

Router Setup Wizard

The Setup Wizard is a tool that offers a simplified version of other WebUI pages used to set some of the most relevant device parameters: **Time** / **LAN** / **WAN** / **WiFi** / **RMS**

You will be greeted with the Setup Wizard the first time you login, after you have changed the device default password. On other logins you will be redirected to the Overview page, but you can reach the Setup Wizard any time via the System > Setup Wizard page.

This page is an overview of the Setup Wizard tool.

General

The **General** section is used to configure the device's time, language and WebUI mode settings.

⌄ WEBUI SETTINGS

Language	English ⌃
Configuration mode	Advanced ⌃

⌄ GENERAL SETTINGS

Current system time 11/22/2022, 11:53:25 AM

SYNC WITH BROWSER

Time zone UTC ⌃

[SKIP WIZARD]   [NEXT]

LAN

The **LAN** section is used to configure the device's local area network (LAN) and DHCP server settings. A DHCP (Dynamic Host Configuration Protocol) server can automatically configure the TCP/IP settings for any device that requests such a service. If you connect a device that has been configured to obtain an IP address automatically, the DHCP server will lease out an IP address from the available IP pool and the device will be able to communicate within the device's private network.

⌄ LAN CONFIGURATION

IPv4 address	192.168.1.1
IPv4 netmask	255.255.255.0 ⌃

⌄ DHCP CONFIGURATION

Enable DHCP	Enable ⌃
Start IP	192.168.1.100
End IP	192.168.1.249
Lease time	12 Hours ⌃

[BACK] [SKIP WIZARD]   [NEXT]

Mobile

The **Mobile** section is used to configure the device's SIM card parameters.

⌃ MOBILE CONFIGURATION | MOB1S1A1

Auto APN   off ◯ on

Connection is or will be established without using APN

PIN [   ]

[‹ BACK] [SKIP WIZARD]   [NEXT]

Field	Value	Description
Auto APN	off | on; default: on	An Access Point Name (APN) is a gateway between a GSM, GPRS, 3G or 4G mobile network and another computer network. Depending on the contract, some operators may require you to enter the APN just to complete the registration to a network. In other cases an APN is used to get special parameters from the operator (e.g., a public IP address) depending on the contract. Auto APN scans an internal Android APN database and selects an APN based on the SIM card's operator and country. If the first automatically selected APN doesn't work, it attempts to use the next existing APN from the database.
PIN	string; default: none	A 4-digit long numeric password used to authenticate the modem to the SIM card.

WiFi

The WiFi section is used to configure the device's WiFi Access Points (APs). The router supports two types of WiFi: 2.4 GHz and 5 GHz. 2.4 GHz WiFi provides better coverage and works at a longer range, but has lower data transfer speeds when compared to 5 GHz WiFi.

∧ WIFI 2.4 GHZ

Enable   ⬤ off on

ESSID   RUT_4E1A_2G

Password   •••••••• 👁

RMS

This section is used to configure the settings required to connect the device to the **RMS** (R**emote Management System**) - a cloud system designed by Teltonika and intended for remote monitoring and management of Teltonika-Networks products.

∨ RMS SETTINGS

Connection type   Enabled

Hostname   rms.teltonika-networks.com

Port   15009

∨ STATUS

Management status	Enabled
Connection state	Failure (Error: Failed to resolve hostname.)
Serial number	1114921763
Lan MAC	00:1E:42:
Next connection after	00:00:08

CONNECT

SAVE & APPLY

WAN setting

To set the WAN select Network > WAN from the main Menu.

The NETWORK INFTERFACES window lets you determine how the router will be connecting to the internet. You can chose between three types of WAN: Mobile, Wired and Wireless. You can also setup backup WAN options in case your main connection goes down (see next chapter "Failover").

⌄ NETWORK INTERFACES

1	wan	**Status:** Up **Failover:** Disabled **Type:** Wired	**IP:** 192.168.91.213/24 **Protocol:** dhcp **MAC:** 00:1E:42:HIDDEN	**Uptime:** 0h 3m 26s **TX:** 7.32 KB **RX:** 405.61 KB	✎
2	wan6	**Status:** Down **Failover:** Disabled **Type:** Wired	**IP:** - **Protocol:** dhcpv6 **MAC:** 00:1E:42:HIDDEN	**Uptime:** - **TX:** 7.32 KB **RX:** 405.61 KB	✎
3	mob1s1a1	**Status:** Up **Failover:** Disabled **Type:** Mobile	**IP:** 10.26.71.219/32 **APN:** Auto (wap) **SIM:** 1	**Uptime:** 0h 41m 5s **TX:** 32.66 KB **RX:** 26.41 KB	✎
4	mob1s2a1	**Status:** Down **Failover:** Disabled **Type:** Mobile	**IP:** - **APN:** Auto **SIM:** 2	**Uptime:** - **TX:** 0.00 B **RX:** 0.00 B	✎

Failover

To set the WAN select Network > Failover from the main Menu.

The Failover function allows you to backup your primary WAN connection in case it goes down.

In order to set priorities, simply press left mouse click on the interface, then drag it to the 1st, 2nd or other position and then press Save & Apply.

⌄ FAILOVER / LOAD BALANCING INTERFACES

Failover ⌃

	METRIC	NAME	TYPE	INTERVAL	STATUS		
✛	1	wan	Wired	3	Disabled	off ⬤ on	✎
✛	2	mob1s1a1	Mobile	3	Disabled	off ⬤ on	✎

You can drag & drop an interface in order to change its position on the list. Interfaces that are higher on the list have a higher priority than the ones that are lower, i.e., the device will always use the WAN interface with the highest priority as long as it is available. If it goes down, the device will start using the interface with the second highest priority and so on.

Take note that changing an interface's position in the list here also changes its position in the following pages:

Network > Interfaces

Network > WAN

Table of typical WAN configurations depending on the system setup

System	Main WAN	Backup WAN
WiFi onBoard	Wireless	-
4G onBoard	Mobile	-
4G onBoard *Plus*	Mobile	-
WiFi + 4G onBoard	Wireless	Mobile
WiFi + 4G onBoard *Plus*	Wireless	Mobile

Scan for available networks

The Wireless section of the Network tab can be used to manage and configure WiFi Access Points and WiFi Stations (clients) . If you're having trouble finding this page or some of the parameters described here on your device's WebUI, you should turn on "Advanced WebUI" mode. You can do that by clicking the "Basic" button under "Mode", which is located at the top-right corner of the WebUI.

1. Enter the router's Web interface (WebUI).

2. Go to the Network > Wirelss page and click the Scan button to scan the surrounding area as shown in picture below.

⌄ WIFI 2.4GHZ

📶 2.4GHz | **Device status:** Running | 802.11bgn | **Channel** 1 (2.41 GHz) ✏

RUT_XXXX_2G   **Interface status:** Running 📶 0%

Mode: Access Point
BSSID: 00:1E:42:HIDDEN
Clients: 0
Encryption: WPA2 PSK (TKIP, CCMP)

✏ ✕   off ⬤ on

MULTI AP   SCAN   ADD

After which you will be redirected to the window shown below, where you will see list of available WiFi Access Points in the area. Choose one according to your liking and press the Join Network button next to it.

⌄ WIRELESS SCAN RESULTS

Signal	SSID	Channel	Mode	BSSID	Encryption	
📶 37 %	RUT_9ADC_5G	36	Master	00:1E:42:2C:9A:DC	WPA2 PSK (TKIP, CCMP)	JOIN NETWORK
📶 50 %	RUT_EC7A_5G	36	Master	00:1E:42:5A:EC:7A	WPA2 PSK (CCMP)	JOIN NETWORK
📶 27 %	[VARMOUR]	52	Master	24:62:CE:7E:CC:F2	WPA2 PSK (CCMP)	JOIN NETWORK

REPEAT SCAN

You again will be redirected to following window, where you will need to enter WPA passphrase or other security password depending on AP that you are connecting to, name yours network (it will be name of your wireless WAN interface) and assign firewall rule.

⌄ JOINING NETWORK: GUEST_TELTONIKA

WPA passphrase   [   ] 👁

Name of the new network   [   ]

Create / Assign firewall-zone   wan: [wan] [wan6] [mob1s1a1] [mob1s2a1] [mob2s1a1] ⌃

SUBMIT

Next window that opens will be Device Configuration. Values there, mostly, should be left unchanged to avoid connection problems, because they are dictated by Access Point. Other than that, only difference from Access Point settings are in Interface Configuration > General Setup section, where **Mode** is set to **Client**, and **Network** attached to this wireless interface is **WAN** instead of LAN.


Click Save & Apply and if you configured correctly, you will have Wireless Client working.

Reset to factory settings

A factory reset restores the device to its default factory settings, i.e. it deletes all custom configurations. Below you will find various methods to perform a factory reset on the router.

1 - Reset button: the reset button is located on the back panel of the device.
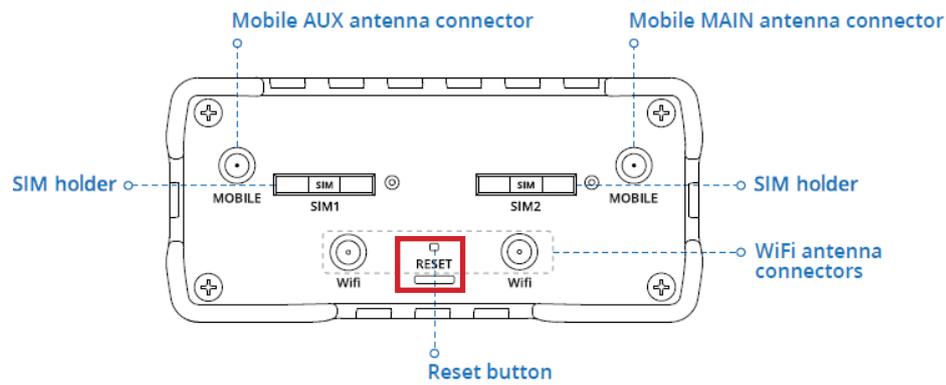
The reset button has two main functions.

• Restart the device. If the reset button is pressed for up to 4 seconds, the device will restart. The start of the reboot will be indicated by all 5 signal strength LEDs flashing along with the green connection status LED.

• Restore factory settings. If the reset button is pressed for at least 5 seconds (default), the device will perform a factory reset and reboot. The signal strength LEDs indicate the elapsed time while the reset button is held down. When all 5 LEDs are on, it indicates that 5 seconds have elapsed and the reset button can be released. The beginning of the factory reset will be indicated by all 5 flashing along with a red connection status LED.

Complete user manual

All the information ragarding the router (model Sea-Hub plus) are hosted by a Wiki page which contains user manuals, configuration guides, certification information and much more.

Please find it at the following internet address: https://wiki.teltonika.lt/view/RUT950

APP for Android and iOS

Teltonika RutOS is an app developed for Android and for iOS to easily setup, monitor and manage the router. It offers a WiFi and device list for wireless connectivity control and Traffic Charts to analyse your internet speed accurately and a Dashboard where you can see all the crucial metrics of connected devices. You can easily scan for availabe WiFi networks and link to them with your Scout WiFi/4G system (if configured for this target).

You can dawnload the app for free on Goggle Play and App Store.
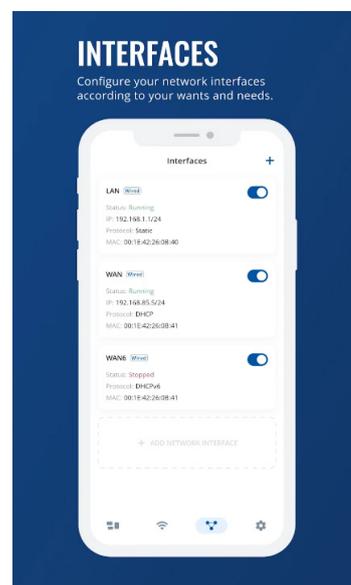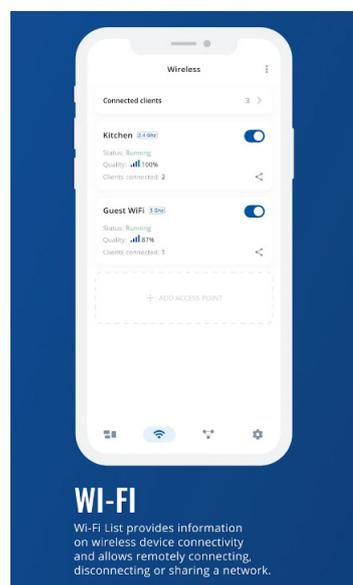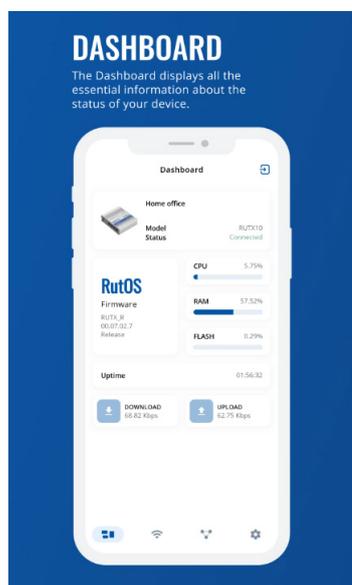
TECHNICAL INFORMATION

Radio specifications	
RF technologies	GSM, GPRS, EDGE, UMTS/HSPA+, LTE, GNSS, WiFi
Max RF power	33 dBm@GSM, 24 dBm@WCDMA, 23 dBm@LTE, 20 dBm@WiFi
Bundled antennas specifications*	
GSM/WCDMA/LTE antenna	698~960/1710~2690 MHz, 50 Ω, VSWR<3, gain** 3 dBi, omnidirectional, SMA male connector
WiFi antenna	2400~2483.5 MHz, 50 Ω, VSWR<2, gain** 5 dBi, omnidirectional, RP-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.

SAFETY INFORMATION

RUT950 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.

[EN] English	Hereby, TELTONIKA declares that this RUT950 is in compliance with the essential requirements and other relevant provisions of Directive CE/RED.
[BG] Bulgarian	С настоящето, TELTONIKA декларира, че RUT950 е в съответствие със съществените изисквания и другите приложими разпоредби на Директива CE/RED.
[CZ] Czech	TELTONIKA tímto prohlašuje, že RUT950 splňuje základní požadavky a všechna příslušná ustanoveni Směrnice CE/RED.
[DE] German	Hiermit erklärt TELTONIKA dass sich das Gerät RUT950 in Übereinstimmung mit den grundlegenden Anforderungen und den übrigen einschlägigen Bestimmungen der Richtlinie CE/RED befindet.
[DK] Danish	Undertegnede TELTONIKA erklærer herved, at følgende udstyr RUT950 overholder de væsentlige krav og øvrige relevante krav i direktiv CE/RED.
[EE] Estonian	Käesolevaga kinnitab TELTONIKA seadme RUT950 vastavust direktiivi CE/RED põhinõuetele ja nimetatud direktiivist tulenevatele teistele asjakohastele sätetele.
[ES] Spanish	Por la presente, TELTONIKA declara que este RUT950 cumple con los requisitos esenciales y otras exigencias relevantes de la Directiva CE/RED.
[FI] Finish	TELTONIKA vakuuttaa täten että RUT950 tyyppinen laite on direktiivin CE/RED oleellisten vaatimusten ja sitä koskevien direktiivin muiden ehtojen mukainen.
[FR] French	TELTONIKA déclare que cette RUT950 est conforme aux exigences essentielles et aux autres dispositions pertinentes de la directive CE /RED.
[GR] Greek	ΜΕ ΤΗΝ ΠΑΡΟΥΣΑ Ο ΚΑΤΑΣΚΕΥΑΣΤΗΣ TELTONIKA ΔΗΛΩΝΕΙ ΟΤΙ RUT950 ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ CE/RED.
[HU] Hungarian	A TELTONIKA ezzennel kijelenti, hogy a RUT950 típusú berendezés teljesíti az alapvető követelményeket és más CE/RED irányelvben meghatározott vonatkozó rendelkezéseket.
[IT] Italian	Con la presente TELTONIKA dichiara che questo RUT950 è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva CE/RED.
[LT] Lithuanian	Šiuo dokumentu UAB TELTONIKA deklaruoja, kad šis RUT950 atitinka esminius reikalavimus ir kitas CE/RED Direktyvos nuostatas.
[LV] Latvian	Ar šo TELTONIKA deklarē, ka RUT950 atbilst Direktīvas CE/RED būtiskajām prasībām un citiem ar to saistītajiem noteikumiem.
[NL] Dutch	Hierbij verklaart TELTONIKA dat het toestel l RUT950 in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn CE/RED.
[NO] Norwegian	TELTONIKA Erklærer herved at RUT950 er i samsvar med de grunnleggende krav og øvrige relevante krav i direktiv CE/RED.
[PL] Polish	Niniejszym TELTONIKA deklaruje że RUT950 jest zgodny z zasadniczymi wymaganiami i innymi właściwymi postanowieniami Dyrektywy CE/RED.
[PT] Portuguese	Eu, TELTONIKA declaro que o RUT950 cumpre os requisitos essenciais e outras provisões relevantes da Directiva CE/RED.
[RO] Romanian	Prin prezenta, TELTONIKA declară că aparatul RUT950 este în conformitate cu cerinţele esenţiale şi cu alte prevederi pertinente ale Directivei CE/RED.
[SE] Swedish	Härmed intygar TELTONIKA att denna RUT950 är i överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv CE/RED.
[SI] Slovenian	TELTONIKA izjavlja, da je ta RUT950 v skladu z bistvenimi zahtevami in drugimi relevantnimi določili direktive CE/RED.

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

Hereby, SCOUT declares that this system is in compliance with the essential requirements and other relevant provisions of Directive 2014/53/EU.

Hereby, SCOUT declares that the radio equipment is in compliance with Radio Equipment Regulations 2017.