R3010 robustOS

Industrial Cellular IoT Gateway

2xEth + 1xVoice + 1xRS232 + 1xRS485 +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, 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 R3010. 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.
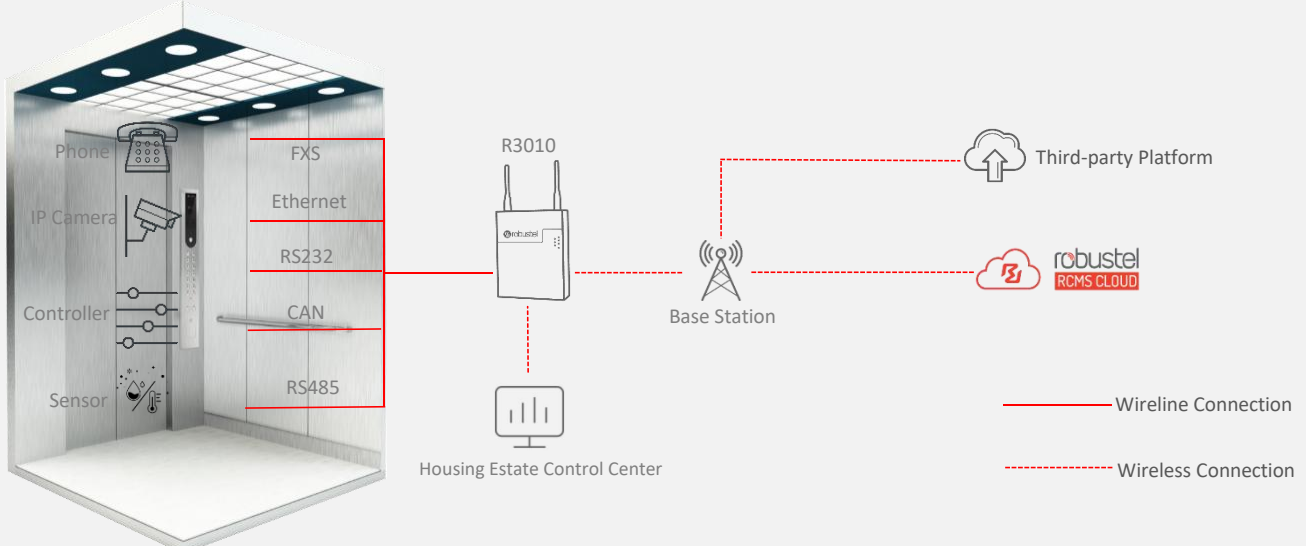
You can try Robustel's free router management platform by signing up here: https://rcms-cloud.robustel.net

KEY FEATURES

➢ 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 ~ 26 VDC, desktop, wall or DIN rail mounting)

APPLICATION EXAMPLES

SPECIFICATIONS

Cellular Interface

Number of antennas	2 (MAIN + AUX)
Type of ports	SMA-K
SIM	1 Mini SIM (2FF)
Standards	GSM/GPRS/EDGE/WCDMA/HSDPA/HSUPA/HSPA+/DC-HSPA+/TD-SCDMA/CDMA (CDMA 1X/EVDO)/FDD LTE/TDD LTE

Voice Interface

Physical connector	3-pin 3.81 mm connector
Type	1 x FXS
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 ~ -56 V
	Off-hook current : 18 ~ 20 mA
	Terminating impedance: configurable

Ethernet Interface

Number of ports	2 x 10/100 Mbps (ETH0 + ETH1)

Serial Interface

Number of ports	1 x RS232 + 1 x RS485 + 1 x CAN
Connector	3-pin 3.81 mm connector
Signal definition	RS232: Tx, Rx, GND
	RS485: A (Data+), B (Data-), GND
	CAN: H, L, GND

Others

Expansion	1 x USB 2.0 host, up to 480 Mbps
Console	1 x Console (GND, Tx, Rx)
LED Indicators	1 x RUN, 1 x MODEM, 1 x USR, 3 x RSSI, 1 x PWR

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 Passthrough, etc.
VPN tunnel	IPSec, OpenVPN, GRE
Firewall	DMZ, anti-DDoS, Filtering (IP/Domain address), Port Mapping, Access Control
Remote management	Web, CLI, SMS, RCMS
Serial port	Transparent, TCP Client/Server, UDP, Modbus RTU Gateway, BACnet

App Center (Apps of RobustOS)

Apps	L2TP, PPTP, DMVPN, DDNS, RCMS VRRP, QoS, SNMP, Language

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

SDK

Supported programming language	C, C++
Flash available for SDK	64 MB
RAM available for SDK	64 MB

Power Supply and Consumption

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

Physical Characteristics

Ingress protection	IP30
Housing & Weight	Metal, 300g
Dimensions	134 x 98 x 32 mm
Installation	Desktop, wall mounting and 35 mm DIN rail mounting
Operation temperature	-40 ~ +75°C
Storage temperature	-40 ~ +85°C
Relative humidity	5 ~ 95% RH

Regulatory and Type Approvals

Environmental	RoHS 2.0, WEEE

ORDERING INFORMATION

Model	PN	Frequency Bands*	Country/Region	Certification (*In progress)
R3010-4L	B040703	**4G**: LTE FDD: B1/B3/B5/B7/B8/B20 LTE TDD: B38/B40/B41 **3G**: WCDMA: B1/B5/B8 **2G**: GSM: B3/B8	EMEA	CE, UKCA
	B040705	**4G**: LTE FDD: B1/B3/B8/B18/B19/B26 LTE TDD: B41 **3G**: WCDMA: B1/B6/B8/B19	Japan	Telec, JATE

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

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