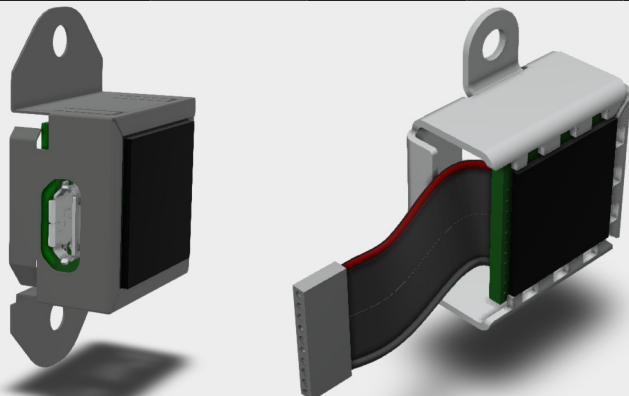


DESIGNCORE[®] PLATFORM

EMBEDDED mmWAVE RADAR SENSORS



Bring the rich feature set support of mmWave radar into your industrial automation, autonomous vehicle, or tracking application.

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

FEATURES

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

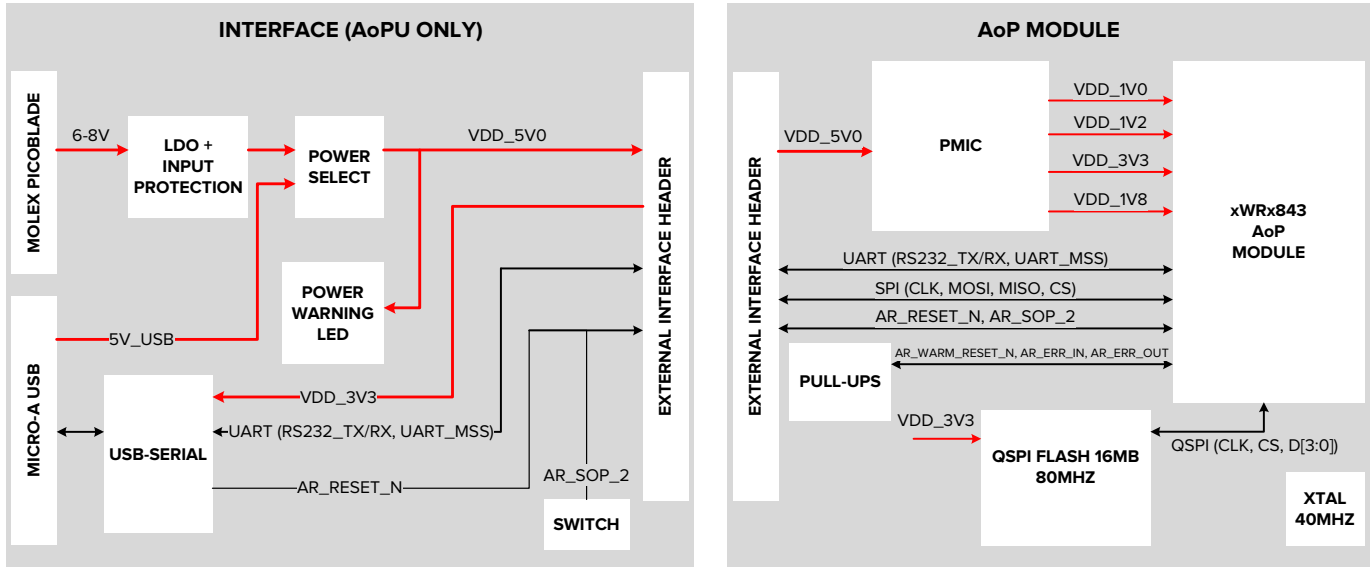
SPECIFICATIONS

Form Factor	1" cube
Voltage Input	5 V
Interfaces	
Debug Board Level	JTAG, I/O TTL UART (AoP), USB-Serial (AoPU)
RF Spectrum	76 to 81 GHz (RS-1843AoP/AoPU) 60 to 64 GHz (RS-6843AoP/AoPU)
Bandwidth	4 GHz
Receive Channels	4
Transmit Channels	3
DSP	600 MHz TI C67XX
Microprocessor	200 MHz TI ARM R4F

APPLICATIONS

- Stand-Alone mmWave Radar Sensor
- Facility Monitoring
- Driver Monitoring
- People Counting and Tracking
- Industrial Vehicle Systems
- Robotics
- Autonomous Machines
- Edge Sensor Processing

DESIGNCORE® EMBEDDED mmWAVE RADAR SENSORS BLOCK DIAGRAM



LOWER YOUR RISK WITH OUR DESIGNCORE® SOLUTIONS

DesignCore® Solutions are platforms, reference designs, and development tools available from D3 Engineering to lower the risk of your next product development project. They contain tested and reliable hardware, software, algorithms, design documentation, and more. D3 Engineering can quickly work with your team to customize these platforms for your application. They allow you to rapidly move from prototype to design, and then to production. DesignCore Solutions lower risk in three important areas:

Technical Risk: DesignCore Solutions are tested and reliable.

Schedule Risk: DesignCore Solutions consist of reliable and tested components for your design. Accelerate your time to market by 6-9 months.

Cost Risk: DesignCore Solutions have been designed for market specific applications.

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