

## **UR32**

## Quick Start Guide

O Allesight



#### 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.



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 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	В			Receive Data
	6	TXD	Α			Transmit Data



1 2

4 5

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
POWER	Power Status	On	The power is switched on
		Croop Light	Static: Start-up
SYSTEM	System Status	Green Light	Blinking slowly: the system is running properly
		Red Light	The system goes wrong
		Off	SIM1 or SIM2 is registering or fails to register (or there
			are no SIM cards inserted)
			Blinking slowly: SIM1 has been registered and is ready
			for dial-up
		Green Light	Blinking rapidly: SIM1 has been registered and is
			dialing up now
SIM	SIM Card Status		Static: SIM1 has been registered and dialed up
		successfully	
			Blinking slowly: SIM2 has been registered and is ready
			for dial-up
		Orange	Blinking rapidly: SIM2 has been registered and is
		Light	dialing up now
			Static: SIM2 has been registered and dialed up
			successfully
		Off	No signal
Signal	Signal 1/2/3		Static/Off/Off: weak signals with 1-10 ASU (please
Strength		Green Light	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	
Blinking	Blinking	Press and hold the reset button for more than 5 seconds.	
Reset	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	
	On	Connected	
Link Indicator (Orange)	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  $\times$  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.)



- 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".



Ethernet Properties ×	Internet Protocol Version 4 (TCP/IPv4) Properties X	Internet Protocol Version 4 (TCP/IPv4) Properties
Networking Sharing	General Alternate Configuration	General
Connect using:	You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.	You can get IP settings assigned this capability. Otherwise, you no for the appropriate IP settings. 192.168.1.20
Configure	Obtain an IP address automatically	○ Obtain an IP address autor 192.168.1.1
This connection uses the following items:	O Use the following IP address:	Use the following IP address:
Client for Microsoft Networks     File and Printer Sharing for Microsoft Networks	IP address:	IP address: 192.168.1.20
Pile and Printer Sharing for Microsoft Networks QoS Packet Scheduler	Subnet mask:	Subnet mask: 255 , 255 , 255 , 0
✓ Internet Protocol Version 4 (TCP/IPv4)		Default gateway: 192.168.1.1
Microsoft Nety Adapter Multiplexor Protocol	Default gateway:	152,105, 1, 1
Internet Protocol Version 4 (TCP/IPv4)	Obtain DNS server address automatically	Obtain DNS server address automatically
	O Use the following DNS server addresses:	O Use the following DNS server addresses:
Install Uninstall Properties	Preferred DNS server:	Preferred DNS server: 192.168.1.1
Description Transmission Control Protocol/Internet Protocol. The default	Alternate DNS server:	Alternate DNS server:
wide area network protocol that provides communication across diverse interconnected networks.	Validate settings upon exit Advanced	□Validate settings upon exit 192.168.1.1
	OK Cancel	OK Can

(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";

		• ]
	ОК	Can
Method 2: click "	Use the	
following IP addr	ess" to as	sign
a static IP manua	ally within t	the
same subnet of t	he router.	

(II) English

(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".

	Milesight
*	Usemame
8	Password
	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 cl	hange the default	passwordl			
Status	Overview	Cellular	Network V	VPN R	Routing	Host List	GPS	Help	-
Guius					-			Model	
Network	System Information	on		S	ystem Status			Show the model n	ame of router.
System	Model	UR32-L			.ocal Time		2020-04-30 14:40:08 Thursday	Serial Number Show the serial nu router.	mber of
System	Serial Number	6218924	450159	U	Jptime		00:03:41	Firmware Versio	'n
Industrial	Firmware Version	32.2.0.5		С	CPU Load		9%	Show the current f version of router.	irmware
	Hardware Version	V1.1		R	RAM (Available/Ca	pacity)	39MB/128MB(30.47%)	Hardware Versio	n
Maintenance				F	Flash (Available/C	apacity)	91MB/128MB(71.09%)	Show the current h version of router.	ardware
APP	Cellular			l w	VAN 🔍 Link in (	ISB		Local Time Show the current I	ocal time of
	Status	No SIM	Card	S	Status		Online	system.	
	Current SIM	SIM2		IF	P		192.168.22.225	Uptime Show the informat	on on how
	IP	0.0.0.0		М	/IAC		24:e1:24:f0:31:94	long the router has running.	
	Connection Duration	n O days,	00:00:00	С	Connection Durati	n	0 days, 00:02:34	CPU Load	
	Data Usage Monthly	0.0 MiB						Show the current o utilization of the ro	
	LAN							RAM (Available/ Show the RAM av- the capacity RAM	ailable and
	IP Connected Devices	192.168 0	.0.1					Flash (Available Show the Flash av the capacity Flash	ailable and
							Manual Refresh  Refresh	Current SIM	Lourronthi

#### 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.

Status	Link Failover	Cellular	Port	WAN	Bridge	WLAN	Switch	Loopback
Network 🔻	Port Setting							
		Port	Status	Propert	ty	Speed	Duplex	
Interface		LAN2	up 🗸	lan	~	auto 🗸	auto 🗸	
DHCP		LAN1/WAN	up 🗸	wan	•	auto 🗸	auto 🗸	
Firewall	Save							
QoS								

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.

Status	Link Failover	Cellular	Port	WAN	Bridge	Switch
Network 👻	— WAN_1					
Interface	Enable	ſ			Ĩ	
DHCP	Port		LAN1/WAN			
Firewall	Connection Type	e	Static IP	•		
QoS	IPv4 Address		192.168.22.225			
VPN	Netmask IPv4 Gateway		255.255.255.0			
IP Passthrough	IPv6 Address		fe80::26e1:24ff:fe	ef0:3192		
Routing	Prefix-length		64			
VRRP	IPv6 Gateway					
DDNS	MTU		1500			
	Primary DNS		8.8.8.8			
System 🕨	Secondary DNS	6				
	Enable NAT		•			

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".

Status		Overview	С	ellular	Network	VPN	Routing	Host List		GPS
Network	×.	WAN-IPv4								
		Port	Status	Туре	IP	Netmask		Gateway	DNS	Connection Durati
System		LAN1/WAN	up	Static	192.168.22.225	255.255.255.0	)	192.168.22.1	8.8.8.8	08h 22m 29s
	100									

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Status	Link Failover	Ce	llular	Port	WAN B	ridge Switch	Loopback
Network 👻	Link Priority						
Interface	Priority	Enable Rule	Link in use	Interface	Connection Ty	pe IP	Operation
DHCP	1		•	WAN	Static IP	192.168.22.225	
Firewall	2		٠	Cellular-SIM1	DHCP	2	
QoS VPN	3			Cellular-SIM2		2	

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

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. A. Click "Network > Interface > Cellular > Cellular Setting" to configure the cellular info, like APN and network type.

B. Click "Save" and "Apply" for configuration to take effect.

Status	Link Failover	Cellular	Port	WAN	Bridge	Switch	Loopback
	Cellular Settings						
Network			SIM1			SIM2	
Interface	APN						
DHCP	Username						
	Password						
Firewall	PIN Code						
QoS	Access Number						
VPN	Authentication Type		Auto		•	Auto	¥
IP Passthrough	Network Type		Auto		¥	Auto	¥
	PPP Preferred						
Routing	SMS Center		+86138005	592500		+8613800592500	
VRRP	Enable NAT						
DDNS	Roaming						
	Data Limit		0		MB	0	MB
System 🕨	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.

Status	Link Failover	C	Cellular	Port	WAN	Bridge	Switch	Loopback
Network 🔫	Link Priority							
Interface	Priority	Enable Rule	Link in use	Interface	Connection	Туре	IP	Operation
DHCP	1	<b>X</b>		Cellular-SIM1			u.	
Firewall	2			Cellular-SIM2	DHCP		0	
QoS	3			WAN	Static If	Þ	192.168.22.225	
VPN								

D. Click  $\square$  to configure ICMP ping detection information.

Enable			
Primary Server (IPv4)	8.8.8.8		
Secondary Server (IPv4)	114.114.114		
Interval	300	s	
Retry Interval	5	s	
Timeout	3	s	
Max Ping Retries	3		
	10. <del>1</del>		

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
M	lodem			Net	twork		
S	itatus	Ready		Sta	itus	Connected	
M	lodel	EC25		IP /	Address	10.2.25.74	
С	Current SIM	SIM1		Net	tmask	255.255.255	.240
S	ignal Level	29asu (·	-55dBm)	Ga	teway	10.2.25.73	
R	legister Status	Registe	red (Home network)	DN	s	211.136.17.1	07
IN	MEI	861585	042050250	Cor	nnection Duration	0 days, 00:00	0:34
IN	MSI	460045	927703654	Dat	ta Usage Monthly		
IC	CCID	898604	39101880723654	•			
15	SP	CHINA	MOBILE	SIN	A-1	RX: 0.0 MiB MiB	TX: 0.0 MiB ALL: 0.0
N	letwork Type	FDD LT	E	SIN	N-2	RX: 0.0 MiB	TX: 0.0 MiB ALL: 0.0
P	LMN ID	46000				MiB	
L	AC	592f					
С	ell ID	271f848	3				

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.

