# R1500 robustOS

Industrial Cellular IoT Gateway

1 Eth + 2 RS232

## INTRODUCTION

R1500 industrial cellular IoT gateway supports GSM/GPRS/EDGE 2G network, WCDMA and other 3G networks, HSPA+ 3.5 G and LTE 4G network. It provides high speed wireless network bandwidth for device by wireless connection, and with dual-SIM backup to ensure the stable connection of wireless network

R1500 is a powerful gateway developed from **RobustOS**, a Robustel self-developed and Linux-based operating system which is designed to be used in Robustel devices. The RobustOS includes basic networking features and protocols providing customers with a very good user experience. Meanwhile, Robustel offers a **Software Development Kit** (SDK) for partners and customers to allow additional customization by using C, C++. It also provides rich **Apps** to meet fragmented IoT market demands.

**RCMS** is Robustel's free router monitoring service that is fully compatible with the R1500. 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.
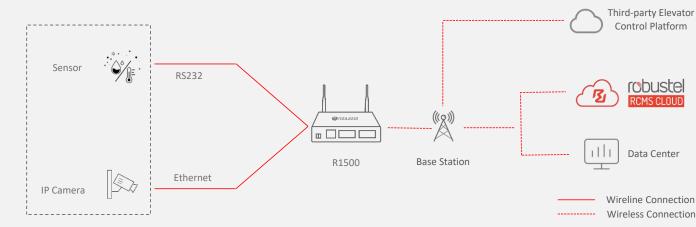
You can try Robustel's free router management platform by signing up here: https://rcms-cloud.robustel.net

## KEY FEATURES

➢ RobustOS + SDK + App

➢ IPsec/OpenVPN/GRE/L2TP/PPTP/DMVPN and various VPNs

➢ Supporting double cards link backup and ICMP detection

➢ Supporting SMS, Email, SNMP Trap and RobustLink

➢ event alarms

➢ Supporting Modbus RTU to TCP、 Modbus Master

➢ Supporting TCP client/server, UDP and virtual serial ports

➢ Supporting IP Passthrough

➢ DHCP server

➢ Supporting RobustVPN cloud platform, providing easy and safe remote access for PLC and other industrial devices

➢ Supporting RobustLink M2M centralized management platform, real time monitoring device network status and counting device flow

➢ Supporting Web、 CLI、 USB、 SMS and RobustLink to upgrade firmware

➢ Powerful industrial design (9~36V DC input voltage, supporting desktop placement, wall mount or rail mount)

## APPLICATION EXAMPLE

Sensor — RS232

IP Camera — Ethernet

R1500 — Base Station

Third-party Elevator Control Platform

robustel RCMS CLOUD

Data Center

—— Wireline Connection

----- Wireless Connection

# SPECIFICATIONS

### Cellular Interface
| | |
|---|---|
| Number of antennas | 2 (MAIN + AUX) |
| Connector | SMA-K |
| SIM | 2 x Mini SIM (2FF) |
| Standard | GSM/WCDMA/FDD LTE/TDD LTE |

### Ethernet Interface
| | |
|---|---|
| Number of ports | 1 x 10/100 Mbps |

### Serial Interface
| | |
|---|---|
| Number of ports | 2 x RS232 |
| Connector | DB9 |
| Signal | TxD, RxD, GND, CTS, RTS, DSR, DTR |
| Baud rate | 300bps ~ 115200bps |

### Others
| | |
|---|---|
| LED indicators | 1 x RUN, 1 x MDM, 1 x USR, 3 x RSSI |
| | Network indicator (link + rate) |
| Built-in | RTC, Watchdog, Timer |

### Software (Basic features of RobustOS)
| | |
|---|---|
| Network protocols | PPP, PPPoE, TCP, UDP, DHCP, ICMP, NAT, HTTP, HTTPs, DNS, ARP, NTP, SMTP, Telnet, SSH2, DDNS, etc. |
| VPN tunnel | IPsec, OpenVPN, GRE |
| Management | Web, CLI, SMS |
| Serial port | Transparent, TCP Client/Server, UDP, Modbus RTU Gateway |

### App Center (Available Apps for RobustOS)
| | |
|---|---|
| Apps* | Language, RCMS |

*Request on demand. For more Apps please visit www.robustel.com.*

| | |
|---|---|
| Supported programming language | C, C++ |
| Flash available for SDK | 3 MB |
| RAM available for SDK | 16 MB |

### Power Supply and Consumption
| | |
|---|---|
| Connector | 2-pin 3.5 mm |
| Input voltage | 9 ~ 36V DC |
| Power consumption | Idle: 80 mA@12 V |
| | Data link: 450 mA (peak) @12 V |

### Physical Characteristics
| | |
|---|---|
| Ingress protection | IP30 |
| Housing & Wight | Plastic, 300 g |
| Dimensions | 118 x 97.5 x 28.5 mm |
| Installations | Desktop, wall mounting and DIN rail mounting |
| Operating temperature | -40 ~ +75 °C |
| Storage temperature | -40 ~ +85 °C |
| Relative humidity | 5 ~ 95% RH |

### Regulatory and Type Approvals
| | |
|---|---|
| Environmental | RoHS2.0, WEEE |

# ORDERING INFORMATION

| Model | PN | Category | Frequency Bands* | Country/ Region | Certifications (*In progress) |
|---|---|---|---|---|---|
| **R1500-4L** | B041701 | Cat 4 | **4G**: LTE FDD: B1/B3/B5/B7/B8/B20<br>LTE TDD: B38/B40/B41<br>**3G**: WCDMA: B1/B5/B8<br>**2G**: GSM: B3/B8 | EMEA | CE |
| | B041703 | | **4G**: LTE FDD: B1/B2/B3/B4/B5/B7/B8/B28<br>LTE TDD: B40<br>**3G**: WCDMA: B1/B2/B5/B8<br>**2G**: GSM: B2/B3/B5/B8 | Oceania | RCM |

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