Implement one of many different mmWave radar sensing algorithms to measure, detect, and track

The DesignCore® platform RS-1843AoP/RS-6843AoP mmWave Sensor is simple but feature-rich mmWave radar sensor based on the Texas Instruments AWR1843/IWR6843AoP. The AWR1843/IWR6843AoP has a full radar transceiver for FMCW with 3 transmitters and 4 receivers, a C67XX DSP for algorithms, and an ARM R4F microprocessor for decision-making and interfacing. It provides a hardware and software starting point for your design.

The RS-1843AoP/RS-6843AoP Sensor has UART and GPIO interfaces. The RS-1843AoPU/RS-6843AoPU Sensor also features a built-in USB-Serial converter. Many algorithms are available as a basis for a solution for your application.

D3 Engineering supports OEM/ODM customers with embedded system development and customized production.

SPECIFICATIONS

- **Form Factor**: 1” cube
- **Voltage Input**: 5 V
- **Interfaces**: JTAG, I/O, TTL UART (AoP), USB-Serial (AoPU)
- **RF Spectrum**: 76 to 81 GHz (RS-1843AoP/AoPU)
- **Receive Channels**: 4
- **Transmit Channels**: 3
- **DSP**: 600 MHz TI C67XX
- **Microprocessor**: 200 MHz TI ARM R4F

FEATURES

- Embeddable Small Form Factor Design
- Integrated PLL, Transmitter, Receiver, Baseband, A2D
- Ultra-Accurate Chirp (Timing) Engine Based on Fractional-N PLL
- UART, logic level I/O, JTAG
- MIMO Antenna-on-Package
- 16 Mb QSPI Flash
- Temperature Sensors
- 5 VDC Power

APPLICATIONS

- Stand-Alone mmWave Radar Sensor
- Driver Monitoring
- Industrial Vehicle Systems
- Robotics
- Autonomous Machines
- Edge Sensor Processing

Bring the rich feature set support of mmWave radar into your industrial automation, autonomous vehicle, or tracking application.
The designs have been cost-optimized for:

**DesignCore Platforms** – Hardware and Software starting point for your design. Allows rapid prototyping and customization.

**DesignCore Reference Design** – Application specific hardware and software for popular applications.

**DesignCore Development Kit** – Development tools that can be purchased and used for prototyping and testing.

**ORDERING INFORMATION**

These sensors are available when you engage D3 Engineering for a systems development project.

**CALL:** 585-429-1550  
**EMAIL:** sales@D3Engineering.com  
**VISIT:** D3Engineering.com