



# R5010

robustOS

High Speed, High Reliability, Low Latency



## INTRODUCTION

The Robustel 5G Industrial Router R5010 is a rugged cellular router offering state-of-the-art mobile connectivity for internet of things applications.

R5010 is a powerful platform developed based on **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 excellent user experience. Meanwhile, RobustOS offers **Software Development Kit (SDK)** allows partners and customers to develop IoT applications by using C, Python or Java. It also provides various **Apps** to meet fragmented IoT market demands.

The R5010 has many unique software innovations including but not limited to: **RobustVPN** – innovative use of Open VPN tunneling to provide a fixed IP address on ANY SIM Card.

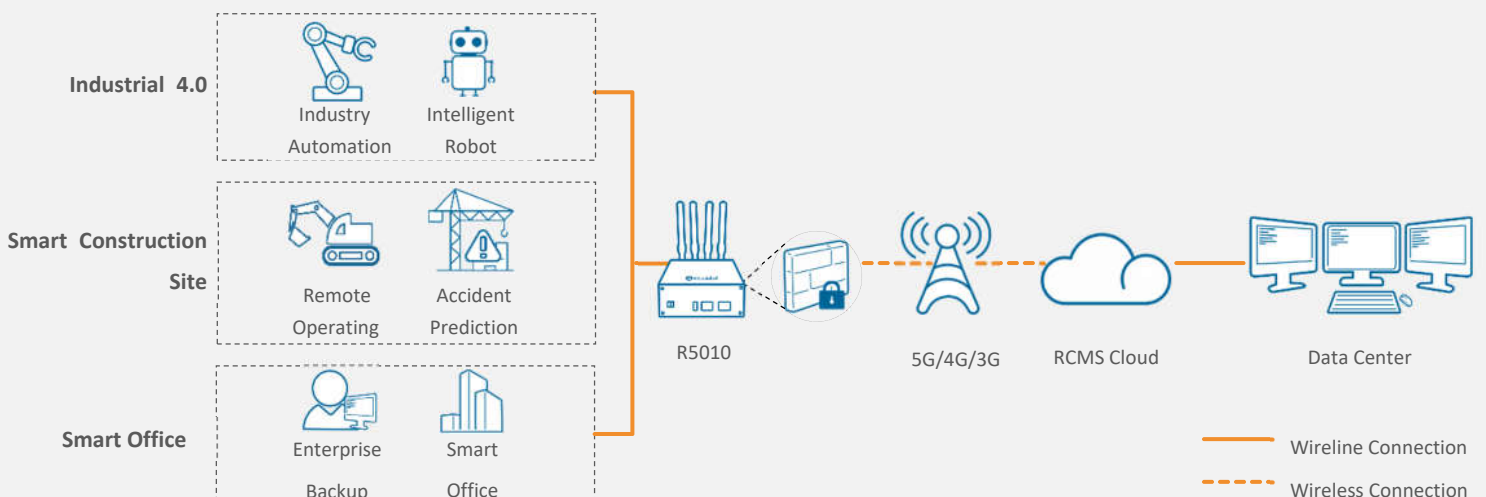
**RCMS** – Robustel’s Cloud management platform – Essential version for managing an estate of routers – Basic version FREE.

Robustel is a leading global industrial IoT/M2M hardware and solution provider. Since inception in 2010, Robustel has focussed on manufacturing and design of industrial cellular routers, gateways, modems, cloud platforms and end to end solutions. Robustel has set up local offices in Germany, Australia, the Netherlands, UK, Japan and Hong Kong and has a global distribution network providing a service in over 100 countries.

## KEY FEATURES

- > Highly stable 5G/4G/3G cellular connections
- > Supports WWAN, WAN link backup
- > Dual SIM and auto failover
- > Supports different backup mode: cold backup , warm backup and load balancing
- > RobustOS + SDK + App
- > IPsec/OpenVPN/GRE/L2TP/PPTP/DMVPN/RobustVPN
- > Full SMS control for diagnosis and recovery from data network problems
- > Management and maintenance via Web/CLI/SNMP/RCMS
- > Robust industrial design desktop, wall mounting or DIN rail mounting

## APPLICATION EXAMPLE



## SPECIFICATIONS

### Cellular Interface

|                    |   |
|--------------------|---|
| Number of antennas | 4 external antenna                            |
| Connector          | SMA-K   |
| SIM                | 2 (3.3 V & 1.8 V) Standard SIM, eSIM optional |

### Ethernet Interface

|                  |  |
|------------------|--|
| Number of ports  | 2 x 10/100/1000 Mbps, can be configured as<br>1 x WAN + 1 x LAN or 2 x LAN |
| Magnet isolation | 1.5 KV   |

### Power Supply and Consumption

|                   |   |
|-------------------|---|
| Connector         | 2-pin 3.5 mm female socket                              |
| Input voltage     | 9 to 36V DC   |
| Power consumption | Idle: 500 mA@12 V<br>Data link: 1000 mA (average) @12 V |

### Others

|                |                                     |
|----------------|-------------------------------------|
| Reset button   | 1 x RST                             |
| USB            | 1 x USB2.0, Type A                  |
| LED indicators | 1 x RUN, 1 x MDM, 1 x USR, 3 x RSSI |
| Built-in       | Watchdog, RTC Timer                 |

### Physical Characteristics

|                    |   |
|--------------------|---|
| Ingress protection | IP30                                      |
| Housing & Weight   | Metal, 580g                               |
| Dimensions         | 125 x 100 x 48 mm                         |
| Installations      | Desktop, wall mounting and 35 mm DIN rail |

### Software (Basic features of RobustOS)

|                   |   |
|-------------------|---|
| Network protocols | PPPoE, DHCP, NAT, DNS, NTP, SMTP, Telnet, SSH2, DDNS, etc.                          |
| VPN tunnel        | IPsec, OpenVPN, GRE   |
| Firewall          | DMZ, anti-DoS, Filtering (IP/Domain name/MAC address), Port Mapping, Access Control |
| Management        | Web, CLI, SMS   |

### App Center (Available Apps for RobustOS)

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

\*Request on demand. For more Apps please visit [www.robustel.com](http://www.robustel.com)

### Regulatory and Type Approvals

|                |  |
|----------------|--|
| Regulatory:    | CE, RCM (In Plan)  |
| Environmental: | RoHS, WEEE   |
| EMI            | EN 55032 Conducted Emission class B<br>EN 55032 Radiated Emission class B  |
| EMS            | IEC 61000-4-2 (ESD) Level 2<br>IEC 61000-4-3 (RS) Level 2<br>IEC 61000-4-4 (EFT) Level 2<br>IEC 61000-4-5 (Surge) Level 2<br>IEC 61000-4-6 (CS) Level 2<br>IEC 61000-4-11(DIP) Level 2 |

## ORDERING INFORMATION

|                       |  |
|-----------------------|--|
| Model                 | <b>R5010-5G</b>  |
| Router Type           | 5G Industrial Router   |
| Air Interface         | 5G NR/LTE/HSPA+  |
| Frequency Bands       | n1/n2/n3/n5/n7/n8/n12/n20/n28/n41/n66/n71/n77/n78/n79  |
| 5G                    |  |
| 4G                    | B1/B2/B3/B4(66)/B5(18/19/26)/B7/B8/B12(17)/B13/B14/B20/B25/B26/B28/<br>B29/B30/B32/B38/B39/B40/B41/B42/B43/B46/B48/B71 |
| 3G                    | B1/B2/B3/B4/B5/B8/B9/B19   |
| Operating Temperature | -25 to +70 °C  |
| Storage Temperature   | -40 to +85 °C  |
| Relative Humidity     | 5 to 95% RH  |

\* Please contact your sales representative for more detailed information.