R3000 Lite robustOS

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

INTRODUCTION

The Robustel Industrial Dual SIM Cellular VPN Router (R3000 Lite) is a rugged cellular router offering state-of-the-art mobile connectivity for machine to machine (M2M) applications.
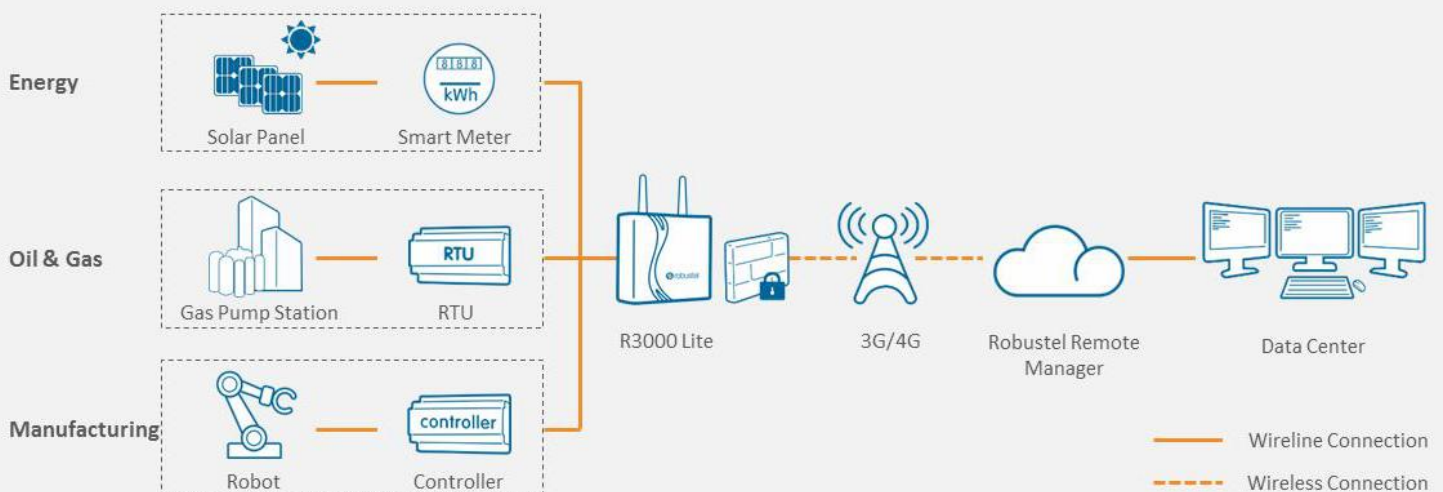
R3000 Lite is a powerful router developed from **RobustOS**, a Robustel self-developed and Linux-based operating system which is designed to be used in Robustel devices. The RobustOS includes basic networking features and protocols providing customers with a very good user experience. Meanwhile, Robustel 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, Japan and Hong Kong.

KEY FEATURES

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

> 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 EXAMPLE

Energy — Solar Panel, Smart Meter (kWh)
Oil & Gas — Gas Pump Station, RTU
Manufacturing — Robot, Controller
R3000 Lite — 3G/4G — Robustel Remote Manager — Data Center

Wireline Connection
Wireless Connection

SPECIFICATIONS

Cellular Interface
Number of antennas	2 (MAIN + AUX)
Connector	SMA-K
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	1 x 10/100 Mbps LAN port
Magnet isolation	1.5 KV

Serial Interface
Number of ports	1 x RS-232 + 1 x RS-485
Connector	DB9, female
ESD protection	±15 KV
Baud rate	300 bps to 230400 bps

Others
Reset button	1 x RST
Expansion	1 x USB 2.0 host up to 480 Mbps
LED indicators	1 x RUN, 1 x PPP, 1 x USR, 3 x RSSI
Built-in	RTC, Watchdog, Timer

Software (Basic features of RobustOS)
Network protocols	PPP, PPPoE, TCP, UDP, DHCP, ICMP, NAT, HTTP, HTTPs, DNS, ARP, NTP, SMTP, Telnet, VLAN, SSH2, DDNS, 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)
Available apps for RobustOS	L2TP, PPTP, DMVPN, RobustVPN, VRRP, QoS, SNMP, Language, RobustLink

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

Power Supply and Consumption
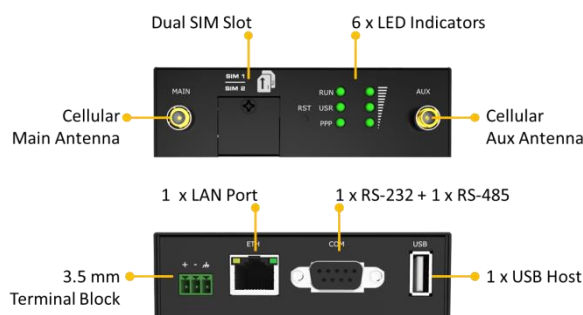|	
Connector	3.5 mm terminal block
Input voltage	9 to 36V DC
Power consumption	Idle: 100 mA@12 V Date link: 400 mA (peak) @12 V

Physical Characteristics
Ingress protection	IP30
Housing & Weight	Metal, 305 g
Dimensions	105 x 98 x 29.5 mm
Installations	Desktop or wall mounting or 35 mm DIN rail mounting

Approvals
Regulatory	CE, FCC, PTCRB, RCM, IMDA, EAC,TELEC, ICASA
Carrier	Telefonica, AT&T, Verizon
Application	IEC 61000-4-12(Electromagnetic Compatibility – Oscillatory Waves Immunity Test) IEC 61000-4-18(Electromagnetic compatibility – Damped Oscillatory Wave Immunity Test)
Environmental	RoHS, WEEE
EMI	EN 55032: 2012/AC: 2013 (CE & RE) Class B
EMS	IEC 61000-4-2 (ESD) Contact Level 2; Air Level 3 IEC 61000-4-3 (RS) level 3 IEC 61000-4-4 (EFT) level 3 IEC 61000-4-5 (Surge) Level 3 IEC 61000-4-6 (CS) level 3

ORDERING INFORMATION

Model	R3000-L3H	R3000-L3P	R3000-L4L
Router Type	HSDPA router	HSPA+ router	LTE router
Antenna Number	1	2	2
Air Interface	GSM/GPRS/EDGE/HSDPA	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	-	-	Global: B1/B2/B3/B4/B5/B7/B8/B12/B13/B18/ B19/B20/B25/B26/B28, B38/B39/B40/B41 AU: B1/B2/B3/B4/B5/B7/B8/B28, B40 US: B2/B4/B5/B13/B17 EMEA: B1/B3/B7/B8/B20/B28A JP: B1/B3/B8/B18/B19/B26, B41
3G	B1/B8	B1/B2/B4(AWS)/B5/B8/B19	Global: WCDMA B1/B2/B4/B5/B6/B8/B19, B34/B39 AU: WCDMA B1/B8 US: HSPA+ B2/B5 EMEA: WCDMA B1/B8 JP: WCDMA B1/B6/B8/B19
2G	B2/B3/B5/B8	B2/B3/B5/B8	EMEA: B3/B8 Global/AU: B2/B3/B5/B8
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
Storage Environment	-40 to +85 °C/5 to 95% RH	-40 to +85 °C/5 to 95% RH	-40 to +85 °C/5 to 95% RH

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