R1510 robustOS

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

INTRODUCTION

Robustel's R1510 router is a Dual Ethernet port (LAN + WAN) 2G/3G/4G router with advanced software functions at a very competitive price point. The R1510 has many unique software innovations including, but not limited to:

RobustVPN – innovative use of OpenVPN 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.

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.

RCMS is Robustel's free router monitoring service that is fully compatible with the R1510. It allows customer to see a location overview of their routers quickly and simply on a map. Features such as data usage, signal strength, current network and much more can then be viewed on a per router basis. Over-the-air updates are supported for Firmware, router configuration and Apps serving as essential 'insurance' if anything was not quite right during deployment. You can try Robustel's free router management platform by signing up here: https://rcms-cloud.robustel.net
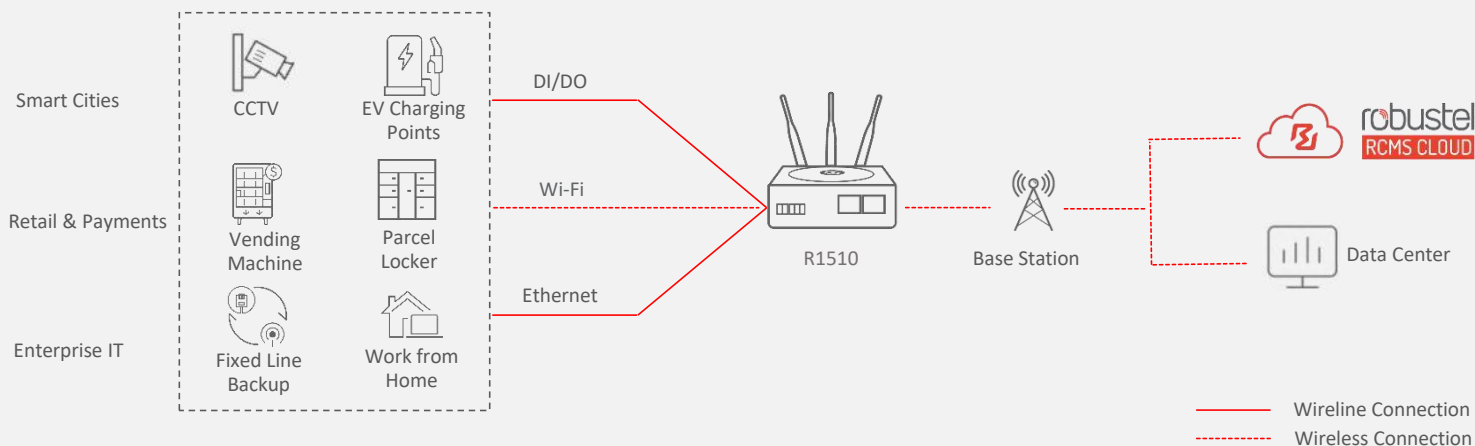
KEY FEATURES

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

➢ Ethernet, Wi-Fi and 4G internet connection options with auto-failover

➢ Free cloud management platform – RCMS

➢ Fully programmable Linux environment with excellent SDK Documentation

➢ 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

Smart Cities — CCTV, EV Charging Points — DI/DO
Retail & Payments — Vending Machine, Parcel Locker — Wi-Fi
Enterprise IT — Fixed Line Backup, Work from Home — Ethernet

R1510 — Base Station — RCMS CLOUD — Data Center

Wireline Connection
Wireless Connection

SPECIFICATIONS

Cellular Interface
Number of antennas	2 External antennas (MAIN + AUX)
Connector	SMA-K
SIM	1 Mini SIM (2 FF)

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

Wi-Fi Interface
Number of antennas	2 (1 x External antenna, 1 x PCB antenna)
Connector	RP-SMA-K (External antenna)
Standards	802.11 b/g/n, supports AP and Client modes
Frequency bands	2.4 GHz
Security	WEP, WPA, WPA2, WPA3
Encryption	64/128 AES, TKIP

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

Others
Reset button	1 x RST
LED indicators	1 x RUN, 1 x MDM, 1 x USR, 1 x RSSI, 1 x Wi-Fi
Watchdog	Built-in

Software (Basic features of RobustOS)
Network protocols	PPPoE, TCP, UDP, DHCP, NAT, DNS, NTP, SMTP, Telnet, VLAN, SSH2, DDNS, etc.
VPN tunnel	IPSec, OpenVPN, GRE, Wireguard
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.

SDK
Supported programming language	C, C++
Flash available for SDK	4 MB
RAM available for SDK	64 MB

Power Supply and Consumption
Connector	2-pin 3.5 mm female socket
Input voltage	9 ~ 36 VDC
Power consumption	Idle: 100 mA@12 V
	Data link: 500 mA (peak) @12 V

Physical Characteristics
Ingress protection	IP30
Housing & Weight	Plastic, 150 g
UL 94	V-0, 5 VB
Dimensions	91.5 x 91.5 x 31.5mm
Installations	Desktop, wall mounting and 35 mm DIN rail mounting
Operating temperature	-25 ~ +70 °C
Storage temperature	-40 ~ +85 °C
Relative humidity	5 ~ 95% RH

Regulatory and Type Approvals
Environmental:	RoHS2.0, WEEE
EMI	EN 55032 Conducted Emission class B
	EN 55032 Radiated Emission class B
EMS	EN 61000-4-2 (ESD) Contact Level 2 Air Level 3
	EN 61000-4-3 (RS) Level 2
	EN 61000-4-4 (EFT) Level 2
	EN 61000-4-5 (Surge) Level 3
	EN 61000-4-6 (CS) Level 2

ORDERING INFORMATION

Model	PN	Category	Frequency Bands	Country/Region	Certifications (*In progress)
R1510-4L	B048701	Cat 4	**4G**: LTE FDD: B1/B3/B7/B8/B20/B28A **3G**: WCDMA: B1/B8 **2G**: GSM: B3/B8	EMEA	CE, ICASA, TDRA, UKCA, CB, E-Mark, SIRIM, NTC*
	B048703	Cat 4	**4G**: LTE FDD: B1/B2/B3/B4/B5/B7/B8/B28 　　LTE TDD: B40 **3G**: WCDMA: B1/B2/B5/B8 **2G**: GSM: B2/B3/B5/B8	South America Oceania	CRC, URSEC, RCM, NOM, SUBTEL, MTC, ENACOM, ARCOTEL
	B048704	Cat 4	**4G**: LTE FDD: B1/B3/B8/B18/B19/B26 　　LTE TDD: B41 **3G**: WCDMA: B1/B6/B8/B19	Japan	Telec, JATE, NTT Docomo
	B048709	Cat 4	**4G**: LTE FDD: B1/B3/B5/B7/B8/B20/B28 　　LTE TDD: B38/B40/B41 **3G**: WCDMA: B1/B5/B8 **2G**: GSM:B3/B8	EMEA, SEA	CE

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