

# GoRugged R3000 Wireline

## Industrial Wireline VPN Router

### For Rugged Secure Connectivity

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

#### Key Features

- WAN link management: 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
- Auto reboot via Timing
- Support alarm via Email, 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/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



#### Applications

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

#### Package Contents

- 1 x Robustel R3000 Wireline Industrial Wireline VPN Router
- 1 x Terminal block for power, I/O and serial port
- 1 x *Quick Start Guide* with download link of other documents or tools

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

- AC/DC power supply adapter
- Rubber SMA antenna for WLAN
- Rubber SMA antenna for GPS
- 35 mm DIN rail mounting kit or wall mounting kit

#### Selection and Ordering Data

Model No.	Frequency Bands	Operating Environment
R3000-NU	2 Ethernet ports, 1 RS232, 1 RS485, 2 DI, 2 DO	-40 to 85°C/5 to 95% RH
R3000-QLA	4 Ethernet ports, 1 RS232	-40 to 85°C/5 to 95% RH
R3000-QLB	4 Ethernet ports, 1 RS485	-40 to 85°C/5 to 95% RH

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### Specifications

#### Ethernet Interface

- Number of ports: 2 x 10/100 Mbps, 1 LAN + 1 WAN (2 Ethernet ports model)  
4 x 10/100 Mbps, 3 LAN+1 WAN (4 Ethernet ports model)
- 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 sensitivity: 1M: -97dBm, 2M: -93dBm, 6M: -91dBm, 11M: -89dBm, 54M: -75dBm, 65M: -72dBm

#### Serial Interface

- Number of ports:  
1 x RS-232+1 x RS-485 (2 Ethernet ports model)  
1 x RS-232 or 1 x RS-485 (4 Ethernet ports model)
- ESD protection:  $\pm 15$  KV
- 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: 3.5 mm terminal block with lock

#### Digital Input (2 Ethernet port model only)

- Type: 2 x DI, Dry Contact
- Dry contact: On: open, Off: short to GND
- Isolation: 3K VDC or 2K Vrms
- Absolute maximum VDC: "V+" +5VDC
- Digital filtering time interval: Software selectable
- Interface: 3.5 mm terminal block with lock

#### Digital Output (2 Ethernet port model only)

- 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

#### Contact:

[www.robustel.com](http://www.robustel.com)  
[info@robustel.com](mailto:info@robustel.com)

#### 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, WLAN, USR
- Built-in RTC, Watchdog, Timer
- Expansion: 1 x USB 2.0 host up to 480 Mbps
- Storage: 1 x Micro SD

#### Software

- Network protocols: 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, 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, 500g
- 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, RCM, RoHS, WEEE
- EMC:  
EMI: EN 55022 (2006/A1: 2007) Class B  
EMS: IEC 61000-4-2 (ESD) Level 3,  
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 Level 4