

UR71

Industrial Cellular Router

Quick Start Guide



Ursalink Technology Co., Ltd.

Welcome

Thank you for choosing Ursalink UR71 industrial cellular router.

This guide describes how to install the UR71 and how to log in the Web GUI to configure the device. Once you complete the installation, refer to the Ursalink UR71 User Manual for instructions on how to perform configurations on the device.

Related Documents

This Start Guide only explains the installation of Ursalink UR71 router. For more functionality and advanced settings, please refer to the relevant documents as below.

Document	Description
Ursalink UR71 Datasheet	Datasheet for the Ursalink UR71 industrial cellular router.
Ursalink UR71 User Guide	Users could refer to the guide for instruction on how to log in the
Orsamik OK/1 Oser 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

Ursalink UR71 is in conformity with the essential requirements and other relevant provisions of the CE, FCC, and RoHS.





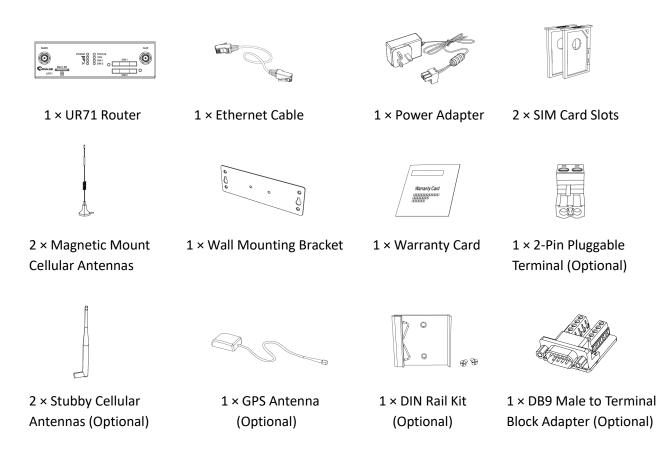
For assistance, please contact Ursalink technical support: Email: support@ursalink.com Tel: 86-592-5023060 Fax: 86-592-5023065



1. Packing List

Before you begin to install the UR71 router, please check the package contents to verify that you have received the items below.

1.1 Package Contents





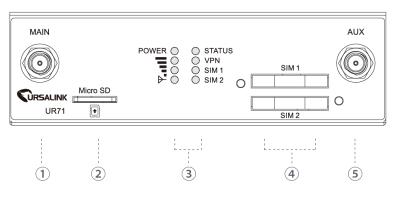
If any of the above items is missing or damaged, please contact your Ursalink sales Representative.



2. Hardware Introduction

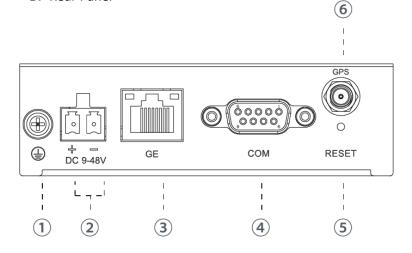
2.1 Overview

A. Front Panel



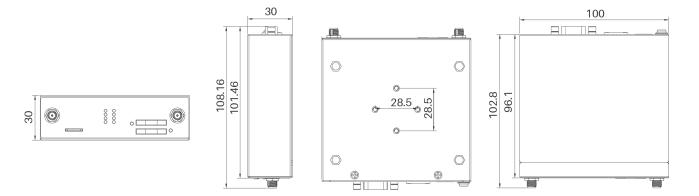
- ① Main Cellular Antenna Connector
- ② Micro SD Card Interface
- ③ LED Indicator Area POWER: Power Indicator STATUS: Status Indicator
 ▼: Signal Strength Indicator
 VPN: VPN Indicator
 SIM1: SIM1 Status Indicator
 SIM2: SIM2 Status Indicator
- (4) SIM Card Slot 1 & SIM Card Slot 2
- (5) AUX Cellular Antenna Connector

B. Rear Panel



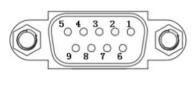
- ① Grounding Stud
- ② Power Connector
- ③ Ethernet Port Indicator:
 Orange for data transmission;
 Green for network rate
- ④ Serial Port: RS232 or RS485
- 5 Reset Button
- 6 GPS Antenna Connector

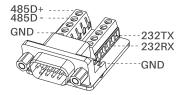
2.2 Dimensions (mm)





2.3 Pinouts





PIN	RS232	RS485	Description		
1		А	Data +		
2	RXD	Receive Data			
3	TXD		Transmit Data		
4					
5	GND		Ground		
6		В	Data -		
7					
8					
9					

V+	V-	
ີ່		
Ľ	Ш	

PIN	Description
10	Positive
11	Negative

2.4 LED Indicators

LED	Indication	Status	Description		
POWER	Power 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		
VPN	VPN Status	Green Light	VPN is connected		
VPN	VPIN Status	Off	VPN is disconnected		
		Off	SIM1 or SIM2 is registering or fails to register (or there		
		Off	are no SIM cards inserted)		
			Blinking slowly: SIM1 or SIM2 has been registered and		
SIM1/SIM2	SIM Card Status		is ready for dial-up		
SIIVIT/SIIVIZ		Green Light	Blinking rapidly: SIM1 or SIM2 has been registered and		
		Green Light	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	Signal 1/2/3		antenna to a suitable location to get better signal)		
strength		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			
	STATUS LED	Action		
Dahaat	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
	On	1000 Mbps mode
Rate Indicator (Green)	Off	100 Mbps mode



3. Hardware Installation

Environmental Requirements

- Power Input: 9-48 VDC
- Power Consumption: Typical 2.8 W (Max 4.2 W)
- Operating Temperature: -40°C to 70°C (-40°F -158°F)
- Relative Humidity: 0% to 95% (non-condensing) at 25°C/77°F

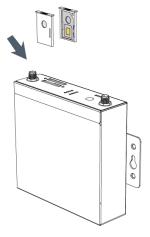
3.1 SIM Card/Micro SD Card Installation

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.

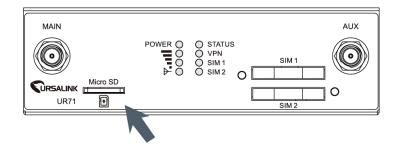
B. Put SIM card onto the slot then insert the back into the hole.





3.1.2 Micro SD Card Installation

Insert Micro SD card

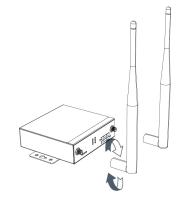




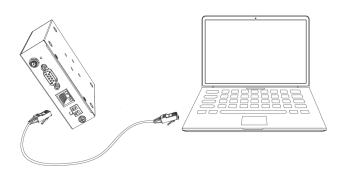
3.2 Antenna Installation

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



3.4 Mount the Router

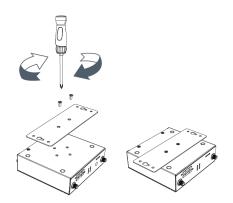
The router can be placed on a desktop or mounted to a wall or a DIN rail.

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.

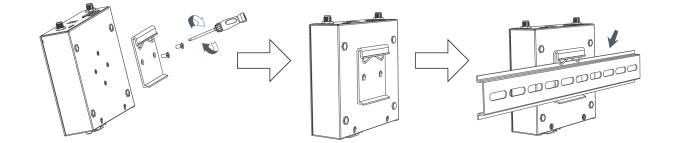




3.4.2 DIN Rail Mounting (Measured in mm)

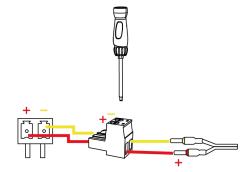
Use 2 pcs of M3 \times 6 flat head Phillips screws to fix the DIN rail to the router, and then hang the DIN rail on the mounting bracket. It is necessary to choose a standard bracket.

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



Cable
1

Color	Polarity
Red	+
Yellow	-

If the wires are inserted into the reverse holes, the router will not start and the user 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.



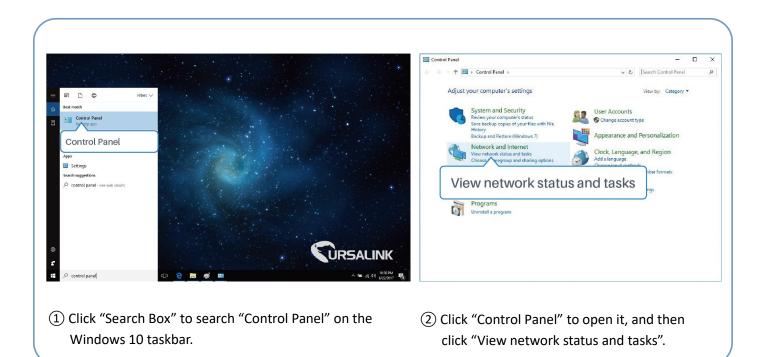
The router must be grounded when deployed. According to operating environment, the ground wire should be connected with grounding stud of router.



Getting Started

4. PC Configuration for Web GUI Accessing to Router

Please connect PC to GE port of UR71 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.



Network and Sharing Center	– 🗆 X	Ethernet Status
> · 🛧 🔽 « Network	and Internet > Network and Sharing Center v 👌 Search Control Panel 🔎	General
Control Panel Home Change adapter settings Change advanced sharing settings	View your basic network information and set up connections View your active network	Connection IP-V4 Connectivity: No network access IP-V5 Connectivity: No network access Media State: Enabled Duration: 00:01:21 Speed: 1.0 Gbps Details
See also HamaGroup Infared Infared Distance Windows Tirewall	Change your networking settings Set up a broadband, dial-up, or VPN connections Troubleshoot problems Diagnose and repair network problems, or get troubleshooting information.	Activity Teceived Properties Disable Diagnose

Ursalink UR71 Quick Start Guide



Ethernet Proper		
etworking Sharing	9	
Connect using:		
Intel(R) 8256	7LM Gigabit Network Conn	ection
		Configure
This connection us	es the following items:	Configure
Client for !	Microsoft Networks	^
	rinter Sharing for Microsoft 1	Vetworks
QoS Pack		
	the set of	
	rotocol Version 4 (TCP/IPv4	
	Nety Adapter Multiplexo	
Microsoft	Nety Adapter Multiplexo	r Protocol
Microsoft		r Protocol
Microsoft	Nety Adapter Multiplexo	r Protocol
Microsoft	Netv Adapter Multiplexo	4 (TCP/IPv4)
Microsoft Microsoft Internet Pr Install Description Transmission Co wide area netwo	Netv Adapter Multiplexo	4 (TCP/IPv4) Properties
Microsoft Microsoft Internet Pr Install Description Transmission Co wide area netwo	Nety Adapter Multiplexo otocol Version Uninstall Introl Protocol/Internet Proto fr protocol/Internet Protocol	4 (TCP/IPv4) Properties
Microsoft Microsoft Microsoft Internet Pr Igstall Description Transmission Co wide area netwo	Nety Adapter Multiplexo otocol Version Uninstall Introl Protocol/Internet Proto fr protocol/Internet Protocol	4 (TCP/IPv4)

eneral	Alternate Configuration						
this cap	n get IP settings assigned a bability. Otherwise, you ner appropriate IP settings.						
	otain an IP address automa	atically					
OU	se the following IP address						
IP a	ddress:		6				
Subr	net mask:			÷.	24		
Defa	ult gateway:		ř.	-	3-		
	otain DNS server address a	automatically	1				
OU	e the following DNS server	addresses:					
Pref	erred DNS server:		•				
Alter	nate DNS server:			4	34		
Πv	alidate settings upon exit				Adv	vanced	

 (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";

ternet Protocol Version 4 (1	
General	
You can get IP settings assig this capability. Otherwise, yo	oune 192,100, 1,20 r
for the appropriate IP setting	^{ps.} 255.255.255.0
Obtain an IP address au	utom 192.168.1.1
• Use the following IP add	dress:
IP address:	192.168.1.20
Subnet mask:	255.255.255.0
Default gateway:	192.168.1.1
Obtain DNS server addr	ress automatically
• Use the following DNS s	
Preferred DNS server:	192.168.1.1
Alternate DNS server:	
Validate settings upon	exit 192.168.1.1
	[· · ·]
	OK Cancel

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.)

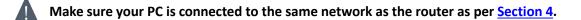


5. Access to Web GUI of Router for Cellular Connection

This chapter explains how to log in UR71 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:



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".

C URSALINK	× +					-		×
$\leftarrow \ \rightarrow$	0 192.168.1.1/login.html			□ ☆	₽	Ø	٩	
	192.168.1.1			() English				
				din cultion				
			7					
		Lusername						
		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 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.

au		_
Old Password		
New Password		
Confirm New Password		
	L	



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

Status		Overview	Cellular	Network	VPN	Routing	Host List
Network	×	System Information	on				
		Model		UR71			
System	•	Partnumber		L00E-S11			
Industrial	Þ	Serial Number		621074815049	i i		
Industrial		Firmware Version		3.1.0.23			
Maintenance	•	Hardware Version		0110			
		Local Time		2018-03-06 20	:37:00		
APP	•	Uptime		00:02:20			
		CPU Load		17%			
		RAM (Capacity/Ava	ilable)	256MB/92MB(35.94%)		
		Flash (Capacity/Ava	ailable)	64MB/37MB(5	7.81%)		

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	INK				💄 admin 🛛 🕀
Status		Port WAN	LAN VLAN Trunk	Cellular	
Network	÷	Cellular Setting		2 Cellular	
Interface			SIM1	SIM2	
		Enable	2	8	
		irk Type	4G First Auto	• Auto •	
1 Int	erfac	ce	4G First 4G Only		
		ame	3G First 3G Only		
DDNS		Password	2G First 2G Only		
		Access Number			
Link Backup		PIN Code			
Routing		Authentication Type	(3)"Auto	o" or others	
VPN		Roaming			
		SMS Center			
System	•	Connection Setting	D		
Industrial		Dual SIM Strategy	8		
mousurai	· · · ·	Enable NAT ICMP Server	8		
Maintenance	F		8.8.8.8		
		Secondary ICMP Server	114.114.114.114		
APP	×.	PING times	5		
		Total Packet Loss Rate	20		
		SMS Settings			
		SMS Mode	PDU	•	



	к					Ayphy 💄 admin 🕀
Status		Port WAN	LAN VLAN Trunk	c	Cellular Loopback	
Network	-	Cellular Setting	SIM1		SIM2	(5) Apply
Interface		Enable			2	
Firewall		Network Type	Auto	٠	Auto •	
QoS		APN				
1 200 A		Username				
DHCP		Password				
DDNS		Access Number				
Link Backup		PIN Code				
Routing		Authentication Type	Auto	•	Auto •	
VPN		Roaming			8	
VPTN		SMS Center				
System	•	Connection Setting	8			
		Dual SIM Strategy Enable NAT				
Industrial		ICMP Server	88.8.8			
Maintenance	•	Secondary ICMP Server	114.114.114.114	-		
		PING times	5	-		
APP	-		20			
		④ Save	PDU	•		
		Save				

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.

UR71 router has 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 Status 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.



tus	Summary	Cellular	Network	VPN	Router Information	Host List
	Modem					
work	Status		Ready			
em	Modem Mode	1	EC25			
	Current SIM		SIM1			
strial	Signal Level		28asu (-57dBm	1)		
	Register Stati	us	Registered (Ho	me network)		
ntenance	IMSI		460019235512	964		
	ICCID		8986011783800	9237649		
	Network Prov	ider	CHN-UNICOM			
	Network Type		LTE			
	PLMN ID		46001			
	Local Area Co	ode	5922			
	Cell ID		B12c63d			
	IMEI		B611070302594	486		
	Network					
	Status		Connected <	< c	onnecte	d
	IP Address		10.63.188.23			
	Netmask		255.255.255.24	10		
	Gateway		10.63 188.24			
	DNS		218.104.128.10	06		
	Connection ti	me	0 days, 00 00 0	13		

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 UR71 router.