

YKT-B18 蓝牙定位信标

YKT-B18 Bluetooth positioning beacon

产品使用说明书 / User Manual

一、产品简介

1. Product Overview

YKT-B18 是一款基于 Bluetooth Low Energy (BLE) 技术的高性能蓝牙定位信标设备，适用于室内定位、资产追踪、智慧零售、工业物联网等应用场景。

YKT-B18 is a high-performance Bluetooth Low Energy (BLE) positioning beacon designed for indoor positioning, asset tracking, smart retail, and industrial IoT applications.

设备通过周期性广播信号，与支持 BLE 的移动设备或网关进行通信，实现精准识别与定位。

The device periodically broadcasts signals to communicate with BLE-enabled devices or gateways for identification and positioning.

二、产品特点

2. Key Features

- 支持 BLE 5.4 (兼容 BLE 4.2)
Supports BLE 5.4 (backward compatible with BLE 4.2)
- 可调广播间隔 (20ms – 10s)
Adjustable advertising interval (20ms – 10s)
- 可调发射功率 (-30 dBm 至 +8.5 dBm)
Adjustable transmission power (-30 dBm to +8.5 dBm)
- 支持 iBeacon / Eddystone 协议
Supports iBeacon / Eddystone protocol
- 超低功耗设计
Ultra-low power consumption
- 采用锂亚电池供电
Powered by lithium thionyl chloride battery

- 插入电池自动开机
Auto power-on when battery is inserted

三、技术规格

3. Technical Specifications

项目	参数
型号	YKT-B18
蓝牙版本	BLE 5.4
兼容版本	BLE 4.2
频率范围	2.4 GHz ISM
发射功率	-30 dBm ~ +8.5 dBm
广播间隔	20 ms ~ 10 s
电池类型	锂亚电池（Lithium Thionyl Chloride）
工作电压	3.6V
工作温度	-40℃ ~ +85℃
防护等级	IP65

四、产品结构说明

4. Product Structure

1. 外壳（防护结构）
Protective housing
2. 电池仓
Battery compartment
3. LED 指示灯
LED indicator

本产品无电源开关

This device does not include a power button

五、使用说明

5. Operation Instructions

1. 安装电池（自动开机）

1. Install Battery (Auto Power-On)

- 打开设备外壳
 - 按照电池仓标识正确安装锂亚电池
 - 安装完成后设备自动开机
 - Open the enclosure
 - Insert the lithium thionyl chloride battery according to polarity marking
 - The device powers on automatically after installation
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2. 正常工作状态

2. Normal Operation

设备开机后自动进入广播模式。

LED 在正常开机状态下默认不亮，以降低功耗。

After power-on, the device automatically enters advertising mode.

In normal operating state, the LED remains OFF to reduce power consumption.

3. 参数配置

3. Configuration

通过 BLE 连接配置工具或移动 APP 进行参数设置：

Configure via BLE using the configuration tool or mobile APP:

- UUID / Major / Minor
- 广播间隔 Advertising interval
- 发射功率 TX power

- 设备名称 Device name

六、LED 指示说明

6. LED Indicator Status

LED 状态	说明	Description
闪烁 3 次	开机成功	Flashes 3 times: Power-on successful
慢闪	BLE 已连接	Slow flashing: BLE connected
常灭	正常广播状态	OFF: Normal advertising mode

七、安全注意事项

7. Safety Instructions

- 请勿拆解或改装设备
Do not disassemble or modify the device
- 请勿短路或挤压电池
Do not short-circuit or crush the battery
- 请使用符合规格的锂亚电池
Use compliant lithium thionyl chloride battery
- 废弃电池请按照当地法规处理
Dispose of used batteries according to local regulations

八、故障排除

8. Troubleshooting

问题	可能原因	解决方法
无法启动	电池未安装或极性错误	检查电池安装方向
无法连接	超出通信距离	靠近设备重新连接
连接不稳定	信号干扰	更换安装位置

九、合规声明

9. Compliance Statement

本设备符合 CE / FCC 相关标准。

This device complies with CE / FCC standards.

未经许可的修改可能会使用户失去操作设备的权限。

Unauthorized modifications may void the user's authority to operate the device.

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.

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.