FeasyBeacon

FSC-BP104 Datasheet

FCC ID: 2AMWO-FSCBP104

1. Description

FeasyBeacon FSC-BP104 is an innovative waterproof IP67 and a super long battery life Bluetooth 5.1 Low Energy smart 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 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 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

- Bluetooth 5.1 Compliant
- Pre-programmed with Feasycom Standard Beacon Firmware
- Up to 10 slots of Advertising Frames
- Portable Smart Beacon with 5 Years Battery Life (by Default Settings)
- Configurable by Free FeasyBeacon Mobile App and SDK

- Customizable Color, Logo, Hardware, Software
- Waterproof: IP67
- Up to 500m in open area

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 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 & Eddystone
System Compatibility	iOS 7.0+, Android 4.3+
Advertising Distance	Up to 500m (Tx Power = 5 dBm, in open area)
Firmware Upgrading	OTA (upgrade firmware over the air)
Key	

4. Product Specifications

Item	Description
Chipset	DA14531
Bluetooth Version	Bluetooth 5.1
TX power	-19.5 dBm to +2.5 dBm
Antenna	2.4GHZ PCB antenna
Power Supply	2 * AAA (LR03), battery is not included in the package
Battery Life	5 Years (ADV Interval = 1300 ms; TX Power = 0 dBm)
Material	ABS plastic
Color	White or customized
Size	Diameter 64.7 mm, height 17 mm
Net weight	28g (Without battery)
Protection	IP67
Operating temperature	-20°C to +60°C

5. Battery Life & Cover Range Estimation+

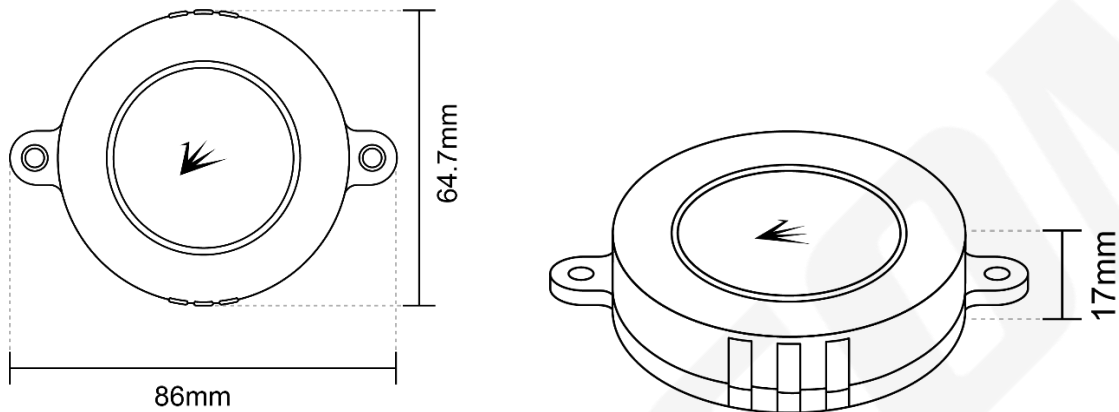| Power ⟍ Tx Power (dBm) Advertising Interval (ms)	-19.5	-7	-3.5	0	2.5
100	44.62uA	55.67uA	63.98uA	76.62uA	89.60uA
150	30.47uA	38.50uA	46.15uA	53.72uA	65.20uA
200	25.35uA	28.18uA	38.62uA	42.35uA	47.83uA
300	15.85uA	20.20uA	25.36uA	26.68uA	32.30uA
400	13.42uA	15.46uA	19.35uA	20.98uA	25.35uA
550	10.85uA	12.28uA	15.32uA	16.85uA	18.56uA
750	8.08uA	9.40uA	12.08uA	12.47uA	14.00uA
850	7.40uA	8.52uA	11.03uA	11.22uA	12.79uA
1000	6.73uA	7.82uA	9.07uA	9.96uA	10.76uA
1300	5.53uA	6.32uA	7.93uA	8.45uA	9.38uA
2000	4.18uA	4.83uA	5.82uA	5.95uA	6.86uA
3000	3.33uA	4.05uA	4.42uA	4.53uA	5.02uA
4000	3.12uA	3.45uA	3.72uA	4.22uA	4.35uA
5000	2.93uA	3.12uA	3.34uA	3.66uA	3.86uA
6000	2.70uA	3.05uA	3.16uA	3.35uA	3.74uA
7000	2.66uA	2.80uA	2.93uA	3.20uA	3.42uA
10000	2.43uA	2.52uA	2.70uA	2.78uA	3.02uA

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 FeasyBeacon SDK compiled app (e.g. FeasyBeacon app), feel free to download FeasyBeacon app from Google Play App Store or iOS App Store.

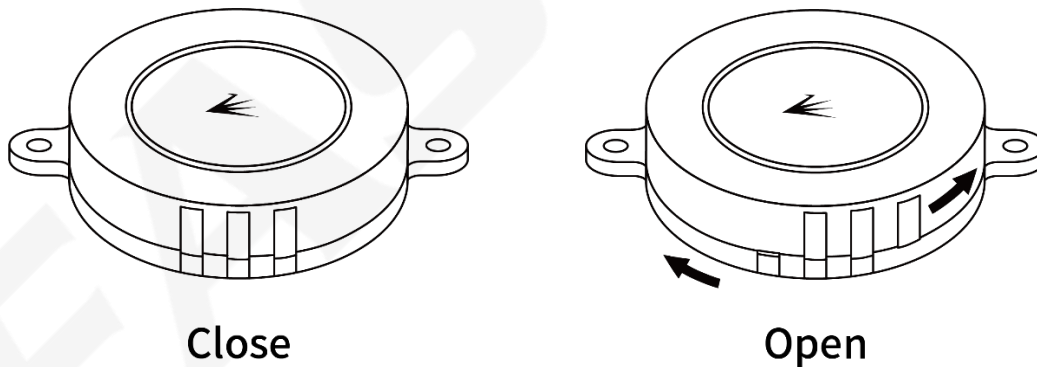| Parameter		Description
Device Name		UTF-8 string, Default: FSC-BP104-XXXXXX
Pin Code		Access password to FSC-BP104 Default: 000000, Range: 000000 ~ 999999
Advertising Interval		Default: 1300 ms, Range: 100 ~ 10000 ms
Tx Power		Maximum Tx power: +2.5 dBm Default: 0 dBm, Range: -19.5 ~ +2.5 dBm
Eddystone-URL	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 (FSC-BP104), 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-BP104), 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-BP104), 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-BP104), 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

64.7mm

86mm

17mm

8. Power supply

Hold the handles on both side and rotate the housing the put in 2pcs AAA battery.

Notice: Batteries are to be inserted with the correct polarity

Close   Open

9. 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.

10. Contact Information

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Revision History

Version	Changes	Author
1.0	Initial Release	Marsh

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

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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.

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

(1) This device may not cause interference.

(2) This device must accept any interference, including interference that may cause undesired operation of the device.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

(1) L' appareil ne doit pas produire de brouillage;

(2) L' appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d' en compromettre le fonctionnement.