R2010

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:
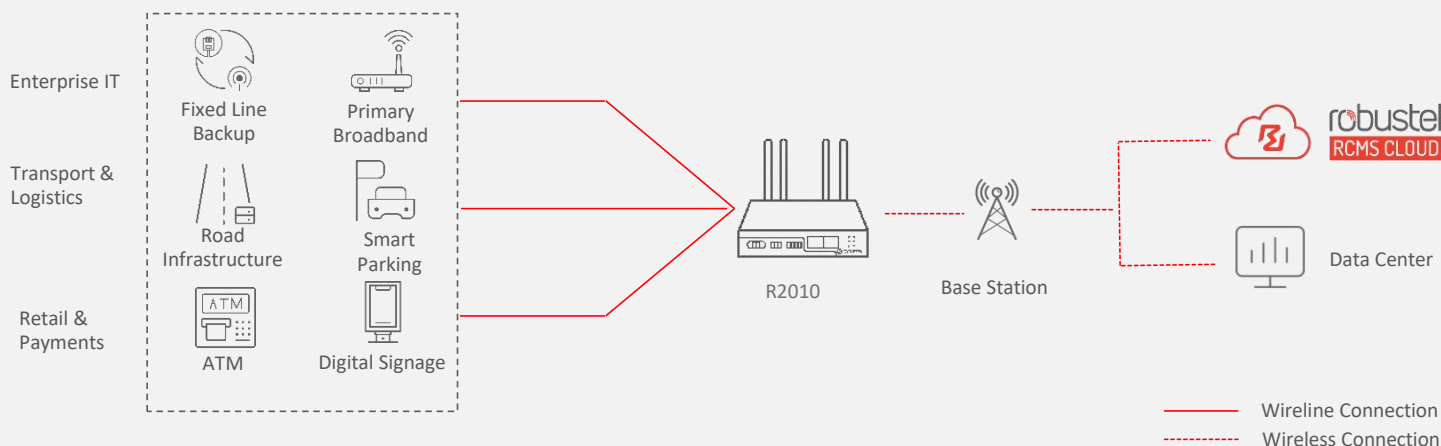https://rcms-cloud.robustel.net

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

Enterprise IT

Fixed Line Backup
Primary Broadband

Transport & Logistics

Road Infrastructure
Smart Parking

Retail & Payments

ATM
Digital Signage

R2010
Base Station
Data Center

Wireline Connection
Wireless Connection

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 ~ 36 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, Modbus RTU Gateway

SDK

Supported programming language	C, C++
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 ~ +75℃
Storage temperature	-40 ~ +85℃
Relative humidity	5% ~ 95%

Regulatory and Type Approvals

Environmental	RoHS 2.0
EMI	EN 55032 Conducted Emission class B
	EN 55032 Radiated Emission class B
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.