

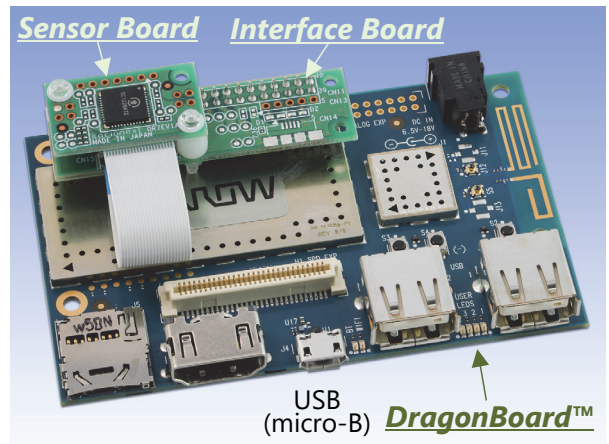
# SC1220AT2-B-113

# 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.

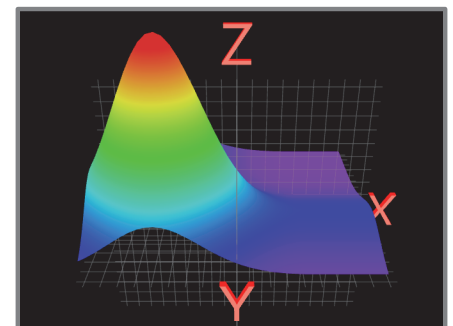


Evaluation Kit of SC1220AT2

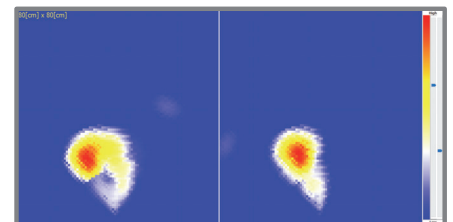
\*: DragonBoard is a trademark of Qualcomm Incorporated, registered in the United States and other countries.

## 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

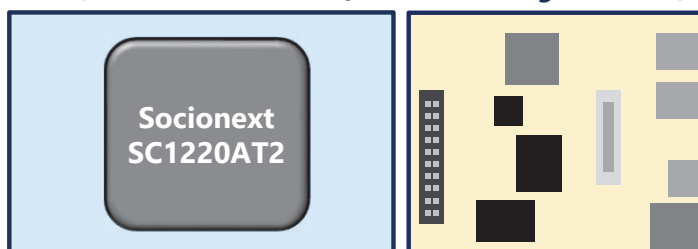


b) Heat-map

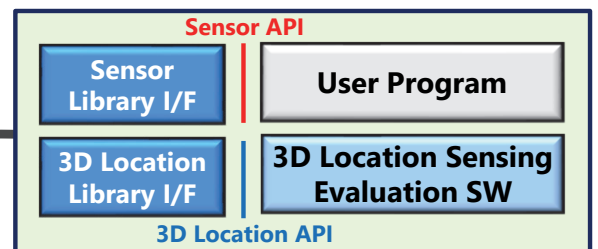
Left: xz-graph (H: x-axis, V: z-axis)  
Right: yz-graph (H: y-axis, V: z-axis)

## EVK System Structure

*EVK (Sensor Board & Interface Board, DragonBoard™)*



*Host PC (Windows)*



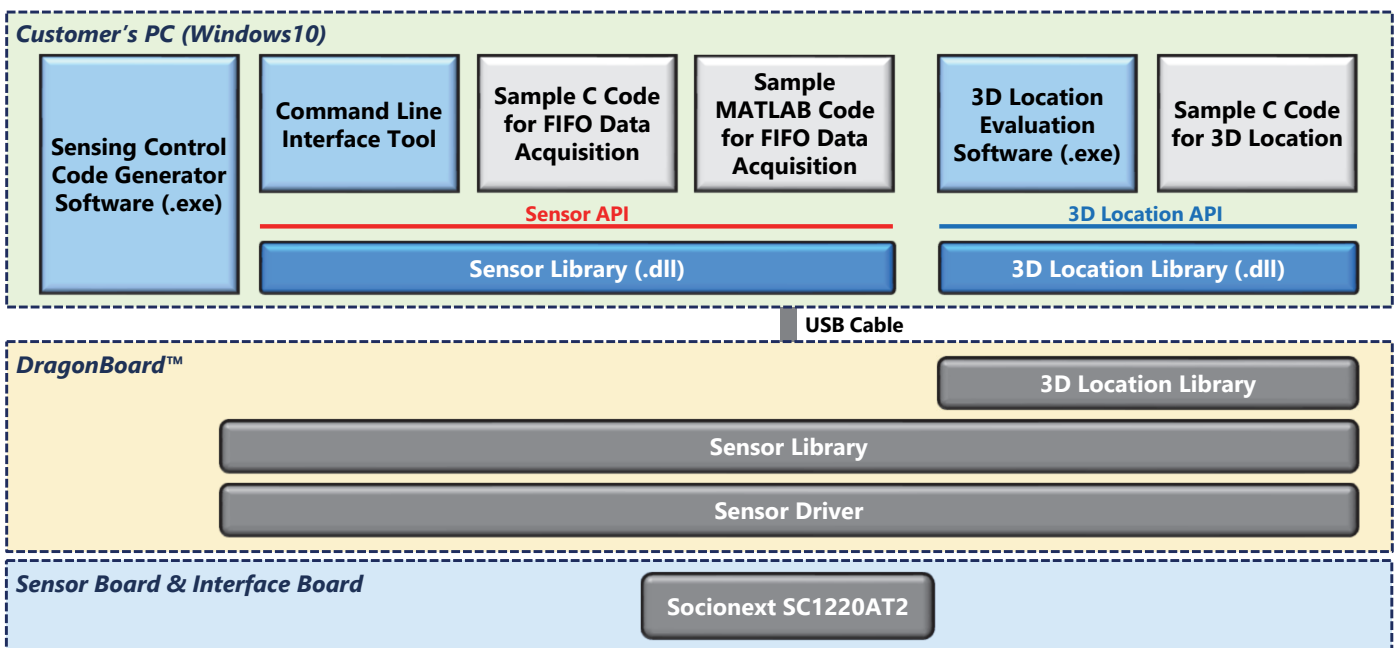
## ■ Specifications

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

