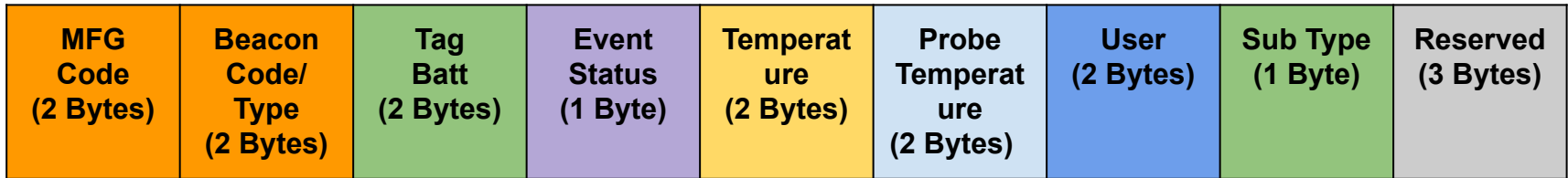
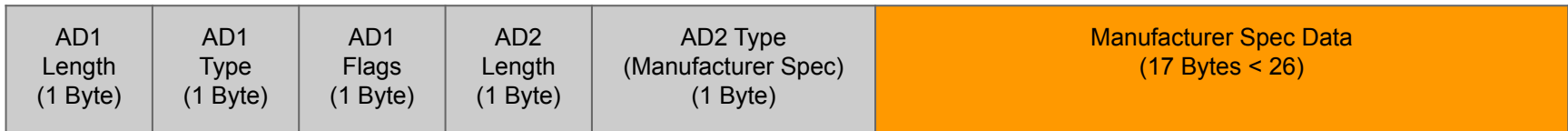


INGICS

iBS03/iBS04 Payload Format

Sep, 2018
rev. 1

Sensor Tag Packet (iBS03)



AD1 (Length, Type, Flags)	BLE Advertising Flags
AD2 Length	depends on payload length
AD2 Type	fixed to 0xFF (for manufacturer)
Manufacturer Spec Data	manufacturer defined payload (currently as 0x000D)

example:

\$GPRP,EAC653D3AA8D,CCB97E7361A4,-44,02010612FF0D0083BC290110FFFFFFFF000001000000

LF

Sensor Tag Packet (iBS03)

MFG Code (2 Bytes)	Beacon Code/ Type (2 Bytes)	Tag Batt (2 Bytes)	Event Status (1 Byte)	Temperature (2 Bytes)	Probe Temperature (2 Bytes)	User (2 Bytes)	Sub Type (1 Byte)	Reserved (3 Bytes)
-----------------------	-----------------------------------	-----------------------	--------------------------	--------------------------	--------------------------------	-------------------	----------------------	-----------------------

* Endianness: little endian

Field	Description	Field Offset
MFG Code	Manufacturer vendor code, fixed	
Beacon Code and Type	Magic Code to identify packet format, fixed to 0xBC83	
Tag Batt	batt voltage of tag in 0.01v unit	
Event Status	8bits for 8 input: Hall:(0x04), Moving:(0x02), Button:(0x01)	
Temperature	Temperature in 0.01 C unit (signed 16bit)	
Probe Temperature	Probe Temperature in 0.01 C unit (signed 16bit) -- valid for iBS03TP model	
User	Configurable by user through App	
Subtype	Used as sub model, type: 0x10: iBS03, 0x15: iBS03T, 0x16: iBS03G, 0x18: iBS04i, 0x19: iBS04	

example:

\$GPRP,EAC653D3AA8D,CCB97E7361A4,-44,02010612FF**0D0083BC**2901**01**FFFFFFFF0000**10**000000

Reader Output Example (iBS03)

example: (from iGS01 beacon gateway output)

\$GPRP,EAC653D3AA8D,CCB97E7361A4,-44,02010612FF0D0083BC4A0100A10AFFFF000015000000

→ **iBS03T, Batt: 0x014A (3.3V), Temp: 0x0AA1 (27.21)**

\$GPRP,EAC653D3AA8C,CCB97E7361A4,-44,02010612FF0D0083BC290102FFFFFFFF000016000000

→ **iBS03G, Moving**

\$GPRP,EAC653D3AA8E,CCB97E7361A4,-44,02010612FF0D0083BC290104FFFFFFFF000010000000

→ **iBS03, Hall sensor activated**

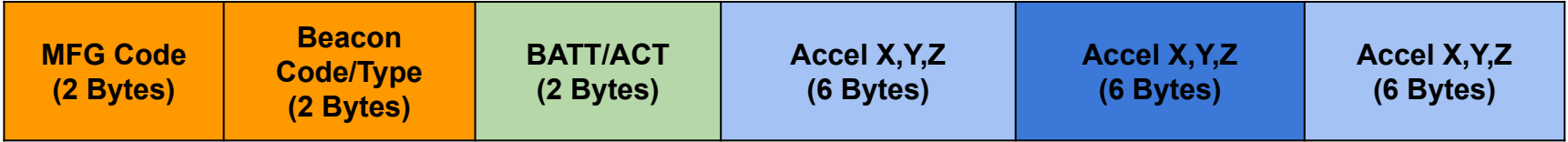
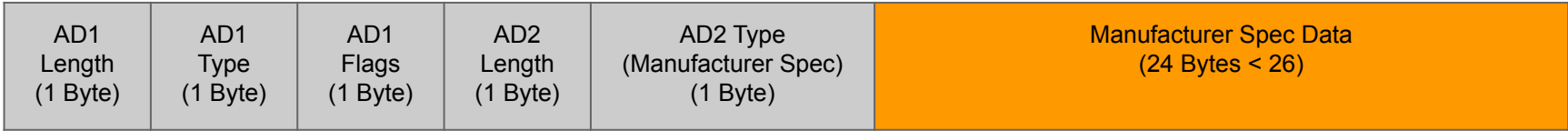
\$GPRP,EAC653D3AA8E,CCB97E7361A4,-44,02010612FF0D0083BC290101FFFFFFFF000010000000

→ **iBS03, Button pressed**

\$GPRP,1804ED7D9C72,CCB97E7361A4,-44,02010612FF0D0083BC29010044094309000017030000

→ **iBS03TP, Batt: 0x0129 (2.97V), Temp: 0x0944 (23.72), Probe Temp: 0x0943 (23.71)**

Raw Accel Tag Packet (iBS03RG)



AD1 (Length, Type, Flags)	BLE Advertising Flags
AD2 Length	depends on payload length
AD2 Type	fixed to 0xFF (for manufacturer)
Manufacturer Spec Data	manufacturer defined payload (currently as 0x000D)

example:

02010619FF0D0081BC4D014D0072FFC9004D0072FFC9004D0072FFC900

Raw Accel Tag Packet (iBS03RG)

MFG Code (2 Bytes)	Beacon Code/Type (2 Bytes)	BATT/ACT (2 Bytes)	Accel X,Y,Z (6 Bytes)	Accel X,Y,Z (6 Bytes)	Accel X,Y,Z (6 Bytes)
------------------------------	--------------------------------------	------------------------------	---------------------------------	---------------------------------	---------------------------------

* Endianness: little endian

Field	Description	Field Offset
MFG Code	Manufacturer vendor code, fixed	
Beacon Code and Type	Magic Code to identify packet format, fixed to 0xBC81	
Tag Batt / Act	Bit[13]: Button pressed, bit[12]: ACT/INACT, bit[0-11] BATT voltage of tag in 0.01v unit	
Accel X, Y, Z	raw data, 2 byte for each axis, unit 0.004G	

Parameter	Value
Accel Sampling Period	100ms
Adv Interval	300ms (3 samples per packet)

example:

\$GPRP,EAC653D3AA8D,CB412F0C8EDC,-57,02010619FF0D0081BC4B01F5FFFEFFFE800F4FFFCFFE700F5FFFBF800

→ F5FF FEFF E800 (x: 0xFFFF5=-11, y: 0xFFFFE=-2, z: 0x00E8=232)

\$GPRP,CC5B2813FE55,DB024BFC4863,-58,02010619FF0D0081BC4B313A00D6FFF0003800D4FFF8003A00D6FFF6

→ Button Pressed, Moving (3)

iBS04i Packet Format (iBeacon)

iBS04i ADV (refer to iBeacon format)

Prefix					MFG Code (2bytes)		Beacon Code/Type (2Bytes)		UUID																MAJOR		MINOR		MEAS TX
02	01	06	1A	FF	4C	00	02	15	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	00	00	01	02	XX

iBS04i Scan Response (refer to iBS03 format)

Prefix					MFG Code (2bytes)		Beacon Code/Type (2Bytes)		Tag Batt (2Bytes)		Event Status (1Byte)	Reserved (2Bytes)		Reserved (2Bytes)		User (2Bytes)		Sub Type (1Byte)	Reserved (3Byte)		
02	01	06	12	FF	0D	00	83	BC	XX	XX	XX	FF	FF	FF	FF	00	XX	XX	00	00	00

REVISION

VER	DATE	CHANGES	NOTE
1	Sep, 2018	Initial release	