



Application Note AN-102

MSD (Manufacturing Specific Data)

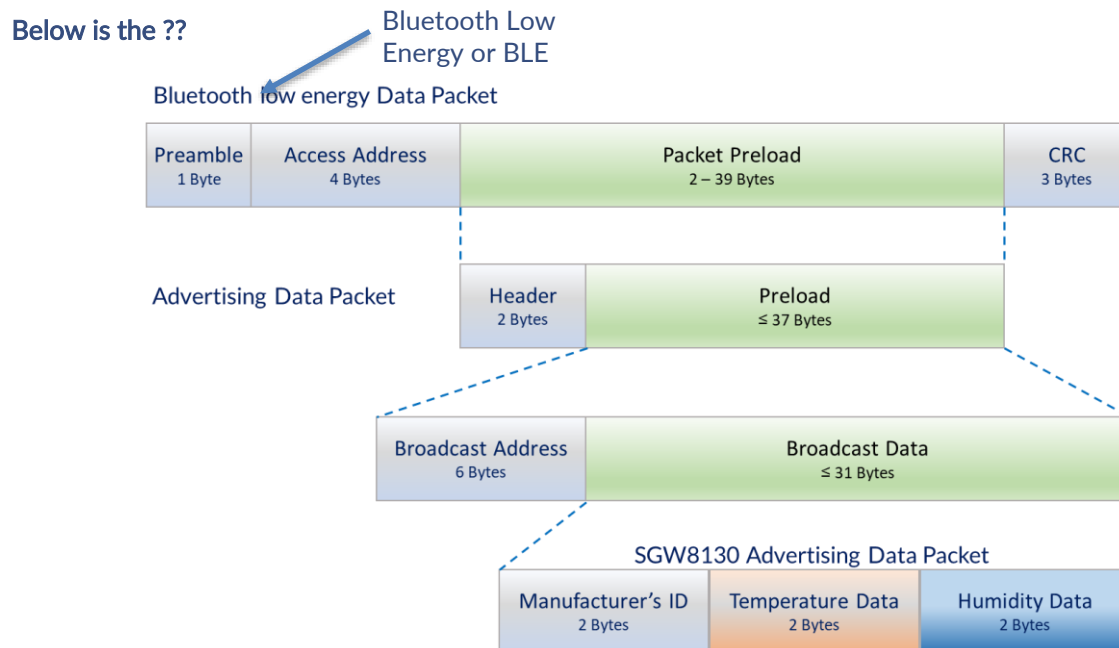
Advertising Mode of SGW8130

1. Introduction

The SGW8130 sensor tag is a Bluetooth Low Energy (BLE) device with different sensor options. This application note provides technical information on the Manufacturer Specific Data (MSD) advertising mode of SGW8130. Temperature and humidity sensing data will be broadcast in this operating mode.

The SGW8130 sensor tag is powered by a standard CR2032 cell battery to enable portability.

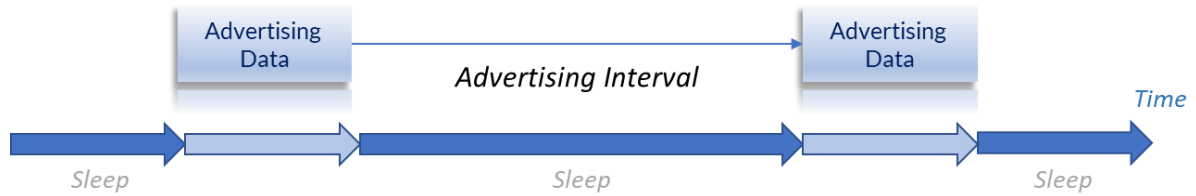
2. Advertising Packet Structure



Field	Length	Description
Preamble	1 byte	Used for synchronization and timing estimation at the receiver. It will always be 0xAA for broadcast packets
Access Address	4 bytes	Fixed broadcast packets with value = 0x8E89BED6.
CRC	3 bytes	Cyclic Redundancy Check (CRC) is an error-detecting code used to validate the packet for unwanted alterations
Header	2 bytes	Packet types information
Broadcast Address	6 bytes	Sensor tag MAC address
Manufacturer ID	2 Bytes	Manufacturer ID = 0x0059
Temperature Data	2 Bytes	Temperature in 0.01 °C, byte in little endian, HEX format
Humidity Data	2 Bytes	Humidity in 0.01 %, byte in little endian, HEX format

3. Advertising Interval

In advertising mode, the sensor tag is under non-connectable broadcasting. It does not activate any receiving capabilities. It achieves the lowest possible power consumption by simply waking up, transmitting data and going back to sleep periodically.



The default advertising interval setting is one second for SGW8130.

4. Revision History

Revision	Date	Description
1.0	Dec 09, 2019	Initial Release

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