



R1511P-DevKit ^{robustOS}

Embedded 4G Router Development Kit



INTRODUCTION

The R1511P Development Kit provides prospective customers with all the parts required to evaluate the suitability of the R1511P embedded 4G router for integration into custom products / projects.

To learn more about R1511P – visit:

<https://www.robustel.com/product/r1511p-embedded-4g-lte-router/>

The Development kit contains the following items:

- 1 x R1511P router board (RS232 or RS485 version)
- 2 x LTE antenna
- 1 x Wifi antenna
- 1 x Global PSU
- 1 x Ethernet cable
- 1 x DB9 to terminal block adapter (for easy DB9 connections)
- 1 x screw terminal block for serial data
- 1 x screw terminal block for power
- 4 x self-tapping screws for board mounting (1 for backup)

The R1511P is fully integrated with Robustel’s free Cloud management platform, RCMS. Be sure to trial it whilst testing the hardware.

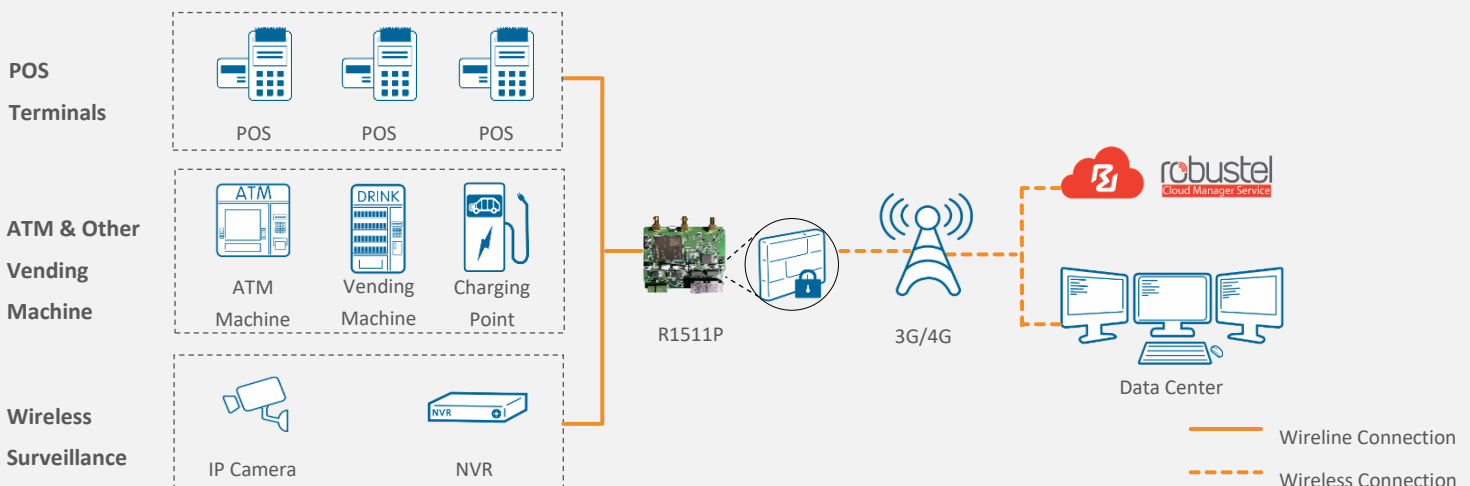
Sign up for a free account here:

<https://rcms-cloud.robustel.net/rcms/index>

KEY FEATURES

- > R1511P dev kit provides everything a customer needs to evaluate R1511P
- > Dual Ethernet, Wifi (AP and client) and 4G/3G/2G capability
- > RS232 (default) or RS485 port for connection to serial devices + integrated Modbus gateway
- > Pre-certified PCB means that manufacturer certification challenges are minimised
- > Fully programmable Linux environment with excellent SDK Documentation
- > Can be connected directly to Raspberry Pi or similar low cost embedded PC for internet access
- > “Smart Reboot” included for enhanced Roaming SIM management
- > Bulk packaging + shipping options to minimise addition to customer BOM cost
- > Free Cloud platform with API

APPLICATION EXAMPLE



SPECIFICATIONS

Cellular Interface

Number of antennas	2 external antenna (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 x external antenna, 1 x 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	
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

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

SDK

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

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.

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

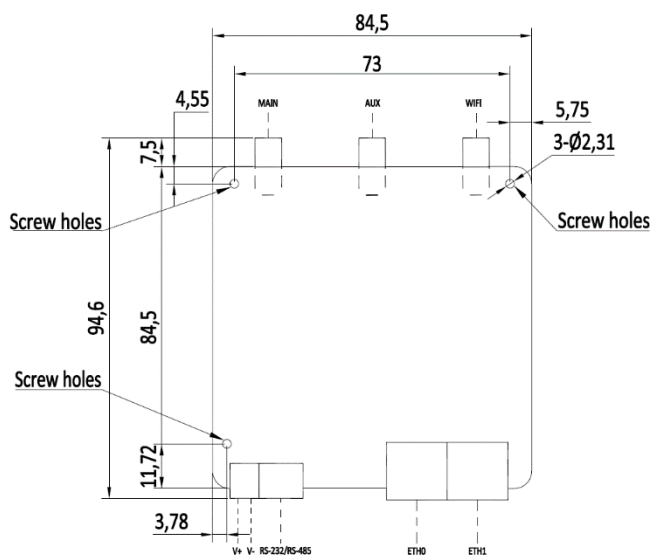
Weight	65g
Installations	Three screw holes are fixed ST2 x 8 black cross grooved pan head tapping
Operating temperature	-25 to +70 °C
Storage temperature	-40 to +85 °C
Relative humidity	5 to 95% RH

Approvals

EMI	EN 55032: 2012/AC: 2013 (CE & RE) Class 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

*See ordering information for details

R1511P Dimension diagram



ORDERING INFORMATION

Model	PN	Serial Interface	LTE Category	Frequency Bands			Region/ Country	Certification (* In progress)
				4G*	3G	2G		
R1511P-4L-A02EU-A-DevKit	B061715	RS232	CAT4	LTE FDD:	WCDMA: B1/B8	GSM: B3/B8	EMEA	CE
R1511P-4L-A02EU-B-DevKit	B061716	RS485		B1/B3/B7/B8/B20/B28A				
R1511P-4L-A03AU-A-DevKit	B061719	RS232	CAT4	LTE FDD: B1/B2/B3/B4/B5/B7/B8/B28	WCDMA:	GSM:	Oceania	RCM
R1511P-4L-A03AU-B-DevKit	B061720	RS485		LTE TDD: B40				

* Please note that the different LTE frequency bands are model dependent and not all 4G frequencies are currently supported on a single model of 1511P router.