



robustOS

R1520 Global

A Global Single SKU IoT Gateway



INTRODUCTION

The R1520 Global router is Robustel's latest addition to the popular R1520 series. This global variant is designed for companies seeking a straightforward, one-size-fits-all solution for global 4G deployments. Traditionally, 4G routers have been offered on a region-specific basis due to cost and certification challenges. However, the R1520 Global changes this paradigm with its support for global 4G (LTE) frequencies and Robustel's significant investment in global certifications.

Certifications include but are not limited to:

FCC/PTCRB - USA
 IC - Canada
 IMDA - Singapore
 NBTC - Thailand
 KCC - Korea
 CE - Europe
 ICASA - South Africa
 RCM - Australia & New Zealand
 TRA - United Arab Emirates

Various carrier certifications pending + more...

To gain a deeper understanding of the challenges and complexities associated with global 4G deployments, please download Robustel's extensive white paper, "Managing and Overcoming the Challenges Presented by Global 4G/LTE IoT Deployments," available here:

<https://www.robustel.com/white-paper/managing-and-overcoming-the-challenges-presented-by-global-4g-lte-iot-deployments/>

The **Robustel Cloud Manager Service (RCMS)** is a unified cloud-based platform designed for real-time monitoring and centralized management of industrial IoT devices. Experience robust, cloud-native device management by registering at: <https://rcms-cloud.robustel.net>

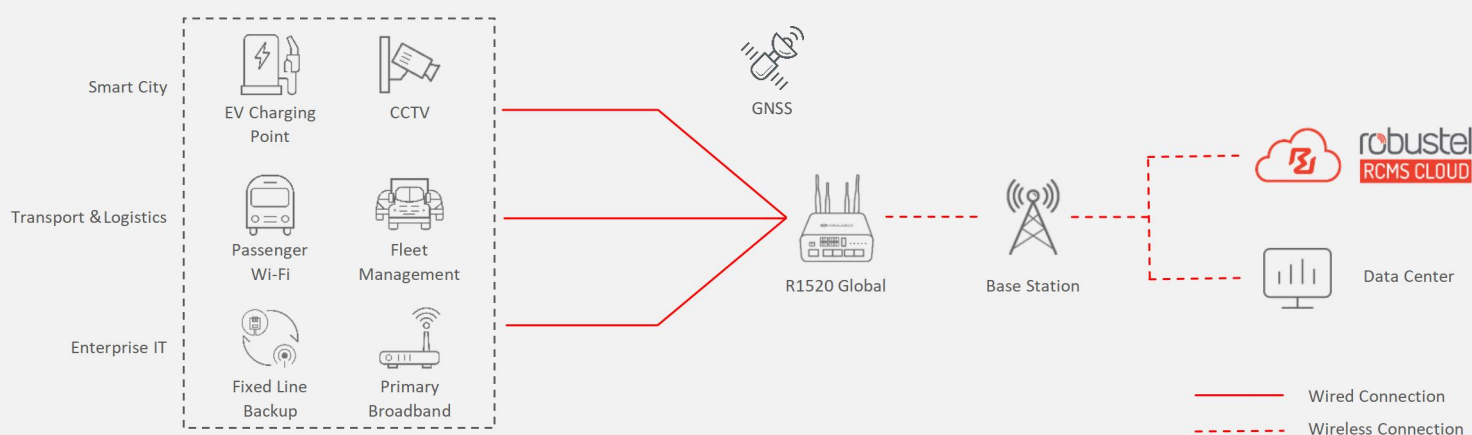


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RCMS CLOUD

KEY FEATURES

- Global 4G frequency coverage for all continents
- Significant investment in global certifications for all major countries
- Free cloud management platform for easy global monitoring
- 802.3at compliant PoE interface for straightforward powering
- E-mark certification for in-vehicle use
- Unique "Smart Roaming" capability for enhanced SIM management
- Support for dual SIMs and Wi-Fi/Ethernet as WAN options
- RobustVPN - hosted service providing a fixed IP address for the router
- Supports WireGuard, IPsec, OpenVPN, and DMVPN protocols

APPLICATION EXAMPLE



SPECIFICATIONS

Hardware System

CPU	MIPS, 650 MHz
RAM	128 MB
Flash	16 MB

Cellular Interface

Number of antennas	2 (MAIN + AUX)
Connector	SMA-K
SIM	2 x Mini SIM (2FF)

Ethernet Port

Number of ports	5 x 10/100 Mbps
WAN port	5 LAN by default, can be configured as 1 WAN + 4 LAN Support 802.3af & 802.3at PD feature on ETH0 (optional)
Magnet isolation protection	1.5 KV

Digital Input/Output Port

Number of ports	1 x DI + 1 x DO, wet contact
Connector	2 x 3-pin 3.5 mm female socket
Isolation	3 KV
Level	3 ~ 30 V DC = HIGH, 0 ~ 1 V DC = LOW
Absolute maximum VDC	30 V DC (DI/DO)
Absolute maximum ADC	10 mA (DI/DO)

Analog Input Port

Number of ports	1 x AI (can be configured as voltage type or current type)
Connector	2 x 3-pin 3.5 mm female socket
Voltage input range	0 ~ 24 V DC
Current input range	4 ~ 20 mA (current-type input requires external resistance, and finally measured by voltage)
Signal definition	AI, AGND

Serial Port

Number of ports	1 x RS-232 + 1 x RS-485
Connector	2 x 4-pin 3.5 mm female socket
Signal definition	RS-232: RXD, TXD, SGND, RTS, CTS RS-485: Data+ (A), Data- (B), Ground (GND)

Wi-Fi Interface

Number of antennas	2
Connector	RP-SMA-K
Standards	802.11 b/g/n, supporting AP and Client modes
Frequency bands	2.4 GHz
Security	WEP, WPA, WPA2, WPA3
Encryption	64/128 AES, TKIP

Other Interfaces

GNSS interface	1 x GNSS
USB port	1 x 480 Mbps High-speed USB 2.0 port (Type A, 5 V, 500 mA)

Others

Reset button	1 x RST
LED indicators	1 x RUN, 1 x MDM, 1 x USB, 1 x WLAN, 1 x RSSI
Built-in	Watchdog, RTC

Software (Basic features of RobustOS)

Network protocols	PPP, PPPoE, TCP, UDP, DHCP, ICMP, NAT, HTTP, HTTPS, DNS, ARP, NTP, SMTP, Telnet, VLAN, SSH2, DDNS, etc.
VPN tunnels	IPsec, OpenVPN, GRE, WireGuard
Firewalls	DMZ, anti-DoS, Filtering (IP/Domain name/MAC address), Port Mapping, Access Control
Remote management	Web, CLI, SMS
Serial port protocols	Transparent, TCP Client/Server, UDP, Modbus RTU Gateway
Routing	Static routing, Dynamic routing (BGP, OSPF v2, RIP v1/v2)
Others	Smart Roaming V2

SDK

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

App Center (Available Apps for RobustOS)

Apps*	L2TP, PPTP, DMVPN, VRRP, QoS, Captive Portal, WLAN Multi AP, SNMP, Language, RCMS, Edge2Cloud, etc.
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*Request on demand. For more Apps please visit www.robustel.com.

Cloud Platform

Robustel Cloud Manager Service (RCMS)	RobustLink, RobustVPN, Operation Console
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Power Supply and Consumption

Connector	2-pin 3.5 mm female socket
Input voltage	12/24 V DC, 9 ~ 36 V DC Reverse polarity protection, surge protection
PoE-PD voltage	40 ~ 57 V DC Possibility to power up through ETH0
Power consumption	Idle: 3 W@12 V Max: 11 W@12 V
Recommended power supply	12 V DC/1.5 A power adapter

Physical Characteristics

Ingress protection	IP30
Housing & Weight	Plastic, 250 g
Dimensions	46 x 90 x 105 mm
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 (non-condensing)

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 EN 61000-4-11 (Dips) Level 2

ORDERING INFORMATION

Model	Order Code	PoE-PD	Frequency Bands*	Country /Region	Certification	Package Contains
R1520-4L Global	A005600705	√	4G: LTE FDD: B1/2/3/4/5/7/8/12/13/18/19/ 20/25/26/28 LTE TDD: B38/39/40/41 3G: WCDMA: B1/2/4/5/6/8/19 2G: GSM: 850/900/1800/1900 MHz	Global	E-Mark, RCM, CE, UKCA, FCC, IC, PTCRB, AT&T, Verizon, ICASA, TDRA, NTC, IMDA, NBTC, SIRIM, MTC, EAC, ANATEL, Rogers, CRC, SUBTEL, ENACOM, URSEC, KCC, NOM, POSTEL, ARCOTEL	1 x R1520 Global Router (B Code: B056701)
	A005600706					1 x R1520 Global Router (B Code: B056701) 1 x DIN Rail Mounting Kit 2 x Cellular Antenna 1 x Wi-Fi Antenna 1 x Power Adapter
	A005600707	-				1 x R1520 Global Router (B Code: B056711)
	A005600708					1 x R1520 Global Router (B Code: B056711) 1 x DIN Rail Mounting Kit 2 x Cellular Antenna 1 x Wi-Fi Antenna 1 x Power Adapter

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