

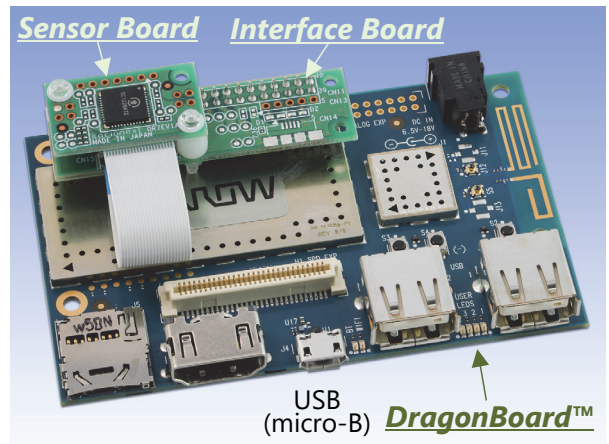
SC1220AT2-B-113

Evaluation Kit for CMOS 60GHz Radar Sensor

Overview

"The 3D radar sensing evaluation kit (EVK), SC1220AT2-B-113, provides an evaluation environment of the Socionext 60GHz radar sensor (SC1220AT2).

The EVK consists of EVK main unit (sensor board, interface board, and DragonBoard™*), accessory, and the software package which is to be used under the host windows OS PC connected with the EVK via a USB cable.

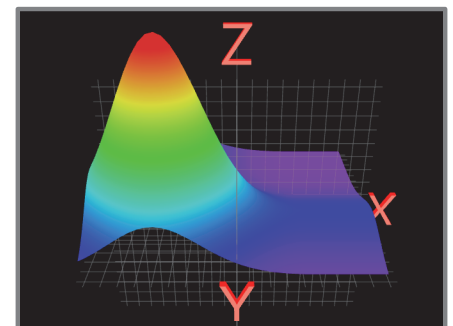


Evaluation Kit of SC1220AT2

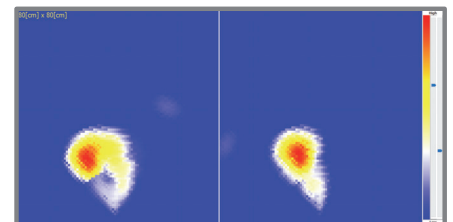
*: DragonBoard is a trademark of Qualcomm Incorporated, registered in the United States and other countries.

Functions

- Selectable three sensing results through API :
 1. 1D/2D/3D location detection result
 2. FFT operation data
 3. IQ data
- 3D location library for several use-cases.
 - 30cm range for finger location, 50cm range for hand location, 7m range for human location.
- GUI based evaluation software :
 - View 3D location library results on GUI application.
 - A rich set of viewers, including 3D color-maps, heat-maps, and distance graphs.
 - Gesture application that recognize hand movements.



a) 3D Color-map

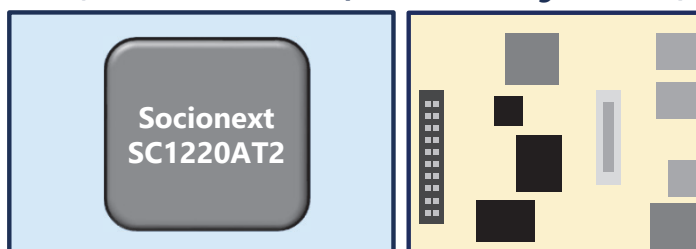


b) Heat-map

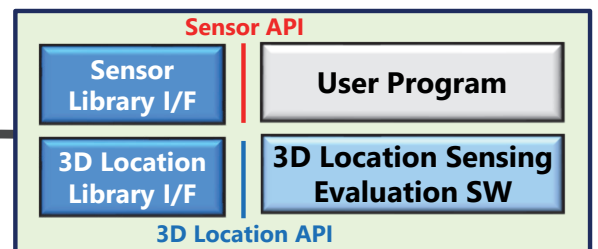
Left: xz-graph (H: x-axis, V: z-axis)
Right: yz-graph (H: y-axis, V: z-axis)

EVK System Structure

EVK (Sensor Board & Interface Board, DragonBoard™)



Host PC (Windows)



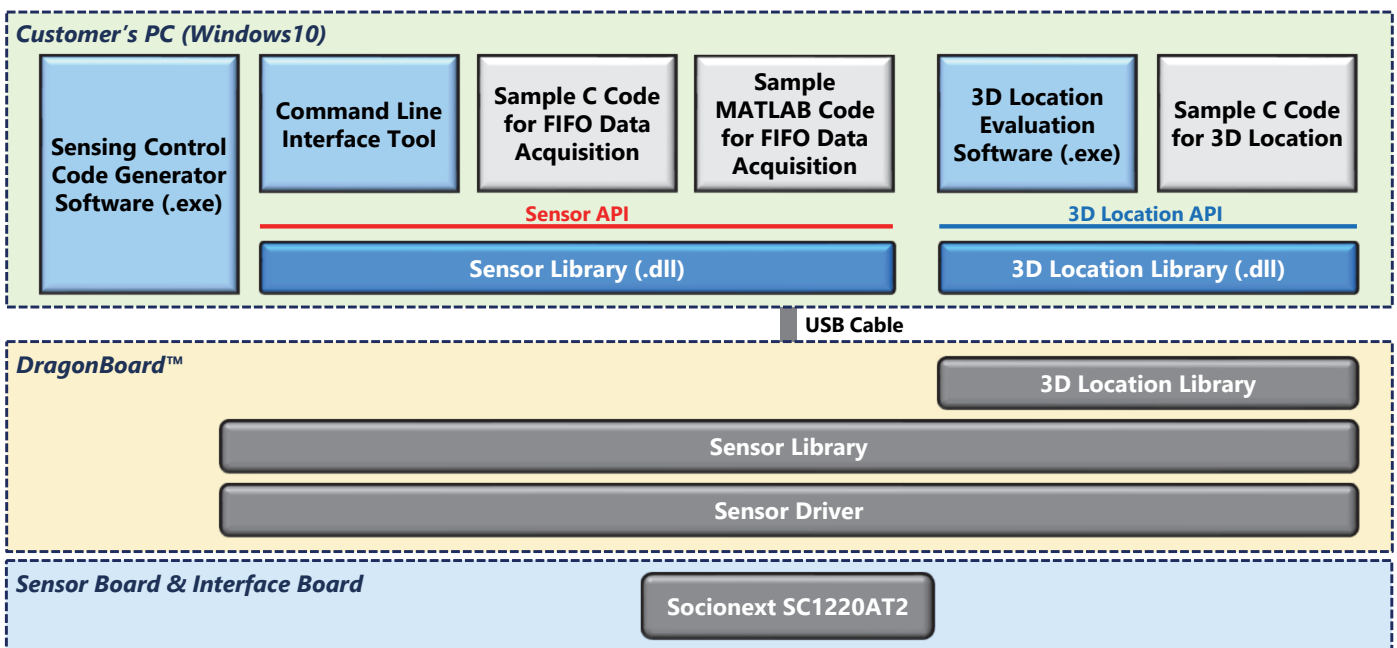
■ Specifications

Frequency	57.1 - 63.9GHz
Sensing mode	FMCW/ CW/ FSKCW ^{*1,*2}
Output (API)	<ul style="list-style-type: none"> • IQ/ FFT Data (API of Sensor Library) • Distance/ 3D Location (API of 3D Location Library)
Interface	USB2.0 (micro-B)

*1: FMCW: Frequency Modulated Continuous Wave, FSKCW: Frequency Shift Keying Continuous Wave

*2: In the 3D location library, FMCW sensing mode is used.

■ Contents of EVK Software



■ Measurement environment using EVK

Setting : Connects the Evaluation Kit (EVK) to the host PC, on which the 3D location sensing software is installed, by a USB cable.

Notes : In order to detect objects like a human and its hand, the EVK should be placed on a horizontal plate like a table and be faced in the vertical upper direction (z-axis) as shown in the right figure.

