



Installation Quick Guide

R3000 Lite - Dual SIM Industrial Cellular VPN Router

Packing List

Before installing the R3000 Lite router, please verify the kit contents as following:

- Robustel R3000 Lite router
- Power terminal block
- Documents and software CD

Optional Accessories

- AC/DC power supply adapter
- Rubber/magnet SMA cellular antenna for HSPA+/LTE
- Serial cable (DB9 female connector switches to DB9 male connector)
- 35 mm DIN rail mounting kit or wall mounting kit

*If any of the above items is missing or damaged, please contact your Robustel Sales Representative.

Environmental Requirements

Power input: 6 to 26 VDC

Power consumption: 100 mA@12 V in idle state, 400 mA (peak) @12 V in communication state

Operating temperature: -40 °C to 85 °C (R3000-L3E supports -20 °C to 75 °C)

Relative humidity: 5% to 95% RH

Hardware Introduction

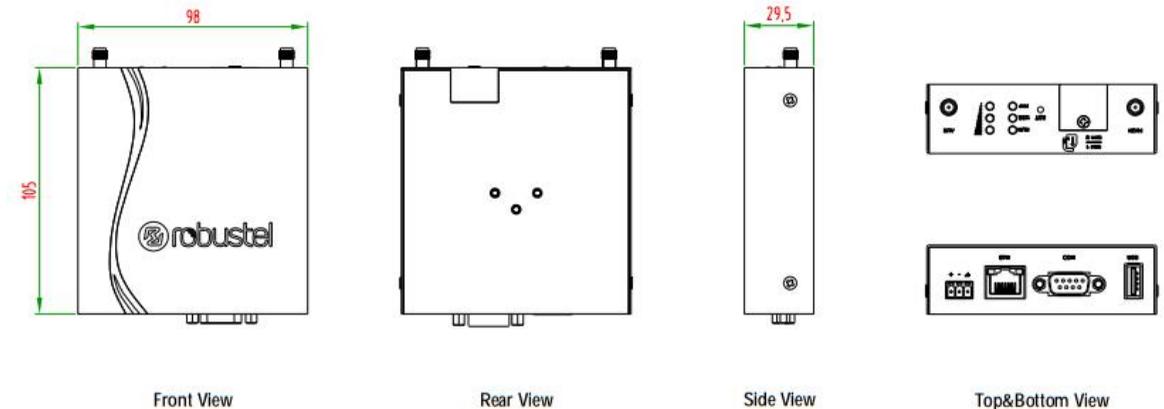
As shown in the following figure, R3000 Lite router has an Ethernet port (LAN interface), a DB9 serial port (supports for RS232 and RS485), two cellular SIM card slots, two cellular antenna interfaces and a GPS antenna interface (optional).



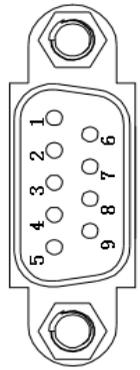
CAUTION!

- ◆ Device should be in accordance with the reliable grounding to avoid lighting strike.
- ◆ Use the rated power adapter for the device, and note the power polarity when wiring.
- ◆ Pay attention to waterproof in storage, transporting and operating environment.
- ◆ Place the device on the horizontal surface.
- ◆ Damaging the product's warranty labeling cannot enjoy the free maintenance in warranty period.

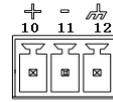
Dimension: 105 mm x 98 mm x 29.5 mm



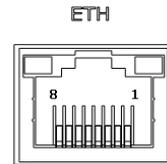
Pinouts



PIN	Debug	RS232	RS485 (2-wire)
1			Data+ (A)
2		RXD	
3		TXD	
4	DRXD		
5	GND	GND	
6			Data- (B)
7		RTS	
8		CTS	
9	DTXD		



PIN	Polarity
10	Positive
11	Negative
12	GND



PIN	Function
1	TX+
2	TX-
3	RX+
6	RX-

LEDs

LED Name	Color	State	Description
RUN	Green	On, solid	Router is booting
		On, blinking	Router is ready
		Off	Router is powered off
USR	Green	On, solid/blinking	VPN tunnel/PPPoE/DynDNS is on
		Off	VPN tunnel/PPPoE/DynDNS is off
PPP	Green	On, solid	PPP connection enabled
		On, blinking	There is dataflow
		Off	PPP connection is disabled

RSSI LEDs	Description
None	No signal or no SIM card inserted correctly
1 bar (only the first LED is on)	Signal level: 1-10 (Abnormal signal level)
2 bar (the first and the second LED are on)	Signal level: 11-20 (Average signal level)
3 bar (all the RSSI LEDs are on)	Signal level: 21-31 (Optimum signal level)

Ethernet Port

The Ethernet port has two LED indicators. The yellow one is **Link Indicator** and the green one is **Speed Indicator**. Each indicator has three status, for details see the table below:

Indicator	State	Description
Link Indicator	On	Connection is enabled
	On, blinking	Data is being transmitted
	Off	Connection is disabled
Speed Indicator	On	100 Mbps mode
	Off	10 Mbps mode

Reset Button

After powering up the router, press the RST button by a small non-conductive stick with a blunt end in about 60 seconds until all three LEDs (RUN, PPP, USR) on the left side blinking 5 times simultaneously. Then the router will be restored to factory default settings.

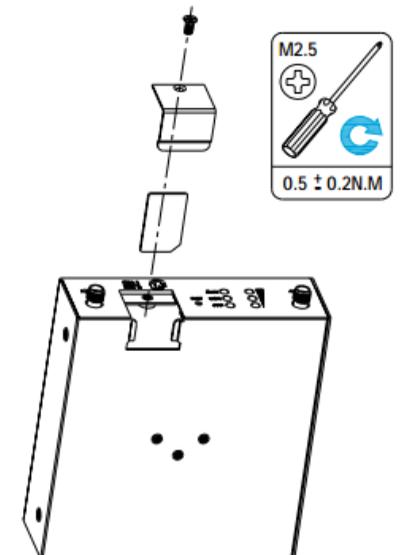
Hardware Installation Steps

Step 1: After opening the package, refer to right side figure to remove the cover, loosen the screws associated with the cover by using a screwdriver and then find the SIM card slot. To insert SIM card, press the card with fingers until snap on and then tighten the screws associated with the cover by using a screwdriver.

Note: In order to protect the slot and SIM card, make sure the router is power off before inserting or removing the SIM card.

Step 2: Connect the SMA external antenna connector to the router's antenna interface and twist tightly. Make sure the antenna is within the correct frequency range.

Note: Recommended torque for mounting is 0.35 N.m



Step 3: Connect the router to the site ground wire by the ground screw before powering on. Router grounding helps prevent the noise effect due to electromagnetic interference (EMI).

Step 4: Connect the router's Ethernet port to a PC through a standard crossed network cable.

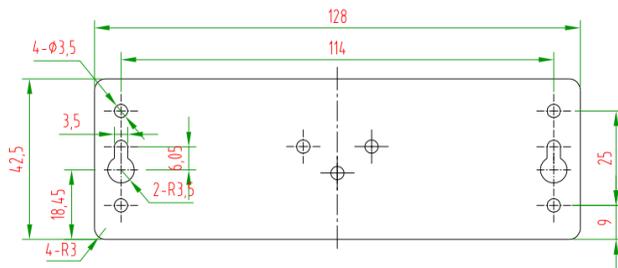
Step 5: R3000 Lite router supports for horizontal surface placement, DIN rail mounting and wall mounting. For details refer to next figure.

Step 6: Use the power adapter to power on the router. R3000 Lite 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. The last step is to plug in and power on.

Two methods for mounting the router

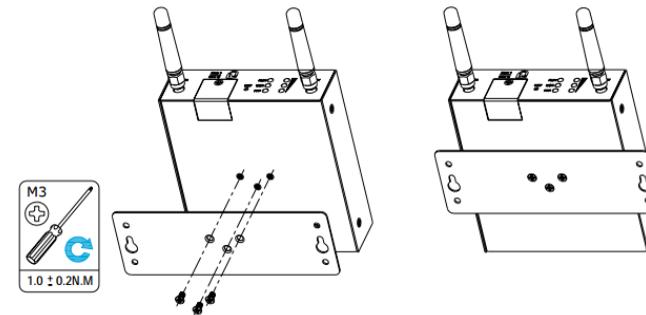
- Wall mounting**

Wall mounting kit size (unit: mm)



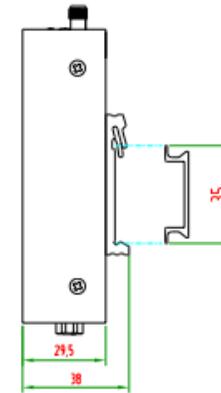
Use 3 pcs of M3*4 countersunk phillips screws to fix the router on the wall mounting kit, and then use 2 pcs of M3 drywall screws to mount the router associated with the wall mounting kit on the wall.

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



- DIN rail mounting**

DIN rail size (unit: mm)



Use 3 pcs of M3*4 countersunk phillips screws to fix the router on the DIN rail, and then hang the DIN rail on the bracket. It is necessary to choose the standard bracket.

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

