



GLOWBIRD Beacon

GB2112 V1.0

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Revision History

| Version | Data | Changes | Author |
|---------|------------|-----------------|---------|
| V1.0 | 2025-12-18 | Initial Release | Origami |
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1. Description

GlowBird Beacon GB2112 is a battery-powered Bluetooth 5.1 Low Energy proximity-beacon, it simultaneously supports iBeacon, Eddystone (e.g. URL, UID, TLM), AltBeacon for broadcasting and provides the ability to advertise up to 10 slots of advertising frames.

With the iOS & Android GlowBird Beacon SDK, the developers can take advantage of the flexibility of the SDK and focus on their own application, such as Broadcast, Proximity Marketing, Digital Signage, Indoor Location, Asset Tracking, Vehicle Tracking, etc. Meanwhile, GlowBird Beacon SDK compiled app is available to download from both the iOS and Android platform (search 'GlowBird Beacon' to download).

2. Features

- Bluetooth 5.1 Compliant
- Pre-programmed with GlowBird Standard Beacon Firmware
- Up to 10 slots of Advertising Frames
- Portable Small-sized Beacon with 1 years Battery Life (by Default Settings)
- Configurable by Free GlowBird Beacon Mobile App and SDK
- Customizable Color, Logo, Hardware, Software

3. Functional Specifications

| Item | Description |
|----------------------------|---|
| Advertising Format | Eddystone (URL/ UID/TLM), iBeacon, AltBeacon |
| Configuring Method | GlowBird Beacon SDK compiled app (e.g. GlowBird Beacon app) |
| Advertising Interval | Default 1300 ms, range from 0 ms to 10000 ms |
| Security | Access password required, Default Pin Code 000000 |
| Max Number of Broadcast | 10 Slots configurable advertising frames |
| Default Broadcast Interval | 1300 ms for iBeacon & TLM |
| System Compatibility | iOS 7.0+, Android 4.3+ |
| Advertising Distance | Up to 450m (open area) |
| Firmware Upgrading | OTA (upgrade firmware over the air) |

4. Product Specifications

| Item | Description |
|-----------------------|---|
| Chipset | FSC1031 |
| Bluetooth Version | Bluetooth 5.1 |
| TX power | +2 dBm (Max) |
| Antenna | PCB Coil antenna |
| G-Sensor | Optional |
| Power Supply | CR2032 |
| Battery Life | 1 Year (ADV Interval = 1300 ms; TX Power = 0 dBm) |
| Material | ABS plastic |
| Color | Body black , strap color is optional |
| Size | Diameter 62.2 mm, height 18.8 mm |
| Net weight | 46g |
| Operating temperature | -20°C to +60°C |

5. Battery Life & Cover Range Estimation

| Advertising Interval (ms) | -20 | -4 | -2 | 0 | 2 |
|---------------------------|------|------|------|------|------|
| Tx Power (dBm) | 97 | 76 | 74 | 71 | 65 |
| 100 | 177 | 142 | 139 | 138 | 123 |
| 200 | 330 | 267 | 258 | 254 | 235 |
| 400 | 650 | 560 | 554 | 536 | 503 |
| 1000 | 779 | 675 | 664 | 623 | 601 |
| 1300 | 1019 | 890 | 889 | 877 | 815 |
| 2000 | 1534 | 1410 | 1389 | 1365 | 1286 |
| 5000 | 1720 | 1581 | 1586 | 1576 | 1529 |
| 7000 | 1849 | 1743 | 1736 | 1708 | 1633 |
| 10000 | | | | | |

Notes: Battery life in **days** when Applying CR2032. These values are tested or estimated in the laboratory, the battery life might be different in different environments or conditions.

6. Configurable Parameters

Parameters in the below table are configurable by GlowBird Beacon SDK compiled app (e.g. GlowBird Beacon app), feel free to download GlowBird Beacon app from Google Play App Store or iOS App Store.

| Parameter | | Description |
|----------------------|--------------------------------------|---|
| Device Name | | UTF-8 string, Default: GB2112 |
| Pin Code | | Access password to GB2112 Default: 000000, Range: 000000 ~ 999999 |
| Advertising Interval | | Default: 1300 ms, Range: 100 ~ 10000 ms |
| Key | Temporary short advertising interval | Temporary short advertising interval after button pressed, this feature is useful when the normal advertising interval set to a very long time (which makes it hard to create connection with the beacon), Default: 100 ms, Range: 0 ~ 10000 ms |
| | Restore Time | The time that temporary short advertising interval taking effect, Default: 35000 ms, Range: 1000 ~ 65535 ms |
| Tx Power | | Maximum Tx power: +2 dBm, Default: 0 dBm, |
| Eddystone-URL | URL | URL that needed to be advertising |
| | RSSI at 0m | A 1-byte value representing the average received signal strength at 0m from the advertiser (GB2112), range: 0 ~ -127 |
| Eddystone-UID | Namespace | 10-byte Namespace |
| | Instance | 6-byte Instance |
| | Reserved | Reserved for future use |
| | RSSI at 0m | A 1-byte value representing the average received signal strength at 0m from the advertiser (GB2112), range: 0 ~ -127 |
| iBeacon | UUID | 16-byte UUID, e.g. FDA50693A4E24FB1AFCFC6EB07647825 |
| | Major | 2-byte Major, range: 0 ~ 65535 |
| | Minor | 2-byte Minor, range: 0 ~ 65535 |
| | RSSI at 1m | A 1-byte value representing the average received signal strength at 1m from the advertiser (GB2112), range: 0 ~ -127 |
| AltBeacon | ID1 | Beacon Identifier 1 |
| | ID2 | Beacon Identifier 2 |
| | ID3 | Beacon Identifier 3 |
| | RSSI at 1m | A 1-byte value representing the average received signal strength at 1m from the advertiser (GB2112), range: 0 ~ -127 |
| | Manufacturer ID | The beacon device manufacturer's company identifier code |
| | Manufacturer | Reserved for use by the manufacturer to implement special |

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| | Reserved | features |
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