R2011 robustOS

Industrial Cellular Router

5 x Eth + 2 x SIM

INTRODUCTION

The Robustel R2011 Industrial Cellular Router is a rugged, versatile 4G router with 5 Ethernet ports, dual SIM single standby capability and a range of advanced functions for mission critical IoT or M2M applications.

The R2011 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 router"

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 R2011. 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.

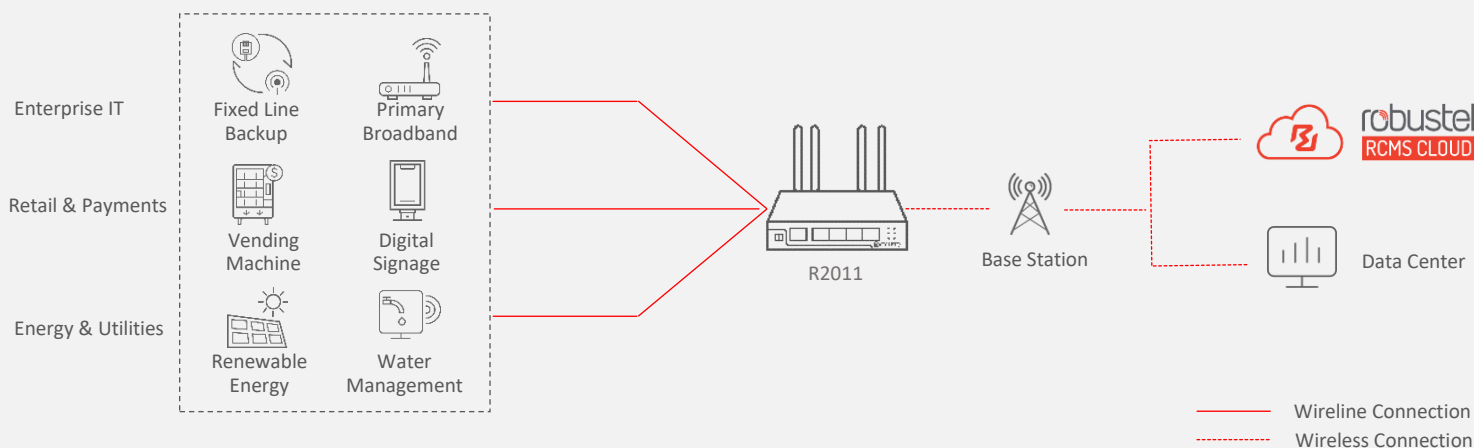You can try Robustel's free router management platform by signing up here:
https://rcms-cloud.robustel.net

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 ~ 36 V DC, desktop or wall mounting or DIN rail mounting)

APPLICATION EXAMPLE

Enterprise IT

Retail & Payments

Energy & Utilities

Fixed Line Backup
Primary Broadband
Vending Machine
Digital Signage
Renewable Energy
Water Management

R2011

Base Station

robustel RCMS CLOUD

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	5 x 10/100 Mbps, 5 x LAN or 4 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

Others
Reset button	1 x RST
LED indicators	1 x RUN, 1 x MDM, 1 x Wi-Fi, 3 x RSSI
Built-in	Watchdog, Timer

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

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.

Power Supply and Consumption
Connector	2-pin 3.5 mm female
Input voltage	9 ~ 36 V DC
Power consumption	Idle: 70 mA@12 V
	Data link: 660 mA (peak)@12 V

Physical Characteristics
Ingress protection	IP30
Housing & Weight	Metal, 350g
Dimensions	127 x 82 x 30 mm
Installations	Desktop, wall mounting and 35 mm DIN rail mounting
Operating temperature	-35 ~ +75°C
Storage temperature	-40 ~ +85°C
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
	IEC 61000-4-11 (DIP)

ORDERING INFORMATION
(Standard Model)

Model	PN	LTE Category	Frequency Bands*	Country/Region	Certification (*In progress)
R2011-A-4L-A23CN	B070710	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*
R2011-A-4L-A12EU	B070712	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, UKCA
R2011-A-4L-A03AU	B070702	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

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

ORDERING INFORMATION
(With PoE-PD Model)

Model	PN	LTE Category	Frequency Bands*	Country/Region	Certification (*In progress)
R2011-B-4L-A23CN	B070711	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*
R2011-B-4L-A12EU	B070713	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, UKCA
R2011-B-4L-A03AU	B070706	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

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Note: *Due to short supply of PoE-PD models, please confirm the lead time with your sales manager.*