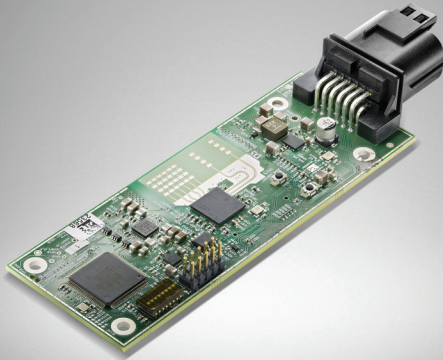


DESIGNCORE[®] PLATFORM

RS-1642A AUTOMOTIVE RADAR SENSOR



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-1642A Automotive Radar Sensor is simple but feature-rich mmWave radar sensor based on the Texas Instruments xWR1642 RFIC. The xWR1642 has a full radar transceiver for FMCW with 2 transmitters and 4 receivers, a 600 MHz C67XX DSP for algorithms, and a 200 MHz ARM R4F microprocessor for decision-making and interfacing. It provides a hardware and software starting point for your design.

The RS-1642A Sensor has UART, GPIO, and CAN Bus interfaces. 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 modules for radar applications.

FEATURES

Rugged, Small Form Factor Design	Integrated MIMO Antenna
Integrated PLL, Transmitter, Receiver, Baseband, A2D	Integrated XDS110 Debugger
Ultra-Accurate Chirp (Timing) Engine Based on Fractional-N PLL	CAN Address Select
CAN, CAN-FD, I2C, SPI, UART, USB, Optoisolated I/O, logic level I/O, JTAG, I2C, 2+2 LVDS	16 Mb QSPI Flash
	Temperature Sensors
	Optoisolated Input/Output
	Automotive Power

SPECIFICATIONS

Form Factor	114 × 42 mm (4.5 × 1.64 inches) stand-alone circuit card
Voltage Input	5 to 36 V
Interfaces	Rugged Debug Board Level
	CAN, CAN-FD, Optoisolated I/O, USB, JTAG, I/O, I2C, SPI, UART, Logic Level I/O, LVDS
RF Spectrum	76 to 81 GHz
Bandwidth	4 GHz
Receive Channels	4
Transmit Channels	2
DSP	600 MHz TI C67XX
Microprocessor	200 MHz TI ARM R4F

APPLICATIONS

Stand-Alone mmWave Radar Sensor

Automotive ADAS

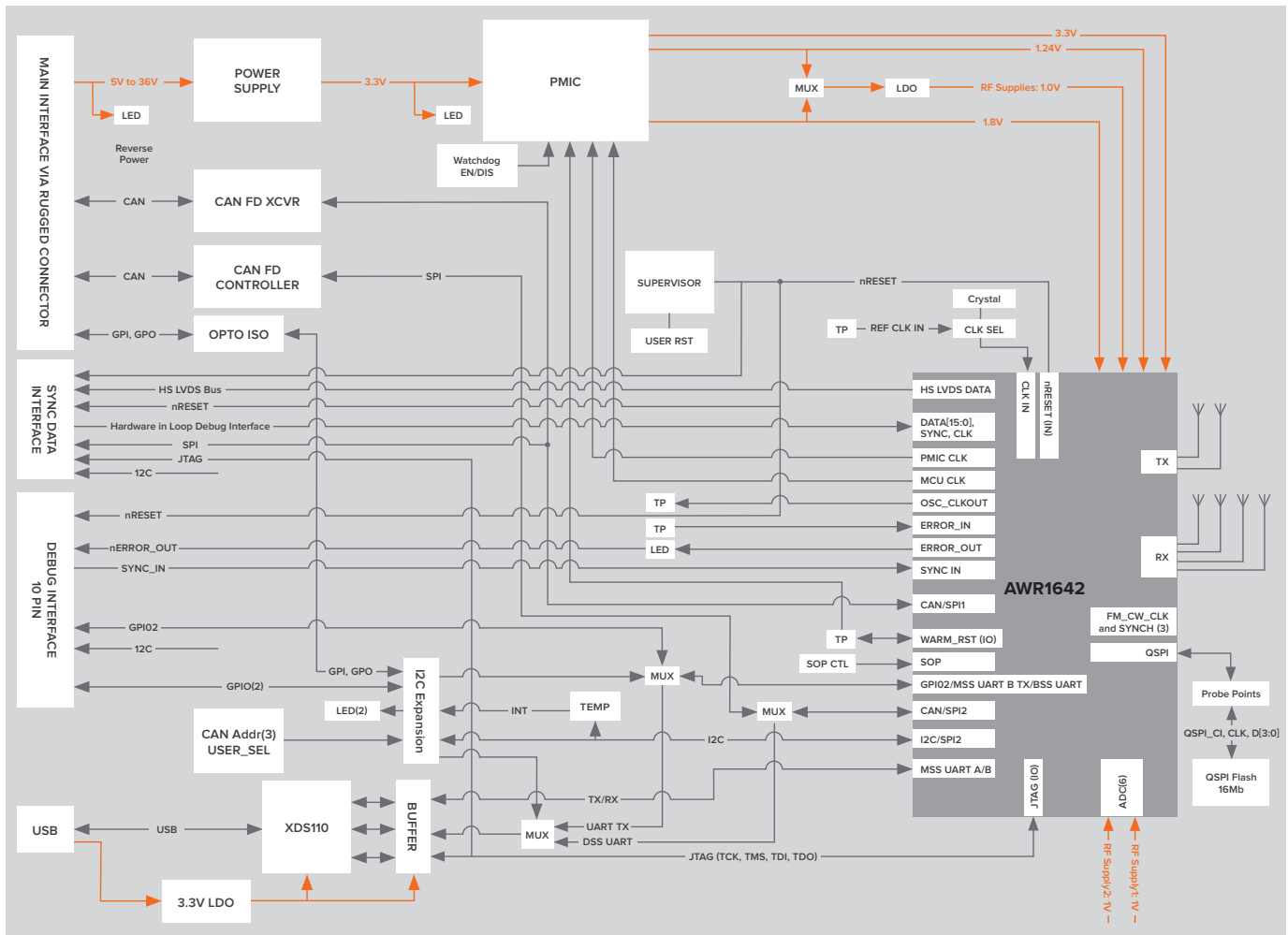
Industrial Vehicle Systems

Robotics

Autonomous Machines

Edge Sensor Processing

DESIGNCORE® RS-1642A AUTOMOTIVE RADAR SENSOR 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

This sensor is available when you engage D3 Engineering for a systems development project.

CALL: 585-429-1550

EMAIL: sales@D3Engineering.com

VISIT: D3Engineering.com