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INDUSTRIAL PRODUCT DATASHEET

EdgeBox-RPI-200 Series & Optional Accessories

Industrial Raspberry Pi CM4 edge controller with rich I/O, wireless options, and rugged design for smart automation and IIoT.

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Overview



The EdgeBox-RPI-200 is a Raspberry Pi CM4-based all-in-one edge computing controller that functions as a PLC, IIoT gateway, and Industry PC, designed for industrial automation. Its rugged, fanless aluminum enclosure supports DIN-rail and wall mounting, and it provides multiple isolated communication interfaces with optional 4G and LoRa connectivity.

Key Features

Note:

Price Increase Announcement
Date: March 2, 2026
Due to increased demand for modules and SSDs, reComputer (Raspberry Pi) and EdgeBox Series' pricing is expected to rise by approximately $20–$80 in the coming weeks. Please confirm your orders and requirements accordingly to help secure availability.

EdgeBox-RPI-200 is not only an industrial raspberry pi/linux gateway and IIoT gateway, but also an all-in-one Raspberry Pi-based edge computing controllers that combines multiple industrial purposes. Designed as high-scalability and rugged industrial hardware, mounted with rich IO resources, and supported by the great Raspberry Pi industrial software ecosystem, it is an ideal choice for smart automation and Industrial Internet of Things(IIoT) solutions.

Key Feature

- **All-in-one IIoT Edge Gateway**

More than just a PLC, PAC, also an IoT edge Gateway, edge computing controller and Industry PC.

- **Powerful and Flexible Processors**

Powered by Raspberry Pi CM4, equipped up to 8GB RAM and 32GB eMMC

- **Multiple Communication Capabilities**

Support multiple industrial iot protocols and standards on phoenix connector and a RJ45 Gigabit Ethernet; Carry full-featured wireless interconnectivity with both cecullar and LoRa, supported by AWS, Azure cloud services

- **Rugged Industrial-grade Hardware Design**

Integrated thermal management with full Aluminum heatsink enclosure, supporting 35mm DIN rail and wall mounting

- **Supported with Rich Industrial Software Ecosystem**

Support rich industrial platforms and also fleet management, including Codesys, N3uron, balena, Node Red, Ignition ar

Description

The EdgeBox-RPI-200 series controllers offer versatile solutions for enhancing edge automation and industrial control. Compact yet powerful, they support real-time operations and multi-process control for various industrial applications, serving as PLC, IIoT Gateway, OPC UA Server, and Industry PC.

For a detailed comparison and to find the best fit for your projects, you can check our **EdgeBox Series Comparision Tab**

Powerful and Flexible Processors

EdgeBox-RPI-200-CM4104016 leverages the processing power of the AI-enabled **Raspberry Pi Compute Module 4(CM4)**, running up to 1.5GHz, equipped with 4 GB RAM and 16 GB eMMC, compiling in Linux, with Debian Operate System.

Rich IO Industrial Interfaces while Supporting Extensive Bus Protocols and Standards

This high-scalability equipment has been engineered with multiple isolated industrial interfaces, which adhere to various industrial bus protocols and standards to achieve data transmission in a variety of situations. It even offers **extended SSD storage** and **enhanced display output**, for more data acquisition and improved visual presentation.

Multiple Communication Capabilities, Multiple Cloud Services Support

The EdgeBox-RPI-200 employs high integration of communication, which integrates with wireless capabilities supported by multiple cloud services. It is greatly qualified for IIoT, which you can utilize to build IoT Gateway.

Great Raspberry Pi Industrial Software Ecosystem

With the great Raspberry Pi industrial software ecosystem, you will find that EdgeBox-RPI-200 has plentiful software and autonomous platforms supported. With **massive documentation and open communities** ,troubleshooting can be precise and expeditious.

There are some platforms and brokers EdgeBox-RPI-200 working on, kindly **click** for detailed instruction and wiki:

> **Note**
>
> The EdgeBox-RPi-200 can't directly flash the OS. An additional carrier board is required to flash the OS.

Robust Hardware Design

The overall structure of Edge Box is **rugged**, **maintenance-reducing** and **fanless**, as it integrates thermal management with full Aluminum heatsink enclosure. It is ultra-lightweight and supports 35mm DIN rail and wall mounting, all of which make it suitable for limited space and extreme conditions including in-vehicle and in-rack applications.

Application

- Smart Building: Building Management System(BMS), Building Automation System(BAS), Building Automati
- Smart Farming: smart irrigation system, greenhouse conditions adgjustment, localized control and automat
- Energy Management: power management system, home energy management system, microgrid control sy
- Manufacturing: defect detection, workplace safety, smart packing
- Industry Automation: water management, forest monitoring, smart packing, fire detection and prevention s

We welcome you to explore and inquire about this product(edge@seeed.cc), unlocking the potential of EdgeBox-RPI-200 across various industries. Embrace the power of digital transformation in your sector with EdgeBox-RPI-200, empowering your business and industry with cutting-edge solutions.

Specification

> **Note**
>
> Options marked with * require additional purchase of module or antenna according to accerrories list.
> If you want to customize features, feel free to email us at edge@seeed.cc.

Note

4G and LoRa® cannot be used at the same time, because EdgeBox have only one Mini-PCIe slot.

Accessories List

FAQ

Q.How can I get started with EdgeBox?

Edgeboxes, pre-loaded with Debian Buster, can be powered up with HDMI and ethernet for first boot. Also you can access it remotely with SSH for initial configuration without a monitor. Once set up, switch to VNC for a graphical interface.

Q.What kinds of 4G and LoRa® modules can I use?

You can input Quectel EC20/EC25 module for 4G LTE usage.

You can use Seeed WM1302 module for LoRaWAN® applications.

Q.Can I use 4G and LoRa® at the same time?

Sorry, this box does not support 4G and LoRa® use at the same time.

Q.How to reflash OS?

When you need to install your preferred OS, you will need some additional hardware to burn it. Remove the CM4 from t

Q.What are the software we can communicate with external world ?

The Edge box is an open-source hardware solution for industries. It supports protocols such as RS485, RS282 Modbus, Ethernet/IP, TCP/IP, and wireless networks. Therefore, you can interact with the external world using third-party software such as Codesys, Node-RED, N3uron, and Ignition Edge, as well as cloud services like AWS and Azure.

Product Gallery









Specification

Parameter	Description
Basic	
CPU	Raspberry Pi CM4, Quad-core Cortex-A72@ 1.5GHz
RAM	1GB/2GB/4GB/8GB
eMMC	Lite/8GB/16GB/32GB
Operating System	Raspbian, Debian
Wireless	
WiFi	2.4 GHz, 5.0 GHz IEEE 802.11 b/g/n/ac equipped*
Bluetooth	Bluetooth 5.0, BLE equipped*
Cellular	Mini-PCIe support 4G LTE(Quectel EC20/EC25 tested)*
LoRa®	Mini-PCIe support LoRaWAN®
Interface	
Ethernet	1 x 1000M RJ45
HDMI	HDMI 2.0 up to 4k@60fps
USB	2 x USB2.0 A

RS Serial	1 x RS485 (isolated)
	1 x RS232
M.2 socket	2242 NVME SSD card
DI	2 x isolated DI ports
	Input Voltage: 24V DC; Current: 1000mA
DO	2 x isolated DO ports
	Output voltage: <60 V; Current: 500 mA
Extra features	
Power Supply	DC 12V - 36V
RTC	RTC
Watchdog Timer	Stand alone
Encryption Chip	ATECC608A*
Uninterrupted Power Supply	UPS*
Operation temperature	-20 ~ 60 °C
Certification	RoHS, CE, FCC, TELEC, UKCA

Applications

- **Smart Building:** Building Management System(BMS), Building Automation System(BAS), Building Automation and Control system(BACS)
- **Smart Farming:** smart irrigation system, greenhouse conditions adgjustment, localized control and automation
- **Energy Management:** power management system, home energy management system, microgrid control system
- **Manufacturing:** defect detection, workplace safety, smart packing
- **Industry Automation:** water management, forest monitoring, smart packing, fire detection and prevention system

Resource Links

- https://www.seeedstudio.com/EdgeBox-RPI-200-LTE-Cat-4-EC25-Bundle.html
- Edgebox Broadsheet
- User Manual
- EdgeBox 3D File
- EdgeBox CE Certificates
- EdgeBox FCC Certificates
- Edge Series Warranty Regulations
- EdgeBox-RPi-200 Backup Image

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