

# GoRugged R3000

## Dual SIM Industrial Cellular VPN Router

### for GSM/GPRS/EDGE/UMTS/EVDO/HSPA+ Networks

Robustel GoRugged R3000 is a rugged cellular router offering state-of-the-art mobile connectivity for machine to machine (M2M) applications.

#### Key Features

- Dual SIM redundancy for continuous cellular connections, supports 2G/3G/4G.
- WAN link management: cellular WAN/Ethernet WAN/WLAN WAN backup.
- VPN tunnel: IPSec/OpenVPN/PPTP/L2TP/GRE.
- Supports Modbus gateway (Modbus RTU/ASCII to Modbus TCP).
- Supports GPS&GLONASS (optional), provides real time location and tracking.
- Supports 802.11 b/g/n Wi-Fi (optional), AP and client mode.
- Supports SDK, provides user programmatic interface.
- Supports 802.1Q VLAN Trunk.
- Supports PPPoE Bridge(IP Passthrough).
- Auto reboot via SMS/Caller ID/Timing.
- Supports RobustLink (Centralized M2M management platform, to remote monitor, configure and update firmware).
- Supports RobustVPN (Cloud VPN Portal, to provide easy and secure remote access for PLCs and machines).
- Flexible Management methods: Web/CLI/SNMP/RobustLink.
- Firmware upgrade via Web/CLI/USB/SMS/RobustLink.
- Various interfaces: RS232/RS485/Console/DI/DO/USB/Ethernet.
- Wide range input voltages from 9 to 60 VDC and extreme operating temperature.
- The metal enclosure can be mounted on a DIN-rail or on the wall, also with extra ground screw.

#### Selection and Ordering Data

Model No.	Description	Operating Environment
R3000-2G	GPRS Router, GPRS 850/900/1800/1900 MHz	-40 to 85°C/5 to 95% RH
R3000-3P	HSPA+ Router, HSPA+ 850/900/1900/2100 MHz	-40 to 85°C/5 to 95% RH
R3000-3E	EVDO Rev A/B Router, EVDO 450 or 800/1900 MHz	-20 to 60°C/5 to 95% RH
R3000-4L	FDD LTE Router, 800/900/1800/2100/2600 MHz	-40 to 85°C/5 to 95% RH



#### Applications

- ATM/Vending Machine Connectivity
- Solar/Wind Energy Monitor
- Distribution Automation
- Automatic Meter Reading
- Industrial Automation
- IP Video Surveillance
- Remote Devices

#### Packing List

- Robustel R3000 Router
- Terminal Block for Power, I/O and Serial Port
- Document and Software CD

#### Optional Accessories (can be purchased separately)

- AC/DC Power Supply Adapter
- Rubber SMA Antenna
- 35mm Din-Rail mounting kit or Wall mounting kit
- Diversity antenna for HSPA+/LTE/EVDO

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### Specifications

#### Cellular Interface

- Standards: GSM/GPRS/EDGE/UMTS/HSPA/EVDO/FDD LTE
- HSPA+: DL/UL 21/5.76 Mbps, fallback to 2G
- FDD LTE: DL/UL 100/50 Mbps, fallback to 3G/2G
- EVDO: Rev A/B
- SIM: 2 x (3V & 1.8V)
- Antenna Interface: SMA Female

#### Ethernet Interface

- Number of Ports: 2 x 10/100 Mbps, 2 LANs or 1 LAN 1 WAN
- Magnet Isolation Protection: 1.5KV

#### WLAN Interface (Optional)

- Standards: 802.11b/g/n up to 65 Mbps, AP and Client mode
- Frequency Band: 2.400 - 2.500 GHz (2.4 GHz ISM band)
- Security: Open, WPA, WPA2, WEP
- Encryption: AES, TKIP, WEP64, WEP128
- Antenna Interface: RP-SMA Female
- Transmission Power: 802.11b: 17dBm, 802.11g/n: 15dBm
- Reception Sensibility: 1M: -97dBm, 2M: -93dBm, 6M: -91dBm, 11M: -89dBm, 54M: -75dBm, 65M: -72dBm

#### Digital Input

- Type: 2 x DI, Dry Contact
- Dry Contact: On: open, Off: short to GND
- Isolation: 3K VDC or 2K Vrms
- Absolute Maximum VDC: 5V
- Digital Filtering Time Interval: Software selectable
- Interface: 3.5mm terminal block with lock

#### Digital Output

- Type: 2 x DO, Sink
- Isolation: 3K VDC or 2K Vrms
- Absolute Maximum VDC: 30V
- Absolute Maximum ADC: 300mA
- Interface: 3.5mm terminal block with lock

#### Serial Interface

- Number of Ports: 1 x RS-232, 1 x RS-485 or 2 x RS232 or 2 x RS485
- ESD Protection:  $\pm 15KV$
- Parameters: 8E1, 8O1, 8N1, 8N2, 7E2, 7O2, 7N2, 7E1
- Baud Rate: 300bps to 230400bps
- RS-232: TxD, RxD, RTS, CTS, GND
- RS-485: Data+ (A), Data- (B)
- Interface: 3.5mm terminal block with lock

#### GPS & GLONASS Interface (Optional)

- Antenna Interface: SMA Female, 50 ohms impedance
- Tracking Sensitivity: GPS: better than -148 dBm  
GLONASS: better than -140 dBm
- Horizontal position accuracy: GPS: 2.5 m  
GLONASS: 4.0 m
- Time-To-First-Fix: GPS: 26 s  
GLONASS: 30 s
- Protocol: NMEA-0183 V2.3

#### System

- LED Indicators: RUN, PPP/WLAN, USR, RSSI, NET, SIM
- Built-in RTC, Watchdog, Timer
- Expansion: 1 x USB 2.0 host up to 480 Mbps
- Storage: 1 x MicroSD

#### Software

- Network protocols: PPP, PPPoE, TCP, UDP, DHCP, ICMP, NAT, DMZ, RIP v1/v2, OSPF, DDNS, VRRP, HTTP, HTTPS, DNS, ARP, QoS, SNTP, Telnet, VLAN, SSH2, etc
- VPN tunnel: IPSec/OpenVPN/PPTP/L2TP/GRE
- Firewall: SPI, anti-DoS, Filter, Access Control
- Management: Web, CLI, SNMP v1/v2/v3, SMS, RobustLink
- Serial Port: TCP client/server, UDP, Modbus RTU/ASCII to Modbus TCP, Virtual COM (COM port redirector)
- RobustLink: Centralized M2M management platform
- RobustVPN: Cloud VPN Portal

#### Power Supply and Consumption

- Power Supply Interface: 5mm terminal block with lock
- Input Voltage: 9 to 60 VDC
- Power Consumption: Idle: 100 mA @ 12 V  
Data Link: 400 mA (peak) @ 12 V

#### Physical Characteristics

- Housing & Weight: Metal, 500g
- Dimension: (L x W x H): 125 x 108 x 45 mm
- Installation: 35mm Din-Rail or wall mounting or desktop

#### Regulatory and Type Approvals

- Approval & Certification: CE, R&TTE, FCC, PTCRB, GCF, AT&T, IC.Rogers, RCM, CB, E-Mark, NBTC, RoHS, WEEE
- EMI : EN 55022 (2006/A1: 2007) Class B
- EMC: 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  
EN 61000-4-6 (CS) Level 4, EN 61000-4-8 Level 4

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