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R3000 Lite

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Industrial Dual SIM Cellular VPN Router
1 x ETH + 1 x RS-232 + 1 x RS-485 + 1 x USB Host

INTRODUCTION

The Robustel Industrial Dual SIM Cellular VPN Router R3000 Lite is a rugged cellular router that provides state-of-the-art mobile connectivity for machine-to-machine (M2M) applications. The R3000 Lite is extensively used in industrial applications such as pipeline monitoring, water treatment, gas and electricity distribution networks, and many other environments where a hardened product with reliable cellular communications is essential. It features extensive overvoltage protection, high EMC immunity, and a DIN-rail/panel mount form factor, making it ideal for use in various industrial automation enclosures.

The following software features are present on the R3000 Lite:
Smart Roaming: an intelligent network selection tool for roaming SIMs
RobustVPN: simple remote access on any SIM using Robustel-hosted VPN
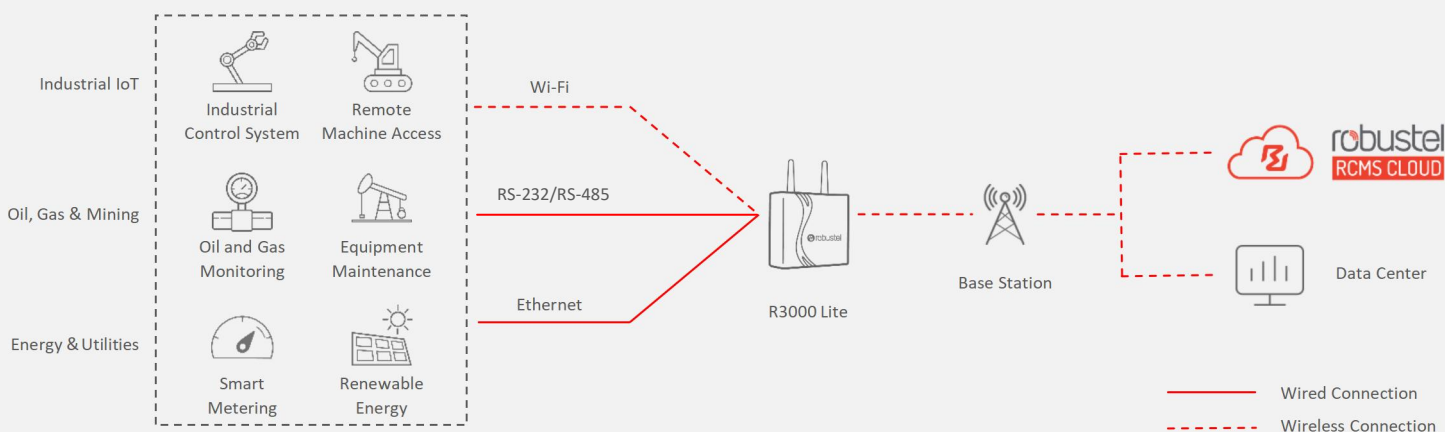**RCMS**: a free router management platform that is feature-rich

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. Experience robust, cloud-native device management by registering at: https://rcms-cloud.robustel.net

robustel RCMS CLOUD

KEY FEATURES

➢ Dual SIM redundancy for persistent 2G/3G/4G cellular network connections

➢ RobustOS with SDK and application support

➢ Supports IPsec, OpenVPN, GRE, L2TP, PPTP, and DMVPN

➢ Management and maintenance via Web, CLI, SNMP, and RCMS Cloud

➢ Robust industrial design with input voltage options of 9 ~ 60 V DC, supporting desktop, wall, or DIN rail mounting

APPLICATION EXAMPLE

Industrial IoT	Industrial Control System	Remote Machine Access
Oil, Gas & Mining	Oil and Gas Monitoring	Equipment Maintenance
Energy & Utilities	Smart Metering	Renewable Energy

Wi-Fi
RS-232/RS-485
Ethernet

R3000 Lite
Base Station
robustel RCMS CLOUD
Data Center

Wired Connection
Wireless Connection

SPECIFICATIONS

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)
Standards	GSM/GPRS/EDGE/WCDMA/HSDPA/HSUPA/HSPA+/ DC-HSPA+/TD-SCDMA/CDMA (CDMA 1X/EVDO)/ FDD LTE/TDD LTE

Ethernet Port

Number of ports	1 x 10/100 Mbps, LAN port
Magnet isolation protection	1.5 KV

Serial Port

Number of ports	1 x RS-232 + 1 x RS-485
Connector	DB9, female
ESD protection	±15 KV
Baud rate	300 bps ~ 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 USR, 1 x PPP, 3 x RSSI
Built-in	RTC, Watchdog, Timer

Power Supply and Consumption

Connector	3.5 mm terminal block
Input voltage	12/24 V DC, 9 ~ 36 V DC
	Reverse polarity protection, surge protection
Power consumption	Idle: 1.5 W@12 V
	Max: 5 W@12 V
Recommended power supply	12 V DC/1.5 A power adapter

Physical Characteristics

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

Software (Basic features of RobustOS)

Network protocols	PPP, PPPoE, TCP, UDP, DHCP, ICMP, NAT, HTTP, DNS, NTP, SMTP, Telnet, HTTPs, ARP, VLAN, SSH2, DDNS, 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
Serial port protocols	Transparent, TCP Client/Server, UDP, Modbus RTU Gateway
Routing	Static routing, Dynamic routing (BGP, OSPF v2, RIP v1/v2)
Others	Smart Roaming V2

SDK

Supported programming languages	C, C++
Flash available for SDK	64 MB
RAM available for SDK	64 MB

App Center (Available Apps for RobustOS)

Apps*	L2TP, PPTP, DMVPN, VRRP, QoS, WLAN Multi AP, SNMP, Language, RCMS, Edge2Cloud, etc.

*Request on demand. For more Apps please visit www.robustel.com.

Cloud Platform

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

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
	EN 61000-4-6 (CS) Level 3

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ORDERING INFORMATION

Model	Order Code	Frequency Bands*	Country /Region	Certification	Package Contains
R3000-L4L	A002500702	4G: LTE FDD: B1/B2/B3/B4/B5/B7/B8/B12/B13/B18/B19/B20/B25/B26/B28 LTE TDD: B38/B39/B40/B41 3G: WCDMA: B1/B2/B4/B5/B6/B8/B19 2G: GSM: B2/B3/B5/B8	Global	CE UKCA CB TDRA RCM	1 x R3000 Lite Router (B Code: B025718)
	A002500703	4G: LTE FDD: B1/B3/B8/B18/B19/B26 LTE TDD: B41 3G: WCDMA: B1/B6/B8/B19	Japan	Telec JATE	1 x R3000 Lite Router (B Code: B025719)
	A002500704	4G: LTE FDD: B1/B3/B7/B8/B20/B28A 3G: WCDMA: B1/B8 2G: GSM: B3/B8	EMEA+SEA	CE UKCA CB SIRIM NBTC	1 x R3000 Lite Router (B Code: B025720)
	A002500705	4G: LTE FDD: B1/B3/B5/B7/B8/B20 LTE TDD: B38/B40/B41 3G: WCDMA: B1/B5/B8 2G: GSM: B3/B8		CE UKCA CB	1 x R3000 Lite Router (B Code: B025717)
	A002500706	4G: LTE FDD: B1/B2/B3/B4/B5/B7/B8/B28 LTE TDD: B40 3G: WCDMA: B1/B2/B5/B8 2G: GSM: B2/B3/B5/B8	ANZ+LATAM	RCM CRC SUBTEL MTC URSEC ANATEL	1 x R3000 Lite Router (B Code: B025712)

For more information about frequency bands in different countries, please contact your Robustel sales representative.