R3000 robustOS

Industrial Dual SIM Cellular VPN Router

2 Eth + 1 RS-232 + 1 RS-485 + 1 USB Host

INTRODUCTION

The Robustel Industrial Dual SIM Cellular VPN Router (R3000) is a rugged cellular router offering state-of-the-art mobile connectivity for machine to machine (M2M) applications.

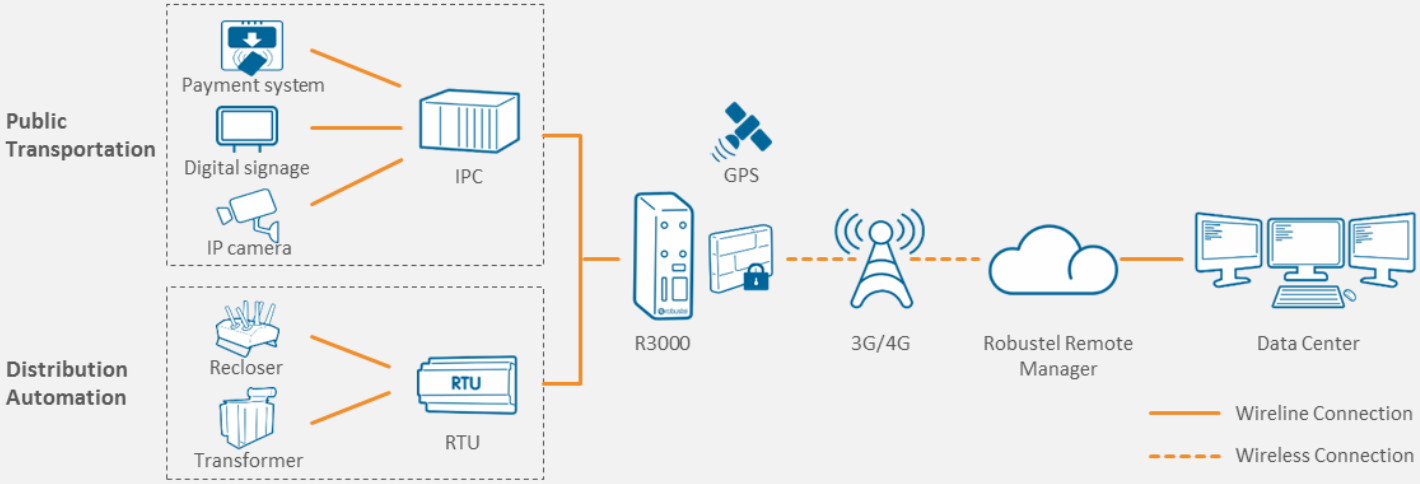
R3000 is a powerful router developed from **RobustOS**, a Robustel self-developed and Linux-based operating system which is designed to be used in Robustel devices. The RobustOS includes basic networking features and protocols providing customers with a very good user experience. Meanwhile, Robustel 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

- The feature *Link Manager* supporting WWAN1, WWAN2, Ethernet WAN, WLAN WAN link backup and ICMP detection
- The option *Backup Mode* supporting cold, warm and load balancing
- RobustOS + SDK + App
- IPsec/OpenVPN/GRE/L2TP/PPTP/ DMVPN
- Management and maintenance via Web/CLI/SNMP/RobustLink Cloud
- Robust industrial design (9 to 60V DC, desktop or wall mounting or DIN rail mounting)

APPLICATION EXAMPLE



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
Magnet isolation	1.5 KV

WiFi Interface (Optional)

Number of antennas	1
Connector	RP-SMA male
Standards	802.11a/b/g/n, supporting AP and Client modes
Frequency bands	2.4 GHz
	5 GHz
Security	Open, WPA, WPA2, WEP
Encryption	AES, TKIP, WEP64
Data speed	Up to 150 Mbps

GPS/GLONASS Interface (Optional)

Number of antennas	1
Connector	SMA female with 50 ohms impedance
Tracking sensitivity	GPS: greater than -148 dBm
	GLONASS: greater than -140 dBm
Horizontal position	GPS: 2.5 m
accuracy	GLONASS: 4.0 m
Protocol	NMEA-0183 V2.3

Serial Interface

Number of ports	1 x RS-232 + 1 x RS-485
	or 2 x RS-232 or 2 x RS-485
Connector	7-pin 3.5 mm female socket with lock
ESD protection	±15 KV
Baud rate	300bps to 230400bps

DI/DO

Type	2 x DI (dry contact) + 2 x DO (wet contact),
	4 x DI, 4 x DO, 3 x DI + 1 x DO or 3 x DO + 1 x DI
Connector	7-pin 3.5 mm female socket with lock
Isolation	3KVDC or 2KVrms
Absolute maximum VDC	"V+" +5V DC (DI), 30V DC (DO)
Absolute maximum ADC	300 mA

Others

Reset button	1 x RST
SD	1 x Micro SD interface
Expansion	1 x USB 2.0 host up to 480 Mbps
LED indicators	1 x RUN, 1 x PPP, 1 x USR, 1 x RSSI, 1 x NET,
Built-in	RTC, 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 5 mm female socket with lock
Input voltage	9 to 60V DC
Power consumption	Idle: 100 mA@12 V

Physical Characteristics

Ingress protection	IP30
Housing & Wight	Metal, 570 g
Dimensions	125 x 104 x 43.5 mm
Installations	Desktop, wall mounting and 35 mm DIN rail

Approvals

Regulatory	CE, NBTC, FCC, RCM, PTCRB, GCF, IC, IMDA,
	EAC, Anatel, UL, CB, ICASA
Carrier	AT&T, Rogers, Vodafone
Application	E-mark (Vehicle), IEC 61000-4-12
	(Electromagnetic Compatibility - Oscillatory
	Waves Immunity Test),
	EN50155 (Railway Applications - Electronic
	equipment used on rolling stock)
Environmental	RoHS2.0, WEEE
EMI	EN 55032: 2012/AC: 2013 (CE & RE) Class B
EMS	IEC 61000-4-2 (ESD) Level 4
	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 (M/S) Level 4

ORDERING INFORMATION

Model	R3000-3P	R3000-4L	R3000-NU
Router Type	HSPA+ Router	LTE Router	Wireline 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	--
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	--
3G	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 (CDMA 1X/EVDO): R0/A BC0/BC1/BC10	--
2G	850/900/1800/1900 MHz	850/900/1800/1900 MHz	--
Operating Environment	-40 to +75 °C 5 to 95% RH	-40 to +75 °C 5 to 95% RH	-40 to +75 °C 5 to 95% RH

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

Email: info@robustel.com | Website: www.robustel.com
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