

# R1511

robustOS

Industrial Cellular VPN Router

2 Ethernet + WiFi + 1 SIM + 1 RS232/RS485



## 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.

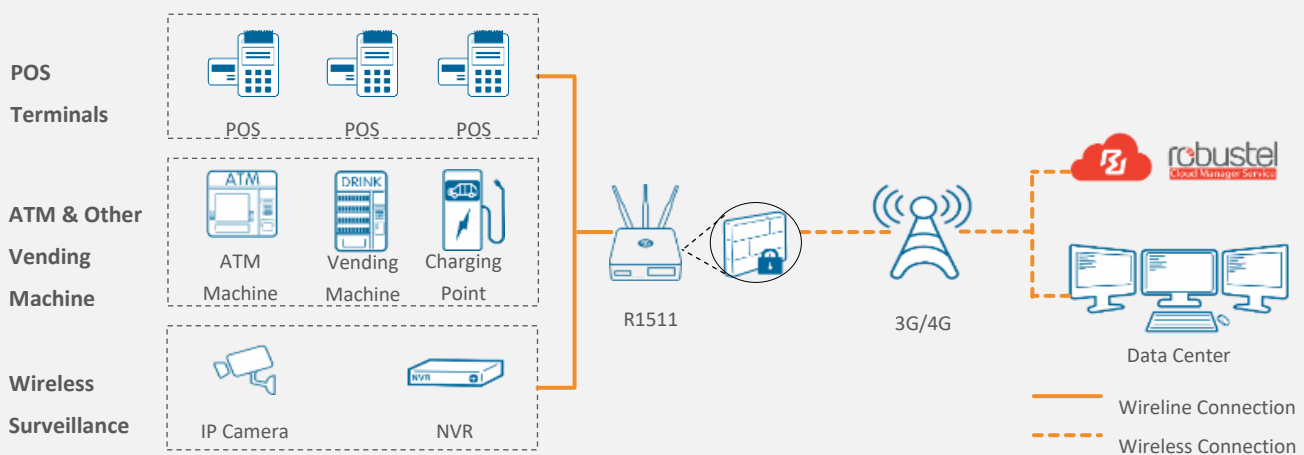
**Data Guard** – critical 'failsafe' that stops unexpected data overusage within seconds of a threshold being breached.

**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 antennas (MAIN + AUX)
Connector	SMA-K
SIM	1 x (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 protection	1.5 KV

### WiFi Interface

Number of antennas	2 (1 external antenna, 1 PCB 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 x 2 MIMO, 300 Mbps	
RF output power	802.11b	19 dBm
(+/-1 dBm)	802.11g	19 dBm
	802.11n (20 MHz)	18 dBm
	802.11n (40 MHz)	17 dBm
Receiving sensitivity	802.11b	-93 dBm
(+/-1 dBm)	802.11g	-90 dBm
	802.11n (20 MHz)	-88 dBm
	802.11n (40 MHz)	-85 dBm

### Serial Interface

Type	1 x RS232 or 1 x RS485 (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 USR, 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, TCP, UDP, DHCP, NAT, DNS, NTP, SMTP, VLAN, SSH2, DDNS, etc.
VPN tunnel	IPsec, OpenVPN, GRE
Firewall	DMZ, anti-DoS, Filtering (IP/Domain name/MAC address), Port Mapping, Access Control
Remote 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, 150g
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

\*See ordering information for details about other certifications

## ORDERING INFORMATION

Model	PN	Serial Interface	LTE Category	Frequency Bands*			Region/ Country	Certification (* In progress)
				4G	3G	2G		
R1511-4L-A02EU-A	B061701	RS232	CAT4	LTE FDD: B1/B3/B7/B8/B20/B28A	WCDMA: B1/B8	GSM: B3/B8	EMEA	CE
R1511-4L-A02EU-B	B061702	RS485						
R1511-4L-A03AU-A	B061703	RS232	CAT4	LTE FDD: B1/B2/B3/B4/B5/B7/B8/B28	WCDMA: B1/B2/B5/B8	GSM: B2/B3/B5/B8	Australia/ New Zealand	RCM
R1511-4L-A03AU-B	B061704	RS485		LTE TDD: B40				
R1511-4L-A07CN-A	B061705	RS232	CAT4	LTE FDD: B1/B3/B5/B8	WCDMA: B1/B8	GSM: B3/B8	China/India	
R1511-4L-A07CN-B	B061706	RS485		LTE TDD: B34/B38/B39/B40/B41				
R1511-4E-A10CN-A	B061707	RS232	CAT1	LTE FDD: B1/B3/B5/B8		GSM: B3/B8	China	
R1511-4E-A10CN-B	B061708	RS485		LTE TDD: B34/B38/B39/B40/B41				
R1511-4L-A05NA-A	B061709	RS232	CAT4	LTE FDD: B2/B4/B5/B12/B13/B14/B66/B71	WCDMA: B2/B4/B5		North America	FCC*, Ic*, PTCRB*, ATT*, Verizon*
R1511-4L-A05NA-B	B061710	RS485						
R1511-4L-A04JP-A	B061711	RS232	CAT4	LTE FDD: B1/B3/B8/B18/B19/B26	WCDMA:		Japan	TELEC*, JATE*
R1511-4L-A04JP-B	B061712	RS485		LTE TDD: B41	B1/B6/B8/B19			

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