



EG5101

robustOS Pro

Edge Computing Gateway

1 x Ethernet + 1 x RS232 + 1 x RS485 + 1 x USB



INTRODUCTION

Robustel’s EG5101 is a new industrial edge computing gateway, supporting 4G Cat 1 network for cellular backhaul, with a fully-fledged Debian 11(bullseye) based operating system able to support thousands of existing or new ARMv7 (Raspberry Pi compatible) based applications.

EG5101 supports Docker for easy deployment of applications and benefits from ‘RobustOS Pro’ – Robustel’s latest router OS with enhanced cybersecurity, advanced GUI and a myriad of software features including VPNs, Smart Roaming, SMS remote control and more.

With a 792 MHz i.MX 6ULL CPU, EG5101 can be used as a combination of cellular router + embedded PC for IoT applications.

RCMS is Robustel’s free router monitoring service that is fully compatible with the EG5101. It allows customers 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>

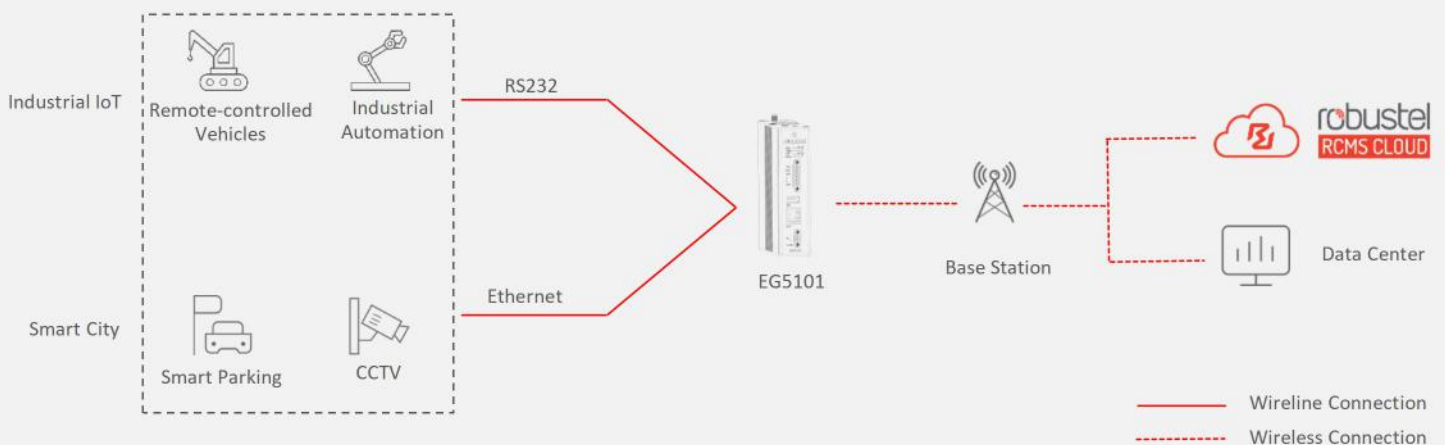
KEY FEATURES

- Highly stable 4G Cat 1 network connectivity
- High performance compute engine with 8 GB eMMC Flash for running complex customer applications
- ‘Docker’ containerization supported
- 1 x RS232, 1 x RS485 for connection to industrial /legacy devices
- Dual SIM card slots for redundant communications
- Wide Operating Temperature range for industrial applications
- Supports C, C++, Java, Python, Node.js etc. for users to develop their own applications
- More than 50,000 applications from Debian repository currently available
- Wireguard/IPsec/OpenVPN/GRE/L2TP/PPTP/DMVPN + more VPN options
- Supports RCMS – Robustel’s router/gateway management platform for effective management of large estates of devices



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RCMS CLOUD

APPLICATION EXAMPLE



SPECIFICATIONS

| Hardware System | |
|-----------------|--------------------|
| CPU | i.MX 6ULL, 792 MHz |
| RAM | 512MB DDR3/1G DDR3 |
| Flash | 8 GB eMMC |

| Cellular Interface | |
|--------------------|--------------------|
| Number of antennas | 1 |
| Connector | SMA-K |
| SIM | 2 x Mini SIM (2FF) |

| Ethernet Interface | |
|--------------------|-----------------------|
| Ports | 1 x RJ45, 10/100 Mbps |
| Magnet isolation | 1 KV |

| Serial Interface | |
|------------------|---|
| Type | 1 x RS232, 1 X RS485 |
| Connector | 6-pin 3.5 mm terminal block with lock |
| ESD protection | 8 KV Air, 4 KV Contact |
| Baud rate | 300 bps to 115200 bps |
| Signal | RS232: TXD, RXD, GND RS485: Data+ (A), Data- (B), GND |

| Others | |
|----------------|---------------------------------------|
| Reset button | 1 x RST |
| USB | 1 x USB 2.0 (host), Type A, 5V, 500mA |
| LED indicators | 1 x RUN, 1 x MDM, 1 x USR, 1 x RSSI |
| Watchdog | External |

| Software (Basic features of RobustOS Pro) | |
|---|--|
| Network protocols | PPP, PPPoE, TCP, UDP, DHCP, ICMP, NAT, HTTP, DNS, NTP, SMTP, Telnet, HTTPs, DNS, ARP, 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 |
| Serial port | Transparent, TCP Client/Server, UDP, Modbus RTU Gateway |
| Others | Smart Reboot, Data Guard, Smart Roaming |

| SDK | |
|--------------------------------|--|
| Operating System | RobustOS Pro (Based on Debian 11(bullseye)) |
| Supported programming language | C, C++, Python, Java, Node.js etc. (for users to develop own applications) |
| Debian repository available | |
| Flash available for SDK | 6 GB |
| RAM available for SDK | 256 MB/768 MB |

| App Center (Available Apps for RobustOS Pro) | |
|--|--|
| Apps* | L2TP, PPTP, DMVPN, VRRP, QoS, SNMP, Language, RCMS, Dynamic route, Modbus Master, etc. |

*Request on demand. For more Apps please visit www.robustel.com.

| Power Supply and Consumption | |
|------------------------------|--|
| Connector | 2-pin 3.5 mm terminal block with lock |
| Input voltage | 9 ~ 36V DC |
| Power consumption | Idle: 56mA @ 12V Data link: 431mA(peak) @ 12V |

| Physical Characteristics | |
|--------------------------|--|
| Ingress protection | IP30 |
| Housing & Weight | Aluminum, 374g |
| Dimensions | 134.8*105*32mm |
| Installations | Desktop, wall mounting and 35 mm DIN rail mounting |
| Operating temperature | -20 ~ + 70 °C |
| Storage temperature | -40 ~ + 85 °C |
| Relative humidity | 5 ~ 95% RH |

| Regulatory and Type Approvals (*In progress) | |
|--|--|
| Environmental | RoHS2.0* |
| EMI | EN 55032 Conducted Emission class B EN 55032 Radiated Emission class B |
| EMS | IEC 61000-4-2 (ESD) Contact Level 2,Air Level 3 IEC 61000-4-3 (RS) Level 2 IEC 61000-4-4 (EFT) Level 2 IEC 61000-4-5 (Surge) Level 2 IEC 61000-4-6 (CS) Level 2 IEC 61000-4-8 Level 2 |

ORDERING INFORMATION

| Model | PN | Cellular | RAM | Enclosure | Frequency Bands* | Country/Region | Certification (*In progress) |
|--------------------|---------|----------|------------|-----------|-------------------------------------|----------------|------------------------------|
| EG5101-A-4E-A31EU | B130001 | 4G | 512MB DDR3 | ✓ | 4G: LTE FDD: B1/3/5/7/8/20/28 | EU ANZ | CE* RCM* CB* |
| EG5101-B-4E-A31EU | B130002 | | 1GB DDR3 | ✓ | | | |
| EG5101P-A-4E-A31EU | B130003 | | 512MB DDR3 | - | | | |
| EG5101P-B-4E-A31EU | B130004 | | 1GB DDR3 | - | | | |

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