

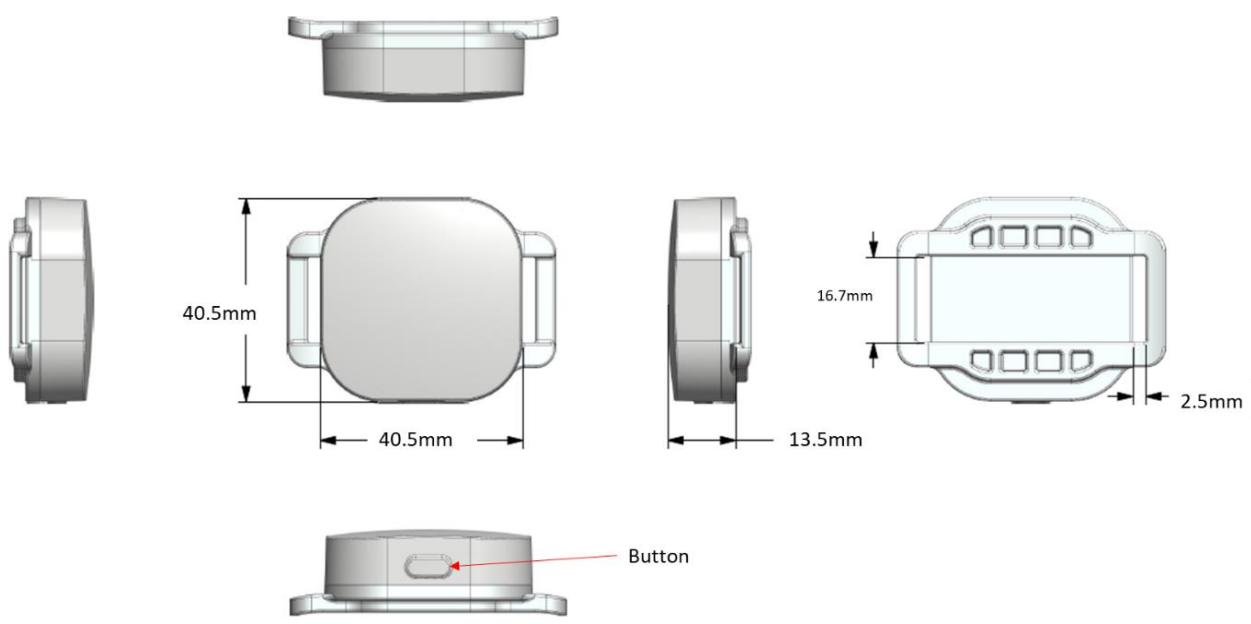


DTSB2.01 SGW8138 BLE Beacon Wristband Datasheet

May 2020 V1.0

Introduction

The SGW8138 wristband has a Bluetooth Low Energy (BLE) 5.0-compliant module with a wearable wrist strap. The wristband regularly sends out iBeacon-compliant signals for detection by BLE central devices (such as smartphones) to determine if its wearer is within a predefined range.



Product Features

Wristbands are identified by the QR codes on the wrist straps (Figure 1). Formatting defined as follows:

- QR code: SN:xx/yyyy/zzzzz
- xx: 01 (fixed for all wristbands)
 - yyyy: five-digit Major number (in decimal format)
 - zzzzz: five-digit Minor number (in decimal format)

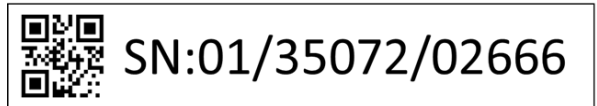


Figure 1: SGW8138 Wristband QR Code Example

As a wearable, the following should be noted:

- Once the wristband is snapped closed, it can be only be removed by cutting the wrist strap.
- Strap-cutting cannot be detected – there is no notification when the wrist strap is cut.
- The wristband is water-resistant, with a water rating of IP54.

Operating Modes

The wristband has two operating modes: Shipment mode and Active mode.

	Shipment Mode	Active Mode
<u>Features</u>	iBeacon advertising is turned off. The wristband consumes the lowest amount of power. To preserve battery shelf life, the wristband is shipped in shipment mode.	iBeacon advertising is turned on. Regular data packets are continuously sent.
<u>Activation</u>	While in active mode: <ol style="list-style-type: none"> 1. Hold the button for 5 seconds. 2. Release the button and wait 1 second before holding the button for 5 seconds again. 	While in shipment mode, hold button for 5 seconds.

Product Specifications

Item	Description
Product Part Number	SGW8138
	Powered by Nordic's nR52840 Bluetooth® 5/BLE SoC
Features	Complete BLE RF solution with embedded antenna
Technology	BLE 5 ready with iBeacon advertising data packet format (Figure 2) <ul style="list-style-type: none"> • UUID = 0xf000aab00451-04000-b000-000000000000 • Major + Minor combination is unique for each wristband
Transmission Range	Up to 100 meters
Advertising Period	Fully configurable
Power	CR2032 (standard) or optional rechargeable battery
Battery Lifetime	2 years in Shipment mode, 30 days in Active mode
Default Operating Mode	Shipment mode
Transmission Power	0dBm
Water Rating	IP54 (customizable for waterproof or rugged conditions)
Bluetooth Standard	Bluetooth Low Energy 5.0
Operating Temperature	0°C to +60°C
Button	On/off key
Silicone Case	White (logo and color customizable)
Dimension	40.5 x 40.5 x 13.5mm

Bluetooth Low Energy Data Packet

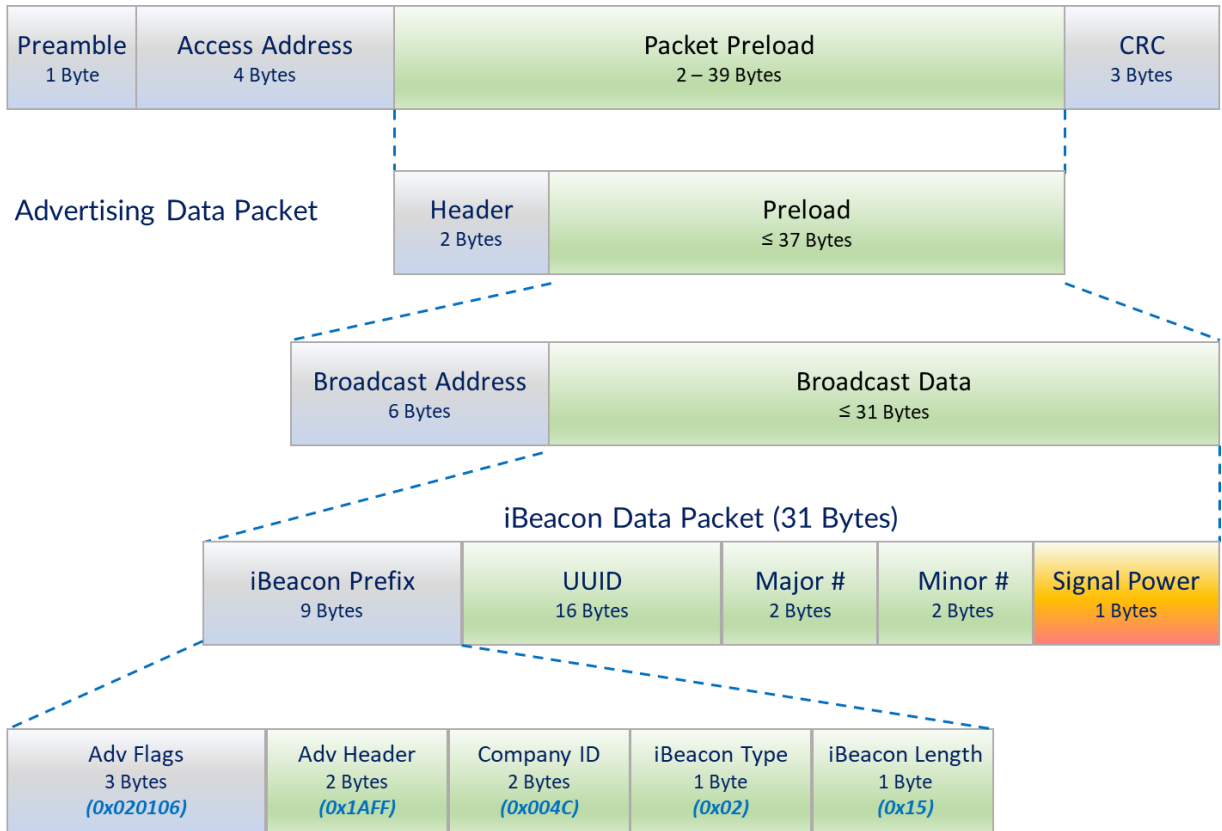


Figure 2: SGW8138 Wristband iBeacon Advertising Data Packet

Revision History

Revised	Version	Description
07-May-2020	1.0	Initial document release

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Website: <https://sgwireless.com/>

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