



UR32

Quick Start Guide



Welcome

Thank you for choosing Milesight UR32 industrial cellular router.

This guide describes how to install the UR32 and how to log in the Web GUI to configure the device. Once you complete the installation, refer to the Milesight UR32 User Guide for instructions on how to perform configurations on the device.

Related Documents

This Start Guide only explains the installation of Milesight UR32 router. For more functionality and advanced settings, please refer to the relevant documents as below.

Document	Description
UR32 Datasheet	Datasheet for UR32 industrial cellular router.
UR32 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

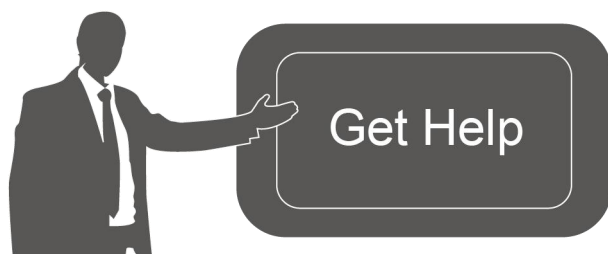
UR32 are in conformity with the essential requirements and other relevant provisions of the CE, FCC, and RoHS.



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Revision History

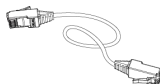
Date	Doc Version	Description
Apr. 26, 2019	V 1.0	Initial version
May 11, 2020	V 1.1	Web interfaces upgrade
Nov. 25, 2020	V 2.0	Layout Replace

1. Packing List

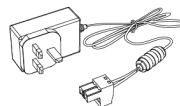
Before you begin to install the UR32 router, please check the package contents to verify that you have received the items below.



1 × UR32



1 × Ethernet Cable



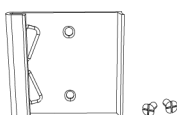
1 × Power Adapter



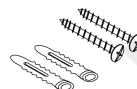
2 × Magnetic Cellular
Antennas



1 × 6-Pin Pluggable
Terminal



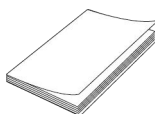
1 × DIN Rail Kit



4 × Setscrews



1 × Warranty Card



1 × Quick Start Guide



1 × Stubby Wi-Fi
Antenna
(Wi-Fi Version Only)



1 × GPS Antenna
(GPS Version Only)



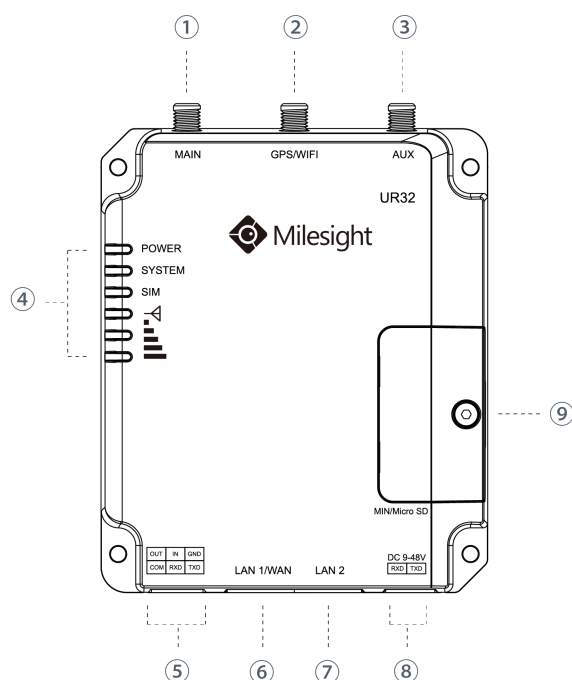
2 × Stubby Cellular
Antennas (Optional)



If any of the above items is missing or damaged, please contact your sales representative.

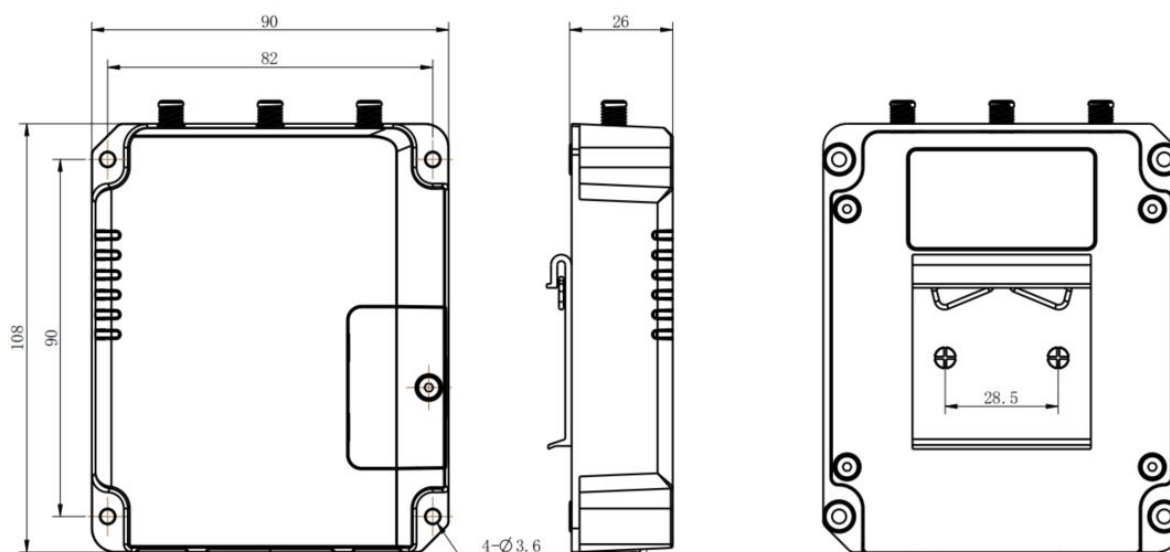
2. Hardware Introduction

2.1 Overview

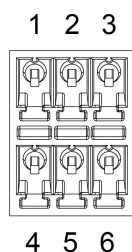


- ① Main Cellular Antenna Connector
- ② GPS/WIFI Antenna Connector
- ③ AUX Cellular Antenna
- ④ LED Indicator Area
POWER: Power Indicator
SYSTEM: Status Indicator
SIM : Status Indicator
Y: Signal Strength Indicator
- ⑤ Serial Port & I/O
- ⑥ Ethernet LAN1/WAN Port
- ⑦ Ethernet LAN2 Port
- ⑧ Power Connector
- ⑨ SIM and Reset Button Holder

2.2 Dimensions (mm)



2.3 Connectors



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



7 8

PIN	Description
7	Positive
8	Negative

*: Only for -485 model.

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
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 has been registered and is ready for dial-up
			Blinking rapidly: SIM1 has been registered and is dialing up now
			Static: SIM1 has been registered and dialed up successfully
		Orange Light	Blinking slowly: SIM2 has been registered and is ready for dial-up
			Blinking rapidly: SIM2 has been registered and is dialing up now
			Static: SIM2 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



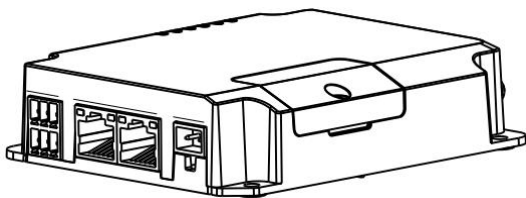
3. Hardware Installation

Environmental Requirements

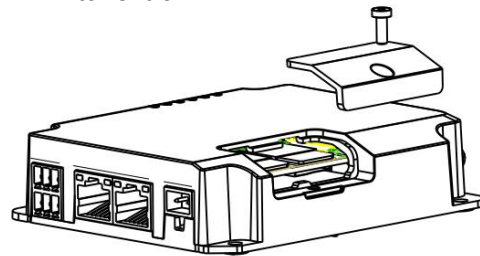
- Power Input: 9-48 VDC
- Power Consumption: Typical 1.9W (Max 2.4 W)
- Operating Temperature: -40°C to 70°C (-40°F -158°F)
- Relative Humidity: 0% to 95% (non-condensing) at 25°C/77°F

3.1 SIM Card/Micro SD Card Installation

A. Unscrew the cover of the SIM card then screw it up.



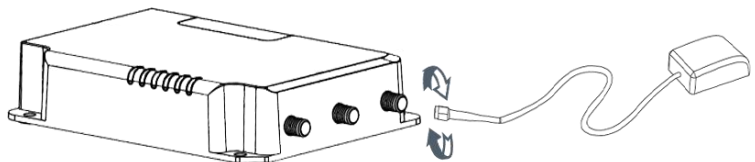
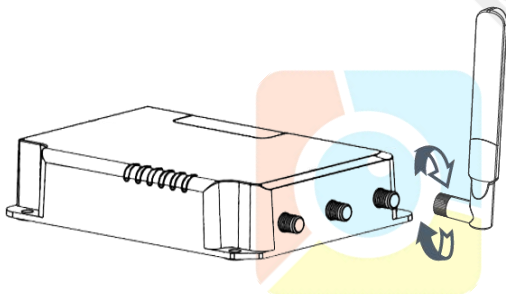
B. Put SIM card/Micro SD into the slot and take it off.



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.



3.4 Router Installation

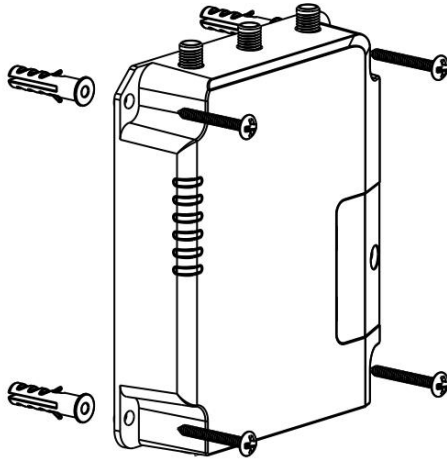
The router can be placed on a desktop or mounted to a wall or a DIN rail.

3.4.1 Wall Mounting (Measured in mm)

Use 4 pcs of M3 × 6 flat head Phillips screws to fix the router on the wall.



Recommended torque for mounting is 1.0 N·m, and the maximum allowed is 1.2 N·m.

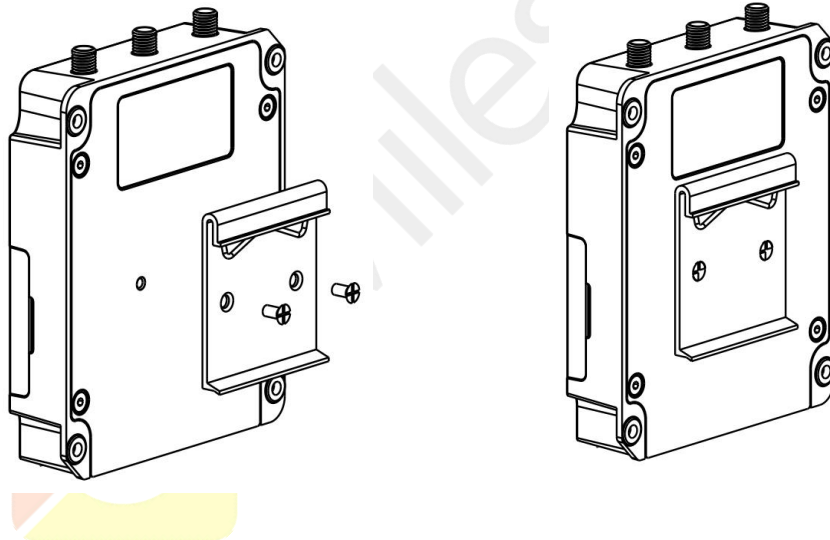


3.4.2 DIN Rail Mounting (Measured in mm)

Use 2 pcs of M3 × 6 flat head Phillips screws to fix the DIN rail to the router, and then hang the DIN rail on the mounting bracket. It is necessary to choose a standard bracket.



Recommended torque for mounting is 1.0 N·m, and the maximum allowed is 1.2 N·m.

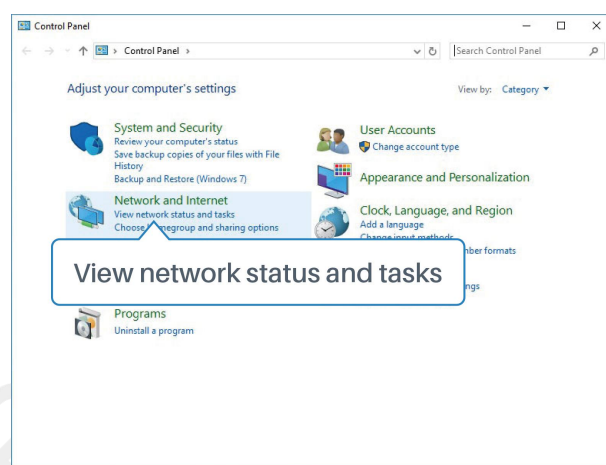
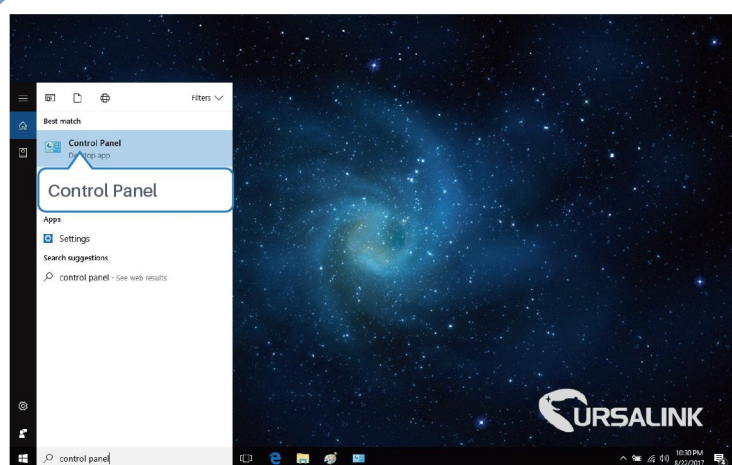


4. Log in the Web GUI of Router

4.1 PC Configuration

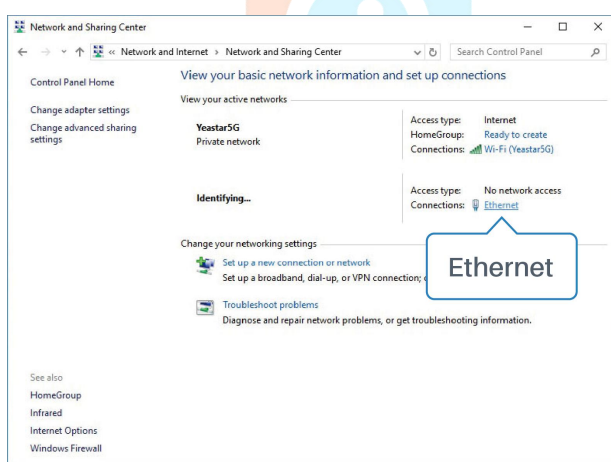
Please connect PC to LAN port of UR32 router. PC can obtain an IP address, or you can configure a static IP address manually. The following steps are based on Windows 10 operating system for your reference.

(Note: As remote access is disabled by default, you can't access to the router's Web GUI if you connect PC to WAN port of the router. But it will function properly if you enable it on Web GUI.)

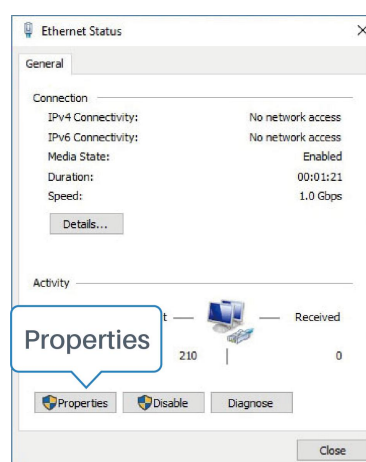


① Click "Search Box" to search "Control Panel" on the Windows 10 taskbar.

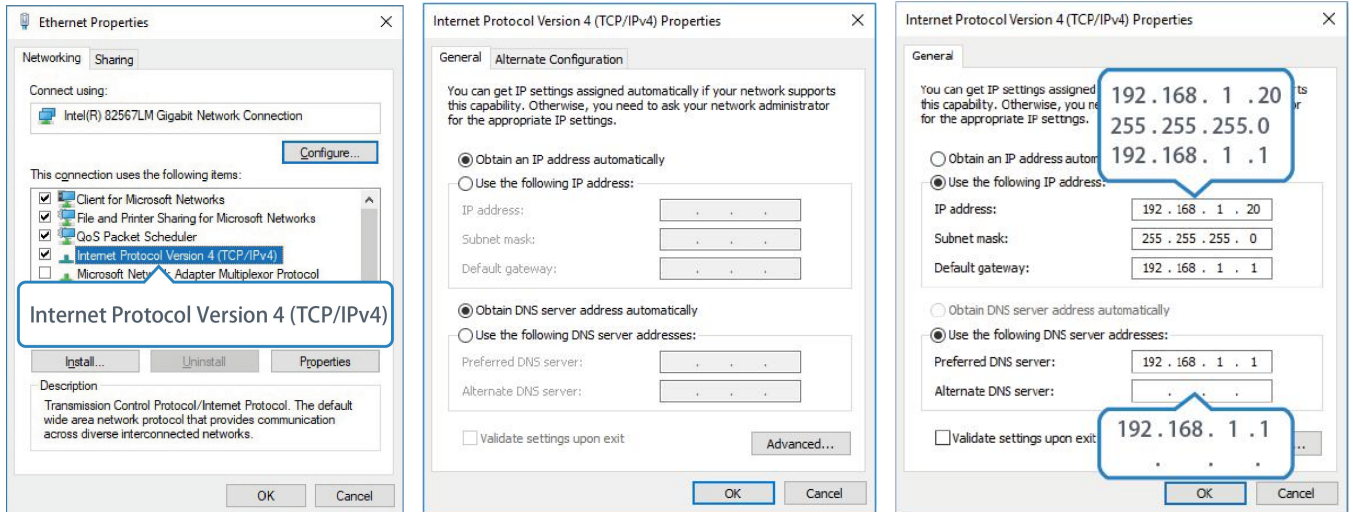
② Click "Control Panel" to open it, and then click "View network status and tasks".



③ Click "Ethernet" (May have different names).



④ Click "Properties".



⑤ Double Click “Internet Protocol Version 4 (TCP/IPv4)” to configure IP address and DNS server.

⑥ Method 1: click “Obtain an IP address automatically”;

Method 2: click “Use the following IP address” to assign a static IP manually within the same subnet of the router.

(Note: Remember to click “OK” to finish configuration.)

4.2 Log in the Router

If this is the first time you configure the router, please use the default settings below:

IP Address: **192.168.1.1**

Username: **admin**

Password: **password**

A. Start a Web browser on your PC (Chrome is recommended), type in the IP address, and press Enter on your keyboard.

B. Enter the username and password, click “Login”.

English



Login

 If you enter the username or password incorrectly more than 5 times, the login page will be locked for 10 minutes.

C. When you log in 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.

Change Password

Old Password

New Password

Confirm New Password

Save

Cancel

D. After you log in the Web GUI, you can view system information and perform configuration on the router.

For your device security, please change the default password.

Status	Overview	Cellular	Network	VPN	Routing	Host List	GPS	Help
	System Information			System Status				
Network	Model	UR32-L01CE-G			Local Time	2020-04-30 14:40:08 Thursday		
System	Serial Number	621892450159			Uptime	00:03:41		
Industrial	Firmware Version	32.2.0.5			CPU Load	9%		
Maintenance	Hardware Version	V1.1			RAM (Available/Capacity)	39MB/128MB(30.47%)		
					Flash (Available/Capacity)	91MB/128MB(71.09%)		
APP	Cellular			WAN ● Link in use				
	Status	No SIM Card			Status	Online		
	Current SIM	SIM2			IP	192.168.22.225		
	IP	0.0.0.0			MAC	24-e1-24-R0-31-94		
	Connection Duration	0 days, 00:00:00			Connection Duration	0 days, 00:02:34		
	Data Usage Monthly	0.0 MIB						
	LAN							
	IP	192.168.0.1						
	Connected Devices	0						
Manual Refresh Refresh								
								Model Show the model name of router.
								Serial Number Show the serial number of router.
								Firmware Version Show the current firmware version of router.
								Hardware Version Show the current hardware version of router.
								Local Time Show the current local time of system.
								Uptime Show the information on how long the router has been running.
								CPU Load Show the current CPU utilization of the router.
								RAM (Available/Capacity) Show the RAM available and the capacity RAM memory.
								Flash (Available/Capacity) Show the Flash available and the capacity Flash memory.
								Current SIM

5. Network Configuration

This chapter explains how to connect UR32 to network via WAN connection or cellular.

5.1 Ethernet WAN Configuration

A. Go to “Network > Interface > Port” to change LAN1 to WAN port.

Port	Status	Property	Speed	Duplex
LAN2	up	lan	auto	auto
LAN1/WAN	up	wan	auto	auto

B. Go to “Network > Interface > WAN” to configure WAN parameters. Take static IP configuration as an example. DHCP client and PPPoE type are optional according to your requirements.

Click “Save & Apply” button to make the changes take effect.

C. Connect WAN port to another router or modem.

D. Log in UR32 web GUI via WAN port IP address and go to “Status > Network” to check if status is “up”.

Port	Status	Type	IP	Netmask	Gateway	DNS	Connection Duration
LAN1/WAN	up	Static	192.168.22.225	255.255.255.0	192.168.22.1	8.8.8.8	08h 22m 29s

E. Go to “Network > Interface > Link Failover” to rise the WAN priority to 1.

Priority	Enable Rule	Link in use	Interface	Connection Type	IP	Operation
1	☒	●	WAN	Static IP	192.168.22.225	✎ ↑ ↓
2	☒	●	Cellular-SIM1	DHCP	-	✎ ↑ ↓
3	☒	●	Cellular-SIM2	-	-	✎ ↑ ↓

F. 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 UR32 router.

5.2 Cellular Connection Configuration

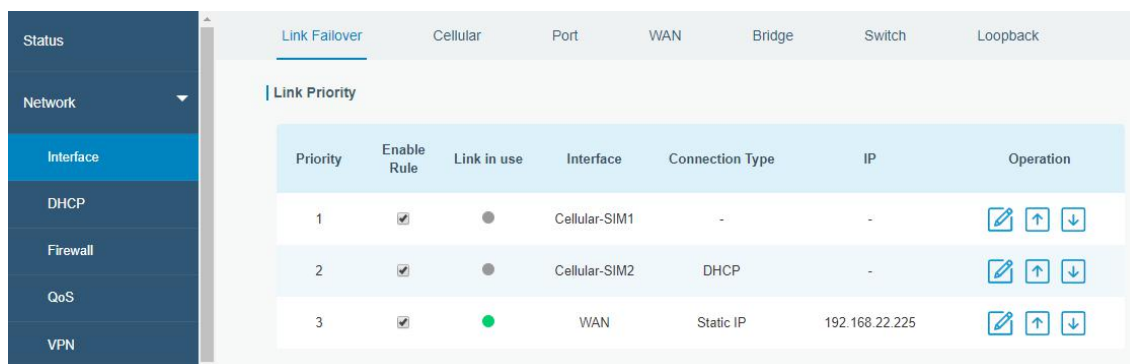
Take inserting SIM card into SIM1 slot as an example; please refer to the following detailed operations.

- Click “Network > Interface > Cellular > Cellular Setting” to configure the cellular info, like APN and network type.
- Click “Save” and “Apply” for configuration to take effect.

	SIM1	SIM2
APN		
Username		
Password		
PIN Code		
Access Number		
Authentication Type	Auto	Auto
Network Type	Auto	Auto
PPP Preferred	☐	☐
SMS Center	+8613800592500	+8613800592500
Enable NAT	☒	☒
Roaming	☒	☒
Data Limit	0 MB	0 MB
Billing Day	Day 1 of The Month	Day 1 of The Month

If you select “Auto”, the router will obtain ISP information from SIM card to set APN, Username, and Password automatically. This option will only be taken effect when the SIM card is issued from a well-known ISP.

C. Go to “Network > Interface > Link Failover” to enable SIM1 and rise link priority of SIM1.



D. Click to configure ICMP ping detection information.

Ping Detection

Enable

☒

Primary Server (IPv4)

8.8.8.8

Secondary Server (IPv4)

114.114.114.114

Interval

300

s

Retry Interval

5

s

Timeout

3

s

Max Ping Retries

3

OK

Cancel

E. 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 green light statically, it means SIM1 has dialed up successfully.

Overview	Cellular	Network	VPN	Routing	Host List	GPS
Modem			Network			
Status	Ready		Status	Connected		
Model	EC25		IP Address	10.2.25.74		
Current SIM	SIM1		Netmask	255.255.255.240		
Signal Level	29asu (-55dBm)		Gateway	10.2.25.73		
Register Status	Registered (Home network)		DNS	211.136.17.107		
IMEI	861585042050250		Connection Duration	0 days, 00:00:34		
IMSI	460045927703654		Data Usage Monthly			
ICCID	89860439101880723654		SIM-1	RX: 0.0 MiB TX: 0.0 MiB ALL: 0.0 MiB		
ISP	CHINA MOBILE		SIM-2	RX: 0.0 MiB TX: 0.0 MiB ALL: 0.0 MiB		
Network Type	FDD LTE					
PLMN ID	46000					
LAC	592f					
Cell ID	271f848					

F. 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 UR32 router.

[END]

