robustel

# 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.

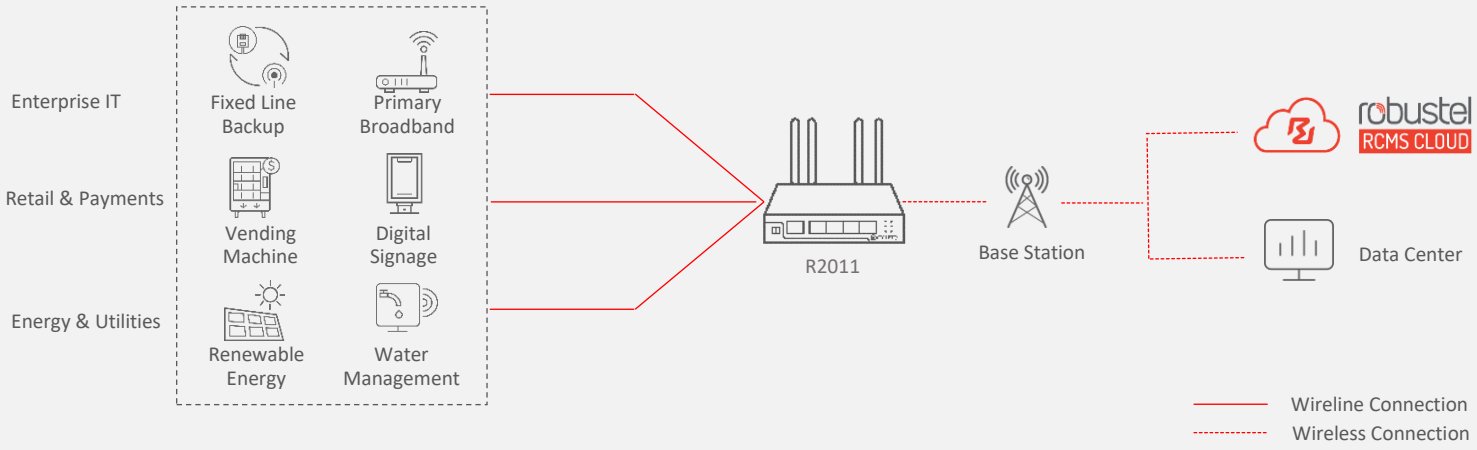
You can try Robustel's free router management platform by signing up here:
https://rcms-cloud.robustel.net

robustel RCMS CLOUD

## 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



# 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<br>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<br>EN 55032 Radiated Emission class B |
| EMS | IEC 61000-4-2 (ESD) Level 4<br>IEC 61000-4-3 (RS) Level 2<br>IEC 61000-4-4 (EFT) Level 2<br>IEC 61000-4-5 (Surge) Level 2<br>IEC 61000-4-6 (CS) Level 2<br>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<br>**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<br>**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<br>**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<br>**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<br>**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<br>**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.*

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



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