R2000 Ent robustOS

Industrial Dual Module Cellular VPN Router with Voice
5 Eth + 1 Voice/RS-232/RS-485 + 1 USB Host

INTRODUTION

The Robustel Industrial Dual Module Cellular VPN Router with Voice (R2000 Ent) provides fast and reliable Internet connectivity, enhanced voice capabilities – making it perfect to respond to and manage any device, anytime and anywhere.
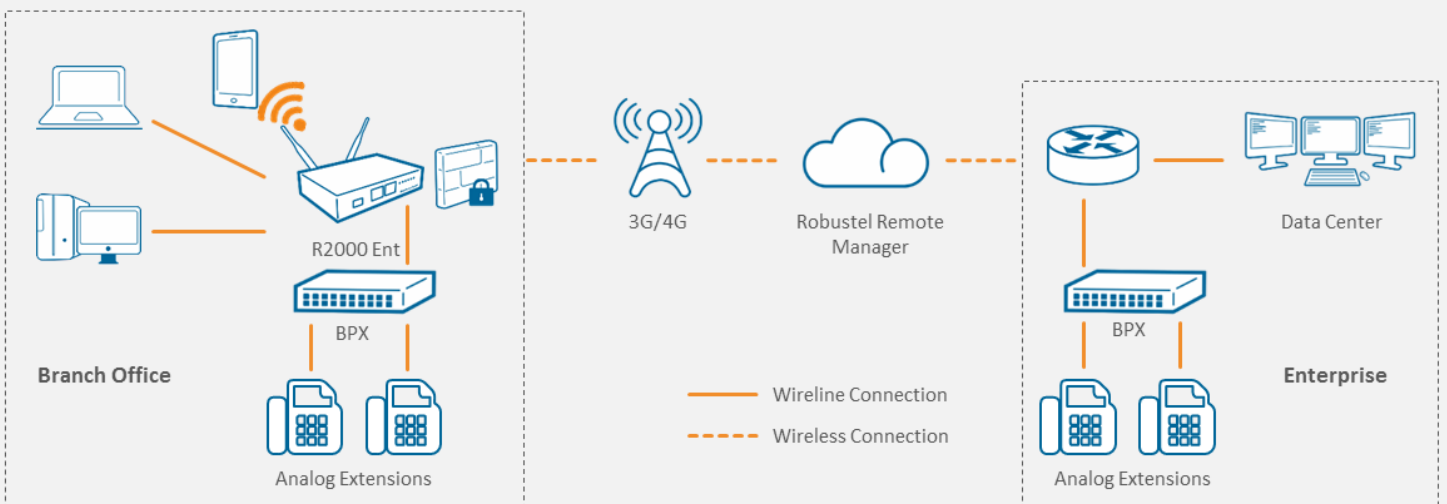
R2000 Ent is a powerful router developed from **RobustOS**, a Robustel self-developed and Linux-based operating system which is designed to be used in Robustel hardware routers. The RobustOS includes basic networking features and protocols providing customers with a very good user experience. Meanwhile, Robustel offers a **Software Development Kit** (SDK) for partners and customers to allow additional customization by using C, Python or Java. It also provides rich **APPs** to meet fragmented IoT market demands.

Robustel is a leading global industrial IoT/M2M hardware and solution provider. Since its establishment in 2010 in Guangzhou, China, Robustel has been focusing on designing and manufacturing industrial cellular routers, gateways, modems, cloud platforms and E2E solutions. In order to support global business in more than 100+ countries and regions, Robustel has set up local offices in Germany, Australia, Netherlands, Japan and Hong Kong.

KEY FEATURES

> Voice call/RS-232/RS-485 (choose one only) shared across an RJ11 port

> Voice call and data transmission being used simultaneously, depending upon your ISP network

> Embedded dual-module supporting two SIM cards online simultaneously

> The feature *Link Manager* supporting configuration of Cellular WAN, Ethernet WAN, WiFi link backup and ICMP detection

> WAN port supporting PD feature – compatible with 802.3at.

> RobustOS + SDK + App

> IPsec/OpenVPN/GRE/L2TP/PPTP/DMVPN

> Management and maintenance via Web/CLI/SMS SNMP/RobustLink Cloud

> Robust industrial design (9 to 36V DC, desktop or wall mounting or DIN rail mounting)

APPLICATION EXAMPLES

3G/4G

Robustel Remote Manager

R2000 Ent

BPX

Branch Office

Analog Extensions

Data Center

BPX

Enterprise

Analog Extensions

——— Wireline Connection

- - - - Wireless Connection

SPECIFICATIONS

Cellular Interface

Number of ports	4 (MAIN1 + AUX1 + MAIN2 + AUX2)
Connector	SMA, female
SIM	2 (3 V & 1.8 V)
Standards	GSM/GPRS/EDGE/WCDMA/HSDPA/HSUPA/ HSPA+/DC-HSPA+/TD-SCDMA/CDMA (CDMA 1X/EVDO)/FDD LTE/TDD LTE

Ethernet Interface

Number of ports	4 x LAN + 1 x WAN (10/100 Mbps)
WAN port	Supports 802.3 at PD feature (optional)
Magnet isolation protection	4 KV

WiFi Interface

Number of ports	2 (WiFi1 + WiFi2)
Connector	RP-SMA, male
Standards	802.11b/g/n, supporting AP and Client mode
Frequency bands	2.412 - 2.484 GHz (2.4 GHz ISM band)
Security	WEP, WPA, WPA2
Encryption	64/128 AES, TKIP
Data speed	2*2 MIMO, up to 300 Mbps

Voice Interface

Number of ports	1 x Voice call
Connector	RJ11
Standards	ITU Q.512 (SLIC)
	ITU K.20 (overcurrent and overvoltage protection)
Subscriber line interface circuit (SLIC)	Ring voltage: 40 to 90 Vpk configurable
	Ring frequency: 20 to 25 Hz
	Ring waveform: sine wave
	Maximum ringer load: 5 ringer equivalence numbers (RENs)
	On-hook voltage (tip/ring): -46 to -56V
	Off-hook current: 18 to 20 mA
	Terminating impedance: configurable

Serial Interface

Serial port	1 x RS-232/RS-485 with an RJ11 interface
USB host	1 x 480 USB 2.0 port up to 480 Mbps

Others

Reset button	1 x RST
LED indicators	1 x RUN, 1 x NET1, 1 x NET2, 1 x RSSI1, 1 x RSSI2, 1 x USR
	5 x LINK of Ethernet interface, including WAN, ETH1, ETH2, ETH3 and ETH4

Software (Basic features of RobustOS)

Network protocols	PPP, PPPoE, TCP, UDP, DHCP, ICMP, NAT, HTTP, HTTPs, DNS, ARP, RIP, OSPF, NTP, SMTP, Telnet, VLAN, SSH2, etc.
VPN tunnel	IPsec, OpenVPN, GRE
Firewall	DMZ, anti-DoS, Filtering (IP/Domain name/MAC address), Port Mapping, Access Control
Management	Web, CLI, SMS
Serial port	Transparent, TCP Client/Server, UDP, Modbus RTU Gateway

App Center (Available apps for RobustOS)

Apps	L2TP, PPTP, DMVPN, RobustVPN, DDNS, VRRP, QoS, Captive Portal, WLAN Multi AP, SNMP, Language, RobustLink

Power Supply and Consumption

Connector	2.1 mm DC Jack socket
	Input voltage 9 to 36V DC
Power consumption	Idle: 350 mA@12 V
	Data link: 500 mA (peak) @12 V
PD feature	WAN port support
	Input voltage 48 to 57V DC

Physical Characteristics

Ingress protection	IP30
Housing & Weight	Metal, 750 g
Dimensions	193 x 113 x 32 mm
Installations	Desktop or wall mounting or DIN rail mounting

ORDERING INFORMATION

Model	R2000-E4L1	R2000-E4L2
Module Number	Single module (Mini PCIe)	Dual module (Mini PCIe)
Antenna Number	2	4
Air Interface	GSM/GPRS/EDGE/WCDMA/HSDPA/HSUPA/HSPA+/DC-HSPA+/TD-SCDMA/CDMA (CDMA 1X/EVDO)/ FDD LTE/TDD LTE	
Frequency Bands 4G	AU: B1/B3/B5/B7/B8/B28, B40	JP: B1/B3/B8/B9/B18/B19/B21/B28, B41
	EU: B1/B3/B7/B8/B20/B28/B31, B38/B40	CN: B1/B3, B38/B39/B40/B41
	US: B2/B4/B5/B13/B17/B25, B41	
3G	WCDMA/HSDPA/HSUPA/HSPA+/DC-HSPA+: B1/B2/B5/B6/B8/B9/B19	
	TD-SCDMA: B34/B39	
	CDMA (CDMA 1X/EVDO): R0/A BC0/BC1/BC10	
2G	850/900/1800/1900 MHz	
Operating Environment	-25 to 70°C/5 to 95% RH	

For more information about 4G frequency bands in different countries, please contact SECTRON sales representative.