

# FeasyBeacon

## FSC-BP103 Datasheet



## 1. Description

FeasyBeacon FSC-BP103 is a battery-powered Bluetooth 5.0 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 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 5.0 Compliant
- Pre-programmed with Feasycom Standard Beacon Firmware
- Up to 10 slots of Advertising Frames
- Portable Small-sized Beacon with 1 Year Battery Life (by Default Settings)
- Variety of Additional Components (e.g. Button, Optional G-sensor, Optional Buzzer)
- Configurable by Free FeasyBeacon Mobile App and SDK54
- 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 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 & Eddystone
System Compatibility	iOS 7.0+, Android 4.3+
Advertising Distance	Up to 130m
Firmware Upgrading	OTA (upgrade firmware over the air)

### 4. Product Specifications

Item	Description
Chipset	TI CC2640R2F
Bluetooth Version	Bluetooth 5.0
TX power	-23 dBm to +5 dBm
Antenna	PCB Coil antenna
Button	Long press central area for power on / off
G-Sensor	Optional
Buzzer	Optional
Power Supply	CR2032
Battery Life	1 Year (ADV Interval = 1300 ms; TX Power = 0 dBm)
Material	ABS plastic
Color	White, Green, Black, Rose Carmine, or customized
Size	37.8 * 33.8 * 7.9 mm
Net weight	6.4 g
Protection	IP40
Operating temperature	-20°C to +60°C
Certification	FCC, CE

## 5. Battery Life & Cover Range Estimation

Tx Power (dBm) Advertising Interval (ms)	-21	-9	0	3	5
	<b>100</b>	37	33	28	28
<b>200</b>	74	68	55	53	47
<b>400</b>	142	126	107	105	88
<b>1000</b>	298	264	236	236	193
<b>2000</b>	434	396	370	418	304
<b>5000</b>	856	816	792	739	674
<b>7000</b>	897	872	825	828	779
<b>10000</b>	1008	992	978	1001	918
<b>Cover Range(m)</b>	4	12	35	60	130

**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.



CR2032



## 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-BP103-XXXXXX
Pin Code		Access password to FSC-BP103 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 ~ 2000 ms
	Restore Time	The time that temporary short advertising interval taking effect, Default: 35000 ms, Range: 1000 ~ 60000 ms
Tx Power		Maximum Tx power: +5 dBm Default: 0 dBm, Range: -21 ~ 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-BP103), 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-BP103), 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-BP103), 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-BP103), 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. Certification

### FCC Certificate (USA)

<b>TCB</b>	<p><b>GRANT OF EQUIPMENT AUTHORIZATION</b></p> <p>Certification</p> <p>Issued Under the Authority of the Federal Communications Commission</p> <p>By:</p> <p>Intertek Testing Services NA, Inc.      Date of Grant: 08/08/2019 70 Codman Hill Road Boxborough, MA 01719      Application Dated: 08/08/2019</p> <p><b>Shenzhen Feasycom Technology Co.,Ltd</b> <b>Room 2004A, 20th Floor, Huichao Technology</b> <b>Building, Jinhai Road, Xixiang, Baoan District,,</b> <b>Shenzhen,</b> <b>China</b></p> <p><b>Attention: Wan Zhifu</b></p> <p style="text-align: center;"><b>NOT TRANSFERABLE</b></p> <p>EQUIPMENT AUTHORIZATION is hereby issued to the named GRANTEE, and is VALID ONLY for the equipment identified hereon for use under the Commission's Rules and Regulations listed below.</p> <p><b>FCC IDENTIFIER:</b> 2AMWOFSC-BP103</p> <p><b>Name of Grantee:</b> Shenzhen Feasycom Technology Co.,Ltd</p> <p><b>Equipment Class:</b> Digital Transmission System</p> <p><b>Notes:</b> Bluetooth Beacon</p> <table border="0" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;"><u>Grant Notes</u></th> <th style="text-align: left;"><u>FCC Rule Parts</u></th> <th style="text-align: left;"><u>Frequency Range (MHZ)</u></th> <th style="text-align: left;"><u>Output Watts</u></th> <th style="text-align: left;"><u>Frequency Tolerance</u></th> <th style="text-align: left;"><u>Emission Designator</u></th> </tr> </thead> <tbody> <tr> <td></td> <td>15C</td> <td>2402.0 - 2480.0</td> <td>0.00299</td> <td></td> <td></td> </tr> </tbody> </table> <p>Output power listed is conducted. This device must not be co-located or operating in conjunction with any other antenna or transmitter, except in accordance with FCC multi-transmitter product procedures. End-users must be informed of the operating requirements for satisfying RF exposure compliance.</p>	<u>Grant Notes</u>	<u>FCC Rule Parts</u>	<u>Frequency Range (MHZ)</u>	<u>Output Watts</u>	<u>Frequency Tolerance</u>	<u>Emission Designator</u>		15C	2402.0 - 2480.0	0.00299			<b>TCB</b>
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# CE Certificate (EU)



Attestation of Global Compliance  
 Recognized by China National Accreditation Service for  
 Conformity Assessment & Taiwan Accreditation  
 Foundation

T: 0086-755-2908 1955  
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1-2/F, Building 19, Junfeng Industrial Park  
 Chongqing Road, Heping Community, Fuhai Street  
 Bao'an District, Shenzhen, Guangdong, China

## EU-RED Certificate of Conformity

### Radio Equipment Directive (RED) 2014/53/EU

Registration No. AGC03285190701EE0

Applicant Shenzhen Feasycom Technology Co., LTD.  
 Room 2004A, 20th Floor, Huichao Technology Building, Jinhai Road,  
 Xixiang , Baoan District, Shenzhen, China

Product Designation Bluetooth Beacon

Brand Name Feasycom

Model / Series Models FSC-BP103

Manufacturer Shenzhen Feasycom Technology Co., LTD.  
 Room 2004A, 20th Floor, Huichao Technology Building, Jinhai Road,  
 Xixiang , Baoan District, Shenzhen, China

Requirement	Applied Standards	Document Evidence	Result
Art.3.1(a) Health	EN 62479:2010	Test Report: AGC03285190701EH02	Conform
Art.3.1(a) Safety	EN 60950-1:2006+A11:2009 +A1:2010+A12:2011+A2:2013	Test Report: AGC03285190701ES01	Conform
Art.3.1(b) EMC	Draft EN 301 489-1 V2.2.1 Draft EN 301 489-17 V3.2.0	Test Report: AGC03285190701EE01	Conform
Art.3.2 Radio	EN 300 328 V2.1.1	Test Report: AGC03285190701EE11	Conform

CE

  
 Signed by General Manager(King Zhang)  
 Issue Date: Aug. 08, 2019

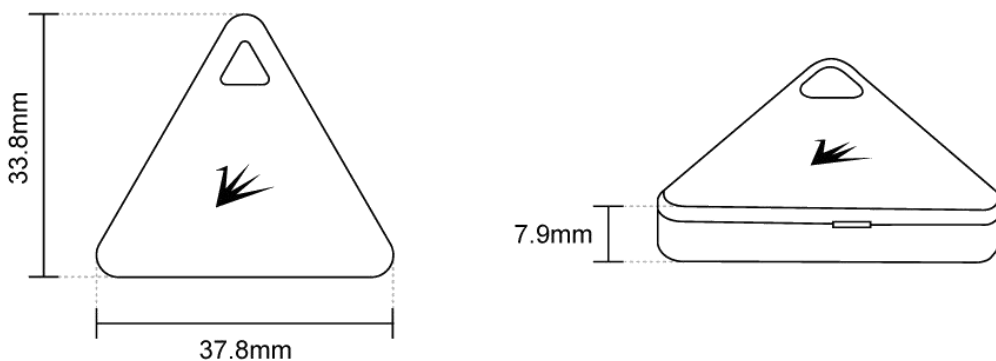




Recognized by Attestation of Global Compliance (Shenzhen) Co., Ltd., in accordance with the RED Directive 2014/53/EU. The certificate doesn't imply assessment of the production. The Applicant of the certificate is authorized to use this certificate in connection with EC declaration of conformity to the Directive. The certificate is only applicable to the equipments described above. This certificate shall not be re-produced except in full without the written approval of Attestation of Global Compliance (Shenzhen) Co., Ltd.

Note: This certificate is part of the full test report(s) and should be used in conjunction with it. Version: 2.0

## 8. Dimensions



## 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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Sales Service: [sales@feasycom.com](mailto:sales@feasycom.com)

## Revision History

Version	Changes	Author
1.0	Initial Release	Alex
1.8	Update specifications Add FCC\CE Certificates	Devin
1.9	Update description Update specifications Document reorganization	Jerry
2.0	Update specifications	Jerry
2.1	Update specifications	Tim