R2000 robustOS

Industrial Dual SIM Cellular VPN Router
2 Eth + 2 SIM

INTRODUCTION

The Robustel Industrial Dual SIM Cellular VPN Router (R2000) is a rugged cellular router offering state-of-the-art mobile connectivity for machine to machine (M2M) applications.
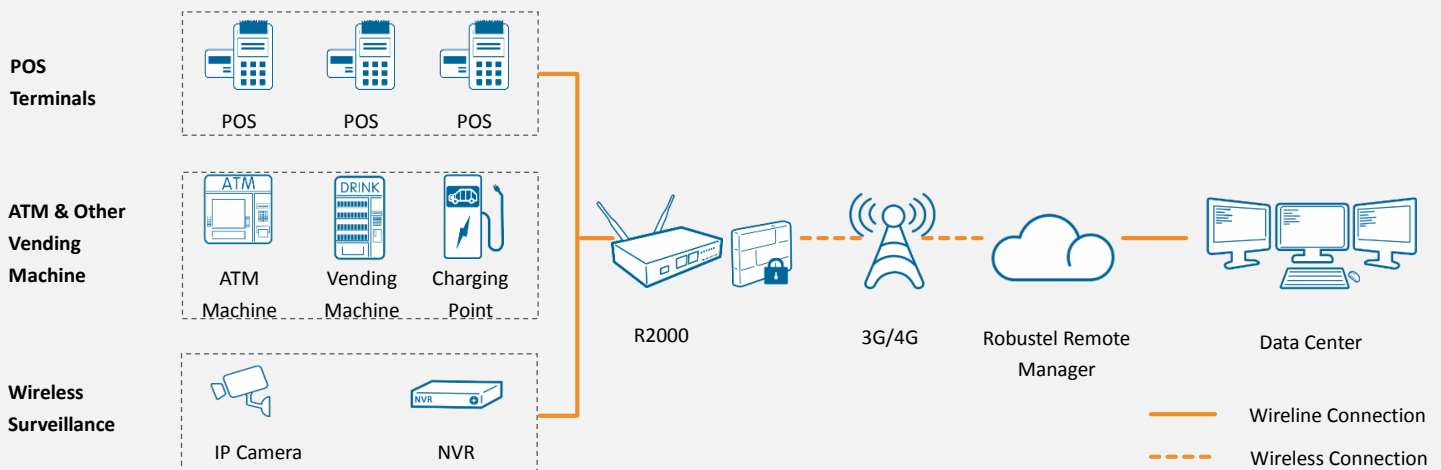
R2000 is a powerful router developed from **RobustOS**, a Robustel self-developed and Linux-based operating system which is designed to be used in Robustel devices. The RobustOS includes basic networking features and protocols providing customers with a very good user experience. Meanwhile, Robustel offers a **Software Development Kit** (SDK) for partners and customers to allow additional customization by using C, 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, the Netherlands, the UK, Japan and Hong Kong.

KEY FEATURES

> Dual-SIM redundancy for continuous 2G/3G/4G cellular network connections

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

> WAN – Static/PPPoE/DHCP Client

> WAN port supporting PD feature - compatible with 802.3at. (optional)

> RobustOS + SDK + App

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

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

> Auto reboot via SMS/Timing

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

APPLICATION EXAMPLE

POS Terminals: POS, POS, POS

ATM & Other Vending Machine: ATM Machine, Vending Machine, Charging Point

Wireless Surveillance: IP Camera, NVR

R2000 — 3G/4G — Robustel Remote Manager — Data Center

— Wireline Connection
---- Wireless Connection

SPECIFICATIONS

Cellular Interface

Number of antennas	2 (MAIN + AUX)
Connector	SMA female
SIM	2 (3 V & 1.8 V)

Ethernet Interface

Number of ports	2 x 10/100 Mbps, 2 x LAN or 1 x LAN + 1 x WAN
WAN port	Supporting 802.3 at PD feature (optional)
Magnet isolation	1.5 KV

WiFi Interface (Optional)

Number of antennas	2 (WiFi1 + WiFi2)	
Connector	RP-SMA male	
Standards	802.11b/g/n, supporting AP and Client modes	
Frequency bands	2.4 GHz	
Security	WEP, WPA, WPA2	
Encryption	64/128 AES, TKIP	
Data speed	2*2 MIMO, 300 Mbps	
RF output power	802.11b	19 dBm
Receiving sensitivity	802.11b	-93 dBm

Others

Reset button	1 x RST
LED indicators	1 x RUN, 1 x PPP, 1 x USR, 3 x RSSI
Built-in	Watchdog, Timer

Software (Basic features of RobustOS)

Network protocols	PPP, PPPoE, TCP, UDP, DHCP, ICMP, NAT, HTTP,
VPN tunnel	IPsec, OpenVPN, GRE

Firewall	DMZ, anti-DoS, Filtering (IP/Domain name/
Management	Web, CLI, SMS
Serial port	Transparent, TCP Client/Server, UDP,

App Center (Available Apps for RobustOS)

Apps*	L2TP, PPTP, DMVPN, RobustVPN, VRRP, QoS,

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

Power Supply and Consumption

Connector	3-pin 3.5 mm female socket
Input voltage	9 to 36V DC
Power consumption	Idle: 100 mA@12 V
PD feature* (optional)	WAN port supported

*It is not recommended to use DC power supply and PD power supply

Physical Characteristics

Ingress protection	IP30
Housing & Weight	Metal, 305 g
Dimensions	127.5 x 82.5 x 29.5 mm
Installations	Desktop, wall mounting and 35 mm DIN rail

Regulatory and Type Approvals

Regulatory	RCM, CE, CCC, EAC,FCC,PTCRB
Carrier	AT&T
Application	E-mark (Vehicle)
Environmental	RoHS, WEEE
EMI	EN 55032: 2012/AC: 2013 (CE & RE) Class A
EMS	IEC 61000-4-2 (ESD) Contact Level 2; Air Level 3
	IEC 61000-4-4 (EFT) Level 2
	IEC 61000-4-5 (Surge) Level 3

ORDERING INFORMATION

Model	R2000-3P	R2000-4L	R2000-4M	R2000-NU
Router Type	HSPA+ Router	LTE Router	LTE-M Router	--
Air Interface	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/	EGPRS/Cat.M1/Cat.NB1	--
Frequency Bands 4G*	--	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	LTE Cat.M1/Cat.NB1:B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B26/B28/B39(for TDD)	--
3G	B1/B2/B5/B8/B19	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	850/900/1800/1900 MHz	EGPRS:850/900/1800/1900MHz	--
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

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