

R3000

Industrial Dual SIM Cellular VPN Router

2 x Ethernet + 2 x DI + 2 x DO + 1 x RS-232 + 1 x RS-485



INTRODUCTION

The Robustel Industrial Dual SIM Cellular VPN Router R3000 is a rugged cellular router designed to provide state-of-the-art mobile connectivity for machine-to-machine (M2M) applications.

The R3000 is widely utilized in industrial sectors such as pipeline monitoring, water treatment, gas and electricity distribution networks, and other similar environments where a durable product with reliable cellular communications is essential.

It features extensive overvoltage protection, high electromagnetic compatibility (EMC) immunity, and a DIN-rail/panel mount form factor, making it ideal for use in various industrial automation enclosures.

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>

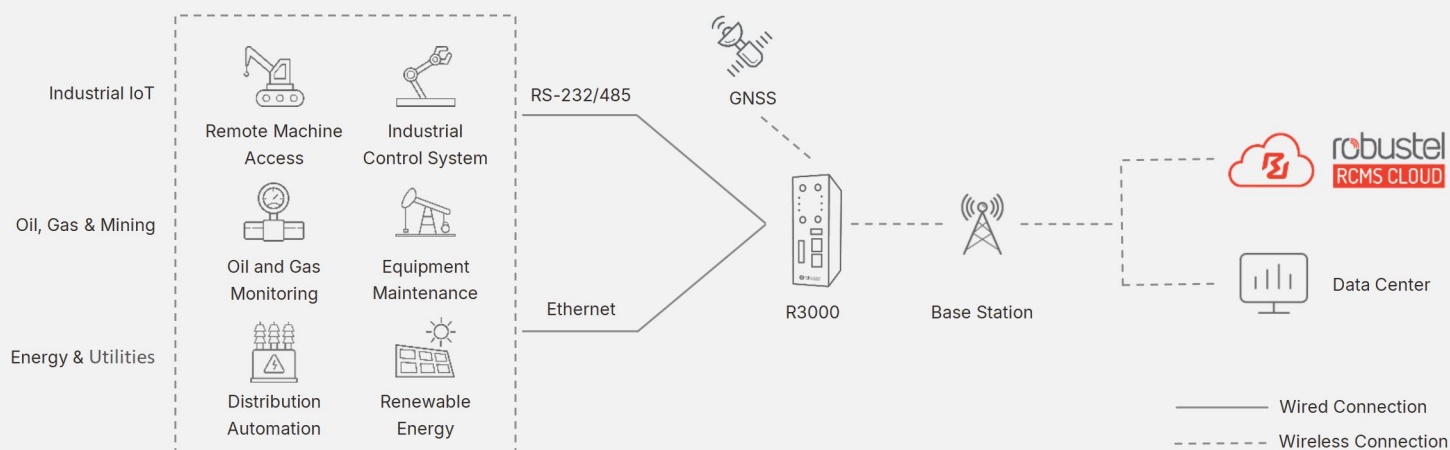


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RCMS CLOUD

KEY FEATURES

- Link Manager supporting WWAN1, WWAN2, Ethernet WAN link backup, and ICMP detection
- Backup Mode options for cold, warm, and load balancing
- Supports IPv6
- RobustOS with SDK and application support
- Supports IPsec, OpenVPN, GRE, L2TP, PPTP, DMVPN and WireGuard
- Management and maintenance via Web, CLI, SNMP, and RCMS Cloud
- Robust industrial design with input voltage options of 9–60 VDC, supporting desktop, wall, or DIN rail mounting

APPLICATION EXAMPLE



SPECIFICATIONS

Hardware

Hardware System

CPU	ARM, 400 MHz
RAM	128 MB
Flash	256 MB

Cellular Interface

Number of antennas	2 (MAIN + AUX)
Connector	SMA-K
SIM	2 x Mini SIM (2FF)

Ethernet Port

Number of ports	2 x 10/100 Mbps, 2 x LAN or 1 x LAN + 1 x WAN
Magnet isolation protection	1.5 kV

Serial Port

Number of ports	1 x RS-232 + 1 x RS-485
Connector	7-pin 3.5 mm female socket with lock
Baud rate	300-230400 bps
Flow control	RTS/CTS (for RS-232)

Digital Input/Output Port

Number of ports	2 x DI (dry contact) + 2 x DO (wet contact)
Connector	7-pin 3.5 mm female socket with lock
Isolation	3 kVDC or 2 kVrms
Absolute max voltage	DI: DC input voltage +5 VDC DO: 30 VDC
Absolute max current	300 mA

GNSS Interface (optional)

Number of antennas	1
Connector	SMA-K with 50 ohms impedance
Tracking sensitivity	-146 dBm
Horizontal position	< 2.5 m CEP50
Protocol	NMEA-0183

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, 1 x RSSI, 1 x NET and 1 x SIM
Watchdog	Built-in

Power Supply and Consumption

Connector	3-pin 5 mm female socket with lock
Input voltage	12/24/48 VDC, 9-60 VDC Reverse polarity protection, surge protection
Power consumption	Idle: 1.5 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, 570 g
Dimensions	43.5 x 104 x 125 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	RoHS 2.0, WEEE
EMI	EN 55032 Conducted Emission Class B EN 55032 Radiated Emission Class B
EMS	EN 61000-4-2 (ESD) Level 4 EN 61000-4-3 (RS) Level 4 EN 61000-4-4 (EFT) Level 4 EN 61000-4-5 (Surge) Level 3, AC Mains Power Port EN 61000-4-6 (CS) Level 2 EN 61000-4-8 (PFM) Level 4

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 Linux)
Programming languages	C, C++
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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*Available upon request. For more apps, please visit www.robustel.com.

Cloud Platform

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

Model	Order Code	GNSS	Frequency Bands	Region	Certifications	Package Contents
R3000-4L	A001800704	-	4G: LTE FDD: B1/2/3/4/5/7/8/28 LTE TDD: B40 3G: WCDMA: B1/2/5/8 2G: GSM: B2/3/5/8	ANZ and LATAM	RCM, ANATEL, CRC, MTC	1 x Router (B Code: B018728)
	A001800706	-	4G: LTE FDD: B1/3/5/7/8/20 LTE TDD: B38/40/41 3G: WCDMA: B1/5/8 2G: GSM: B3/8	EMEA and SEA	CE, UKCA, E-Mark, IMDA, SIRIM, NTC, TDRA	1 x Router (B Code: B018735)
	A001800708	√	4G: LTE FDD: B1/2/3/4/5/7/8/12/13/18/19/20/25/26/28 LTE TDD: B38/39/40/41 3G: WCDMA: B1/2/4/5/6/8/19 2G: GSM: B2/3/5/8	Global	FCC, IC, UL, PTCRB, AT&T, Verizon, CE, UKCA, SIRIM, E-Mark, CB, TDRA, RCM	1 x Router (B Code: B018745)

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