

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.

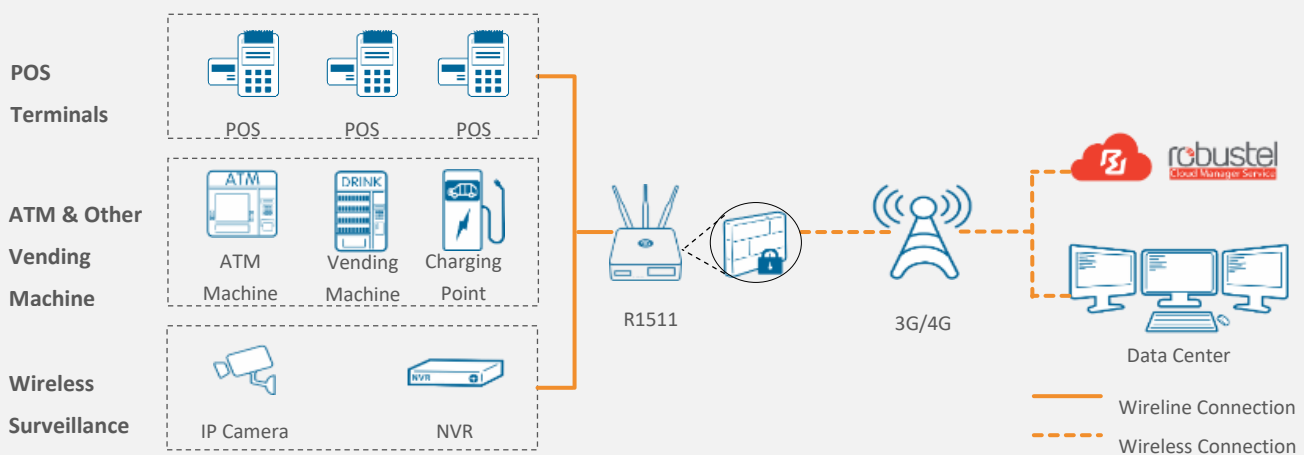
Data Guard – critical 'failsafe' that stops unexpected data overusage within seconds of a threshold being breached.

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 |
|-------|---|

*Request on demand. For more Apps please visit 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.