MINEW

Ultra-Long Range Beacon

(High-precision Version)

Datasheet

PRODUCT OVERVIEW

MBM01 adopts an ultra-low-power nRF52833 chip, supports Bluetooth 5.3 standard nRF 52 series chip Mbps/125 Kbps low-energy mode, and adopts a DW3120 chip with ultra-wide band technology, which DW 31 series chip deployed in public places such as airports, railway stations, or warehouses and helps users realize asset positioning and tracking or indoor precision navigation.

KEY FEATURES

- High Precision Positioning
- Long Range Supported
- IP65 Dust & Waterproof
- Large Capacity Battery
- External Operation Button
- Fashionable Design

APPLICATION SCENARIOS

Warehouse Asset Tracking

MBM01 can be deployed in warehouses to help users track the exact location of tools, shelves, or equipment.

Indoor Precision Navigation

Through the reasonable installation of MBM01 in airports and combining relevant algorithm solution platforms, this device can help users realize precision route guidance indoors.

* **Remark:** The scenarios mentioned above are only a reference; users should deploy the MBM01 based on their own scenario solutions.

PRODUCT SPECIFICATIONS

BASIC PARAMETERS

Model	MBM01	/
Material	Plastic PC+ABS	/
Color	White	Customizable
Dimensions(L*W*H mm)	72 x 72 x 23 mm	/
Weight	153.4 g	Alkaline Battery Included
Protection	IP65	/

TECHNICAL PARAMETERS

Chip	nRF52 & DW31 Series	/
Sensor	No	Accelerator Optional
Battery	Alkaline battery	Total capacity: 5800 mAh
UWB Frequency Min.	CH5, 6.5GHz	/
UWB Frequency Max.	CH9, 8GHz	/
UWB Maximum Output Power	-31 dBm	/
Bluetooth Broadcasting Range	600 m (open area)	For Reference Only
UWB Broadcasting Range	Up to 50 m	For Reference Only
Operating Temperature Range	-18~50℃	/

INSTALLATION INSTRUCTION

Double-sided Tapes Deployment


Recommended Deployment Surface

The surface should be smooth and dry， such as ceramics, glass/epoxy resin, acrylic acid, PBT, ABS, PC, hard PVC. Due to the material difference of double-sided tapes, it is recommended using installation on surface such as cement, plasterboard to be installed using double-sided tapes and glue for a better stability.

Recommended Deployment Temperature

10℃ or above.

Beacons deployment should avoid the metal, glass shield or other obstructions, and avoiding the corner.

Double-sided Tapes Step Detail

Before deployment, the surface to be installed should be clean and have no dust.

When pasting, press beacon with the double-sided tapes for 5 seconds and repeat.

Common Deployment Scenarios: surface to be installed such as office walls, glass window & door, desk, wood, tile, etc.

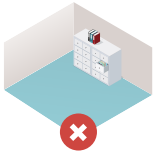
Screw Bracket Deployment

Recommended Deployment Surface

The surface to be installed should not be the ceramic, glass, fragile plastic materials, crack-prone partitions or walls, etc. to avoid the risk of dislodging and the risk of falling.

Recommended Deployment Temperature

10℃ or above.



Devices deployment should avoid the metal, glass shield or other obstructions, and avoiding the corner.

Step Detail

1 Put screws into the screw hole of the devices(for screw deployment); or put the device into the installation bracket (for screw bracket deployment).

2 Drill screw holes on the surface of a hard surface to be installed.

3 Put the green expansion plug into the screw holes on the hard surface to be installed.

4 Put the screws into the green expansion plug, and install the device in the direction of screw holes.

Common Deployment Scenarios: office walls, tile, plasterboard walls, etc.

DEVICE OPERATIONS

Switch-on

Press the button for 3.6 s until the blue light on.

Switch-off

Can be realized by a button or default application.

Low-power Alerts

The red light will flash every 8 seconds.

BLE & UWB Part: Beacon broadcasts via BLE. Tag detects the broadcast and responds (via BLE) to the request for range measurement. Beacon confirms the request (also over BLE).Tag and Beacon turn on the UWB radio and measure the range.

CAUTIONS

* About the Bluetooth and UWB broadcasting range information is for reference only; we suggest that it be tested again when used in a practical application.
* Decreasing the power and increasing the broadcasting interval can extend the lifetime of Bluetooth beacons if they are used in a proper environment.
* The device will be shut down for shipping.
* Please use the device at the suggested working temperature for safety.
* Minew will not be responsible for the damage caused by disassembling the product.
* This equipment may only be operated indoors.Operation outdoors is in viol ation of 47 U.S.C. 301 and could subject the operator to serious legal penal ties.
* Please contact our sales team if you have any questions.
* UWB devices may not be employed for the operation of toys. Operation onboard an aircraft, a ship or a satellite is prohibited.

CERTIFICATIONS

* Please contact our sales team or technical support team before completing another certification requirement.

FCC warning:
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.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

PRODUCT PACKAGE

Items	Inner Box(Battery included)	Outer Box(Battery included)
Package Picture		
Quantity	8 pcs	40 pcs
Dimensions	30.5 x 11 x 7.2 cm	32 x 12.5 x 40 cm

QUALITY ASSURANCE

The factory has already obtained the certification of ISO9001 Quality System. Each product has been strictly tested (testings include transmission power, sensitivity, power consumption, stability, aging, etc.).
Warranty Period: 12 months from the date of shipping (Battery and other accessories excluded).

DECLARATION

Rights Statement

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.

MINEW

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