PATHPARTNER

DecaWave: UWB-IOT tools Infrastructure

BSP Release Notes

BSP Version: 01.00.03

Date: 15-May-17

1. Important Note

This release is for Nordic NRF52840 and STM32F401RE Nucleo platform.

2. INTRODUCTION

This release notes provides important information that will assist you in using the BSP software package. This document provides the product information and known issues that are specific to the BSP software package.

3. New in this Release

Added support for BSP for Decawave on RIOT for Nordic NRF52840 and STM32F401RE Nucleo platform.

Added support for DecaRange RTLS ARM Application

4. Installation and Usage

Installation and Usage of the BSP package is detailed in PP_DecaWave_BSP_UserGuide

5. Upgrade and Compatibility Information

None

6. Dependencies

This release requires following tools/packages to be installed

BSP Package: Version 01.00.03

Ubuntu OS: Version 14.04 LTS

GCC ARM Embedded tool chain: Version 6.3.1 20170215

Open On-Chip Debugger: Version 0.10.0+dev-00092-g77189db

Pyterm Terminal

7. Platforms Supported

Nordic NRF52840

STM32F401RE Nucleo

8. Applications Supported

DecaRange RTLS ARM Application

9. What is Supported

BSP for Decawave on RIOT

DecaRange RTLS ARM Application for Mode 1 Configuration for Tracking, Navigation and Geo-Fencing Use Case Scenario

DecaRange RTLS ARM Application for Mode 2 Configuration for Tracking, Navigation and Geo-Fencing Use Case Scenario

DecaRange RTLS ARM Application for Mode 3 Configuration for Tracking, Navigation and Geo-Fencing Use Case Scenario

DecaRange RTLS ARM Application for Mode 4 Configuration for Tracking, Navigation and Geo-Fencing Use Case Scenario

Note:

Range Distance Estimation for Nordic NRF52840 and STM32F401RE Nucleo is printed on PyTerm Terminal

10. TREK 1000 Features

Supported Use cases:

Tracking, Navigation and Geo-Fencing: Configuration for Mode 1/2/3/4

11. Known Issues

Tracking Use case

Observed Anchor to anchor bias corrected range(ma), Tag to anchor bias corrected range(mc) and Tag to anchor raw range(mr) range deviation is between 25-40 cm instead of 15cm for all modes randomly.

Navigation Use case

Observed that T0 to A0, A1, A2 Range info is detected as 0 randomly

Geo-Fencing Use case

Log Pattern is not proper as expected: A0:T0, A0:T1, A0:T0 & A0:T2 instead of A0:T0, A0:T1, A0:T2 for all modes. In case of Mode 3, this is observed occasionally

Note:

BSP Beta release package depends on RIOT OS services for mutex calls.

12. Known Limitations

Due to EVB 1000 Hardware constraints with External Microcontroller

- Range Distance Estimation is displayed on PyTerm Terminal
- Selection of Mode(Mode-1/2/3/4), UNIT(Tag/Anchor) and UNIT ID (0 to 2) is configured in DecaRange RTLS ARM Application based on User Input

13. Validation Information

This release is validated on Nordic NRF52840 and STM32F401RE Nucleo Platforms.