



UR35

Quick Start Guide



Welcome

Thank you for choosing Milesight UR35 industrial cellular router.

This guide describes how to install the UR35 and how to log in the Web GUI to configure the device. Once you complete the installation, refer to the Milesight UR35 User Guide for instructions on how to perform configurations on the device.

Related Documents

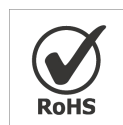
This Start Guide only explains the installation of Milesight UR35 router. For more functionality and advanced settings, please refer to the relevant documents as below.

Document	Description
UR35 Datasheet	Datasheet for UR35 industrial cellular router.
UR35 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

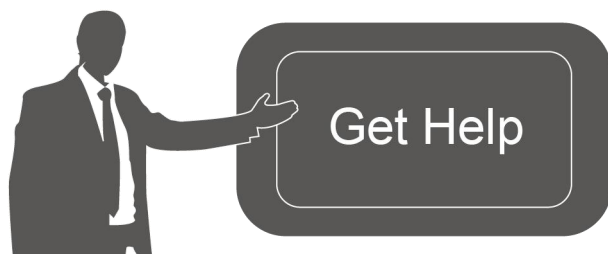
UR35 are in conformity with the essential requirements and other relevant provisions of the CE, FCC, and RoHS.



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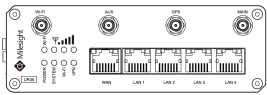
For assistance, please contact
Milesight technical support:
Email: iot.support@milesight.com
Tel: 86-592-5085280
Fax: 86-592-5023065

Revision History

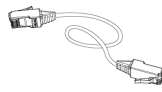
Date	Doc Version	Description
Aug. 1, 2019	V 1.0	Initial version
Feb. 11, 2020	V 1.1	1. Replace serial port picture; 2. Delete reboot descriptions of reset button
Aug. 26, 2020	V 1.2	1. Web GUI change; 2.Add -485 model
Nov. 20, 2020	V 2.0	Layout replace

1. Packing List

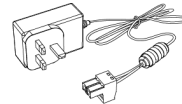
Before you begin to install the UR35 router, please check the package contents to verify that you have received the items below.



1 × UR35



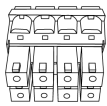
1 × Ethernet Cable



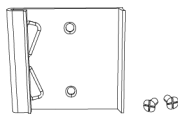
1 × Power Adapter



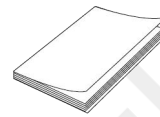
2 × Magnetic Cellular Antennas



1 × 8-Pin Pluggable Terminal



1 × DIN Rail Kit



1 × Quick Start Guide



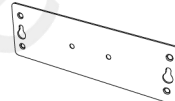
1 × Warranty Card



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



1 × GPS Antenna
(GPS Version Only)



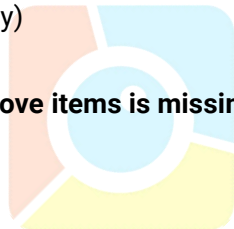
1 × Wall Mounting Bracket (Optional)



2 × Stubby Cellular Antennas (Optional)



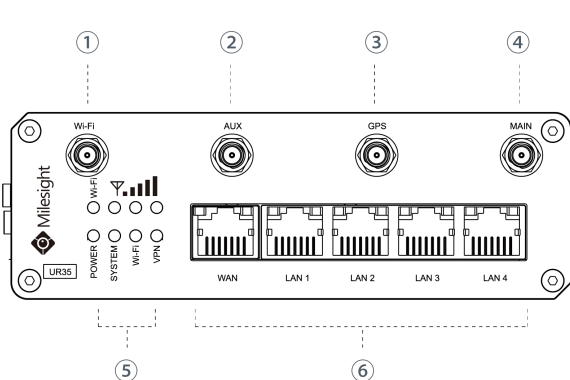
If any of the above items is missing or damaged, please contact your sales representative.



2. Hardware Introduction

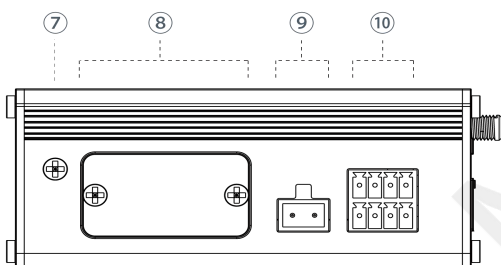
2.1 Overview

A. Front Panel



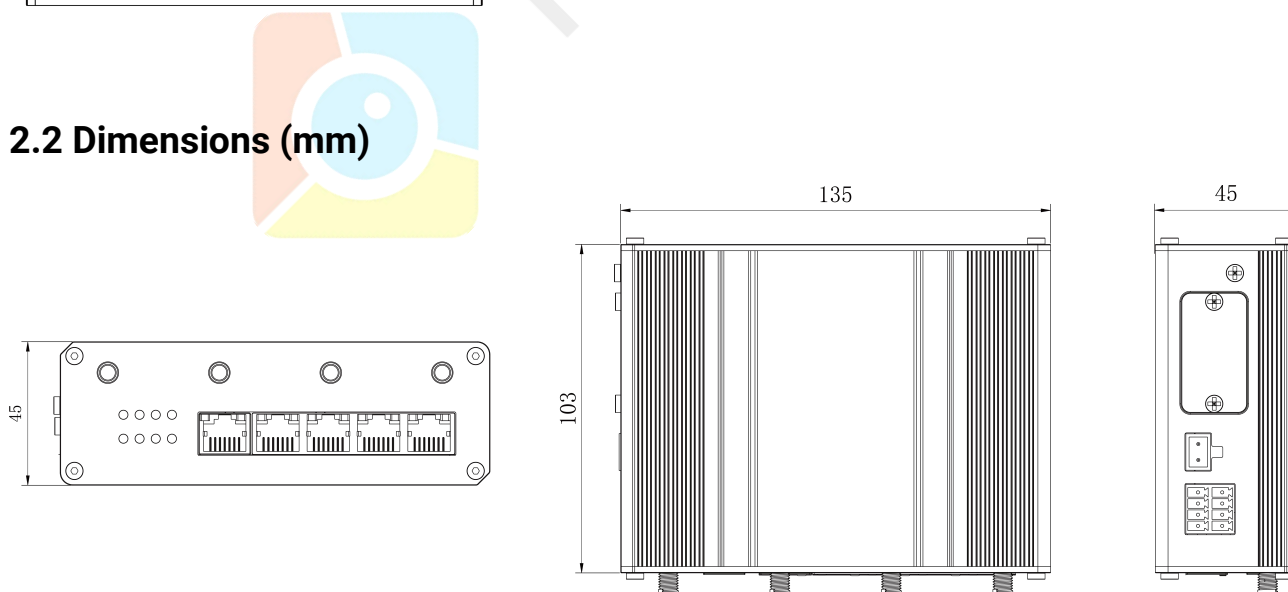
- ① Wi-Fi Antenna Connector
- ② AUX Antenna Cellular Connector
- ③ GPS Antenna Connector
- ④ MAIN Cellular Antenna Connector
- ⑤ LED Indicator Area
 POWER: Power Indicator
 SYSTEM: Status Indicator
 Wi-Fi: Wi-Fi Indicator
 VPN: VPN Indicator
 SIM : SIM Status Indicator
 ▽: Signal Strength Indicator
- ⑥ Ethernet Port & Indicator

B. Left Side Panel

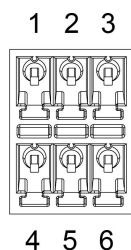


- ⑦ Grounding Stud
- ⑧ SIM and Reset Button Holder
- ⑨ Power Connector
- ⑩ Serial Port & I/O

2.2 Dimensions (mm)

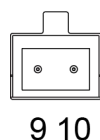


2.3 Connectors



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
9	Positive
10	Negative

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

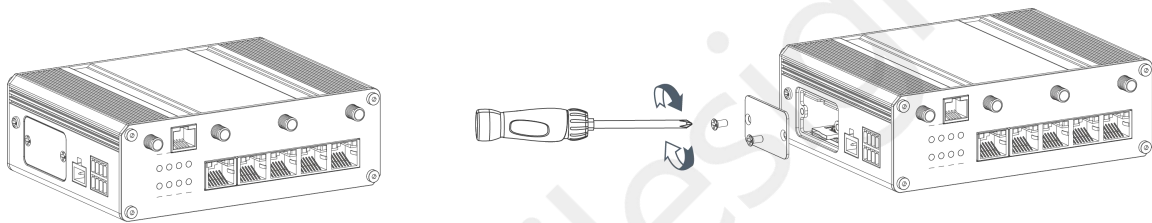
- Power Input: 9-48 VDC (48 VDC is needed for PoE output)
- Power Consumption: Typical 3.9W (Max 4.6 W)
- Operating Temperature: -40°C to 70°C (-40°F -158°F)
- Relative Humidity: 0% to 95% (non-condensing) at 25°C/77°F

3.1 SIM Card/Micro SD Card Installation

! UR35 do not support hot-plug. Please cut off the power before insert or take off cards.

A. Unscrew the cover of the SIM card/Micro SD then insert the card then take it off.

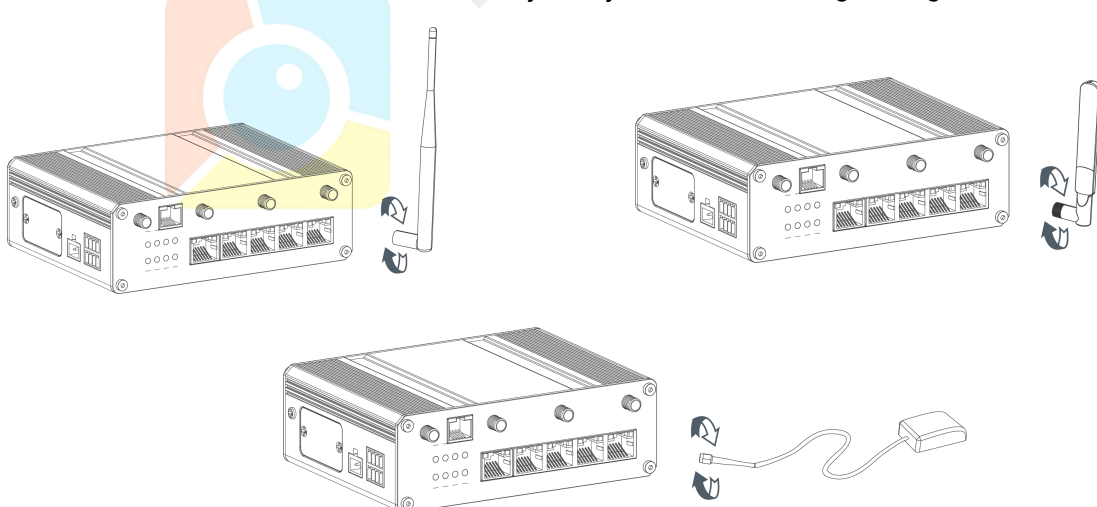
B. Put SIM card/Micro SD card into the slot and screw it up.



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.



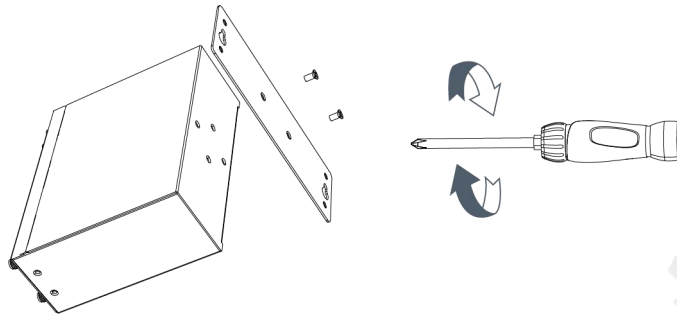
3.4 Router Installation

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

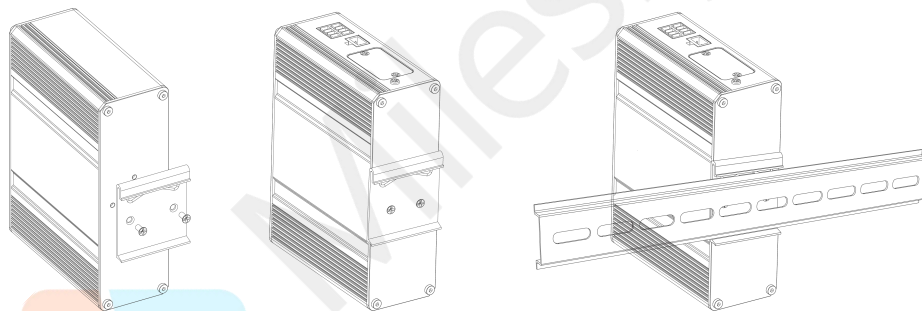
! Recommended torque for mounting is 1.0 N·m, and the maximum allowed is 1.2 N·m.



3.4.2 DIN Rail Mounting (Measured in mm)

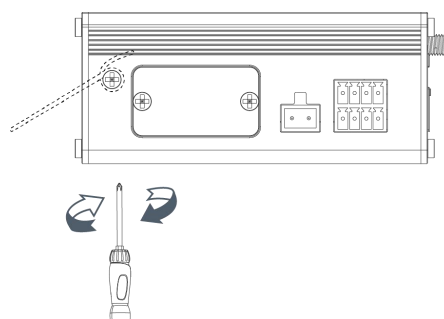
Use 2 pcs of M3 × 6 flat head Phillips screws to fix the DIN rail to the router, and then hang the DIN rail on the mounting bracket. It is necessary to choose a standard bracket.

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



3.5 Protective Grounding Installation

- A. Remove the grounding nut.
- B. Connect the grounding ring of the cabinet's grounding wire onto the grounding stud and screw up the grounding nut.



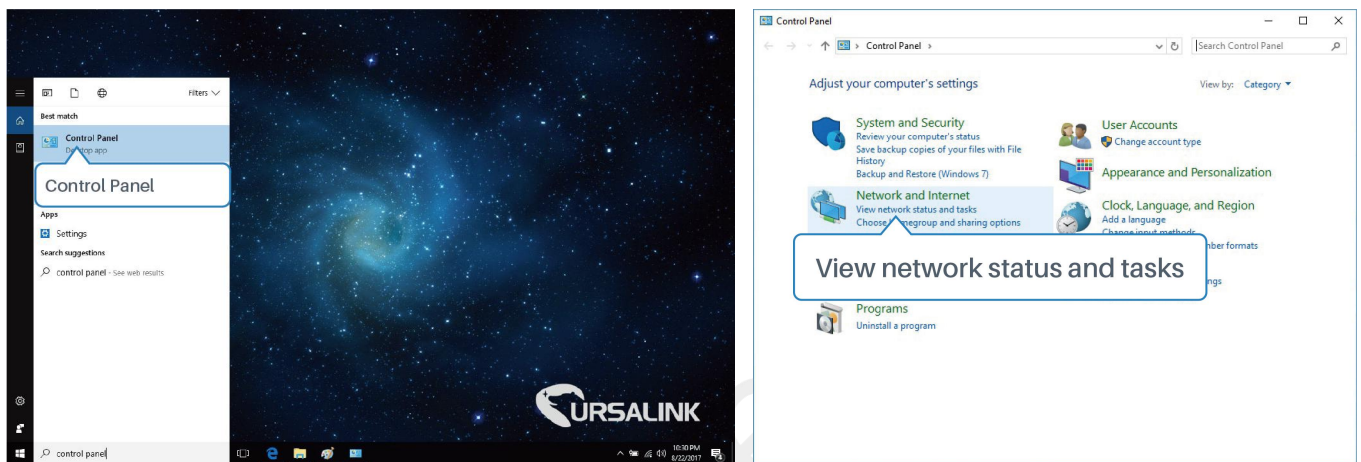
! The router must be grounded when deployed. According to operating environment, the ground wire should be connected with grounding stud of router.

4. Log in the Web GUI of Router

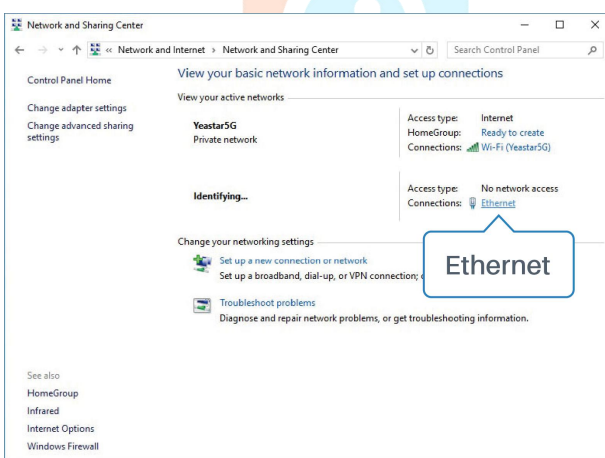
4.1 PC Configuration

Please connect PC to any port among LAN1-LAN4 of UR35 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.

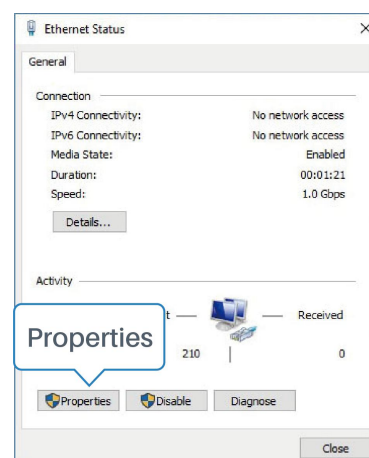
(Note: As remote access is disabled by default, you can't access to the router's Web GUI if you connect PC to WAN port of the router. But it will function properly if you enable it on Web GUI.)



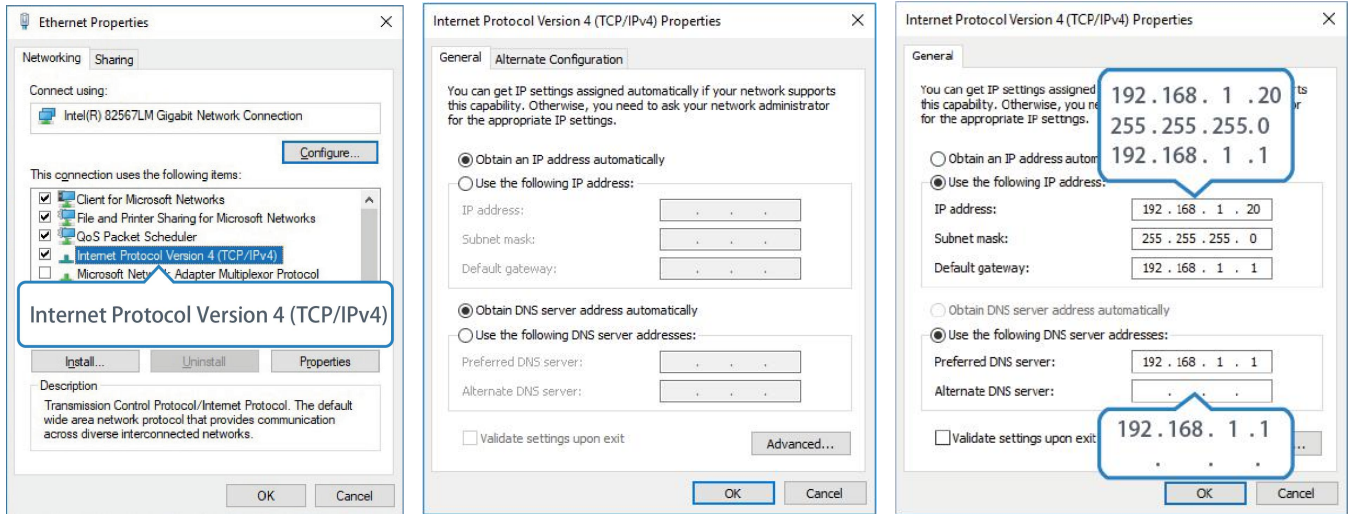
- ① Click "Search Box" to search "Control Panel" on the Windows 10 taskbar.
- ② Click "Control Panel" to open it, and then click "View network status and tasks".



- 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



! 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!

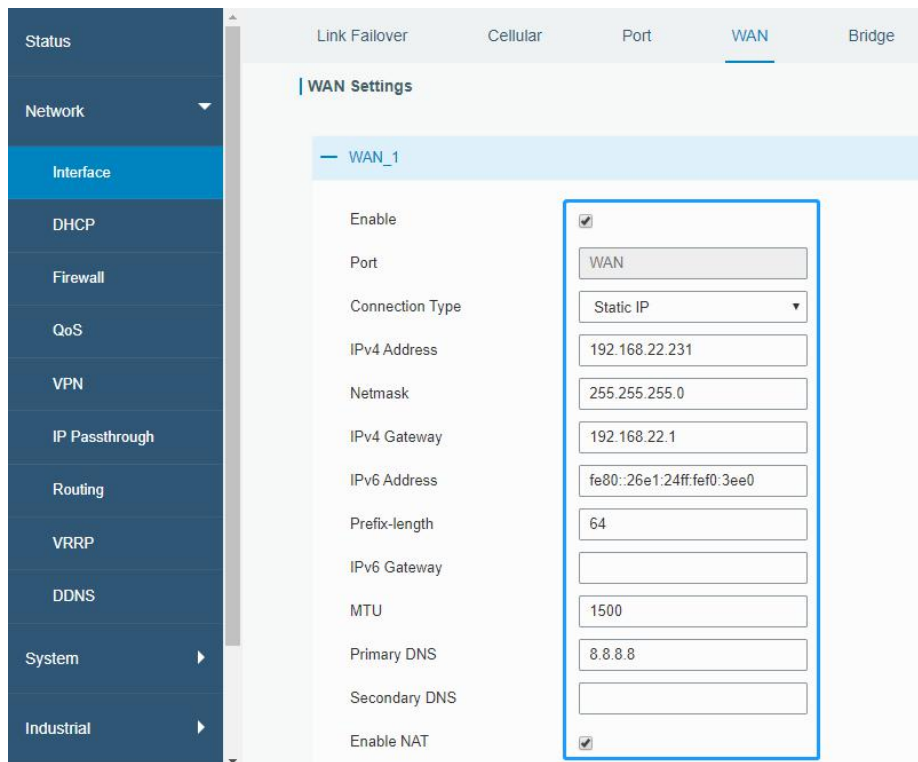
Status	Overview	Cellular	Network	WLAN	VPN	Routing	Host List	GPS	Help
Network	System Information Model: UR35-L01CE-W-G Serial Number: 621993233982 Firmware Version: 35.2.0.5 Hardware Version: V1.1		System Status Local Time: 2020-05-11 17:54:47 Monday Uptime: 17:58:31 CPU Load: 13% RAM (Available/Capacity): 24MB/128MB(18.75%) Flash (Available/Capacity): 83MB/128MB(64.84%)		Cellular Status: No SIM Card Current SIM: SIM1 IP: 0.0.0.0 Connection Duration: 0 days, 00:00:00 Data Usage Monthly: 0.0 MIB		WAN ● Link in use Status: Online IP: 192.168.22.231 MAC: 24-e1-24-10-3e-e2 Connection Duration: 0 days, 17:57:24		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)
System	WLAN Status: Disabled		LAN IP: 192.168.1.1 Connected Devices: 0 Manual Refresh Refresh						
Industrial									
Maintenance									
APP									

5. Network Configuration

This chapter explains how to connect UR35 to network via WAN connection or cellular.

5.1 Ethernet WAN Configuration

A. 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.



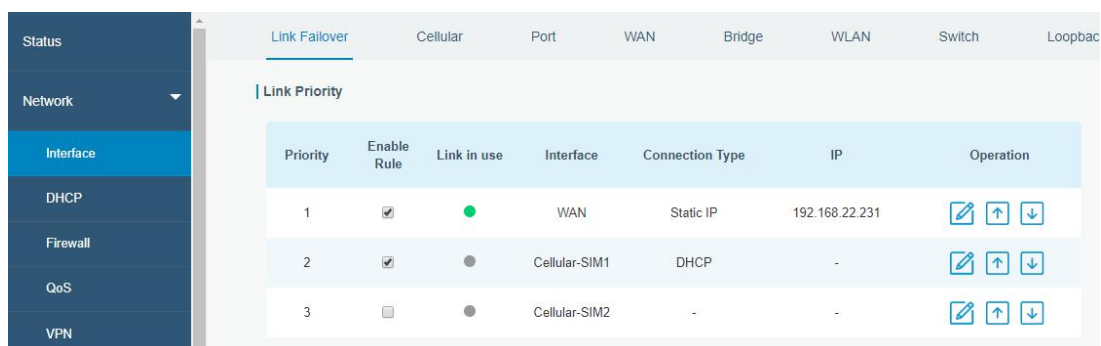
Click “Save & Apply” button to make the changes take effect.

B. Connect WAN port to another router or modem.

C. Log in UR35 web GUI via WAN port IP address and go to “Status > Network” to check if status is “up”.



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 UR35 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.

The screenshot shows the 'Cellular Settings' page in the UR35 web interface. The left sidebar is expanded to 'Interface'. The main content area is titled 'Cellular Settings' and is divided into two columns for SIM1 and SIM2. The settings include:

Setting	SIM1	SIM2
APN	<input type="text"/>	<input type="text"/>
Username	<input type="text"/>	<input type="text"/>
Password	<input type="text"/>	<input type="text"/>
PIN Code	<input type="text"/>	<input type="text"/>
Access Number	<input type="text"/>	<input type="text"/>
Authentication Type	Auto	Auto
Network Type	Auto	Auto
PPP Preferred	<input type="checkbox"/>	<input type="checkbox"/>
SMS Center	+8613800592500	+8613800592500
Enable NAT	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Roaming	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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.

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

The screenshot shows the 'Link Priority' page in the UR35 web interface. The left sidebar is expanded to 'Interface'. The main content area is titled 'Link Priority' and contains a table with the following data:

Priority	Enable Rule	Link in use	Interface	Connection Type	IP	Operation
1	<input checked="" type="checkbox"/>	●	Cellular-SIM1	-	-	
2	<input checked="" type="checkbox"/>	●	Cellular-SIM2	DHCP	-	
3	<input checked="" type="checkbox"/>	●	WAN	Static IP	192.168.22.225	

- Click to configure ICMP ping detection information.

Ping Detection

Enable

Primary Server (IPv4)

Secondary Server (IPv4)

Interval s

Retry Interval s

Timeout s

Max Ping Retries

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 UR35 router.

[END]