# R1510

robustOS

Industrial Cellular VPN Router
2 Ethernet + 1 DI + 1 DO

## INTRODUCTION

Robustel's R1510 router is a Dual Ethernet port (LAN + WAN) 3G/4G router with advanced software functions at a very competitive price point.

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 R1510 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.
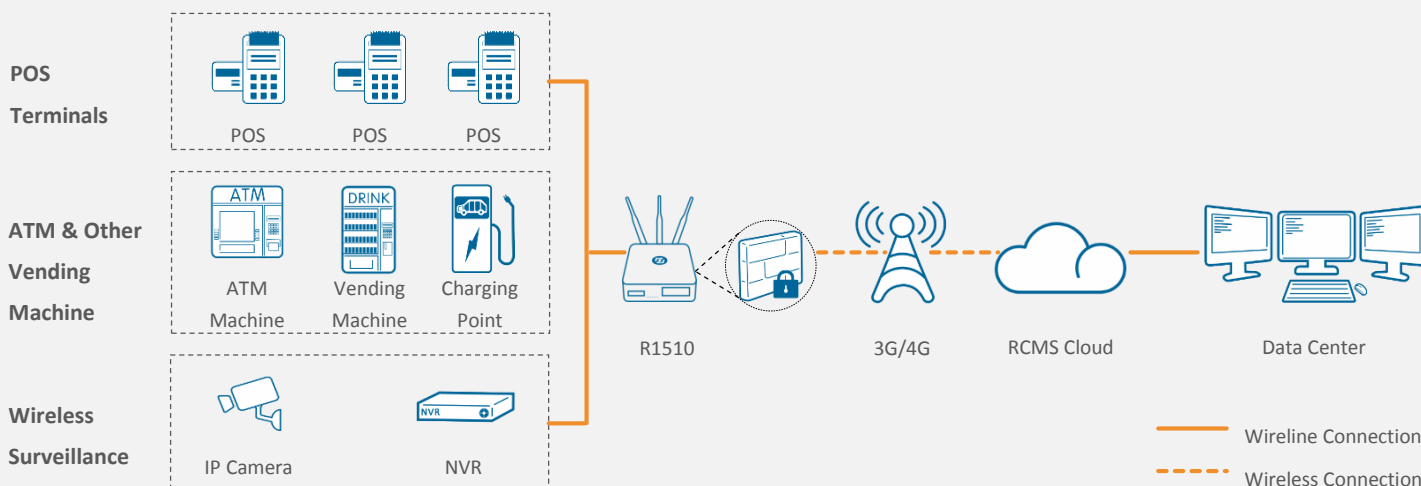Smart Reboot – essential backup solution for when your roaming SIM card doesn't roam!

Robustel is a leading global industrial IoT/M2M hardware and solution provider. Since inception in 2010, Robustel has focussed on manufacturing and design of industrial cellular routers, gateways, modems, cloud platforms and end to end solutions. Robustel has set up local offices in Germany, Australia, the Netherlands, UK, Japan and Hong Kong and has a global distribution network providing a service in over 100 countries.

## KEY FEATURES

> Highly stable 2G/3G/4G cellular connections
> 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



POS Terminals
POS   POS   POS

ATM & Other Vending Machine
ATM Machine   Vending Machine   Charging Point

Wireless Surveillance
IP Camera   NVR

R1510   3G/4G   RCMS Cloud   Data Center

Wireline Connection
Wireless Connection

# SPECIFICATIONS

### Cellular Interface
| | |
|---|---|
| Number of antennas | 2 external antenna(MAIN + AUX) |
| Connector | SMA-K |
| SIM | 1 (3 V & 1.8 V) Standard SIM, eSIM optional |

### 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 | 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 |

### DI/DO
| | |
|---|---|
| Type | 1 x DI (wet contact) + 1 x DO (wet contact) |
| Connector | 3-pin 3.5 mm female socket |
| Absolute maximum VDC | 30V DC (DI/DO) |
| Absolute maximum ADC | 20mA |

### Others
| | |
|---|---|
| Reset button | 1 x RST |
| LED indicators | 1 x RUN, 1 x MDM, 1 x USR, 1 x RSSI, 1 x WiFi |
| Built-in | Watchdog, Timer |

### 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, RobustVPN, VRRP, QoS, Captive Protal, WLAN Multi AP, SNMP, Language, RobustLink |

*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 26V 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 30.8mm |
| Installations | Desktop, wall mounting and 35 mm DIN rail mounting |

### Regulatory and Type Approvals
| | |
|---|---|
| Regulatory: | CE |
| Environmental: | RoHS, WEEE |
| EMI | EN 55032: 2012/AC: 2013 (CE & RE) Class A |
| 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 |

# ORDERING INFORMATION

| Model | R1510-4L |
|---|---|
| Router Type | LTE Router |
| Air Interface | GSM/GPRS/EDGE/WCDMA/HSDPA/HSUPA/HSPA+/DC-HSPA+/ |
| | TD-SCDMA/CDMA (CDMA 1X/EVDO)/FDD LTE/TDD LTE/ |
| Frequency Bands | EU: B1/B3/B7/B8/B20/B28 |
| | AU+LATAM: B1/B3/B5/B7/B8/B28, B40 |
| 4G* | CN+IN: B1/B3/B5/B8, B34/B38/B39/B40/B41 |
| 3G | WCDMA/HSDPA/HSUPA/HSPA+/DC-HSPA+: B1/B2/B5/B8 |
| | TD-SCDMA: B34/B39 |
| | CDMA (CDMA 1X/EVDO):BC0 |
| 2G | B3/B8 |
| Operating Temperature | -25 to +70 °C |
| Storage Temperature | -40 to +85 °C |
| Relative Humidity | 5 to 95% RH |

* Please note that the different LTE frequency bands are model dependent and not all 4G frequencies are currently supported on a single model of R1510 router.

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