

Vital Signs BLE Protocol based on mmWave Platform v01.02

Abstract:

This document dedicated description for Vital Signs BLE Protocol based on mmWave Platform

Description:

The BLE Protocol structure as followings,

BLE Protocol:

<FrameStructure> := h f BR HR BP HP c t (more detail see Appendix A2)

Appendix:

(A1) Frame Period Time : 50 ms (based on mmWave board firmware v01.11)

(A2)

/* BLE protocol for Vital Signs

/* syntax: h f BR HR BP HP c t

/*

/* Item	Name	Location	Length	Type	Description
/* 0	h	0	1	U8	header (0x7B) or ('{')
/* 1	f	1	1	'0'..'9'	flow for readable
/* 2	BR	2 3 4 5	4	F32	Breath Rate
/* 3	HR	6 7 8 9	4	F32	Heart Rate
/* 4	BP	10 11 12 13	4	F32	Breath Waveform Phase
/* 5	HP	14 15 16 17	4	F32	Heart Waveform Phase
/* 6	c	18	1	U8	checkSum := see Notes
/* 7	t	19	1	U8	tail (0x7D) or ('}')

Notes: Type definition as followings,

checkSum := (xor(Location0..17) % 26) + 'a' // 'a'..'z' for readable purpose

U8 := unsigned char (1 bytes)

F32 := float (4 bytes in LittleEndian format)

(A3) example on data logged in Real case

