

#### FEATURES

- **CoreHW CorePatch 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
- Dual polarized antenna array with eight patch antenna elements
- Connectors for radio frequency signals and CoreHW CHW1010 SP16T GPIO control signals
- Low cost 4-layer PCB stack-up structure
- Optimized phase balance between antenna chains
- No need for calibrations during production
- Firmware support and antenna models available
- PCB dimensions: 150mm x 150mm

#### 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*

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

#### GENERAL DESCRIPTION

**CoreHW CorePatch PCB** is an antenna array consisting of eight dual polarized patch antenna elements. The antenna array PCB is intended for direction and positioning system solution providers.

CorePatch 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.

CorePatch antenna boards enable system solutions which are insensitive to multipath signals, has position accuracy down to sub 0.5 meter level and are easy, fast and cost-efficient to manufacture.

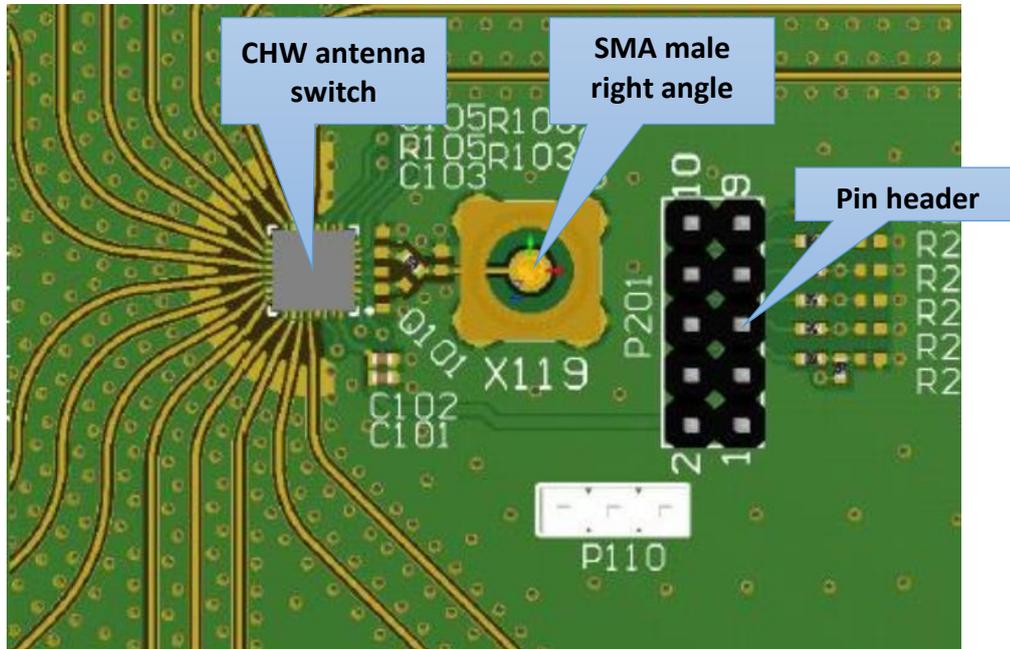
CoreHW offers an AoA demo system with CoreHW firmware and Windows PC positioning engine SW with user interface (GUI). The demo system contains four CorePatch PCB based locators. The demo system can be used for laboratory tests and for initial testing in real use case scenarios.



PCB V2, V2.0L CONNECTORS AND SIGNAL PINS

PCB version	RF connector	GPIO connector
V2, V2.0L	SMA male (right angle)	Pin header

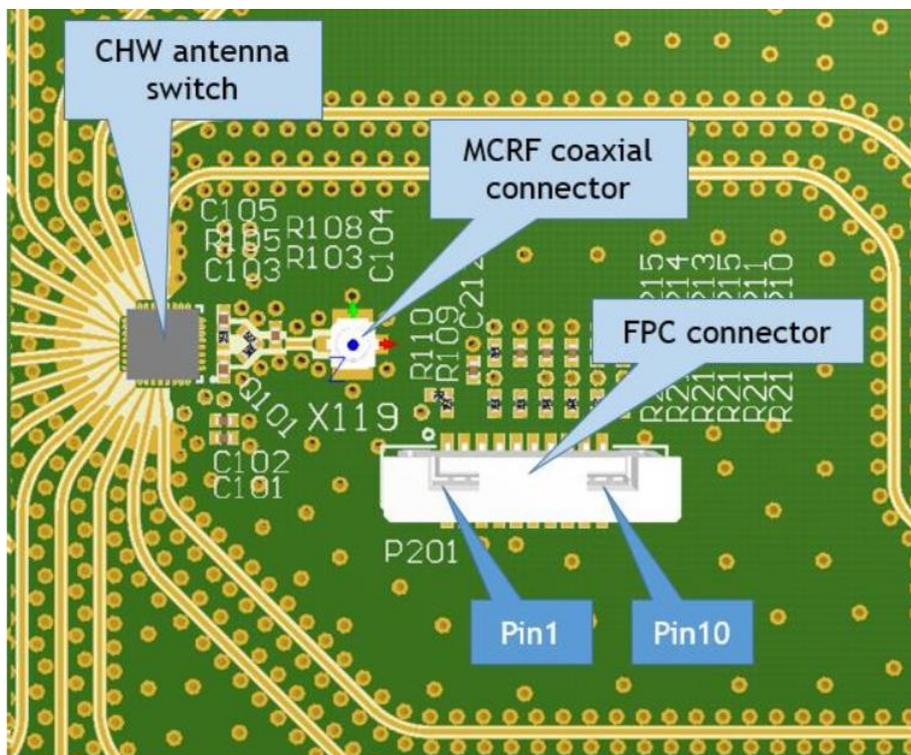
Pin	Purpose	Description
1	VBAT	Supply voltage (3V nominal)
2	VBAT	Supply voltage (3V nominal)
3	GND	GND
4	GND	GND
5	D1	ANT_SELO
6	D3	ANT_SEL2
7	D2	ANT_SEL1
8	D4	ANT_SEL3
9	D0	Digital control input
10	EN	Chip enable



### PCB V2.1L CONNECTORS AND SIGNAL PINS

PCB version	RF connector	GPIO connector
V2.1L	MCRF coaxial 50 Ohms	FPC vert 10pos

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

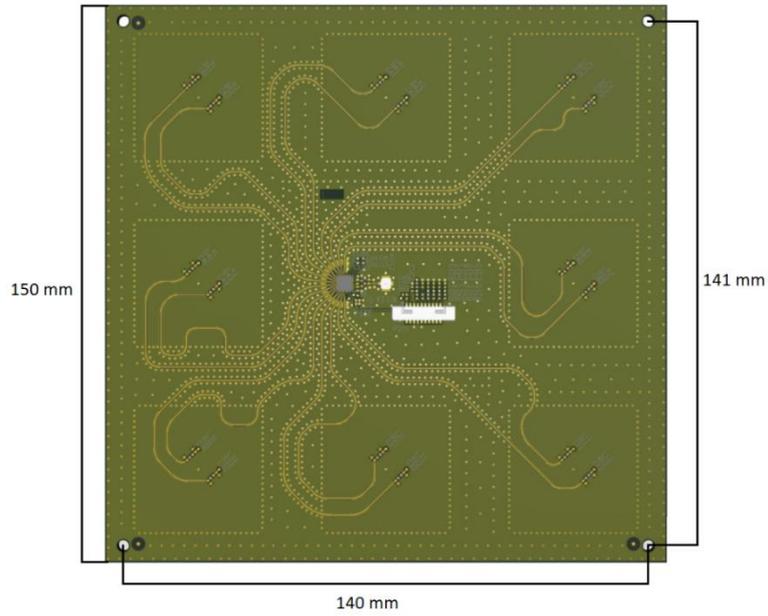


### Technical Data

### CoreHW CorePatch PCB

#### DIMENSIONS

PCB thickness: 3.6 mm



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