



R2011 robustOS

Industrial Cellular Router
5 Eth + 2 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

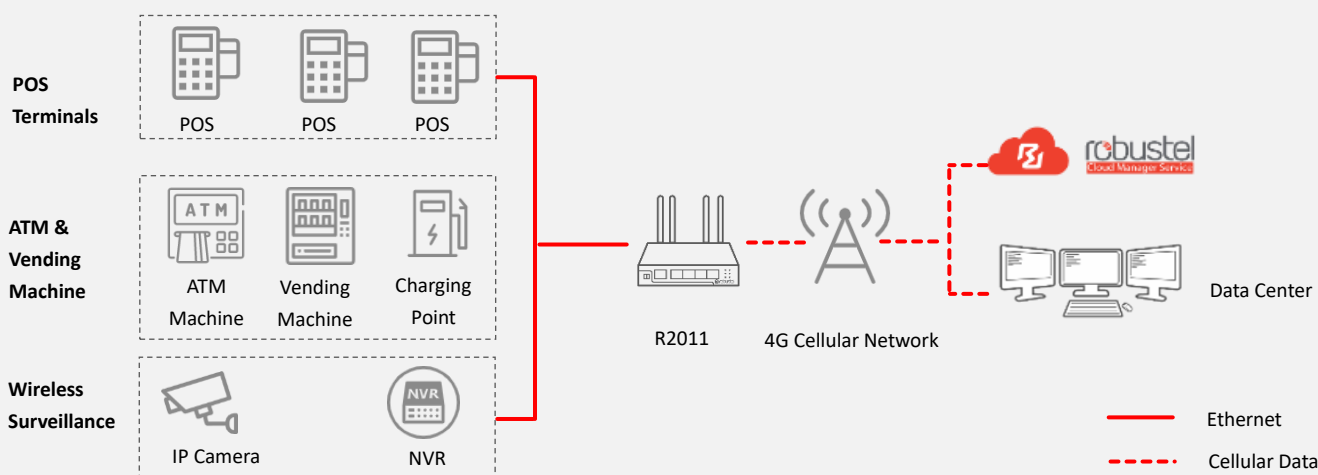
Smart Roaming

Provides you with device-assisted intelligent network selection for roaming SIMs to improve performance and reduce risk.

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 Mini SIMs (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
Serial port	Transparent, TCP Client/Server, UDP, Modbus RTU Gateway

SDK

Supported programming language	C, C++
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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
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*Request on demand. For more Apps please visit www.robustel.com.

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: 580mA (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 (*In progress)

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

Model	PN	LTE Category	Frequency Bands*	Country/Region	Certification (*In progress)
R2011-A-4L-A15CN	B070703	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-A16EU	B070704	Cat 4	4G: LTE FDD: B1/B3/B7/B8/B20/B28 LTE TDD: B38/B40/B41 3G: WCDMA: B1/B8 2G: GSM: B3/B8	Europe	CE*
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, Australia, New Zealand	RCM*

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