Industrial Router Ultra Series

UR75

Quick Start Guide

Safety Precautions

Milesight will not shoulder responsibility for any loss or damage resulting from not following the instructions of this operating guide.

- The device must not be modified in any way.
- Do not place the device close to objects with naked flames.
- Do not place the device where the temperature is below/above the operating range.
- Do not power on the device or connect it to other electrical device when installing.
- Check lightning and water protection when used outdoors.
- Do not connect or power the equipment using cables that have been damaged.

Related Documents

This Start Guide only explains the installation of Milesight UR75 router. For more functionality and advanced settings, please refer to the relevant documents as below.

Document	Description
UR75 Datasheet	Datasheet for UR75 industrial cellular router.
UR75 User Guide	Users could refer to the guide for instruction on how to log in the web GUI, and how to configure all the settings.

The related documents are available on Milesight website: https://www.milesight-iot.com

Declaration of Conformity

UR75 are in conformity with the essential requirements and other relevant provisions of the CE, FCC, and RoHS.

Get Help

For assistance, please contact
Milesight technical support:
Email: iot.support@milesight.com
Tel: 86-592-5085280
Fax: 86-592-5023065
Address: Building C09, Software Park III, Xiamen
361024, China

Revision History

Date	Doc Version	Description
Aug. 4, 2020	V 1.0	Initial version
Nov. 20, 2020	V 2.0	Layout replace
Dec. 1, 2021	V 2.1	Update cellular pictures
June 8, 2022	V 2.2	1. Wall mounting bracket customizable 2. Web GUI logo update

Contents

1. Packing List

Before you begin to install the UR75 router, please check the package contents to verify that you have received the items below.
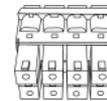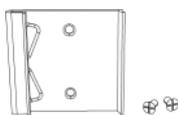
1 × UR75	1 × Ethernet Cable	1 × Power Adapter	1 × 8-Pin Pluggable Terminal
1 × DIN Rail Kit	1 × Quick Start Guide	1 × Warranty Card	1 × Wall Mounting Bracket(Customizable)
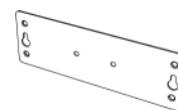
UR75-5G Antennas:

4 × Stubby Cellular Antennas	2 × Stubby Wi-Fi Antennas	Antenna Magnetic Mount (Optional)

UR75-4G Antennas:

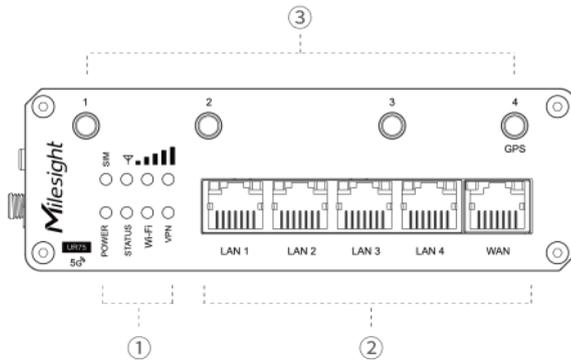|			
2 × Magnetic Cellular Antennas	2 × Stubby Wi-Fi Antennas	1 × GPS Antenna	2 × Stubby Cellular Antennas (Optional)

⚠️ **If any of the above items is missing or damaged, please contact your sales representative.**
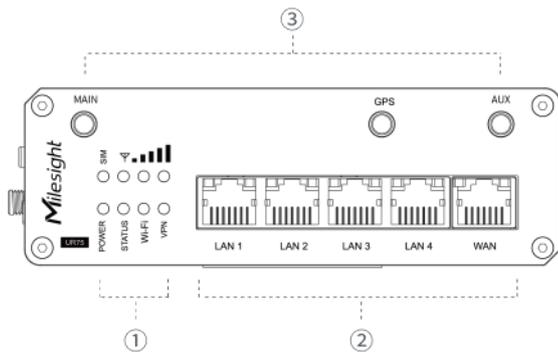
2. Hardware Introduction

2.1 Overview

A. Front Panel of UR75-5G


① LED Indicator Area
    POWER: Power Indicator
    SYSTEM: Status Indicator
    Wi-Fi: Wi-Fi Indicator
    VPN: VPN Indicator
    SIM : SIM Status Indicator
    : Signal Strength Indicator
② Ethernet Ports & Indicators
③ Cellular Antenna Connectors
    (Connector 4 is for both GPS and cellular)

B. Front Panel of UR75-4G

① LED Indicator Area
    POWER: Power Indicator
    SYSTEM: Status Indicator
    Wi-Fi: Wi-Fi Indicator
    VPN: VPN Indicator
    SIM : SIM Status Indicator
    : Signal Strength Indicator
② Ethernet Ports & Indicators
③ Antenna Connectors
    MAIN: Main Cellular Antenna Connector
    AUX: Auxiliary Cellular Antenna Connector
    GPS: GPS Antenna Connector

C. Left Side Panel
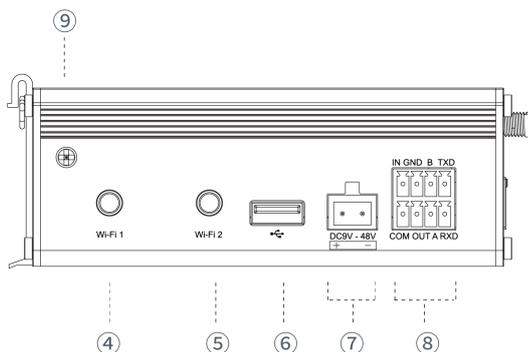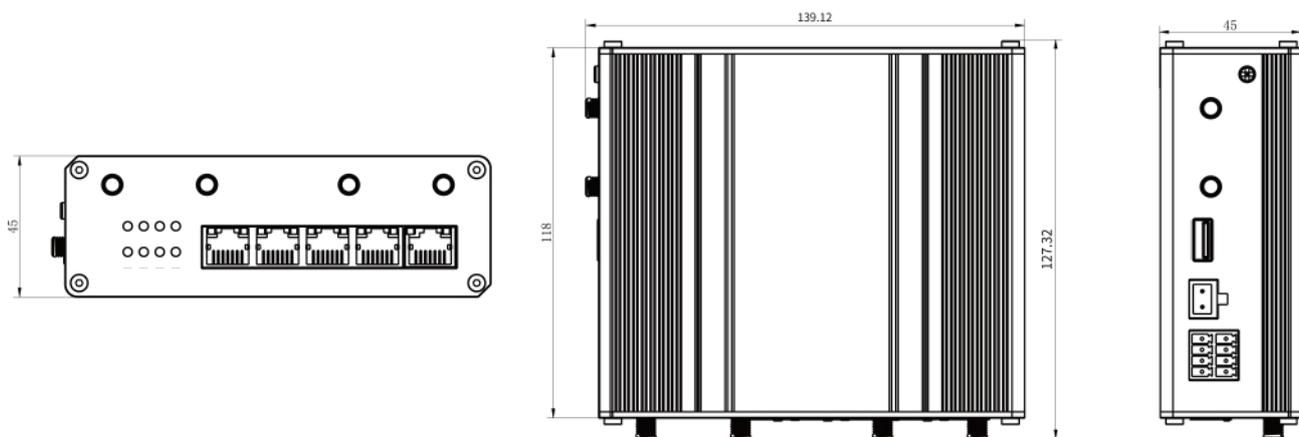

④ Wi-Fi Antenna Connector 1
⑤ Wi-Fi Antenna Connector 2
⑥ USB Port (Reserved)
⑦ Power Connector
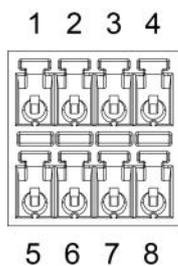⑧ Serial Port & I/O Ports
⑨ Grounding Stud

D. Right Side Panel
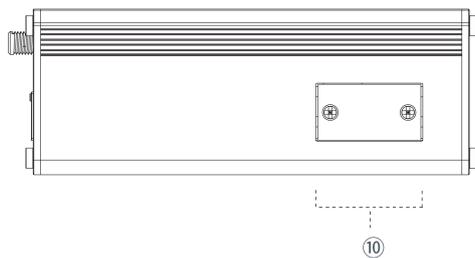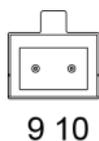

⑩ SIM and Reset Button Holder

⑩

2.2 Dimensions (mm)

2.3 Serial & IO & Power Pinouts

PIN	RS232	RS485	DI	DO	Description
1	---	---	IN	---	Digital Input
2	GND	---	GND	---	Ground
3	---	B	---	---	Data -
4	TXD	---	---	---	Transmit Data
5	---	---	---	COM	Common Ground
6	---	---	---	OUT	Digital Output
7	---	A	---	---	Data +
8	RXD	---	---	---	Receive Data

Note: For -RS485 model, RXD--->A, TXD--->B.

PIN	Description	Wire Color
9	Positive	Red
10	Negative	Black

2.4 LED Indicators

LED	Indication	Status	Description
POWER	Power Status	Off	The power is switched off
		On	The power is switched on
SYSTEM	System Status	Green Light	Static: Start-up
			Blinking slowly: the system is running properly
		Red Light	The system goes wrong
VPN	VPN Status	Off	VPN is disconnected
		Green Light	VPN is connected
Wi-Fi	Wi-Fi Status	Off	Wi-Fi is disabled
		Green Light	Static: Wi-Fi is enabled
			Blinking slowly: sending or receiving data via Wi-Fi
SIM	SIM Card Status	Off	SIM1 or SIM2 is registering or fails to register (or there are no SIM cards inserted)
		Green Light	Blinking slowly: SIM1 (as primary SIM) has been registered and is ready for dial-up
			Blinking rapidly: SIM1(as primary SIM) has been registered and is dialing up now
			Static: SIM1 (as primary SIM) has been registered and dialed up successfully
		Orange Light	Blinking slowly: SIM2 (as primary SIM) has been registered and is ready for dial-up
			Blinking rapidly: SIM2 (as primary SIM) has been registered and is dialing up now
			Static: SIM2 (as primary SIM) has been registered and dialed up successfully
Signal Strength	Signal 1/2/3	Off	No signal
		Green Light	Static/Off/Off: weak signals with 1-10 ASU (please check if the antenna is installed correctly, or move the antenna to a suitable location to get better signal)
			Static/Static/Off: normal signals with 11-20 ASU (average signal strength)
			Static/Static/Static: strong signals with 21-31 ASU (signal is good)

2.5 Reset Button

Reset button is under the SIM slots.

Function	Description	
	SYSTEM LED	Action
Reset	Blinking	Press and hold the reset button for more than 5 seconds.

	Static Green → Rapidly Blinking	Release the button and wait.
	Off → Blinking	The router is now reset to factory defaults.

2.6 Ethernet Port Indicator

Indicator	Status	Description
Link Indicator (Orange)	On	Connected
	Blinking	Transmitting data
	Off	Disconnected

# 3. Hardware Installation

Environmental Requirements

- Power Input: 9-48 VDC (48 VDC is needed for PoE output)
- Power Consumption: ≤ 7.9W (In Non-PoE mode)
- Operating Temperature: -40°C to 70°C (-40°F -158°F)
- Relative Humidity: 0% to 95% (non-condensing) at 25°C/77°F

3.1 SIM Card Installation

⚠️ UR75 do not support hot-plug. Please cut off the power before insert or take off cards.

A. Unscrew the holder of the SIM card.
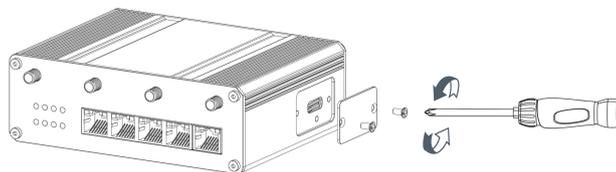
B. Insert the SIM card(s) into the device following the triangle location of SIM card(s).
C. Put SIM card into the slot and screw it up.
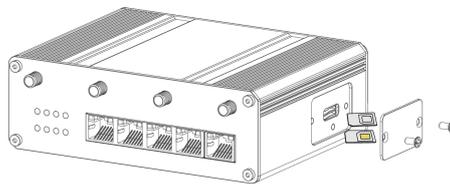
3.2 Antenna Installation

Rotate the antenna into the antenna connector accordingly.
The external antenna should be installed vertically always on a site with a good signal.
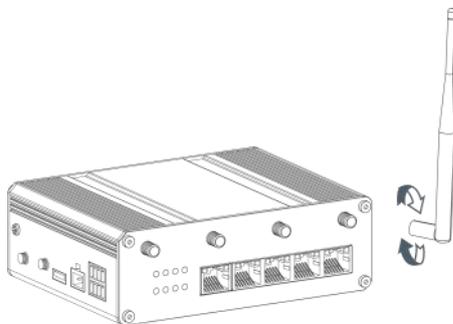
3.3 Router Installation

The router can be placed on a desktop or mounted to a wall or a DIN rail.

3.3.1 DIN Rail Mounting (Measured in mm)

Use 2 pcs of M3 × 6 flat head Phillips screws to fix the mount clip to the router, and then hang the device to the DIN rail. The width of DIN rail is 3.5cm.

⚠️ **Recommended torque for mounting is 1.0 N·m, and the maximum allowed is 1.2 N·m.**
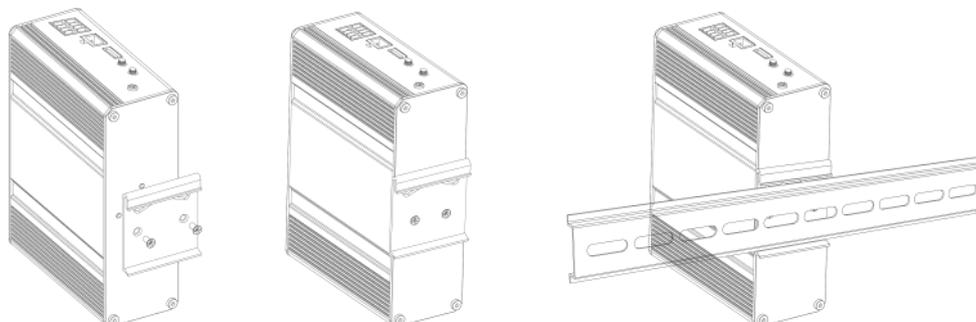
3.3.2 Wall Mounting (Measured in mm)

Use 2 pcs of M3 × 6 flat head Phillips screws to fix the wall mounting bracket to the router, and then use 2 pcs of M3 drywall screws to mount the router associated with the wall plugs on the wall.

⚠️ **Recommended torque for mounting is 1.0 N·m, and the maximum allowed is 1.2 N·m.**
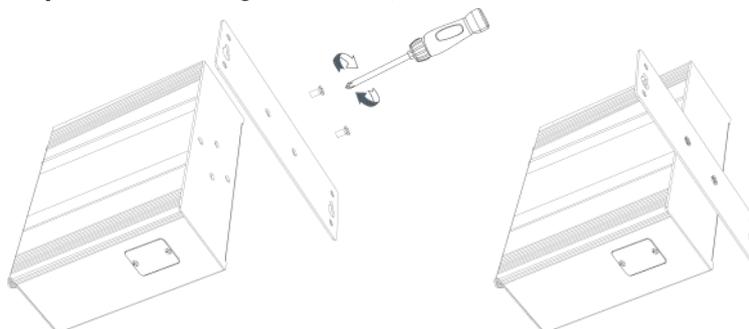
3.4 Protective Grounding Installation

Remove the grounding nut, then connect the grounding ring of the cabinet's grounding wire onto the grounding stud and screw up the grounding nut.
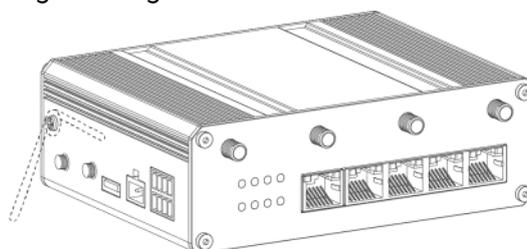
⚠️ **The router must be grounded when deployed. According to operating environment, the ground wire should be connected with grounding stud of router.**

4. Log in the Web GUI of Router

UR75 provides web-based configuration interface for management. If this is the first time you configure the device, please use the default settings below:

IP Address: **192.168.1.1**

Username: **admin**

Password: **password**

4.1 Wireless Access

A. Enable Wireless Network Connection on your computer and search for access point "**Router_******"** to connect it.

B. Open a Web browser on your PC (Chrome is recommended) and type in the IP address **192.168.1.1** to access the web GUI.

C. Enter the username and password, and click "Login".
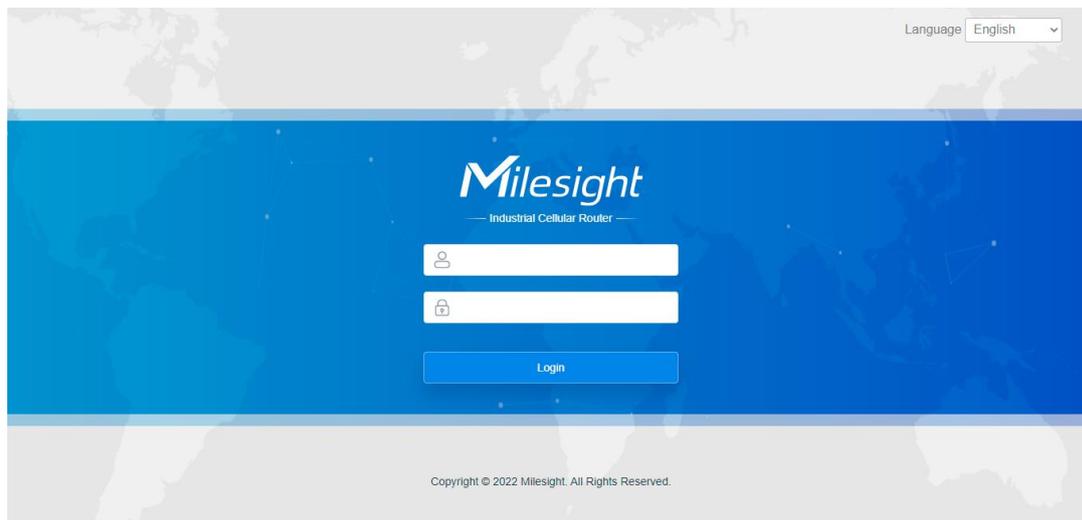
⚠️ **If you enter the username or password incorrectly more than 5 times, the login page will be locked for 10 minutes.**

D. When you login with the default username and password, you will be asked to modify the password. It's suggested that you change the password for the sake of security. Click "Cancel" button if you want to modify it later.

E. After you login the Web GUI, you can view system information and perform configuration on the device.


4.2 Wired Access

Connect PC to LAN port of UR75 router directly. The following steps are based on Windows 10 operating system for your reference.

A. Go to "Control Panel" → "Network and Internet" → "Network and Sharing Center", then click "Ethernet" (May have different names).
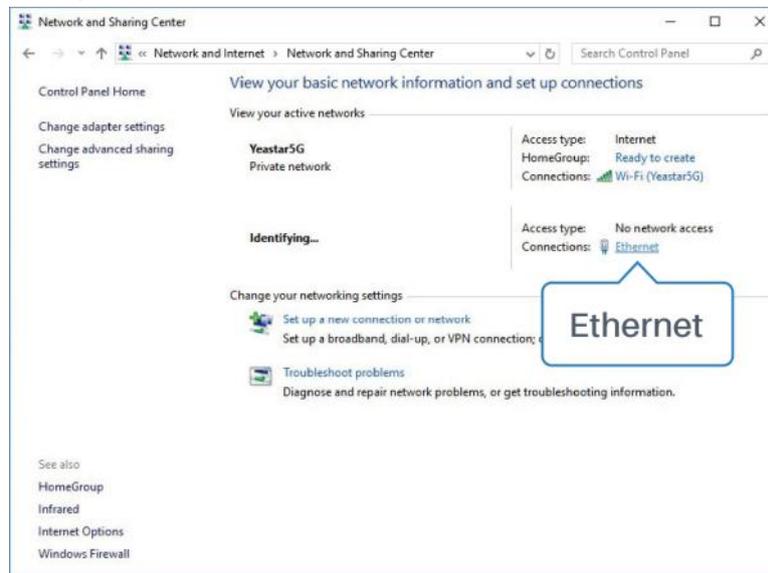
B. Go to "Properties" → "Internet Protocol Version 4(TCP/IPv4) ", select "Obtain an IP address automatically" or "Use the following IP address", then assign a static IP manually within the same subnet of the device.
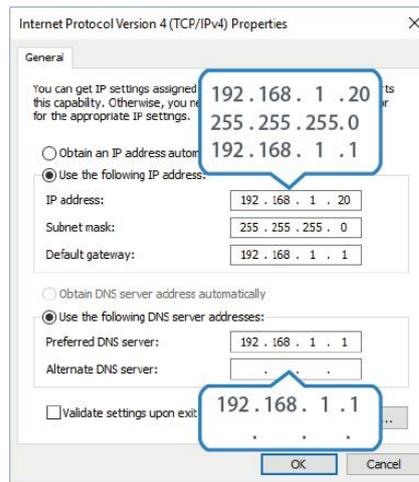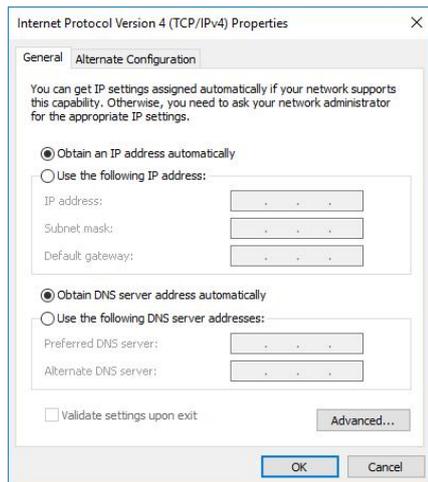
C. Open a Web browser on your PC (Chrome is recommended), type in the IP address 192.168.1.1, and press Enter on your keyboard.

D. Enter the username, password, and click "Login".
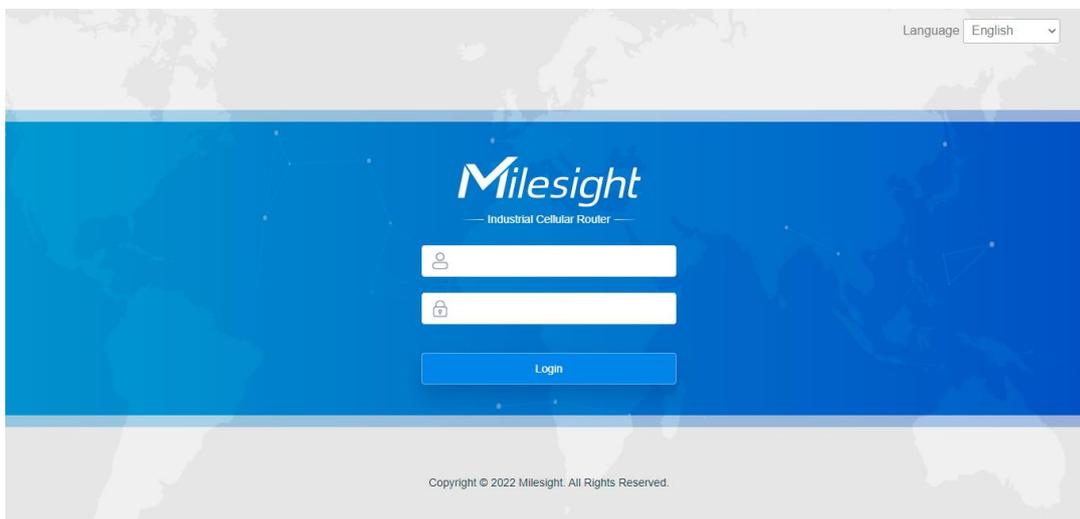
⚠ **If you enter the username or password incorrectly more than 5 times, the login page will be locked for 10 minutes.**

E. When you login with the default username and password, you will be asked to modify the password. It's suggested that you change the password for the sake of security. Click "Cancel" button if you want to modify it later.

F. After you login the Web GUI, you can view system information and perform configuration on the device.

5. Network Configuration

This chapter explains how to connect UR75 to network via WAN connection, Wi-Fi or cellular.

5.1 Ethernet WAN Configuration

A. Go to "Network" → "Interface" → "WAN" to select connection type and configure WAN parameters, click "Save & Apply" button to make the changes take effect.
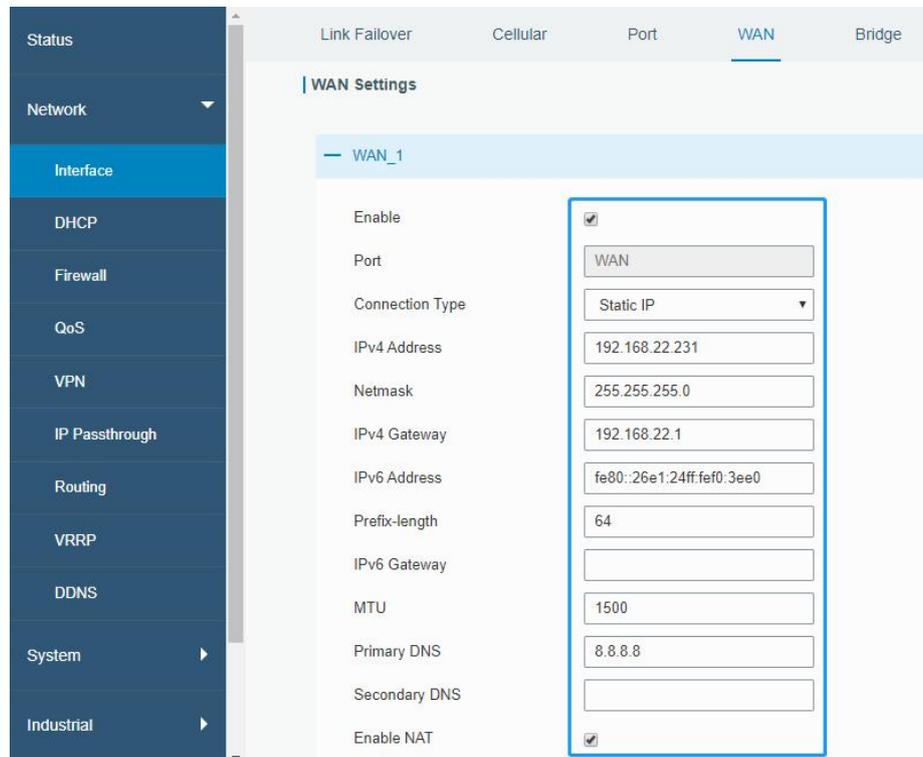
B. Connect WAN port to another network devices like modem.

C. Go to "Network" → "Interface" → "Link Failover" to rise the WAN priority to 1.

D. Open your preferred browser on PC, then type any available web address into address bar and see if it is able to visit Internet via UR75 router.
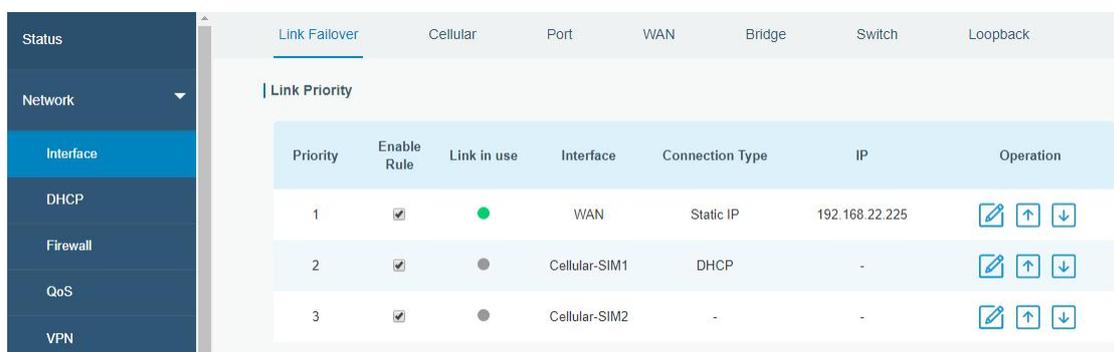
5.2 Cellular Connection Configuration

Take inserting SIM card into SIM1 slot as an example; please refer to the following detailed operations.

A. Go to "Network" → "Interface" → "Cellular" → "Cellular Setting" to configure APN, PIN code or other

cellular info, click "Save" and "Apply" to save the configuration.

B. Go to "Network" → "Interface" → "Link Failover" to enable SIM1 and rise link priority of SIM1.

C. Click ✎ to configure ICMP ping detection information.

D. Click "Status" → "Cellular" to view the status of the cellular connection. If it shows "Connected", it means SIM1 has dialed up successfully. On the other hand, you can check the status of SIM indicator. If it keeps on light statically, it means SIM1 has dialed up successfully.

E. Open your preferred browser on PC, then type any available web address into address bar and see if it is able to visit Internet via UR75 router.

5.3 Wi-Fi Configuration

A. Go to "Network" → "Interface" → "WLAN" and select "Client" mode.
B. Click "Scan" to search for Wi-Fi access point. Select the available one and click "Join Network".

C. Type the key of Wi-Fi.

D. Go to "Network" → "Interface" → "Link Failover" to enable WLAN.

E. Go to "Status" → "WLAN" to check Wi-Fi status. If it shows "Connected", it means the device connects to Wi-Fi successfully.

[END]