

Robustel R3000-4L (B018745)

Robustel R3000-4L Industrial Cellular VPN Router User Manual

Model: R3000-4L (B018745)

1. INTRODUCTION

The Robustel R3000-4L is a dual SIM industrial cellular VPN router designed for robust and reliable connectivity in harsh environments. It provides seamless, secure, and fast wireless connectivity for M2M/IoT applications, functioning as a versatile and easy-to-deploy VPN gateway.

This manual provides comprehensive instructions for the setup, operation, maintenance, and troubleshooting of your R3000-4L router.

2. PRODUCT OVERVIEW

2.1 Key Features

- Dual SIM support for redundant cellular connectivity.
- Industrial-grade design for harsh environments.
- Support for WWAN1, WWAN2, Ethernet WAN, WLAN WAN link backup and ICMP detection via Link Manager.
- Backup Mode options: WWAN1+WWAN2 Cold, WWAN1+WAN/WLAN Warm, and load balancing backup mode.
- Supports IPv6 for future-proof networking.
- Powered by RobustOS with SDK and App support.
- Integrated GPS for location services.
- Multiple connectivity options: 2x Ethernet ports, USB, WLAN.
- Wide input voltage range: 9-60VDC.

2.2 Package Contents

The standard package for the Robustel R3000-4L includes:

- Robustel R3000-4L Industrial Cellular VPN Router
- (Additional accessories such as antennas, power adapter, mounting kit may vary by region or specific bundle. Please check your packaging for a complete list.)

2.3 Device Layout



Figure 1: Front Panel of Robustel R3000-4L Router

This image displays the front panel of the Robustel R3000-4L router. Visible components include:

Antenna Connectors: AUX and MAIN (top), GPS and WLAN (bottom).

LED Indicators: RUN, PPP, USR (left column); NET, SIM (right column), and signal strength indicators (red, yellow, green bars).

USB Port: Standard USB port.

Ethernet Ports: ETH0 and ETH1, with status LEDs.

Terminal Block: For In1, In2, OUT1, OUT2, GND, A, B connections.

Reset Button: Labeled RST.

3. SETUP GUIDE

3.1 Safety Precautions

- Ensure the power supply voltage is within the specified range (9-60VDC).
- Do not expose the device to extreme temperatures, humidity, or direct sunlight.
- Disconnect power before performing any installation or maintenance.
- Use appropriate tools and follow all local electrical codes.

3.2 SIM Card Installation

1. Locate the SIM card slots on the device. The R3000-4L supports dual SIM cards.
2. Ensure the device is powered off.
3. Insert the SIM cards into the designated slots until they click into place. Ensure correct orientation.
4. Close the SIM card cover securely.

3.3 Antenna Connection

1. Connect the cellular antennas to the MAIN and AUX connectors.
2. If using WLAN, connect the WLAN antenna to the WLAN connector.
3. If using GPS, connect the GPS antenna to the GPS connector.
4. Ensure all antenna connections are finger-tight.

3.4 Power Connection

1. Connect the power supply to the device's power input terminal block.
2. Ensure correct polarity (positive to positive, negative to negative).
3. Verify the power source provides 9-60VDC.
4. Once all connections are secure, apply power to the device.

3.5 Initial Network Connection

1. Connect a computer to one of the Ethernet ports (ETH0 or ETH1) using an Ethernet cable.
2. Configure your computer's network adapter to obtain an IP address automatically (DHCP).
3. Open a web browser and navigate to the router's default IP address (refer to the device's documentation or label for the default IP, commonly 192.168.1.1).
4. Log in using the default username and password (refer to the device's documentation).

4. OPERATING INSTRUCTIONS

4.1 LED Indicators

Understanding the LED indicators is crucial for monitoring the router's status:

LED	Status	Description
RUN	Green (Solid)	System is running normally.
RUN	Green (Blinking)	System is booting up or performing an update.
PPP	Green (Solid)	PPP connection established.
PPP	Off	No PPP connection.

LED	Status	Description
USR	Configurable	User-definable LED, configurable via software.
NET	Green (Solid)	Network connection active.
NET	Off	No network connection.
SIM	Yellow (Solid)	SIM card detected and ready.
SIM	Off	No SIM card detected or SIM error.
Signal Strength	Red/Yellow/Green	Indicates cellular signal strength (Red: Weak, Yellow: Medium, Green: Strong).

4.2 Web Interface Configuration

The Robustel R3000-4L is managed primarily through its web-based interface. After logging in, you can configure various settings:

- **Network Settings:** Configure WAN (Cellular, Ethernet, WLAN), LAN, VPN (IPsec, OpenVPN, L2TP, PPTP), Firewall rules, and Port Forwarding.
- **System Settings:** Manage user accounts, update firmware, configure time settings, and view system logs.
- **Link Manager:** Set up link backup and failover strategies for redundant connectivity (WWAN1, WWAN2, Ethernet WAN, WLAN WAN).
- **SMS/Email Alerts:** Configure notifications for critical events.
- **GPS:** Monitor GPS location data.
- **SDK/App:** Utilize the RobustOS SDK to develop custom applications or install pre-built apps.

Refer to the detailed online documentation or the router's built-in help for specific configuration steps for each feature.

5. MAINTENANCE

5.1 Firmware Updates

Regularly updating the router's firmware ensures optimal performance, security, and access to new features. Firmware updates can typically be performed via the web interface. Always download firmware from the official Robustel website.

5.2 Cleaning

Keep the device clean and free from dust. Use a soft, dry cloth for cleaning. Do not use liquid cleaners or aerosols.

5.3 Environmental Considerations

Ensure the router operates within its specified temperature and humidity ranges to prevent damage and ensure longevity.

6. TROUBLESHOOTING

This section provides solutions to common issues you might encounter.

6.1 No Power

- Verify the power adapter is correctly connected to the router and the power outlet.
- Check the power source for voltage and stability (9-60VDC).
- Ensure the power terminal block connections are secure and correctly polarized.

6.2 No Cellular Connection

- Check the SIM card installation and ensure it is properly seated.
- Verify the SIM card is active and has a valid data plan with your mobile operator.
- Ensure cellular antennas are securely connected to the MAIN and AUX ports.
- Check the SIM and NET LEDs for status.
- Confirm APN settings are correctly configured in the web interface.
- Check cellular signal strength via the web interface or signal strength LEDs. Relocate the router if signal is weak.

6.3 Cannot Access Web Interface

- Ensure your computer is connected to an Ethernet port of the router.
- Verify your computer's IP settings (should be set to DHCP or a static IP within the router's subnet).
- Confirm you are using the correct default IP address (e.g., 192.168.1.1) and port (if applicable).
- Try clearing your browser's cache or using a different browser.
- If you have forgotten the password, perform a factory reset using the RST button (refer to the device's specific reset procedure, usually press and hold for 5-10 seconds while powered on). *Note: A factory reset will erase all configurations.*

7. SPECIFICATIONS

Feature	Description
Model Number	R3000-4L (B018745)
Connectivity Technology	Ethernet, Cellular (Dual SIM)
Wireless Communication Standard	802.11a, 802.11b, 802.11g, 802.11n
Frequency Band Class	Dual-Band (5 GHz)
Input Voltage	9-60VDC
Special Feature	LED Indicator, GPS
Compatible Devices	Personal Computer
Recommended Uses	Business, M2M/IoT Applications
Operating System	RobustOS + SDK + App
Included Components	Router

8. WARRANTY INFORMATION

This product is manufactured by Robustel. For specific warranty terms and conditions, please refer to the warranty card included with your product or visit the official Robustel website. Warranty coverage typically includes defects in materials and workmanship under normal use.

Please retain your proof of purchase for warranty claims.


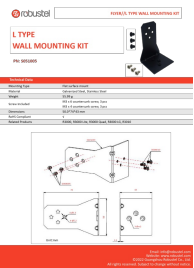
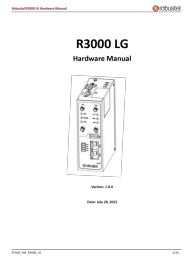

9. TECHNICAL SUPPORT

For technical assistance, product documentation, or software downloads, please visit the official Robustel support

website. You may also contact their technical support team directly via the contact information provided on their website. When contacting support, please have your product model number (R3000-4L / B018745) and serial number ready.



Related Documents

	<p>Robustel Cloud Manager Service: IoT Solutions</p> <p>Explore the Robustel Cloud Manager Service (RCMS), a modular IoT cloud platform for scalable, cost-effective IoT solutions. Learn about device monitoring, management, and control features, including RobustLink and RobustVPN. Discover recommended Robustel routers for various applications like smart metering, passenger WiFi, industrial automation, and kiosks.</p>
	<p>Robustel L Type Wall Mounting Kit PN: S051005</p> <p>Official product information for the Robustel L Type Wall Mounting Kit (PN: S051005). This mounting bracket is designed for flat surface mounting and is constructed from galvanized steel and stainless steel. It includes M3 x 6 and M3 x 4 countersunk screws. Compatible with Robustel R3000 series devices.</p>
	<p>Robustel R3000 LG Hardware Manual: Industrial LoRaWAN Gateway Specifications and Installation</p> <p>Comprehensive hardware manual for the Robustel R3000 LG industrial LoRaWAN gateway. Covers specifications, regulatory compliance, installation, interface descriptions, and basic login procedures.</p>
	<p>Robustel R3000 Quad Hardware Manual</p> <p>Hardware manual for the Robustel R3000 Quad Industrial Cellular VPN Router, detailing its features, specifications, installation, and operation.</p>