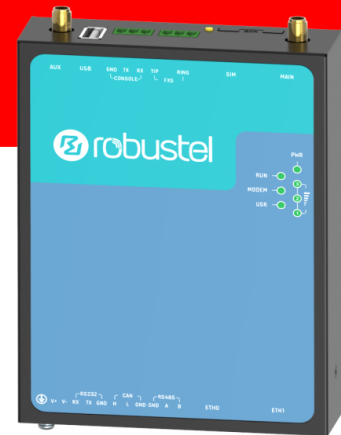# R3010 robustOS

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.
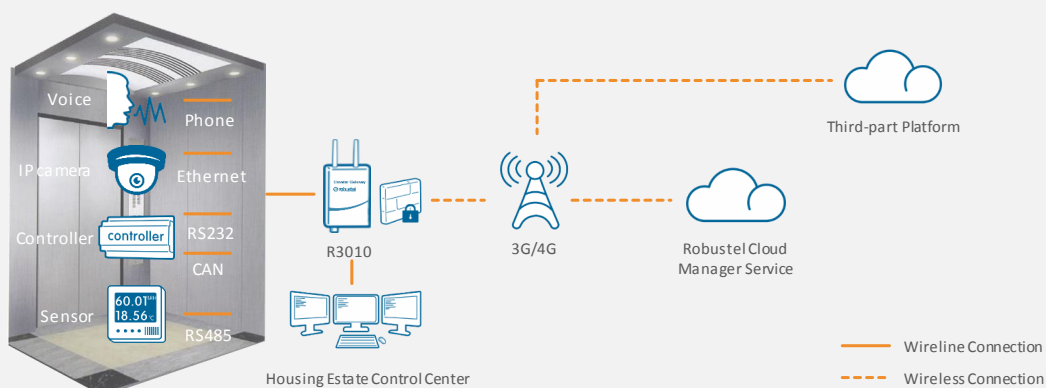
R3010 is a powerful gateway developed from **RobustOS**, a Robustel self-developed and Linux-based operating system which is designed to be used in Robustel hardware routers. The RobustOS includes basic networking features and protocols providing customers with a very good user experience. Meanwhile, 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/RobustLink 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 male
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 RobustLink device management cloud platform RobustVPN VPN cloud platform

LED Indicators

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

Voice Interface

Physical Connector	3-pin 3.81mm connector
Interface type	1xFXS
Interface Standard	ITU Q.512 (SLIC), ITU K.20 (overcurrent and overvoltage protection)

Subscriber line interface circuit (SLIC)

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、Captive Portal、WLAN Multi AP、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
Carrier	AT&T
Environmental	RoHS, WEEE

ORDERING INFORMATION

Model	R3010-4L
Antenna Number	2
Air Interface	GSM/GPRS/EDGE/ HSDPA/HSUPA/HSPA+/FDD LTE
Frequency Bands	EU: B1/B2/B3/B4/B5/B7/B8/B20
4G*	US: B2/B4/B5/B13/B17
3G	HSDPA/HSUPA/HSPA+/: B1/B2/B5/B8
2G	GSM/GPRS/EDGE: 850/900/1800/1900 MHz
Storage Environment	-40 to 85°C
Operating Environment	-40 to 75°C
Relative Humidity	5 to 95% RH

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

Assured Systems

Assured Systems is a leading technology company with over 1,500 regular clients in 80 countries, deploying over 85,000 systems to a diverse customer base in 12 years of business. We offer high-quality and innovative rugged computing, display, networking and data collection solutions to the embedded, industrial, and digital-out-of-home market sectors.

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