

# EMU-200 Series

Arm-based Application Ready and Programmable IIoT Gateway



## Features

- Python-enabled programmable open platform for customized applications at the edge
- Supported communication protocols include Modbus TCP/RTU, MQTT, OPC UA and Restful
- Supports Azure, AWS cloud connection flexible configuration for different user scenarios with wizard
- NXP i.MX 8M Plus with 4x Arm Cortex-A53 cores @1.8GHz 2GB DDR4 RAM (EMU-210)
- TI AM4376 ARM Cortex-A9 @1.0GHz(EMU-200)
- 32GB eMMC system storage
- Supports 5G/4G/LTE, and Wi-Fi communication (optional, only EMU-210 supports 5G )
- Operating Temperature -40°C to 70°C (-20°C to 70°C for EMU-210)

## Introduction

The EMU-200 series is an Arm-based IIoT gateway that bridges OT and IT, enhancing data flow and cloud integration.

The EMU-210 is a high-performance IoT gateway based on the i.MX 8M Plus, featuring an open platform design with a quad-core processor, making it suitable for edge computing and AIoT applications that demand higher performance. In contrast, the EMU-200 is a cost-effective IoT gateway powered by an Arm Cortex-A9 @1.0GHz. It facilitates communication across Wi-Fi, Ethernet, or serial-based protocols, enabling extensive device integration into networks. Both the EMU-200 and EMU-210 enable system integrators to develop applications specifically for renewable energy, EV chargers, and factories that require extensive data collection and cloud-based applications.

The EMU-200 Series built-in EGIFlow allows configuration via web browser of serial port, Ethernet, Wi-Fi, cellular, time synchronization and transport I/O data. It also includes a no-code interface for protocol translation and iApp for python-enabled user-defined data analytics at the edge.

## Ordering Information

- EMU-210  
Built-in EGiFlow allows configuration via web browser
- EMU-210L  
Open platform with pre-installed Debian 11 provides Serial Port/Network Configuration API easily configure and manage serial port and network settings
- EMU-200  
Built-in EGiFlow allows configuration via web browser
- EMU-200-W  
Built-in EGiFlow allows configuration via web browser with Wi-Fi enabled
- EMU-200L  
Open platform with pre-installed Debian 11
- EMU-200L-W  
Open platform with pre-installed Debian 11 with Wi-Fi enabled  
\*\*\* EMU-200-W/EMU-200L-W Available regions: Europe/Australia and New Zealand/North America/Taiwan

## Accessories

### EMU-210

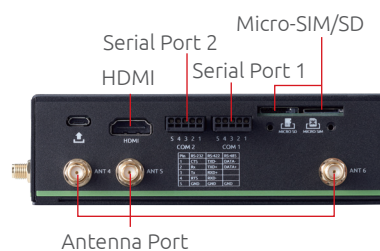
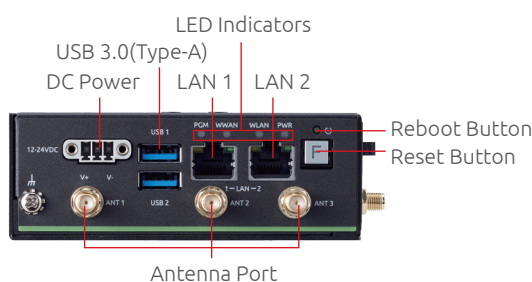
- AC-DC ADAPTER 90W  
FSP, FSP090-AAAN3, Input :100~240V AC, Output: 24V DC/3.75A
- WiFi Kit  
Intel® Wi-Fi 6E AX210 with Bluetooth
- 5G Kit  
Telit: MV32-W for Global
- 4G LTE Kit  
Quectel EM05-G M.2 4G LTE, Cat 4 for Global

### EMU-200

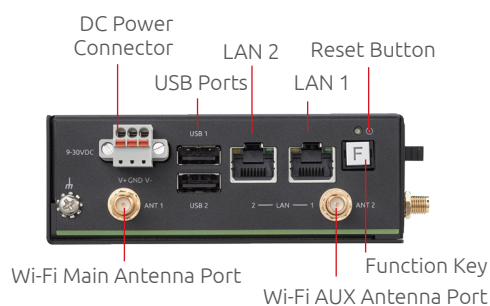
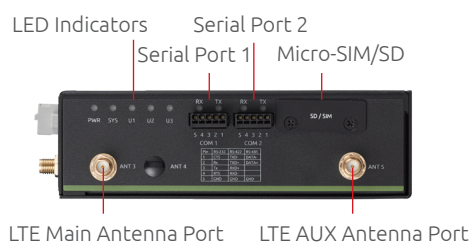
- AC-DC ADAPTER 40W  
MEANWELL, GST40A24-AD, Input: 90-264V AC/40W, Output: 24V DC/1.67A
- 4G LTE Kit
  - Sierra EM7411 M.2 4G LTE, Cat 7 for USA and Canada
  - Sierra EM7421 M.2 4G LTE, Cat 7 for EU and Taiwan
  - Quectel EM05-E M.2 4G LTE, Cat 4 for Europe/Australia/Taiwan
  - Quectel EM05-CE M.2 4G LTE, Cat 4 for China
  - Quectel EM05-G M.2 4G LTE, Cat 4 for Global

## Product Illustration

### EMU-210



### EMU-200



## Specifications

| Model                   | EMU-210  | EMU-200  | EMU-200-W   |
|-------------------------|--|--|---|
| <b>System</b>           |  |  |   |
| Processor               | i.MX8M Plus Arm Cortex-A53 Quad-Core 1.8GHz  | Arm Cortex-A9 1.0 GHz  |   |
| Memory                  | LPDDR4 2GB   | DDR3 1GB   |   |
| NAND Flash (eMMC)       | 32 GB eMMC   |  |   |
| Wi-Fi                   | N/A  |  | 2.4GHz/5GHz   |
| OS                      | Debian 11  |  |   |
| Configuration Interface | EGiFlow  |  |   |
| <b>I/O Interface</b>    |  |  |   |
| Ethernet                | 2x RJ45 10BASE-T/100BASE-TX/1000BASE-T ports   |  |   |
| Serial Ports            | 2x isolated RS-232/422/485 4-wire  |  |   |
| Display output          | 1x HDMI  | N/A  |   |
| USB                     | 2x USB 3.0 (Type-A)  | 2x USB 2.0 (Type-A)  |   |
| M.2                     | 1x M.2 E-key for Wi-Fi/BT<br>1x M.2 B-key (USB 3.0) for 5G or 4G/LTE   | 1x M.2 B-key (USB 2.0) for 4G/LTE  |   |
| Micro-SIM               | 1  |  |   |
| <b>External Storage</b> |  |  |   |
| Storage Slot            | 1x MicroSD   |  |   |
| <b>Mechanical</b>       |  |  |   |
| Dimensions              | 110.90 (L) x 40 (W) x 131.4 (H) mm   |  |   |
| Mounting                | DIN rail kit and wall mount kit  |  |   |
| Housing                 | Metal, IP40  |  |   |
| <b>Power Supply</b>     |  |  |   |
| DC Input                | 12 to 24V  | 9 to 30V   |   |
| <b>Environmental</b>    |  |  |   |
| Operating Temperature   | -20°C to 70°C  | -40°C to 70°C  |   |
| Storage Temperature     | -25°C to 85°C  | -40°C to 85°C  |   |
| Vibration Resistance    | IEC 60068-2-64 compliant Operating: 2 Grms, 5-500 Hz, 3 axes   |  |   |
| Shock Resistance        | IEC 60068-2-27 compliant Operating: 20 G, Pulse width: 11 ms duration, 3 times per axis  |  |   |
| <b>Certifications</b>   |  |  |   |
| EMC                     | CE / UKCA / RCM / KC / FCC<br>EN/IEC 61000-6-4:2019;<br>EN/IEC 61000-6-2:2019<br>47 CFR FCC Part 15 Subpart B,<br>class B        | CE/FCC/ICES-003/RCM/BSMI, Class A<br>EN 55032, EN 55035, EN 61000-6-2, EN 61000-6-4, CNS 15936 |   |
| Safety                  | IEC 62368-1:2014;<br>EN 62368-1:2014+A11:2017<br>UL 61010-1; CSA C22.2 No.61010-1<br>UL 61010-2-201; CSA C22.2<br>No.61010-2-201 | IEC/EN/UL 62368-1  |   |
| RF                      | NA   |  | CE-RED (EN 300328, EN300440,<br>EN 301489 -1/-17, EN301893),<br>RCM, FCC, ISED, NCC |