



# **ED-GWL2010**

## **Datasheet**

by EDA Technology Co., Ltd

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# ED-GWL2010

## An Indoor LoRa Gateway Based on Raspberry Pi 4

- Broadcom BCM2711, quad core Arm Cortex-A72 (ARM v8) 64-bit SoC @ 1.5GHz
- LPDDR4 from 1GB to 8GB, SD card storage from 32GB to 64GB
- 1 x Gigabit Ethernet, optional 2.4GHz & 5GHz dual-band Wi-Fi/Bluetooth
- 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
- Support 12V DC power input
- 1 x USER button, 1 x LED
- Integrated super capacitor (backup power supply, optional), RTC, Watch Dog, EEPROM and crypto authentication
- Metal case design, built-in crypto authentication



## 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<br>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                                          |

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

| Panel I/O             |                                                                                                |
|-----------------------|------------------------------------------------------------------------------------------------|
| Power                 | 1 x DC IN, DC jack connector (5.5x2.5mm), supporting 12V input.                                |
| 1000M Ethernet        | 1 x adaptive 10/100/1000M ethernet port, RJ45 connector. It can be used to access the network. |
| LoRa Antenna Port     | 1 x SMA port, using to connect LoRa antenna                                                    |
| Wi-Fi/BT Antenna Port | 1 x SMA port, using to connect Wi-Fi/BT antenna                                                |

| Button and Indicator |                                                                         |
|----------------------|-------------------------------------------------------------------------|
| 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.       |

| Internal I/O |                                                                                                              |
|--------------|--------------------------------------------------------------------------------------------------------------|
| SD Card Slot | 1 x Micro-SD card slots, which is used to install SD card. It supports booting the OS and storing user data. |
| USB 2.0      | 2 x USB 2.0 ports, dual layer type A connector, each channel supports up to 480Mbps.                         |
| USB 3.0      | 2 x USB 3.0 ports, dual layer type A connector, each channel supports up to 5Gbps.                           |
| HDMI         | 2 x HDMI ports, Micro HDMI connector, supporting 4K 60Hz                                                     |

| Expansion Performance |                                                                                                        |
|-----------------------|--------------------------------------------------------------------------------------------------------|
| Crypto Authentication | It can be matched to realize the required upper layer application and improves the security of device. |

| Electrical Characteristics |           |
|----------------------------|-----------|
| Input Voltage              | 12V DC    |
| Power Consumption          | 18W (Max) |

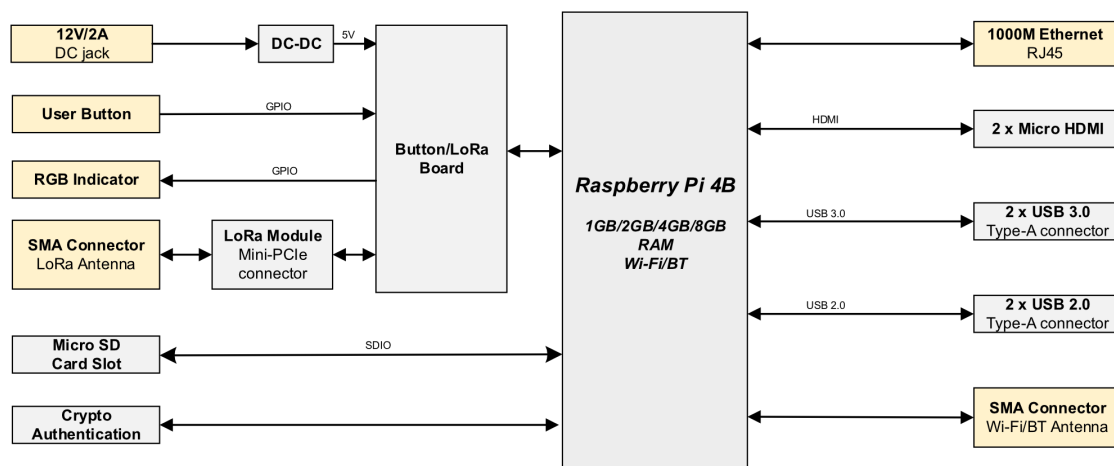
| Mechanical Characteristics |                                                      |
|----------------------------|------------------------------------------------------|
| Dimensions                 | 95mm x 95mm x 24mm (WxDxH, antenna is not included.) |
| Weight                     | About 300g                                           |
| Installation               | Placing on the desk                                  |

| Wireless        |                                                                                                                                                                                                                                                                                   |
|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Wi-Fi/Bluetooth | 2.4GHz & 5GHz dual-band Wi-Fi and Bluetooth with antenna. <ul style="list-style-type: none"><li>• 2.4GHz Wi-Fi: Compatible with IEEE 802.11 b/g/n</li><li>• 5GHz Wi-Fi: Compatible with IEEE 802.11 a/n/ac</li><li>• The Bluetooth supports 2402MHz ~ 2480MHz frequency</li></ul> |
| LoRa            | Support three LoRa modules with antenna <ul style="list-style-type: none"><li>• EU868 Module: 868MHz</li><li>• US915 Module: 915MHz</li><li>• CN470 Module: 470 MHz</li></ul>                                                                                                     |

| Environmental         |              |
|-----------------------|--------------|
| Operating Temperature | -25°C ~ 60°C |

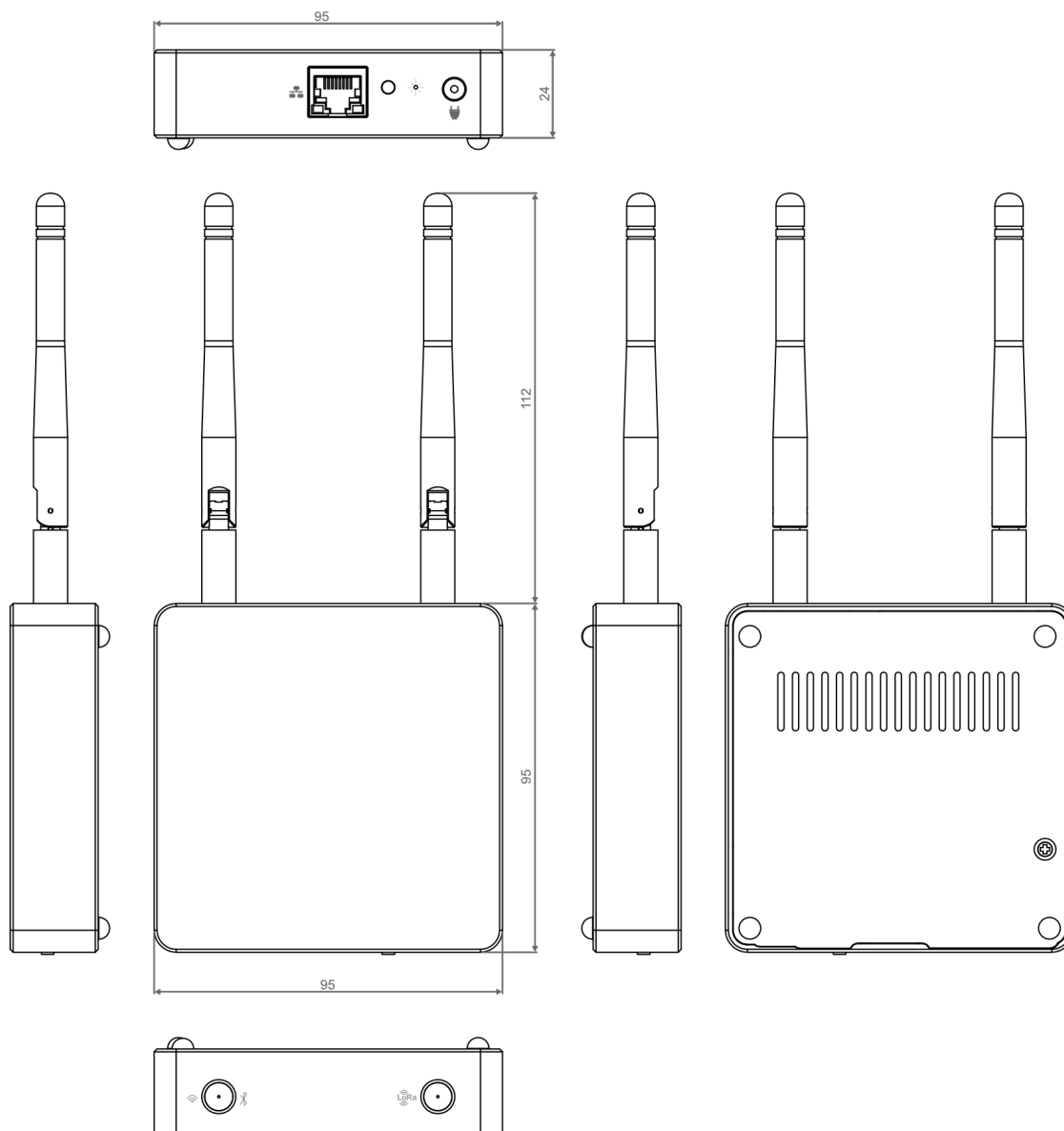
| Environmental       |                           |
|---------------------|---------------------------|
| Storage Temperature | -25°C ~ 60°C              |
| Ambient humidity    | 5% ~ 95% (non-condensing) |

## System Diagram

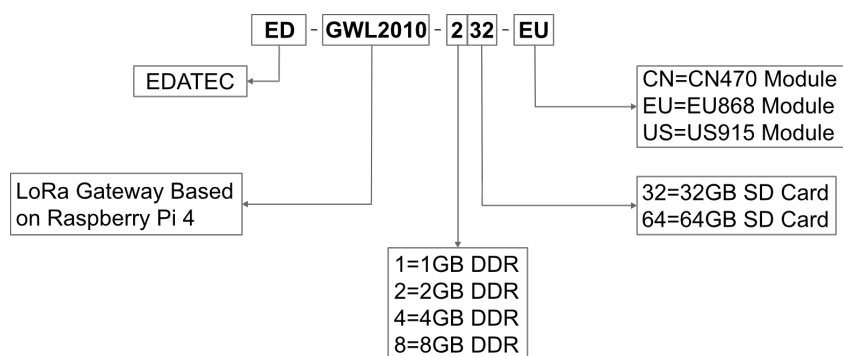


## Dimensions

Unit: mm



## Ordering Code



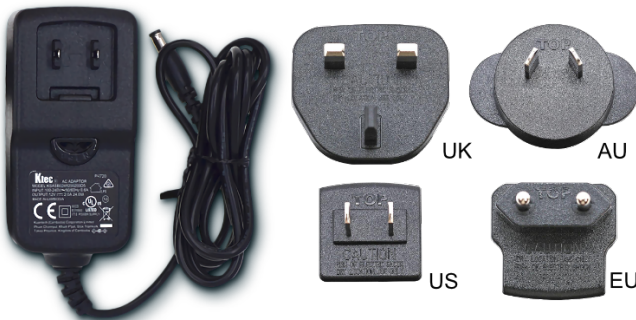
### Example

P/N: **ED-GWL2010-232-EU**

Configuration: An indoor LoRa Gateway Based on Raspberry Pi 4, with Wi-Fi & Bluetooth, 2GB DDR, 32GB SD card and EU868 LoRa Frequency.

## Optional Accessory

You can choose a power adapter according to actual needs.

| Model         | Description                                                       | Picture                                                                            |
|---------------|-------------------------------------------------------------------|------------------------------------------------------------------------------------|
| ED-PSU1202-UK | 100~240VAC to 12VDC/2A Adapter,<br>with UK AC plug, 5.5mm DC plug |  |
| ED-PSU1202-US | 100~240VAC to 12VDC/2A Adapter,<br>with US AC plug, 5.5mm DC plug |                                                                                    |
| ED-PSU1202-AU | 100~240VAC to 12VDC/2A Adapter,<br>with AU AC plug, 5.5mm DC plug |                                                                                    |
| ED-PSU1202-EU | 100~240VAC to 12VDC/2A Adapter,<br>with EU AC plug, 5.5mm DC plug |                                                                                    |

NOTE: Each model contains only one of the UK, US, AU and EU plugs.

## Packing List

- 1 x ED-GWL2010 Unit
- 1 x LoRa Antenna
- 1 x 2.4GHz/5GHz Wi-Fi/BT Antenna