



robustel R1520 VPN Router with Dual SIM Instruction Manual

[Home](#) » [robustel](#) » robustel R1520 VPN Router with Dual SIM Instruction Manual 

Contents

- [1 R1520 VPN Router with Dual SIM](#)
- [2 Product Information](#)
- [3 Product Usage Instructions](#)
- [4 Regulatory and Type Approval Information](#)
- [5 Safety Information](#)
- [6 Technical Support](#)
- [7 Interface Descriptions](#)
- [8 Hardware Installation](#)
- [9 Documents / Resources](#)
 - [9.1 References](#)
- [10 Related Posts](#)



R1520 VPN Router with Dual SIM



Product Information

- **Product Name:** Robustel R1520
- **Product Type:** Hardware Manual
- **Version:** 1.0.1
- **Date:** Nov. 28, 2022
- **Model Number:** RT056_HM_R1520

Toxic or Hazardous Substances

Name of the Part	(Pb)	(Hg)	(Cd)	(Cr(VI))	(PBB)	(PBDE)	(DEHP)	(BBP)	(DBP)	(DIBP)
Metal parts	—	—	—	—	—	—	—	—	—	—
Circuit modules	o	o	o	o	o	o	o	o	o	o
Cables and cable assemblies	o	o	o	o	o	o	o	o	o	o
Plastic and polymeric parts	o	o	o	o	o	o	o	o	o	o

Note:

- **o:** Indicates that this toxic or hazardous substance contained in all of the homogeneous materials for this part is below the limit requirement in RoHS2.0.
- **X:** Indicates that this toxic or hazardous substance contained in at least one of the homogeneous materials for this part might exceed the limit requirement in RoHS2.0.
- **-:** Indicates that it does not contain the toxic or hazardous substance.

Radio Specifications for Europe

- **RF technologies:** 2G, 3G, 4G, GNSS, Wi-Fi

Cellular Frequency*:

- 4G: LTE FDD: B1/B2/B3/B4/B5/B7/B8/B12/B13/ B18/B19/B20/B25/B26/B28
- LTE TDD: B38/B39/B40/B41 3G: WCDMA: B1/B2/B4/B5/B6/B8/B19 2G: GSM: B2/B3/B5/B8
- May vary on different models.


FCC & IC Radiation Exposure Statement

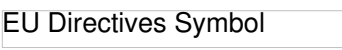

This equipment complies with FCC and Canada radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20cm between the radiator and your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Simplified EU Declaration of Conformity

We, Guangzhou Robustel Co., Ltd., located at 501, Building #2, 63 Yongan Road, Huangpu District, Guangzhou, China, declare that this radio equipment complies with all applicable EU directives. The full text of the EU DoC is available at the following internet address: www.robustel.com/certifications/



The symbol  indicates that the product should not be mixed with general household waste but must be sent to separate collection facilities for recovery and recycling.

- The symbol  indicates that the product meets the requirements of the applicable EU directives.
- The symbol  indicates that the product meets the requirements of the relevant UK legislation.

Technical Support

- Tel: +86-20-82321505
- Email: support@robustel.com
- Web: www.robustel.com

Product Usage Instructions

Overview

The Robustel R1520 is a rugged cellular router that can support 2G, 3G, and 4G LTE Cat 4 networks. It provides high-speed wireless network bandwidth for devices through wireless connections to ensure stable wireless network connections.

To use the Robustel R1520:

1. Ensure that the router is properly connected to a power source.
2. Connect your devices to the router using the appropriate wireless connection (2G, 3G, or 4G LTE).
3. Configure the router settings according to your network requirements.
4. Monitor the wireless network connection and ensure stability.

For detailed instructions on how to configure the router settings and monitor the wireless network connection,

refer to the complete hardware manual available at www.robustel.com/en/documentations/.

Regulatory and Type Approval Information

Table 1: Toxic or Hazardous Substances or Elements with Defined Concentration Limits

Name of the Part	Hazardous Substances									
	(Pb)	(Hg)	(Cd)	(Cr(VI))	(PBB)	(PBDE)	(DEHP)	(BBP)	(DBP)	(DIBP)
Metal parts	o	o	o	o	–	–	–	–	–	–
Circuit modules	o	o	o	o	o	o	o	o	o	o
Cables and cable assemblies	o	o	o	o	o	o	o	o	o	o
Plastic and polymeric parts	o	o	o	o	o	o	o	o	o	o

o: Indicates that this toxic or hazardous substance contained in all of the homogeneous materials for this part is below the limit requirement in RoHS2.0.

X: Indicates that this toxic or hazardous substance contained in at least one of the homogeneous materials for this part might exceed the limit requirement in RoHS2.0.

–: Indicates that it does not contain the toxic or hazardous substance.

Radio Specifications for Europe

RF technologies	2G, 3G, 4G, GNSS, Wi-Fi
Cellular Frequency*	4G: LTE FDD: B1/B2/B3/B4/B5/B7/B8/B12/B13/ B18/B19/B20/B25/B26/B28 LTE TDD: B38/B39/B40/B41 3G: WCDMA: B1/B2/B4/B5/B6/B8/B19 2G: GSM: B2/B3/B5/B8
Max RF power	33 dBm±2dB@GSM, 24 dBm+1/-3dB@WCDMA, 23 dBm±2dB@LTE, 18 dBm@Wi-Fi

* May vary on difference models.

Caution

The user is cautioned that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s) and Part 15 of the FCC Rules.

Operation is subject to the following two conditions:

1. This device may not cause interference.
2. This device must accept any interference, including interference that may cause undesired operation of the device.

Note

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.
If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC& IC Radiation Exposure Statement

This equipment complies with FCC and Canada radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20cm between the radiator and your body.
This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Simplified EU Declaration of Conformity

We, Guangzhou Robustel Co., Ltd. are located at 501, Building #2, 63 Yongan Road, Huangpu District, Guangzhou, China, declare that this radio equipment complies with all applicable EU directives. The full text of the EU DoC is available at the following internet address: www.robustel.com/certifications/

Safety Information

General

- The router generates radio frequency (RF) power. When using the router, care must be taken on safety issues related to RF interference as well as regulations of RF equipment.
- Do not use your router in aircraft, hospitals, petrol stations or in places where using cellular products is prohibited.
- Be sure that the router will not be interfering with nearby equipment. For example: pacemakers or medical equipment. The antenna of the router should be away from computers, office equipment, home appliance, etc.
- An external antenna must be connected to the router for proper operation. Only uses approved antenna with the router. Please contact authorized distributor on finding an approved antenna.

RF exposure

- This device meets the official requirements for exposure to radio waves. This device is designed and manufactured not to exceed the emission limits for exposure to radio frequency (RF) energy set by authorized agencies.
- The device must be used with a minimum separation of 20 cm from a person's body to ensure compliance with RF exposure guidelines. Failure to observe these instructions could result in your RF exposure exceeding the applicable limits.

Note: Some airlines may permit the use of cellular phones while the aircraft is on the ground and the door is open. Router may be used at this time.



The symbol indicates that the product should not be mixed with general household waste but must be sent to separate collection facilities for recovery and recycling.



The symbol indicates that the product meets the requirements of the applicable EU directives.



The symbol indicates that the product meets the requirements of the relevant UK legislation.

Related download link

Find more product documents or tools at: www.robustel.com/en/documentations/

Technical Support

Tel: +86-20-82321505

Email: support@robustel.com

Web: www.robustel.com

Document History

Updates between document versions are cumulative. Therefore, the latest document version contains all updates made to previous versions.


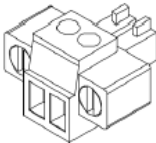
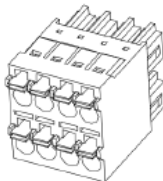
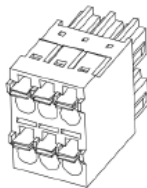



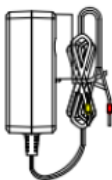
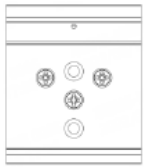
Date	Firmware Version	Document Version	Change Description
July 6, 2022	5.0.0	1.0.0	Initial release.
Nov. 28, 2022	5.0.0	1.0.1	Added declaration for product.

Overview

Robustel R1520 is a rugged cellular router can support 2G, 3G, and 4G LTE Cat 4 networks. It provides high-speed wireless network bandwidth for devices through wireless connections to ensure stable wireless network connections.

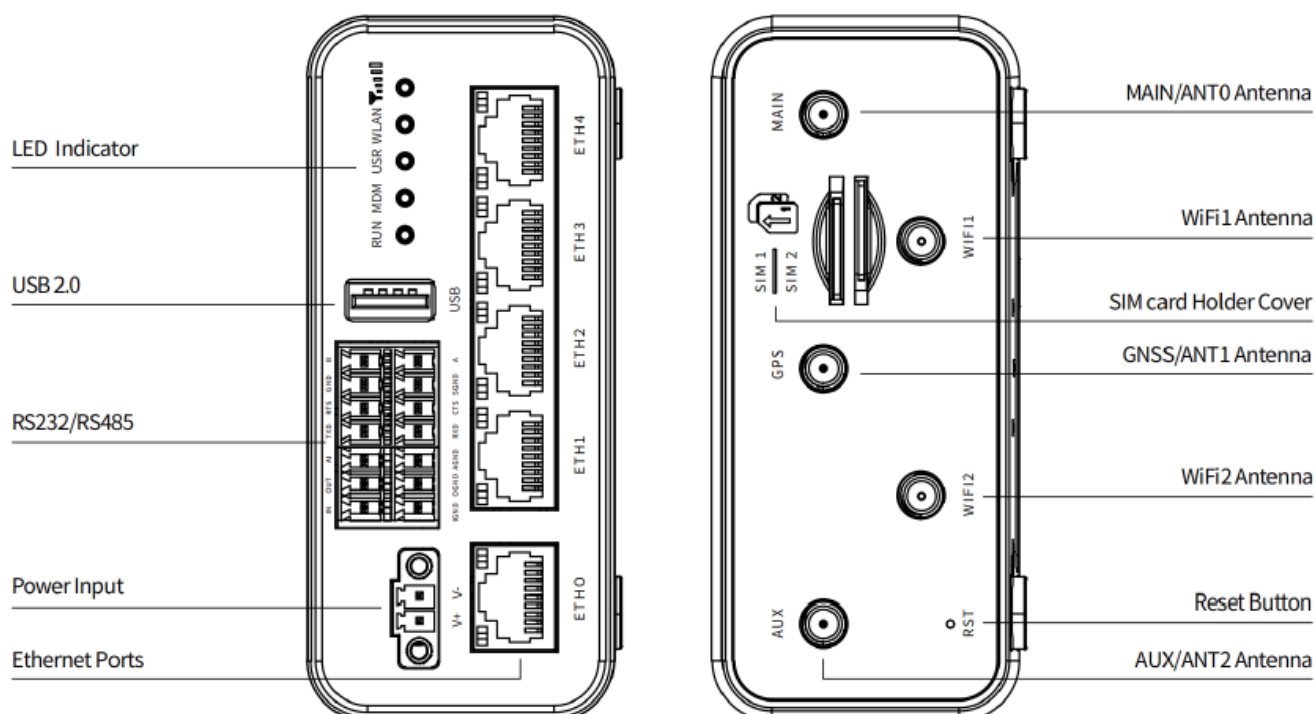
Package Checklist

Before commencing installation ensure your package has the following components:

Device	2PIN Terminal Block	2x4PIN Terminal Block	2x3PIN Terminal Block	SIM Card Sticker
				
Cellular Antenna (Optional)	Wi-Fi Antenna (Optional)	Power Supply (Optional)	Mounting Kit (Optional)	
				

Note: The accessories could be different on specific order.

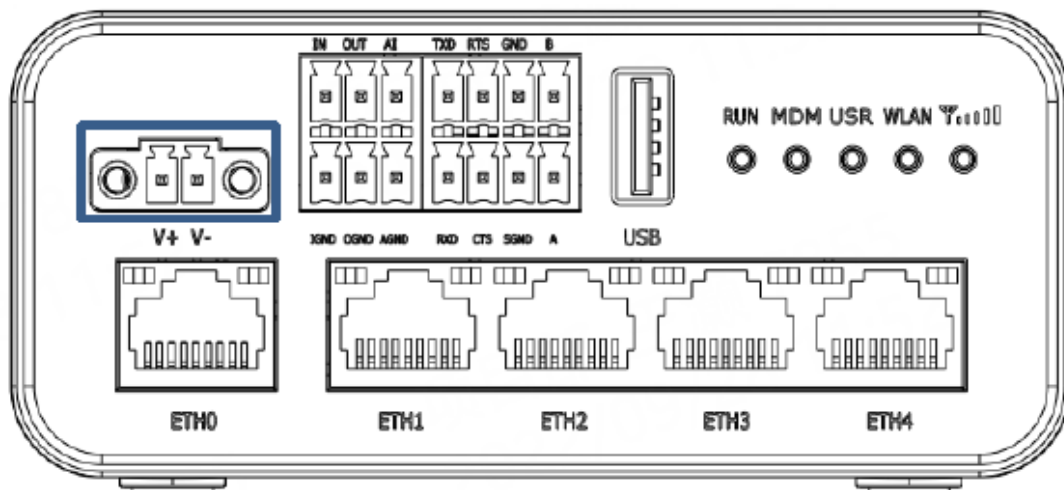
Panel Layout(May vary on difference models)



Interface Descriptions

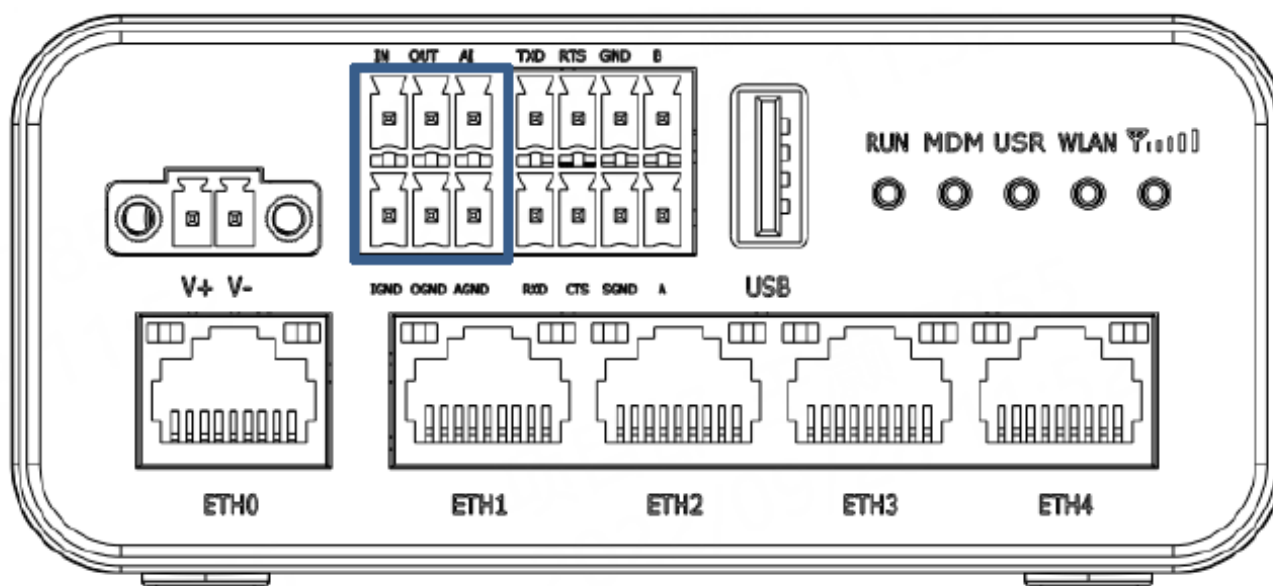
Power Supply

- PIN 3.5mm Terminal Block

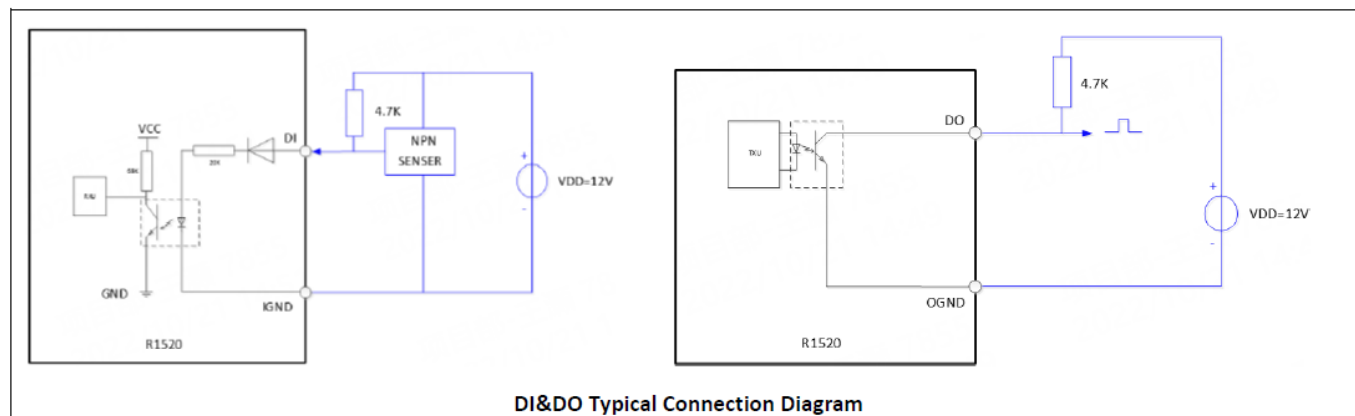


PIN	Description	Note	
1	V+	Positive	9-36 VDC Power Connection Diagram
2	V-	Negative	

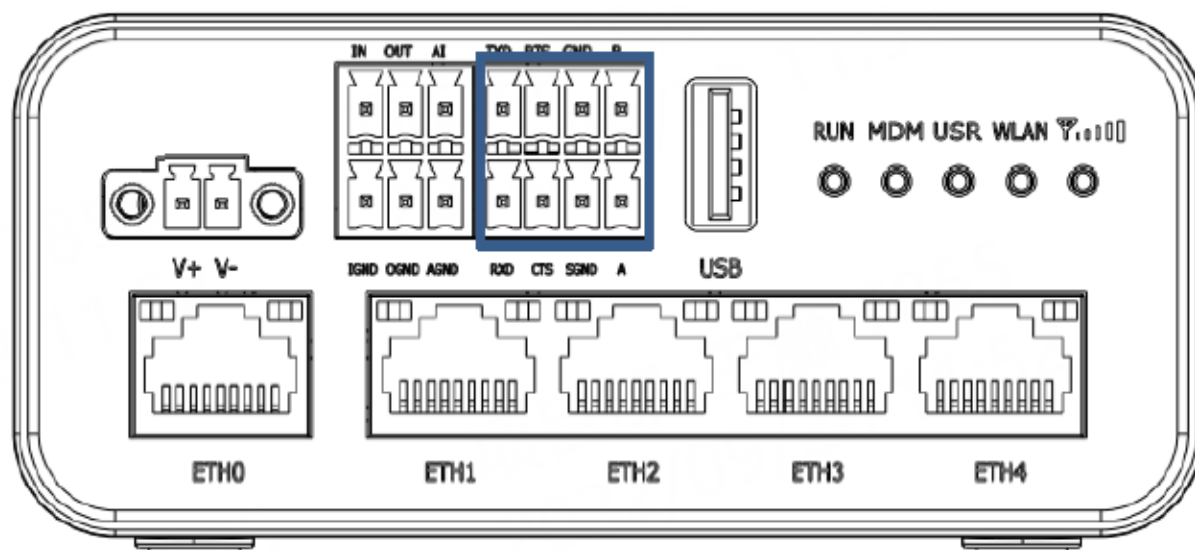
DI/DO AI Interface



PIN	DI	DO	AI	Note
1	IN		—	Digital Input Positive
2	—	OUT	—	Digital Output Positive
3	—	—	AI	Analog Input
4	IGND	—	—	Digital Input Negative
5	—	OGND	—	Digital Output Negative
6	—	—	AGND	Analog Input Signal Ground



RS-232/RS-485



PIN	RS232	RS485	Description
1	TXD	—	Router → Devices
2	RTS	—	Router → Devices
3	—	GND	RS485 Signal Ground
4		B	RS485 Data+ (B)
5	RXD	—	Router ← Devices
6	CTS	—	Router ← Devices
7	SGND	—	RS232 Signal Ground
8	—	A	RS485 Data+ (A)

Reset Button

Feature	Operation
Reboot	Press and hold the RST button for 2~ 5 seconds under the operating status.
Restore to default configuration	Press and hold the RST button for 5~10 seconds, the RUN LED starts blinking quickly, the router will restore to default configuration.
Restore to factory default settings	Once the operation of restoring default configuration is performed twice within one minute, the router will restore to factory default settings.
Note: The more details please refer to RT123_SM_RobustOS Software Manual, 2.3 Factory Reset.	

USB Interface

Feature	Operation
Firmware upgrade	The USB interface can be used for batch firmware upgrades, but it cannot send or receive data with slave devices connected to the USB interface. The user can insert a USB storage device, such as a U disk or a hard disk, at the USB interface. If there is a configuration file or router firmware in the USB storage device, the router will automatically update the configuration file or firmware. For details, please refer to “4.2.6 USB”.

LED Indicator

Name		Color	Status	Description
RUN		Green	On, solid	Router is powered on (System is initializing)
			On, blinking	Router starts operating
			Off	Router is powered off
MODEM		Green	On, solid	Link connection is working
			On, blinking	Data is sent and received
			Off	Link connection is not working
USR	USR-OpenVPN	Green	On, solid	OpenVPN connection is established
			Off	OpenVPN connection is not established
	USR-IPsec	Green	On, solid	IPsec connection is established
			Off	IPsec connection is not established
RSSI		Green	On, solid	Signal Level: Best Signal Level Wireless module: 21-31dB (signal strength)
			On, slow blinking (1s)	Signal Level: Average Signal Level Wireless module: 11-20dB (signal moderate)
			On, fast blinking	Signal Level: Abnormal Signal Level Wireless module: 21-31dB (signal weak)
			Off	No signal
WLAN		Green	On, solid	Wi-Fi is enabled and working properly
			Off	Wi-Fi is disabled or not working properly

Note: You can choose the display type of USR LED. For more details, please refer to

RT123_SM_RobustOS Software Manual, Services > Advanced > System > System Settings > User LED Type.

Ethernet Ports.

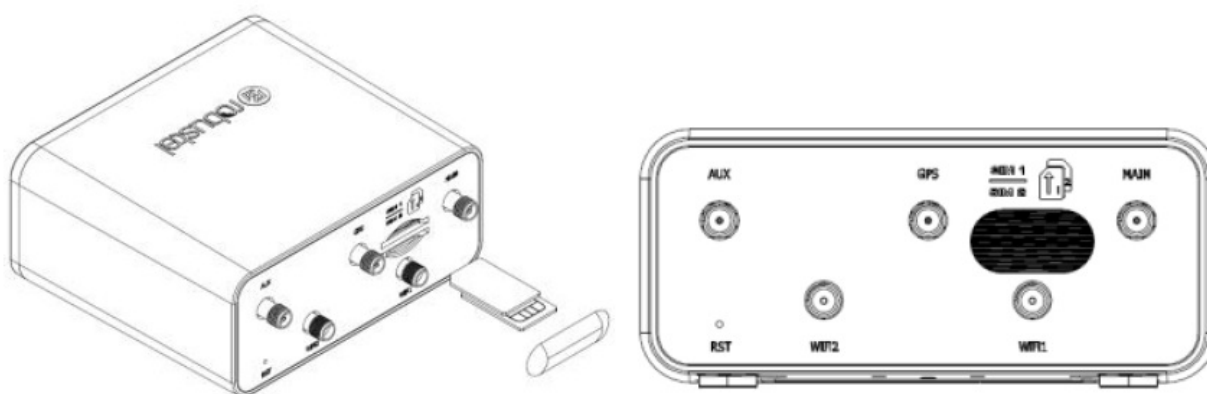
There are five Ethernet ports on R1520, including ETH0 (PoE-PD Optional), ETH1, ETH2, ETH3 and ETH4. Each has two LED indicators. The green one is a link indicator but the yellow one doesn't mean anything. For details about status, see the table below.

Ethernet LED Indicator	Status	Description
Link indicator (Green)	On, solid	Connection is established
	On, blinking	Data is being transferred
	Off	Connection is not established

Hardware Installation

1. SIM Card Installation

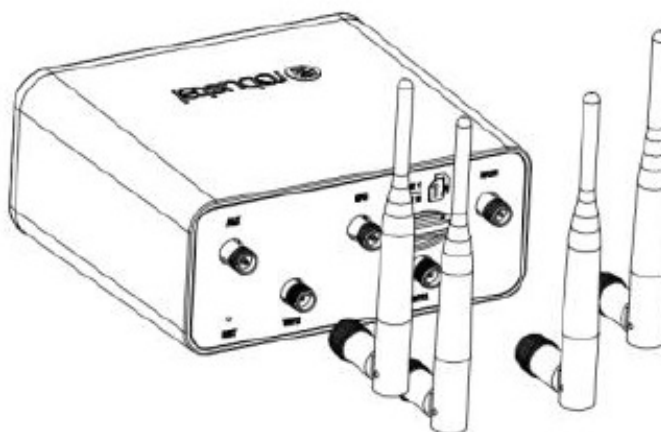
1. Insert the SIM cards into the device, then stick the sticker.



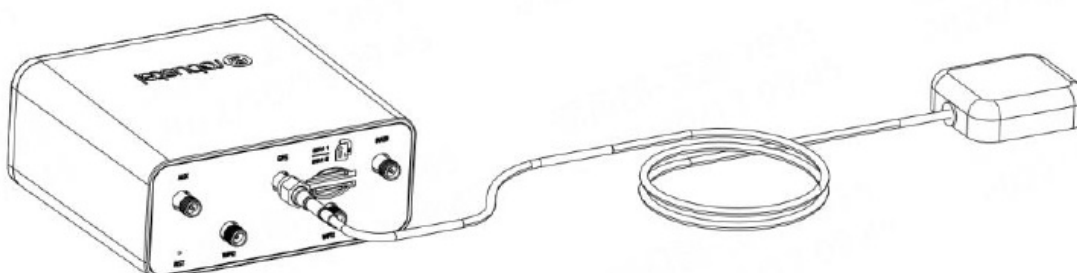
2. Antenna Installation

Rotate the antenna into the antenna connector accordingly.

1. Cellular Antenna

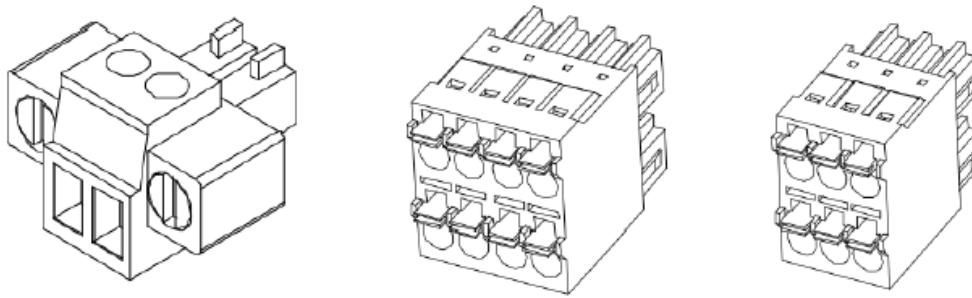


2. GPS Antenna



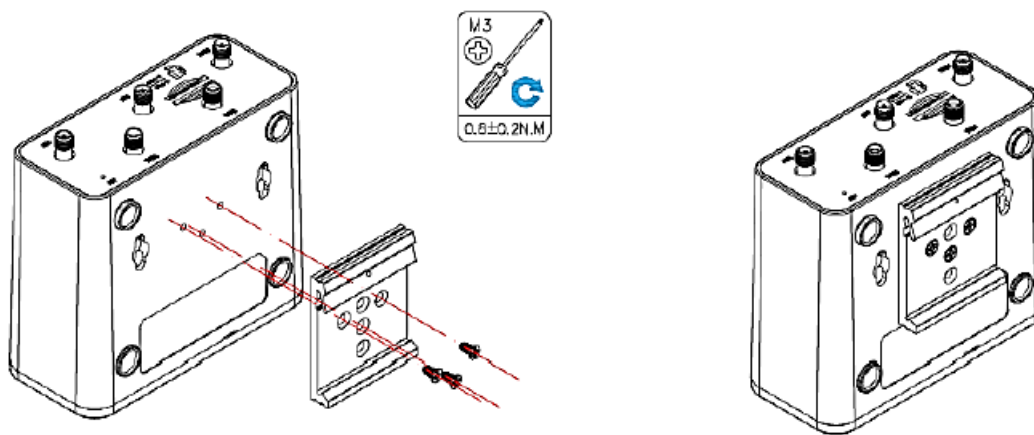
3. Terminal Block Installation.

Insert the 2PIN 2x3PIN 2x4PIN terminal blocks into the interfaces connector, then can connect the devices or sensors to the gateway via corresponding interfaces e.g. RS232/RS485, DIDO...

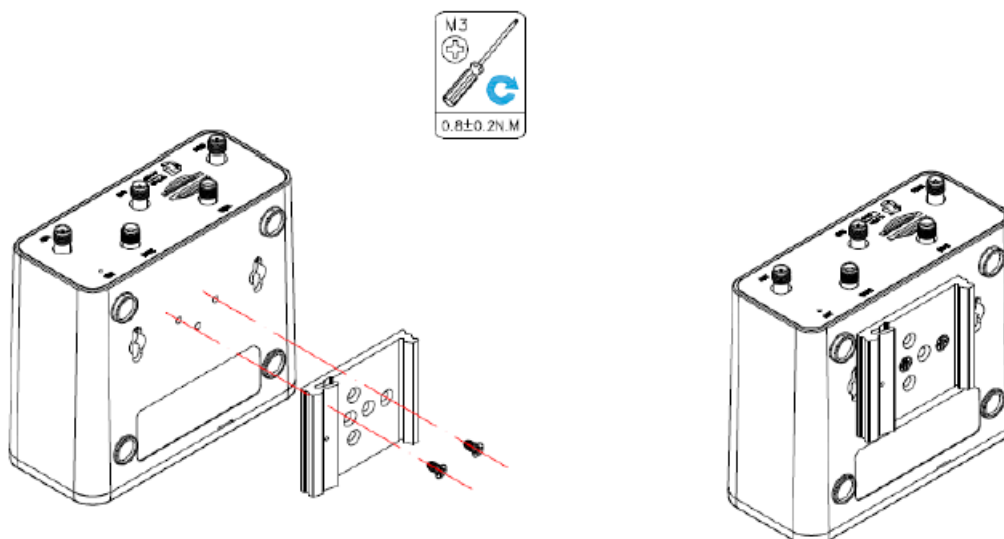


4. Mounting Kit installation

Wall mounting



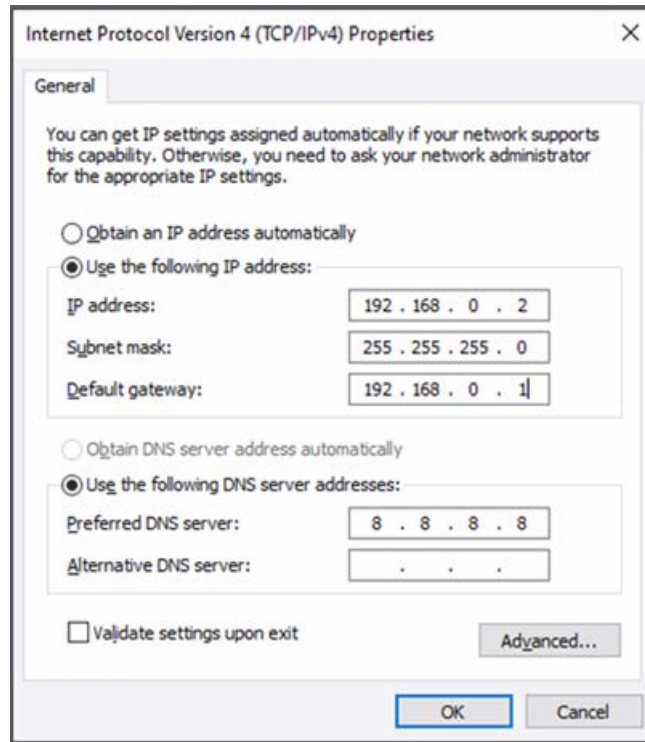
DIN rail mounting



Login to the Device

1. Connect the router's Ethernet port to a PC with a standard Ethernet cable.
2. Before logging in, manually configure the PC with a static IP address on the same subnet as the gateway address, click and configure "Use the following IP address".

3.

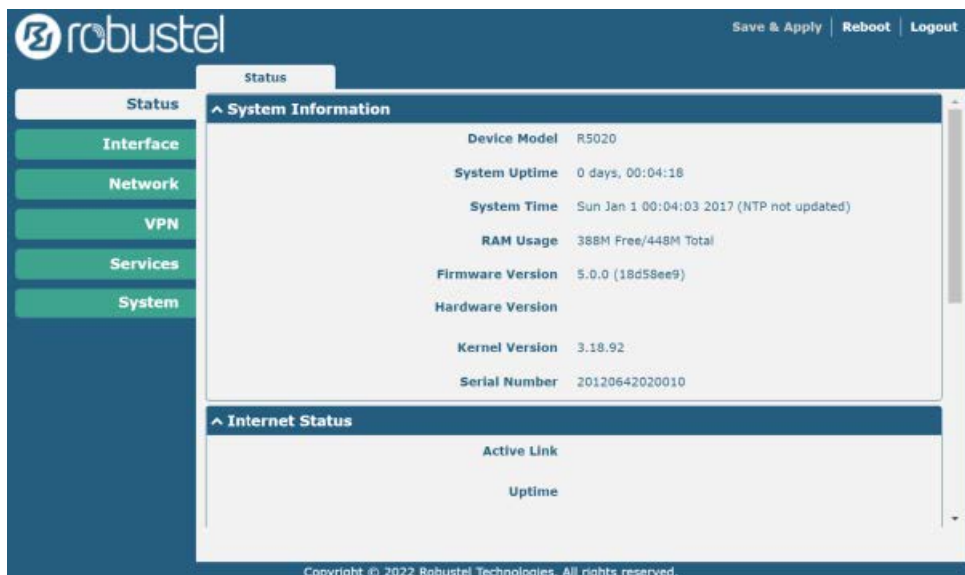


To enter the gateway's web interface, type `http://192.168.0.1` into the URL field of your Internet browser.

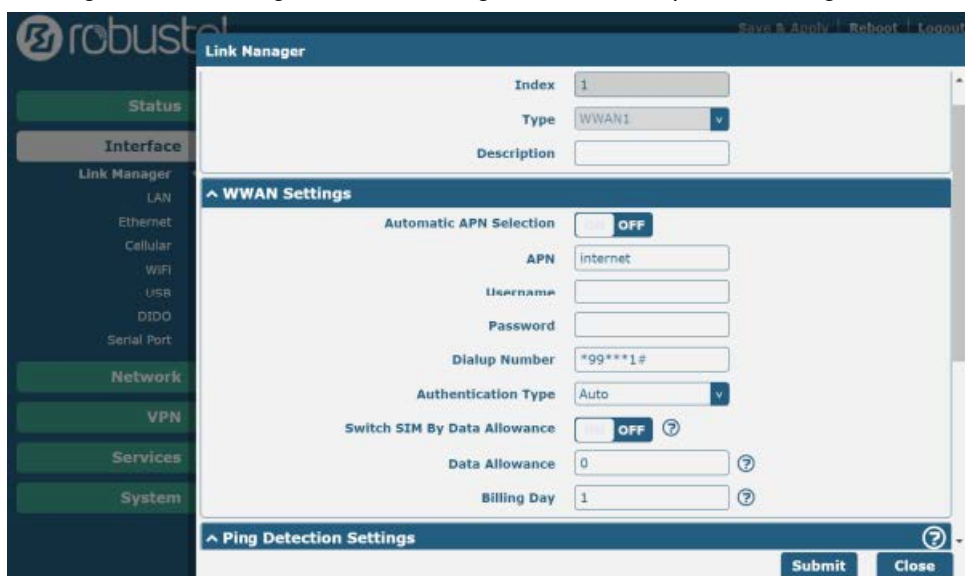
4. Use login information shown in the product label when prompted for authentication.



5. After logging in, the home page of the we interface is displayed, then you can view system information and perform configuration on the device.



6. The automatic APN selection is ON by default, if need to specify your own APN, please go to the menu Interface->Link Manager->Link Setting->WWAN Settings to finish the specific setting.



7. The more configuration details please refer to RT123_SM_RobustOS Software Manual.(END)

Support: support@robustel.com

Website: www.robustel.com

© 2022 Guangzhou Robustel Co.,Ltd.



All rights reserved. Subject to change without notice

Documents / Resources

	<p>robustel R1520 VPN Router with Dual SIM [pdf] Instruction Manual</p> <p>R1520, R1520 VPN Router with Dual SIM, VPN Router with Dual SIM, Router with Dual SIM, Dual SIM</p>
--	--

References

- [4G/LTE/5G/Cellular Routers, Gateways and Modems for Industrial IoT - Robustel](#)

-  [4G/LTE/5G/Cellular Routers, Gateways and Modems for Industrial IoT - Robustel](#)
-  [Certifications | Robustel - Industry-leading IoT Solutions Provide](#)

Manuals+.