FeasyBeacon

FSC-BP107 Datasheet

1. Description

FeasyBeacon **FSC-BP107** is a battery powered 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. Transmit distance up to 100m.

Designed with the wristband, it's the best option for applications like Children's Real Time Positioning, Student Attendance, Music Festival and so on.

With the iOS & Android FeasyBeacon 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 and Outdoor Location, Asset Tracking, Vehicle Tracking, etc. Meanwhile, FeasyBeacon SDK compiled app is available to download from both the iOS and Android platform (search 'FeasyBeacon' to download).

2. Features

- Wristband shape, wearable device
- Bluetooth 5.1 Compliant
- Pre-programmed with Feasycom Standard Beacon Firmware
- Up to 10 slots of Advertising Frames

- Up to 1 Year of Battery Life (by Default Settings)
- Configurable by Free FeasyBeacon Mobile App and SDK
- Customizable Color, Logo, Hardware, Software

3. Functional Specifications

Item	Description
Advertising Format	Eddystone (URL/ UID/ TLM), iBeacon, AltBeacon
Configuring Method	FeasyBeacon SDK compiled app (e.g. FeasyBeacon app)
Advertising Interval	Default 1300 ms, range from 100 ms to 2000 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 & Eddystone
System Compatibility	iOS 7.0+, Android 4.3+
Advertising Distance	Up to 100m (open area)
Firmware Upgrading	OTA (upgrade firmware over the air)

4. Product Specifications

Item	Description
Chipset	TI CC2640R2F
Bluetooth Version	Bluetooth 5.1
TX power	-23 dBm to +5 dBm
Antenna	Ceramic antenna
Power Supply	CR2032
Battery Life	1 Year (ADV Interval = 1300 ms; TX Power = 0 dBm)
G-Sensor	Optional
Material	ABS plastic
Color	Black, Green, Blue, Yellow, Red, Rose Carmine, or customized
Size	250(L)*38.5(W)*11.5(H)mm
Net weight	46.2 g
Protection	IP40
Operating temperature	-20°C to +60°C

5. Battery Life & Cover Range Estimation

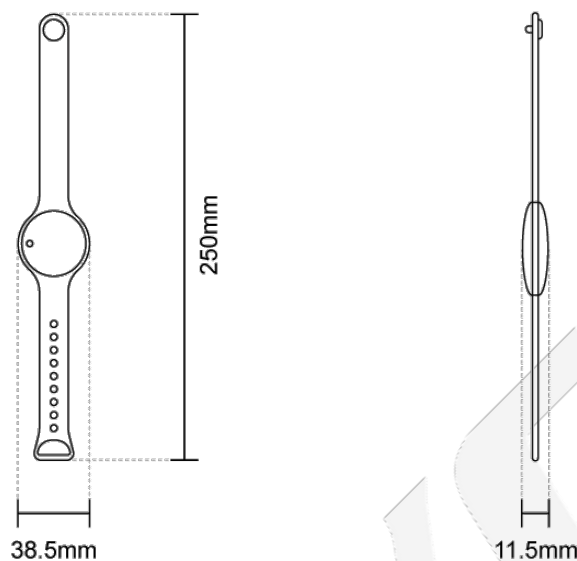| Tx Power (dBm) Advertising Interval (ms)	-21	-9	0	3	5
100	44	40	36	34	32
200	88	79	74	69	64
400	165	148	136	133	127
1000	356	319	298	293	266
2000	577	513	498	485	468
5000	946	884	878	827	786
7000	999	965	944	929	889
10000	1132	1070	1057	1017	1008
Cover Range(m)	10	30	80	100	135

Notes: Battery life in **days** when Applying CR2032 (225 mAh, see reference photo down below). 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 FeasyBeacon SDK compiled app (e.g. FeasyBeacon app), feel free to download FeasyBeacon app from Google Play App Store or iOS App Store.

Parameter		Description
Device Name		UTF-8 string, Default: FSC-BP107-XXXXXX
Pin Code		Access password to FSC-BP107 Default: 000000, Range: 000000 ~ 999999
Advertising Interval		Default: 1300 ms, Range: 100 ~ 2000 ms
Tx Power		Maximum Tx power: +5 dBm Default: 0 dBm, Range: -21 ~ 5 dBm
Eddystone-URL	URL	URL that needed to be advertised
	RSSI at 0m	A 1-byte value representing the average received signal strength at 0m from the advertiser (FSC-BP107), 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 (FSC-BP107), 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 (FSC-BP107), 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 (FSC-BP107), 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

8. Declaration

The contents of this datasheet are subject to change without prior notice for further improvement. Feasycom team reserves all the rights for the final explanation.

iBeacon is a trademark of Apple Inc., Eddystone is a trademark of Google Inc.

Please contact Feasycom sales team or visit https://www.feasycom.com/ to get more related information if needed.

9. Contact Information

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Revision History

Version	Changes	Author
1.0	Initial Release	Devin
1.1	Update specifications	Lynn
1.2	Update description Update specifications Document reorganization	Tim
1.3	Update specifications	Tim
1.4	Update specifications	Tim
1.5	Update Address	Selina
1.6	Modify Bluetooth Version: Upgrade from BT 5.0 to BT 5.1	Marsh

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