



R3010 robustOS

Industrial Cellular IoT Gateway

2xEth + 1xVoice + 1xRS-232 + 1xRS-485 +1xCAN + 1xConsole + 1xUSB



INTRODUCTION

Robustel R3010 is an industrial gateway designed for elevator monitoring and provides fast, reliable and stable Internet connectivity.

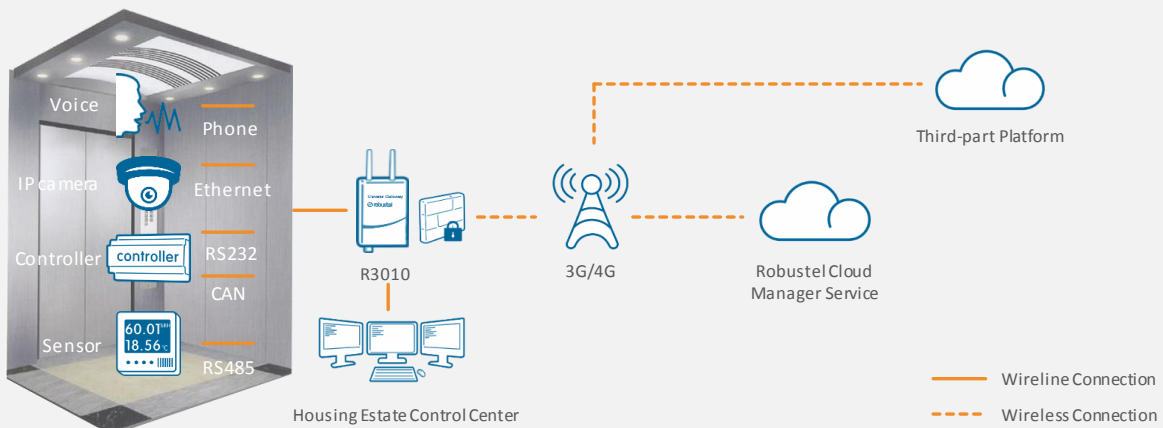
R3010 is a powerful gateway developed from **RobustOS**, a Robustel self-developed and Linux-based operating system which is designed to be used in Robustel hardware routers. The RobustOS includes basic networking features and protocols providing customers with a very good user experience. Meanwhile, Robustel offers a **Software Development Kit (SDK)** for partners and customers to allow additional customization by using C, Python or Java. It also provides rich **APPs** to meet fragmented IoT market demands.

Robustel is a leading global industrial IoT/M2M hardware and solution provider. Since its establishment in 2010 in Guangzhou, China, Robustel has been focusing on designing and manufacturing industrial cellular routers, gateways, modems, cloud platforms and E2E solutions. In order to support global business in more than 100+ countries and regions, Robustel has set up local offices in Germany, Australia, the Netherlands, the UK, Japan and Hong Kong.

KEY FEATURES

- Supports 2G/3G/4G cellular network
- Supports always online and connect according to needs
- Various interfaces:
RS232/CAN/RS485/Console/USB/Ethernet/FXS
- RS485 serial port supports BACnet protocol
- Supports GSM and VoLTE(optional) for voice traffic
- Supports IPSec, OpenVPN, PPTP, L2TP, GRE, DMVPN
- Supports Modbus RTU/ASCII converts to TCP
- Built-in real time clock, software watchdog
- Supports message, telephone and reboot at regular time
- Supports e-mail and message event alert
- RobustOS + SDK + App
- Equipped with third party management platform, to realize real-time processing and analysis, fault real-time warning
- Management via SMS/Web/CLI/SNMP/RCMS Cloud
- Robust industrial design (9 to 26V DC, desktop, wall or DIN rail mounting)

APPLICATION EXAMPLES



SPECIFICATIONS

Cellular Interface

| | |
|-------------------|---|
| Number of Antenna | 2 (MAIN + AUX) |
| Type of Ports | SMA-K |
| SIM slot Number | 1 (3.0 V/1.8 V) |
| Standards | GSM/GPRS/EDGE/WCDMA/HSDPA/HSUPA/HSPA+/DC-HSPA+/TD-SCDMA/CDMA (CDMA 1X/EVDO)/FDD LTE/TDD LTE |

Device Management

| | |
|------------|---|
| Management | Web, CLI, SNMP v1/v2/v3, SMS RCMS cloud platform RobustVPN VPN cloud platform |
|------------|---|

LED Indicators

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|----------------|---|
| LED Indicators | RUN, MODEM, USR, RSSI(1-3), PWR Network port indicator |
|----------------|---|

Voice Interface

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|----------------------------|---|
| Physical Connector | 3-pin 3.81mm connector |
| Interface type | 1xFXS |
| Interface Standard | ITU Q.512 (SLIC), ITU K.20 (overcurrent and overvoltage protection) <u>Subscriber line interface circuit (SLIC)</u> |
| Ring voltage | 40~90 Vpk configurable |
| Ring frequency | 20~25 Hz |
| Ring waveform | sinusoidal |
| Maximum ringer load | 5 ringer equivalence numbers (RENS) |
| On-hook voltage (tip/ring) | -46~-56V |
| Off-hook current | 18~20 mA |
| Terminating impedance | configurable |

Other

| | |
|-----------------|---|
| Number of Ports | 1x RS-232, 1 x CAN, 1 x RS-485 serial port, 1 x Console, 1 x SIM port |
| RS-232 | Tx, Rx, GND |
| CAN | H, L, GND |
| RS-485 | A (Data+), B (Data-), GND |
| Console | Tx, Rx, GND |
| Interface | 3-pin 3.81mm connector |
| Type of Ports | 2 x SMA female antenna port (MAIN +AUX) |
| Ethernet Port | 2 x 10/100 Mbps (ETH0 + ETH1) |
| Expansion | 1 x USB 2.0 host up to 480 Mbps |

Software(Basic features of RobustOS)

| | |
|-------------------|---|
| Network protocols | PPP, PPPoE, TCP, UDP, DHCP, ICMP, NAT, HTTP, HTTPS, DNS, ARP, RIP, OSPF, NTP, SMTP, Telnet, VLAN, SSH2, IP Pass-through, etc. |
| VPN tunnel | IPsec, OpenVPN, GRE |
| Firewall | DMZ, anti-DoS, Filtering (IP/Domain name/MAC address), Port Mapping, Access Control |
| Management | Web, CLI, SMS |
| Serial port | Transparent, TCP Client/Server, UDP, Modbus RTU Gateway, BACnet |

App center(Apps of RobustOS)

| | |
|------|---|
| Apps | L2TP, PPTP, DMVPN, RobustVPN, DDNS VRRP, QoS, SNMP, Language, RobustLink |
|------|---|

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

Power Supply and Consumption

| | |
|------------------------|---|
| Power supply interface | 2-pin 3.81mm connector |
| Input voltage | 9 to 26 VDC |
| Power consumption | 900 mA (MAX) @ 9 V, 600 mA (MAX) @ 12 V, 400 mA (MAX) @ 26 V |

Physical Characteristics

| | |
|---------------------------|-------------------------------------|
| Industry Protection Level | IP30 |
| Housing | Metal, 300g |
| Dimensions | 134mm x 98mm x 32mm |
| Installation | Desktop, wall and DIN rail mounting |
| Operation Temperature | -40~75°C |
| Storage Temperature | -40~85°C |
| Humidity | 5~95%RH |

Approvals

| | |
|---------------|---------------------------|
| Regulatory | CE, FCC, IC, PTCRB, Telec |
| Carrier | AT&T |
| Environmental | RoHS2.0, WEEE |

ORDERING INFORMATION

| | |
|------------------------------|--|
| Model | R3010-4L |
| Antenna Number | 2 |
| Air Interface | GSM/GPRS/EDGE/ HSDPA/HSUPA/HSPA+/FDD LTE |
| Frequency Bands | EMEA: B1/B3/B5/B7/B8/B20; B38/B40/B41 |
| 4G* | AU: B1/B2/B3/B4/B5/B7/B8/B28; B40 NA: B2/B4/B5/B17 JP: B1/B3/B8/B18/B19/B26; B41 |
| 3G | EMEA: B1/B5/B8 AU: B1/B2/B5/B8 NA: B2/B5 JP: B1/B6/B8/B19 |
| 2G | EMEA: B3/B8 AU: B2/B3/B5/B8 |
| Operating Temperature | -40 to +75°C |
| Storage Temperature | -40 to +85°C |
| Relative Humidity | 5 to 95% RH |

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