R3000

robustOS

Industrial Dual SIM Cellular VPN Router

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

INTRODUCTION

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

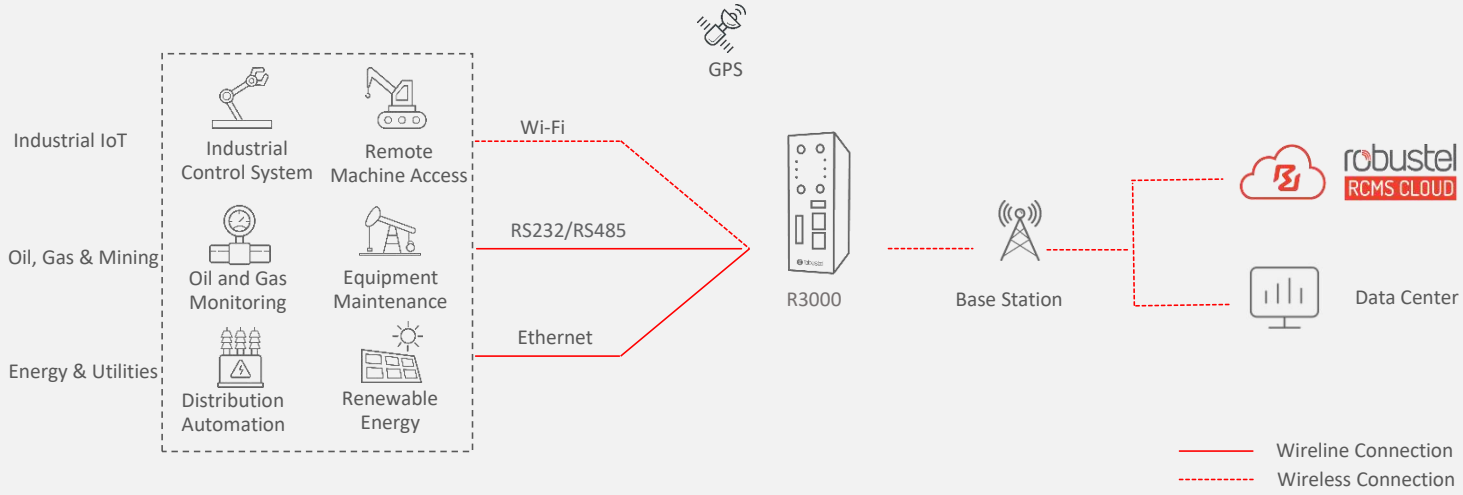
You can try Robustel's free router management platform by signing up here:
https://rcms-cloud.robustel.net

robustel RCMS CLOUD

KEY FEATURES

- The feature *Link Manager* supports WWAN1, WWAN2, Ethernet WAN, WLAN WAN link backup and ICMP detection
- The option *Backup Mode* supports cold, warm and load balancing
- Supports IPv6
- RobustOS + SDK + App
- IPSec/OpenVPN/GRE/L2TP/PPTP/ DMVPN
- Management and maintenance via Web/CLI/SNMP/RCMS Cloud
- Robust industrial design (9 ~ 60V DC, desktop or wall mounting or DIN rail mounting)

APPLICATION EXAMPLE



SPECIFICATIONS

Cellular Interface

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

Ethernet Interface

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

Wi-Fi Interface (Optional)

Number of antennas	1
Connector	RP-SMA-K
Standards	802.11 a/b/g/n, supports AP and Client modes
Frequency bands	2.4 GHz 5 GHz
Security	Open, WPA, WPA2, WEP
Encryption	AES, TKIP, WEP64
Data speed	Up to 150 Mbps

GNSS Interface (Optional)

Number of antennas	1
Connector	SMA-K with 50 ohms impedance
Tracking sensitivity	GPS: greater than -148 dBm GNSS: greater than -140 dBm
Horizontal position accuracy	GPS: 2.5 m GNSS: 4.0 m
Protocol	NMEA-0183 V2.3

Serial Interface

Number of ports	1 x RS232 + 1 x RS485
Connector	7-pin 3.5 mm female socket with lock
ESD protection	±15 KV
Baud rate	300 bps ~ 230400 bps
Flow control	RTS/CTS (for RS232)

DI/DO

Type	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 maximum VDC	"V+" +5 VDC (DI), 30 VDC (DO)
Absolute maximum ADC	300 mA

Others

Reset button	1 x RST
SD	1 x Micro SD interface
Expansion	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, 1 x SIM
Built-in	RTC, Watchdog, Timer

Software (Basic features of RobustOS)

Network protocols	PPP, PPPoE, TCP, UDP, DHCP, ICMP, NAT, HTTP, HTTPs, DNS, ARP, 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, DNP3 Transparent, TCP Client/ Server, UDP, Modbus RTU Gateway

App Center (Available Apps for RobustOS)

Apps*	L2TP, PPTP, DMVPN, VRRP, QoS, SNMP, Language, RCMS, Data Guard

**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-pin 5 mm female socket with lock
Input voltage	9 ~ 60 VDC
Power consumption	Idle: 100 mA@12 V Data link: 400 mA (peak) @12 V

Physical Characteristics

Ingress protection	IP30
Housing & Weight	Metal, 570 g
Dimension	125 x 104 x 43.5 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	RoHS2.0, WEEE
EMI	EN 55032: 2012/AC: 2013 (CE & RE) Class B
EMS	IEC 61000-4-2 (ESD) Level 4 IEC 61000-4-3 (RS) Level 4 IEC 61000-4-4 (EFT) Level 4 IEC 61000-4-5 (Surge) Level 3 IEC 61000-4-6 (CS) Level 2 IEC 61000-4-8 (M/S) Level 4

ORDERING INFORMATION

Model	PN	Category	Wi-Fi	GNSS	Frequency Bands*	Country/ Region	Certifications (*In progress)
R3000-NU	B018001	-	-	-	-	EMEA	CE
	B018002	-	✓	-	-	EMEA	CE
R3000-4L	B018728	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, ANATEL, CRC, MTC, ENACOM, ASEP
	B018729		✓	-			
	B018735		-	-	**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, E-13
	B018739		✓	-			
	B018744		✓	✓	**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	North America EMEA	IC, UL, FCC, PTCRB, AT&T, Verizon, CE,
	B018745		-				
	B018752		-	-	**4G**: LTE FDD: B1/B3/B8/B18/B19/B26 LTE TDD: B41 **3G**: WCDMA: B1/B6/B8/B19	Japan	Telec, JATE

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

Email: info@robustel.com
Website: www.robustel.com