R3000 Lite robustOS

Industrial Dual SIM Cellular VPN Router

1 Eth + 1 RS232 + 1 RS485 + 1 USB Host

INTRODUCTION

The Robustel Industrial Dual SIM Cellular VPN Router (R3000 Lite) is a rugged cellular router offering state-of-the-art mobile connectivity for machine to machine (M2M) applications. R3000 Lite is used extensively in industrial applications such as pipeline monitoring, water treatment, Gas & Electricity distribution networks and many similar environments where a hardened product with bulletproof cellular communications is required. R3000 Lite has extensive overvoltage protection, high EMC immunity and has a DIN-rail / panel mount form-factor making it ideal for use in any kind of industrial automation enclosure.

The following software features are present on R3000 Lite:
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
Data Guard – Automatically stop data overruns to avoid billshock

RCMS is Robustel's free router monitoring service that is fully compatible with the R3000 Lite. It allows customer to see a location overview of their routers quickly and simply on a map. Features such as data usage, signal strength, current network and much more can then be viewed on a per router basis. Over-the-air updates are supported for Firmware, router configuration and Apps serving as essential 'insurance' if anything was not quite right during deployment.

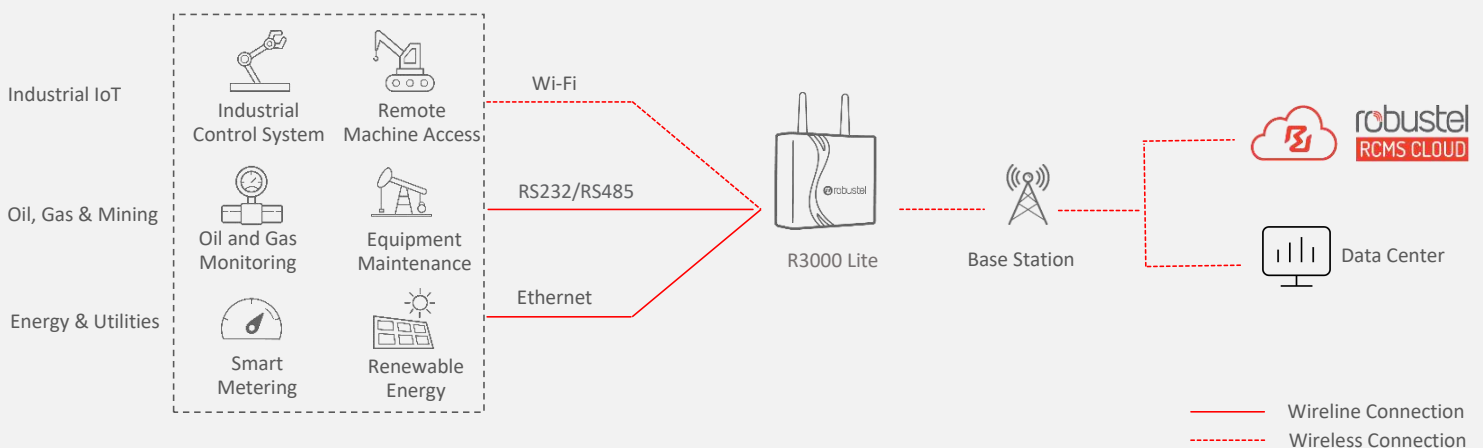You can try Robustel's free router management platform by signing up here:
https://rcms-cloud.robustel.net

KEY FEATURES

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

➢ RobustOS + SDK + App

➢ IPsec/OpenVPN/GRE/L2TP/PPTP/DMVPN

➢ Management and maintenance via Web/CLI/SMS/SNMP/RobustLink Cloud

➢ Robust industrial design (9 ~ 36 VDC, desktop or wall mounting 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 · RS232/RS485 · Ethernet → R3000 Lite → Base Station → RCMS Cloud / Data Center

—— Wireline Connection
- - - Wireless Connection

SPECIFICATIONS

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

Serial Interface
Number of ports	1 x RS232 + 1 x RS485
Connector	DB9, female
ESD protection	±15 KV
Baud rate	300 bps ~ 230400 bps
Flow control	RTS/CTS (for RS232)

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

Software (Basic features of RobustOS)
Network protocols	PPP, PPPoE, TCP, UDP, DHCP, ICMP, NAT, HTTP, HTTPs, DNS, ARP, BGP, RIP, OSPF, NTP, SMTP, Telnet, VLAN, SSH2, DDNS, etc.
VPN tunnel	IPsec, OpenVPN, GRE
Firewall	DMZ, anti-DoS, Filtering (IP/Domain name/ MAC address), Port Mapping, Access Control
Remote management	Web, CLI, SMS
Serial port	Transparent, TCP Client/Server, UDP, Modbus RTU Gateway

App Center (Available Apps for RobustOS)
Apps*	L2TP, PPTP, DMVPN, VRRP, QoS, Data Guard, WLAN Multi AP, SNMP, Language, RCMS

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

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

Power Supply and Consumption
Connector	3.5 mm terminal block
Input voltage	9 ~ 36 VDC
Power consumption	Idle: 100 mA@12 V
	Data link: 400 mA (peak) @12 V

Physical Characteristics
Ingress protection	IP30
Housing & Weight	Metal, 305 g
Dimensions	105 x 98 x 29.5 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

Regulatory and Type Approvals
Environmental	RoHS 2.0, WEEE
EMI	EN 55032: 2012/AC: 2013 (CE & RE) Class B
EMS	IEC 61000-4-2 (ESD) Contact Level 2; Air Level 3
	IEC 61000-4-3 (RS) level 3
	IEC 61000-4-4 (EFT) level 3
	IEC 61000-4-5 (Surge) Level 3
	IEC 61000-4-6 (CS) level 3

ORDERING INFORMATION

Model	PN	Category	Frequency Bands*	Country/Region	Certifications (*In progress)
R3000-L4L	B025712	Cat 4	**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	Oceania South America	RCM, CRC, SUBTEL, MTC, ENACOM, URSEC
	B025713		**4G**: LTF FDD: B2/B4/B5/B13/B17 **3G**: UMTS: B2/B5	USA	FCC, PTCRB, AT&T, Verizon
	B025717		**4G**: LTE FDD: B1/B3/B5/B7/B8/B20 LTE TDD: B38/B40/B41 **3G**: WCDMA: B1/B5/B8 **2G**: GSM: B3/B8	EMEA	CE*
	B025718	Cat M1	**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	EMEA	CE
	B025719	Cat 4	**4G**: LTE FDD: B1/B3/B8/B18/B19/B26 LTE TDD: B41 **3G**: WCDMA: B1/B6/B8/B19	Japan	Telec, JATE
	B025720		**4G**: LTE FDD: B1/B3/B7/B8/B20/B28A **3G**: WCDMA: B1/B8 **2G**: GSM: B3/B8	EMEA	CE

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