

DESIGNCORE[®]

RS-L6432U AND RS-L1432U MMWAVE RADAR SENSORS

D3



Embed advanced mmWave sensing and algorithms into your consumer, industrial, and automotive products

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

The DesignCore[®] RS-L6432U and RS-L1432U mmWave Radar Sensors are simple, low-power, low-cost but feature-rich sensors based on the Texas Instruments IWRL6432 and AWRL1432 devices.

These devices have a full radar transceiver for Frequency Modulated Continuous Wave (FMCW) with 2 transmitters and 3 receivers, a radar processing hardware accelerator, and an ARM microprocessor for decision-making and interfacing.

These DesignCore platforms provide a hardware and software starting point for your design. They feature a built-in USB-serial connector which can act as a power supply input as well as enumerating two serial UARTs, one for console and processed radar returns or other algorithm output and the other for auxiliary functions.

Many algorithms are available as a basis for a solution for your application. D3 supports OEM customers with embedded system development and customized production modules for radar applications.

FEATURES

Low-Cost Miniature Design with FR4 MIMO Antenna Array

Low Power Modes

Simple Embedded Integration

Alternative Interface Boards for CAN-FD and LIN

Presence, Motion and Gesture Detection Algorithms

Integrated PLL, Transmitters, Receivers, Baseband, ADC

APPLICATIONS

Personal Computers and Laptops

Consumer Electronics

Automotive and Industrial Safety and Controls

Proximity Sensing

Tracking

Enhanced Motion Detection/Tracking

Living Object Detection

Vital Signs Monitoring

Static Scene Changes

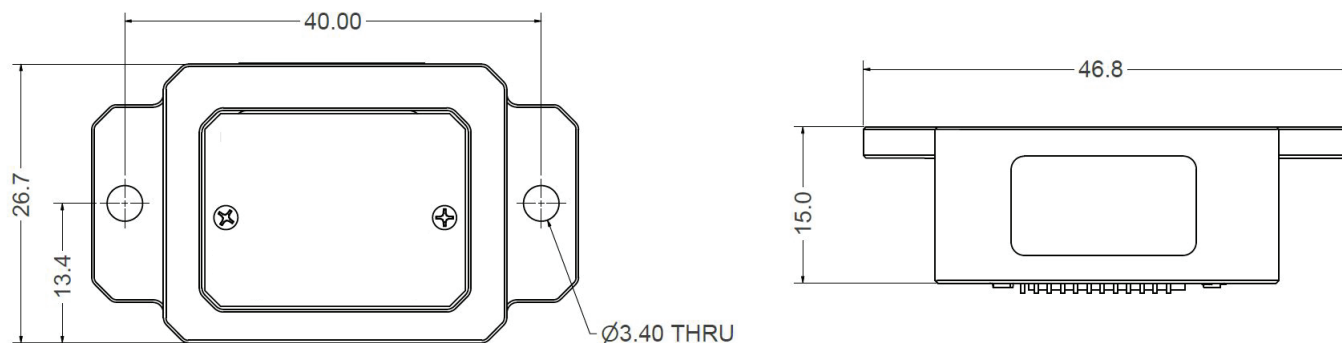
Gesture Recognition

Presence Detection

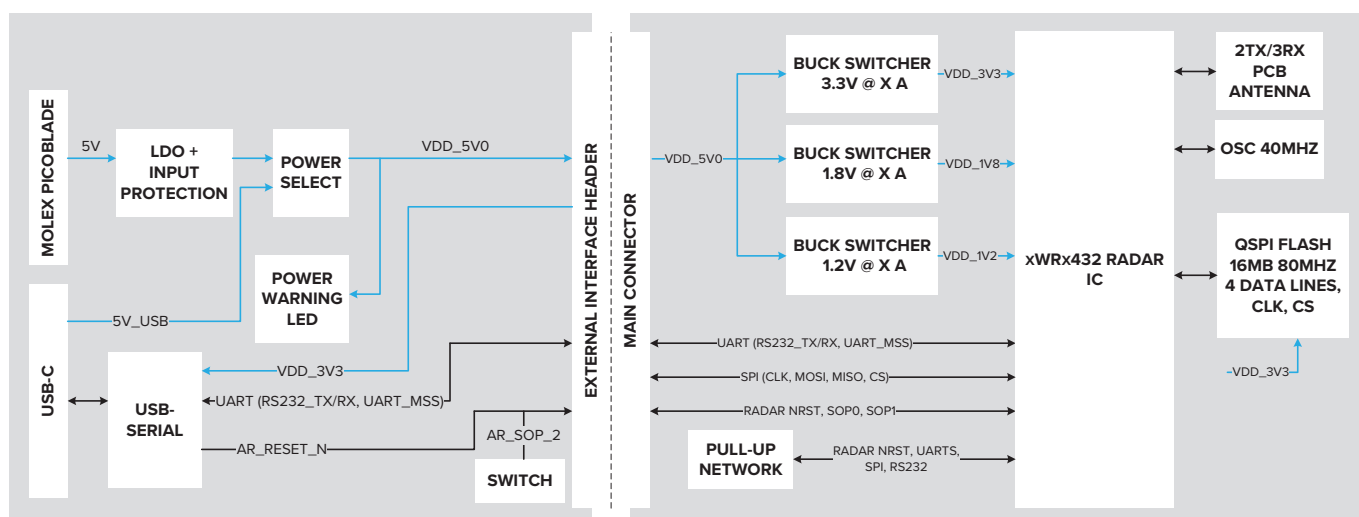
SPECIFICATIONS

Form Factor	1" Cube with Heatsink
Voltage Input	5 V, 1 A max
Frequency Band	RS-L6432: 57-64 GHz RS-L1432: 76-81 GHz
Bandwidth	RS-L6432: 7 GHz RS-L1432: 5 GHz
Channels	3 RX, 2 TX
Forward Human Detection Range	10 to 20 m
Field of View Az, El	TBSL
Angular Separation to Resolve Separate Objects Az, El	TBSL
Microprocessor	ARM Cortex-M4F @ 160 MHz
Co-processor	Radar Hardware Accelerator
Interface Type	USB-C Jack
Interfaces	UART over USB





DESIGNCORE® RS-Lx432U MMWAVE RADAR SENSOR BLOCK DIAGRAM



ACCELERATE TIME TO MARKET WITH THE D3 PRODUCT DEVELOPMENT PROCESS

DEFINE: Enable off-the-shelf radar sensors with established algorithm software and convenient interfaces to quickly find the radar system that best suits your application.

DESIGN: Work with our design services team to customize off-the-shelf radar sensors for your use case and volume production requirements.

DEPLOY: Leverage D3's dependable capabilities as an American original design manufacturer to deploy your product faster than the competition.

When the possibilities are endless, D3 makes the best solution possible.

CALL: 585-429-1550

EMAIL: Sales@D3Engineering.com

VISIT: D3Engineering.com

ORDERING INFORMATION

DesignCore® RS-L6432U mmWave Radar Sensor
SKU: 1002048

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