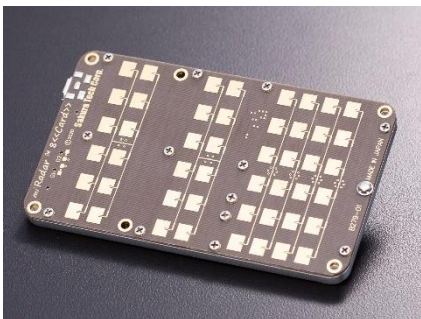


# Card-size 24GHz FMCW MIMO Radar Platform

## Overview

- 24GHz FMCW MIMO Radar sensor
- Tx 2ch, Rx 4ch / 8ch virtual array
- Business Card size, right-weight Module
- Support both distance and Vital Sign data
- microUSB interface



## Features

- Contactless sensing even when Blankets and Clothing exit, and no-affect Brightness
- Simultaneous and Multiple target detection

## Specifications

- Frequency; 24GHz
- Certification: ARIB-T73 (Japan)
- Tx Power: -4/2/8 dBm (selectable)
- # of Antenna: Tx 2, Rx 4 MIMO
- FoV : Elevation  $\pm 8^\circ$  / Azimuth  $\pm 45^\circ$
- Resolution: Distance 0.8m / Azimuth  $13^\circ$
- Size (mm): 92 x 55 x 5
- Signal processing: External PC
- Power: DC+5V, <0.9A (USB Bus Power)
- Operating Temp. -20 to +60°C

## Applications

- Care Services  
Simultaneous multiple people monitoring of Vital Sign Monitoring, Heart and Respiration rates even Blankets and Clothing exist
- Security
  - Intrusion detection
  - Avoidance detection
  - Human detection over a wall (note) in visible and in dark-night.
- Construction field
  - People detection of prohibits area
- Parking / Multi storey Car Park
  - Intrusion detection
  - Child Presence Detection
- Backward Monitoring  
Prevention of a collision with a vehicle approaching from behind, or blind spot.



## System configuration (example)

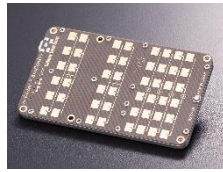
Open data platform for advanced analytics and machine learning



Sensor to Cloud



Multiple targets

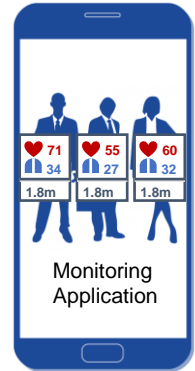


miRadar® 8 <<Card>>

USB



Radar and VSM algorithm

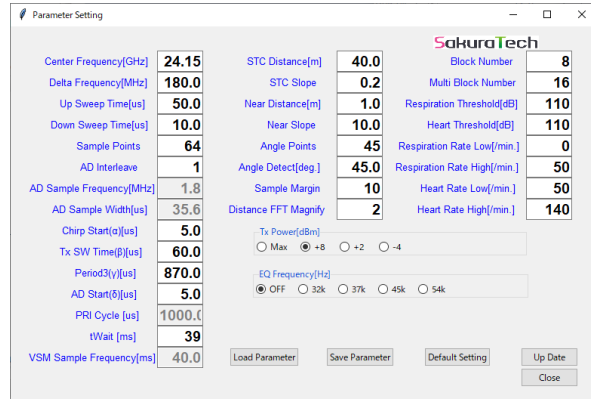
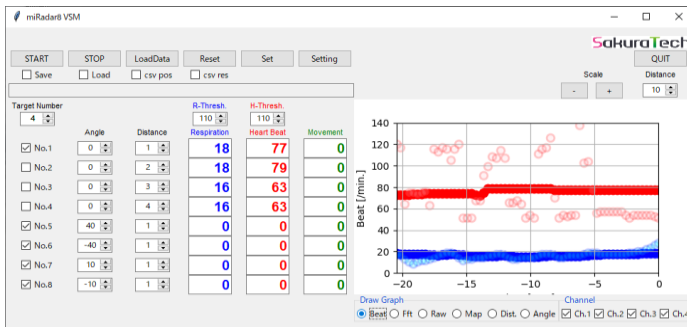


Monitoring Application

- USB data communication and USB Bus-Power
- Application software running on the PC

## Software Development Kit for VSM Application (example)

- Python open source-code available for user development
- Instruction manual



## Ordering Guide

Product Name	Product Number	Comments
miRadar®8 <Card>	B279-01	Card size, 24GHz FMCW MIMO Radar Platform
miRadar®8-EV2 <Card>	B279-01-EV2	Radar Evaluation hardware bundled B279-SW001 and B279-SW002
miRadar®8-VSM <Card>	B279-01-VSM	VSM Evaluation hardware bundled B279-SW007
Radar Evaluation software	B279-SW001	Radar Evaluation software (starter version) – bundled EV2 evaluation kit.
Radar Evaluation software	B279-SW002	Radar Evaluation software (standard version) – bundled EV2 evaluation kit.
VSM Evaluation software	B279-SW007	VSM Evaluation software – bundled VSM evaluation kit
VSM SDK (Matlab)	B279-SW009	SDK for VSM. Opened some source code for MATLAB / Windows
VSM SDK (Python)	B279-SW011	SDK for VSM. Python code for user development

## SAKURA TECH CORPORATION

### Headquarters:

4F-B VORT Shin-Yokohama Bldg. 3-2-6 Shin-Yokohama, Kohoku-ku, Yokohama-shi, Kanagawa, 222-0033 Japan

### Contact:

Phone: +81-45-548-9611 Fax: +81-45-548-9533

E-mail: [info@sakuratech.jp](mailto:info@sakuratech.jp)

<https://www.sakuratech.jp>



### ALLIANCE PARTNERS

