

R2010

robustos

Industrial Cellular Gateway
2 ETH+ 1 RS232/RS485 + 1 DI + 1 DO



INTRODUCTION

The Robustel R2010 Industrial Cellular Gateway is a rugged, versatile 4G Gateway with dual Ethernet ports, dual SIM single standby capability and a range of advanced functions for mission critical IoT or M2M applications.

The R2010 runs on Robustel's own Linux based Operating System, RobustOS. Developed entirely in-house, this gives way to a very high standard of technical support and high reliability. Robustel offers a **Software Development Kit** (SDK) to allow additional customization by using C, C++. It also provides rich **Apps** to meet fragmented IoT market demands such as:

RobustVPN - Highly flexible hosted VPN service so customers can easily enjoy a "fixed IP Gateway"

Data-Guard - Invaluable failsafe in case of a system failure and runaway data usage **Smart Reboot** - SMS tool to push roaming SIMs from a non-working to working state **Smart Roaming** - Provides you with device-assisted intelligent network selection for roaming SIMs to improve performance and reduce risk.

RCMS is Robustel's free router monitoring service that is fully compatible with the R2010. It allows customer to see a location overview of their routers quickly and simply on a map. Features such as data usage, signal strength, current network and much more can then be viewed on a per router basis. Over-the-air updates are supported for Firmware, router configuration and Apps serving as essential 'insurance' if anything was not quite right during deployment.

You can try Robustel's free router management platform by signing up here: https://rcms-cloud.robustel.net



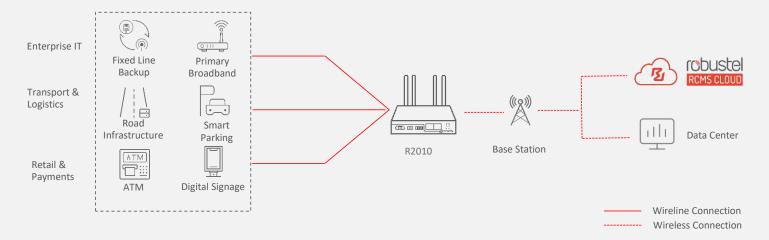




KEY FEATURES

- Dual-SIM redundancy for continuous cellular network connections
- Link Manager supports Cellular WAN, Ethernet WAN, WLAN WAN link backup and ICMP detection
- WAN Static/DHCP Client
- RobustOS + SDK + Apps
- IPsec/OpenVPN/GRE/Wireguard VPN capabilities
- Management and maintenance via Web/RCMS Cloud
- Auto reboot via SMS/time schedule
- Robust industrial design (9 to 36 V DC, desktop or wall mounting or DIN rail mounting)

APPLICATION EXAMPLE



SPECIFICATIONS

Cellular Interface

Number of antennas 2 (MAIN + AUX) or 1 (MAIN)

Connector SMA-K

SIM 2 x Mini SIM (2FF)

Ethernet Interface

Number of ports 2 x 10/100 Mbps, 2 x LAN or 1 x LAN + 1 x WAN

WAN port Supports 802.3at PD feature (optional)

Magnet isolation protection 1.5 KV

Wi-Fi Interface

Number of antennas 2 (Wi-Fi1 + Wi-Fi2)

Connector RP-SMA-K

Standards 802.11 b/g/n, supporting 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

Connector 1 x 4-pin 3.5 mm female socket

Signal definition DI+, DI-, DO+, DO-

Level 3.5 to 30V DC = HIGH, 0 to 1V DC = LOW

Absolute maximum VDC 30V DC (DI/DO)
Absolute maximum ADC 10mA (DI/DO)

Serial Interface

Type RS232 or RS485 (software configurable)

Connector 1 x 3-pin 3.5 mm female socket
Signal definition RS232: TXD, RXD, GND RS485: A, B

Others

Reset button 1 x RST

LED indicators 1 x RUN, 1 x MDM, 1 x WIFI, 3 x RSSI

Built-in Watchdog, Timer

Power Supply and Consumption

Connector 2-pin 3.5 mm female socket

Input voltage $9 \sim 36 \text{ V DC}$ Power consumption Idle: 200 mA@ 12 V

Data link: 580 mA (peak)@12 V

Software (Basic features of RobustOS)

Network protocols PPP, PPPoE, TCP, UDP, DHCP, ICMP, NAT, HTTP,

HTTPs, DNS, ARP, BGP, RIP, OSPF, NTP, SMTP,

Telnet, VLAN, SSH2, DDNS, etc.

VPN tunnel IPsec, OpenVPN, GRE, WireGuard

Firewall DMZ, anti-DoS, Filtering (IP/Domain name/

MAC address), Port Mapping, Access Control

Remote management Web, CLI, SMS

Serial port Transparent, TCP Client/Server, UDP,

C, C++

Modbus RTU Gateway

SDK

Supported programming

language

Flash available for SDK 16 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

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

Physical Characteristics

Ingress protection IP30

Housing & Weight Metal, 350 g
Dimensions 127 x 82 x 30 mm

Installations Desktop, wall mounting and 35 mm DIN rail

mounting

Operating temperature $-35 \sim +75 ^{\circ}\text{C}$ Storage temperature $-40 \sim +85 ^{\circ}\text{C}$ Relative humidity $5\% \sim 95\%$

Regulatory and Type Approvals
Environmental RoHS 2.0

EMI EN 55032 Conducted Emission class B
EN 55032 Radiated Emission class B

EN 55032 Radiated Emission (

EMS IEC 61000-4-2 (ESD) Level 4

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

ORDERING INFORMATION

Model	PN	LTE Category	Frequency Bands*	Country/Region	Certification (*In progress)
R2010-A-4L-A23CN	B069711	Cat 4	4G: LTE FDD: B1/B3/B5/B8 LTE TDD: B34/B38/B39/B40/B41 3G: WCDMA: B1/B5/B8 2G: GSM: B3/B8	China, India	CCC*
R2010-A-4L-A12EU	B069714	Cat 4	4G : LTE FDD: B1/B3/B7/B8/B20/B28A LTE TDD: B38/B40/B41 3G : WCDMA: B1/B8 2G : GSM: B3/B8	EMEA	CE
R2010-A-4L-A03AU	B069705	Cat 4	4G : LTE FDD: B1/B2/B3/B4/B5/B7/B8/B28 LTE TDD: B40 3G : WCDMA: B1/B2/B5/B8 2G : GSM: B2/B3/B5/B8	South America, Oceania	RCM
R2010-A-4E-A10CN	B069704	Cat 1	4G : LTE FDD: B1/B3/B5/B8 LTE TDD: B34/B38/B39/B40/B41 2G : GSM: 900/1800 MHz	China	CCC*

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

