![robustel logo]

Hardware Installation Quick Guide

R2000--Industrial Cellular VPN Router

Package Checklist

Before installing theR2000 router, verify that the package contains the following items:

- Robustel R2000 Router
- Terminal Block for Power
- Document and Software CD

Optional Accessories

- AC/DC Power Supply Adapter
- SMA Cellular antenna (HSPA+/LTE)
- RP-SMA Wi-Fi antenna (stubby or magnet)
- 35mm Din-Rail mounting kit or Wall mounting kit

Notify your sales representative if any of the above items is missing or damaged.

Environment Requirements

- Power Input:

    9 to 26V DC（A014401, A014402, A014403, A014404, A014405, A014406, A014701, A014702, A014703, A014704, A014705, A014706）;

    9 to 36V DC

- Power Consumption: Idle: 100 mA @ 12 V, Data Link: 500 mA (peak) @ 12 V
- Operating Temperature: -20 to +65°C
- Operating Humidity: 5 to 95% RH

Hardware Introduction

As shown in the following figures, R2000 router has two Ethernet ports (2xLAN or 1xLAN+1xWAN) and two cellular SIM card slots.
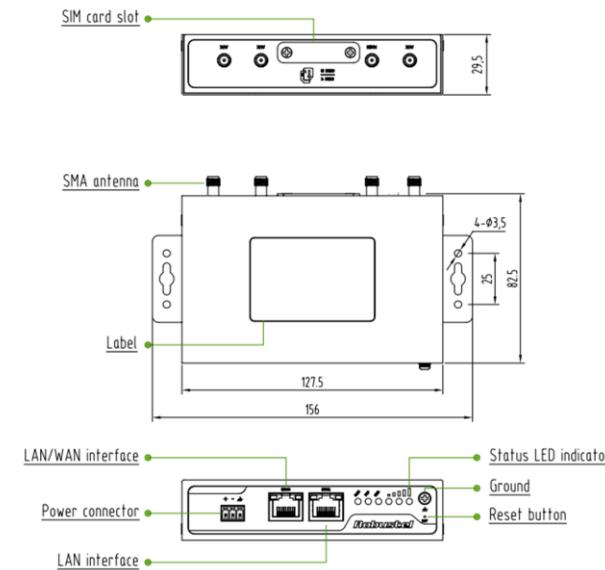
Caution

- Router shall be grounding reliably under the rule which in order to avoid lightning strike damage.
- When use the power adapter, please note the power polarity.
- Please pay attention to waterproof in the storage, transportation and operation environment.
- Suggest to mounting the router on a horizontal flat surface.
- If warranty label was damaged in warranty period of product, no free maintenance.

Reset Button

Restore the R2000 to factory default settings by using a pointed object (such as a Pointed pen) to keep pushing the button about 16 seconds once power on, until all the LED light blink one by one recurrently. When all the LED light blinks hold on 2 seconds, it means that the router loads default successfully.

In addition, reboot R2000 by pushing the button for 2~7 seconds under working status.

Ethernet Port

Each Ethernet port has two LED indicators. The yellow one is **Link indicator** and the green one doesn't mean anything. There are three status of Link indicator.

Indicator	Status	Description
Link Indicator	Off	Connection is down.
	On	Connection is up.
	Blink	Data is being transmitted

LED Indicators

Name	Color	Status	Function
RUN	Green	Blinking	Router is ready.
		On	Router is starting.
		Off	Router is power off.
PPP	Green	Blinking	PPP Indicator: Null
		On	PPP Indicator: PPP connection is up.
		Off	PPP Indicator: PPP connection is down.
USR	Green	Blinking	SIM: using backup SIM card.
			NET: register to a low level network.
		Off after blinking	SIM: working fine.
			NET: working fine.
		Light up	OpenVPN: OpenVPN is connected.
			IPSec: IPSec is connected.
			GRE: GRE is connected.
		Off after lighting up	OpenVPN: OpenVPN is disconnected.
			IPSec: IPSec is disconnected.
			GRE: GRE is disconnected.
	Green	On	Signal level: 21-31 (Perfect signal level).
	Yellow	On	Signal level: 11-20 (Average signal level).
	Red	On	Signal level: 1-10 (Exceptional signal level).
	When the network is disconnected, those three signal LEDs are designed as a binary combination code to indicate a series of error report. (Green Yellow Red) On: 1 Off: 0 001 AT command failed 010 no SIM card detected 011 it need to enter the PIN code 100 it need to enter the PUK code 101 registration failed 110 something wrong happened in the module		

Hardware Installation

Step 1: After unpacking the unit, please refer to the following figure insert the SIM into the R2000 router.

Please note: recommended torque for inserting is 0.5N.m and the maximum torque is 0.7N.m

Step 2: Connect router with an external SMA antenna. Make sure the antenna is within correct frequency range and is screwed tightly.

Please note: recommended torque for mounting is 0.35N.m

Step 3: Use a wire connect the ground screw of router to ground surface before connecting devices. (Optional)

Step 4: Use a standard cross-over Ethernet cable to connect R2000 to PC with Eth0 or Eth1 port.

Step 5: The router may be placed on a horizontal surface such as a desktop, mounted on a DIN-rail, or mounted on the wall.

Wall Mount

Use 4 pcs of M2.5*4 countersunk head cross recess screws to fix the router on the two metal plates. And then use 2 pcs of M3*6 screw with point-end to mount the router with two metal plates on the wall.

Please note: recommended torque for mounting is 0.5N.m and the maximum torque is 0.7N.m

Din Rail

Mount the router on a DIN rail with 3 pcs of M3*6 countersunk head cross recess screw screws, and then hang the DIN-Rail on the holder. You need to choose a standard holder.

Please note: recommended torque for mounting is 1.0N.m and the maximum torque is 1.2N.m

Insert SIM Card
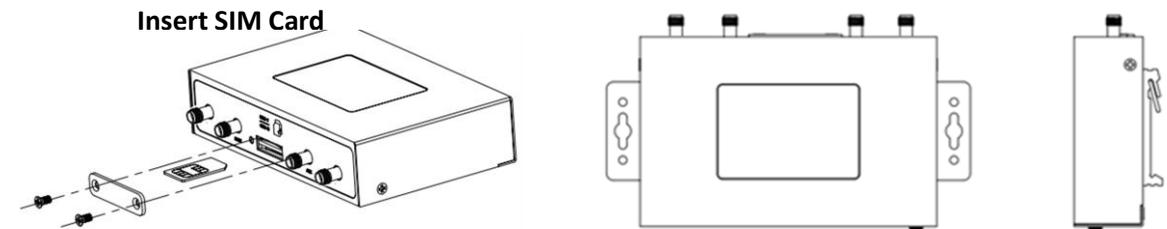
Step 6: R2000 router supports reverse polarity protection, but always connects to the power adapter correctly. There are two cables associated with the power adapter. Following to the color of the head, connect the cable marked red to the positive pole through a terminal block, and connect the yellow one to the negative in the same way.

Step 7: (Optional) If you want to power on R2000 by Ethernet, please refer to the following topology and connect R2000 to PSE (Power Sourcing Equipment).

POE power input voltage range is 48~57 VDC.