

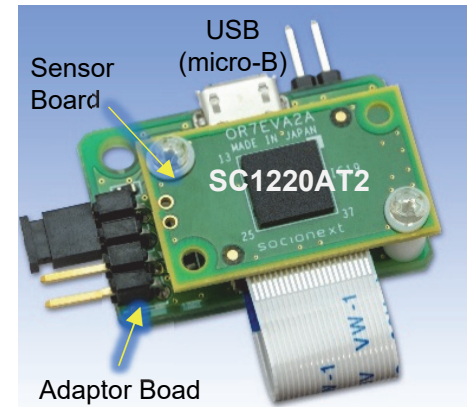
SC1220AT2-B-230

Evaluation Kit for CMOS 60GHz Radar Sensor

■ Overview

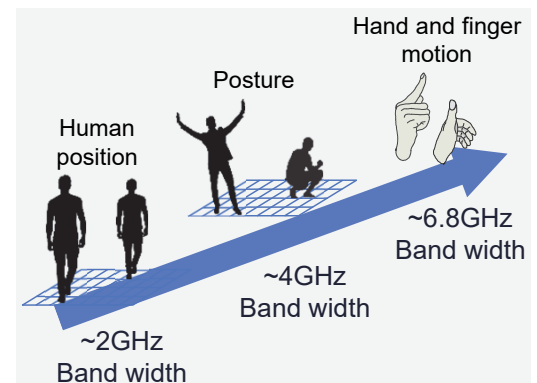
The 3D radar sensing evaluation kit (EVK), SC1220AT2-B-230, provides an evaluation environment of the Socionext 60GHz radar sensor (SC1220AT2).

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.

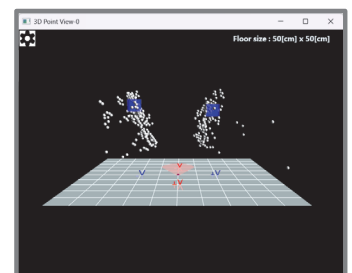


■ Functions

- 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.
- Quick performance evaluation (via 3D Location Library*)
 - 3D display window for visualizing detection of fingers (30 cm), hands (50 cm), and people (7 m)



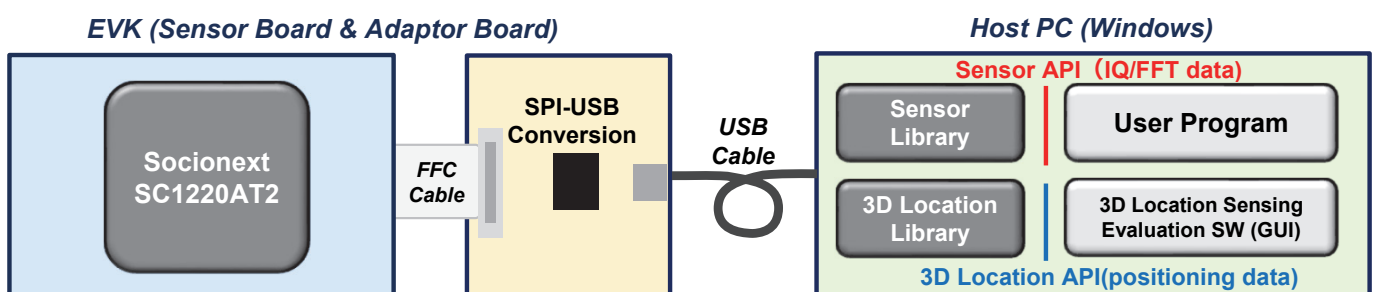
Examples of detectable targets by bandwidth **



3D Location Window

* : This library is prepared by Socionext for evaluation purposes.
 ** : These examples are for reference only and do not guarantee detection.

■ EVK System Structure



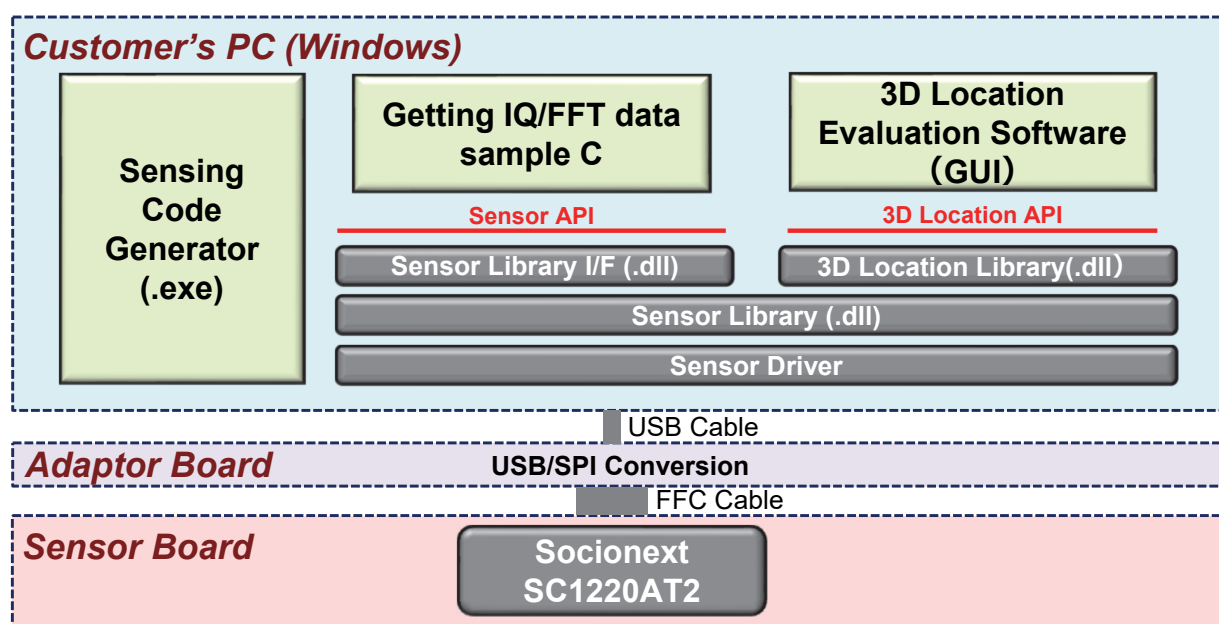
■ Specifications

Frequency	57.1 - 63.9GHz
Sensing mode	FMCW/ CW/ FSKCW ^{*1,*2}
Output (API)	• 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



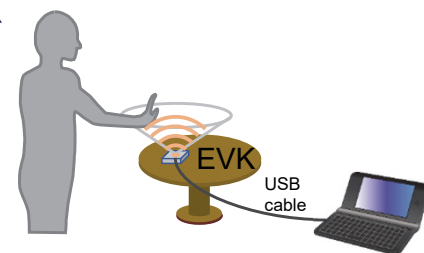
■ Measurement Environment using EVK

Setup:

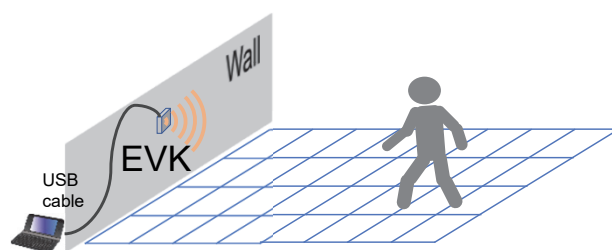
Connect the Evaluation Kit (EVK) to the host PC, on which the 3D location sensing software is installed, by a USB cable.

Setting:

- (a) Upward transmission for fine hand detection,
- (b) Horizontal transmission for wide-area human detection (indoor/outdoor).



(a) Example of hand position detection



(b) Example of human position detection

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Socionext Inc.

Nomura Shin-Yokohama Bldg.,
2-10-23 Shin-Yokohama,
Kohoku-ku, Yokohama, Kanagawa, 222-0033, Japan
Tel. +81-45-568-1015
<https://www.socionext.com/en/>