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Wiki

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Analog Devices Wiki

This version (30 Jul 2021 06:53) was *approved* by [Victor Calinao, Jr](https://ez.analog.com/members/Victor%20Engineer/) [https://ez.analog.com/members/Victor%20Engineer/].
The *Previously approved version* (</resources/eval/user-guides/eval-adicup360/hardware/adxl362?rev=1516720721>) (23 Jan 2018 16:18) is available.

EVAL-ADXL362-ARDZ Shield

The [EVAL-ADXL362-ARDZ](https://www.analog.com/EVAL-ADXL362-ARDZ) [https://www.analog.com/EVAL-ADXL362-ARDZ] shield illustrates the functionality of the ADXL362 - an ultralow power, 3-axis MEMS accelerometer.



(/_detail/resources/eval/user-guides/eval-adicup360/hardware/eval-adxl362-ardz.jpg?id=resources%3Aeval%3Auser-guides%3Aeval-adicup360%3Ahardware%3Aadxl362)

The [ADXL362](https://www.analog.com/ADXL362) [https://www.analog.com/ADXL362] is capable of measuring dynamic acceleration (resulting from motion or shock) as well as static acceleration (gravity). It provides 12-bit output resolution and has three operating ranges, ± 2 g (gravity), ± 4 g (gravity), and ± 8 g (gravity). Additional useful features include an on-chip, 12-bit temperature sensor accurate to $\pm 0.5^\circ$, motion triggered wake-up functionality, and several activity detection modes which makes it ideal for portable low-power instruments.

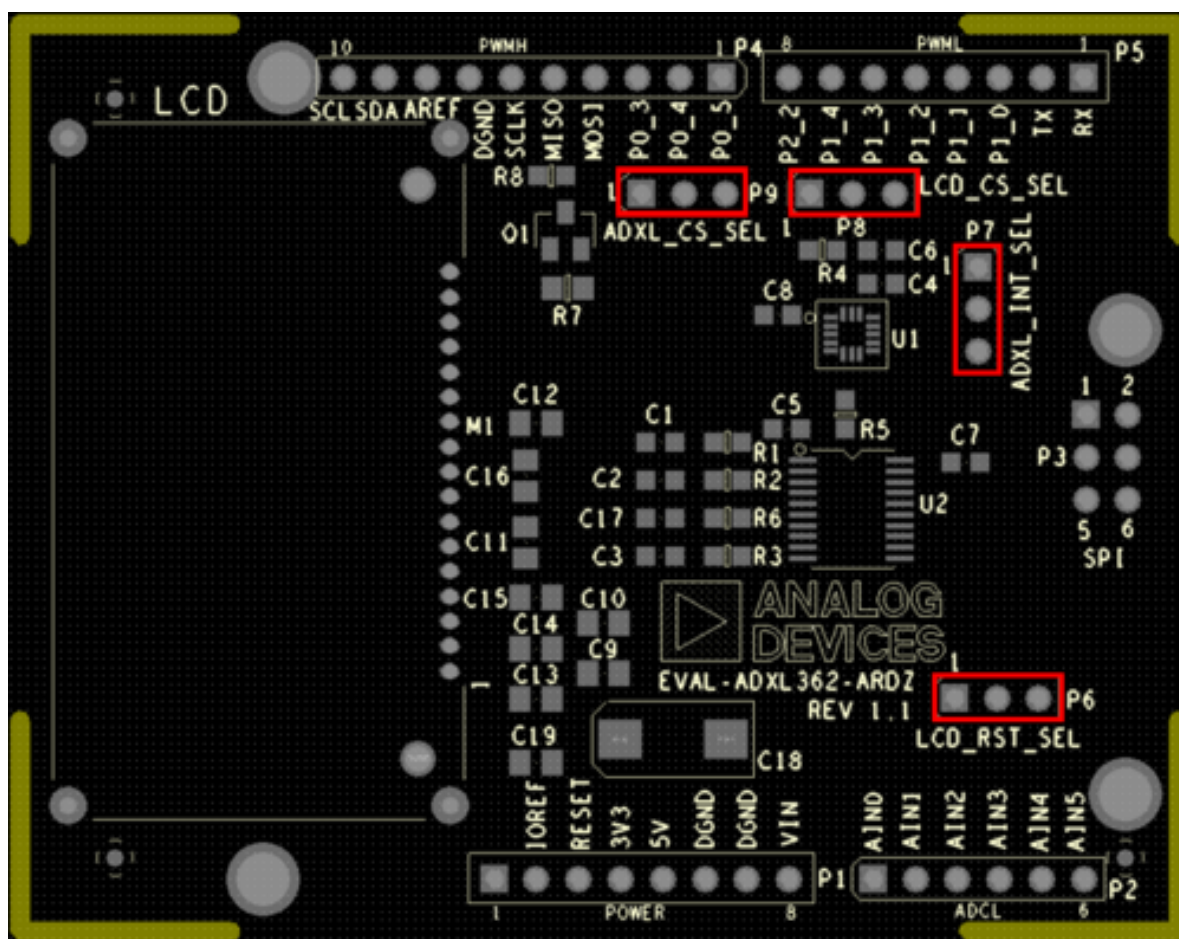
The [EVAL-ADXL362-ARDZ](https://www.analog.com/EVAL-ADXL362-ARDZ) [https://www.analog.com/EVAL-ADXL362-ARDZ] Shield is designed in Arduino Uno R3 format which makes it suitable to be used with both Arduino Due (e.g. (for example) [EVAL-ADICUP360](https://www.analog.com/EVAL-ADICUP360) [https://www.analog.com/EVAL-ADICUP360] based board) and Arduino Uno R3 base boards.

The [EVAL-ADXL362-ARDZ](https://www.analog.com/EVAL-ADXL362-ARDZ) [https://www.analog.com/EVAL-ADXL362-ARDZ] board has a large capacitor (C18) on the board which holds charge for the LCD screen. When power cycling the system, you must wait approximately 5 seconds to allow enough time for the capacitors on the [EVAL-ADXL362-ARDZ](https://www.analog.com/EVAL-ADXL362-ARDZ) [https://www.analog.com/EVAL-ADXL362-ARDZ] board to fully discharge. This is a power requirement for the [ADXL362](https://www.analog.com/ADXL362) [https://www.analog.com/ADXL362], which notes in the datasheet that the power rail must come all the way back down to 0V before powering back up.

Getting Started Video

Connectors and Jumper configuration



The EVAL-ADXL362-ARDZ [<https://www.analog.com/EVAL-ADXL362-ARDZ>] Shield has four jumpers to increase flexibility when stacking systems together. Each jumper and it's purpose is described below.



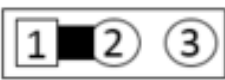
(/_detail/resources/eval/user-guides/eval-


[adlcup360/hardware/eval-adxl362-ardz_silkscreen_w-jumper.png?id=resources%3Aeval%3Auser-guides%3Aeval-adicup360%3Ahardware%3Aadxl362](https://www.analog.com/resources/eval/user-guides/eval-adicup360/hardware/eval-adxl362-ardz_silkscreen_w-jumper.png?id=resources%3Aeval%3Auser-guides%3Aeval-adicup360%3Ahardware%3Aadxl362))

ADXL_CS_SEL

Configuration	Function
 (/_detail/resources/eval/user-guides/eval-adicup360/hardware/horizontal_jumper_12.png?id=resources%3Aeval%3Auser-guides%3Aeval-adicup360%3Ahardware%3Aadxl362)	Routes ADXL362 CS pin to P0.3/IRQ0/CS1
 (/_detail/resources/eval/user-guides/eval-adicup360/hardware/horizontal_jumper_23.png?id=resources%3Aeval%3Auser-guides%3Aeval-adicup360%3Ahardware%3Aadxl362)	Routes ADXL362 CS pin to P0.4/RTS/IRQ1

LCD_CS_SEL

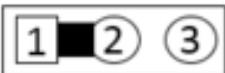

Configuration	Function
 (/_detail/resources/eval/user-guides/eval-adicup360/hardware/horizontal_jumper_12.png?id=resources%3Aeval%3Auser-guides%3Aeval-adicup360%3Ahardware%3Aadxl362)	Connects LCD CS pin to P2.2/BM

Configuration	Function
 <p>(/_detail/resources/eval/user-guides/eval-adicup360/hardware/horizontal_jumper_23.png?id=resources%3Aeval%3Auser-guides%3Aeval-adicup360%3Ahardware%3Aadxl362)</p>	Connects LCD CS pin to P1.4/PWM2/MISO0.

ADXL_INT_SEL

Configuration	Function
 <p>(/_detail/resources/eval/user-guides/eval-adicup360/hardware/vertical_jumper_12.png?id=resources%3Aeval%3Auser-guides%3Aeval-adicup360%3Ahardware%3Aadxl362)</p>	Connects ADXL362 Interrupt pin 1 (INT1) to P1.0/IRQ3
 <p>(/_detail/resources/eval/user-guides/eval-adicup360/hardware/vertical_jumper_23.png?id=resources%3Aeval%3Auser-guides%3Aeval-adicup360%3Ahardware%3Aadxl362)</p>	Connects ADXL362 Interrupt pin 2 (INT2) to P1.0/IRQ3.

LDC_RST_SEL

Configuration	Function
 <p>(/_detail/resources/eval/user-guides/eval-adicup360/hardware/horizontal_jumper_12.png?id=resources%3Aeval%3Auser-guides%3Aeval-adicup360%3Ahardware%3Aadxl362)</p>	Connects LCD Reset to IOREF
 <p>(/_detail/resources/eval/user-guides/eval-adicup360/hardware/horizontal_jumper_23.png?id=resources%3Aeval%3Auser-guides%3Aeval-adicup360%3Ahardware%3Aadxl362)</p>	Connects LCD Reset to pin P1.1/IRQ4

Schematics, PCB Layout, Bill of Materials

[EVAL-ADXL362-ARDZ Design & Integration Files \(/_media/resources/eval/user-guides/eval-adicup360/hardware/eval-adxl362-ardz_design_files.zip\)](https://media/resources/eval/user-guides/eval-adicup360/hardware/eval-adxl362-ardz_design_files.zip)

- Schematics
- PCB Layout and Mounting Diagram
- Bill of Materials
- Allegro Project

Software examples

- ADICUP360 + ADXL362 Demo ([/resources/eval/user-guides/eval-adicup360/reference_designs/demo_adxl362](https://resources/eval/user-guides/eval-adicup360/reference_designs/demo_adxl362))
- ADICUP3029 + ADXL362 Wi-Fi Demo ([/resources/eval/user-guides/eval-adicup3029/reference_designs/demo_adxl362](https://resources/eval/user-guides/eval-adicup3029/reference_designs/demo_adxl362))
- Arduino Uno + ADXL362 Demo ([/resources/eval/user-guides/arduino-uno/reference_designs/demo_adxl362](https://resources/eval/user-guides/arduino-uno/reference_designs/demo_adxl362))

Registration

Receive software update notifications, documentation updates, view the latest videos, and more when you register your hardware. Register [<https://my.analog.com/en/app/registration/hardware/EVAL-ADXL362-ARDZ?&v=RevD>] to receive all these great benefits and more!

End of Document

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