

#### FEATURES

- Bluetooth® Low Energy 5.1 AoA (Angle-of-Arrival) Locator
- Operating frequency range: 2400-2483 MHz
- **CoreHW Gen2 PCB4** AoA antenna array board
  - CoreHW CHW1010 SP16T Bluetooth AoA/AoD antenna switch
  - Dual polarized antenna array, eight patch antenna elements
- nRF52833 Development Kit PCB with micro-USB connection
  - CoreHW1010 antenna switch control and I/Q-sampling
- Locator assembly dimensions 176mm x 176mm x 67mm (210mm including mounting brackets)
- Locator weight 390-490 g

#### APPLICATIONS

- *Bluetooth 5.1 Angle-of-Arrival, radio direction finding*
- *Bluetooth indoor positioning systems*

[www.corehw.com](http://www.corehw.com)

#### GENERAL DESCRIPTION

**CoreHW Gen1 AoA Locator** is a Bluetooth AoA development kit locator device intended for indoor positioning system providers.

Locator includes CoreHW Gen2 AoA antenna array board and nRF52833 Development Kit board. The Gen2 antenna array board contains eight dual linear polarized patch antennas and CoreHW CHW1010 SP16T Bluetooth AoA/AoD capable antenna switch for Bluetooth AoA CTE sampling.

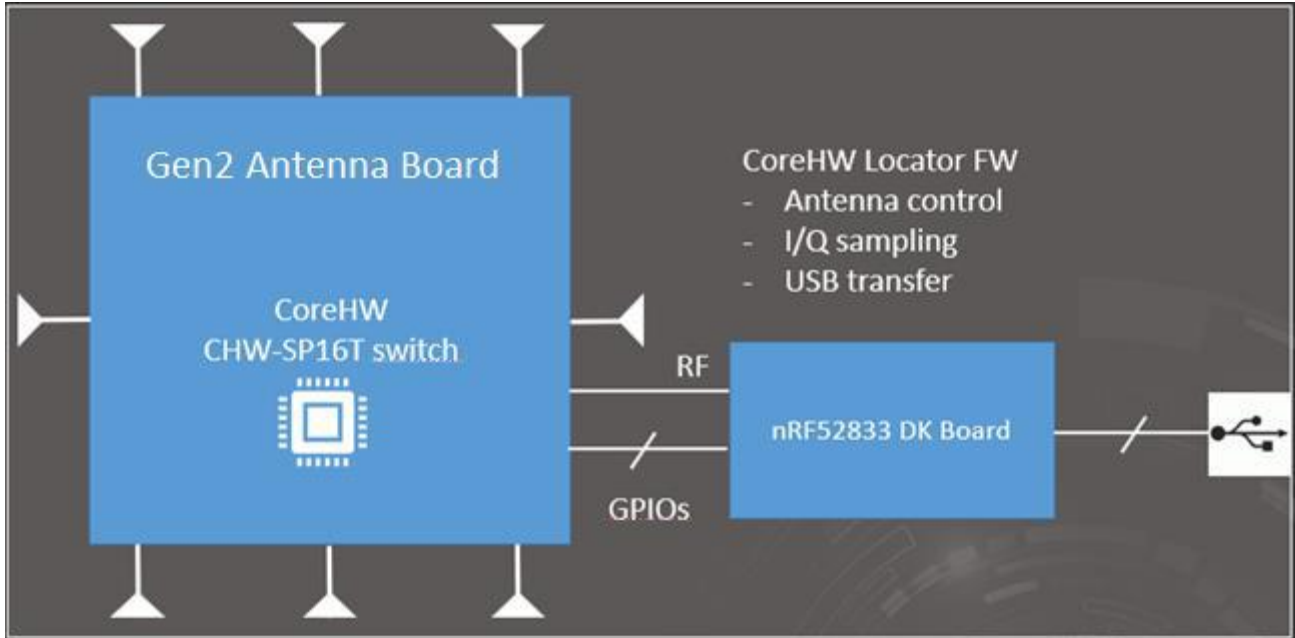
nRF52833 Development Kit board, contains Nordic Semiconductor nRF52833 BLE SoC, controls CoreHW 1010 AoA antenna switch and performs I/Q-sampling of CTE advertising packets sent by compatible Bluetooth AoA Tags. I/Q samples can then be passed for further processing on positioning system via USB interface.

Multiple Gen1 locators can be connected to Windows 10 PC via USB interface and used together with CoreHW AoA Demo PC software to demonstrate indoor positioning based on AoA.



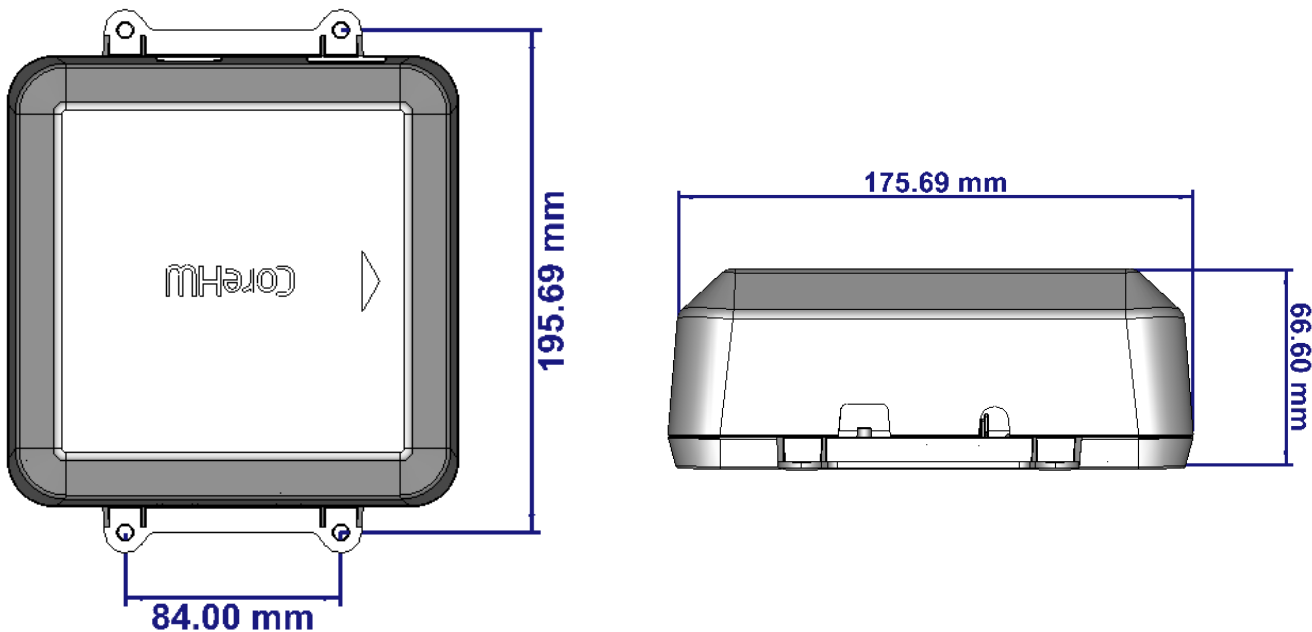
### Gen1 Locator

Simplified block diagram of Gen1 locator:



### Gen1 Locator Dimensions

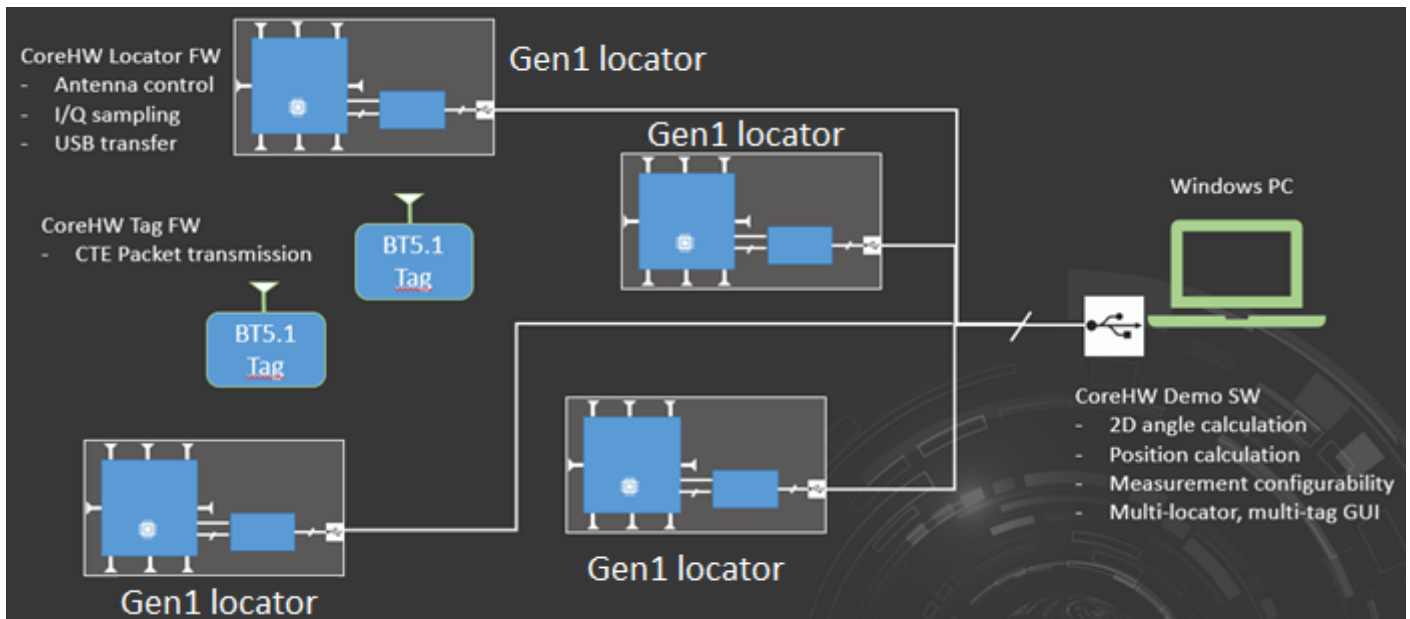
5.6mm mounting holes for 5mm screws



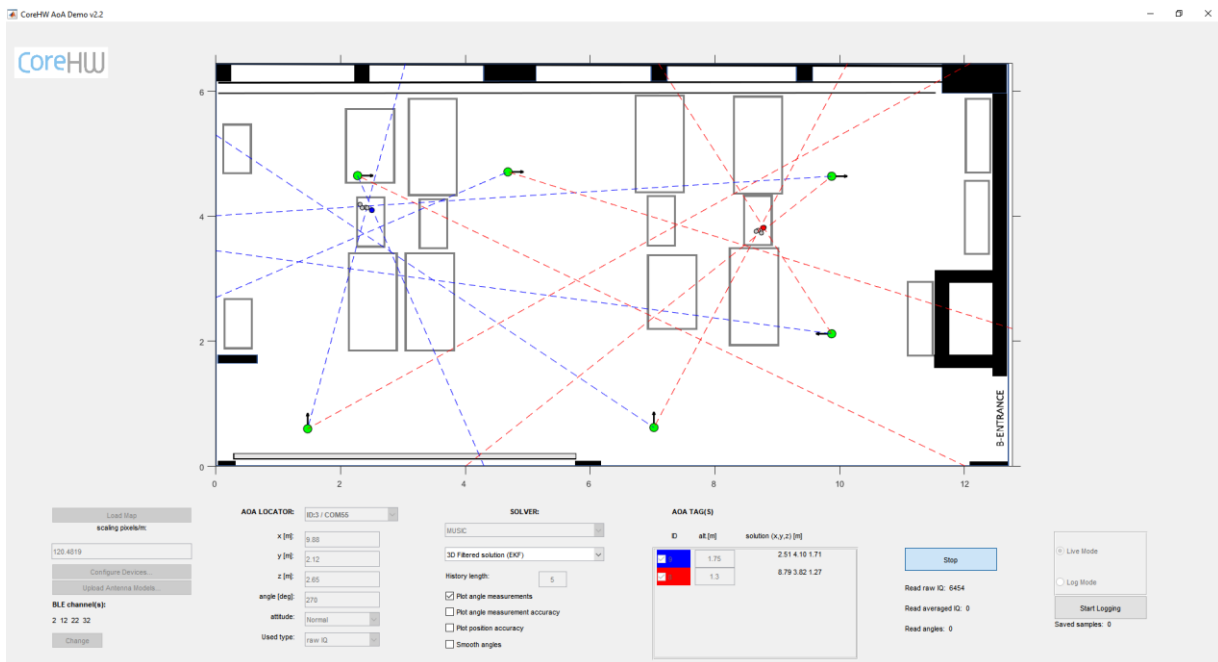
### CoreHW AoA Demo

Multiple Gen1 locators can be installed e.g. on ceiling of a room and connected via USB to Windows 10 PC running proprietary CoreHW AoA Demo software. PC Demo software can be used to demonstrate AoA Tag position estimation based on Angle-of-Arrival data.

### Simplified system block diagram of CoreHW AoA Demo system:



### CoreHW AoA Demo PC Software GUI:



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