

## Datasheet

### **Product Name: MBM02 Bluetooth Location Beacon**

#### **Product Pictures:**



### **Product Overview**

MBM02 is a proximity location beacon developed by Minew that is mainly used for push notification and indoor navigation. With adequate development and platforms, MBM02 can provide a complete planning view from start to finish in exhibitions, museums, libraries, commercial complexes, etc. MBM02 has a broadcast distance of up to 150 meters and is equipped with a large battery that can be replaced. Under the low-power broadcast, the service life is up to 10 years while being maintenance-free.

### **Key Features**

Up to 10 years battery life & Replaceable.

Up to 150 meters broadcast transmission distance

IP67 dustproof and waterproof performance

Location-based push notification

### **Market Applications**

#### **Smart Venue**

MBM02 is suitable for large venues such as exhibitions, libraries, museums, aquariums, and recreation facilities. It can provide way-finding, catering, store marketing, news update, and event announcement so that visitors can schedule plans, and book appointments, and no events of interest will be missed. Event coordinators can send content to targeted visitors in different areas using behavioral analysis, thus personalized marketing campaigns can influence visitors' decision-making.

## Smart Retail

MBM02 can be deployed in supermarkets and shopping malls. It can help with information pushing and collecting information such as the number of times customers inquire about products and receive customer feedback by tracing shoppers' activities. By analyzing shoppers' engagement and satisfaction, an optimized shopping path can be designed, thereby creating a better shopping experience, receiving higher revenue and more customers.

Note: Application cases above are only as a reference, more applications realized are based on users' software algorithm ability.

## Product Specifications

### Basic Specifications

Material	PC
Color	White
Dimensions (D * H)	Ø 71.98 * 30.5 mm (without the bracket) Ø 75.04 * 34 mm (with the bracket)
Weight	95 g (without the bracket)
Protection level	IP67
Battery type	1 * lithium battery
Battery capacity	4000 mAh
Battery life	10 years (under default configuration)
Sensor	None
Button	None <sup>[1]</sup>
LED	1 * RGB light
NFC	None
OTA	Not support
Configure APP	BeaconSET+ <sup>[2]</sup>

[1] Supports adding 1 optional magnetron, please contact our sales team for details.

[2] Bluetooth-related SDK is available, please contact our sales team for details.

## Technical Specifications

Chip	nRF52 series
Bluetooth version	Bluetooth® LE 5.0
Broadcast power	-40 dBm ~ +4 dBm
Broadcast frequency	100 ms ~ 5 s
Broadcast distance	Up to 150 m (open area)
Working temperature	-20°C ~ 60°C
Working humidity	0 ~ 95% RH, non-condensing
Security	Supports changing passwords, anti-malicious connection

## Broadcast Specifications

Type (channel)	Items	Default settings
iBeacon (on)	UUID (16 bytes)	E2C56DB5-DFFB-48D2-B060- D0F5A71096E0 (configurable)
	Major (2 bytes)	0 (0 - 65535, configurable)
	Minor (2 bytes)	0 (0 - 65535, configurable)
	Measured power	-59 dBm (0xC5)
	Tx power	0 dBm
	Interval	900 ms
UID (on)	Instance ID	00112233445566778899 (configurable)
	Namespace ID	Random
	Measured power	-24 dBm (0xE8)
	Tx power	0 dBm
	Interval	2000 ms

URL (on)	URL	<a href="https://www.minewtech.com/">https://www.minewtech.com/</a> (configurable)
	Measured power	-24 dBm (0xE8)
	Tx power	0 dBm
	Interval	2000 ms
TLM (on)	Battery mV	System built-in
	boot time	System built-in
	PDU packets	System built-in
	Measured power	-24 dBm (0xE8)
	Tx power	0 dBm
	Interval	4000 ms
INFO (on)	Device name	MBM02
	Electricity	System built-in
	MAC address	Assigned at factory
	Measured power	-24 dBm (0xE8)
	Tx power	-8 dBm
	Interval	4000 ms
ACC (off)	Measured power	/
	Tx power	/
	Interval	/
Password	Password	minew123 (default)
Connection mode	Connectable or not	Connectable

## Compatibilities

Support systems	Supported models
iOS 7.0 and above	iPhone6 /6 Plus /6S/ 6S Plus /7 /7 Plus /8 /8 Plus /x /xr /xs /xs max /SE /SE2 /11 /11 pro /11 pro max
Android 4.3 and above	Samsung, Xiaomi, Google Pixel, Honor, OnePlus, OPPO, VIVO, Huawei, etc

## Instructions

**Power on/ off:** The product is powered on and shipped by default, and power off is not supported. It will be powered on after the battery is installed, and the blue LED will flash once powered on.

**Battery:** When the battery is low, the red light flashes every 8 s.

## Installations

### Double-sided tapes

**Surfaces:** Ceramic, glass/epoxy, acrylic, PBT, ABS, PC, rigid PVC, and others. It is not recommended to use the default double-sided tape on walls (such as cement, gypsum board, etc.) with gray texture, incomplete drying, aging, moisture, etc., or there is a risk of peeling off. You can choose 3M double-sided foam tape or nail free glue as alternatives.

**Requirements:** No dust on the material surface and clean it before installation. Before pasting, increase the viscosity of the double-sided paste with a hairdryer firstly, and then press for seconds sequentially and stick over half-hours; or leave the device over 72 hours after pasting for better stability.

Please contact our sales team if you have any questions about the installation environment.

### Bracket screw installation

The product can be shipped with a bracket, which supports the wall, ceiling, and corner, and can be secured with screws.

**Surfaces:** The screw should be installed on a solid surface, such as a wall, where it is not easy to loosen.

### Steps:

1. Drill screw holes on the surface to be installed.

2. Insert the green expansion plug into the surface hole.
3. Put the MBM02 into the mounting bracket.
4. Twist screws onto the expansion plug so that the product can be installed firmly.

## Precautions

1. The product has no switch button and does not support restarting. Do not set the product to "unconnectable mode" in the app. Otherwise, the product becomes unusable and cannot be connected.
2. It is recommended to set lower transmitting power and longer broadcast intervals to achieve a longer service life.
3. Do not use the product above the designed working temperature to avoid damage. It is recommended that to store the product in a normal temperature environment (20°C ~ 30°C) when not in use.
4. Avoid being exposed to direct sunlight for an extended period to mitigate shell aging.
5. Please do not disassemble the main casing without permission and we are not responsible for any damages.
6. If you have any other questions, please contact our sales team or technical support team.

## Certifications

CE    FCC

Note: CE and FCC certification numbers can be provided upon request. If other certifications are needed, please contact us.

### FCC Requirement

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

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.



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, it

he 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.

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.

## Packaging

Details	Inner carton (Battery included)	External box (Battery included)
Picture		
Quantity	6 units	48 units
Size	30.6 x 11 x 9.5 cm	32 x 23.5 x 40 cm
Gross weight	683 g	5.9 kg

Note: the weight of bracket is not included.

## Quality Assurance

The factory has already obtained the certification of ISO9001 Quality System. Each product has been strictly tested (tests include transmission power, sensitivity, power consumption, stability, aging, etc.).

Warranty Period: 12 months from the date of shipping (battery and other accessories excluded).

## Declarations

### Statement of Rights:

The contents of this manual belong to the Manufacturer of Minew Technologies Co., LTD, Shenzhen, and are protected by Chinese laws and applicable international conventions related to copyright laws. The contents can be revised by the company according to the technological development without prior notice. Anyone, companies, or organizations cannot modify the contents and cite the contents of this manual without Minew's permission, otherwise, Violators will be held accountable according to law.

**Disclaimer:**

Minew team reserves the right to the final explanation of the document and product differences. The Minew group is not responsible for liability of property or personal injury with the wrong operation if users develop related products without checking the technical specifications of this manual.

**Contact Information****SHENZHEN MINEW TECHNOLOGIES CO., LTD.**

+86 (755) 2103 8160



[www.minew.com](http://www.minew.com)



[info@minew.com](mailto:info@minew.com)



[www.minewstore.com](http://www.minewstore.com)



No.8, Qinglong Road, Longhua District, Shenzhen, China