User Manual

Document Version: V1.0

Manufacturer: QUZHOU SANMAX HARDWARE TECHNOLOGY CO., LTD.

FCC ID: 2BQG6-B100

1. Product Overview

The Model B100 is a 2.4GHz ISM band Bluetooth Low Energy (BLE) broadcasting beacon. It is widely applied in indoor positioning, asset tracking, personnel management, and proximity sensing scenarios.

This device is powered by two ER18505 3.6V lithium thionyl chloride primary batteries connected in parallel. The non-rechargeable battery solution provides ultra-long service life, low self-discharge rate, and stable power supply in wide temperature environments.

2. Basic Technical Specifications

Item	Specification
Model Number	B100
Wireless Protocol	Bluetooth Low Energy (BLE)
Operating Frequency Band	2402 MHz ~ 2480 MHz (2.4 GHz ISM Band)
Power Supply	Two ER18505 Li-$SOCl_2$ batteries, parallel connection, 3.6V nominal voltage

Item	Specification
Battery Type	Non-rechargeable primary lithium battery, NO recharge allowed
Operating Temperature Range	-40°C ~ +85°C
Storage Temperature Range	-55°C ~ +85°C
Installation Method	Wall-mounted, fixed by side mounting holes
Certification Compliance	FCC Part 15.247

3. Safety Instructions

3.1 Battery Safety Warnings

1. The ER18505 batteries inside the device are **non-rechargeable primary lithium batteries**. DO NOT attempt to recharge, heat, crush, puncture, disassemble or

solder the batteries. Recharging will cause fire, explosion, battery leakage and permanent damage.

2. Do not short-circuit the positive and negative electrodes of the battery.
3. Do not mix use new batteries and old batteries, do not mix batteries of different types. When replacing batteries, replace the two parallel batteries at the same time.
4. Keep the device and batteries away from open flame, high temperature environment and direct sunlight exposure.
5. Battery disposal: Please dispose of waste batteries in accordance with local environmental protection regulations. Do not discard batteries into domestic garbage, do not incinerate batteries.
6. Prevent children from touching and swallowing the batteries.

3.2 General Operation Safety

1. Install the device in a well-ventilated dry environment. Avoid long-term soaking in water, heavy dust and corrosive gas environment.
2. Do not make unauthorized disassembly, modification and transformation of the internal circuit of the device.
3. Do not knock, drop or violently vibrate the device.

4. FCC Compliance Statements (Mandatory FCC Warning Clauses)

This device complies with **Part 15 Subpart C of the FCC Rules**.

4.1 FCC Operation Conditions

Operation is subject to the following two conditions:

(1) This device may not cause harmful interference.

(2) This device must accept any interference received, including interference that may cause undesired operation.

4.2 FCC Caution Statement

CAUTION: Any changes or modifications to this device not expressly approved by the party responsible for FCC compliance will void the user's authority to operate this equipment.

4.3 FCC Interference Statement

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. If not installed and used in accordance with the instructions, it 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 distance between the equipment and the receiver.
- Connect the equipment to a circuit different from that to which the receiver is connected.

4.4 FCC RF Exposure Statement

This portable BLE beacon device complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. The internal antenna of the device is integrated inside the housing, and normal operation of the device will not exceed the FCC RF exposure requirement.

4.5 FCC ID Label Information

The permanent FCC ID label of this product is marked on the **rear outer surface of the device**, inside the central recessed area of the housing.

The label content is permanently engraved by laser marking process:

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FCC ID: 2BQG6-B100
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The laser-engraved label is durable, wear-resistant, non-falling, clearly visible without disassembly, and fully meets the FCC permanent marking requirements.

5. Installation & Use Instructions

1. **Mounting Installation**: Use the reserved mounting holes on both sides of the housing to fix the device on the wall or target surface with screws.
2. After installation, ensure the rear FCC ID label is completely exposed, without being blocked by wall, bracket or other obstacles.
3. The device will automatically broadcast BLE signal after power on. Users can configure broadcast parameters (UUID, major/minor, broadcast interval, transmit power) through the matching BLE configuration mobile APP.
4. No manual operation is required after normal power-on installation, the device works continuously with battery power supply.

6. Maintenance & Troubleshooting

1. Daily maintenance: Wipe the device shell with dry soft cloth. Do not use corrosive chemical cleaners.
2. No signal broadcast: Check whether the battery is exhausted, replace two new ER18505 batteries at the same time.
3. Weak wireless signal: Check battery remaining power, check whether the installation position is blocked by metal obstacles.
4. Battery abnormal leakage: Immediately stop using the device, properly dispose of the waste battery, clean the battery compartment before installing new batteries.

7. Warranty Note

The manufacturer warrants that the product is free from defects in materials and workmanship under normal use within the warranty period. The warranty does not cover damage caused by unauthorized modification, improper operation, battery abuse, natural disasters and man-made damage.