



# Product Manual

Product model: PMC1

Product description : LoRa Central Control device

Version: Ver3.0

Date : 2020.10.20

FCC ID: 2AXDW-PMC1

IC ID: 26126-PMC1

NOTE:

# BLGE302-H8

## LoRa Gateway

### Overview

BLGE302-H8 LoRa gateway is a high performance industrial-level LoRa to wired network data gateway based on RF front-end SX1250 chip of baseband transceiver chip and Lexin ESP32 control chip. The product adopts top suction installation, built-in FPC antenna, reserved network port and 5V power supply port, easy for users to install indoors. The user can easily base on the LoRa protocol and realize the communication and networking management of the LoRa node by the server through the gateway.

#### ◆ *Key characteristics*

operating frequency

903-927MHz

#### ◆ Maximum ouut+20dBm

#### ◆ Transmissionpower

-141dBm(SF12,BW 125KHz)

ece iv ing sensitivity

-126dBm(SF7,BW 125KHz)

#### ◆ *Suitable for scene*

#### ◆ LoRa/LoRaWAN Gateway

#### ◆ Internet of things

#### ◆ Meter Concentrator

#### ◆ Industrial Control Concentrator

#### ◆ Security Alert System

#### ◆ Receiver Performance

8-channel LoRa packet detectors

SF5-SF12 LoRa demodulator

125kHz LoRademodulator

#### ◆ launcher performance

1 launch channel

#### ◆ CPU and Memory

Dual Core 32-bit LX6 Microprocessor

448kB ROM

520kB internal SRAM

8MB external Pseudo SRAM

#### ◆ communication interface

1 M/100Mbit 10 cable ports

Support POE power supply

5 V DC power supply interface

#### ◆ antenna

External LoRa sucker antenna

#### ◆ Communication distance

About 5000m(Test conditions: Sunny, open, maximum power, antenna gain 5 dBi, altitude greater than 2 m, 2.4Kbps air rate)

### Ordering Information

| type       | Temperature range |  |  |
|------------|-------------------|--|--|
| BLGE302-H8 | -40°C ~ +85°C     |  |  |

**Product specifications:**

|                                    | Functional specifications  |                           |   |
|------------------------------------|--|---------------------------|---|
| Appearance                         |  |                           |   |
| Appearance dimensions              | Φ（21CM）*H(5CM)   |                           |   |
| Main core                          | ESP32+SX1302+SX1250  |                           |   |
| Mode of communication              | Server side  | 10M/100Mbit Wired network |   |
|                                    | Nodes side   | LoRa data                 |   |
| Storage                            | Internal   | RAM                       | ESP32 Internal 520 KB, External 8MB   |
|                                    |  | ROM                       | 448 KB  |
|                                    |  | Flash                     | 8M  |
| Transmission reception performance | Transmission power   |                           | Maximum output+20dBm  |
|                                    | Receiving sensitivity  |                           | -141dBm(SF12,BW 125KHz)<br>-126dBm(SF7,BW 125KHz)   |
|                                    | Communication distance   |                           | About 5000m(Test conditions: Sunny, open, maximum power, antenna gain 5 dBi、altitude greater than 2 m、2.4Kbps air rate) |
| Working voltage                    | DC   | 3.3V                      |   |
| Power supply                       | 5V,2A DC input, or POE 48V (Optional, Follow-up support)                           |                           |   |
| Basic attributes                   | Use of temperature   |                           | -40℃～85℃  |
|                                    | Transport and storage temperature  |                           | -40℃～125℃   |
|                                    | Weight   |                           | 0.25kg  |

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|                    |                               |                    |
|--------------------|-------------------------------|--------------------|
|                    | Electromagnetic compatibility | Group B 1          |
|                    | Communications agreement      | Bob-W-ap           |
| Software functions | Update                        | OTA                |
|                    | Interface type                | RJ45 (10M/100Mbit) |

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## Sales and Services Network

### Best of Best Holding Limited

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### Revision of history

| version | date       | Revised note         | Maintenance personnel |
|---------|------------|----------------------|-----------------------|
| V1.0    | 2019/06/10 | Create documentation | Andy.zhu              |
|         |            |                      |                       |
|         |            |                      |                       |

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**Note:**

This device complies with part 15 of the FCC Rules. Operation is subject to the condition that this device does not cause harmful interference (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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To maintain compliance with FCC's RF Exposure guidelines, This equipment should be installed and operated with minimum distance between 20cm the radiator your body: Use only the supplied antenna.

**IC Caution:**

This device complies with Industry Canada licence-exempt RSS standard(s).

Operation is subject to the following two conditions:

- (1) This device may not cause interference, and
- (2) This device must accept any interference, including interference that may cause undesired operation of the device.

- French:

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

- (1) l'appareil ne doit pas produire de brouillage, et
- (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

#### RF POWER

| Function  | Operation Frequency | Max RF output power: | Limit    |
|---|---------------------|----------------------|----------|
| Lora  | 863~870MHz          | 8.25dBm              | 13.98dBm |
| This product can be used across EU member states. |                     |                      |          |

Manufacturer's Name: SHENZHEN PUDU TECHNOLOGY CO., LTD.

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Product name : LoRa Central Control device

Model number: PMC1, PMC1-H4, PMC1-H8, PMC1-H9, PMC1-H9K

Operating Temperature: -40° C to 85° C

This device in compliance with the essential requirements and other relevant provisions of Directive 2014/53/EU.

All essential radio test suites have been carried out.

1. Adapter shall be installed near the equipment and shall be easily accessible.
2. The plug considered as disconnect device of adapter.
3. The device complies with RF Exposure.

