



robustOS

R5010

High Speed 5G Router
1 x Ethernet + 1 x USB



INTRODUCTION

The R5010 is Robustel's latest 5G-capable router supporting global 5G, 4G, and 3G bands. It utilizes our proven high-performance **RobustOS** - an in-house developed operating system that has successfully undergone extensive third-party penetration testing. The R5010 is compliant with 3GPP Release 16 and is designed for the following applications:

Primary Broadband: Cellular network operators now offer unlimited 5G plans at competitive prices. For many businesses, transitioning from wired connections to wireless internet can be both technically and commercially beneficial.

SD-WAN: While many appliances come with built-in cellular options, the R5010 provides a cost-effective solution for adding a 5G backup route. Its ability to be positioned externally enhances the likelihood of receiving a strong 5G signal.

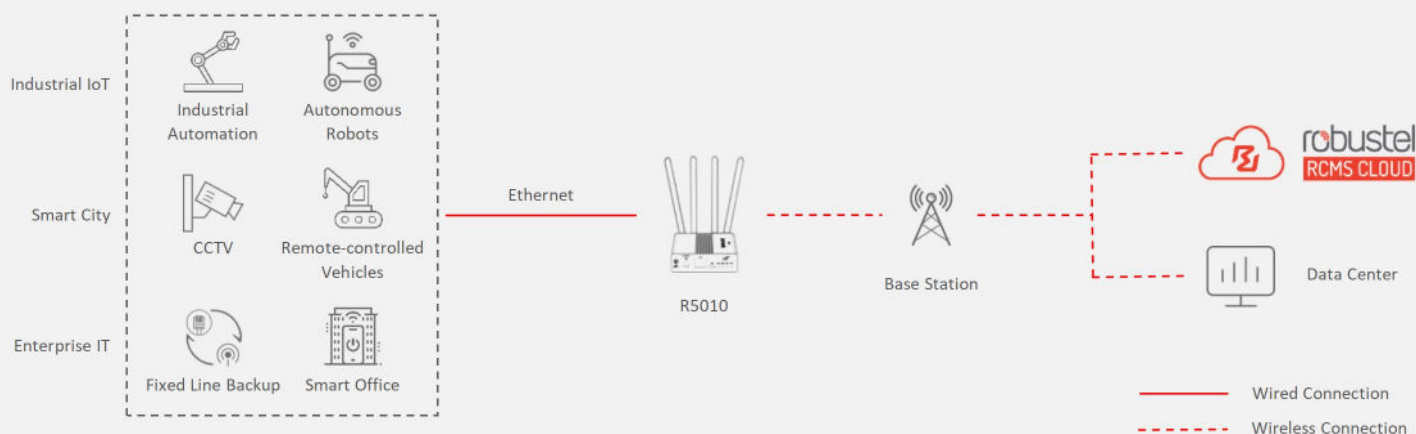
The **Robustel Cloud Manager Service (RCMS)** is a unified cloud-based platform designed for real-time monitoring and centralized management of industrial IoT devices. Fully compatible with Robustel routers and gateways, RCMS delivers an interactive geospatial dashboard that enables users to visualize device locations and track critical metrics such as data usage, signal strength, and network status. To ensure seamless operations, the platform facilitates over-the-air (OTA) updates for firmware, configurations, and applications, minimizing downtime while optimizing system performance. Experience robust, cloud-native device management by registering at: <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 2.5 Gbps Ethernet port
- PoE-PD compatibility with IEEE 802.3at standard
- USB modem mode
- Fully programmable operating system with comprehensive SDK support
- Multiple VPN options available including DMVPN, IPsec, L2TP, and more
- Free cloud management platform (RCMS)
- Robust metal enclosure with a compact design for DIN-rail and wall mounting



APPLICATION EXAMPLE



SPECIFICATIONS

Cellular Interface

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

Ethernet Port

Number of ports	1 x 2.5 Gbps, LAN Supporting 802.3at PD feature on ETH
Magnet isolation protection	1 KV

Others

Reset button	1 x RST
USB port	1 x USB 3.1 (Type C) For power supply, network supply and debug
LED indicators	1 x RUN, 1 x MDM, 1 x USR, 1 x RSSI
Watchdog	External

Power Supply and Consumption

Connector	4-pin Micro-Fit socket
Input voltage	12/24/48 V DC, 9 ~ 60 V DC 5 V/3 A by USB Type C Port Reverse polarity protection, surge protection
PoE-PD voltage	Possibility to power up through ETH 44 ~ 57 V DC
Power consumption	Idle: 1.5 W@12 V Max: 15 W@12 V
Recommended power supply	12 V DC/1.5 A power adapter

Physical Characteristics

Ingress protection	IP30
Housing & Weight	Aluminum, 276 g
Dimensions	30 x 94 x 100 mm
Installations	Desktop, wall mounting and 35 mm DIN rail mounting
Operating temperature	-40 ~ +70 °C
Storage temperature	-40 ~ +85 °C
Relative humidity	5 ~ 95% RH (non-condensing)

Software (Basic features of RobustOS)

Network protocols	PPP, PPPoE, TCP, UDP, DHCP, ICMP, NAT, HTTP, DNS, NTP, SMTP, Telnet, VLAN, HTTPS, ARP, SSH2, DDNS, etc.
VPN tunnels	IPsec, OpenVPN, GRE, WireGuard
Firewalls	DMZ, anti-DoS, Filtering (IP/Domain name/MAC address), Port Mapping, Access Control
Remote management	Web, CLI, SMS
Others	Smart Roaming V3

SDK

Supported programming languages	C, C++
Flash available for SDK	10 MB
RAM available for SDK	45 MB

App Center (Available Apps for RobustOS)

Apps*	L2TP, PPTP, DMVPN*, VRRP*, QoS, SNMP, Language, RCMS, etc.
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*Request on demand. For more Apps please visit www.robustel.com.

Cloud Platform

Robustel Cloud Manager Service (RCMS)	RobustLink, RobustVPN, Operation Console
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Regulatory and Type Approvals

Environmental	RoHS2.0
Testing	IEC 60068-2-6 (Sinusoidal Vibration) IEC 60068-2-27 (Mechanical Shock) IEC 60068-2-64 (Random Vibration)
EMI	EN 55032 Conducted Emission Class B EN 55032 Radiated Emission Class B
EMS	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 Level 2 EN 61000-4-6 (CS) Level 2 EN 61000-4-11 (Dips) Class 2

ORDERING INFORMATION

Model	Order Code	Frequency Bands*	Country /Region	Certification	Package Contains
R5010-A-5G-A28EU	A011300001	5G: NR SA/NSA: n1/3/5/7/8/20/28/38/40/41/75/76/77/78 4G: LTE FDD: B1/3/5/7/8/20/28/32 LTE TDD: B38/40/41/42/43	EMEA+ANZ	CE, UKCA, CB, RCM	1 x R5010 Router (B Code: B113001) 1 x DIN Rail Mounting Kit 4 x Cellular Antenna 1 x Power Adapter
	A011300002	3G: WCDMA: B1/5/8			1 x R5010 Router (B Code: B113001) 1 x DIN Rail Mounting Kit 1 x Power Plug Converter

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