



LINOVISION IoT-R32L Router User Guide

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LINOVISION

LINOVISION IoT-R32L Router



Welcome

- Thank you for choosing Linovision R32L industrial cellular router.
- This guide describes how to install the R32L and how to log in the Web GUI to configure the device. Once you complete the installation, refer to the Linovision R32L User Guide for instructions on how to perform configurations on the device.

Related Documents

Document	Description
R32L Datasheet	Datasheet for R32L industrial cellular router.
R32L User Guide	Instruction on how to log in the web GUI, and how to configure all the settings.

Declaration of Conformity

R32L 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 Linovision sales support:
 - Email: sales@linovision.com

◦ **Tel:** 86-571-86708175

Packing List

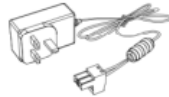
Before you begin to install the R32L router, please check the package contents to verify that you have received the items below.



1 × R32L



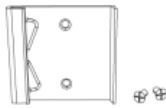
1 × Ethernet Cable



1 × Power Adapter



1 × Magnetic
Cellular
Antenna



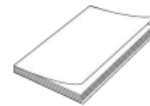
1 × DIN Rail Kit



Setscrews



1 × Warranty Card



1 × Quick Start
Guide

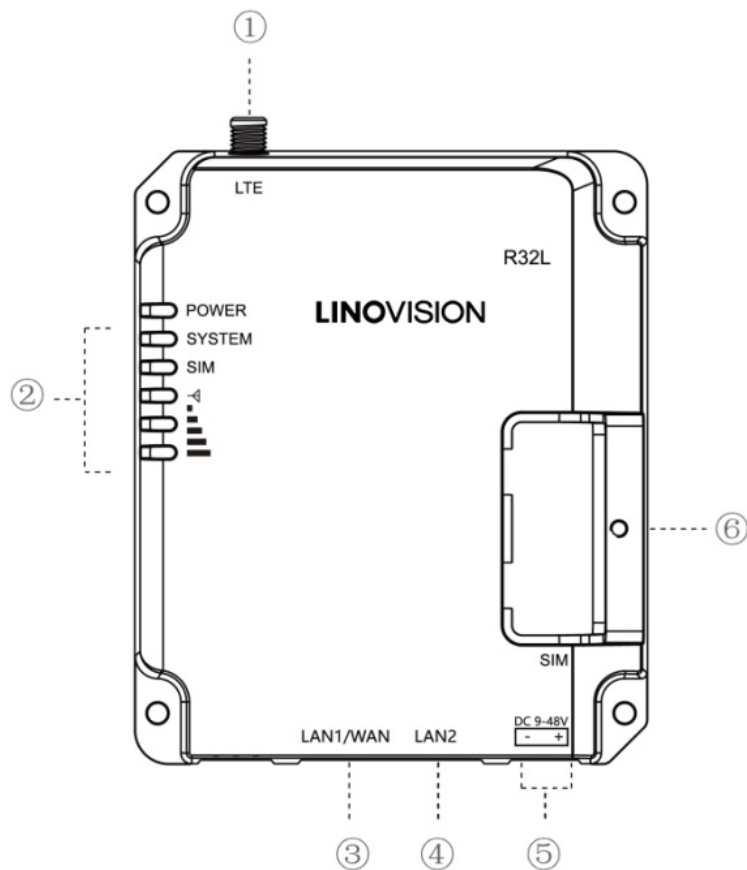


1 × Stubby Cellular
Antenna (Optional)

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

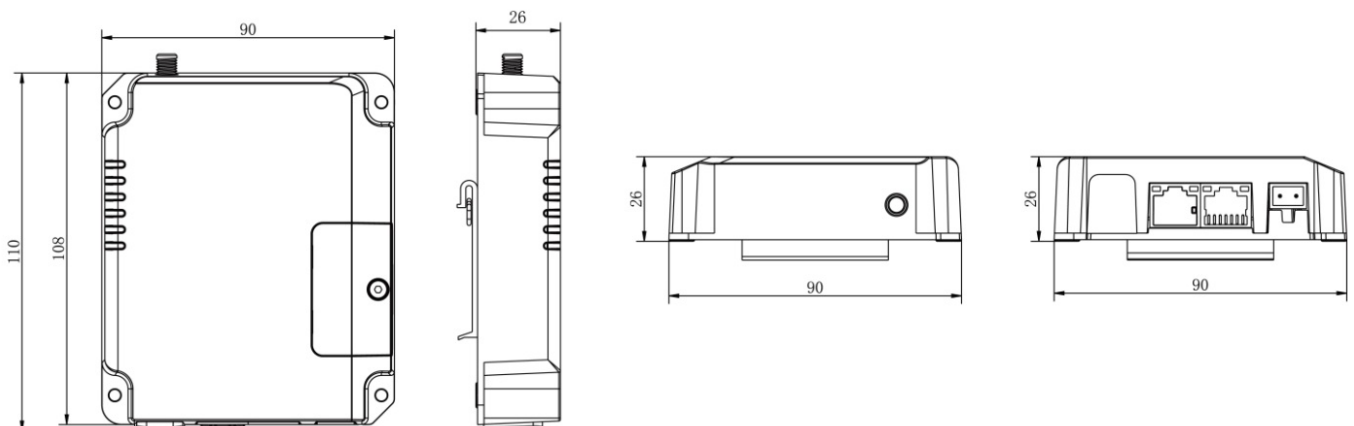
Hardware Introduction

Overview



1. Cellular Antenna Connector
2. LED Indicator Area
 - **POWER:** Power Indicator
 - **SYSTEM:** Status Indicator
 - **SIM :** Status Indicator
 - Signal Strength Indicator
3. Ethernet LAN1/WAN Port
4. Ethernet LAN2 Port
5. Power Connector
6. SIM and Reset Button Holder

Dimensions (mm)



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	Static: Start-up
		Light	Blinking slowly: the system is running properly
		Red Light	The system goes wrong
SIM	SIM Status Card	Off	SIM is registering or fails to register (or there are no SIM cards inserted)
		Green Light	Blinking slowly: SIM has been registered and is ready for dial-up
			Blinking rapidly: SIM has been registered and is dialing up now
			Static: SIM has been registered and dialed up successfully
Signal Str ength	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)

Reset Button

Reset button is under the SIM slot.

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.

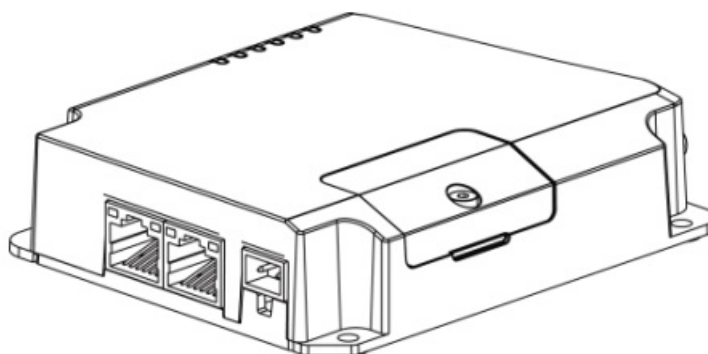
Ethernet Port Indicator

Indicator	Status	Description
Link Indicator (Orange)	On	Connected
	Blinking	Transmitting data
	Off	Disconnected

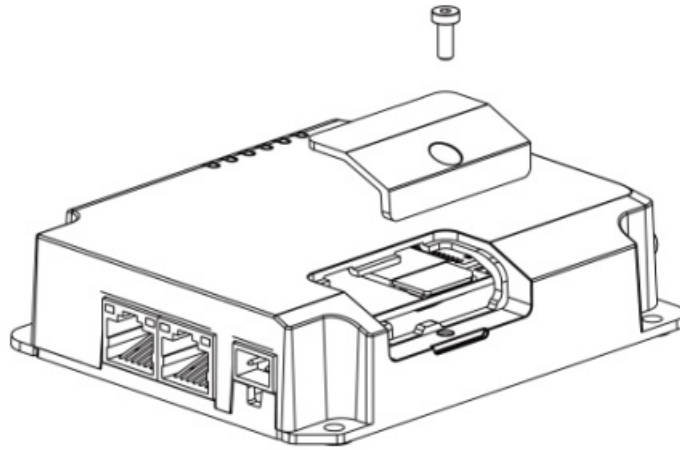
Hardware Installation

SIM Card Installation

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

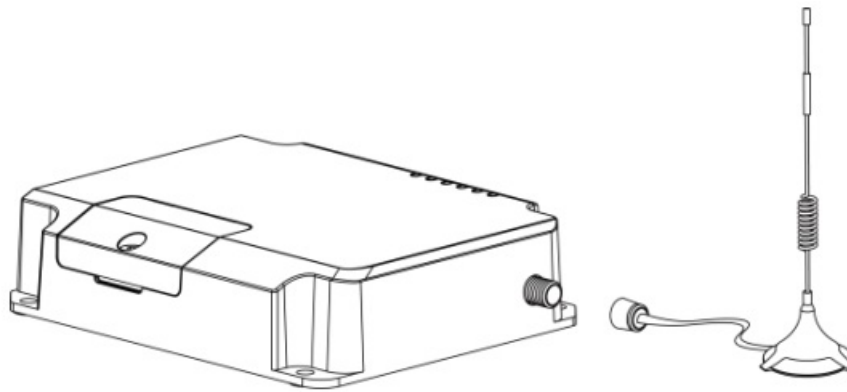


- B. Put SIM card into the slot and screw it up.



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.



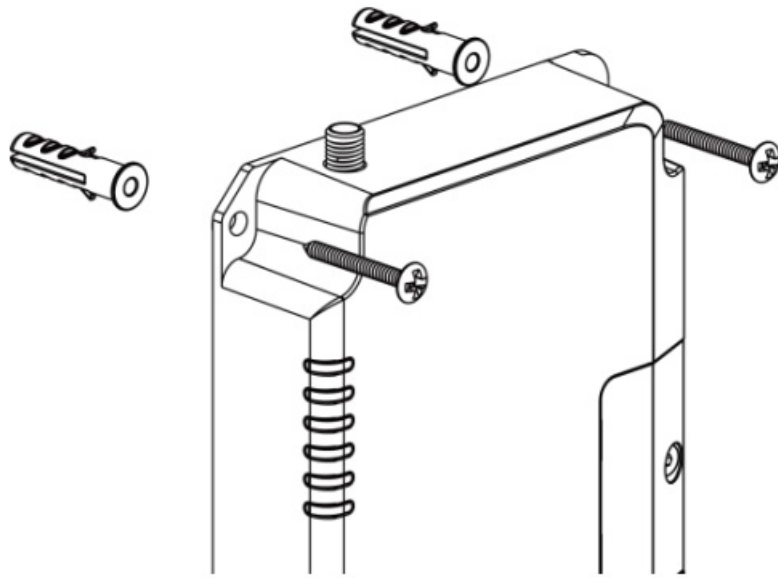
Router Installation

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

1. Wall Mounting (Measured in mm)

Use 4 pcs of M3 × 6 flat head Phillips screws to fix the router on the wall.

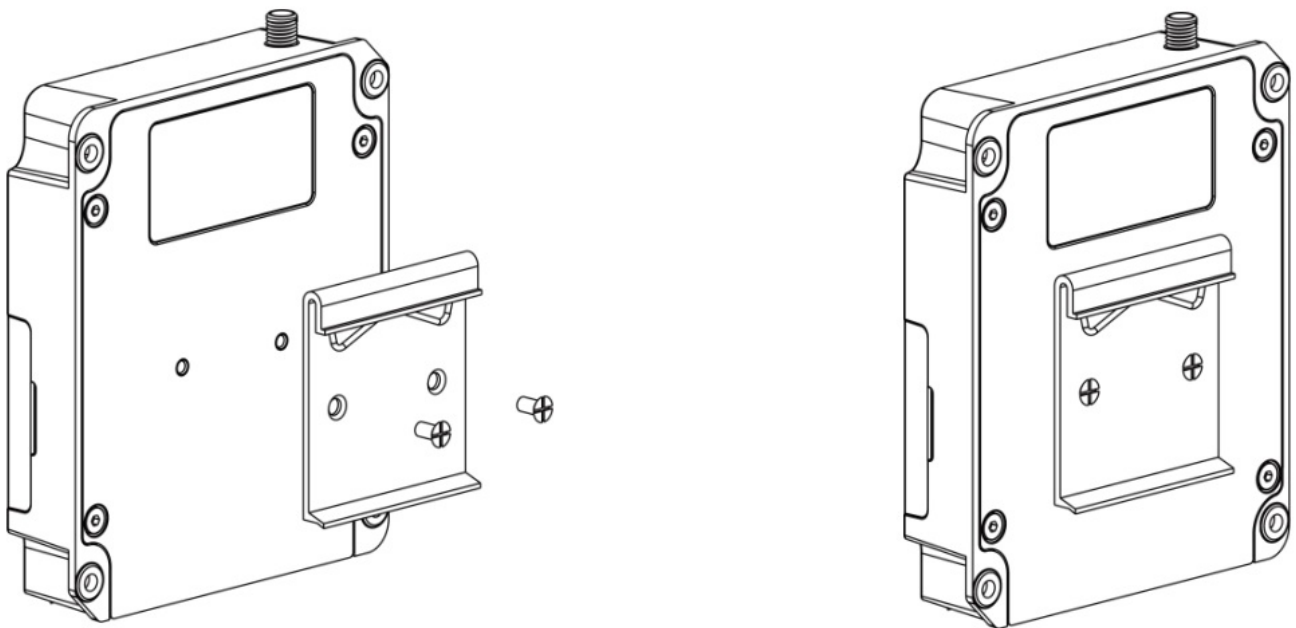
Recommended torque for mounting is 1.0 N·m, and the maximum allowed is 1.2 N·m.



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.



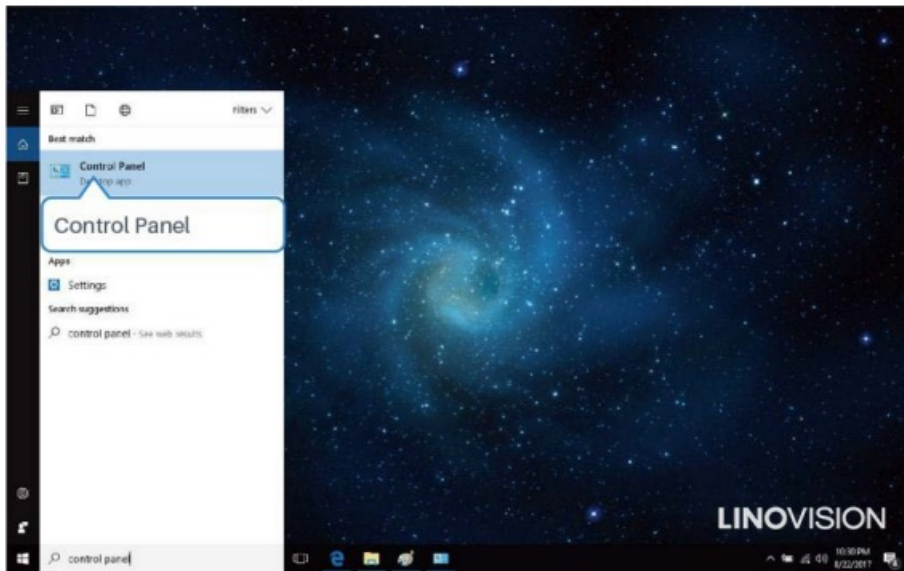
Log in the Web GUI of Router

PC Configuration

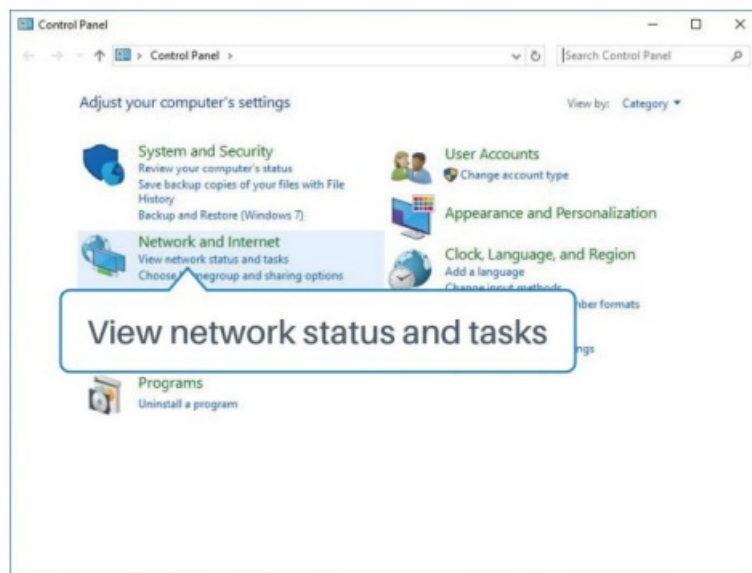
Please connect PC to LAN port of R32L router. PC can obtain an IP address, or you can configure a static IP address manually. The following steps are based on Windows 10 operating system for your reference.

(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.

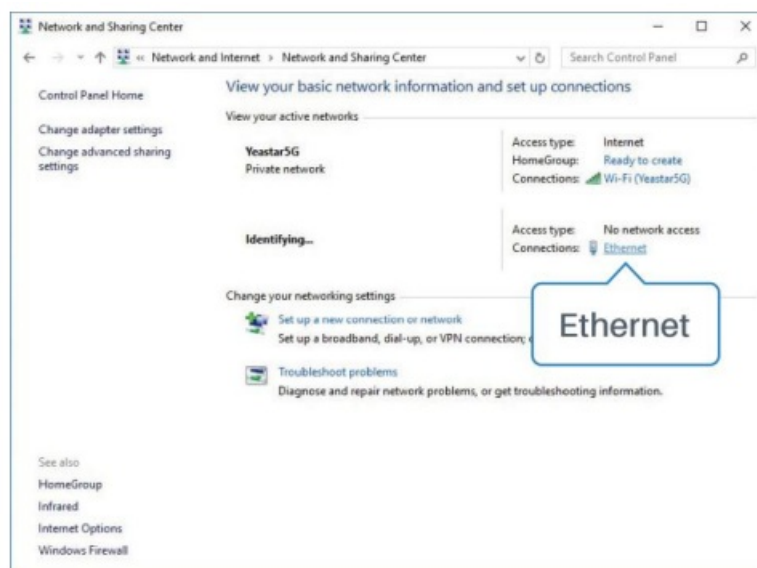
1. Click "Search Box" to search "Control Panel" on the Windows 10 taskbar.



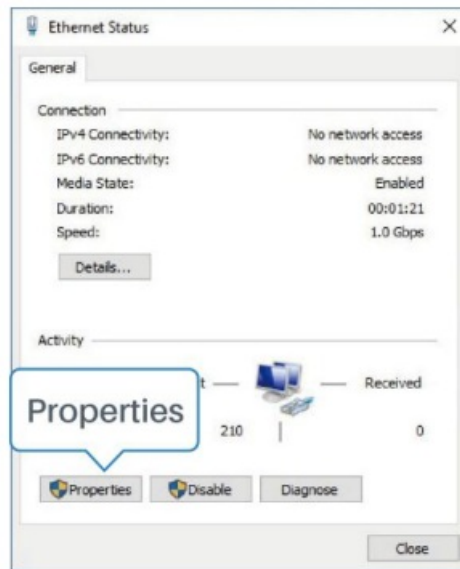
2. Click “Control Panel” to open it, and then click “View network status and tasks”.



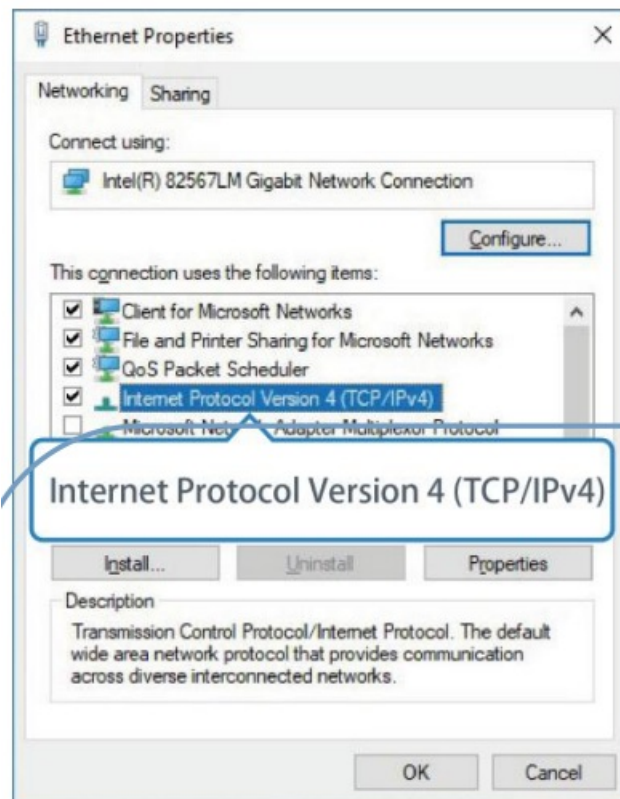
3. Click “Ethernet” (May have different names).



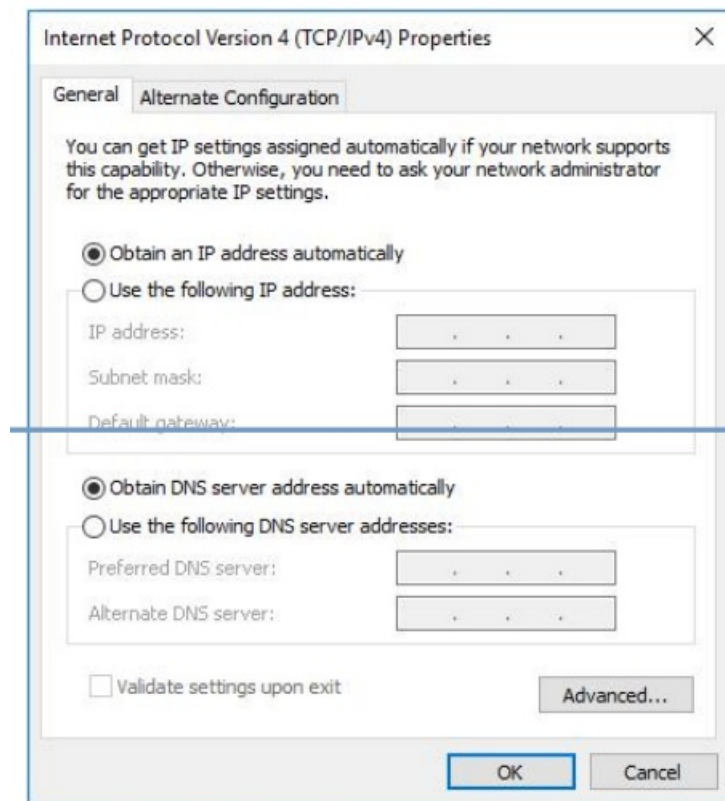
4. Click “Properties”.



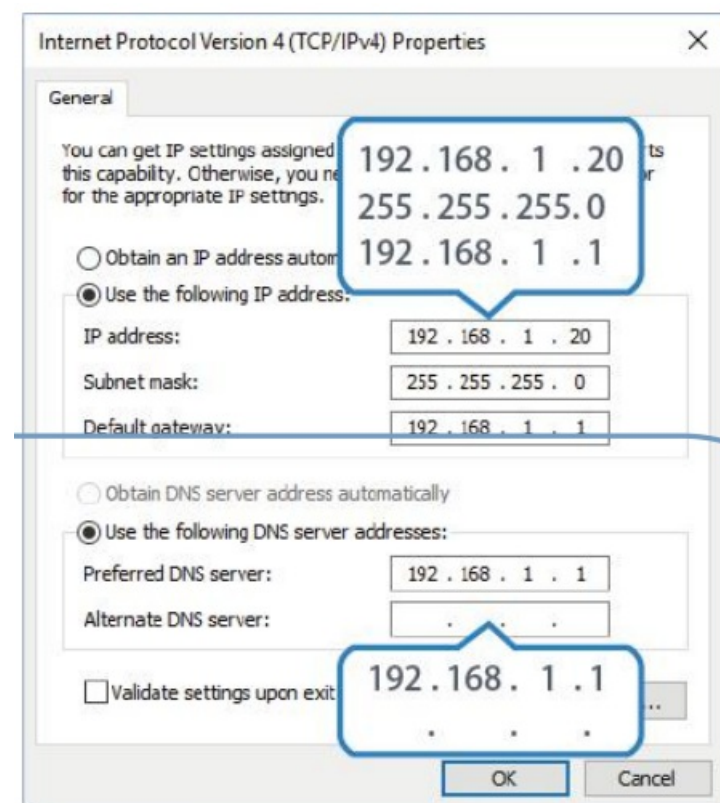
5. Double Click “Internet Protocol Version 4 (TCP/IPv4)” to configure IP address and DNS server.



6. **Method 1:** click “Obtain an IP address automatically”;



7. **Method 2:** click “Use the following IP address” to assign a static IP manually within the same sub net of

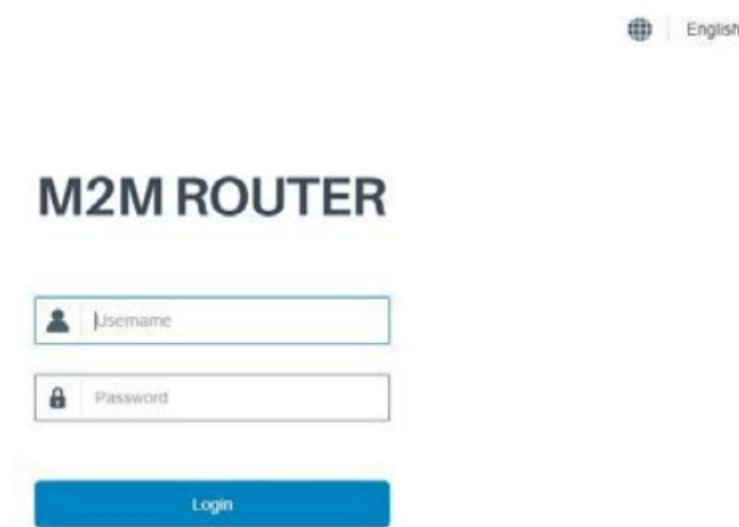


Log in the Router

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


- Start a Web browser on your PC (Chrome is recommended), type in the IP address, and press Enter on your keyboard.
- Enter the username and password, click “Login”.



The image shows the login interface for an M2M Router. At the top right, there is a globe icon and the text "English". In the center, the text "M2M ROUTER" is displayed in a large, bold, dark blue font. Below this, there are two input fields: the first is labeled "Username" with a person icon, and the second is labeled "Password" with a lock icon. Both fields have a light blue border. Below the password field is a solid blue button with the text "Login" in white.

If you enter the username or password incorrectly more than 5 times, the login page will be locked for 10 minutes.

- 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.



The image shows a "Change Password" dialog box. It has a title bar with the text "Change Password" and a close button (X) in the top right corner. Inside the dialog, there are three labels on the left: "Old Password", "New Password", and "Confirm New Password". To the right of each label is a corresponding text input field. At the bottom of the dialog, there are two blue buttons: "Save" and "Cancel".

- 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
Network
System
Maintenance

Overview
Cellular
Network
VPN
Routing
Host List

System Information
System Status

Model	R32L-L00E0	Local Time	2021-03-23 13:06:29 Tuesday
Serial Number	6224B1100592	Uptime	00:06:36
Firmware Version	32.2.0.33	CPU Load	11%
Hardware Version	V2.1	RAM (Available/Capacity)	54MB/128MB(42.19%)
		Flash (Available/Capacity)	91MB/128MB(71.09%)

Cellular
WAN

Status	Disabled	Status	Online
IP	0.0.0.0	IP	192.168.22.119
Connection Duration	0 days, 00:00:00	MAC	24-e1:24-f1:6d:48
Data Usage Monthly	0.0 MiB	Connection Duration	0 days, 00:00:00

Manual Refresh
Refresh

Model
Serial Number
Firmware Version
Hardware Version
Local Time
Uptime
CPU Load

Network Configuration

This chapter explains how to connect R32L to network via WAN connection or cellular.

Ethernet WAN Configuration

- Go to “Network > Interface > Port” to change LAN1 to WAN port

Status
Network
Interface
DHCP
Firewall
QoS

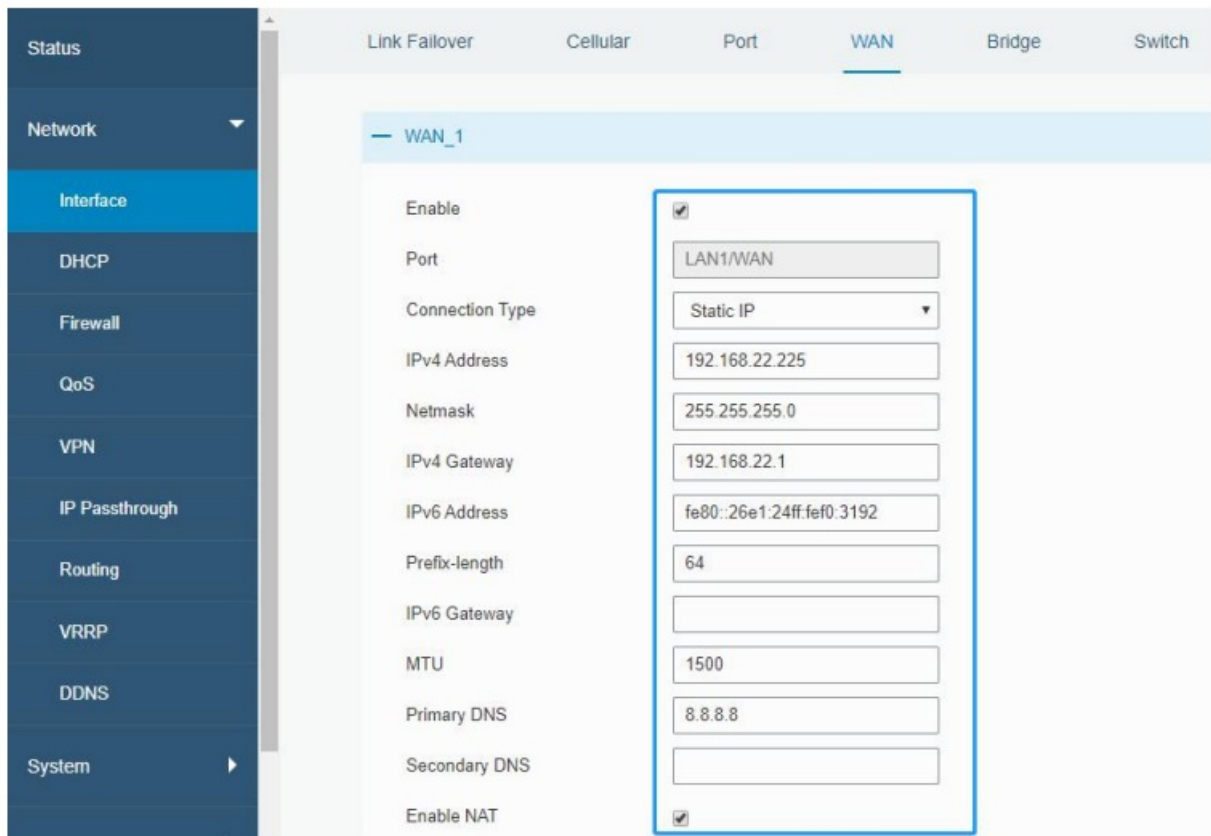
Link Follower
Cellular
Port
WAN
Bridge
WLAN
Switch
Loopback

Port Setting

Port	Status	Property	Speed	Duplex
LAN2	up	lan	auto	auto
LAN1/WAN	up	wan	auto	auto

Save

- 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.



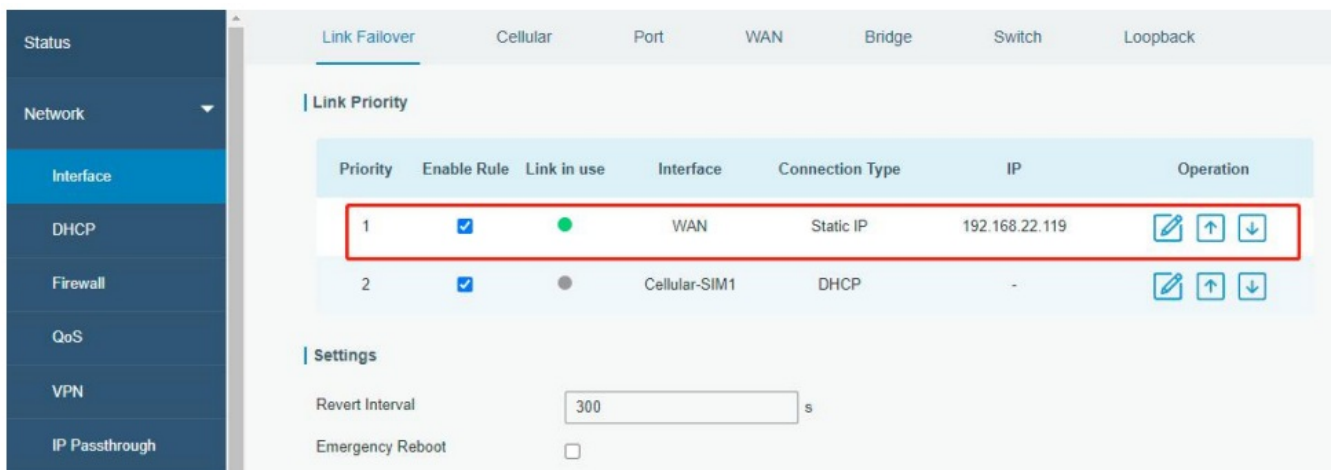
Click “Save & Apply” button to make the changes take effect.







- Connect WAN port to another router or modem.
- Log in R32L web GUI via WAN port IP address and go to “Status > Network” to check if status is “up”.



Port	Status	Type	IP	Netmask	Gateway	DNS	Connection Duration
LAN1/WAN	up	Static	192.168.22.225	255.255.255.0	192.168.22.1	8.8.8.8	08h 22m 29s

- Go to “Network > Interface > Link Failover” to rise the WAN priority to 1.



Priority	Enable Rule	Link in use	Interface	Connection Type	IP	Operation
1	<input checked="" type="checkbox"/>	●	WAN	Static IP	192.168.22.119	  
2	<input checked="" type="checkbox"/>	●	Cellular-SIM1	DHCP	-	  

Settings

Revert Interval: s

Emergency Reboot: ☐

- 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 R32L router.

Cellular Connection Configuration

- 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' tab under the 'Interface' section. The left sidebar contains a menu with 'Interface' selected. The main area is titled 'Cellular Settings' and contains the following fields:

Field	Value
APN	
Username	
Password	
PIN Code	
Access Number	
Authentication Type	Auto
Network Type	Auto
PPP Preferred	<input type="checkbox"/>
SMS Center	
Enable NAT	<input checked="" type="checkbox"/>
Roaming	<input checked="" type="checkbox"/>
Data Limit	0 MB
Billing Day	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 Fail over” to enable SIM and rise link priority.

The screenshot shows the 'Link Priority' tab under the 'Link Failover' section. The left sidebar contains a menu with 'Interface' selected. The main 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"/>	<input type="radio"/>	Cellular-SIM1	DHCP	-	Edit Up Down
2	<input checked="" type="checkbox"/>	<input checked="" type="radio"/>	WAN	Static IP	192.168.22.119	Edit Up Down

Below the table, there is a 'Settings' section with the following fields:

Field	Value
Revert Interval	300 s
Emergency Reboot	<input type="checkbox"/>

- Click to configure ICMP ping detection information.

Ping Detection

×

Enable

☒

Primary Server (IPv4)

8.8.8.8

Secondary Server (IPv4)

114.114.114.114

Interval

300

s

Retry Interval

5

s

Timeout

3

s

Max Ping Retries

3

OK

Cancel


- Click “Status > Cellular” to view the status of the cellular connection. If it shows “Connected”, it means SIM 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 SIM has dialed up successfully.

Overview	Cellular	Network	VPN	Routing	Host List	GPS
<div>Modem</div> <div> <div>Status</div> <div>Ready</div> </div> <div> <div>Model</div> <div>EC25</div> </div> <div> <div>Current SIM</div> <div>SIM1</div> </div> <div> <div>Signal Level</div> <div>29asu (-55dBm)</div> </div> <div> <div>Register Status</div> <div>Registered (Home network)</div> </div> <div> <div>IMEI</div> <div>861585042050250</div> </div> <div> <div>IMSI</div> <div>460045927703654</div> </div> <div> <div>ICCID</div> <div>89860439101880723654</div> </div> <div> <div>ISP</div> <div>CHINA MOBILE</div> </div> <div> <div>Network Type</div> <div>FDD LTE</div> </div> <div> <div>PLMN ID</div> <div>46000</div> </div> <div> <div>LAC</div> <div>592f</div> </div> <div> <div>Cell ID</div> <div>271f848</div> </div>		<div>Network</div> <div> <div>Status</div> <div>Connected</div> </div> <div> <div>IP Address</div> <div>10.2.25.74</div> </div> <div> <div>Netmask</div> <div>255.255.255.240</div> </div> <div> <div>Gateway</div> <div>10.2.25.73</div> </div> <div> <div>DNS</div> <div>211.136.17.107</div> </div> <div> <div>Connection Duration</div> <div>0 days, 00:00:34</div> </div> <div> <div>Data Usage Monthly</div> <div> <div>SIM-1</div> <div>RX: 0.0 MiB TX: 0.0 MiB ALL: 0.0 MiB</div> </div> <div> <div>SIM-2</div> <div>RX: 0.0 MiB TX: 0.0 MiB ALL: 0.0 MiB</div> </div> </div>				

- 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 R32L router.

Documents / Resources

	<p>LINOVISION IoT-R32L Router [pdf] User Guide IoT-R32L Router, IoT-R32L, Router</p>
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Manuals+