GLOWBIRD Beacon
GB21G V1.0

Revision History

Version	Data	Changes	Author
V1.0	2025-11-20	Initial Release	Zoe

Contact Us

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1. Description

GlowBird Beacon GB21G 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 applications, 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 platforms (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 1.5 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 400m (open area)
Firmware Upgrading	OTA (upgrade firmware over the air)

GLOWBIRD

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	1.5 Years (ADV Interval = 1300 ms; TX Power = 0 dBm)
Material	ABS plastic
Color	White/Black
Size	Φ31*9.2mm
Net weight	6.8g
Operating temperature	-20°C to +60°C

5. Battery Life & Cover Range Estimation

TX Power(dBm) / Advertising Interval (ms)	-20	-4	0	2
100	94	87	83	80
200	177	159	154	144
400	324	297	285	275
750	556	502	470	480
1000	681	616	595	578
1300	802	734	719	706
2000	1022	983	946	911
5000	1514	1437	1422	1414
7000	1594	1602	1583	1559
10000	1732	1742	1720	1704

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.

GLOWBIRD

6. Configurable Parameters

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

Parameter		Description
Device Name		UTF-8 string, Default: GB21G
Pin Code		Access password to GB21G 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 (GB21G), 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 (GB21G), 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 (GB21G), 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 (GB21G), 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