



robustOS

R5010

High Speed 5G Router

1 x Ethernet + 1 x USB



INTRODUCTION

The R5010 is Robustel’s new 5G capable router supporting global 5G, 4G and 3G bands. The R5010 leverages our tried and tested high performance **RobustOS 5** – an Operating System developed in-house by Robustel that has passed extensive 3rd party penetration testing.

R5010 is compatible with 3GPP Release 16 and targeted at the following applications:

Primary Broadband – Cellular network operators can now provide unlimited 5G tariffs at very reasonable prices. For many, a chance to cut the cables and use a wireless internet connection can be technically or commercially favorable.

SD-WAN – whilst many appliances have cellular options built-in, the R5010 can offer a very low-cost way to add a 5G backup route & by virtue of being able to located externally to the appliance, is more likely to get a good 5G signal!

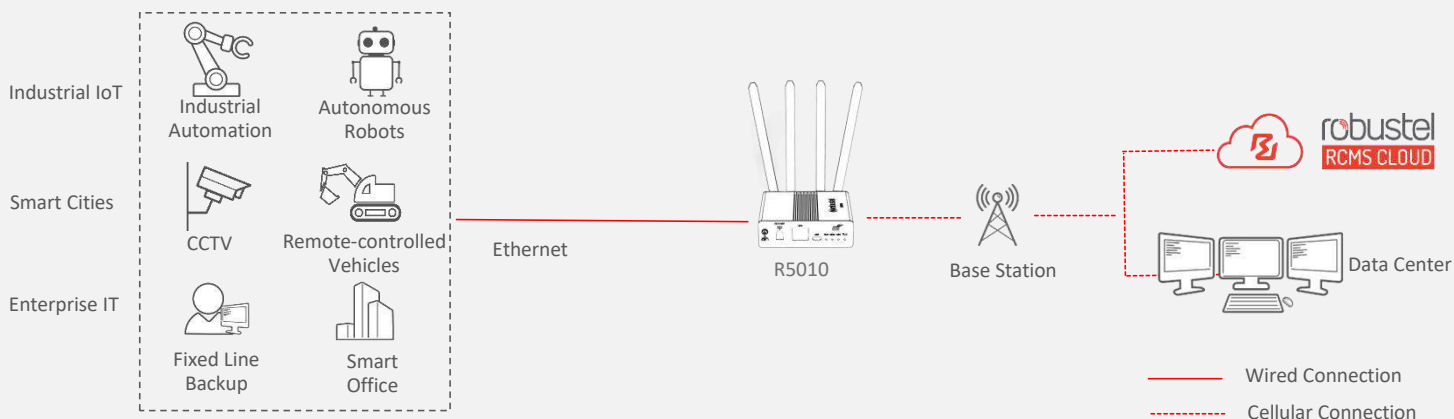
RCMS is Robustel’s free router monitoring service that is fully compatible with the R5010. It is an extremely polished piece of software hosted on MS Azure & available as a privately hosted instance. You can try Robustel’s free router management platform by signing up here: <https://rcms-cloud.robustel.net>

KEY FEATURES

- Low cost industrial 5G Router
- Global 5G/4G/3G cellular connections
- Cutting-edge 5G 3GPP Release 16 cellular interface
- 1 x 1000Mbps Ethernet port
- PoE-PD, compatible with IEEE 802.at standard
- USB modem mode supported
- Fully programmable Operating System with a well-documented SDK
- Multiple VPN options available including DMVPN, IPsec, L2TP + more...
- Free cloud management platform - RCMS
- Robust metal enclosure with small footprint – DIN-rail + wall mount options



APPLICATION EXAMPLE



SPECIFICATIONS

Cellular Interface

| | |
|--------------------|-------------------------------|
| Number of antennas | 4 (ANT0 + ANT1 + ANT2 + ANT3) |
| Connector | SMA-K |
| SIM | 2 x Mini SIM (2FF) |

Ethernet Interface

| | |
|----------------------|-----------------------------------|
| Number of ports | 1 x 10/100/1000 Mbps, LAN |
| Isolation protection | 1 KV |
| LAN port | Support 802.3at PD feature on ETH |

Others

| | |
|----------------|---|
| Reset button | 1 x RST |
| LED indicators | 1 x RUN, 1 x Modem, 1 x USR, 1 x RSSI, |
| USB | 1 x USB 3.1 (Type C) for Power Supply, Network Supply and Debug |
| Watchdog | External |

Regulatory and Type Approvals

| | |
|-------------------|---|
| Environmental | RoHS2.0 |
| Physical Features | IEC 60068-2-6 (Sinusoidal Vibration) IEC 60068-2-64 (Random Vibration) IEC 60068-2-27 (Mechanical Shock) |
| EMI | EN 55032 Conducted Emission Class B EN 55032 Radiated Emission Class B |
| EMC | EN 61000-3-2 (Harmonic Current) EN 61000-3-3 (Voltage Flicker) EN 61000-4-2 (ESD) Contact Level 3, Air Level 3 EN 61000-4-3 (RS) Level 2 EN 61000-4-4 (EFT) Power Ports Level 2 Signal Ports Level 2 EN 61000-4-5 (Surge) Line to line Level 2, Line to ground Level2 EN 61000-4-6 (CS) Level 2 EN 61000-4-11 (Dips) Class 2 |

Software (Basic features of RobustOS)

| | |
|-------------------|---|
| Network protocols | PPP, PPPoE, TCP, UDP, DHCP, ICMP, NAT, HTTP, HTTPs, DNS, ARP, NTP, SMTP, Telnet, VLAN, SSH2, DDNS, etc. |
| VPN tunnel | IPsec, OpenVPN, GRE |
| Firewall | DMZ, anti-DoS, Filtering (IP/Domain name/MAC address), Port Mapping, Access Control |
| Remote management | Web, CLI, SMS |
| Others | Data Guard, etc. |

SDK

| | |
|---------------------------------|--------|
| Supported programming languages | C, C++ |
| Flash available for SDK | 110MB |
| RAM available for SDK | 45MB |

App Center (Available Apps for RobustOS)

| | |
|-------|--|
| Apps* | L2TP, PPTP, DMVPN, VRRP, QoS, SNMP, Language, RCMS, Data Guard |
|-------|--|

*Upon request. For more Apps please visit www.robustel.com.

Power Supply and Consumption

| | |
|-------------------|--|
| Connector | 4-pin Micro-Fit socket |
| Input voltage | 9 ~ 60 VDC 5V/3A by USB Type C Port |
| PoE-PD Voltage | Possibility to power up through ETH 44 ~ 57 VDC |
| Power consumption | Idle: 1.5w Data link: 15w |

Physical Characteristics

| | |
|-----------------------|---|
| Ingress protection | IP30 |
| Housing & Weight | Aluminum, 276 g |
| Dimension | 100*94*30 mm |
| Installations | DIN rail mounting, desktop or wall mounting |
| Operating temperature | -40 ~ +70°C |
| Storage temperature | -40 ~ +85°C |
| Relative humidity | 5 ~ 95%RH |

ORDERING INFORMATION

| Model | PN | Frequency Bands* | Country/Region | Certification (*Planned) |
|------------------|---------|--|----------------|--------------------------|
| R5010-A-5G-A28EU | B113001 | 5G: NR SA/NSA: n1/n3/n5/n7/n8/n20/n28/n38/n40/n41/ n75/n76/n77/n78 4G: LTE FDD: B1/B3/B5/B7/B8/B20/B28/B32 LTE TDD: B38/B40/B41/B42/B43 3G: WCDMA: B1/B5/B8 | EMEA ANZ | CE*, UKCA*, CB*, RCM* |

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