



MOKO Bluetooth Gateway Plug (MK106)

Datasheet

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1. Product Introduction

MK106 is a small Bluetooth gateway plug that integrates **WIFI** and **Bluetooth Low Energy** technology. Its communication protocol is based on MQTT 3.1.1, can access to multiple MQTT servers such as standard MQTT broker, Ali IOT and AWS cloud server.

MK106 gateway is suitable for type I socket, and easy for installation. The plug works as a BLE scanner to gather Bluetooth broadcast data of BLE device nearby, and upload these data frames to MQTT server through 2.4GHz WIFI. It is mainly used for position tracking and BLE sensors monitoring.

1.1 Key Features

- Built-in ESP32 module and MOKO standard firmware
- Above 100 meters Bluetooth scanning range in open space
- 150 Bluetooth frames scanned per second
- 100 meters WIFI connection range
- Multi-color LED indicates device working status
- Firmware update over the air (OTA)
- Supports multiple MQTT servers connection such as MQTT broker, AWS IOT, and Ali IOT
- Supports Android & IOS APP SDK for APP development
- Schematic diagrams are available for customers to develop firmware
- Australian approval standard: AS/NZS 3112:2017; AS/NZS 3122:2015; AS/NZS 3100:2017; AS/NZS CISPR 32:2015; AS/NZS4268:2017; AS/NZS2772.2

1.2 Applications

- Location tracking in room
- Health/fitness monitoring in hospital
- Environmental monitoring
- Temperature sensor monitoring
- Beacon & BLE Sensor & BLE device raw data gathering

2. Physical Characteristics

| NO. | Item | Remarks |
|-----|-----------------------|------------------------------|
| 1 | Wireless technology | WIFI& Bluetooth |
| 2 | Input voltage | 100VAC-240VAC, 50/60HZ |
| 3 | Output voltage | 100VAC-240VAC |
| 4 | Max load | 10A, 2400W, continuous load |
| 5 | Operation temperature | 0 °C~ 40 °C (32°F ~ 104°F) |
| 6 | Plug type | Type I |
| 7 | Certification | SAA&RCM (In progress) |

3. Technology Parameters

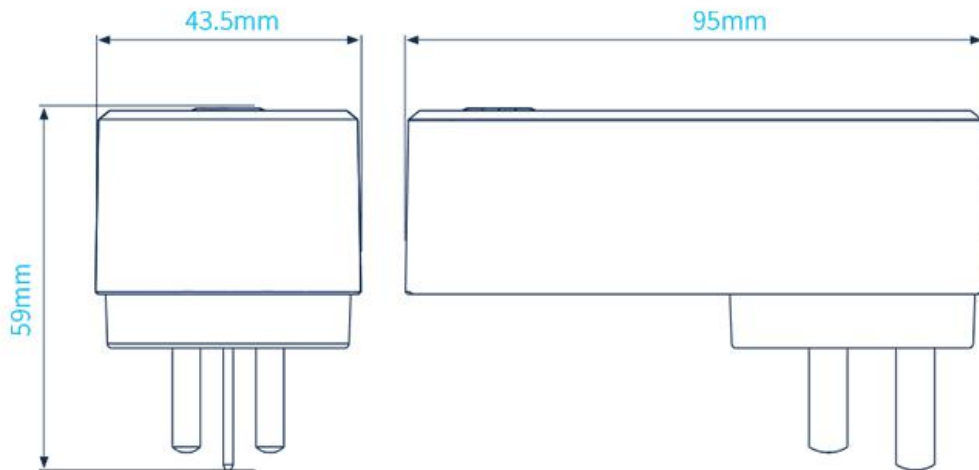
| NO. | Item | Remarks |
|--------------------|------------------------|--|
| Hardware | MCU | ESP32 |
| Software | Communication protocol | MQTT V3.1.1 |
| | Firmware | Built-in MOKO standard firmware, also provide schematic diagram for customers to develop firmware |
| | APP configuration | MokoScanner APP available for IOS & Android, also provide APP SDK for customers to develop their own APP |
| WIFI specification | Frequency | 2.4GHz-2.5Ghz (2400MHz-2483.5MHz) |
| | Protocol | 802.11b/g/n |
| | Coverage | 100 meters in open space |
| | Encryption mode | OPEN/WEP/WPA_PSK/WPA2_PSK/WPA_WPA2_PSK |
| | Transmission power | 13dB@802.11n; 18.5dB@802.11b |

| | | |
|-------------------------|-----------------------|--|
| Bluetooth specification | Bluetooth standard | Bluetooth 4.2 |
| | Max scanning range | Above 100 meters in open space |
| | Scanning rate | 150 times/s(150 Bluetooth frames per second) |
| | Max scanning capacity | 100 BLE devices max |
| | Receiving sensitivity | -97dB |

4. Indicator & Button Status

| Item | Indicator status | Operation |
|-----------------------|---------------------------------------|---|
| Factory reset | Flash green and blue alternately once | Press and hold the button for 10s to trigger reset, after reset successful, Bluetooth will be OFF |
| Bluetooth OFF | LED off | |
| Bluetooth advertising | Flash green | When Bluetooth is OFF, click the button to turn ON the device Bluetooth |
| Bluetooth connected | Solid green | APP is connected to device Bluetooth |
| Network connection | Flash blue | Device is connecting to router and server |
| Network connected | Solid blue | Device has connected to router and server |
| OTA upgrading | Flash green | To indicate OTA process |
| OTA successful | Solid green | To indicate OTA successful |
| OTA failed | Solid red | To indicate OTA failed |

5. Dimensions




Dimensions (Length x Width x Height):
95mm x 43.5mm x 59mm

6. Revision History

| Revision | Description | Editor | Date |
|----------|-----------------|-----------|------------|
| V1.0 | Initial Release | Weiguifen | 2020.10.30 |

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