



R2010e

Industrial Cellular Gateway

2 x ETH + 1 x RS-232/RS-485 + 1 x DI + 1 x DO



INTRODUCTION

The Robustel R2010e is an industrial 4G/LTE router designed for dependable site connectivity with modern eSIM flexibility. Built on the proven R2010 platform, the R2010e replaces the secondary physical SIM slot with an embedded MFF2 eSIM with GSMA SGP.22 compliant, enabling a hybrid SIM architecture (1 x SIM + 1 x eSIM) that simplifies international deployment, subscription management, and long-term device lifecycle operations.

Robustel Cloud Manager Service (RCMS) is a cloud-based platform for real-time monitoring and centralized management of Robustel routers and gateways. With Zero-Touch eSIM Provisioning, RCMS allows enterprises to remotely assign and activate eSIM profiles at scale - overcoming the industry limitation where SGP.22 cannot support mass deployment on its own. This capability eliminates manual SIM handling, reduces on-site labour, and accelerates global rollouts.

Unlike traditional dual-SIM routers, the R2010e introduces a set of advanced eSIM capabilities designed to accelerate global IoT rollout and reduce operational friction:

- **Robust and Secure eSIM Profile Management:** supports remote enable/disable and profile switching, allowing operators and enterprises to optimise connectivity and reduce reliance on physical SIM logistics.

- **Auto Failsafe Recovery:** When profile download or activation fails, the device automatically rolls back to the previous working profile, ensuring continuous connectivity and preventing remote provisioning failures.

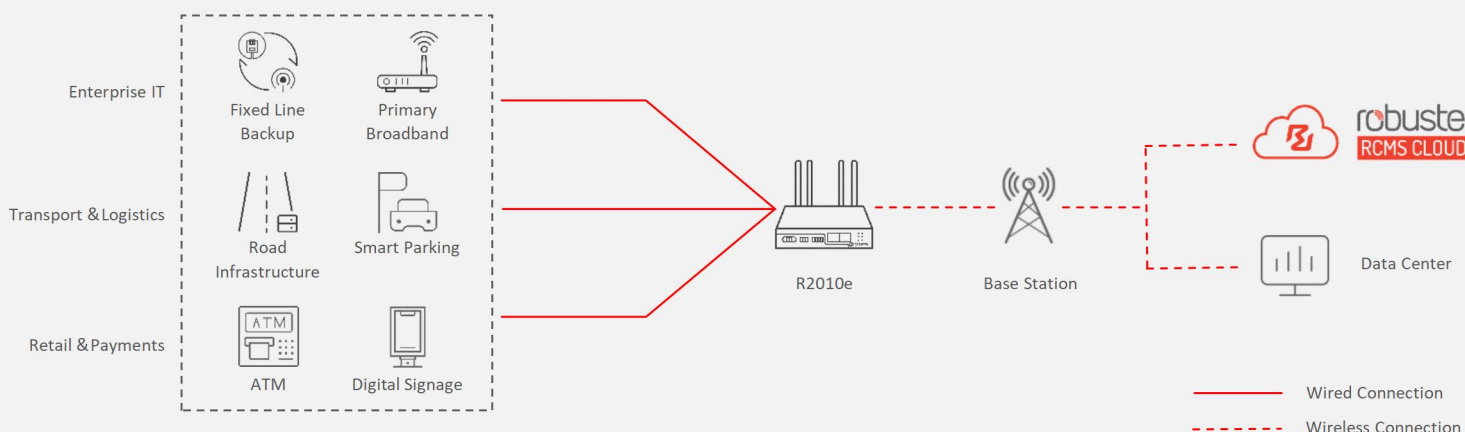
- **Enhanced lifecycle management:** eSIM profile rotation reduces dependence on long-term roaming agreements and mitigates SIM-card-swap maintenance tasks.

KEY FEATURES

- GSMA SGP.22 compliant for multi-scenarios IoT provisioning
- MFF2 eSIM supported for zero-touch deployment
- Network redundancy with SIM + eSIM dual backup
- Link Manager supports backup for Cellular, Ethernet, and WLAN along with ICMP detection
- WAN configuration options include Static and DHCP Client
- Features RobustOS, an SDK, and a variety of applications
- Supports VPN capabilities including IPsec, OpenVPN, GRE, and WireGuard
- Management and maintenance via Web/RCMS
- Auto-reboot functionality is available through SMS or on a time schedule
- Robust industrial design supports 9 to 36 V DC, with options for desktop, wall, or DIN rail mounting



APPLICATION EXAMPLE



SPECIFICATIONS

Hardware System

CPU	MIPS, 650 MHz
RAM	128 MB
Flash	32 MB

Cellular Interface

Number of antennas	2 (MAIN + AUX)
Connector	SMA-K
SIM	1 x Mini SIM (2FF) + 1 x eSIM (MFF2) SGP.22 eSIM, profile download and removal operations Typically supports up to 6 eSIM profiles

Ethernet Port

Number of ports	2 x 10/100 Mbps 2 x LAN or 1 x LAN + 1 x WAN
WAN port	Support 802.3at PD feature (optional)
Magnet isolation protection	1.5 KV

Serial Port

Number of ports	1 x RS-232 or 1 x RS-485 (software configurable)
Connector	1 x 3-pin 3.5 mm female socket
Signal definition	RS-232: TXD, RXD, GND RS-485: A, B

Digital Input/Output Port

Number of ports	1 x DI + 1 x DO
Connector	1 x 4-pin 3.5 mm female socket
Signal definition	DI+, DI-, DO+, DO-
Level	3.5 to 30 V DC = HIGH, 0 to 1 V DC = LOW
Absolute maximum VDC	30 V DC (DI/DO)
Absolute maximum ADC	10 mA (DI/DO)

Wi-Fi Interface

Number of antennas	2 (Wi-Fi 1 + Wi-Fi 2)
Connector	RP-SMA-K
Standards	802.11 b/g/n Supporting AP and Client modes
Frequency bands	2.4 GHz
Security	WEP, WPA, WPA2, WPA3
Encryption	AES, TKIP

Others

Reset button	1 x RST
LED indicators	3 x RSSI, 1 x RUN, 1 x MDM, 1 x Wi-Fi
Watchdog	Built-in

Power Supply and Consumption

Connector	2-pin 3.5 mm female socket
Input voltage	12/24 V DC, 9 ~ 36 V DC Reverse polarity protection, surge protection
Power consumption	Idle: 1.0 W@12 V Max: 7.0 W@12 V
Recommended PSU	12V DC/1.5 A power adapter

Software (Basic features of RobustOS)

Network protocols	PPPoE, TCP, UDP, DHCP, NAT, DNS, NTP, SMTP, Telnet, VLAN, 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
Serial port protocols	Transparent, TCP Client/Server, UDP, Modbus RTU Gateway
Others	Smart Roaming V3

SDK

Supported programming languages	C, C++
Flash available for SDK	16 MB
RAM available for SDK	64 MB

App Center (Available Apps for RobustOS)

Apps*	L2TP, PPTP, DMVPN, VRRP, QoS, Captive Portal, WLAN Multi AP, SNMP, Language, RCMS, Edge2Cloud
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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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Physical Characteristics

Ingress protection	IP30
Housing & Weight	Metal, 350 g
Dimensions	30 x 82 x 127 mm
Installations	Desktop, wall mounting and 35 mm DIN rail mounting
Operating temperature	-35 ~ +75 °C
Storage temperature	-40 ~ +85 °C
Relative humidity	5 ~ 95% RH (non-condensing)

Regulatory and Type Approvals

Environmental	RoHS2.0
EMI	EN 55032 Conducted Emission Class B EN 55032 Radiated Emission Class B
EMS	EN 61000-4-2 (ESD) Level 4 EN 61000-4-3 (RS) Level 2 EN 61000-4-4 (EFT) Level 2 EN 61000-4-5 (Surge) Level 3 (AC Port) EN 61000-4-6 (CS) Level 2

ORDERING INFORMATION

Model	Order Code	eSIM	Frequency Bands*	Country /Region	Certification	Package Contains
R2010e-A-4L-A24EU	A006900739	√	LTE CAT4 4G: LTE FDD: B1/3/5/7/8/20/28 LTE TDD: B38/40/41 3G: WCDMA: B1/5/8 2G: GSM: B3/8	EMEA+SEA	CE, UKCA	1 x R2010e Gateway (B Code: B006900730)
	A006900740	√				1 x R2010e Gateway (B Code: B006900730) 1 x DIN Rail Mounting Kit 1 x Power Adapter 2 x Cellular Antenna 2 x Wi-Fi Antenna

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