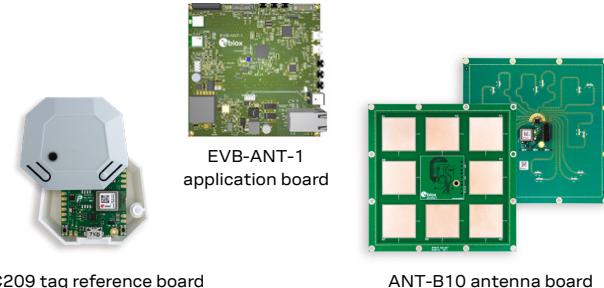


XPLR-AOA-3

Bluetooth® direction finding explorer kit and reference design

Angle-of-Arrival anchor point out of the box

- ANT-B10 Bluetooth Low Energy antenna board evaluation
- Angle-of-arrival anchor point reference design
- Includes application board with powerful MCU and a variety of connectivity options
- Includes Bluetooth 5.1 angle-of-arrival tag
- u-connectLocate software with optimized direction-finding algorithm; fully compatible with Bluetooth 5.1
- High resolution angle calculation in two dimensions



Product description

The XPLR-AOA-3 kit features boards designed by u-blox for Bluetooth direction finding and indoor positioning. Users can evaluate the ANT-B10 antenna board as well as the u-blox optimized direction-finding algorithm. It also serves as a complete angle-of-arrival (AoA) anchor point reference design. The kit includes an ANT-B10 antenna board, an EVB-ANT-1 development board, and a C209 AoA tag, as well as all necessary software for operating the kit and evaluating the u-blox direction finding solution.

The ANT-B10 antenna board features an antenna array comprising eight individual patch antennas as well as the u-blox NINA-B411 Bluetooth 5.1 module. Designed for integration into commercial end-products, the board enables low power, high precision indoor positioning and speeds up evaluation, testing, and commercialization of Bluetooth direction finding and indoor positioning solutions. Using the u-connectLocate software, which runs on the Bluetooth module, developers can easily execute the u-blox angle calculation algorithm.

The EVB-ANT-1 application board offers developers a quick and easy way to evaluate the ANT-B10 antenna board. It features the NXP RT1061 MCU for configuring and developing direction finding applications, as well as an Ethernet PHY chip and u-blox MAYA-W1 Wi-Fi module. An off-the-shelf pin header on EVB-ANT-1 allows easy connection to ANT-B10, yielding a ready-to-use AoA indoor positioning anchor point in seconds.

The C209 is a tag based on the NINA-B406 Bluetooth LE module. It runs software that sends out Bluetooth 5.1 advertisement messages for reception by the ANT-B10 antenna board, which will then determine the direction of the tag via the u-connectLocate software.

The XPLR-AOA-3 kit can be used to explore many different indoor positioning applications. For example, it can detect if an object is approaching a door, keep track of goods passing through a gate, avoid collisions between automated guided vehicles, or let a camera follow an asset moving in a room. A positioning system can be created by combining several XPLR-AOA-3 kits and triangulating the directions from three or more ANT-B10 antenna boards.

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