



# 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.

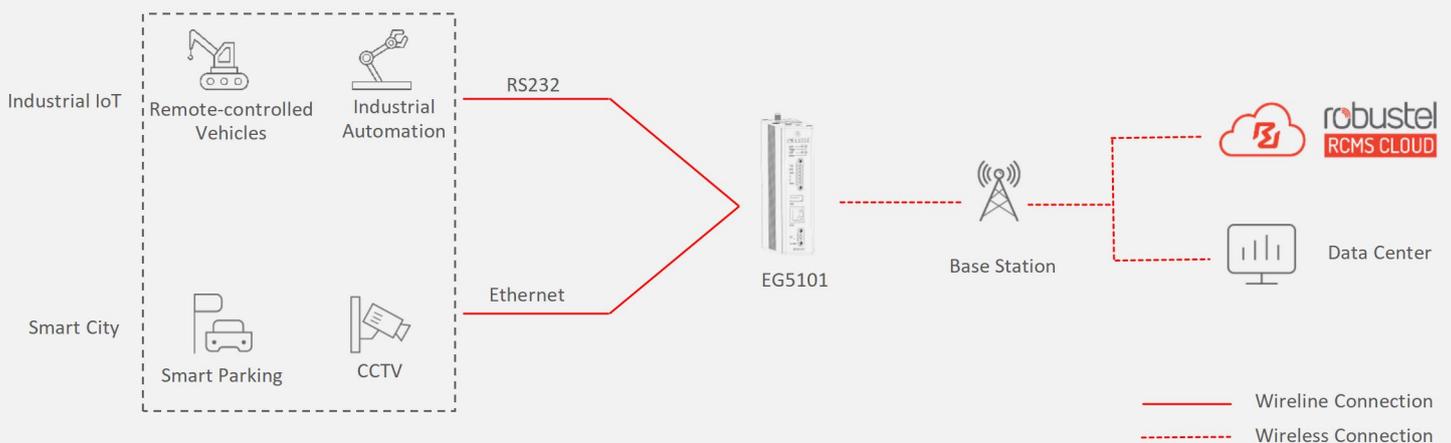
You can try Robustel’s free router management platform by signing up here: <https://rcms-cloud.robustel.net>

## 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



## 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 xRJ45, 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](http://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.