Evaluation kit for the B-UWB-MOD1 ultra-wideband module

Picture is not contractual.

Features

- Module evaluation kit for the B-UWB-MOD1 ultra-wideband (UWB) module
- Prototyping, evaluation and demonstration of indoor location systems
- From 4 to 60 boards per location system
- Range up to 600 m in LoS (line of sight)
- Precision down to 10 cm
- Measurement rate: adjustable, up to 250 per second
- 105 × 75 × 98 mm (PCB and antenna)
- Data acquisition: UART on USB
- Power supply: USB or external battery connection (5 V / 200 mA)

Description

The B-UWB-MEK1 module evaluation kit is designed to test advanced positioning and tracking technology in real conditions, or to be directly embedded into a ready-to-use indoor location system.

B-UWB-MEK1 includes Evaluation boards equipped with the STM32-based B-UWB-MOD1 UWB module used as fixed or as mobile devices. Use from four up to sixty boards to prototype a location system.

B-UWB-MEK1 represents an affordable and user-friendly solution for 1D measurement as well as 3D positioning. Experiment further with B-UWB-MEK1 to address indoor real-time locating systems (RTLS) for large amounts, such as multi-tag tracking and GPS-like positioning.

Deploy B-UWB-MEK1-based indoor location in such applications as warehouse automation, automated guided vehicle (AGV), drone control, robot positioning, or in-factory navigation.

Product status link
B-UWB-MEK1

DB4392 - Rev 1 - March 2021
For further information contact your local STMicroelectronics sales office.

www.st.com

1   Ordering information

The B-UWB-MEK1 module evaluation kit is available in packs composed of:

- 2 × Evaluation boards
- 2 × omnidirectional antennas
- 2 × USB Type-C® to USB Type-A cables

To order a kit, contact the nearest STMicroelectronics sales office.

The B-UWB-MOD1 UWB module embeds the STM32L476JE microcontroller based on the Arm® Cortex®-M4 processor.

Note: *Arm is a registered trademark of Arm Limited (or its subsidiaries) in the US and/or elsewhere.*

arm

1.1   Product marking

The sticker located on the top or bottom side of the PCB shows the information about product identification such as board reference, revision, and serial number.

Evaluation tools marked as "ES" or "E" are not yet qualified and therefore not ready to be used as reference design or in production. Any consequences deriving from such usage will not be at ST charge. In no event, ST will be liable for any customer usage of these engineering sample tools as reference designs or in production.

"E" or "ES" marking examples of location:

- On the module mounted on the board
- Next to the evaluation tool ordering part number stuck or silk-screen printed on the board

2 Use case examples

Figure 1. 1D measurements
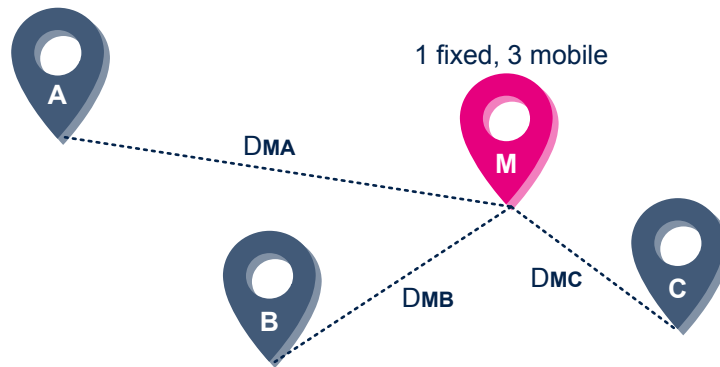
Distances D_{MA}, D_{MB}, D_{MC} provided at M interface

Figure 2. 3D single self-positioning

3 Development environment

3.1 System requirements

- Windows® OS (7, 8, or 10) or Linux® Ubuntu®

Note: *Linux® is a registered trademark of Linus Torvalds.*

Ubuntu® is a registered trademark of Canonical Ltd.

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3.2 Evaluation tools

- STMicroelectronics - MOD1/MEK1 programming tool[1]
- STMicroelectronics - MOD1/MEK1 trace analysis tool[1]

1. *Refer to the software development kit*

3.3 Demonstration software

Use the MOD1/MEK1 programming tool included in the software development kit for experimenting on location systems. Contact the local STMicroelectronics sales office or distributor (refer to *www.st.com*) for the latest software and associated documentation.

Revision history

Table 1. Document revision history

Date	Revision	Changes
15-Mar-2021	1	Initial release.

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