

Product Specification

Product Name: Wireless emergency button

Model Name: DSBC-101

Revision History

Specification		Sect.	Update Description	By
Rev	Date			
1.0	2021-02-01		New version release	
1.1	2021-03-01		Add new ID	
1.2	2021-05-10		a. Update the model list in chapter 2. b. Add hardware block diagram in chapter 3. c. Update performance in chapter 4.1. d. Update picture in chapter 7. e. Update installation method in chapter 8. f. Add certification in chapter 10.	Huang
1.3	2021-05-27		Updated pictures	Huang
1.4	2021-06-22		Change the main model from DSBC-101 to DSBC-101	WX
1.5	2021-07-02		Change the working distance	WX
1.6	2021-07-02		ADD NFC, Beeper	WX
1.7	2021-08-26		Add 3M glue installation	WX
1.8	2021-10-12		Add package description	WX

Approvals

Organization	Name	Title	Date

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1. Introduction

1.1 Description

DSBC-101 is a portable wireless emergency button alarm. The product is developed based on Siliconlabs' EFR32MG21A020F768IM32-B chip. It can be used with Zigbee gateway, and then users or orderlies can receive emergency alarm signals from anywhere through the cloud.

1.2 Application

- SOS alarm
- Elderly care

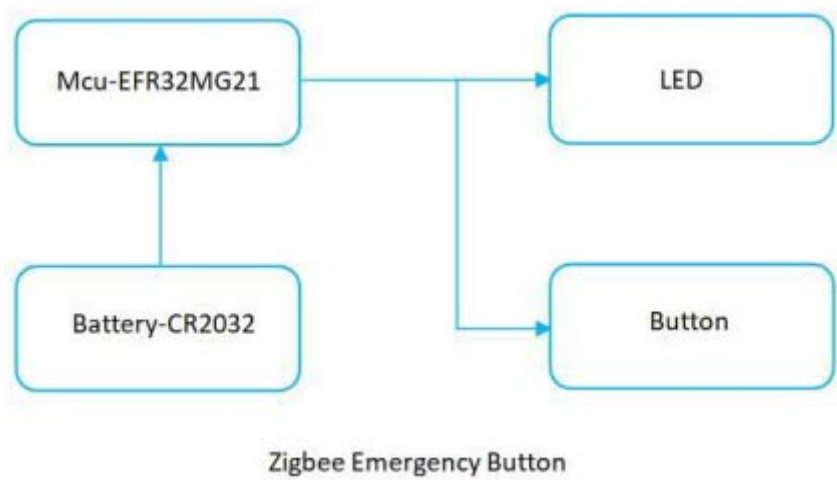
2. Appearance



Model

Feature Mode	Zigbee	Beep	Installation	Color
DSBC-101	•	•	Wristband	white
DSBC-101-2-WB	•	•	Wristband	white
DSBC-101-2-LY	•	•	Lanyard	white

3. Hardware block diagram



4. Product specification

4.1 Performance

Item	Performance
	DSBC-101-2
Outline Size	φ41mm
Net weight	~30g
Main IC	EFR32MG21
Protocol	Zigbee 3.0
Transmission frequency	2.400 - 2.4835GHz
Receiving Sensibility	-94dBm
Transmission distance	200 meters minimum (open area)
Average power consumption	<30uA
Working voltage:	2.75~3.6VDC
Operation temperature	-10~65℃
Storage temperature	-30~85℃
Color	Black
Built-in battery	CR2032 180mAh
Battery life	2Years (Depends on the mode of operation)
IP protection	IP68
Beep	support
Certification	CE, FCC

5. Function

5.1 Pairing and Unpairing

5.1.1 When there is no pairing information, press the button for 5 seconds to enter pairing mode, and the LED starts flashing at 1Hz frequency.

5.1.2 If the pairing is successful, the LED will be on for 2 seconds and then off.

5.1.3 If the pairing is not successful within 60 seconds, the LED will turn off and exit the pairing mode.

5.1.4 When there is pairing information, press the button for 5 seconds, and the LED starts flashing at 1Hz frequency. At this time, release the button. If you press the button again within 2 seconds and hold it for 5 seconds, the LED flashes at 2Hz frequency to clear the pairing and launch the pairing broadcast. If the button is not pressed again within 2 seconds, the LED will stop flashing.

5.2 Indicator status

Status	Description
Low voltage DSBC-101-2: Below 30% electric quantity	LED flashes every 10s
Starting up	LED flashes three times at 1Hz frequency
Short press the button once	LED flashing once
OTA	LED always on
Pairing mode	LED flashes at 1Hz frequency for 60s
Pairing success	LED is on for 2s
Switch on pairing mode when the device has pairing information	LED flashes at 2Hz frequency

5.3 Button functions

Button Action	Description
Short press the button once	Submit an alarm message to the gateway
(Unpaired) Press the button for 5seconds.	Enter pairing mode
(Paired) Press the button for 5seconds and then release, and then press the button again within 2 seconds and hold it for 5 seconds.	Clear the pairing and launch the pairing broadcast

5.4 OTA

When the device is in the network state, the gateway or mobile APP issues an upgrade command to the device.

6. *Caution*

1. Being close to a metal object will interfere with the signal, causing the signal to be weakened.
2. Note the distance between DSBC-101 and the receiver to guarantee the accuracy of receiving.
3. Keep away from the corrosive objects.

6. *Caution*

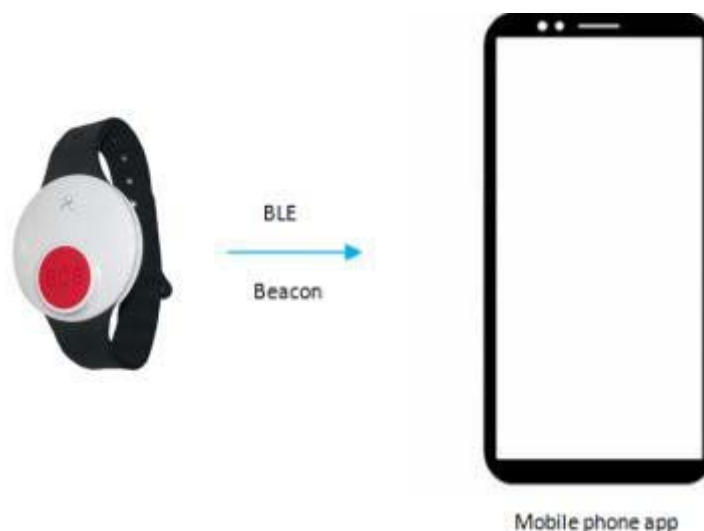
7.1 Gateway usage

- 1) DSBC-101 paired to the Zigbee gateway.
- 2) Zigbee Gateway gets the data from the sensor and sends the information to Cloud via Wi-Fi or LTE once per second.



7.2 Mobile phone usage

- 1) The device will always want to send a broadcast packet nearby at a certain frequency.
- 2) A mobile phone with Bluetooth enabled can receive the beacon information and parse the data through the APP



8. Installation

8.1 Lanyard

Can be wear on the neck.



8.2 Wristband

With rubber wristband accessories, can be wear the product on the wrist



8.3 3M adhesive type

- 1. Select the adhesive tape to stick to the back of the device, and tear off the adhesive tape on the back of the beacon sensor
- 2. Just stick the beacon sensor to the surface of the object



9. QA Requirements

Quality & Testing Information	
Information Description	Standard (Yes) custom (No)
ESD Testing	Yes
Battery life Testing	Yes
RF Antenna Analysis	Yes
Environmental Testing	Yes
Reliability Testing	Yes

10. WARNING

This device 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 device 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 device does cause harmful interference to radio or television reception, which can be determined by turning the device 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 device and receiver.
- Connect the device 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

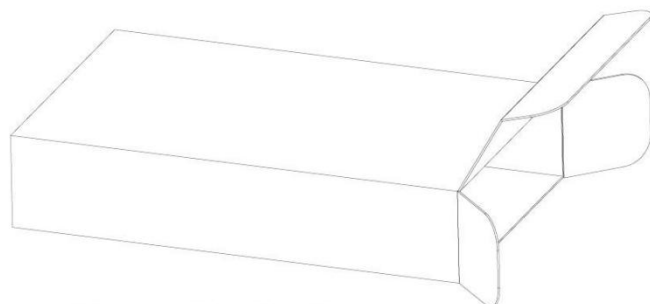
This device contains licence-exempt transmitter(s)/receiver(s) that comply with Part 15 of the FCC Rules and Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions: (1) This device may not cause interference. (2) This device must accept any interference, including interference that may cause undesired operation of the device

Cet appareil contient des émetteurs / récepteurs exemptés de licence conformes aux RSS (RSS) d'Innovation, Sciences et Développement économique Canada. Le fonctionnement est soumis aux deux conditions suivantes : (1) Cet appareil ne doit pas causer d'interférences. (2) Cet appareil doit accepter toutes les interférences, y compris celles susceptibles de provoquer un fonctionnement indésirable de l'appareil

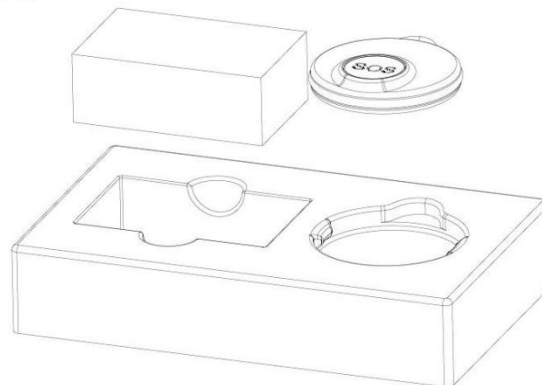
11. Package

The outer packaging of the product is simple packaging, the outer packaging is a paper box material, blister box lining.

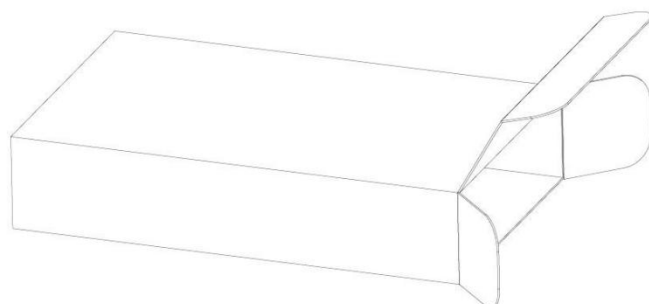
Lanyard



Size: 130x80x27mm



Wristband



Size: 130x80x27mm

