R2000 Ent

robustOS

Industrial Dual Module Cellular VPN Router with Voice

5 Eth + 1 Voice/RS232/RS485 + 1 USB Host

INTRODUCTION

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 devices. 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, C++. It also provides rich **Apps** to meet fragmented IoT market demands.

RCMS is Robustel's free router monitoring service that is fully compatible with the R2000 Ent. It allows customer to see a location overview of their routers quickly and simply on a map. Features such as data usage, signal strength, current network and much more can then be viewed on a per router basis. Over-the-air updates are supported for Firmware, router configuration and Apps serving as essential 'insurance' if anything was not quite right during deployment.

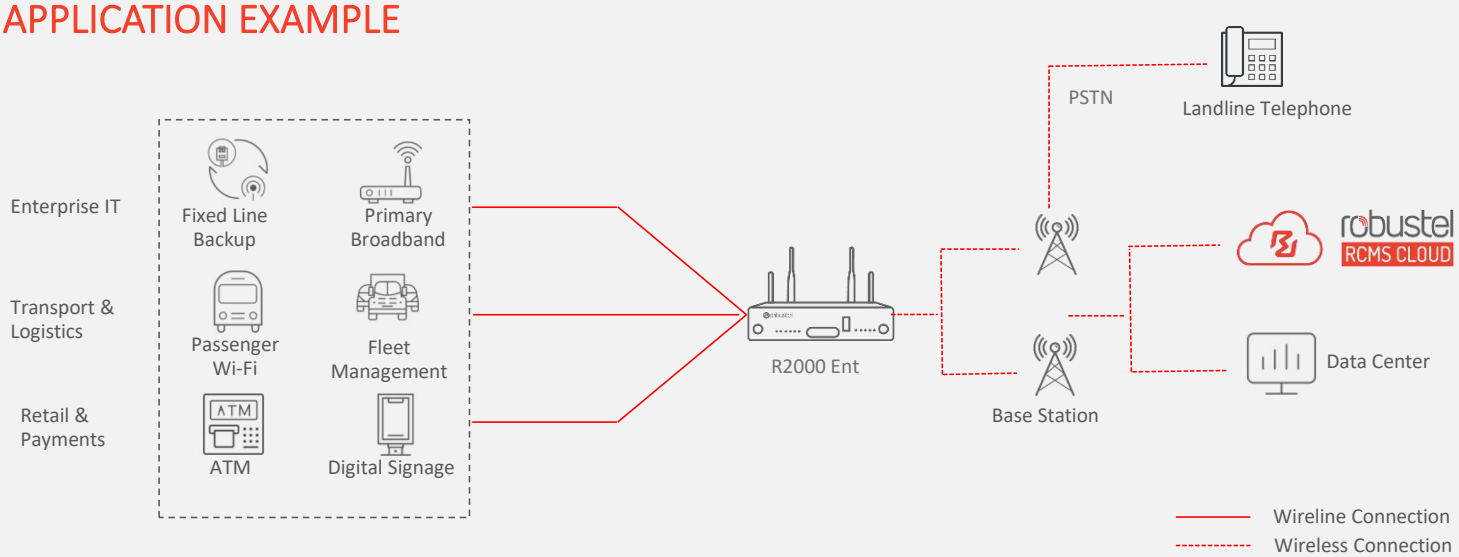
You can try Robustel's free router management platform by signingup here: https://rcms-cloud.robustel.net

robustel RCMS CLOUD

KEY FEATURES

- Voice call/RS232/RS485 (choose one only) shared across an RJ11 port
- Voice call and data transmission being used simultaneously, depending upon your ISP network
- Supports GSM and VoLTE (optional) for voice traffic
- Embedded dual-module supports two SIM cards online simultaneously
- The feature *Link Manager* supports configuration of Cellular WAN, Ethernet WAN, Wi-Fi link backup and ICMP detection
- WAN port supports PD feature – compatible with 802.3at.
- RobustOS + SDK + App
- IPsec/OpenVPN/GRE/L2TP/PPTP/DMVPN
- Management and maintenance via Web/CLI/SMS SNMP/RCMS
- Robust industrial design (9 ~ 36 VDC, desktop or wall mounting or DIN rail mounting)

APPLICATION EXAMPLE



SPECIFICATIONS

Cellular Interface

Number of antennas	4 (MAIN1 + AUX1 + MAIN2 + AUX2)
Connector	SMA-K
SIM	2 Mini SIM (2FF)
Standards	GSM/GPRS/EDGE/WCDMA/HSDPA/HSUPA/ HSPA+/DC-HSPA+/TD-SCDMA/CDMA (CDMA 1X/EVDO)/LTE-FDD/LTE-TDD

Ethernet Interface

Number of ports	4 x LAN + 1 x WAN (10/100 Mbps)
Magnet isolation protection	4 KV

Wi-Fi Interface

Number of antennas	2 (Wi-Fi1 + Wi-Fi2)
Connector	RP-SMA-K
Standards	802.11 b/g/n, support AP and Client modes
Frequency bands	2.4 GHz
Security	WEP, WPA, WPA2
Encryption	64/128 AES, TKIP
Data speed	2 x 2 MIMO, up to 300 Mbps

Voice Interface

Number of ports	1 x Voice call (only SIM1 support)
Connector	RJ11 (also be used for landline telephone's power supply)
Standards	ITU Q.512 (SLIC) ITU K.20 (overcurrent and overvoltage protection)
Subscriber line interface circuit (SLIC)	Ring voltage: 40 ~ 90 Vpk configurable Ring frequency: 20 ~ 25 Hz Ring waveform: sine wave Maximum ringer load: 5 ringer equivalence numbers (RENs) On-hook voltage (tip/ring): -46 ~ -56 V Off-hook current: 18 ~ 20 mA Terminating impedance: configurable

Serial Interface

Serial port	1 x RS232/RS485 with an RJ11 interface
USB host	1 x 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
Remote management	Web, CLI, SMS
Serial port	Transparent, TCP Client/Server, UDP, Modbus RTU Gateway

App Center (Available Apps for RobustOS)

Apps*	L2TP, PPTP, DMVPN, VRRP, QoS, Captive Portal, WLAN Multi AP, SNMP, RCMS Language, RobustLink

**Request on demand. For more Apps please visit www.robustel.com.*

SDK

Supported programming language	C, C++
Flash available for SDK	4 MB
RAM available for SDK	16 MB

Power Supply and Consumption

Connector	2.1 mm DC Jack socket Input voltage 9 ~ 36 VDC
Power consumption	Idle: 350 mA@12 V Data link: 500 mA (peak) @12 V

Physical Characteristics

Ingress protection	IP30
Housing & Weight	Metal, 695 g
Dimensions	193 x 113 x 32 mm
Installations	Desktop, wall mounting or 35 mm DIN rail mounting
Operating temperature	-25 ~ +70 °C
Storage temperature	-40 ~ +85 °C
Relative humidity	5 ~ 95% RH

Regulatory and Type Approvals

Environmental	RoHS2.0, WEEE

ORDERING INFORMATION

Model	PN	Number of Modules	Number of Cellular Antennas	Frequency Bands*	Country/Region	Certifications (*In Progress)
R2000-E4L2	B022720	Dual module	4	**4G**: LTE FDD: B1/B3/B5/B7/B8/B20 LTE TDD: B38/B40/B41 **3G**: WCDMA: B1/B5/B8 **2G**: GSM: B3/B8	EMEA	CE, ICASA
	B022742				EMEA	CE
	B022722			**4G**: LTE FDD: B1/B3/B4/B5/B7/B8/B28 LTE TDD: B40 **3G**: WCDMA: B1/B2/B5/B8 **2G**: GSM: B2/B3/B5/B8	Oceania South America	RCM, CRC
	B022732					
R2000-E4L1	B022718	Single module	2	**4G**: LTE FDD: B1/B3/B5/B7/B8/B20 LTE TDD: B38/B40/B41 **3G**: WCDMA: B1/B5/B8 **2G**: GSM: B3/B8	EMEA	CE, ICASA
	B022719			**4G**: LTE FDD: B1/B3/B4/B5/B7/B8/B28 LTE TDD: B40 **3G**: WCDMA: B1/B2/B5/B8 **2G**: GSM: B2/B3/B5/B8	Oceania South America	RCM, CRC

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

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