



# R1511

robustOS

Industrial Cellular VPN Router  
2 Ethernet + WiFi + 1 SIM + 1 RS-232/RS-485



## INTRODUCTION

Robustel's R1511 router is a Dual Ethernet port (LAN + WAN) 2G/3G/4G/LTE router with advanced software functions at a very competitive price point. The R1511 is a sister product of the R1510 series offering a choice of (3-wire) RS232 or (2-wire) RS485 INSTEAD of the Digital Input and Digital Output found on R1510 series. This means that RS232 and RS485 devices, including Modbus RTU equipment can connect to the internet directly through the R1511 router. Ethernet port 0 can be independently configured as WAN, LAN1 or LAN2 and Ethernet port 1 as LAN1 or LAN2.

At the heart of all of Robustel's routers is the "RobustOS" operating System. With 5 years of maturity and innovative features, RobustOS offers customers a very professional product with an easy to navigate Graphical User Interface and the connection stability required by critical IoT applications. The router occupies a very small footprint which is useful for space-constrained applications such as bus signs, ticketing machines, vending machines, covert surveillance & digital signage applications.

The R1511 has many unique software innovations including, but not limited to: **RobustVPN** – innovative use of Open VPN tunneling to provide a fixed IP address on ANY SIM Card.

**RCMS** – Robustel's Cloud management platform – essential for managing an estate of routers – Basic version FREE.

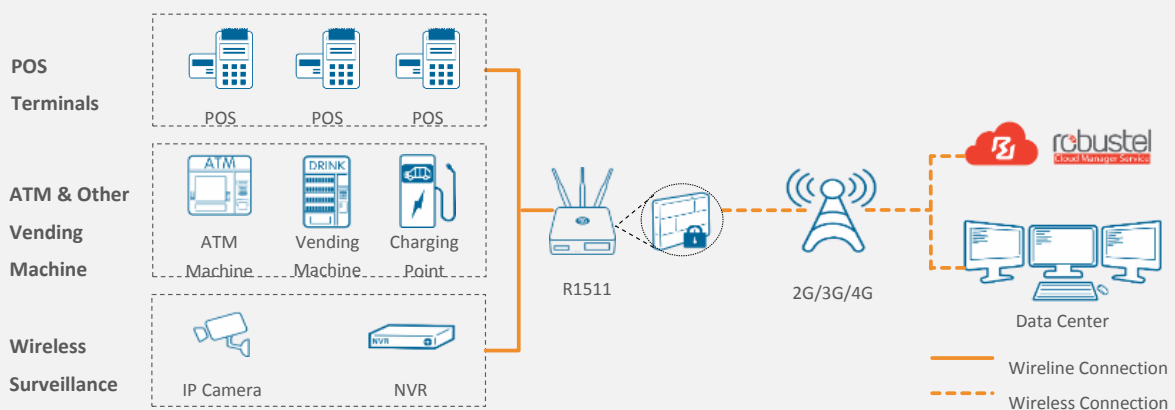
**Data Guard** – critical 'failsafe' that stops unexpected data overusage within seconds of a threshold being breached.

**Smart Reboot** – essential backup solution for when your roaming SIM card doesn't roam!

## KEY FEATURES

- > Dual Ethernet and choice of RS232 or RS485 port
- > Modbus RTU to Modbus TCP Gateway built-in
- > Ethernet, Wifi and 4G internet connection options with auto-failover
- > Free cloud management platform – RCMS
- > Fully programmable Linux environment with excellent SDK Documentation
- > 'Smart Reboot' for enhanced roaming SIM management
- > RobustVPN provides fixed IP address on ANY SIM card
- > Full SMS control for diagnosis and recovery from data network problems
- > Very small footprint for space-constrained applications
- > Wall-mount and DIN-rail mounting options available

## APPLICATION EXAMPLE



## SPECIFICATIONS

### Cellular Interface

Number of antennas	2 external antenna(MAIN + AUX)
Connector	SMA-K
SIM	1* (3 V & 1.8 V) Standard SIM or eSIM

### 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

Number of antennas	1 external antenna
Connector	RP-SMA-K (external antenna)
Standards	802.11b/g/n, supports 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 (+/-1 dBm)	802.11b 19 dBm 802.11g 19 dBm 802.11n (20 MHz) 18 dBm 802.11n (40 MHz) 17 dBm
Receiving sensitivity (+/-1 dBm)	802.11b -93 dBm 802.11g -90 dBm 802.11n (20 MHz) -88 dBm 802.11n (40 MHz) -85 dBm

### Serial Interface

Type	1 x RS-232 or 1 x RS-485(Hardware configuration)
Connector	3-pin 3.5 mm female socket
Baud rate	300bps to 115200bps

### Others

Reset button	1 x RST
LED indicators	1 x RUN, 1 x MDM, 1 x USB, 1 x RSSI, 1 x WLAN
Built-in	Watchdog, Timer

### SDK

Supported programming languages	C, C++, Linux Shell scripts
Flash available for SDK	4MB
RAM available for SDK	64MB

### Software (Basic features of RobustOS)

Network protocols	PPPoE, DHCP, NAT, DNS, 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

### App Center (Available Apps for RobustOS)

Apps*	L2TP, PPTP, DMVPN, VRRP, QoS, Captive Portal, WLAN Multi AP, SNMP, Language, RCMS
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\*Request on demand. For more Apps please visit [www.robustel.com](http://www.robustel.com).

### Power Supply and Consumption

Connector	2-pin 3.5 mm female socket
Input voltage	9 to 36V DC
Power consumption	Idle: 100 mA@12 V Data link: 500 mA (peak) @12 V

### Physical Characteristics

Ingress protection	IP30
Housing & Weight	Plastic, 150 g
Dimensions	91.5 x 91.5 x 31.5 mm
Installations	Desktop, wall mounting and 35 mm DIN rail mounting
Operating Temperature	-25 to +70 °C
Storage Temperature	-40 to +85 °C
Relative Humidity	5 to 95% RH

### Approvals

EMI	EN 55032: 2012/AC: 2013 (CE & RE) Class B
EMS	IEC 61000-4-2 (ESD) Contact Level 2; IEC 61000-4-3 (RS) Level 2 IEC 61000-4-4 (EFT) Level 2 IEC 61000-4-5 (Surge) Level 2 IEC 61000-4-6 (CS) Level 2

\*(In progress)

\*See ordering information for details about other certifications

## ORDERING INFORMATION

Model	Serial Interface	LTE Category	Frequency Bands*			Region/Country	Certification (* In progress)
			4G	3G	2G		
R1511-4L-A02EU-A	RS-232	CAT4	LTE FDD:	WCDMA: B1/B8	GSM: B3/B8	EMEA	CE*
R1511-4L-A02EU-B	RS-485		B1/B3/B7/B8/B20/B28A				
R1511-4L-A03AU-A	RS-232	CAT4	LTE FDD: B1/B2/B3/B4/B5/B7/B8/B28	WCDMA:	GSM:	Oceania	RCM*
R1511-4L-A03AU-B	RS-485		LTE TDD: B40				
R1511-4L-A04JP-A	RS-232	CAT4	LTE FDD: B1/B3/B8/B18/B19/B26	WCDMA:		Japan	Telec*, JATE*
R1511-4L-A04JP-B	RS-485		LTE TDD: B41				
R1511-4L-A05NA-A	RS-232	CAT4	LTE FDD:	WCDMA: B2/B4/B5		North America	FCC*, PTCRB*, ATT*, Verizon*, Ic*, Canada Telco*
R1511-4L-A05NA-B	RS-485		B2/B4/B5/B12/B13/B14/B66/B71				
R1511-4L-A07CN-A	RS-232	CAT4	LTE-FDD: B1/B3/B5/B8	WCDMA: B1/B8	GSM: B3/B8	China/India	
R1511-4L-A07CN-B	RS-485		LTE-TDD: B34/B38/B39/B40/B41				
R1511-4E-A10CN-A	RS-232	CAT1	LTE-FDD: B1/B3/B5/B8		GSM: B3/B8	China	
R1511-4E-A10CN-B	RS-485		LTE-TDD: B34/B38/B39/B40/B41				

\* Please contact your sales representative for more detailed information on model numbers and for availability of "Global" routers.

## Assured Systems

Assured Systems is a leading technology company with over 1,500 regular clients in 80 countries, deploying over 85,000 systems to a diverse customer base in 12 years of business. We offer high-quality and innovative rugged computing, display, networking and data collection solutions to the embedded, industrial, and digital-out-of-home market sectors.

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