ED-GWL2110

Datasheet

by EDA Technology Co., Ltd

built: 2025-12-24

ED-GWL2110

An outdoor LoRa Gateway Based on Raspberry Pi CM4

- Broadcom BCM2711, quad core Arm Cortex-A72 (ARM v8) 64-bit SoC @ 1.5GHz
- LPDDR4 RAM from 1GB to 8GB
- Dual SD card slots, support booting system and storing user data
- 1 x Gigabit Ethernet with PoE
- Optional 2.4GHz & 5GHz dual-band Wi-Fi/Bluetooth and 4G LTE
- LoRa module powered by Semtech SX1302 baseband processor and SX1250 TX/RX front-end
- Support global license-free frequency band including CN470, EU868 and US915
- Built-in RTC, Watchdog and crypto authentication
- Waterproof case design, IP65 waterproof grade

Specifications

System	
CPU	Broadcom BCM2711, quad core Arm Cortex-A72 (ARM v8) 64-bit SoC @ 1.5GHz
VPU	H.265 (HEVC), up to 4Kp60 decode H.264, up to 1080p60 decode, 1080p30 encode
GPU	OpenGL ES 3.1 & Vulkan 1.0
Memory	Options for 1GB, 2GB, 4GB, 8GB LPDDR4-3200 SDRAM
Storage	Options for 32GB, 64GB SD card storage, using for booting system

software	
Operating System	Raspberry Pi OS (Lite) 64-bit

Panel I/O	
1000M Ethernet	1 x adaptive 10/100/1000M ethernet port with PoE, RJ45 connector. It can be used to access the network and supply power for the device.

4G Antenna Port (optional)	1 x SMA port, using to connect 4G antenna
LoRa Antenna Port	1 x SMA port, using to connect LoRa antenna
Wi-Fi/BT Antenna Port (optional)	1 x SMA port, using to connect Wi-Fi/BT antenna

Internal I/O	
SD Card Slot	2 x Micro SD card slots, which is used to install SD card. It supports booting the OS and storing user data.
SIM Card Slot (optional)	1 x Nano SIM card slot, using to install SIM card for getting 4G signal.
Button	1 x USER button, you can define the function according to actual needs.
LED	1 x USER LED, you can define the color according to actual needs.

Expansion Performance	
Crypto Authentication	It can be matched to realize the required upper layer application and improves the security of device.
RTC	We provide a battery base, and a CR1220 battery can be installed as a backup power supply for RTC, which can ensure that the system clock is not affected by device power-off.
Watch Dog*	This function has been reserved on hardware. But we need additional software to support it, which is under development.

Electrical Characteristics	
Input Voltage	PoE power supply, support 802.3af standard
Power Consumption	15W (Max)

Mechanical Characteristics	
Dimensions	194.2mm x 194.2mm x 65.3mm (WxDxH, antenna is not included.)
Weight	About 1kg
Installation	Wall Mounting

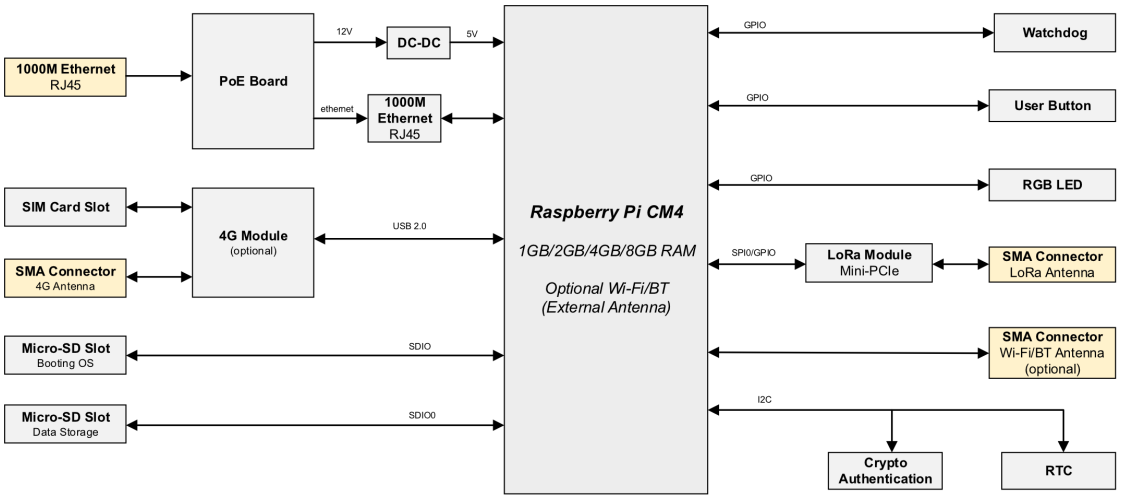
Wireless	
Wi-Fi/Bluetooth (optional)	2.4GHz & 5GHz dual-band Wi-Fi and Bluetooth with antenna. • 2.4GHz Wi-Fi: Compatible with IEEE 802.11 b/g/n • 5GHz Wi-Fi: Compatible with IEEE 802.11 a/n/ac • The Bluetooth supports 2402MHz ~ 2480MHz frequency

Wireless	
LoRa	Support three LoRa modules with antenna • EU868 Module: 868MHz • US915 Module: 915MHz • CN470 Module: 470 MHz
4G (optional)	Connect with various 4G LTE modules through the Mini PCIe interface, with antenna. • EC20-CE Module (China/India) ◦ LTE FDD: B1/B3 ◦ LTE TDD: B38/B39/B40/B41 ◦ TDSCDMA: B34/B39 ◦ WCDMA: B1 ◦ CDMA 1x/EVDO: BC0 ◦ GSM: 900/1800MHz ◦ GPS/GLONASS/BDS/Galileo/QZSS (optional) • EC25-AFX Module (North America) ◦ LTE FDD: B2/B4/B5/B12/B13/B14/B66/B71 ◦ LTE TDD ◦ WCDMA: B2/B4/B5 ◦ GSM/EDGE ◦ GPS/GLONASS/BDS/Galileo/QZSS • EC25-AUX Module (Latin America/Australia/New Zealand) ◦ LTE FDD: B1/B2/B3/B4/B5/B7/B8/B28 ◦ LTE TDD: B40 ◦ WCDMA: B1/B2/B4/B5/B8 ◦ GSM/EDGE: B2/B3/B5/B8 ◦ GPS/GLONASS/BDS/Galileo/QZSS • EC25-EUX Module (Europe/Middle East/Africa/Thailand) ◦ LTE FDD: B1/B3/B7/B8/B20/B28A ◦ LTE TDD: B38/B40/B41 ◦ WCDMA: B1/B8 ◦ GSM/EDGE: B3/B8 ◦ GPS/GLONASS/BDS/Galileo/QZSS • EC25-EFA Module (Europe/Middle East/Africa/South-East Asia) ◦ LTE FDD: B1/B3/B7/B8/B20/B28 ◦ LTE TDD: B38/B40/B41 ◦ WCDMA: B1/B5/B8 ◦ GSM/EDGE: B3/B8 ◦ GPS/GLONASS/BDS/Galileo/QZSS

Environmental	
Operating Temperature	-25°C ~ 60°C
Storage Temperature	-25°C ~ 60°C
Ambient humidity	5% ~ 95% (non-condensing)
Certifications	

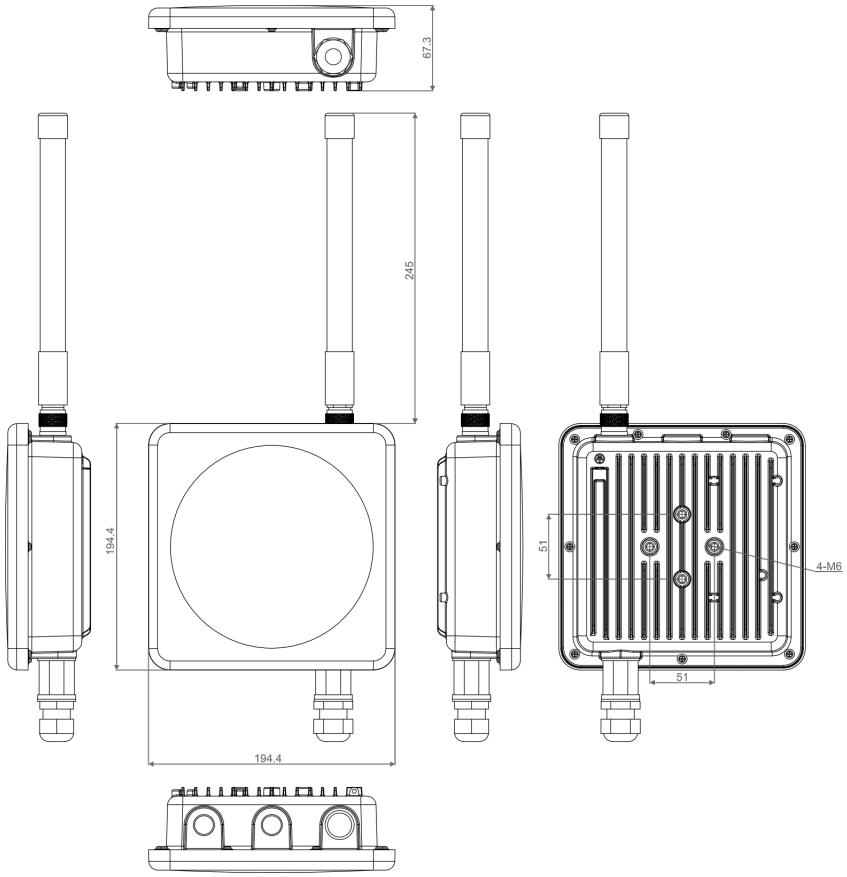
Environmental	
	• FCC ◦ FCC 47 CFR Part 15 Subpart B • CE ◦ EN IEC 62368-1:2024 + A11:2024 ◦ EN IEC 62311:2020 ◦ ETSI EN 301 489-1 V2.2.3 (2019-11)/ETSI EN 301 489-3 V2.3.2 (2023-01) ETSI EN 301 489-17 V3.3.1 (2024-09)/ETSI EN 301 489-52 V1.2.1 (2021-11) EN 55032:2015 + A1:2020 + A11:2020/EN 55035:2017 + A11:2020 ◦ ETSI EN 300 328 V2.2.2 (2019-07)/ETSI EN 301 893 V2.1.1 (2017-05) ETSI EN 300 440 V2.2.1 (2018-07)/ETSI EN 300 220-1 V3.1.1 (2017-02) ETSI EN 300 220-2 V3.2.1 (2018-06)/ETSI EN 301 908-1 V15.2.1 (2023-01) ETSI EN 301 908-13 V13.2.1 (2022-02)

System Diagram

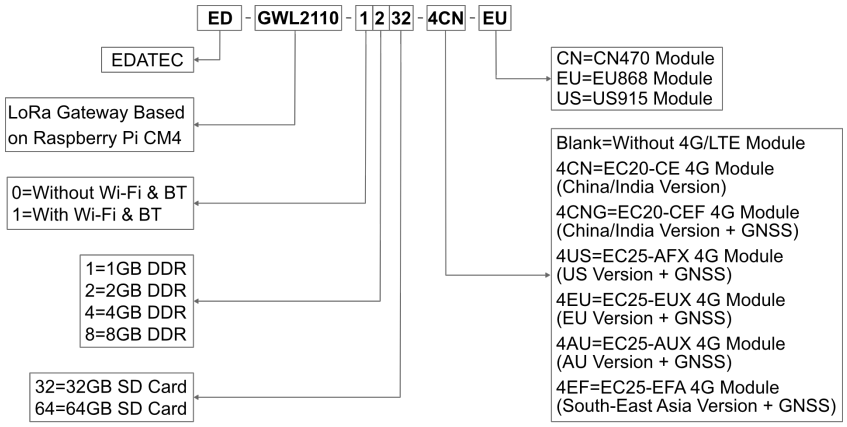


Dimensions

Unit: mm



Ordering Code



Example

P/N: **ED-GWL2110-1232-4CN-EU**
Configuration: An outdoor LoRa Gateway Based on Raspberry Pi CM4, with Wi-Fi & Bluetooth, 2GB DDR, 32GB SD Card, 4G(EC20-CE Module) and EU868 LoRa Module.

Packing List

- 1 x ED-GWL2110 Unit
- 1 x LoRa Antenna
- [4G Version - optional] 1 x 4G/LTE Antenna
- [Wi-Fi/BT Version - optional] 1 x 2.4GHz/5GHz Wi-Fi/BT Antenna