

UR72 & UR75 Industrial Cellular Router Quick Start Guide



Ursalink Technology Co., Ltd.

Welcome

Thank you for choosing Ursalink UR72/UR75 industrial cellular router.

This guide describes how to install the UR72/UR75 and how to log in the Web GUI to configure the device. Once you complete the installation, refer to the Ursalink UR72/UR75 User Guide for instructions on how to perform configurations on the device.

Related Documents

This Start Guide only explains the installation of Ursalink UR72 & UR75 router. For more functionality and advanced settings, please refer to the relevant documents as below.

Document	Description
Ursalink UR72/UR75 Datasheet	Datasheet for the Ursalink UR72/UR75 industrial cellular router.
	Users could refer to the guide for instruction on how to log in the
Ursalink UR72/UR75 User Guide	web GUI, and how to configure all the settings.

The related documents are available on Ursalink website: <u>http://www.ursalink.com</u>.

Declaration of Conformity

UR72 & UR75 are in conformity with the essential requirements and other relevant provisions of the CE, FCC, and RoHS.





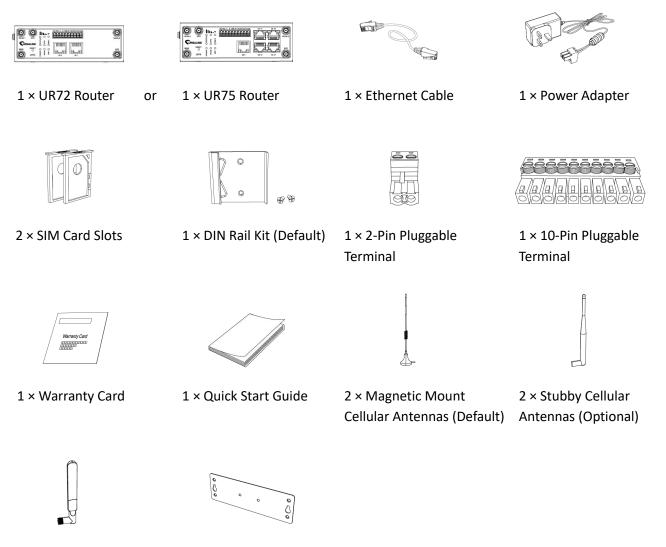
For assistance, please contact Ursalink technical support: Email: support@ursalink.com Tel: 86-592-5023060 Fax: 86-592-5023065



1. Packing List

Before you begin to install the UR72/UR75 router, please check the package contents to verify that you have received the items below.

1.1 Package Contents



2 × Stubby Wi-Fi Antennas (Optional)

1 × Wall Mounting Bracket (Optional)

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

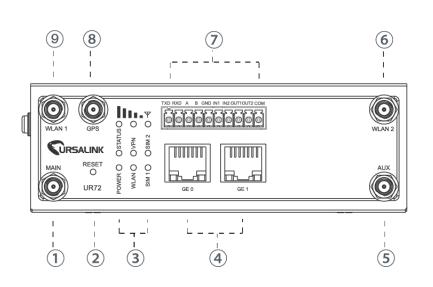


2. Hardware Introduction

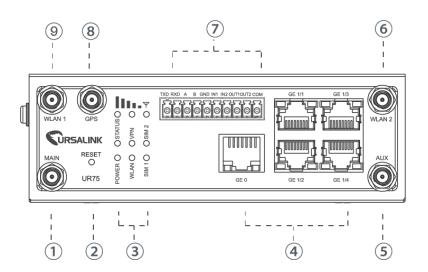
2.1 Overview

A. Front Panel

UR72 Front Panel



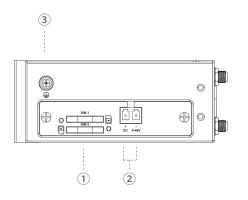
UR75 Front Panel



- ① Main Cellular Antenna Connector
- ② Reset Button
- ③ LED Indicator Area
 POWER: Power Indicator
 STATUS: Status Indicator
 WLAN: Wi-Fi Indicator
 VPN: VPN Indicator
 SIM 1: SIM 1 Status Indicator
 SIM 2: SIM 2 Status Indicator
 ▼: Signal Strength Indicator
- Ethernet Port Indicator
 Orange for data transmission;
 Green for network rate
- 5 AUX Cellular Antenna
- 6 WLAN 2: Wi-Fi Antenna Connector 2
- ⑦ Serial Port & I/O
- (8) GPS: GPS Antenna Connector
- (9) WLAN 1: Wi-Fi Antenna Connector 1
- ① Main Cellular Antenna Connector
- 2 Reset Button
- ③ LED Indicator Area
 POWER: Power Indicator
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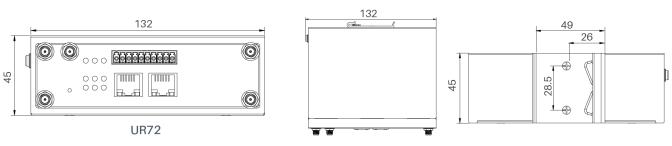


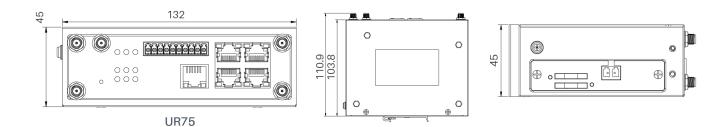
B. Left Side Panel



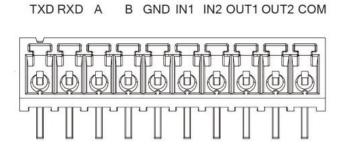
- ① SIM Card Slot
- ② Power Connector
- ③ Grounding Stud

2.2 Dimensions (mm)





2.3 Pinouts



PIN	RS232	RS485	DI	DO	Description
1	TXD				Transmit Data
2	RXD				Receive Data
3		А			Data +
4		В			Data -
5	GND		GND		Ground
6			IN1		Digital Input1
7			IN2		Digital Input2
8				OUT1	Digital Output1
9				OUT2	Digital Output2
10				СОМ	Common Ground



V+	V-	
۲ ٥	0	

PIN	Description
11	Positive
12	Negative

2.4 LED Indicators

LED	Indication	Status	Description			
	Devuer Status	On	The power is switched on			
POWER	Power Status	Off	The power is switched off			
		Croop Light	Static: Start-up			
STATUS	System Status	Green Light	Blinking slowly: the system is running properly			
		Red Light	The system goes wrong			
		Green Light	VPN is connected			
VPN	VPN Status	Off	VPN is disconnected			
		Creen Linht	Static: Wi-Fi is enabled			
WLAN (Wi-Fi)	WLAN Status	Green LightStatic: Start-up Blinking slowly: the Blinking slowly: the Blinking slowly: the OffGreen LightThe system goes with The system goes with OffGreen LightVPN is connected VPN is disconnected Blinking slowly: sen Blinking slowly: sen OffOffWPN is disconnected Static: Wi-Fi is enabled Blinking slowly: sen there are no SIM ca Blinking slowly: Slip and is ready for dia Blinking rapidly: Slip and is dialing up no Static: SIM1 or SIM2SGreen LightBlinking rapidly: Slip and is dialing up no Static: SIM1 or SIM2OffNo signalOffNo signal	Blinking slowly: sending or receiving data via Wi-Fi			
		Off	Wi-Fi is disabled			
		0#	SIM1 or SIM2 is registering or fails to register (or			
		Off	there are no SIM cards inserted)			
			Blinking slowly: SIM1 or SIM2 has been registered			
SIM1/SIM2	SIM Card Status		and is ready for dial-up			
311011/311012	Silvi Caru Status	Groop Light	Blinking rapidly: SIM1 or SIM2 has been registered			
		Green Light	and is dialing up now			
			Static: SIM1 or SIM2 has been registered and dialed			
			up successfully			
		Off	No signal			
			Static/Off/Off: weak signals with 1-10 ASU (please			
			check if the antenna is installed correctly, or move the			
Signal Strength	Signal 1/2/2		antenna to a suitable location to get better signal)			
Signal Strength	Signal 1/2/3	Green Light	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

Function	Description				
Function	STATUS LED	Action			
Doboot	Blinking	Press and hold the reset button for about 5-15 seconds.			
Reboot	Static Green	Release the button and wait for system to reboot.			
	Blinking	Press and hold the reset button for more than 15 seconds.			
Deest	Static Green \rightarrow	Release the button and wait.			
Reset	Rapidly Blinking				
	$Off \rightarrow Blinking$	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	
Rate	On	1000 Mbps mode	
Indicator (Green)	Off	100 Mbps mode	



3. Hardware Installation

Environmental Requirements

- Power Input: 9-48 VDC
- Power Consumption: Typical 3.3W (Max 5.8 W) for UR72
 - Typical 4.0 W (Max 6.7 W) for UR75
- 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/SSD Installation

3.1.1 SIM Card Installation

A. Push the yellow button on the left panel of the slot router, and then you will see the SIM card slot popping out directly.

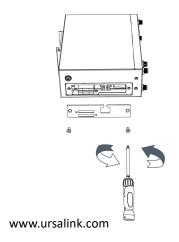
B. Put SIM card onto the slot then insert the back into the hole.





3.1.2 Micro SD Card Installation

A. Unscrew the cover on the left panel of the router and then take it off.

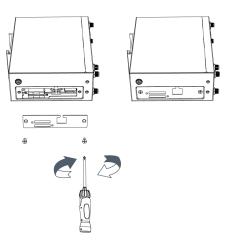


B. Insert Micro SD card.





C. Close the cover and screw it back to the router.

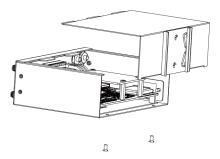


3.1.3 SSD Installation

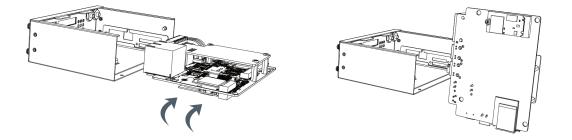


Before installing SSD, please turn off the power.

A. Unscrew the enclosure, and then remove the cover.

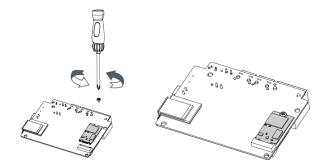


B. Unscrew the main-board, find the interface on the rear side of the main-board and then insert SSD.





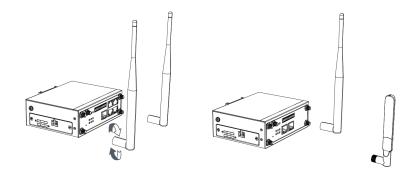
C. Screw the main-board on the cabinet and close the cover.



3.2 Antenna Installation

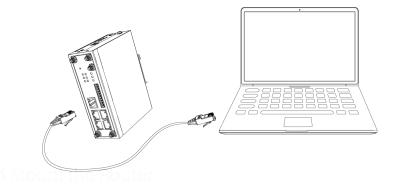
Rotate the antenna into the antenna connector accordingly.

The external antenna should be installed vertically always on a site with a good cellular signal.



3.3 Connect the Router to a Computer

Please connect PC to any port among GE 1/1-GE 1/4 of UR75 router, or to GE 1 of UR72 router directly.



3.4 Mount the Router

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

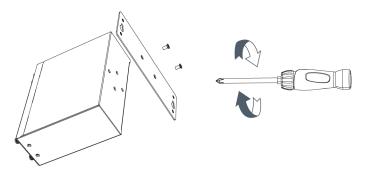


3.4.1 Wall Mounting (Measured in mm)

Use 2 pcs of $M3 \times 6$ 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.



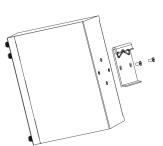
Recommended torque for mounting is 1.0 N·m, and the maximum allowed is 1.2 N·m.

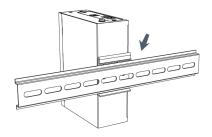


3.4.2 DIN Rail Mounting (Measured in mm)

Use 2 pcs of M3 \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.

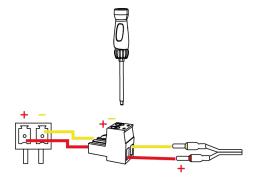
Recommended torque for mounting is 1.0 N·m, and the maximum allowed is 1.2 N·m.





3.5 Power Supply Installation

- A. Take out the terminal from the router and unscrew the bolt on terminal.
- B. Screw down the bolt after inserting power cable into the terminal.



Connecting the Power Cable

Color	Polarity
Red	+
Yellow	-

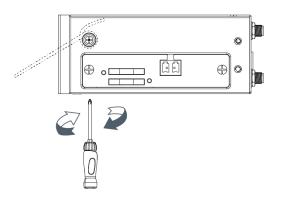
If you insert wires into the reverse holes, the router will not start and you must switch the wires into the correct holes.



3.6 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.

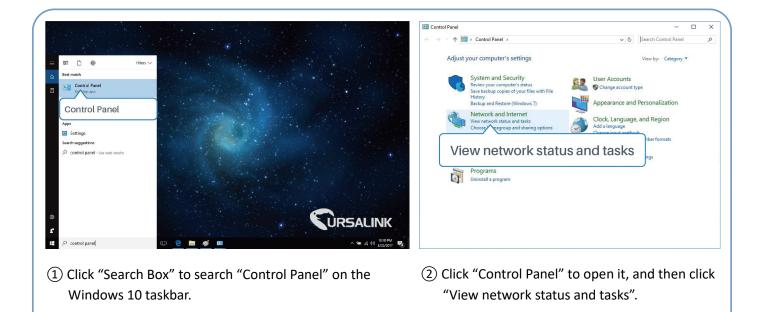


Getting Started

4. PC Configuration for Web GUI Accessing to Router

Please connect PC to any port among GE 1/1-GE 1/4 of UR75 router, or to GE 1 of UR72 router directly. 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 GE 0 of the router. But it will function properly if you enable it on the Web GUI.)



Network and Sharing Center		– 🗆 ×	Ethernet Status ×	
- 🔿 🕆 🕈 🔽 « Network	and Internet > Network and Sharing Center	✓ ♂ Search Control Panel	General	
Control Panel Home	View your basic network informa	ation and set up connections		
Change adapter settings	View your active networks		Connection IPv4 Connectivity: No network access	
Change advanced sharing	Yeastar5G	Access type: Internet HomeGroup: Ready to create	IPv4 Connectivity: No network access IPv6 Connectivity: No network access	
settings	Private network	Connections: M Wi-Fi (Yeastar5G)	Media State: Enabled	
			Duration: 00:01:21	
	Identifying	Access type: No network access	Speed: 1.0 Gbos	
	identifying	Connections: P Ethernet		
			Details	
	Change your networking settings			
	Set up a new connection or netw Set up a broadband, dial-up, or V			
			Activity	
	Troubleshoot problems	blems, or get troubleshooting information.	t — Received	
	bighter and repair network pro-	biens, or get troubleshould information.	Properties 7	
See also				
HomeGroup			Properties Diagnose	
Infrared			Undere Disginae	
Internet Options				
Windows Firewall			Close	
Click "Fth	ornot" (May have	e different names).	(4) Click "Properties".	
	CITICE (IVIAY HAVE	c unicient names).	- Click rioperties.	



Ethernet Properties X	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 ne for the appropriate IP settings. 255 . 255 . 255 . 255 .
This connection uses the following items:	Obtain an IP address automatically Use the following IP address:	Obtain an IP address autor 192.168.1.1
Glient for Microsoft Networks File and Printer Sharing for Microsoft Networks Gos Packet Scheduler	IP address:	IP address: 192.168.1.20
Cost Packet Scheduler Cost Internet Protocol Version 4 (TCP/IPv4) Microsoft Netv Adapter Multiplexor Protocol	Subnet mask: Default gateway:	Subnet mask: 255.255.255.0 Default gateway: 192.168.1.1
Internet Protocol Version 4 (TCP/IPv4)	Obtain DNS server address automatically	Obtain DNS server address automatically
	O Use the following DNS server addresses:	Our Section of the
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 Cancel	OK Car

Protocol Version 4 (TCP/IPv4)" to configure IP address and DNS server.

address automatically";

following IP address" to assign a static IP manually within the same subnet of the router.

(Note: Remember to click "OK" to finish configuration.)



5. Access to Web GUI of Router for Cellular Connection

This chapter explains how to log in UR72/UR75 router's Web GUI, and connect the router to cellular network.

Ursalink router provides Web-based configuration interface for management. If this is the first time you configure the router, please use the default settings below:

IP Address: **192.168.1.1** Username: **admin**

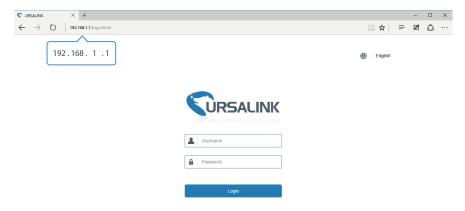
Password: password

5.1 To Log in the Router

Make sure your PC is connected to the same network as the router as per Section 4.

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

B. Enter the username and password, click "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.

Old Password		
New Password		
Confirm New Passw	ord	



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

	к						
Status		Summary	Cellular	Network	VPN	Router Information	Host List
Network	۱.	System inform:	ition				
System	۰.	Model		02			
Industrial		SN		000000000000			
		Firmware Version		2.0.0.7			
Maintenance	•	Hardware Version		0000			
		Local Time		2017-08-23 14:4	19:58		
		CPU Load		1.17, 0.39, 0.14			
		RAM (Total/Free)		256/97(37.89%)			
		Memory consum		64M/35M(60.94			

5.2 Configure the Cellular Connection

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

- A. Click "Network" \rightarrow "Interface" \rightarrow "Cellular" \rightarrow "Cellular Setting" to configure the cellular info.
- B. Enable SIM1.
- C. Choose relevant network type. "Auto", "4G First", "4G Only", "3G First", "3G Only", "2G First" and "2G Only" are optional.
- D. Click "Save" and "Apply" for configuration to take effect.

URSALI	NK				💄 admin 🛛 🔁
Status	F	ort WAN	LAN VLAN Trunk	Cellular	
Network	- I Ce	Ilular Setting	SIM1	2 Cellular	
Interface	E	able	Sint .		
1 Inte	erface	rk Type ame	4G First Auto 4G First 4G Only 3G First 3G Only 29 First	Auto	
DDNS		cess Number	2G First 2G Only		
Link Backup	PI	N Code			
Routing		thentication Type	3"Auto	o" or others	
VPN		oaming //S Center			
System	• 0	onnection Setting			
Industrial	10	al SIM Strategy	2		
Maintenance		MP Server condary ICMP Server	8.8.8.8		
APP	•	NG times	5		
	Te	tal Packet Loss Rate	20		
	si	AS Settings			
	s	/IS Mode	PDU	•	
		Save			



	к						Apply	admin 🕘
Status	Po	nt WAN	LAN VLAN Trunk	Cel	ilular Lo	opback		יר
Network	Cel	lular Setting	SIM1		SIM2		(5) Apply	
Interface	Enz	able						
Firewall	Net	work Type	Auto	¥	Auto	*		
QoS	API	N						
DHCP	Use	ername						
		ssword						
DDNS		cess Number						
Link Backup	PIN	I Code						
Routing		hentication Type	Auto	•	Auto	•		
1000	Roa	arming	8		8			
VPN	SM	S Center						
System		nnection Setting	8					
		al SIM Strategy						
Industrial		able NAT	8					
Maintenance	3.5	IP Server	8.8.8.8					
Maintenance		condary ICMP Server	114.114.114.114	_				
APP	PIN	IG times	5					
	4	Save	20 PDU	•				

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.

If you select "4G First" or "4G Only", you can click "Save" to finish the configuration directly.

If you select "3G First", "3G Only", "2G First" or "2G Only", you should manually configure APN, Username, Password, and Access Number.

UR72 & UR75 routers have two cellular interfaces, named SIM1 & SIM2. Only one cellular interface is active at one time. If both cellular interfaces are enabled, SIM1 interface takes precedence by default.

5.3 Check the Cellular Connection Status

5.3.1 Check the Cellular Connection Ctatus by Web GUI of Router

Click "Status" \rightarrow "Cellular" to view the status of the cellular connection. If it shows "Connected", it means SIM1 has dialed up successfully.



Status		Summary	Cellular	Network	VPN	Router Information	Host List		
	-	Modem							
Network	•	Status		Ready					
System		Modern Model		EC25					
		Current SIM	Current SIM		SIM1				
Industrial	•	Signal Level		28asu (-57dBm	n)				
		Register Status		Registered (Ho	ome network)				
Maintenance	•	IMSI		460019235512	964				
APP		ICCID		898601178380	09237649				
		Network Provider		CHN-UNICOM					
		Network Type		LTE					
		PLMN ID		46001					
		Local Area Code		5922					
		Cell ID		B12c63d					
		IMEI		B61107030259	486				
		Network							
		Status		Connected <	< c	onnecte	d		
		IP Address		10.63.188.23					
		Netmask		255 255 255 24	40				
		Gateway		10.63.188.24					
		DNS		218.104.128.10	06				
		Connection time		0 days, 00 00 0	03				

5.3.2 Check the Cellular Connection Status by Hardware

On the other hand, you can check the status of SIM1 indicator. If it keeps on green light statically, it means SIM1 has dialed up successfully.

5.4 Check out if Network Works Properly by Browser on PC

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 UR72/UR75 router.