R1520 Global

robustOS

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.

At the time of writing (JAN 2021), Certifications include but are not limited to:

FCC/PTCRB - USA

IC - Canada

CCC - China

IMDA – Singapore*

NBTC – Thailand*

TELEC & JATE – Japan*

CE - Europe

ICASA - South Africa

RCM – Australia & New Zealand

TRA - United Arab Emirates

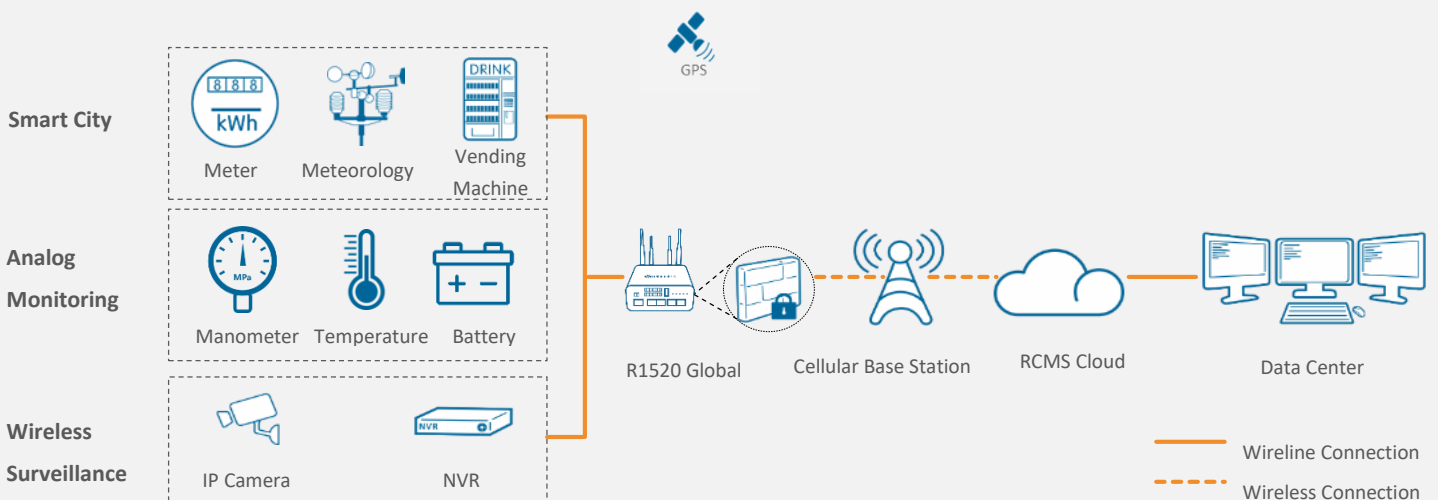Various carrier certifications pending + more…

(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 City — Meter, Meteorology, Vending Machine

Analog Monitoring — Manometer, Temperature, Battery

Wireless Surveillance — IP Camera, NVR

GPS — R1520 Global — Cellular Base Station — RCMS Cloud — Data Center

Wireline Connection
Wireless Connection

SPECIFICATIONS

Cellular Interface
Number of antennas	2
Connector	SMA-K
SIM	2, Standard SIM or eSIM

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

WiFi Interface
Number of antennas	2
Connector	RP-SMA-K
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 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 to 30V DC = HIGH, 0 to 1V DC = LOW
Absolute maximum VDC	30V DC (DI/DO)
Absolute maximum ADC	10mA (DI/DO)

Analog Input
Type	1 x AI (can be configured as voltage type or current type)
Voltage input range	0 to 24V DC
Current input range	4-20mA (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
GPS	GPS/GLONASS/BeiDou/Galileo
USB	1 x 480Mbps high-speed USB 2.0 interface

Others
Reset button	1 x reset button (RST button)
RTC	External RTC clock, Backup energy storage capacitor can be maintained for 2 days
LED indicators	1 x RUN, 1 x MDM, 1 x USR, 1 x RSSI, 1 x WiFi
Watchdog	Built-in

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.

Power Supply and Consumption
Connector	2 pin 3.5 mm socket with lock
Input voltage	9 to 36V DC
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 to +70 °C
Storage Temperature	-40 to +85 °C
Relative Humidity	5 to 95% RH

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

*See ordering information for details about other certifications

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 4G (LTE TDD): B38/B39/B40/B41 3G: B1/B2/B4/B5/B6/B8/B19 2G: 850/900/1800/1900MHz	RCM, CE, FCC, CCC, ICASA, IC, TRA, NTC, EAC*, TELEC*, JATE *, IMDA*, NBTC*, Anatel*, ATT*, CB*, SIRIM*, MTC*, PTCRB, AT&T*, Verizon*, Vodafone*, Rogers*, E-Mark

* Please contact your sales representative for more detailed information.

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