



# **GLOWBIRD Beacon**

## **GB2111 V1.0**

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## Revision History

Version	Date	Changes	Author
V1.0	2025-12-18	Initial Release	Zoe

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# 1. Description

GlowBird Beacon GB2111 is a battery-powered Bluetooth 5.2 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 5.2 Compliant
- Pre-programmed with GlowBird com Standard Beacon Firmware
- Up to 10 slots of Advertising Frames
- Portable Small-sized Beacon with 2 years Battery Life (by Default Settings)
- Configurable by Free GlowBird Beacon Mobile App and SDK
- Customizable Color, Logo, Hardware, Software
- Up to 400m in open area

## 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 400m (open area)

Firmware Upgrading	OTA (upgrade firmware over the air)
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## 4. Product Specifications

Item	Description
Chipset	EFR32BG21
Bluetooth Version	Bluetooth 5.2
TX power	up to 20dBm
Antenna	PCB Coil antenna
G-Sensor	Optional
Power Supply	2 * AAA (LR03), battery is not included in the package
Battery Life	2 Years (ADV Interval = 1300 ms; TX Power = 0 dBm)
Material	ABS plastic
Color	White or customized
Size	55.7mm(L)*55.7mm(W)*16mm(H)
Net weight	45g
Operating temperature	-20°C to +60°C

## 5. Battery Life & Cover Range Estimation

Tx Power (dBm) Advertising Interval (ms)	0	5	9	16	20
<b>100</b>	112	97	87	85	67
<b>200</b>	209	187	165	160	129
<b>400</b>	412	360	309	300	245
<b>750</b>	707	635	582	558	450
<b>1000</b>	879	790	715	691	568
<b>1300</b>	1078	993	920	897	736
<b>2000</b>	1503	1380	1236	1183	1031
<b>5000</b>	2488	2406	2214	2149	1998
<b>7000</b>	2925	2735	2601	2493	2303
<b>10000</b>	3367	3094	3021	2912	2771

**Notes:** Battery life in **days** when Applying 2 \* AAA. 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: GB2111
Pin Code		Access password to GB2111 Default: 000000, Range: 000000 ~ 999999
Advertising Interval		Default: 1300 ms, Range: 0 ~ 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: +20 dBm Default: 0 dBm, Range: -20 ~ 20 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 (GB2111), 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 ( GB2111), 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 ( GB2111), 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 (GB2111), range: 0 ~ -127
	Manufacturer ID	The beacon device manufacturer's company identifier code
	Manufacturer Reserved	Reserved for use by the manufacturer to implement special features

## 7. Dimensions

