

# RADAR-SENSOR BASED VITAL SIGN MONITOR (VSM) DEVELOPMENT PLATFORM

## OVERVIEW

- A 24-GHz radar vital sign sensor for heart and respiration rates
- Sensor algorithm that works with the 24-GHz radar sensor module, miRadar™8, uses a chipset by Analog Devices, Inc.
- Ranging sensor and vitals sensor can be configured with software as software-defined radar systems
- Allows connectivity with IoT cloud system for advanced signal processing design



Radar sensor module



System development kit

## RADAR VSM FEATURES

- Contactless sensing
- Sensing through fabric
- Senses multiple objects
- Senses from front or back
- Privacy protection—no images
- 24/7 monitoring
- Moving target tracking with vital sign monitoring
- Sensor-to-cloud connectivity—first as a commercial product

## ADVANCED ALGORITHM DEVELOPMENT PLATFORM

- Sensor data can be uploaded to IoT cloud
- Sensor data as big data—capable of working with modern technologies such as data analytics and machine learning tools



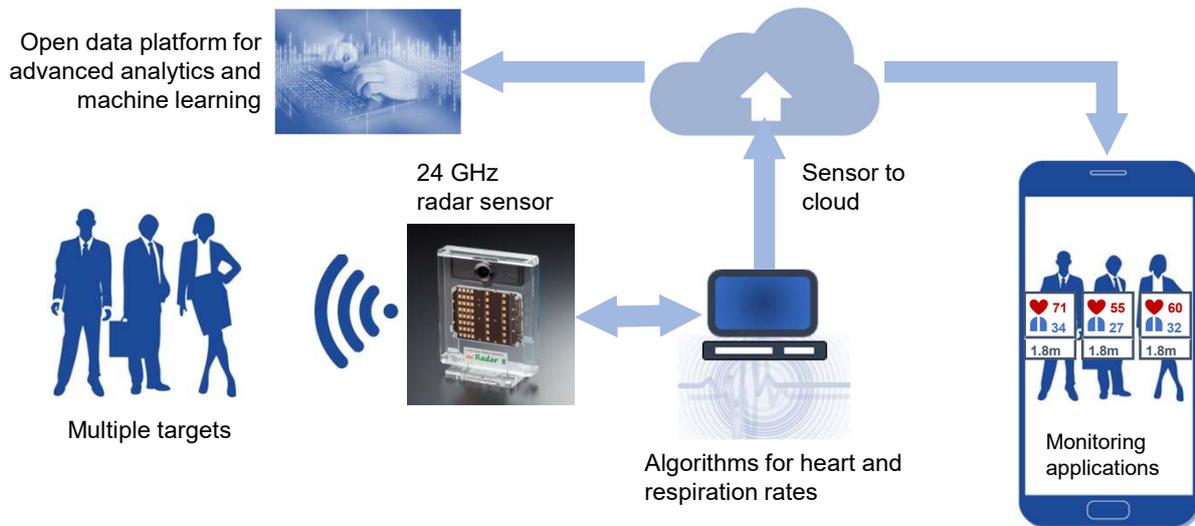
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GUI image

## APPLICATIONS

- Advanced algorithm development platform with machine learning technology
- Nursing care services—e.g. 24/7 monitoring, moving object tracking, sensing through blankets and clothing, sudden infant death syndrome (SIDS) prevention, sleep apnea syndrome (SAS) prevention

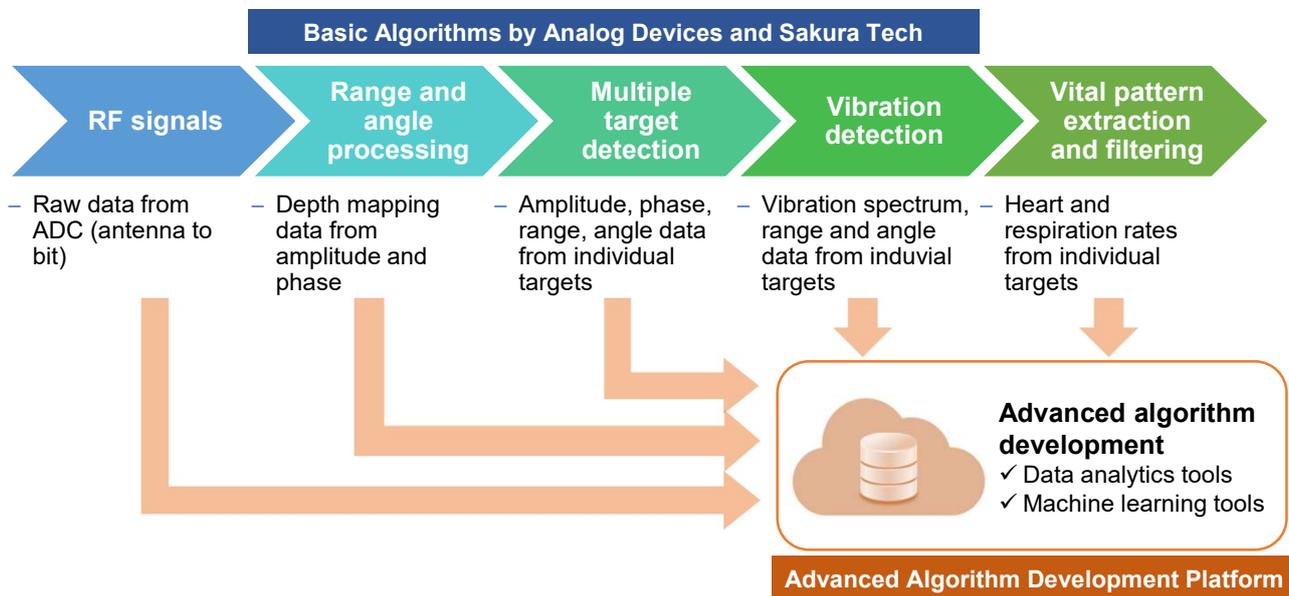


## SYSTEM OVERVIEW



- Direct sensor connection and control to-and-from IoT cloud
- Data logging for either local sensor data store (CSV format) or IoT cloud storage
- Sensor data with time stamp and device ID data
- Flexible sensor data for algorithm development
- Customizable algorithms

## RADAR VSM DATA FOR ALGORITHM DEVELOPMENT



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