ASSURED SYSTEMS

robustel

R2110   robustOS

High Speed Smart LTE / LTE-A Router
4 Eth + 1 RS-232 + 1 RS-485 + Bluetooth

INTRODUCTION

The Robustel High Speed Smart LTE /LTE-A Router (R2110) is a rugged cellular router offering state-of-the-art mobile connectivity for internet of things applications.
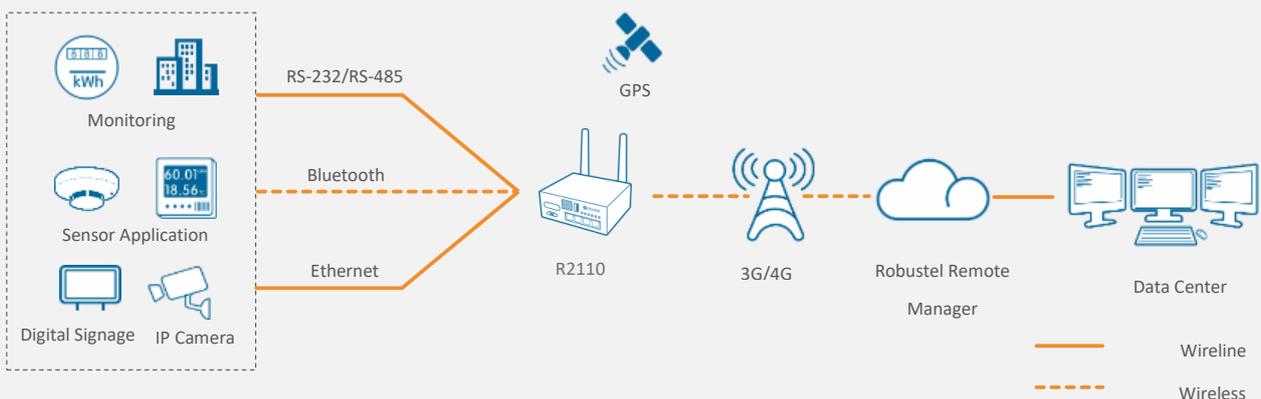
R2110 is a powerful platform developed based on **RobustOS**, a Robustel self-developed and Linux-based operating system which is designed to be used in Robustel devices. The RobustOS includes basic networking features and protocols providing customers with excellent user experience. Meanwhile, RobustOS offers **Software Development Kit** (SDK) allows partners and customers to develop IoT applications by using C, Python or Java. It also provides various **Apps** to meet fragmented IoT market demands.

Robustel is a leading global industrial IoT/M2M hardware and solution provider. Since its establishment in 2010 in Guangzhou, Robustel has been focusing on designing and manufacturing industrial cellular routers, gateways, modems, cloud platforms and E2E solutions. In order to support global business in more than 100+ countries and regions, Robustel has set up local offices in Germany, Australia, the Netherlands, the UK, Japan and Hong Kong.

KEY FEATURES

> Supports WWAN, WAN, WLAN link backup and ICMP detection

> Supports cold backup , warm backup and load balancing

> RobustOS + SDK + App

> IPsec/OpenVPN/GRE

> Ignition sensing(optional)

> Management and maintenance via Web/CLI/SNMP/RCMS

> Robust industrial design desktop or wall mounting or DIN rail mounting)

APPLICATION EXAMPLE

kWh — Monitoring

Sensor Application

Digital Signage   IP Camera

RS-232/RS-485

Bluetooth

Ethernet

GPS

R2110

3G/4G

Robustel Remote Manager

Data Center

—— Wireline
---- Wireless

SPECIFICATIONS

Cellular Interface

Number of antennas	2 (MAIN + AUX)
Connector	SMA-K
SIM	2 (3 V & 1.8 V) Standard SIM; UICC SIM (Optional)

Ethernet Interface

LAN port	3 x LAN (10/100/1000 Mbps)
WAN port	Support 802.3at PD feature (optional) on ETH0 1 x WAN (10/100/1000 Mbps)
Magnet isolation protection	1 KV

WiFi Interface

Number of antennas	2
Connector	RP-SMA-K
Standards	802.11a/b/g/n/ac 2*2 MIMO, supports AP and Client modes
Frequency bands	2.412 - 2.472 GHz (2.4 GHz ISM band) 5.15 - 5.825 GHz (5 GHz ISM band)
Security	Open, WPA, WPA2, WEP
Encryption	AES, TKIP, WEP64
Data speed	5G: Up to 867Mbps 2.4G: Up to 300Mbps

Bluetooth Interface (Optional)

Number of antennas	1
Connector	RP-SMA-K
Standards	BLE 5.0 Compatible with BLE 4.2, BLE 4.0

GPS (Optional)

Number of antennas	1
GNSS technology	GPS
Connector	SMA-K with 50 ohms impedance
Tracking sensitivity	GPS: greater than -148 dBm
Horizontal position accuracy	GPS: 2.5 m

Serial Interface

Number of ports	1 x RS-232 + 1 x RS-485
Connector	2 x 3-pin 3.5 mm female socket
ESD protection	±15 KV
Baud rate	300bps to 115200bps

DI/DO

Type	1x DI + 1 x DO, wet contact
Connector	2 x 2-pin 3.5 mm female socket
Isolation	3.75KV DC
Absolute maximum VDC	"V+" +30V DC (DI), +30V DC (DO)
Absolute maximum ADC	100 mA

Others

Reset button	1 x Tact Switch
SD	1 x Micro SD interface
Expansion	1 x USB2.0 Host; 5V/500mA
LED indicators	1 x RUN, 1 x Modem, 1 x USR, 1 x RSSI, 1 x NET, 1 x WIFI
Built-in	Watchdog

Software (Basic features of RobustOS)

Network protocols	PPP, PPPoE, TCP, UDP, DHCP, ICMP, NAT, HTTP, HTTPs, DNS, ARP, NTP, SMTP, Telnet, SSH2, DDNS, etc.
VPN tunnel	IPsec, OpenVPN, GRE
Firewall	DMZ, anti-DoS, Filtering (IP/Domain name/ MAC address), Port Mapping, Access Control
Management	Web, CLI, SMS
Serial port	Transparent, TCP Client/Server, UDP, Modbus RTU to TCP

App Center (Available Apps for RobustOS)

Apps*	L2TP, PPTP, DMVPN, RobustVPN, VRRP, QoS SNMP, Language, RobustLink, Bluetooth, Dynamic route,

*Request on demand. For more Apps please visit www.robustel.com.

Power Supply and Consumption

Connector	3-pin 3.5 mm female socket with lock
Input voltage	9 to 36V DC (without Ignition sensing) ; 10 to 30V DC (with Ignition sensing)
Power consumption	Idle: 500 mA@12 V Data link: 1.3 A (peak) @12 V

Physical Characteristics

Ingress protection	IP30
Housing & Weight	Aluminum, 500 g
Dimension	125 x 100 x 48 mm (device only)
Installations	Desktop, wall mount, DIN-Rail

Approvals

Environmental:	RoHS, WEEE
Regulatory	CE*, FCC*, RCM*, Telec*, E-Mark* (*: In progress)

ORDERING INFORMATION

Model	R2110-4L	
Router Type	LTE Router	LTE-A Router
Air Interface	LTE/WCDMA/HSDPA/HSUPA/HSPA+/DC-HSPA+/TD-SCDMA / CDMA (CDMA 1X/EVDO)	LTE-A /LTE /WCDMA/HSDPA/HSUPA/HSPA+/DC-HSPA+ /TD-SCDMA
Frequency Bands 4G*	AU: B1/B3/B5/B7/B8/B28, B40	APAC: B1/B3/B5/B7/B8/B18/B19/B21/B28/B38-B41
	EU: B1/B3/B7/B8/B20/B28/B31, B38/B40 US: B2/B4/B5/B13/B17/B25, B41 JP: B1/B3/B8/B9/B18/B19/B21/B28, B41 CN: B1/B3, B38/B39/B40/B41	NA/EMEA: B1-B5/B7/B8/B12/B13/B20/B25/B26/B29/B30/B41
3G	WCDMA/HSDPA/HSUPA/HSPA+/DC-HSPA+: B1/B2/B5/B6/B8/B9/B19 TD-SCDMA: B34/B39 CDMA (CDMA 1X/EVDO): R0/A BC0/BC1/BC10	WCDMA/HSDPA/HSUPA/HSPA+/DC-HSPA+: B1-B6/B8/B9/B19 TD-SCDMA: B34/B39
2G	850/900/1800/1900 MHz	850/900/1800/1900 MHz
Operating Temperature	Normal operation: -20 to +55 °C Extended operation: -25 to +70 °C	Normal operation: -20 to +55 °C Extended operation: -25 to +70 °C
Storage Temperature	-40 to +85 °C	-40 to +85 °C
Relative Humidity	5 to 95% RH	5 to 95% RH

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

Assured Systems

Assured Systems is a leading technology company with over 1,500 regular clients in 80 countries, deploying over 85,000 systems to a diverse customer base in 12 years of business. We offer high-quality and innovative rugged computing, display, networking and data collection solutions to the embedded, industrial, and digital-out-of-home market sectors.

US

sales@assured-systems.com

Sales: +1 347 719 4508
Support: +1 347 719 4508

1309 Coffeen Ave
Ste 1200
Sheridan
WY 82801
USA

EMEA

sales@assured-systems.com

Sales: +44 (0)1785 879 050
Support: +44 (0)1785 879 050

Unit A5 Douglas Park
Stone Business Park
Stone
ST15 0YJ
United Kingdom

VAT Number: 120 9546 28
Business Registration Number: 07699660