robustel

robustOS

R1520 Global

A Global Single SKU IoT Gateway

INTRODUCTION

The R1520 Global router is Robustel's latest addition to the popular R1520 series. The Global variant has been designed for companies that want a simple one size fits all for global 4G deployments. Traditionally, 4G routers have had to be supplied on a 'per region' basis due to cost and certification issues but the R1520 Global changes all that with global 4G (LTE) frequency and a massive investment by Robustel in Global certifications.

Certifications include but are not limited to:
FCC/PTCRB - USA
IC - Canada
CCC - China
IMDA – Singapore
NBTC – Thailand
KCC – Korea
CE - Europe
ICASA - South Africa
RCM – Australia & New Zealand
TRA - United Arab Emirates
Various carrier certifications pending + more…
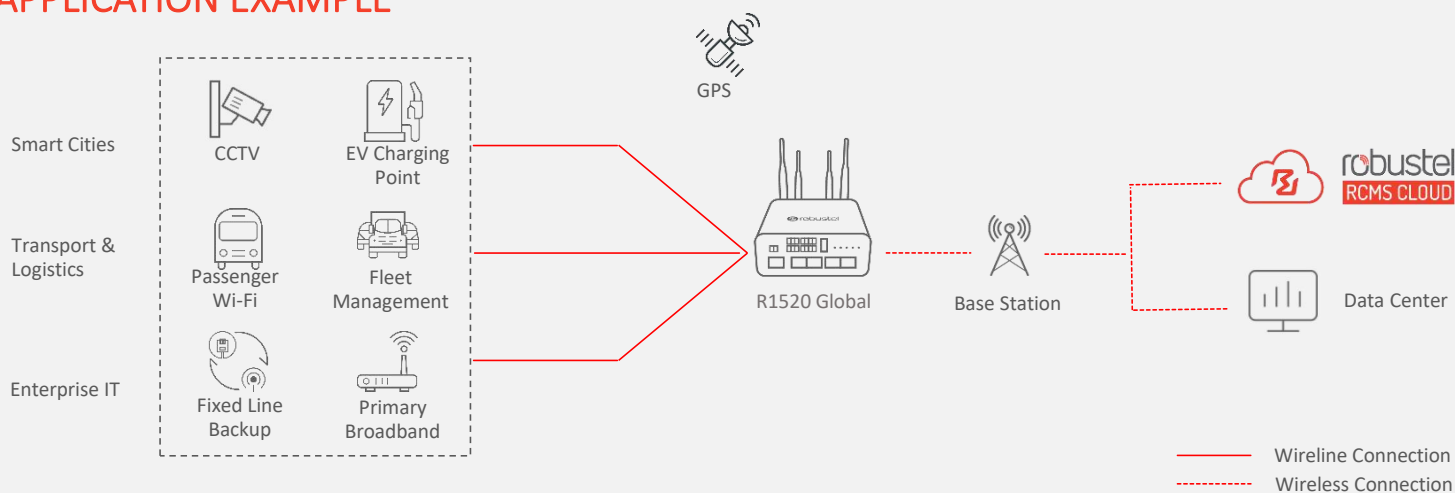*(*In progress)*

To fully understand the challenges and complexities of 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/

KEY FEATURES

➢ Global 4G frequency coverage for all continents

➢ Huge investment in Global certifications for all major countries

➢ Free Cloud Management platform for easy global monitoring

➢ 802.3at compliant POE interface for simple powering

➢ E-mark certification for in vehicle use

➢ Unique "Smart Roaming" capability for enhanced roaming SIM management

➢ Support Dual SIMs & WIFI/Ethernet as WAN

➢ RobustVPN – hosted service providing a "fixed IP" router

➢ Wireguard/IPsec/OpenVPN/DMVPN supported

APPLICATION EXAMPLE

Smart Cities	CCTV	EV Charging Point
Transport & Logistics	Passenger Wi-Fi	Fleet Management
Enterprise IT	Fixed Line Backup	Primary Broadband

GPS

R1520 Global — Base Station — RCMS CLOUD — Data Center

robustel RCMS CLOUD

——— Wireline Connection
- - - - - Wireless Connection

SPECIFICATIONS

Cellular Interface
Number of antennas	2
Connector	SMA-K
SIM	2 Mini SIMs (2FF)

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

Wi-Fi Interface
Number of antennas	2
Connector	RP-SMA-K
Standards	802.11 b/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

DI/DO
Type	1 x DI + 1 x DO, wet contact
Isolation	3 KV
Socket form	2 x 3-pin 3.5 mm female socket
Level	3 ~ 30 V DC = HIGH, 0 ~ 1 V DC = LOW
Absolute maximum V DC	30 V DC (DI/DO)
Absolute maximum A DC	10 mA (DI/DO)

Analog Input
Type	1 x AI (can be configured as voltage type or current type)
Voltage input range	0 ~ 24 VDC
Current input range	4 ~ 20 mA (current-type input requires external resistance, and finally measured by voltage)
Socket form	2 x 3-pin 3.5 mm female socket
Signal definition	AI, AGND

Serial Port
Type	1 x RS232 + 1 x RS485 serial port
Socket form	2 x 4-pin 3.5 mm female socket
Signal definition	RS232: RXD, TXD, SGND, RTS, CTS RS485: Data+ (A), Data- (B), Ground (GND)

Other Interfaces
1 x GPS interface (Optional, depending on the cellular module)
1 x 480Mbps high-speed USB 2.0 interface

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

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 socket with lock
Input voltage	9 ~ 36 VDC
Power consumption	Idle: 100 mA@12 V Data link: 1.0 A (peak) @12 V

Physical Characteristics
Ingress protection	IP30
Housing & Weight	Plastic, 250 g
Dimensions	105 x 90 x 46 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

Regulatory and Type Approvals
Environmental	RoHS2.0, WEEE
EMC	
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 IEC 61000-4-11 (DIP) Level 2

ORDERING INFORMATION

Model	PN	Frequency Bands	Certification (* In progress)
R1520-4L Global	B056701	**4G**: LTE FDD: B1/B2/B3/B4/B5/B7/B8/B12/B13/ B18/B19/B20/B25/B26/B28 LTE TDD: B38/B39/B40/B41 **3G**: WCDMA: B1/B2/B4/B5/B6/B8/B19 **2G**: GSM: 850/900/1800/1900MHz	E-13, RCM, CE, FCC, CCC, ICASA, IC, TRA, NTC, AT&T, IMDA, NBTC, SIRIM, MTC, PTCRB, EAC*, Anatel*, Rogers*, CRC, SUBTEL, Enacom, URSEC*, KCC

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