

R3000 **robustOS**

Industrial Dual SIM Cellular VPN Router
2 Eth + 1 RS-232 + 1 RS-485 + 1 USB Host



INTRODUCTION

Robustel 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 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.

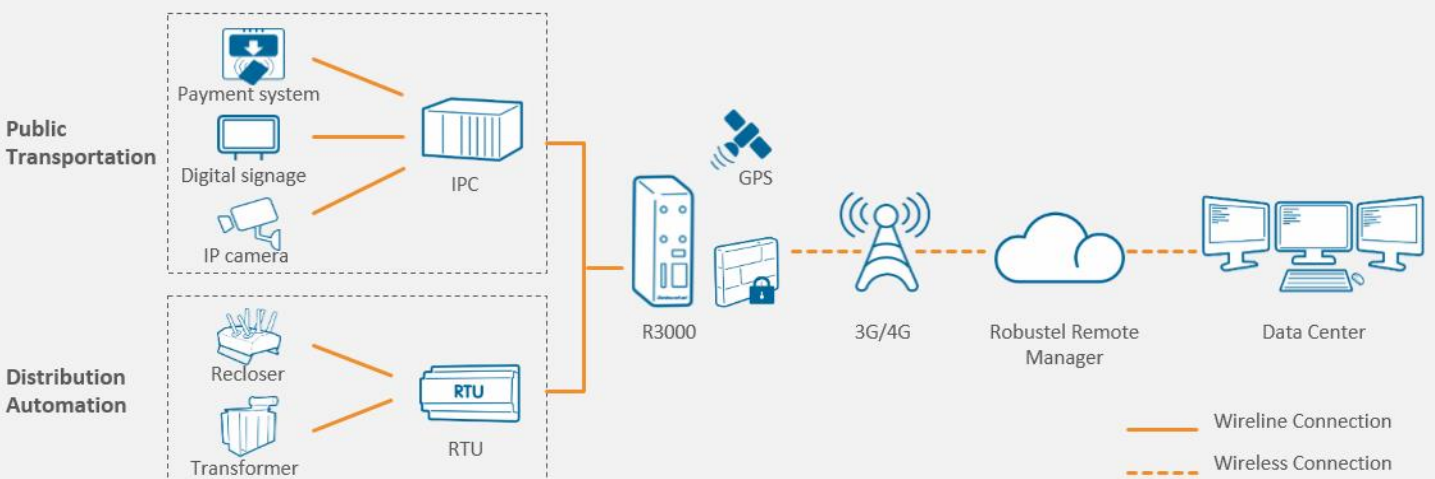
CERTIFICATIONS

CE, R & TTE, FCC, PTCRB, GCF, AT & T, IC, Rogers, RCM, CB, E-Mark, NBTC, RoHS, WEEE

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 EXAMPLES



SPECIFICATIONS

Cellular Interface

Number of port	2 (AUX + MAIN)
Connector	SMA, female
SIM	2 (3 V & 1.8 V)
Standards	2G/3G/4G

Ethernet Interface

Number of ports	2 x 10/100 Mbps, 2 x LAN or 1 x LAN + 1 x WAN
Magnet isolation protection	1.5 KV

WiFi Interface (Optional)

Number of ports	1
Connector	RP-SMA, male
Standards	802.11a/b/g/n, supporting AP and Client mode
Frequency bands	2.412 - 2.484 GHz (2.4 GHz ISM band) 4.910 - 5.825 GHz (5.8 GHz ISM band)
Security	Open, WPA, WPA2, WEP
Encryption	AES, TKIP, WEP64
Data speed	Up to 150 Mbps

GPS/GLONASS Interface (Optional)

Number of ports	1
Connector	SMA, female, with 50 ohms impedance
Tracking sensitivity	GPS: greater than -148 dBm GLONASS: greater than -140 dBm
Horizontal position accuracy	GPS: 2.5 m 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	DB9, female
ESD protection	±15 KV
Baud rate	300bps to 230400bps

DI/DO (Software selectable)

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	3.5 mm terminal block with lock
Isolation	3KVDC or 2KVrms
Absolute maximum	"V+" +5 VDC (DI), 30 V (DO)
Absolute maximum	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, 1 x SIM
Built-in	RTC, Watchdog, Timer

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, IP Pass-through, DDNS, etc.
VPN tunnel	IPsec, OpenVPN, GRE
Firewall	DMZ, anti-DoS, Filtering (IP packet/domain/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, VRRP, QoS, SNMP, Language, RobustLink
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*Request on demand, for more APPs please visit www.robustel.com.

Power Supply and Consumption

Connector	5 mm terminal block with lock
Input voltage	9 to 60V DC
Power consumption	Idle: 100 mA@12 V Data link: 400 mA (peak) @12 V

Physical Characteristics

Ingress protection	IP30
Housing & Wight	Metal, 500 g
Dimensions	125 x 104 x 43.5 mm
Installations	Desktop or wall mounting and DIN rail mounting

EMC

EMI	EN 55022: 2006/A1: 2007 (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
Router Type	HSPA+ router (Mini PCIe module)	LTE router (Mini PCIe module)
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	--	FDD LTE: B1/B2/B3/B4/B5/B7/B8/B9/B13/B17/B18/B19/B20/B21/B25/B28/B31 TDD LTE: B38/B39/B40/B41
4G		
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

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