# 博联科技
## BeeLinker Technology

# Lora Locator Card
# Datasheet

**BLM5130**

Suzhou Beelinker Technology Co,.Ltd

# MODEL NO/DESCRIPTION

| | |
|---|---|
| Product Name | Tamper-proof asset beacon |
| Product Mode | BLM5130 |
| Version | 1.2 |
| Release Date | 2023.1 |

# 目 录

# 1.Product Description

Suzhou Bolian Technology independently developed a new generation of low-power intelligent portable Lora positioning badge products, support Bluetooth search, lora long-distance transmission, support motion detection, battery power display, a key alarm, RFID proximity sensor and other functional features. Nordic nRF52 series Bluetooth master chip, using low-power Bluetooth BLE 5.0 technology, and equipped with Lora for long-distance communication; the product built-in private lightweight Lora protocol and anti-conflict multi-concurrency performance. The card-type plastic case is water resistant and aesthetically pleasing. It is magnetically charged and has a built-in high-capacity battery for long battery life and can be used for people and object monitoring.
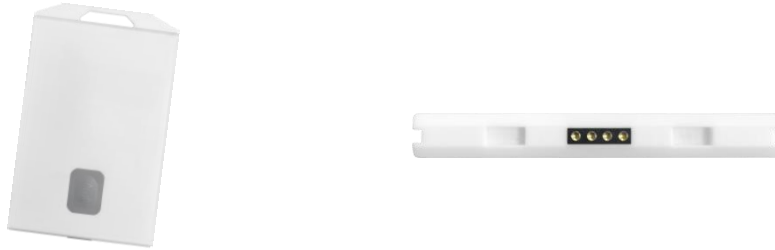
Product view

# 2.Product Features

★ Support for USB-5V magnetic charging; support for real-time SOS alarms;

★ Support for motion detection, power display, signal strength display;

★ Provision of RFID (13.56Mhz) proximity sensing capability;

★ Support for Bluetooth OTA one-click upgrades;

★ Support for the server to remotely modify terminal operating parameters such as: reporting interval, SOS triggering mode, etc;

★Support for automatic entry and exit from the network;

★ Support for Bluetooth scanning beacon signal smoothing

## 3.Application

Used in conjunction with Lora positioning base stations and Bluetooth beacons, it is widely used for indoor real-time positioning of personnel and materials, such as the management of personnel on duty in hazardous chemical plants, the positioning of valuable instruments and equipment in hospitals, and the positioning management of storage materials; intelligent inspection and clocking in, such as automated inspection of factory security personnel, vehicle and staff clocking in, etc.



## 4.Characteristics

| Model | BLM5130 |
|---|---|
| Industrial grade | IP67 |
| Housing material | PC + flame retardant |
| Shell colour | White、Grey |
| Dimensions | 97mm×60mm×7.3mm(L×W×H) |
| Product quality | 45.45g (With Battery) |
| Battery | 1000mAh　Rechargeable lithium batteries |
| Supply voltage | USB-5V，Magnetic suction |
| Wearing style | Lanyard wear |

## 5.Specifications

| Name | Parameters |
|---|---|
| Bluetooth parameters | Protocol stack version : Bluetooth LE 5.0<br><br>Working mode : SCAN + Advertising<br><br>Modulation method : GFSK<br><br>RX Sensitivity : -96dbm<br><br>Spectrum range : 2402MHz~2480MHz |
| Bluetooth scanning range | 50m (unobstructed) |
| Bluetooth OTA | Support |
| Pushbuttons | SOS alarm, OTA mode switch |
| LED | Charging status indication: red light always on<br><br>SOS alarm alert: red light flashing<br><br>Low battery alarm alert: yellow breathing light<br><br>Operating status indication: blue light flashes once |
| LORA operating RF frequencies | 470M~510M |
| LORA access | 64 (channels with poor communication quality have been removed) |

| | |
|---|---|
| LORA transmitting power | +10dBm ~ +20dBm |
| LORA reception sensitivity | -137dBm@300bps , -122dBm@9.4Kbps |
| LORA transmission distance | 400m outdoors and 200m indoors through the wall (standard) |
| LORA Network | Star topology + BLLONE (private protocol) |
| Duration | 10 days (5s up once, 8 hours per day) |
| Reporting interval | 1s ~ 2 minutes to match |
| Dynamic and static detection | Support |
| Operating temperature | -20℃ ~ +65℃ |
| Working humidity | <=90% RH |
| Description of dust protection | Sealed against dust |
| Waterproof description | IP67 |

**Summary of use：**

（1）**Activation：** For long distance transport and storage, the factory default is inactive, and the power consumption in this state is micro-amp. Press and hold the button to activate it before use, a flashing LED will indicate successful activation.

（2）**Access to the network：** As long as the gateway is set up in the environment, people wearing the card will automatically enter the network when they trigger motion detection.

**OTA：** After switching to OTA mode by pressing the button, open the Android APP with the upgrade firmware provided by the original manufacturer to carry out the upgrade, the upgrade interface is as follows:
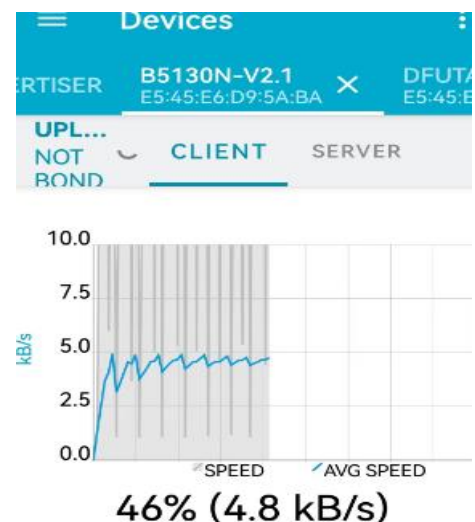
# 6.Certification Information

# 7.Packaging Information

| Package | Outer case (with batteries) |
|---|---|
| Packaging images |  |
| Quantity | 100pcs |
| Gross weight | 6.4kg |
| Size | 290*170*190mm |

# 8.Quality Assurance

The factory is certified to ISO9001. Every sample will be verified (Transmit power, power consumption, reliable test) before shipping.

# 9.Contact



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# 10.FCC Warnings

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

Any 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.

The device has been evaluated to meet general RF exposure requirement. The device can be u sed in portable exposure condition without restriction