

Bluetooth LE Gateway User Manual

Model: JW1602G4V5

V1.0.0

Model	Description
JW1602G4V5	Bluetooth LE Gateway, 4G LTE network, IP55 waterproof, 220V AC powered, Upload data to server, MQTT/UDP/TCP, Black color.

The Bluetooth LE Gateway JW1602G4V5 is a Bluetooth® Low Energy gateway device, it is designed to scan nearby bluetooth beacon advertising package, can be used for asset tracking, people tracking, pet tracking, sensor data collecting, SOS button signal collecting, etc.

FEATURES

- Standard firmware with open communication protocol.
- -91 dBm sensitivity for BLE.
- Peak current 500mA.
- Idle current 25mA.
- Easy to print the logo



SPECIFICATION

Compatibility

- Compatible with all Bluetooth® 4.0 and above BLE advertising devices.

Power supply

- 220V AC.

Soft Reboot

- Connect gateway by app 'Joyway Beacon' then disconnect to make it reboot.

OTA and J-Link

- OTA is supported by bluetooth.
- J-Link port on board for programming.

Configurable Parameters

- Server IP/URL, server port.
- Network protocol such as MQTT/TCP/UDP.

Transmission Power Levels

- 30, -20, -16, -12, -8, -4, 0, +4 dBm.

Security

- Need password to connect and configure;
- AES HW encryption

Install

- Indoor/Outdoor.

Working Mode

- Always scan nearby ble advertising package and report to server by 4G network.
- In configure mode while connected by Mobile app 'Joyway Beacon'.

ACTIVATE JW1602G4V5

It start working immediately when connected power source.

CONFIGURE PARAMETERS

Use Android app to configure gateway.

App name: Joyway Beacon

Download link: http://www.joyway.cn/download/android_app/JoywayBeacon.apk

COMMUNICATION PROTOCOL

- 'G2S' means Gateway sends to Server.
- 'S2G' means Server sends to Gateway.

MQTT			
ID	Topic	Msg Data	Description
1	G2S_GS/	%s	Gateway report itself status to server.
2	G2S_BSE/	%d %s %s %s %s	Gateway report scan event data to server. %d = Data type. %s = Gateway mac. %s = Beacon mac. %s = Beacon rssi. %s = Beacon adv data.
3	S2G_CB_%s/ (%s = gateway mac)	%s (%s = beacon mac)	Server ask specified gateway to connect specified beacon.

UDP/TCP			
ID	Msg name	Msg Data	Description
1	CC_G2S_ ScanReport_RawData	0x0400 RAW_DATA_LEN (1 byte) RAW_DATA...	Gateway report beacon's raw adv data.
2	CC_G2S_ ScanReport_iBeacon	0x0402 Following byte count 34 (1 byte) gateway mac (6 bytes) Beacon mac (6 bytes) UUID (16 bytes) Major (2 bytes) Minor (2 bytes) rssi@1meter/ battery percent(1 byte) rssi(1 byte)	Gateway report iBeacon data.
3	CC_G2S_ ScanReport_TSensor	0x0403 Following byte count (1 byte)	Gateway report T-Sensor data.

		byte0 byte1 ...	
4	CC_G2S_ ScanReport_GSensor	0x0404 Following byte count (1 byte) byte0 byte1 ...	Gateway report G-Sensor data.
5	CC_G2S_ ScanReport_MCWP	0x0405	Gateway report milk caw worker badge adv data.
6	CC_G2S_ ScanReport_MCC	0x0406	Gateway report milk caw collar adv data.
7	CC_G2S_ ScanReport_MCEL	0x0407	Gateway report milk caw ear label adv data.
8	CC_G2S_ ScanReport_DecimalMe ter	0x0408	Gateway report environment noise decibel value.
9	CC_S2G_ ScanReport_ACK	0x04FF	Server send response to gateway once received scan report from gateway.

ELECTRONIC PARAMETERS

Item	Value	Remarks
Case Color	Black	
Power supply	220V AC	
Operation Voltage	5V	DC
Transmission Current	500mA(Max.)	Test at 0dBm transmission power
BLE transmission Range	50 meters	Maximum
Antenna	50ohm	
Net Weight	65 g	
Size	45.5x29x70 mm	Power cable length not included.

PACKING INFORMATION

Details	Small Box	Carton
Quantity(JW1602G4V5)	1 pc	100 pcs
Net Weight	65 g	6.5 kg
Gross Weight	80 g	8 kg
Size	50x34x74 mm	270x190x316mm

DECLARATION

The contents of this datasheet are subject to change without prior notice for further improvement.
Joyway team reserves the right to explain all the terms of this datasheet.

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