

# R1312

Economical Industrial Router

2 x Eth + 1 x SIM + 1 x RS232/RS485 + 1 x DI



## INTRODUCTION

The Robustel R1312 features compact size and multi-functionality. It provides stable network connectivity to devices via either 4G Cat1 or wired Ethernet.

The R1312 runs on **RobustOS**, a mature and stable Operating System developed in-house by Robustel. 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++.

**RCMS** is Robustel's free router monitoring service that is fully compatible with the R1312. You can try Robustel's free router management platform by signing up here: <https://rcms-cloud.robustel.net>

R1312 can be applied across multiple industry sectors:

✓ Smart Environmental Protection:

Environmental monitoring, Energy saving for wind turbines

✓ Smart Healthcare:

Medical Equipment

✓ Smart Retail:

Vending Machines, Digital Signage

## KEY FEATURES

### Economical, reliable device networking solution

- Durable hardware paired with the reliable RobustOS IoT gateway operating system, offering extensive software functionalities, ideal for large-scale IoT deployments.

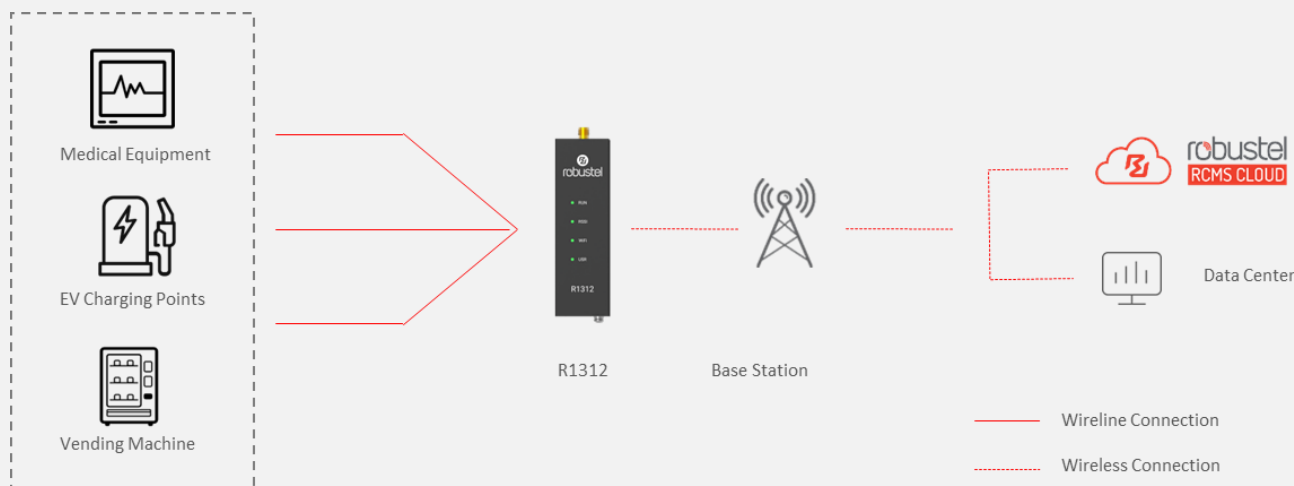
### Stable and reliable link maintenance mechanism

- Built-in link management module supporting cellular, Ethernet, and Wi-Fi link backup.
- Supports ICMP detection, promptly detecting network failures and switching to backup links, significantly reducing downtime due to link failures.

### Cloud-based centralized operations and maintenance management

- Supports real-time monitoring of device network status, device location, device traffic statistics, etc., detecting device information and promptly handling anomalies.
- Provides RobustVPN access for remote operations and maintenance of devices, enhancing efficiency for technical personnel.

## APPLICATION EXAMPLE



# SPECIFICATIONS

<b>Hardware System</b>	
CPU	580MHz
RAM	64MB DDR2
ROM	16MB SPI Flash

<b>Cellular Interface</b>	
Number of antenna	1
Connector	SMA-K
SIM	1 Nano SIM (4FF)
Network	4G: LTE-FDD/LTE-TDD LTE
Standard	Cat 1

<b>Ethernet Interface</b>	
Number of ports	2 x 10/100 Mbps, 2 x LAN or 1 x LAN + 1 x WAN

<b>Serial Port</b>	
Type	1 x RS232 or 1 x RS485
Socket form	3-pin 3.5 mm female socket
Baud rate	300bps - 115200bps

<b>DI</b>	
Type	1 X DI
Socket form	3-pin 3.5 mm female socket (shared with the power terminal)

<b>Wi-Fi Interface</b>	
Number of antennas	1
Connector	RP-SMA-K
Frequency bands	2.4 GHz
Standards	802.11 b/g/n, supports AP and Client modes
Data rate	150Mbps Max
Security	WEP, WPA, WPA2, WPA3
Encryption	64/128 AES, TKIP

<b>Power Supply and Consumption</b>	
Connector	3-pin 3.5 mm female socket (shared with the DI)
Input Voltage	9~36V DC
Power consumption	Idle: TBD mA@12 V Data link: TBD mA (peak) @12 V

<b>Physical Characteristics</b>	
Ingress protection	IP30
Housing & Weight	Metal, 256g
Dimensions	94 x 77 x 29mm
Installations	Desktop, wall mounting and 35 mm DIN rail mounting
Operating temperature	-20 ~ +70 °C
Storage temperature	-40 ~ +85 °C
Relative humidity	5 ~ 95% RH (non-considering)

<b>Others</b>	
Reset button	1 x RST
LED indicators	1 x RUN, 1 x USR, 1 x RSSI, 1 x Wi-Fi

<b>RobustOS Network Functions</b>	
Network protocol	Static IP, PPPoE, TCP, UDP, DHCP, DNS, NTP, SMTP, Telnet, VLAN, SSH2, DDNS, DNS Relay, Trace, NAT, Static routing
Network Expansion	Link Management

<b>RobustOS Network Security</b>	
Firewall	DMZ, anti-DDoS, Filtering (IP/Domain name/ MAC address), Port Mapping, Access Control
VPN tunnel	IPSec, OpenVPN, GRE, WireGuard
Security Management	User Management, Role Management

<b>RobustOS Device Management</b>	
Remote Management	Web, CLI, SMS, RCMS

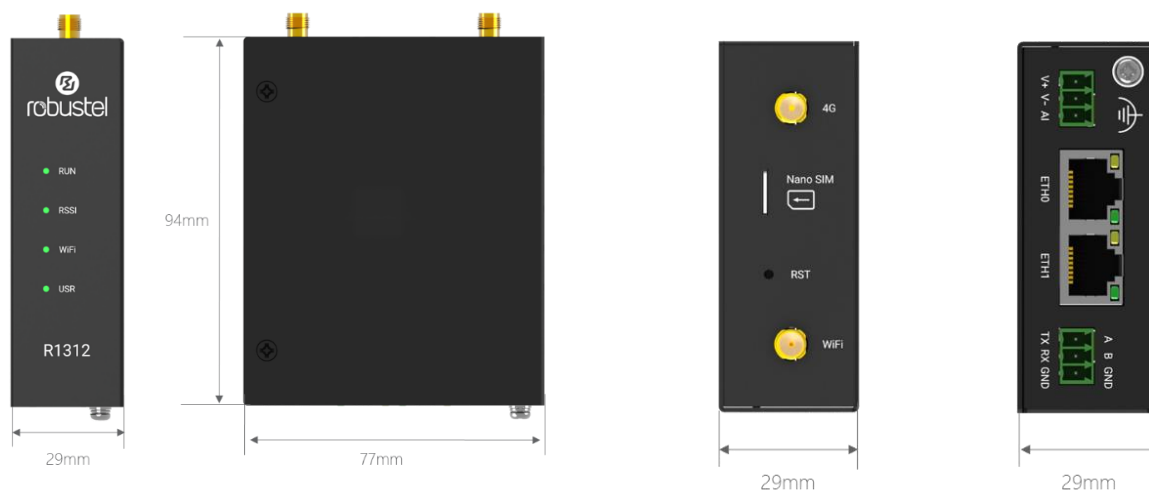
<b>APP Center</b> (Available Apps for RobustOS)	
Data Reporting	RCMS, RDMS, third-party platforms supporting MQTT protocol
VPN	L2TP, PPTP, DMVPN
Wi-Fi Feature	Captive Portal
Expansion	
Network Protocols	SNMP, Dynamic Routing
Others	Language

*\*Request on demand. For more Apps please visit [www.robustel.com](http://www.robustel.com).*

<b>SDK</b>	
Supported programming language	C, C++
Flash available for SDK	2 MB
RAM available for SDK	8 MB

<b>Regulatory and Type Approvals</b>	
Environmental	RoHS2.0
EMI	EN 55032 Conducted Emission Class B EN 55032 Radiated Emission Class B
EMS	EN 61000-4-2 (ESD) Contact Level 2, Air Level 3 EN 61000-4-3 (RS) Level 2 EN 61000-4-4 (EFT) Level 2 EN 61000-4-5 (Surge) Level 3 EN 61000-4-6(CS) Level 2

## DIMENSIONS



## ORDERING INFORMATION

Model	PN	Serial port	Frequency Bands	Country/Region	Package Contains
R1312-4E-A-A38CN	A014500001	RS232	4G: LTE FDD: B1/B3/B5/B8	China/ India	12V/1A CN PSU, Magnetic Antenna, DIN Rail
R1312-4E-B-A38CN	A014500002	RS485	LTE TDD: B34/B38/B39/B40/B41		

\*For more information about 4G frequency bands in different countries, please contact your Robustel sales representative.