
Waveform Capture based Ultrasonic Sensing for multi-transducer pairs Board Connections

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ABSTRACT

This document describes the connections required for connecting the USS MUX to the EVM430-FR6047.

Table of contents

| | | |
|----------|-----------------------------------|----------|
| 1 | Schematic | 2 |
| 2 | Board Layout | 3 |
| 3 | Board Connections..... | 3 |
| 4 | Revision Information | 4 |

1 Schematic

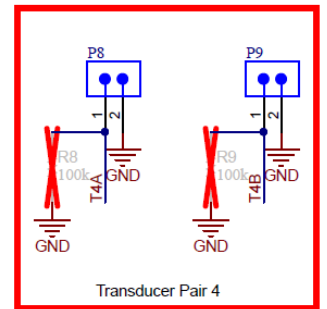
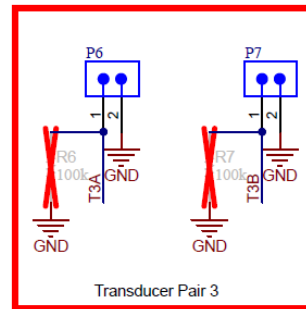
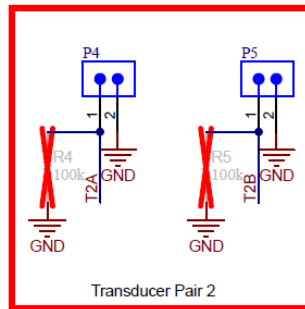
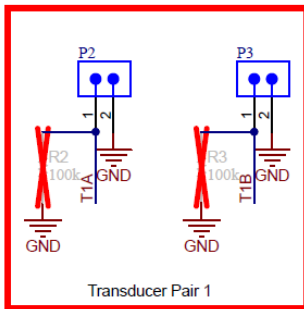
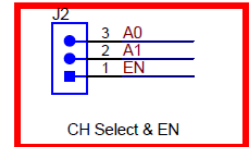
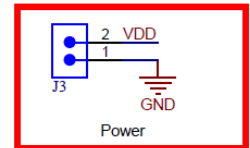
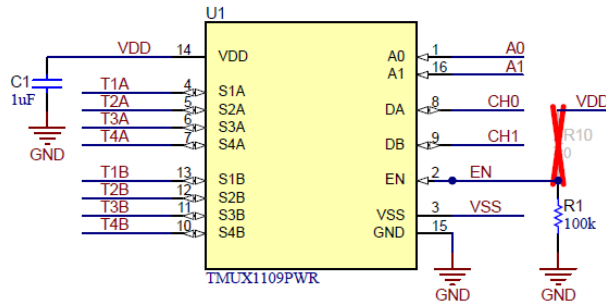
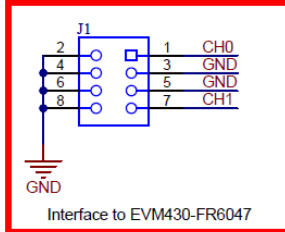
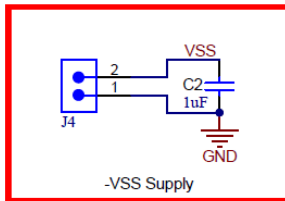


Figure 1: MSP430FR6047 USS MUX Schematic

2 Board Layout

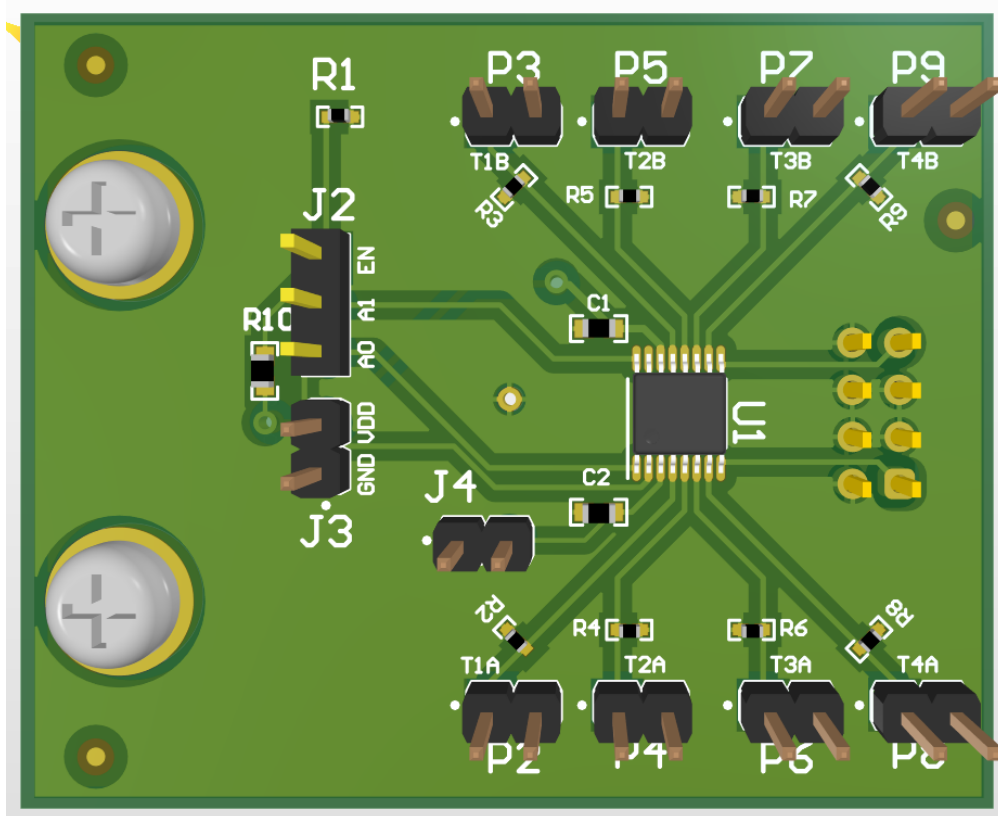


Figure 2: USS MUX Board Layout

3 Board Connections

3.1 Enable and Address

J2 – For always on operation, EN should be tied to VDD. If controlling the enable via GPIO, connect this pin to GPIO on MSP430FR604x. Active high signaling is used for this pin.

3.2 Power

J3 - Positive Supply voltage (2.2V – 3.6V)

J4 – Negative Supply voltage (Total voltage range between positive and negative supply must be less than 5.5V)

3.3 Connection to EVM430-FR6047

J1 – Should be connected to J8 of the EVM430-FR6047.

3.4 Transducer Connections

T1A(P2) – Transducer pair 1

T1B(P3) – Transducer pair 1

T2A(P4) – Transducer pair 2

T2B(P5) – Transducer pair 2

T3A(P5) – Transducer pair 3

T3B(P6) – Transducer pair 3

T4A(P7) – Transducer pair 4

T4B(P8) – Transducer pair 4

4 Revision Information

This is version 0.0 of the document, last updated on July 9th, 2019.

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