

FEATURES

- **CoreHW Gen3S PCB** antenna array for Bluetooth® Low Energy 5.1 AoX direction finding systems
- Operating frequency range: 2400-2483 MHz
- CoreHW CHW1010 SP16T Bluetooth AoA/AoD antenna switch
- Connectors for radio frequency signals and CoreHW CHW1010 SP16T GPIO control signals
- Four patch antenna elements
- Low cost 4-layer PCB stack-up structure
- Optimized phase balance between antenna chains
- Firmware support and antenna models available
- PCB dimensions: 75mm x 75mm

APPLICATIONS

- *Asset tracking in factories, offices, logistics etc.*
- *Access control*
- *People tracking*
- *Wayfinding*
- *Point-of-interest services*
- *Proximity marketing*
- *Shopping guidance and assistance*
- *Equipment and facilities utilization*
- *Consumer behavior analysis*
- *Security services*
- *Item finding*

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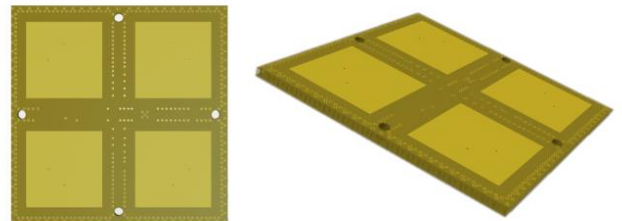
GENERAL DESCRIPTION

CoreHW Gen3S PCB is an antenna array consisting of four patch antenna elements. The antenna array PCB is intended for direction and positioning system solution providers.

Gen3S antenna array board contains CoreHW CHW1010 SP16T Bluetooth AoA/AoD capable antenna switch for antenna controls and Bluetooth CTE sampling. The device comprises of very low phase mismatch antenna switch array which enables real high accuracy positioning.

Gen3S antenna boards enable system solutions which are insensitive to multipath signal and has outstanding position accuracy down to 50cm level.

CoreHW offers an AoA reference design system with CoreHW firmware and Windows PC positioning engine SW with user interface (GUI). The reference system contains four patch antenna array-based locators. The reference system can be used for laboratory tests and PoC testing in real use case scenarios.



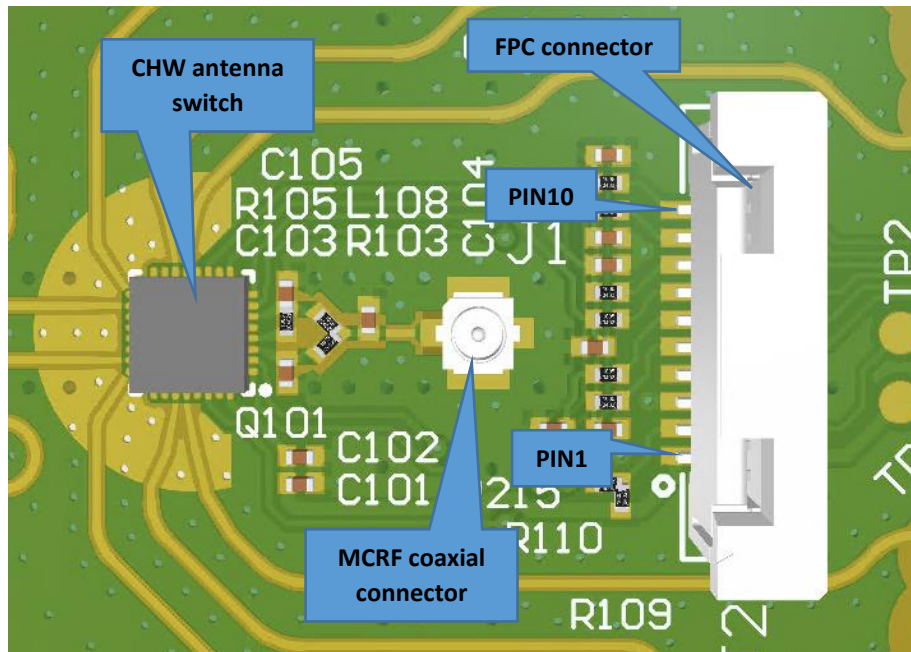
PCB CONNECTORS AND SIGNAL PINS

Table 1. Connector types

RF connector	GPIO connector
MCRF coaxial 50 Ohms	FPC vert 10pos, pitch 1mm

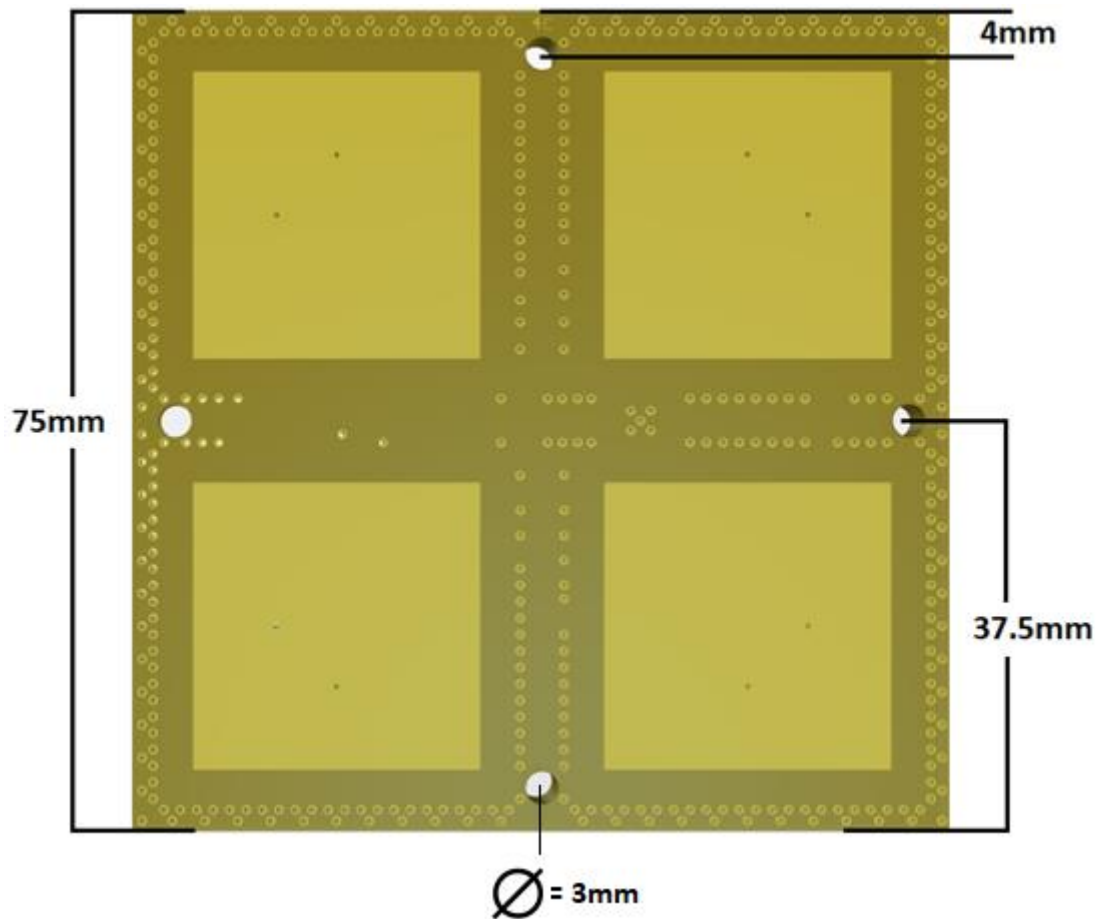
Table 2. GPIO pin contacts

Pin	Purpose	Description
1	VBAT	Supply voltage (3V nominal)
2	Unused	Unused
3	GND	GND
4	GND	GND
5	D1	ANT_SELO
6	D3	ANT_SEL2
7	D2	ANT_SEL1
8	D4	ANT_SEL3
9	D0	Digital control input
10	EN	Chip enable



DIMENSIONS

PCB thickness: 3.6 mm



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