



BlueBeacon Bluetooth LE proximity-beacon

Sensors Packet Structure

BlueBeacon beacons with second-generation firmware (ver. 5.0 or higher), supports a new frame type, Sensors packet. Although Sensors packet is configurable on all beacons, at present it is meaningful only on BlueBeacon Sensor beacon, that integrates the following environmental sensors: temperature, humidity, pressure.

Sensors packet is identified by a 16-byte Service UUID 0x181A (the UUID for standard Environmental Sensing Service defined by Bluetooth specifications has been adopted)

Sensors packet is individually configurable for interval (from 100 msec to 5 secs) and transmission power (from -40dBm to +4dBm).

Sensors packet is accessible using native Bluetooth Low Energy libraries for iOS or Android:

- CoreBluetooth for iOS (ref.: <https://developer.apple.com/reference/corebluetooth>)
- Bluetooth LE for Android (ref.: <https://developer.android.com/guide/topics/connectivity/bluetooth-le.html>)

The following table contains the Advertising Packet format.

Byte	Default (hex)	Description	Comments	Property
1	11	AD length	Length of packet data (17 bytes)	Fixed
2	16	AD type	Service data	Fixed
3	1A	Service UUID	Adopted from Environmental Sensing Service (0x181A)	Fixed
4	18			
5	6E	Temperature UUID	Adopted from Temperature Characteristic (0x2A6E)	Fixed
6	2A			
7	<i>Byte 1</i>	Temperature value	Temperature in 0.01 °C unit (little endian, signed)	Variable
8	<i>Byte 0</i>			
9	6F	Humidity UUID	Adopted from Humidity Characteristic (0x2A6F)	Fixed
10	2A			
11	<i>Byte 1</i>	Humidity value	Humidity in 0.01 % unit (little endian, unsigned)	Variable
12	<i>Byte 0</i>			
13	6D	Pressure UUID	Adopted from Pressure Characteristic (0x2A6D)	Fixed
14	2A			
15	<i>Byte 3</i>	Pressure value	Pressure in 0.1 Pa unit (little endian, unsigned)	Variable
16	<i>Byte 2</i>			
17	<i>Byte 1</i>			
18	<i>Byte 0</i>			