



R3000 Quad robustOS

Industrial Cellular VPN Router with 4 Ethernet Ports
4 Eth + 1 RS232/1 RS485 + 1 USB Host



INTRODUCTION

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

- 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 Quad. 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>

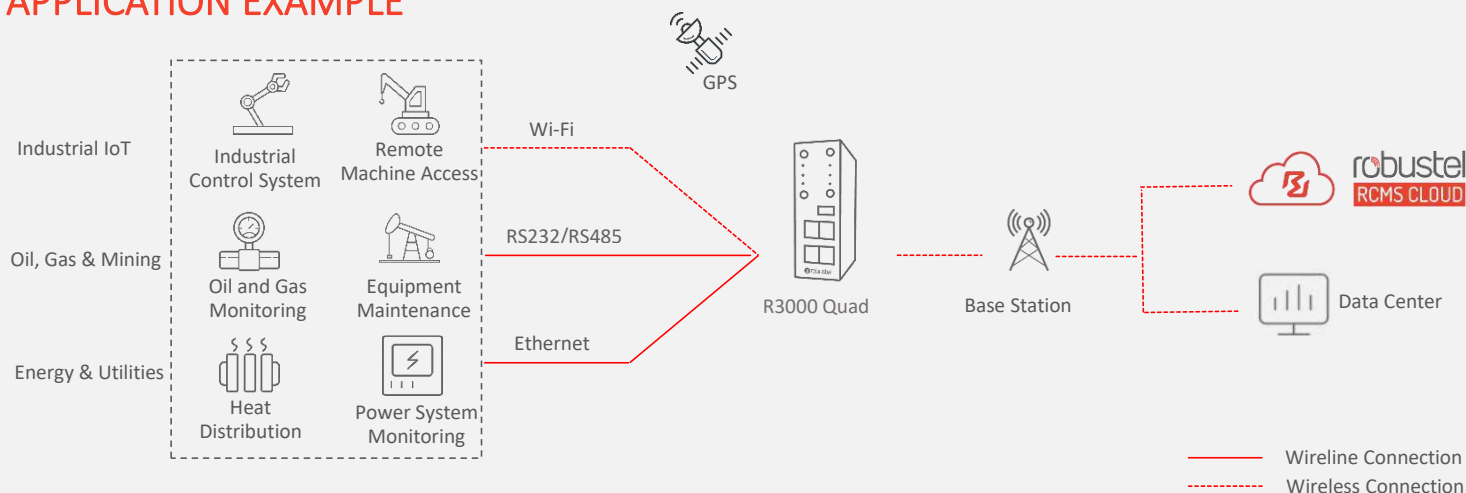


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RCMS CLOUD

KEY FEATURES

- The feature *Link Manager* supporting WWAN1, WWAN2, Ethernet WAN, WLAN WAN link backup and ICMP detection
- The option *Backup Mode* supporting cold, warm and load balancing
- RobustOS + SDK + App
- IPsec/OpenVPN/GRE/L2TP/PPTP/DMVPN
- Management and maintenance via Web/CLI/SNMP/RCMS Cloud
- Robust industrial design (9 ~ 60 VDC, 18 ~ 75 VDC (optional), desktop or wall mounting or DIN rail mounting)

APPLICATION EXAMPLE



SPECIFICATIONS

Cellular Interface

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

Ethernet Interface

Number of ports	4 x 10/100 Mbps, 4 x LAN or 3 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, supporting AP and Client modes
Frequency bands	2.4 GHz 5 GHz
Security	Open, WPA, WEP
Encryption	AES, TKIP, WEP64

GNSS Interface (Optional)

Number of antennas	1
Connector	SMA-K with 50 ohms impedance
Acquisition sensitivity	GPS: greater than -148 dBm
Horizontal position accuracy	GPS: 2.5 m
Protocol	NMEA-0183 v4.10

Serial Interface (Software selectable)

Number of ports	1 x RS232 or 1 x RS485
Connector	7-pin 3.5 mm female socket with lock
Baud rate	300 bps ~ 230400 bps
Isolation	2.5 KV (optional)
Flow control	RTS/CTS (for RS232)

Others

Reset button	1 x RST
SD	1 x Micro SD interface
Expansion	1 x USB 2.0 host, up to 480 Mbps
CLI	1 x CLI interface
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-DDoS, 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, SNMP, Language, RCMS, Data Guard
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*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, 55 mA@24 V, 30 mA@48 V; Data link (peak): 400 mA@12 V, 215 mA@24 V, 115 mA@48 V

Physical Characteristics

Ingress protection	IP30
Housing & Weight	Metal, 570 g
Dimensions	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)connect Level2; Air Level 3 IEC 61000-4-3 (RS) Level 2 IEC 61000-4-4 (EFT) Level 2 IEC 61000-4-5 (Surge) Level 3 IEC 61000-4-6 (CS) Level 2

ORDERING INFORMATION

Model	PN	Category	Wi-Fi	GNSS	Frequency Bands*	Country/Region	Certifications (*In progress)
R3000-QLB	B019001	-	-	-	-	EMEA	CE
	B019002		✓	-			
R3000-Q4LB	B019727	Cat 4	-	-	4G: LTE FDD: B1/B2/B3/B4/B5/B7/B8/B28 LTE TDD: B40	Oceania, South America	RCM, CRC, URSEC
	B019728		✓	-	3G: WCDMA: B1/B2/B5/B8 2G: GSM: B2/B3/B5/B8		
	B019738		-	-	4G: LTE FDD: B1/B3/B5/B7/B8/B20 LTE TDD: B38/B40/B41	EMEA	CE, TRA, UKCA
	B019739		✓	-	3G: WCDMA: B1/B5/B8 2G: GSM: B3/B8		

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