

BLE Location Beacon

Specification

V1.0

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1 Introduction

A BLE (Bluetooth Low Energy) Location Beacon is a small wireless device that transmits Bluetooth signals at regular intervals. These signals can be detected by Bluetooth-enabled devices, such as [SenseCAP T1000 Tracker](#) Tracker, allowing them to determine their proximity to the beacon, building a location-based solution for indoor positioning, asset tracking and other applications.

1.1 Features



- **Bluetooth® LE 5.0**
- **Long battery life:** Replaceable lithium battery, more than 5 years (0dBm/500ms in default configuration).
- **Long-distance transmission:** Up to 120 meters in open areas.
- **High compatibility:** Compatible with iOS 7.0+ and Android 4.3+ systems

1.2 BLE Indoor Positioning System

GPS has proven its ability to locate outdoors. Now, we also tend to move to indoor positioning, and Bluetooth beacons make indoor precise positioning possible. Combine with [SenseCAP T1000 Tracker](#) to build an indoor positioning solution.

[SenseCAP T1000](#) is a compact LoRaWAN® tracker that utilizes GNSS/Wi-Fi/Bluetooth for precise indoor & outdoor location tracking. It's ideal for a variety of location-based applications.



Deploy Bluetooth beacons in your target area, the tracker receives the signal sent by the beacon, and the positioning accuracy is at the meter level (2-3 meters). It can realize functions such as asset tracking, route planning, reverse car search, etc., and can be integrated into applets and APPs.



1.3 Button Description



Power on: Open the back cover of the product, press and hold the button for 3 seconds, and the blue LED will light up for 5 seconds, then the boot is successful.

Power off: In the power-on state, open the back cover of the product, press and hold the button for 3 seconds, and the blue LED flashes 5 times to indicate a successful shutdown.

2 Specification

2.1 General Specification

UUID	PC
Color	White
IP rate	None
Dimension(L*W*H)	Φ50*20.5mm
Weight	39g(include battery)
Battery	Lithium battery, 2400mAh
Chip	nRF52 series
Bluetooth Version	BLE 5.0
Bluetooth Protocol	iBeacon
Sensors	Support accelerometer
LED	Included
APP	BeaconSET
Working temperature	-30~60°C
Battery life	More than 5 years (0dBm/500ms in default configuration).

2.2 Default broadcast parameters

Parameters	Default Value
UUID	FDA50693-A4E2-4FB1-AFCF-C6EB07647825
Major	10001
Minor	19641
Measured power	-59dBm
Tx Power	-30 - +4dBm, default 0dBm
Adv Interval	100ms~10s,default 500ms
Password	minew123 (Letters and numbers)
Serial ID	None
Device Name	E5 (1-7 characters)
Connection Mode	Yes/No
Soft Reboot	minew123 (same with the password)
Battery Service	Battery icon display, real-time detection full grid is 100%

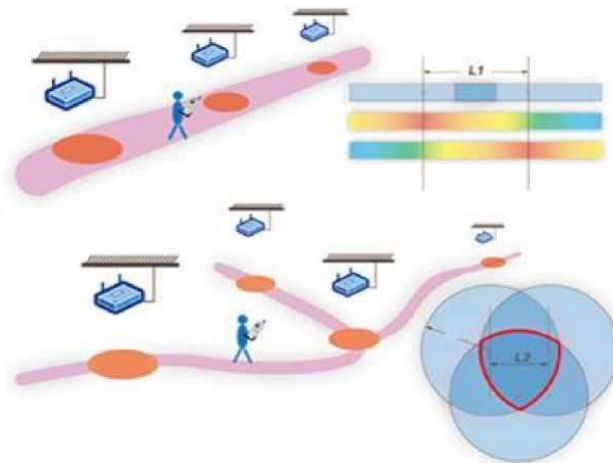
2.3 Compatibility information

System	Devices
BLE	BLE 4.2+
IOS 7.0+	iPhone 4S,iPhone 5/5C/5S, iPhone 6/6Plus/6S/6SPlus,iPhone 7/7Plus, iPad mini/mini2/4/Air/Pro,etc.
Android 4.3+	Samsung, XIAOMI, HUAWEI, ONEPLUS, VIVO, OPPO ,etc.

3 Deployment

3.1 Deployment guidelines

- Bluetooth beacons are typically positioned 2.5-3m above ground level, with a horizontal spacing of 5-10m. These beacons can be deployed either in column formations or evenly distributed in triangular patterns, depending on the environment.



- Deployment strategies vary across scenarios. For instance, indoor settings might involve central (narrow) placement or triangular grid distribution (sparse). In indoor corridors, options include centerline deployment (for corridors around 3m wide) or dual-column arrangement (wider corridors). Avoid ceiling mounting in high-rise buildings (floor height > 4m). Opt instead for wall or low-level installation, approximately 5m apart. Outdoors, use a triangular grid pattern for open spaces.



**The red ones are wrong examples and the blue ones are correct ones.*

- In humid environments, factor in the product's waterproof rating during deployment to prevent prolonged water exposure.
- Maintain a distance from metallic, glass, or other obstructing elements when situating the product, should not be close to the corner.

Note: The deployment guidelines are for reference only. Actual deployment should be customized based on customer positioning algorithms, product installation surroundings, and testing conditions.

3.2 Magnet Adsorption Installation Instructions

Installation conditions:

- The tool or platform material table for product installation should be the surface of equipment or brackets that can be attracted by magnets;
- Recommended installation temperature range: 20~40°C;
- When installing the product, try to keep it away from corners, other surrounding magnetic fields and large obstacles.

Installation steps:

The magnetic contact surface of the product can be directly adsorbed to the surface of the bracket or equipment to be installed.

Note: Because the volume of magnetic products is heavier than that of general products (without magnet absorption), it is recommended not to install such products on surfaces such as ceilings to avoid the risk of falling.

3.3 3M glue/nail-free glue installation instructions

Installation conditions:

- The surface of the platform material on which the product is installed should be a flat, dry surface such as ceramics, glass/epoxy resin, acrylic, PBT, ABS, PC, and rigid PVC. Due to the differences in the viscosity and installability of different double-sided adhesive models, it is not recommended to use the default double-sided adhesive on walls with gray texture, incomplete drying, aging, and humidity (such as cement, gypsum board, etc.). There is a risk of shedding;
- Recommended installation temperature range: 20~40°C;
- The product should be installed away from metal, glass shielding or other obstructions; the product should not be deployed close to the corner.

Installation steps:

- Before installation: clean the surface of the application platform or tool to be pasted, and ensure that the pasted surface is dry and dust-free;
- When pasting, stick the double-sided tape to the device with your hands or tools and press it for 1-2 seconds. Repeat the pressing several times to make the double-sided tape or nail-free glue of the product and the application paste surface better bonded.

Note: *If you need to install the product in a low temperature environment or in a harsh environment, it is recommended to use double-sided adhesive + strong nail-free adhesive to install the product for the best effect. Please contact our sales staff for more information on nail-free glue.*