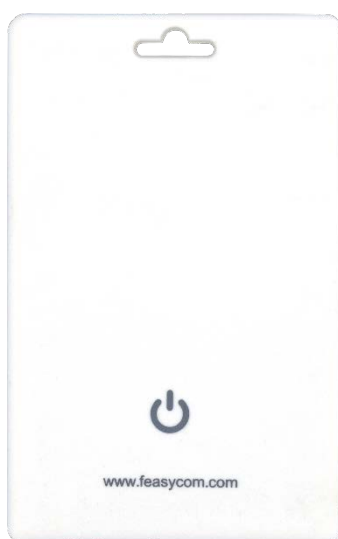# FeasyBeacon

FSC-BP105 Datasheet

1. Description

FeasyBeacon FSC-BP105 series is an innovative waterproof IP66 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).

Ordering Code	KEY	LED	NFC	G-sensor	Battery
BP105D	✔	✔	X	（Optional）	✔
BP105N	✔	✔	✔	（Optional）	✔

2. Features

- Bluetooth 5.1 Compliant
- NFC (only BP105N)
- Pre-programmed with Feasycom Standard Beacon Firmware
- Up to 10 slots of Advertising Frames
- Portable Smart Beacon with up to 6 Years Battery Life (by Default Settings)
- Configurable by Free FeasyBeacon Mobile App and SDK
- Customizable Color, Logo, Hardware, Software
- Waterproof: IP66
- Up to 400m 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 400m (Tx Power = 2.5 dBm, in open area)
Firmware Upgrading	OTA (upgrade firmware over the air)
Button	Power ON/OFF
LED	Status

4. Product Specifications

Item	Description
Chipset	DA14531
Bluetooth Version	Bluetooth 5.1
TX power	-19.5 dBm to +2.5 dBm
Antenna	F-shape PCB antenna

Button	Long press the button to power on/off
NFC	Yes (BP05N)
G-sensor	Optional
LED	Power On: Long press button, the light flash 3 times Power OFF:Long press button, the light keeps on then off
Power Supply	Li-MnO2 battery (500mAh)
Battery Life	Up to 6 Years (ADV Interval = 1300 ms; TX Power = 0 dBm，Battery Capacity=1000mAh)
Material	ABS plastic
Color	White or customized
Size	85.5(L)mm x 54(W)mm x 4.2(H)mm
Net weight	17 g/19 g (BP105D/BP105N)
Options	IP66
Operating temperature	-20°C to +60°C

* All battery information depends on the usage environment and many other factors, actual results may vary. The battery validity period is usually 10 years.

5. Power consumption

Power \ Tx Power Advertising Interval (ms)	-19.5dBm	-7dBm	-3.5dBm	0dBm	2.5dBm
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

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-BP105-XXXXXX
Pin Code		Access password to FSC-BP105 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-BP105), 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-BP105), 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-BP105), 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-BP105), 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
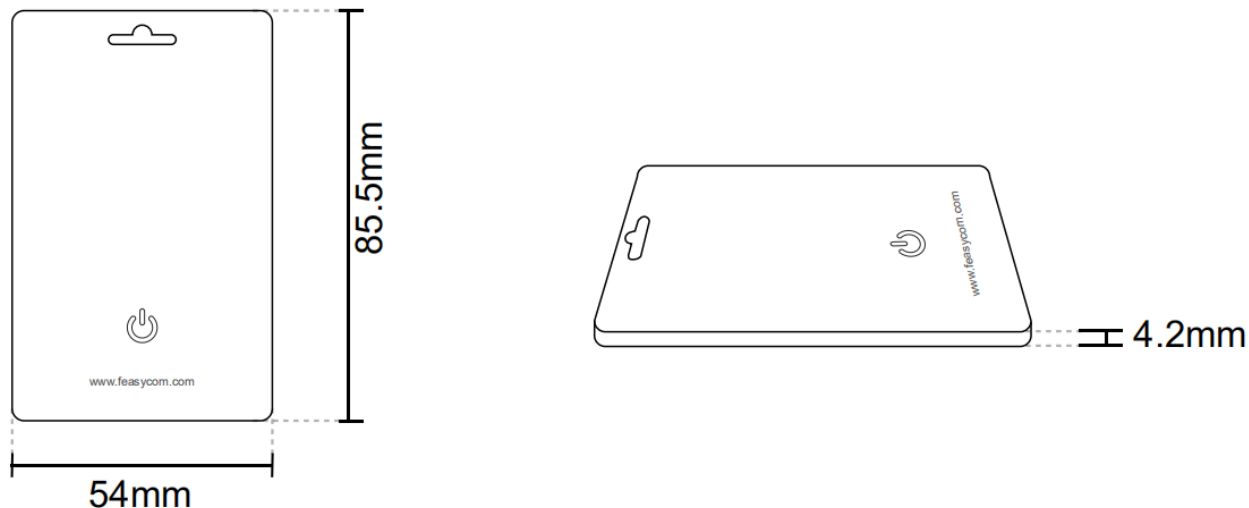
8. Power ON/OFF & NFC(BP105N)

8.1   Long press the central area to power on, the led light flash 3 times.

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8.2 NFC(BP105N)
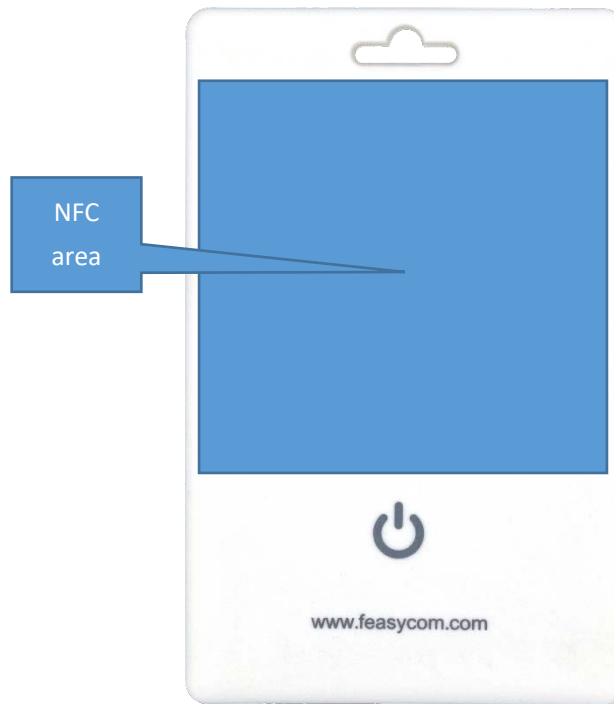
9. Declaration

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