

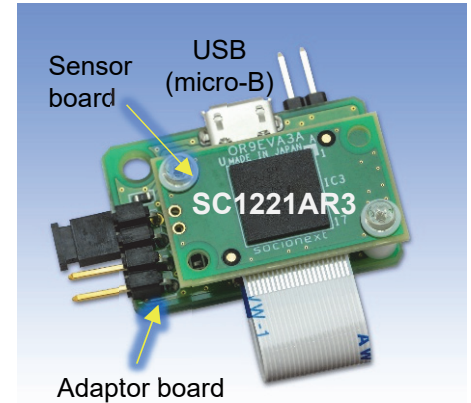
# SC1221AR3-B-220

## Evaluation Kit for CMOS 60GHz Radar Sensor

### ■ Overview

The 2D location sensing evaluation kit (EVK), SC1221AR3-B-220, provides an evaluation environment of the Socionext 60GHz Radar Sensor (SC1221AR3).

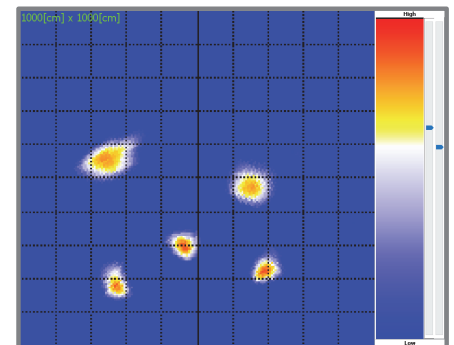
The EVK consists of EVK main unit (Sensor board, Adaptor board) and the software package which is to be used under the host Windows OS PC connected with the EVK via a USB cable.



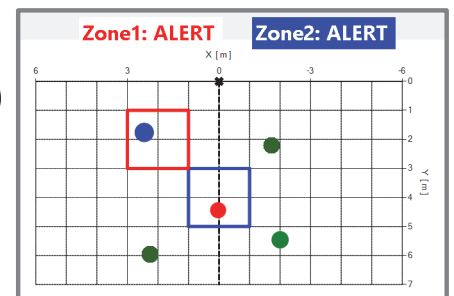
### ■ Functions

- Selectable three sensing results through API :
  - 1) IQ data
  - 2) FFT data
  - 3) 1D/2D/3D location detection results
- Supports flexible sensing configurations
  - Selectable from FMCW, CW, and FSKCW
  - Configurable frame rate, frequency, bandwidth, and chirps for sensing target
  - Acquired IQ/FFT data enables user-defined signal processing.
- Instant performance check (with 2D Location Library\*)
  - Multiple low-power operation modes
  - Heatmap window visualizing detection results
  - Intrusion detection application for specified zones

\*: This library is prepared by Socionext for evaluation purposes.

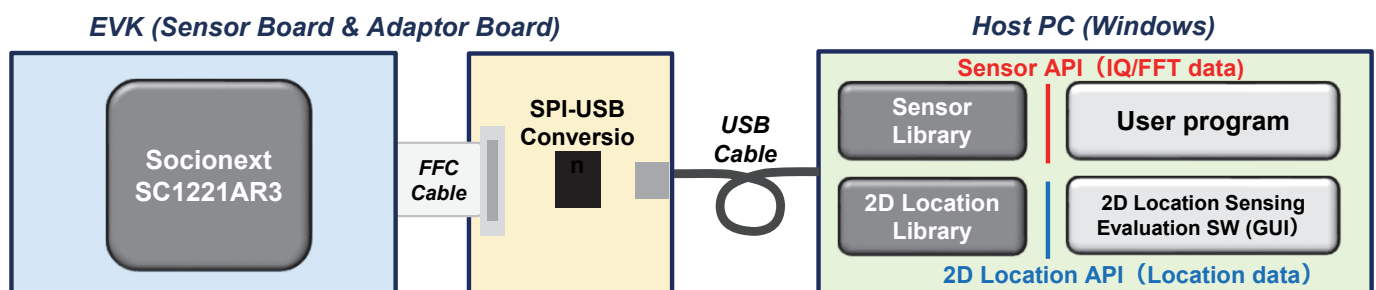


2D heatmap



2D plot window

### ■ EVK System Structure



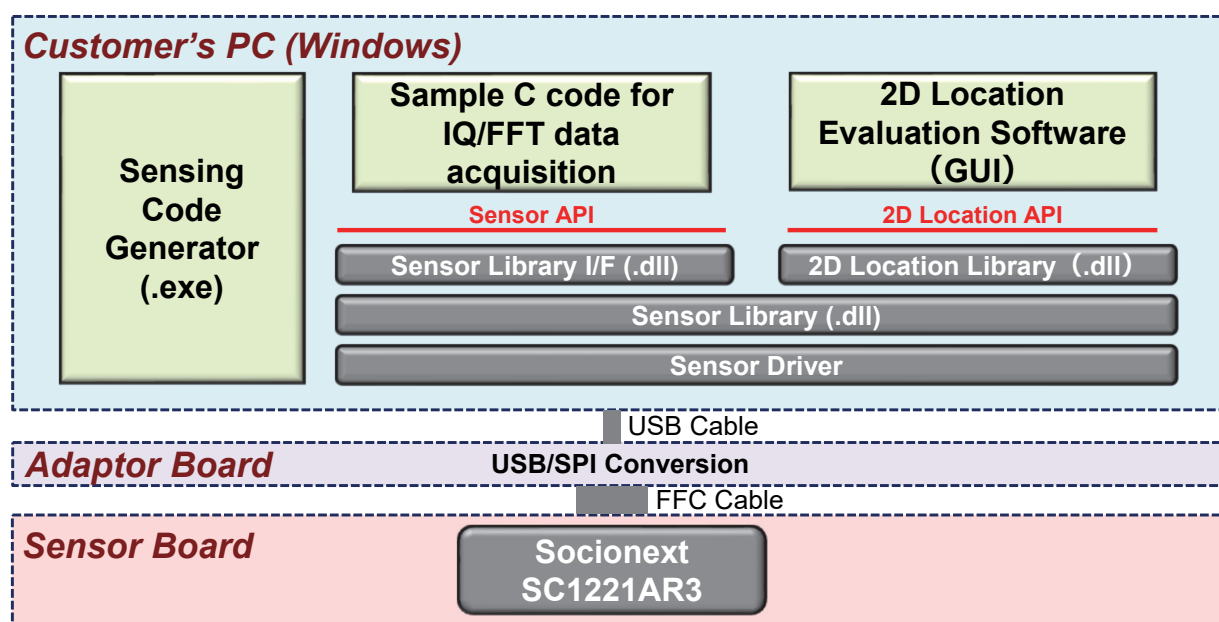
## ■ Specifications

|                     |                                                                                                                                                       |
|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| <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/ 2D Location (API of 2D 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 2D location library, FMCW sensing mode is used.

## ■ Contents of EVK Software



## ■ Measurement environment using EVK

### Setup:

Connects the Evaluation Kit (EVK) to the host PC, on which the 2D location sensing software is installed, by a USB cable.

### Setting:

In order to detect objects on the ground, the EVK should be faced to the detection target area, for example, placing it on the wall or with a supporter like a tripod stand as shown in the right figure.

