



# R3000 Lite



## Industrial Dual SIM 5G RedCap VPN Router

1 x Ethernet + 1 x RS-232 + 1 x RS-485 + 1 x USB Host



### INTRODUCTION

The Robustel Industrial Dual SIM 5G RedCap VPN Router (R3000 Lite) is a rugged cellular router offering advanced mobile connectivity for machine to machine (M2M) applications. The R3000 Lite is suitable for industrial applications such as pipeline monitoring, water treatment, and gas and electricity distribution networks and many similar environments where rugged hardware and reliable cellular communications are required. R3000 Lite has extensive overvoltage protection, high EMC immunity and has a DIN-rail and panel-mount form factor making it ideal for use in any kind of industrial automation enclosure.

The R3000 Lite supports the following software features:

- Smart Roaming**—intelligent network selection tool for roaming SIMs
- RobustVPN**—Simple remote access on any SIM using Robustel hosted VPN
- RCMS**—Free Router Management Platform—very feature rich

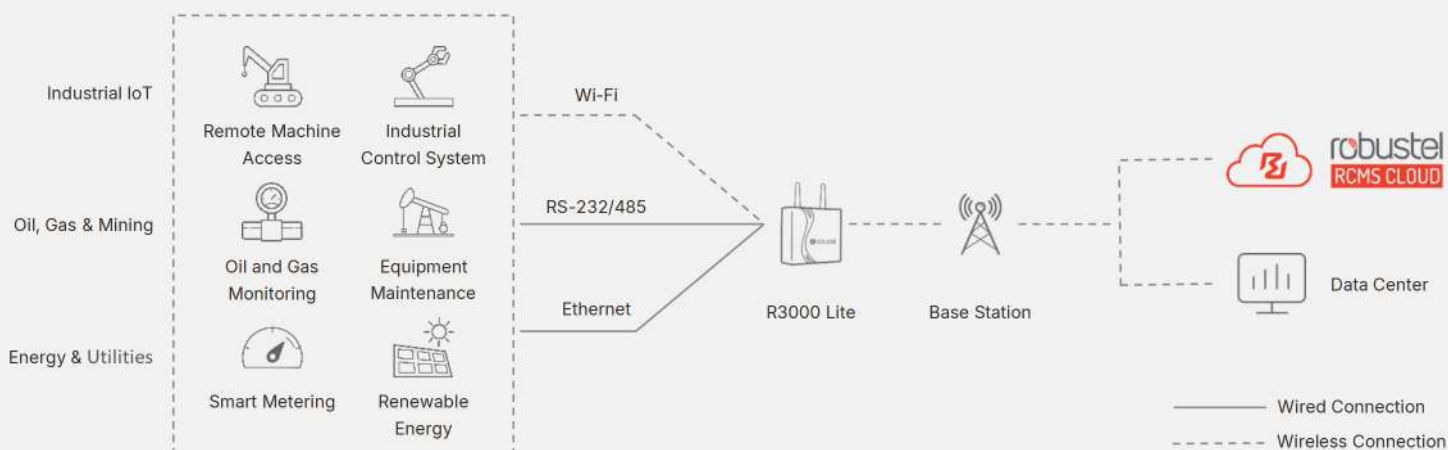
The **Robustel Cloud Manager Service (RCMS)** is a unified cloud-based platform designed for real-time monitoring and centralized management of industrial IoT devices. Fully compatible with Robustel routers and gateways, RCMS delivers an interactive geospatial dashboard that enables users to visualize device locations and track critical metrics such as data usage, signal strength, and network status. To ensure seamless operations, the platform facilitates over-the-air (OTA) updates for firmware, configurations, and applications, minimizing downtime while optimizing system performance. For more information or to get started with RCMS, visit: <https://rcms-cloud.robustel.net>

### KEY FEATURES

- Dual-SIM redundancy for reliable 5G RedCap and 4G LTE cellular connectivity
- RobustOS with SDK and App Center support
- Secure VPN support: IPsec, OpenVPN, GRE, L2TP, PPTP, DMVPN, and WireGuard
- Centralized management via Web, CLI, SMS, SNMP, RCMS, and RobustLink Cloud
- Robust industrial design with 9–36 VDC input and desktop, wall-mount, or DIN-rail installation options



### APPLICATION EXAMPLE



# SPECIFICATIONS

## Hardware

### Hardware System

CPU	ARM, 400 MHz
RAM	128 MB
Flash	256 MB

### Cellular Interface

Number of antennas	2 (MAIN + DIV)
Connector	SMA-K
SIM	2 x Mini SIM (2FF)
Standards	5G NR-Light, LTE FDD, LTE TDD

### Ethernet Port

Number of ports	1 x 10/100 Mbps Ethernet LAN port
Magnet isolation protection	1.5 kV

### Serial Port

Number of ports	1 x RS-232 + 1 x RS-485
Connector	DB9 female
Baud rate	300–230400 bps
Flow control	RTS/CTS (for RS-232)

### Others

Reset button	1 x RST
USB port	1 x USB 2.0 (host), up to 480 Mbps
LED indicators	1 x RUN, 1 x PPP, 1 x USR, and 3 x RSSI
Built-in	Watchdog, RTC, and Timer

### Power Supply and Consumption

Connector	3.5 mm terminal block
Input voltage	12/24 VDC, 9–36 VDC Reverse polarity protection, surge protection
Power consumption	Idle: 1.0 W@12 V Max: 5.0 W@12 V
Rec. power supply	12 VDC/1.5 A power adapter

### Physical Characteristics

Ingress protection	IP30
Housing & Weight	Metal, 305 g
Dimensions	29.5 x 98 x 105 mm
Installation	Desktop, wall mounting & 35 mm DIN rail mounting
Operating temperature	-40 to +75 °C
Storage temperature	-40 to +85 °C
Relative humidity	5–95% RH (non-condensing)

### Regulatory and Type Approvals

Environmental	RoHS2.0, WEEE
EMI	EN 55032 Conducted Emission Class B EN 55032 Radiated Emission Class B
EMS	EN 61000-4-2 (ESD) Contact Level 2, Air Level 3 EN 61000-4-3 (RS) Level 3 EN 61000-4-4 (EFT) Level 3 EN 61000-4-5 (Surge) Level 3, AC Mains Power Port Level 3, Signal Ports EN 61000-4-6 (CS) Level 3

## Software

### Operating System (Basic Features of RobustOS)

Network protocols	PPP, PPPoE, ARP, VLAN, ICMP, NAT, TCP, UDP, DHCP, DNS, DDNS, NTP, HTTP, HTTPS, Telnet, SSH2, SMTP, etc.
VPN tunnels	IPsec, OpenVPN, GRE, WireGuard
Firewalls	DMZ, anti-DoS, Filtering (IP/Domain name/MAC address), Port Mapping, Access Control
Remote management	Web, CLI, SMS, RCMS
Serial port protocols	Transparent, TCP Client/Server, UDP, Modbus RTU Gateway
Others	Smart Roaming V3, etc.

### SDK

Operating system	RobustOS (Based on Debian 11 Bullseye)
Programming languages	C, C++, Python, Java, Node.js, etc. (for users to develop own applications)
Debian repository available	
Available Flash for SDK	64 MB
Available RAM for SDK	64 MB

### App Center (Available Apps for RobustOS)

Apps*	L2TP, PPTP, DMVPN, VRRP, QoS, SNMP, Language, RCMS, Dynamic Routing, Modbus Master, TR069*, Edge2Cloud
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\*Request on demand. For more Apps please visit [www.robustel.com](http://www.robustel.com).

### Cloud Platform

Robustel Cloud Manager Service (RCMS)	RobustLink, RobustVPN, Operation Console
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# ORDERING INFORMATION

Model	Order Code	Category	Frequency Bands	Region	Certifications	Package Contents
R3000-L5R	A002500709	5G RedCap	5G NR: n1/3/5/7/8/20/28/38/40/41/77/78	EMEA, ANZ, and SEA	CE*, UKCA*	1 x Router (B Code: B002500727) 1 x DIN Rail Mounting Kit
	A002500708	5G RedCap	4G: LTE FDD: B1/3/5/7/8/20/28 LTE TDD: B38/40/41/42/43	EMEA, ANZ, and SEA	CE*, UKCA*	1 x Router (B Code: B002500727) 2 x Cellular Antenna 1 x Power Adapter 1 x DIN Rail Mounting Kit

**NOTE:**

1. For more information about regional and carrier-specific variants, please contact us.
2. \* Denotes certification in progress.