



# Industrial Router Pro Series

## UR32

### 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 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
Dec. 1, 2021	V 2.1	1. DI matches to GND 2. Update cellular pictures
Oct. 31, 2022	V 2.2	1. Delete Ethernet cable 2. Loggin page update

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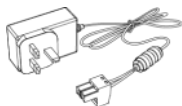
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## 1. Packing List

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



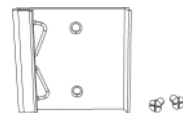
1 × UR32



1 × Power Adapter



1 × 6-Pin Pluggable  
Terminal



1 x DIN Rail Kit



4 × Wall Mounting Kits



2 × Magnetic Cellular  
Antennas



1 × Warranty Card



1 × Quick Start Guide



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



1 × GPS Antenna  
(GPS Version Only)



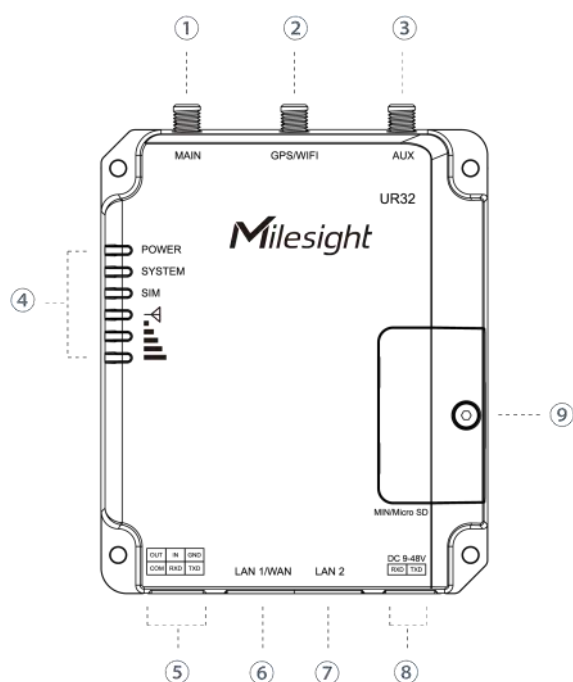
2 × Stubby Cellular  
Antennas  
(Optional)



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

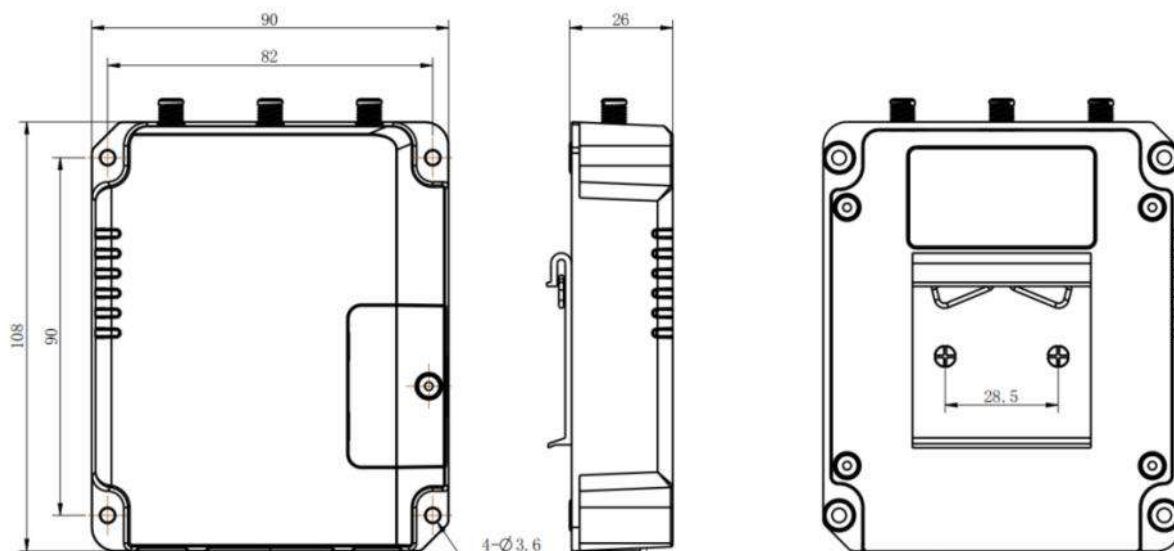
## 2. Hardware Introduction

### 2.1 Overview

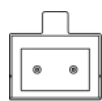
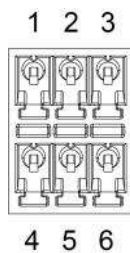


- ① Main Cellular Antenna Connector
- ② GPS/WIFI Antenna Connector
- ③ AUX Cellular Antenna
- ④ LED Indicator Area  
POWER: Power Indicator  
SYSTEM: Status Indicator  
SIM : Status Indicator  
📶: Signal Strength Indicator
- ⑤ Serial Port & I/O
- ⑥ Ethernet LAN1/WAN Port
- ⑦ Ethernet LAN2 Port
- ⑧ Power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

### 2.2 Dimensions (mm)



## 2.3 Serial & IO & Power Pinouts



7 8

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

PIN	Description	Wire Color
7	Positive	Red
8	Negative	Black

\*: 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



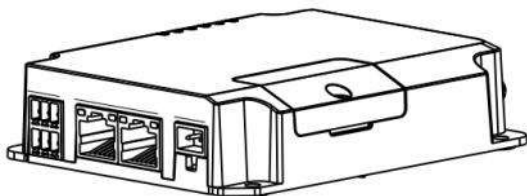
### 3. Hardware Installation

#### Environmental Requirements

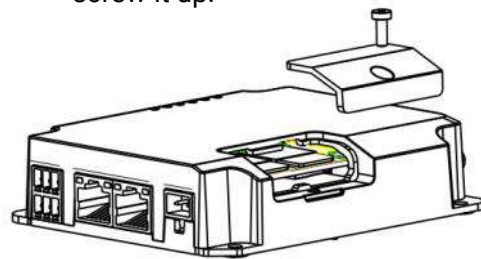
- Power Input: 9-48 VDC (48 VDC is needed for PoE output)
- Power Consumption: Typical 1.9 W (Max 2.4 W)
- Operating Temperature: -40°C to 70°C (-40°F -158°F)
- Relative Humidity: 0% to 95% (non-condensing) at 25°C/77°F

#### 3.1 SIM Card/Micro SD Card Installation

A. Unscrew the cover of the SIM card then take it off.



B. Put SIM card/Micro SD into the slot and screw it up.

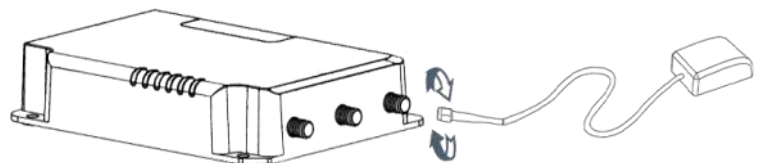
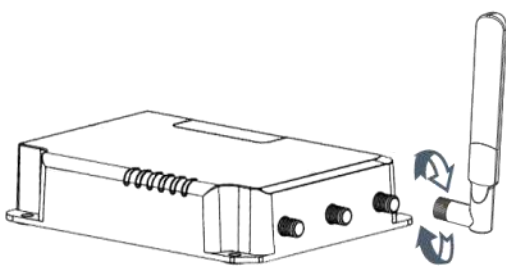


**Note:** UR32 does not support hot plugging (also called hot swapping). please turn off the power before you insert or take off cards.

#### 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

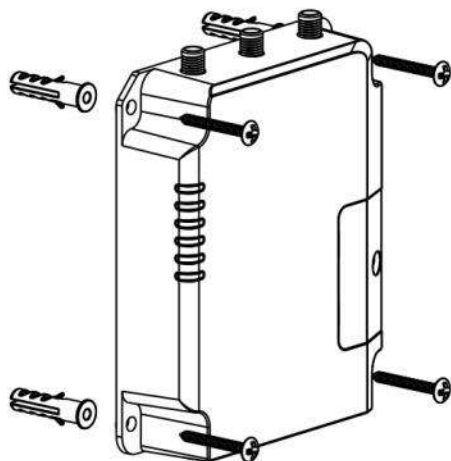
The router can be placed on a desktop or mounted to a wall or a DIN rail.

##### 3.3.1 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.**

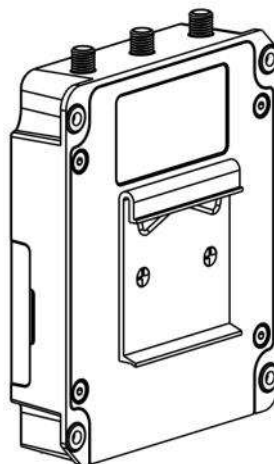
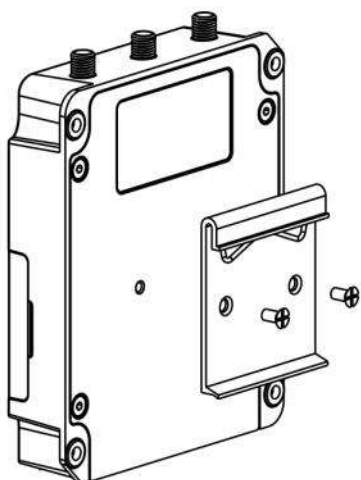


### 3.3.2 DIN Rail Mounting (Measured in mm)

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 3.5 cm.



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



## 4. Log in the Web GUI

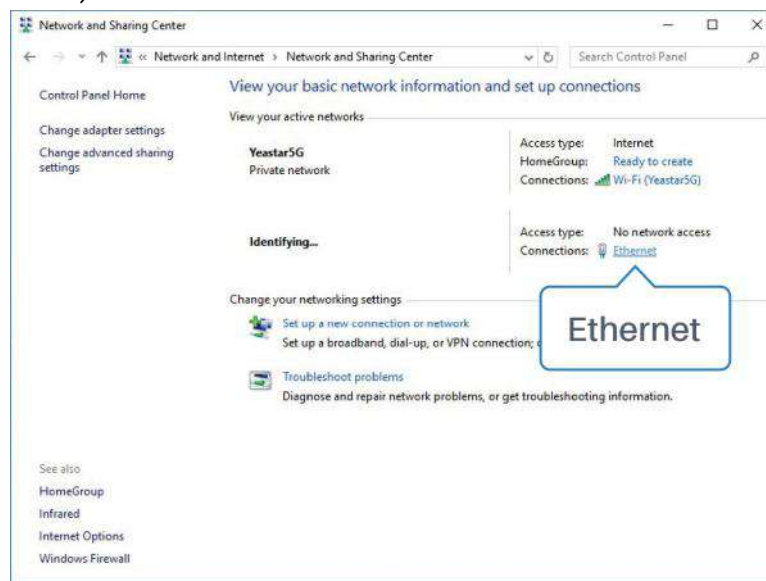
Please connect PC to LAN port of UR32 router. PC can obtain an IP address, or you can configure a static IP address manually. The following steps are based on Windows 10 operating system for your reference.

IP Address: **192.168.1.1**

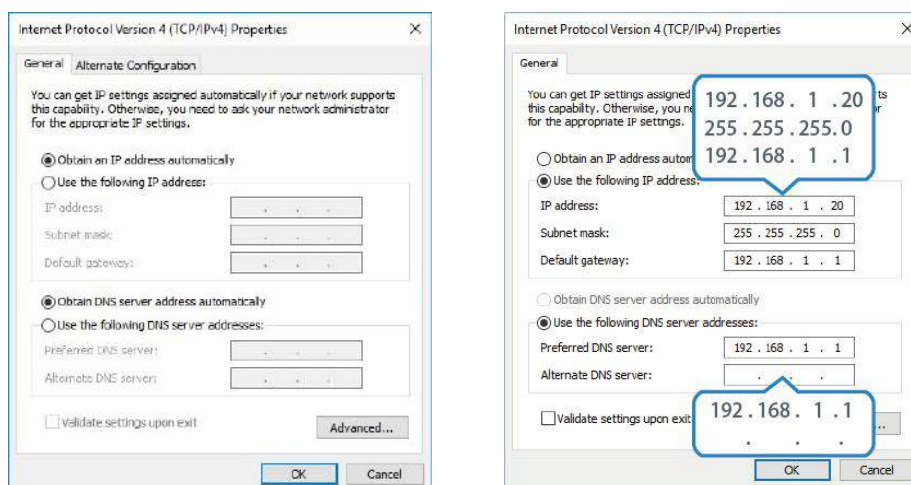
Username: **admin**

Password: **password**

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** to access the web GUI.

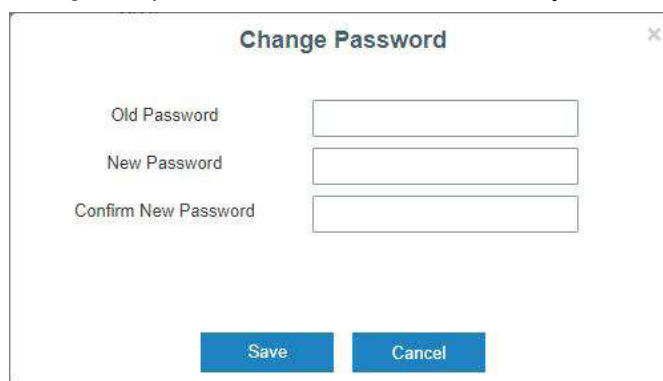
D. Enter the username, password, and click "Login".



The login page features the Milesight logo and the text "Industrial Cellular Router". It includes a language dropdown menu set to "English". Below the logo are two input fields: one for the username (with a person icon) and one for the password (with a lock icon). A blue "Login" button is positioned below the password field.

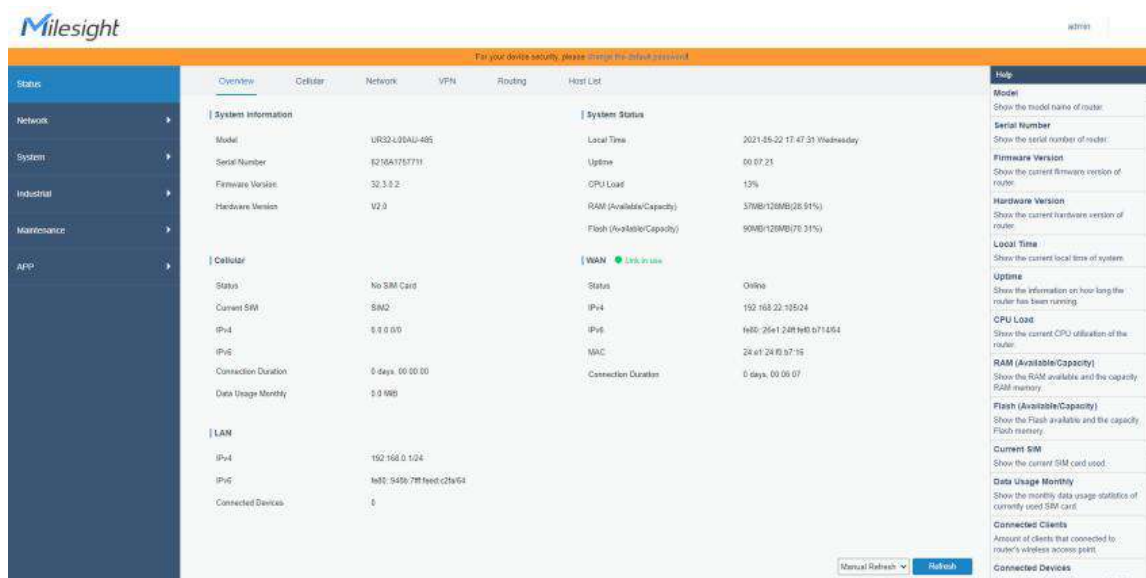
**!** If you enter the username or password incorrectly more than 5 times, the login page will be locked for 10 minutes.

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.



The "Change Password" dialog box contains three input fields: "Old Password", "New Password", and "Confirm New Password". At the bottom, there are two buttons: "Save" and "Cancel".

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



The Web GUI dashboard displays system information and status. The left sidebar shows navigation options: Status, Network, System, Industrial, Maintenance, and APP. The main content area is divided into two columns: System Information and System Status. The right sidebar provides a Help section with links to various system parameters.

System Information	System Status
Model: UR32-L00AU-485	Local Time: 2021-05-22 17:47:31 Wednesday
Serial Number: R216A1757731	Uptime: 00:07:23
Firmware Version: 32.3.0.2	CPU Load: 13%
Hardware Version: V2.0	RAM (Available/Capacity): 37MB/128MB(28.91%)
	Flash (Available/Capacity): 90MB/128MB(70.31%)
Cellular	WAN: <span style="color: green;">●</span> 3G/LTE
Status: No SIM Card	Status: Online
Current SIM: SIM2	IPV4: 192.168.22.13524
IPv4: 6.9.0.0	IPv6: fd01:2541:24ff:fe6b:b71454
IPv6: 24:41:24:ff:fe6b:b71454	MAC: 24:41:24:ff:fe6b:b71454
Connection Duration: 0 days, 00:00:00	Connection Duration: 0 days, 00:00:07
Data Usage Monthly: 0.0 MB	
LAN	
IPv4: 192.168.0.1/24	
IPv6: fd01:2541:24ff:fe6b:b71454	
Connected Devices: 0	

Help section links:

- 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.
- Flash (Available/Capacity): Show the Flash available and the capacity.
- Current SIM: Show the current SIM card used.
- Data Usage Monthly: Show the monthly data usage statistics of currently used SIM card.
- Connected Clients: Amount of clients that connected to router's wireless access point.
- Connected Devices: Amount of devices that connected to the router.

## 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 select connection type and configure WAN parameters, click “Save & Apply” button to make the changes take effect.

Enable	<input checked="" type="checkbox"/>
Port	LAN1/WAN
Connection Type	Static IP
IPv4 Address	192.168.22.225
Netmask	255.255.255.0
IPv4 Gateway	192.168.22.1
IPv6 Address	fe80::26e1:24ff:fe0:3192
Prefix-length	64
IPv6 Gateway	
MTU	1500
Primary DNS	8.8.8.8
Secondary DNS	
Enable NAT	<input checked="" type="checkbox"/>

C. Connect WAN port to another network devices like modem.

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

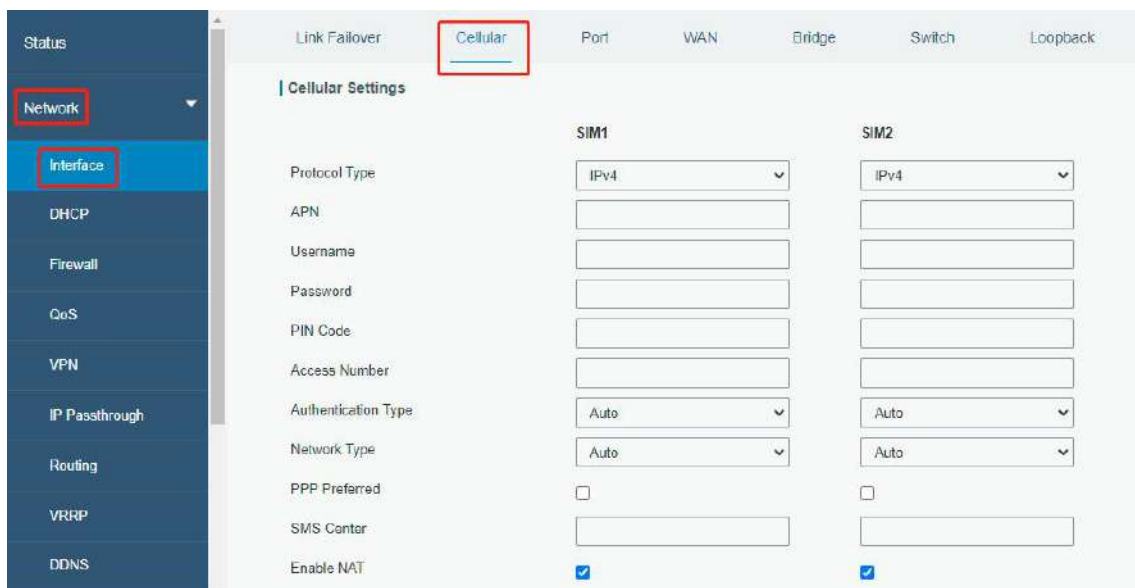
E. Open your preferred browser on PC, then type any available web address into address bar and see if it is able to visit Internet via UR32 router.



## 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.

**Ping Detection**

Enable	<input checked="" type="checkbox"/>
IPv4 Primary Server	<input type="text" value="8.8.8.8"/>
IPv4 Secondary Server	<input type="text" value="114.114.114.114"/>
IPv6 Primary Server	<input type="text" value="2001:4860:4860::8888"/>
IPv6 Secondary Server	<input type="text" value="2400:3200::1"/>
Interval	<input type="text" value="300"/> s
Retry Interval	<input type="text" value="5"/> s
Timeout	<input type="text" value="3"/> s
Max Ping Retries	<input type="text" value="3"/>

OK Cancel

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 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	861595042050250		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					
Network Type	FDD LTE		SIM-2	RX: 0.0 MiB TX: 0.0 MiB ALL: 0.0 MiB		
PLMN ID	46000					
LAC	592f					
Cell ID	271f848					

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 UR32 router.

**[END]**