

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

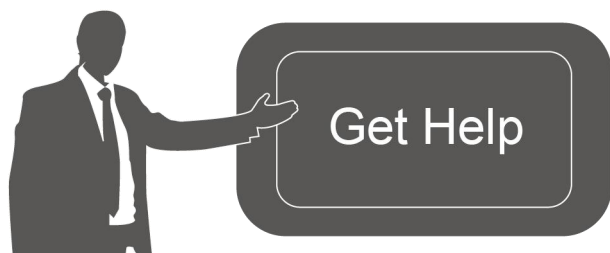
UR32 are in conformity with the essential requirements and other relevant provisions of the CE, FCC, and RoHS.



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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

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1. Packing List

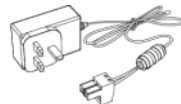
Before you begin to install the UR32 router, please check the package contents to verify that you have received the items below.



1 × UR32



1 × Ethernet Cable



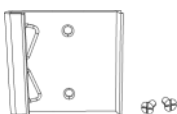
1 × Power Adapter



2 × Magnetic Cellular
Antennas



1 × 6-Pin Pluggable
Terminal



1 × DIN Rail Kit



4 × Wall Mounting
Kits



1 × Warranty Card



1 × Quick Start Guide



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



1 × GPS Antenna
(GPS Version Only)



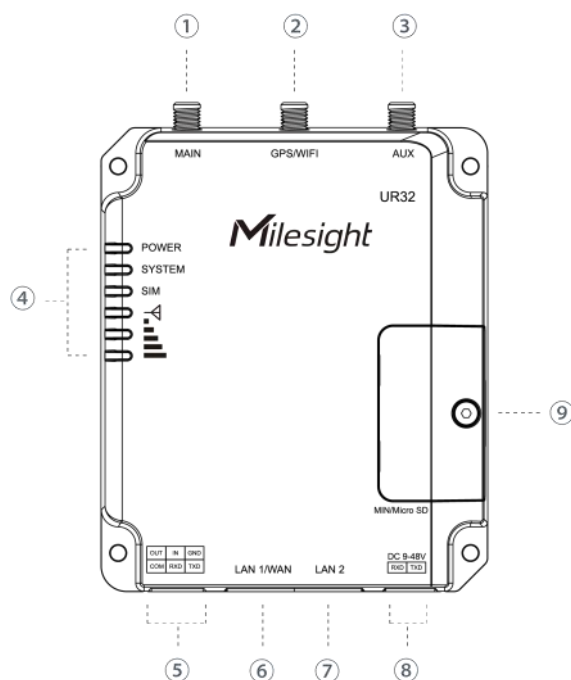
2 × Stubby Cellular
Antennas (Optional)



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

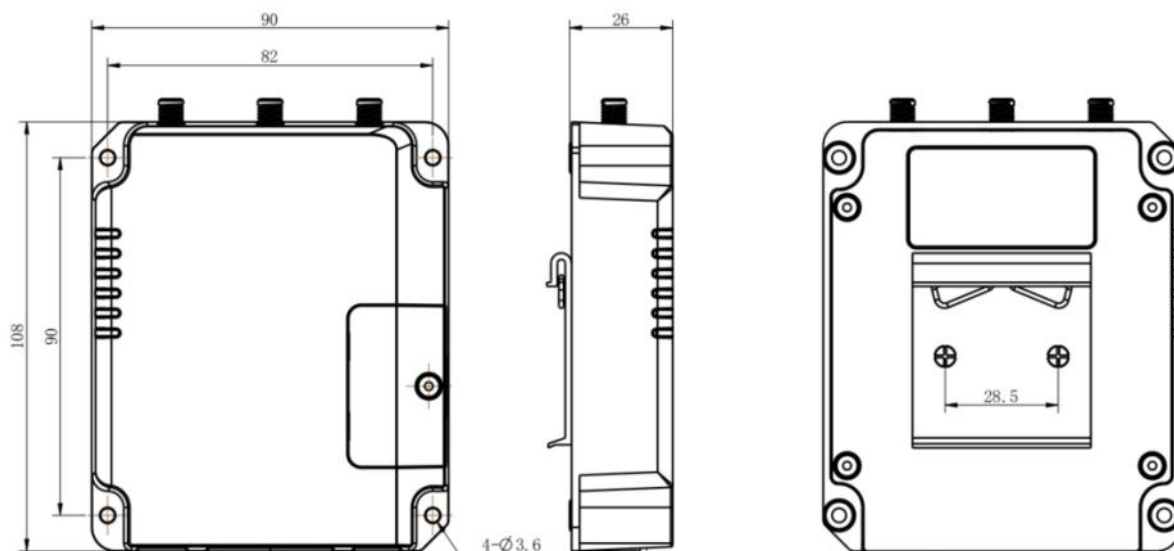
2. Hardware Introduction

2.1 Overview

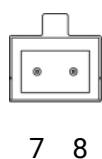
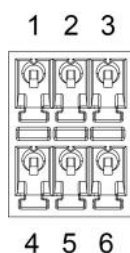


- ① Main Cellular Antenna Connector
- ② GPS/WIFI Antenna Connector
- ③ AUX Cellular Antenna
- ④ LED Indicator Area
POWER: Power Indicator
SYSTEM: Status Indicator
SIM : Status Indicator
📶: Signal Strength Indicator
- ⑤ Serial Port & I/O
- ⑥ Ethernet LAN1/WAN Port
- ⑦ Ethernet LAN2 Port
- ⑧ Power Connector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

2.2 Dimensions (mm)



2.3 Serial & IO & Power Pinouts



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

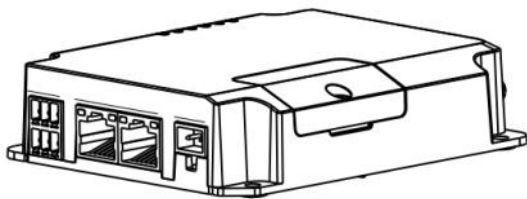
3. Hardware Installation

Environmental Requirements

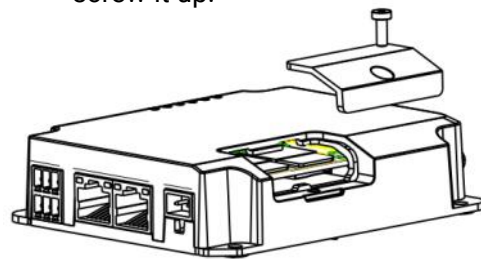
- Power Input: 9-48 VDC (48 VDC is needed for PoE output)
- Power Consumption: Typical 1.9W (Max 2.4 W)
- Operating Temperature: -40°C to 70°C (-40°F -158°F)
- Relative Humidity: 0% to 95% (non-condensing) at 25°C/77°F

3.1 SIM Card/Micro SD Card Installation

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



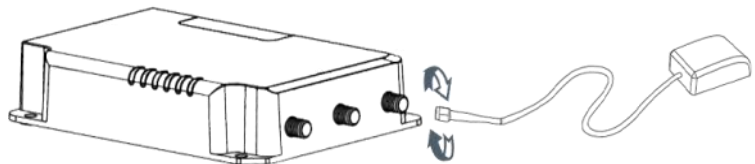
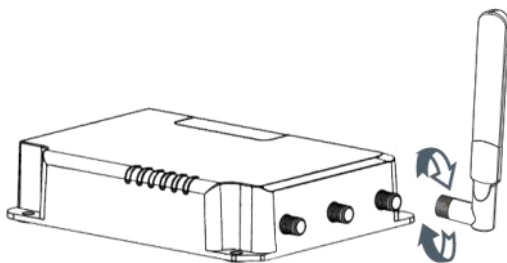
B. Put SIM card/Micro SD into the slot and screw it up.



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

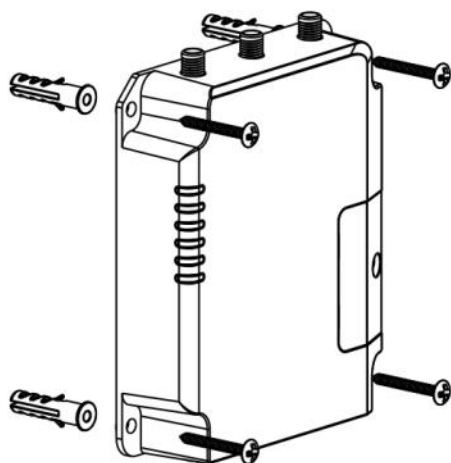
The router can be placed on a desktop or mounted to a wall or a DIN rail.

3.3.1 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.

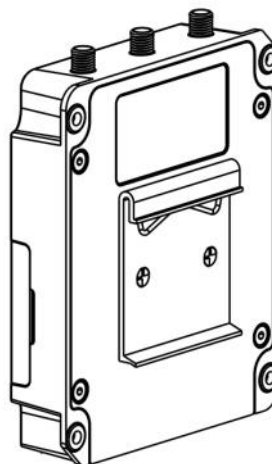
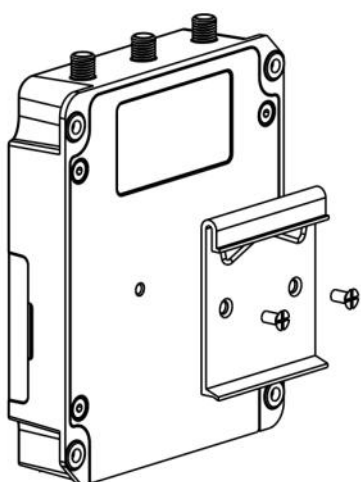


3.3.2 DIN Rail Mounting (Measured in mm)

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 3.5cm.



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

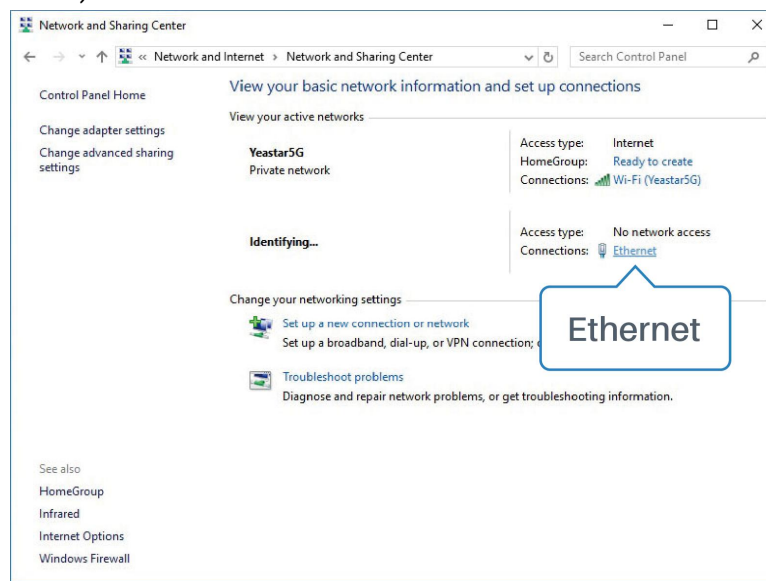
Please connect PC to LAN port of UR32 router. PC can obtain an IP address, or you can configure a static IP address manually. The following steps are based on Windows 10 operating system for your reference.

IP Address: **192.168.1.1**

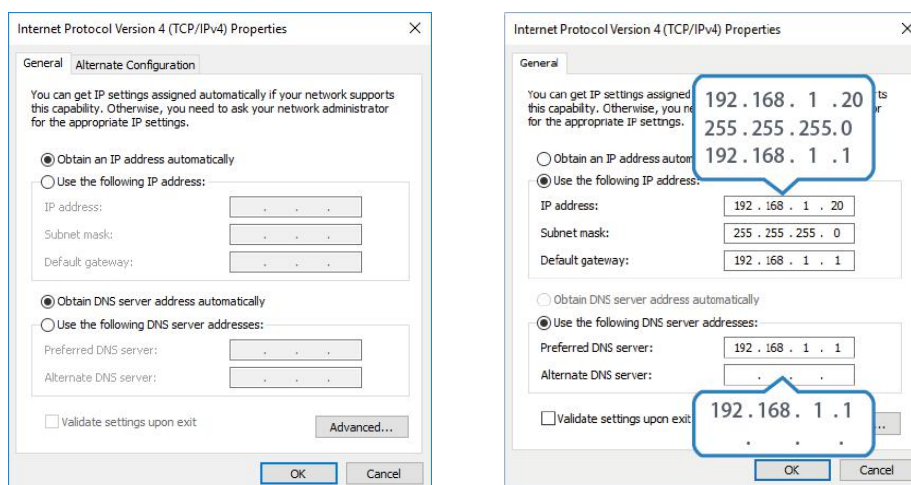
Username: **admin**

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, and press Enter on your keyboard.

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

English

Milesight

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.

Change Password

Old Password

New Password

Confirm New Password

Save

Cancel

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

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ADMIN

For your device security, please change the default password

Status

Overview

Cellular

Network

VPN

Routing

Host List

Help

Network

System

Industrial

Maintenance

App

System Information

Model

Serial Number

Firmware Version

Hardware Version

System Status

Local Time

Uptime

CPU Load

RAM (Available/Capacity)

Flash (Available/Capacity)

Cellular

Status

Current SIM

IPv4

IPv6

Connection Duration

Data Usage Monthly

LAN

IPv4

IPv6

Connected Devices

Model

Serial Number

Firmware Version

Hardware Version

Local Time

Uptime

CPU Load

RAM (Available/Capacity)

Flash (Available/Capacity)

Current SIM

Data Usage Monthly

Connected Clients

Connected Devices

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

Save

B. Go to “Network > Interface > WAN” to select connection type and configure WAN parameters, click “Save & Apply” button to make the changes take effect.

WAN_1

Enable ☒

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 ☒

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.

Status	Link Failover	Cellular	Port	WAN	Bridge	Switch	Loopback
Network	Link Priority						
Interface	Priority	Enable Rule	Link in use	Interface	Connection Type	IP	Operation
DHCP	1	☒	●	WAN	Static IP	192.168.22.225	
Firewall	2	☒	●	Cellular-SIM1	DHCP	-	
QoS	3	☒	●	Cellular-SIM2	-	-	
VPN							

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.

Status	Link Failover	Cellular	Port	WAN	Bridge	Switch	Loopback
Network	Cellular Settings						
Interface			SIM1	SIM2			
DHCP	Protocol Type		IPv4	IPv4			
Firewall	APN						
QoS	Username						
VPN	Password						
IP Passthrough	PIN Code						
Routing	Access Number						
VRRP	Authentication Type		Auto	Auto			
DDNS	Network Type		Auto	Auto			
	PPP Preferred	☐		☐			
	SMS Center						
	Enable NAT	☒		☒			

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

Status	Link Failover	Cellular	Port	WAN	Bridge	Switch	Loopback
Network	Link Priority						
Interface	Priority	Enable Rule	Link in use	Interface	Connection Type	IP	Operation
DHCP	1	☒	●	Cellular-SIM1	-	-	
Firewall	2	☒	●	Cellular-SIM2	DHCP	-	
QoS	3	☒	●	WAN	Static IP	192.168.22.225	
VPN							

C. Click to configure ICMP ping detection information.

Ping Detection

Enable	☒
IPv4 Primary Server	8.8.8.8
IPv4 Secondary Server	114.114.114.114
IPv6 Primary Server	2001:4860:4860::8888
IPv6 Secondary Server	2400:3200::1
Interval	300 s
Retry Interval	5 s
Timeout	3 s
Max Ping Retries	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	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					

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]