

# GoRugged R2000 Dual

## Industrial Dual Module Cellular VPN Router with Power over Ethernet

### For GSM/GPRS/EDGE/UMTS/WCDMA/HSPA+/LTE Networks

Robustel's R2000 Dual Industrial Dual Module Cellular VPN Router with Power over Ethernet provides fast and reliable communication for monitoring and controlling remote equipment. The added new feature, Power over Ethernet, makes installing or expanding much simpler and cheaper for both power and data transmission.

#### Key Features

- Embedded dual module supporting two SIM cards online simultaneously
- Four fast Ethernet LAN port supporting Power over Ethernet 12.95 W of POE/30 W of POE+ shared across the four LAN ports
- Supports Cellular, WAN, WLAN link backup and ICMP detection; also supports cold backup, warm backup and load balancing
- WAN - Static/PPPOE/DHCP Client
- Wi-Fi supporting AP mode and Client mode
- VPN tunnel - IPsec/OpenVPN/GRE/L2TP/PPTP/DMVPN
- Auto reboot via SMS/Timing
- Supports RobustLink (a centralized M2M management platform for remote monitoring, configuration and firmware upgrade)
- Management and upgrading via web user interface/ SMS/CLI/RobustLink
- Supports various APP like QoS, DDNS, VRRP, Captive Portal, SNMP, WLAN multi, multi-language
- Easy wall or DIN rail mounting options



#### Applications

- ATM/Vending Machine/Retail POS/Kiosks
- Branch Offices
- Convenience Stores
- Quick Service Restaurants
- Digital Signage
- IP Video Surveillance

#### Ordering Information

Model	R2000-D3P1	R2000-D3P2	R2000-D4L1	R2000-D4L2
Router Type	HSPA+ router	HSPA+ router	LTE router	LTE router
Module Number	1	2	1	2
Air Interface	GSM/GPRS/EDGE/HSDPA/HSUPA/HSPA+	GSM/GPRS/EDGE/HSDPA/HSUPA/HSPA+	GSM/GPRS/EDGE/WCDMA/HSDPA/HSUPA/HSPA+/DC-HSPA+/TD-SCDMA/CDMA (CDMA 1X/EVDO)/FDD LTE/TDD LTE	GSM/GPRS/EDGE/WCDMA/HSDPA/HSUPA/HSPA+/DC-HSPA+/TD-SCDMA/CDMA (CDMA 1X/EVDO)/FDD LTE/TDD LTE
Frequency Bands	--	--	AU: B1/B3/B5/B7/B8/B28, B40 EU: B1/B3/B7/B8/B20/B28/B31, B38/B40 US: B2/B4/B5/B13/B17/B25, B41 JP: B1/B3/B8/B9/B18/B19/B21/B28, B41 CN: B1/B3, B38/B39/B40/B41	AU: B1/B3/B5/B7/B8/B28, B40 EU: B1/B3/B7/B8/B20/B28/B31, B38/B40 US: B2/B4/B5/B13/B17/B25, B41 JP: B1/B3/B8/B9/B18/B19/B21/B28, B41 CN: B1/B3, B38/B39/B40/B41
4G				
3G	B1/B2/B4(AWS)/B5/B8/B19	B1/B2/B4(AWS)/B5/B8/B19	WCDMA/HSDPA/HSUPA/HSPA+/DC-HSPA+: B1/B2/B5/B6/B8/B9/B19 TD-SCDMA: B34/B39 CDMA(CDMA1X/EVDO):R0/A BC0/BC1/BC10	WCDMA/HSDPA/HSUPA/HSPA+/DC-HSPA+: B1/B2/B5/B6/B8/B9/B19 TD-SCDMA: B34/B39 CDMA(CDMA1X/EVDO):R0/A BC0/BC1/BC10
2G	850/900/1800/1900 MHz	850/900/1800/1900 MHz	850/900/1800/1900 MHz	850/900/1800/1900 MHz
Operating Environment	-25 to 70°C 5 to 95% RH	-25 to 70°C 5 to 95% RH	-25 to 70°C 5 to 95% RH	-25 to 70°C 5 to 95% RH

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### Specifications

#### Cellular Interface

- Standards: GSM/GPRS/EDGE/UMTS/WCDMA/HSPA/HSDPA/HSUPA/HSPA+/DC-HSPA+/LTE
- FDD LTE: max. 150/50 Mbps (DL/UL) @20M BW cat4
- TDD LTE: max. 100/50 Mbps (DL/UL)
- DC-HSPA+: 42/5.76 Mbps (DL/UL)
- HSPA+: max. 21.6/5.76 Mbps (DL/UL)
- WCDMA: 384/384 kbps (DL/UL)
- EDGE: 236.8 kbps (DL/UL)
- GPRS: 85.6 kbps (DL/UL)
- SIM: 2 (3 V & 1.8 V)
- Connector: SMA, female (2 x MAIN + 2 x AUX)

#### Ethernet Interface

- Number of ports: 1 x WAN and 4 x LAN (10/100 Mbps)
- Magnet isolation protection: 1.5 KV

#### WLAN Interface

- Standards: 802.11b/g/n, supporting AP and Client mode
- Data speed: 150 Mbps
- Frequency band: 2.412 - 2.485 GHz
- Security: WEP, WPA, WPA2
- Encryption: 64/128 AES, TKIP
- Connector: RP-SMA, female

#### Device Interface

- POE (4 x LAN)  
Four ports power supply output  
IEEE802.3 at/af standard compatibility  
Maximum power output up to 30 W per port  
Power management function  
Voltage Range: 48 to 57V DC
- Digital Input (DI)  
When router is used in in-vehicle networks, DI function makes router enter a state of low power consumption which can avoid the battery excessive consumption of the vehicle.

#### System

- 1 x Reset button
- LED indicators: 1 x RUN, 2 x PPP, 1 x USR, 2 x NET, 6 x RSSI

#### Contact:

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

#### Software

- Network protocols: PPP, TCP, UDP, DHCP, ICMP, NAT, DMZ, DDNS, VRRP, HTTP, HTTPS, DNS, ARP, SNTP, SSH, Telnet, SNMP, AAA etc.
- VPN tunnel: IPsec/OpenVPN/GRE/L2TP/PPTP/DMVPN
- Firewall: SPI, anti-DoS, Filter, Access Control
- Management: Web, SMS, CLI

#### Power Supply and Consumption

- Connector: 3.5 mm terminal block
- Input voltage: 9 to 57V DC
- Power consumption: Idle: 100 mA@12 V  
Data link: 800 mA (peak)@12 V
- With ground screw

#### Physical Characteristics

- Housing & Weight: Metal, 750 g
- Dimensions: 145 x 130 x 46 mm
- Installations: Flat surface placement, wall mounting and 35 mm DIN rail mounting

#### Regulatory and Type Approvals

- Approvals & Certificates: CE, RCM
- EMC:  
EMI: EN55022: 2006/A1: 2007 (CE & RE) Class B  
EMS: IEC 61000-4-2 (ESD) Level 4  
IEC 61000-4-4 (EFT) Level 4  
IEC 61000-4-5 (Surge) Level 3

#### Package Contents

- 1 x Robustel R2000 Dual Industrial Dual Module Cellular VPN Router with Power over Ethernet
- 1 x Terminal block for power
- 1 x *Quick Start Guide* with download link of other documents or tools

#### Optional Accessories (sold separately)

- AC/DC power adapter
- POE power adapter
- SMA cellular antenna for 3G/4G LTE
- Stubby/magnet RP-SMA Wi-Fi antenna
- Wall mounting kit
- 35 mm DIN rail mounting kit