GoRugged R3000

Dual SIM Industrial Cellular VPN Router

For GSM/GPRS/EDGE/UMTS/EVDO/HSPA+/LTE 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/DMVPN
- Supports Modbus gateway (Modbus RTU/ASCII to Modbus TCP) and Modbus Master
- 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
- Support alarm via Email, SMS, DO, SNMP trap
- Support AAA and FTP
- Supports RobustLink (a 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
- The metal enclosure can be mounted on a DIN-rail or on the wall, also with extra ground screw

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
- 35 mm DIN rail mounting kit or wall mounting kit
- Diversity antenna for HSPA+/LTE/EVDO

Selection and Ordering Data

Model No.	Description	Operating Environment
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	LTE Router, FDD LTE: B1, B2, B3, B4, B5, B7, B8, B9, B18, B19, B20, B21, B28; TDD LTE: B38, B39, B40, B41	-40 to 85°C/5 to 95% RH

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Specifications

Cellular Interface
- Standards: GSM/GPRS/EDGE/UMTS/ EVDO/HSPA+/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 (3 V & 1.8 V)
- Antenna interface: SMA demale

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

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: "V+" +5 VDC
- Digital filtering time interval: Software selectable
- Interface: 3.5 mm terminal block with lock

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

Serial Interface
- Number of ports: 1 x RS-232 + 1 x RS-485 or 2 x RS-232 or 2 x RS-485
- ESD protection: ±15 KV
- Parameters: 8E1, 8O1, 8N1, 8N2, 7E2, 7O2, 7N2, 7E1
- Baud rate: 300 bps to 230400 bps
- RS-232: TxD, RxD, RTS, CTS, GND
- RS-485: Data+ (A), Data- (B)
- Interface: 3.5 mm terminal block with lock

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GPS & GLONASS Interface (Optional)
- Antenna interface: SMA female, with 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
- 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 Micro SD

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/DMVPN
- 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: 5 mm 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, 500 g
- Dimension: 125 mm x 108 mm x 45 mm
- Installation: 35 mm DIN rail or wall mounting or desktop

Regulatory and Type Approvals
- Approval & Certificates: CE, R&TTE,FCC, PTCRB, GCF, AT&T, IC.Rogers, RCM, CB, E-Mark, NBTC, RoHS, WEEE
- EMC:
  EMI: EN 55022: 2006/A1: 2007 (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 4,
  IEC 61000-4-8 (M/S) Level 4