



# **HIGHER EFFICIENCY ENHANCED SECURITY**

*Industrial Edge Computing Gateway*

# Robustel Industrial Edge Computing Gateway Portfolio



High Speed Connection



Supports Docker



Cost-effective Hardware



Serial Ports & Digital IO Onboard



Powerful Hardware Performance



AI Computing Capability



Robust Industrial Design



Dual SIM Card Design

The above features are the common features of some products in this series. Please check the following pages to learn about the details in difference of products.

# Hardware

## Industrial Edge Computing Gateway

Robustel's Edge Computing Gateways combines all the benefits of Robustel's tried and tested RobustOS operating system with a Debian embedded computer to create the ultimate hybrid product Comms & Compute all in one box.

The Dual OS design uses RobustOS Pro to make router management easy whilst allowing the User to access the underlying Debian OS from the command line to install new or existing 3rd party applications on the same hardware.

Robustel's Edge Computing Gateways equipped CPU(s) use the same instruction as the ubiquitous Raspberry Pi computer powered by ARM architecture meaning all existing applications can be easily ported to Edge Computing Gateways, optionally using Docker containerization.

# Robustel EG5200

## Industrial Edge Computing Gateway (Coming Soon)

Robustel's EG5200 is a new generation of industrial edge computing gateway supporting global 4G/3G/2G networks for cellular backhaul, with a fully-fledged Debian 11 (bullseye) based operating system able to support thousands of existing or new ARMv8 (Raspberry Pi compatible) based applications.



robust OS Pro



### AI Computing Capability

Equipped with an NPU with a computing power of 2.3 TOPs, it can support high-speed image recognition and video data processing.

### Powerful Hardware Performance

The iMX.8M.Plus high-performance hardware platform provides a strong foundation for information processing and complex task handling.

### Supports HDMI

Equipped with an HDMI high-definition image interface for high-bandwidth image transfer in industrial settings.

### Supports Wi-Fi 6

Compatible with 802.11ax standard, ensuring more Stable Connections and Faster Speeds for High Capacity Wireless LAN Applications!

## Hardware

<b>Cellular</b>	4G/LTE, 3G WCDMA, 2G GSM	<b>BT</b>	Bluetooth 2.1/3.0 + EDR + Bluetooth 5.2
<b>CPU</b>	i.MX 8M Plus, 4 Core Cortex-A53, 1.6 GHz, equipped NPU with up to 2.3 TOPS	<b>Ethernet Port</b>	5 x RJ45, 10/100/1000Mbps
<b>Memory</b>	4 GB DDR4	<b>Serial Port</b>	2 x RS485/RS422/RS232 software configurable, 1 x RS232 console
<b>Flash</b>	32 GB EMMC	<b>DI/DO</b>	2 x DI, 2 x Relay Output
<b>Housing</b>	Metal, 622g	<b>USB</b>	2 x USB 3.0 (host), Type A, 5V 900mA 1 x USB 3.0 (device), Type C
<b>Dimension</b>	60 x 105 x 128	<b>GNSS (incl.GPS)</b>	Optional
<b>Operating Temperature</b>	-30 to +70 °C	<b>SIM Card Slot</b>	2
<b>Power Supply</b>	9 ~ 60V	<b>microSD</b>	Yes, SDXC standard
<b>Antenna Interface</b>	2 x Cellular Antenna, 2 x Wi-Fi Antenna	<b>Video</b>	1 x HDMI 2.0
<b>Wi-Fi</b>	Optional, Wi-Fi 6		

## IoT Applications



**Industrial IoT**



**Transportation & Logistics**



**Healthcare**



Watch  
Video

# Robustel EG5120

## 5G Industrial Edge Computing Gateway

Robustel's EG5120 is a new generation of industrial edge computing gateway, supporting global 5G/4G/3G/2G networks for cellular backhaul, with a fully-fledged Debian 11 (bullseye) based operating system able to support thousands of existing or new ARMv8 (Raspberry Pi compatible) based applications.



robustOS Pro



### High Speed Connection

Robustel's 5G routers support 5G Release 16 with fast DL/UL speeds in NSA/SA modes. 4G+ Carrier Aggregation ensures fast connections without 5G.

### Powerful Hardware Performance

The iMX.8M.Plus high-performance hardware platform provides a strong foundation for information processing and complex task handling.

### AI Computing Capability

Equipped with an NPU with a computing power of 2.3 TOPs, it can support high-speed image recognition and video data processing.

### Supports Docker

Robustel's Docker containerisation allows easy porting of software to EG5000 series Gateways from other platforms.

Hardware			
<b>Cellular</b>	5G SA/NSA, 4G/LTE, 3G WCDMA	<b>BT</b>	Optional, Bluetooth 2.1/3.0 + EDR + Bluetooth 5.2
<b>CPU</b>	i.MX 8M Plus, 4 Core Cortex-A53, 1.6 GHz, equipped NPU with up to 2.3 TOPS	<b>Ethernet Port</b>	2 x RJ45, 10/100/1000Mbps
<b>Memory</b>	2 GB DDR4	<b>Serial Port</b>	2 x RS232/RS485, Software configurable
<b>Flash</b>	16 GB eMMC	<b>DI/DO</b>	2 x DI, 2 x DO, wet contact
<b>Housing</b>	Metal, 568g	<b>USB</b>	1 x USB 3.0 (host), Type A, 5V 900mA
<b>Dimension</b>	49 x 105 x 128 mm	<b>GNSS (incl.GPS)</b>	Optional
<b>Operating Temperature</b>	-40 to +70 °C	<b>SIM Card Slot</b>	2
<b>Power Supply</b>	9 ~ 60V	<b>microSD</b>	Support, up to 256GB
<b>Antenna Interface</b>	4 x Cellular Antenna, 2 x Wi-Fi Antenna		
<b>Wi-Fi</b>	2.4 GHz: Up to 300 Mbps - 2 x 2 MIMO, 5 GHz: Up to 866.7 Mbps (80 MHz Band)		

## IoT Applications



Smart Cities



Industrial IoT



Healthcare



Watch  
Video

# Robustel EG5100

## Industrial Edge Computing Gateway

Robustel's EG5100 is a new generation of industrial edge computing gateway, supporting global 4G/3G/2G networks 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.



### Cost-effective Hardware

Robustel hardware: Industrial grade, durable, wide voltage/temperature range, cost-effective for high volume Industrial/IoT rollouts.

### Extensive International Certifications

Robustel heavily invests in global certifications for Robustel's Global IoT Router, making it one of the most certified worldwide.

### Dual SIM Card Design

Dual SIM backup enhances network resilience - 2 networks are better than 1!

### Serial Ports & Digital IO Onboard

Equipped with multiple Ethernet ports. Built-in network switch to meet the needs of multi-device access.





Hardware			
<b>Cellular</b>	4G/LTE, 3G WCDMA, 2G GSM	<b>BT</b>	Optional, Bluetooth 2.1/3.0 + EDR + Bluetooth 5.2
<b>CPU</b>	i.MX 6ULL, ARM Cortex-A7, 792MHz	<b>Ethernet Port</b>	2 x RJ45, 10/100Mbps
<b>Memory</b>	1GB DDR3	<b>Serial Port</b>	2 x RS232/RS485 (software configurable) Or 1 x RS232/RS485 (software configurable) + 1 x CAN
<b>Flash</b>	8 GB eMMC		
<b>Housing &amp; Weight</b>	Metal, 567g	<b>DI/DO</b>	2 x DI, 2 x DO, wet contact
<b>Dimension</b>	49 x 105 x 128 mm	<b>USB</b>	1 x USB 2.0 (host), Type A, 5V 500mA
<b>Operating Temperature</b>	-40 to +70 °C	<b>GNSS (incl.GPS)</b>	Optional
<b>Power Supply</b>	9 ~ 60V	<b>SIM Card Slot</b>	2
<b>Antenna Interface</b>	2 x Cellular Antenna, 2 x Wi-Fi Antenna, 1 x GPS Antenna (Optional)		
<b>Wi-Fi</b>	2.4 GHz: up to 300 Mbps, 5 GHz: up to 866.7 Mbps		

## IoT Applications



Energy & Utilities



Industrial IoT



Smart Cities

# Robustel EG5101

## Industrial Edge Computing Gateway (Coming Soon)

Robustel's EG5101 is a new generation of industrial edge computing gateway, supporting global 4G networks 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.

robust **OS** PRO



### Cost-effective Hardware

Robustel hardware: Industrial grade, durable, wide voltage/temperature range, cost-effective for high volume Industrial/IoT rollouts.

### Serial Ports Onboard

RS232/485 support for Modbus RTU interface, connecting thousands of sensors/instruments for maximum flexibility.

### Dual SIM Card Design

Dual SIM backup enhances network resilience - 2 networks are better than 1!

### Robust Industrial Design

Robustel's quality products have industrial housing for reliability in any conditions, and protect against humidity, dust, vibration and EMC.

## Hardware

<b>Cellular</b>	4G/LTE	<b>Power Supply</b>	9 ~ 36V
<b>CPU</b>	i.MX 6ULL, ARM Cortex-A7, 792MHz	<b>Antenna Interface</b>	1 x Cellular Antenna
<b>Memory</b>	512MB / 1GB DDR3	<b>Ethernet Port</b>	1 x RJ45, 10/100Mbps
<b>Flash</b>	8 GB EMMC	<b>Serial Port</b>	1 x RS232 and 1 x RS485
<b>Housing &amp; Weight</b>	Metal, 374g	<b>USB</b>	1 x USB 2.0 (host), Type A, 5V 500mA
<b>Operating Temperature</b>	-20°C to +70°C	<b>SIM Card Slot</b>	2

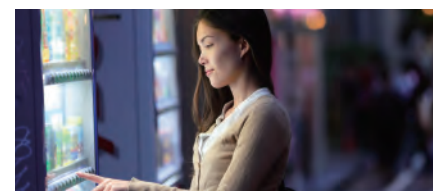
## IoT Applications



**Industrial IoT**



**Environmental IoT**



**Retail & Payments**

# Software

Operating System

## RobustOS

RobustOS is Robustel's proprietary router operating system. Built from the ground up around the Linux Kernel, RobustOS allows for lightweight firmware and application delivery across the Robustel product range.

RobustOS dovetails seamlessly with Robustel's free Microsoft Azure based router management platform - RCMS, allowing easy management of thousands or even millions of routers through a 'single pane of glass'.



### Security

RobustOS has been penetration tested by UK Cybersecurity experts Nettitude and shown to have ZERO VULNERABILITIES.



### Market Proven Reliability

More than 2 Million RobustOS devices have been deployed globally.



### App Centre

The 'App Centre' is an integral part of RobustOS, allowing bespoke applications to be quickly and reliably added into mainstream firmware branches.



### SDK

For additional flexibility and customization, you can create your own RobustOS Apps with the RobustOS SDK in C.



### Advanced Features

RobustOS has evolved to include many unique or advanced features that are useful for IoT and Enterprise applications alike.

# RobustOS Pro

RobustOS Pro is Robustel's powerful Debian based operating system with support for Docker based applications. RobustOS Pro is used in EG5000 series Gateways to provide communication and computing in a single box.

Customers can rapidly port, test and deploy new applications in whatever language they are comfortable developing in, in addition to giving customers access to over 50,000 existing applications in the Debian repository.



### User-friendly Web UI

RobustOS Pro features a colourful and easy to use Web UI providing a simple configuration interface for basic router functions. Power users can directly access the Debian CLI through SSH for low-level device control.



### Docker & Other Containerisation

RobustOS PRO leverages high performance ARM CPUs that can natively manage Docker & other containerization tools for quick and easy software redeployment.



### Security & Reliability

Secure boot (Optional)  
Signature verification for system updates  
Penetration tests by Nettitude (planned)



### Flash Manager

RobustOS Pro allows use of resource intensive 3rd party applications. Users can utilize "Flash Manager" to make sure the regularity of writes to the Flash memory (eMMC NAND Flash) will not cause excessive wear and early device failure.






# Software

## Device Management Platform

# ROBUSTEL CLOUD MANAGER SERVICE

Robustel Cloud Manager Service (RCMS) is an excellent Microsoft Azure based IoT cloud platform designed to work with RobustOS/RobustOS Pro based routers and gateways to help realise the true potential of Robustel products. It provides customers with comprehensive gateway monitoring, management and control features including a fully integrated VPN service.



 <b>robustel</b> RCMS CLOUD	 <b>RCMS BASIC</b> Monitor your fleet of Robustel devices from anywhere in the world	 <b>RCMS ESSENTIALS</b> Manage and control your Robustel devices from any network or location	 <b>RCMS ADVANCED</b> Secure cloud based VPN access to your Robustel devices and end devices	 <b>RCMS FREE TRIAL</b> Any new Robustel device connecting to RCMS for the first time gets 3 months free
<b>Included Features</b>				
Device Overview Dashboard	Yes	Yes	Yes	Yes
Device Status & Statistics	Yes	Yes	Yes	Yes
Device Location (GPS or Cell)	Yes	Yes	Yes	Yes
Custom Report Generation & Export	Yes	Yes	Yes	Yes
Syslog & Debug Data	Yes	Yes	Yes	Yes
Over-the-Air (OTA) Provisioning & Updating	X	Yes	Yes	Yes
Zero-Touch & Bulk Provisioning & Updating	X	Yes	Yes	Yes
Configuration Management (CLI or GUI)	X	Yes	Yes	Yes
Remote Actions (Speed Test, I/O Control, etc)	X	Yes	Yes	Yes
VPN Access to Single/Group of Devices	X	X	Yes	Yes
Desktop Client to Site VPN Access	X	X	Yes	Yes



## 24/7 Cloud SaaS Device Management - RCMS Cloud



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RCMS CLOUD

RCMS Cloud is a shared public cloud deployment of RCMS available to all Robustel customers.

### Environment

Hosted by Robustel in partnership with Microsoft Azure for enhanced scalability and security options.

### Available Apps



### Price Model

OPEX with tiered pricing per device based on features required.

### Customization

- Custom APPs & Features available from APP Centre
- Custom APP development available with restrictions

### Advantage

- Free Read-Only basic access for all customers
- No need for hosting or third-party integration costs
- Standardized Code Base updated regularly for security, bugs and new features.
- Microsoft Azure Active Directory and IoT Hub Integration.
- Connected to the Robustel App Centre to send the latest firmware and RobustOS APPs directly to devices.

## Locally Hosted Device Management - RCMS Stack



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RCMS STACK

RCMS STACK is a private version of the RCMS platform packaged and installed in a customer's environment.

### Environment

Hosted by the customer in their environment of choice; Either a local server, physical data centre or cloud provider.

### Available Apps



### Price Model

CAPEX Set-up + Annual OPEX fee (Customer owned Infrastructure Cost)

### Customization

- Custom APPs & Features available on request
- OEM Software Development options available at cost

### Advantage

- Custom URL & Destination Server
- Standardized Code Base updated regularly for security, bugs and new features.
- Data stored locally
- Ports can be restricted for 'Local operation'
- Becomes more cost effective at high device volumes as long as infrastructure is maintained.

# Empower Your Devices with Cloud Management



## Monitor

The RobustLink App inside RCMS gives you visibility of your entire Robustel device fleet in a single location from anywhere in the world. View device status, signal strength, data usage and WAN details for any device connected to the platform at the touch of a button.

### Management Dashboard

Total Devices Online/Offline | Devices by Connection Type | Total Devices by Group | Total Devices by Model | Total Devices by Cellular Carrier.

### Individual Device Statistics

Online/Offline Status | Connection Type & Link Details | Signal Strength | Data Usage | Location (GPS, Cellular or Manual) | Installed Apps & Firmware.

### Remote Syslog

Enable/Disable Syslog features remotely and export them for analysis.



## Manage

Use the RobustLink App inside RCMS to access your devices remotely to change configuration parameters or send device commands through remote Command Line Interface (CLI) access. Maintain your fleet through Over-the-Air (OTA) updates for Firmware, Apps and Configuration files in bulk or for a single device.

### Over-the-Air (OTA) Updates

Update Firmware, RobustOS Apps and XML config files.

### Remote Command Line Interface (CLI)

Configure any device connected to RCMS using the CLI without the need for a fixed/addressable IP Address.

### Remote Reboot

Remote actions allow you to automatically reboot a batch of devices or a single unit with the press of a button.



## Control

Use the RobustVPN App inside RCMS to create a virtual LAN for your devices that can be accessed securely from anywhere in the world using the preconfigured desktop VPN client.

### Access groups of devices through a single VPN

Configure VPN groups within RCMS to control the devices and users that are allowed to access your virtual network.

### Controlled VPN Usage

Use RCMS to control when your virtual network is available. Configure your VPN to be always available or only when needed to reduce network traffic.

### VPN Traffic Logging

VPN Traffic logs allow you to pinpoint problem devices quickly and efficiently.



# Company Overview

## Company Introduction

Robustel is a cellular router & Gateway manufacturer specialising in 5G, 4G/LTE & LPWAN devices. Our products are used in smart cities, transportation, utilities, energy, Industrial IoT and many other applications to deliver robust and reliable connectivity.

## Data Highlights



## Brand Philosophy

"Robustel" is composed of "Robust" and "Tel". "Robust" represents robustness in automation systems, which refers to the high reliability and robustness of the system, while "Tel" represents communication. Together, it means that Robustel provides highly reliable and robust communication products and systems in the industrial internet of things (IIoT). At a macro level, the people at Robustel are highly reliable and trustworthy, and the products and services they design must also be highly reliable.

## Why Choose Robustel?



Combination of  
Hardware & Software

High-reliability industrial grade cellular routers & gateways at a very competitive price point.



Free Device  
Platform

Free MS-Azure based device management platform with all products. Unique and powerful management features in advanced version.



Customization

In-house router OS development allows for fast customization and OEM branding.



Guaranteed  
Security

Excellent Cybersecurity practices including independent penetration testing on all software components.



Globalization

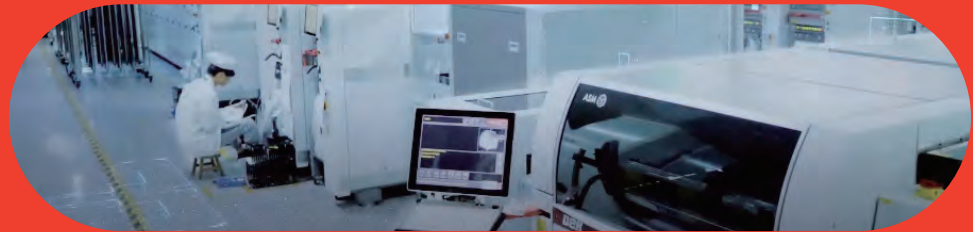
Supplying 100+ countries, with over 50 distribution partners to provide high quality localized service.

## Turnkey Manufacturing Facilities

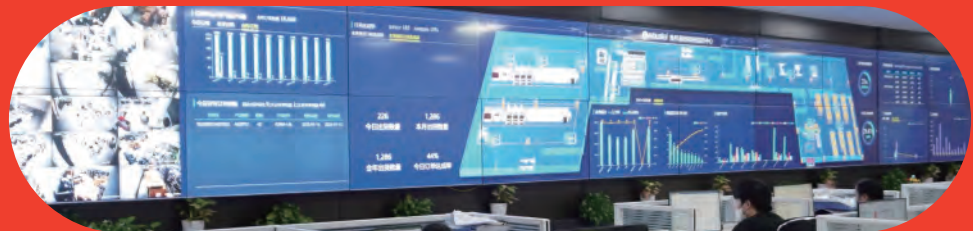
Robustel's "Smart Factory" was developed from the ground-up in 2018 with full software and hardware design capabilities. Robustel developed MES systems based on "lean production" idea, which created an intelligent infrastructure for a data-driven, green and flexible supply-chain. Also, multiple SMT lines give Robustel complete control over production scheduling and QA of the manufactured products. These facilities are regularly used to deliver fully or semi-bespoke OEM products along with simple EMS capabilities.

**1**

Intelligent  
Automated  
Production Line

**2**

Digital Twin  
Screen

**3**

Digital  
Process



## Robustel Industrial IoT Product

### Main Product

Industrial Wireless Communication Device

Edge Computing Gateway

Agriculture, Enterprise IT, Industrial IoT, Transport & Logistics, Smart Cities, Healthcare, Oil, Gas & Mining, Retail & Payments, Energy & Utilities, Environmental IoT

Make Things Connected

# Typical Applications

## Energy & Utilities

Managing the reading, collection and distribution of traditional and renewable resources for consumer and business use.



## Smart Cities

Empowering councils and governments with connectivity for infrastructure, buildings, public spaces and traffic management.



## Enterprise IT

Primary internet access or fixed line failover connectivity for distributed office, retail or branch environments.



## Retail & Payments

Wireless Monitoring and Communications for ATMs, Vending Machines, Kiosks, Digital Signage and Point of Sale systems.





## Transport & Logistics

In-Vehicle internet access for fleet management, logistics, public Wi-Fi, security and telematicdata.



## Industrial IoT

Monitoring & managing assets, equipment and infrastructure in manufacturing, warehousing and construction.



## Oil, Gas & Mining

Employing remote control and management to improve safety and efficiency around the extraction of primary resources.



## Agriculture

Using sensing & wireless technology to improve irrigation, fertilization, yield and more in agriculture and farming.



## Environmental IoT

Environmental protection solutions for local conditions to realize intelligent environmental monitoring, disaster prevention and environmental compliance.



## Healthcare

Powering remote diagnostics, telemedicine solutions through wireless communications.





Scan to Visit Robustel Website for  
More Product Information

[info@robustel.com](mailto:info@robustel.com)  
[www.robustel.com](http://www.robustel.com)



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