

## IOT-EC01

Industrial Edge Computing Gateway Integrating Raspberry Pi® CM4 supports RS485 & LoRaWAN & 4G LTE



## Outstanding Features

### Powerful Performance

- Equipped with Raspberry Pi® Compute Module 4 to deliver high-performance computing for industrial edge applications.
- Supports additional high-speed storage expansion with 128GB NVMe SSD to meet data-intensive workloads.

### Multiple Industrial Interfaces

- Includes 3 isolated RS485 serial ports and dual Ethernet ports (1 \* Gigabit with PoE support).
- Provides high-definition display applications with HDMI 2.0 output.

### Versatile Wireless Options

- Integrated wireless support includes dual-band Wi-Fi (2.4/5GHz) and BLE 5.0.
- Expansion capabilities via SPI allow for LoRaWAN® integration.
- Supports 4G LTE connectivity for remote and mobile applications.

### Industrial Design

- Rugged enclosure with IP40 protection, suitable for harsh environments.
- Operates in a wide temperature range from -30°C to +70°C (-30°F to +158°F).

## Hardware Specifications

| Hardware Platform      |   |
|------------------------|---|
| CPU                    | Raspberry Pi CM4, Quad-core Cortex-A72@1.5 GHz                                    |
| Operating System       | Raspbian, Debian  |
| RAM                    | 8GB   |
| Storage                | 32GB eMMC   |
| Interface              |   |
| Ethernet Port          | 1 * 10/100/1000 Mbps (Supports PoE*); 1 * 10/100 Mbps IEEE802.3/802.3u            |
| USB                    | 2 * USB-A 2.0 Host; 1 * USB-C 2.0 (for flashing OS)                               |
| Serial Port            | 3 * RS485 (Isolated)  |
| HDMI                   | 1 * HDMI 2.0  |
| SIM Card               | 1 * Standard SIM Card Slot  |
| SSD Card               | 1 * M.2 NVMe SSD Slot 2280-M Key  |
| LED                    | 6 * LED indicators  |
| Buzzer                 | 1   |
| Reset Button           | 1   |
| Wireless Communication |   |
| Wi-Fi                  | On-chip Wi-Fi 2.4/5.0 GHz   |
| BLE                    | On-chip BLE 5.0   |
| LoRa®                  | SPI LoRa®*  |
| 4G Cellular            | 4G LTE*   |
| Standards              |   |
| EMC                    | ESD: EN61000-4-2, Level 3; EFT: EN61000-4-4, Level 2; Surge: EN61000-4-5, Level 2 |
| Certification          | CE, FCC, TELEC, ROHS, REACH   |
| Ambient Conditions     |   |
| Ingress Protection     | IP40  |
| Operating Temperature  | -30~70°C  |
| Operating Humidity     | 10~95% RH   |
| Storage Temperature    | -40~80°C  |

## System

|                        |  |
|------------------------|--|
| Power input            | AC 12~24 V/DC 9~36 V, 2-pin Terminal Block |
| PoE(as powered device) | IEEE 802.3af Standard 12.95 W PoE          |
| Power Consumption      | Idle: 2.88 W; Full Load: 5.52 W            |
| Power switch           | No   |
| Reboot Switch          | Yes  |

## Others

|                     |                     |
|---------------------|---------------------|
| Hardware Watch Dog  | 1~255s              |
| RTC                 | High Accuracy RTC   |
| Security            | ATECC608A           |
| Heat Dissipation    | Fanless             |
| Warranty            | 2 years             |
| Production Lifetime | Until December 2030 |

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Dimension (mm)



Weight: 545g (1.20 lb)

## Package Contents



x1

IOT-EC01



x1

DIN-Rail Mounting Accessory



x3

Terminal



x1

Adapter Cable



x1

User Manual