

# **ANALOG DEVICES UG-2087 Evaluation Board User Guide**

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# **FEATURES**

- Full featured evaluation board for the AD4129-8
- PC control in conjunction with Analog Devices, Inc. System monstration Platform (EVAL-SDP-CK1Z)
- PC software for control and data analysis (time domain)
- · Standalone capability.

# **EVALUATION KIT CONTENTS**

EVAL-AD4129-8WARDZ evaluation board

#### **ONLINE RESOURCES**

- · Documents Needed
  - AD4129-8 data sheet
  - EVAL-AD4129-8WARDZ user guide
- Required Software
- AD4129-8 ACE Plugin

#### **EQUIPMENT NEEDED**

- EVAL-AD4129-8WARDZ evaluation board
- EVAL-SDP-CK1Z System Demonstration Platform
- · DC signal source
- · USB cable
- PC running Microsoft Windows with USB 2.0 port

## **GENERAL DESCRIPTION**

The EVAL-AD4129-8WARDZ evaluation kit features the AD4129-8 16-bit, ultra-low power, low noise analog-to-digital converter (ADC).

The EVAL-AD4129-8WARDZ board connects to the USB port of the PC by connecting to the EVAL-SDP-CK1Z motherboard. Regulate a 5 V USB supply through the PC to 3.3 V to supply the AD4129-8 and support all necessary components.

The AD4129-8 ACE Plugin fully configures the AD4129-8 device register functionality and provides DC time domain analysis as waveform graphs, histograms, and associated noise analysis for ADC performance evaluation.

The EVAL-AD4129-8WARDZ is an evaluation board that evaluates the features of the ADC. The user PC software executable controls the AD4129-8 over the USB through the EVAL-SDP-CK1Z System Demonstration Platform (SDP) board.

The product data sheet provides the full specifications of the AD4129-8. Consult the AD4129-8 data sheet in conjunction with this user guide when working with the EVAL-AD4129-8WARDZ evaluation board.

## **EVAL-AD4129-8WARDZ BLOCK DIAGRAM**

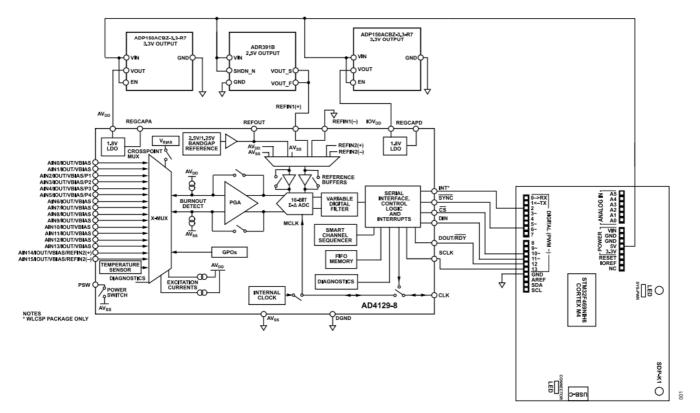


Figure 1: EVAL-AD4129-8WARDZ Block Diagram

#### **EVAL-AD4129-8WARDZ QUICK START GUIDE**

To begin using the evaluation board, do the following:

- 1. Disconnect the EVAL-SDP-CK1Z board from the USB port of the PC.
- 2. Install the ACE software, which can be downloaded at <a href="www.analog.com/ACE">www.analog.com/ACE</a>. Restart the PC after the software installation is complete. For complete software installation instructions, see the Evaluation Software section.
- 3. Connect the EVAL-SDP-CK1Z board to the EVALAD4129-8WARDZ board.
- 4. Screw the two boards together using the plastic screw and washer set (included in the evaluation board kit) to connect the boards firmly together.
- 5. Connect the EVAL-SDP-CK1Z board to the PC using the supplied USB cable. If using Microsoft Windows® XP, search for the EVAL-SDP-CK1Z drivers. Choose to automatically search for the drivers for the EVAL-SDP-CK1Z board if prompted by the operating system.
- 6. From the **Programs** menu, go to the **Analog Devices** subfolder, and click ACE to launch the AD4129-8 ACE Plugin (see the Launching the Software section).

For more details on the evaluation board or the demo mode, visit <a href="https://wiki.analog.com/resources/eval/user-quides/ad4129-8">https://wiki.analog.com/resources/eval/user-quides/ad4129-8</a>.

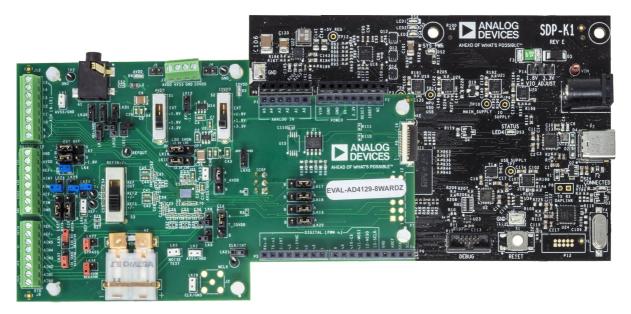


Figure 2. Hardware Configuration, Setting up the EVAL-AD4129-8WARDZ Evaluation Board.

#### **Legal Terms and Conditions**

By using the evaluation board discussed herein (together with any tools, components documentation or support materials, the "Evaluation Board"), you are agreeing to be bound by the terms and conditions set forth below ("Agreement") unless you have purchased the Evaluation Board, in which case the Analog Devices Standard Terms and Conditions of Sale shall govern. Do not use the Evaluation Board until you have read and agreed to the Agreement. Your use of the Evaluation Board shall signify your acceptance of the Agreement. This Agreement is made by and between you ("Customer") and Analog Devices, Inc. ("ADI"), with its principal place of business at Subject to the terms and conditions of the Agreement, ADI hereby grants to Customer a free, limited, personal, temporary, non-exclusive, non-sublicensable, non-transferable license to use the Evaluation Board FOR EVALUATION PURPOSES ONLY. Customer understands and agrees that the Evaluation Board is provided for the sole and exclusive purpose referenced above, and agrees not to use the Evaluation Board for any other purpose. Furthermore, the license granted is expressly made subject to the following additional limitations: Customer shall not (i) rent, lease, display, sell, transfer, assign, sublicense, or distribute the Evaluation Board; and (ii) permit any Third Party to access the Evaluation Board. As used herein, the term "Third Party" includes any entity other than ADI, Customer, their employees, affiliates and in-house consultants. The Evaluation Board is NOT sold to Customer; all rights not expressly granted herein, including ownership of the Evaluation Board, are reserved by ADI. CONFIDENTIALITY. This Agreement and the Evaluation Board shall all be considered the confidential and proprietary information of ADI. Customer may not disclose or transfer any portion of the Evaluation Board to any other party for any reason. Upon discontinuation of use of the Evaluation Board or termination of this Agreement, Customer agrees to promptly return the Evaluation Board to ADI. ADDITIONAL RESTRICTIONS. Customer may not disassemble, decompile or reverse engineer chips on the Evaluation Board. Customer shall inform ADI of any occurred damages or any modifications or alterations it makes to the Evaluation Board, including but not limited to soldering or any other activity that affects the material content of the Evaluation Board. Modifications to the Evaluation Board must comply with applicable law, including but not limited to the RoHS Directive. TERMINATION. ADI may terminate this Agreement at any time upon giving written notice to Customer. Customer agrees to return to ADI the Evaluation Board at that time. LIMITATION OF LIABILITY. THE EVALUATION BOARD PROVIDED HEREUNDER IS PROVIDED "AS IS" AND ADI MAKES NO WARRANTIES OR REPRESENTATIONS OF ANY KIND WITH RESPECT TO IT. ADI SPECIFICALLY DISCLAIMS ANY REPRESENTATIONS, ENDORSEMENTS, GUARANTEES, OR WARRANTIES, EXPRESS OR IMPLIED, RELATED TO THE EVALUATION BOARD INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTY OF MERCHANTABILITY, TITLE, FITNESS FOR A PARTICULAR PURPOSE OR NONINFRINGEMENT OF INTELLECTUAL PROPERTY RIGHTS. IN NO EVENT WILL ADI AND ITS LICENSORS BE LIABLE FOR ANY INCIDENTAL, SPECIAL, INDIRECT, OR CONSEQUENTIAL DAMAGES RESULTING FROM CUSTOMER'S POSSESSION OR USE OF THE EVALUATION BOARD, INCLUDING BUT NOT LIMITED TO LOST PROFITS, DELAY COSTS, LABOR COSTS OR LOSS OF GOODWILL. ADI'S TOTAL LIABILITY FROM ANY AND ALL CAUSES SHALL BE LIMITED TO THE AMOUNT OF ONE HUNDRED US DOLLARS (\$100.00). EXPORT. Customer agrees that it will not directly or indirectly export the Evaluation Board to another country, and that it will comply with all applicable United States federal laws and regulations relating to exports. GOVERNING LAW. This Agreement shall be

governed by and construed in accordance with the substantive laws of the Commonwealth of Massachusetts (excluding conflict of law rules). Any legal action regarding this Agreement will be heard in the state or federal courts having jurisdiction in Suffolk County, Massachusetts, and Customer hereby submits to the personal jurisdiction and venue of such courts. The United Nations Convention on Contracts for the International Sale of Goods shall not apply to this Agreement and is expressly disclaimed.

# **Costumer Support**

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One Analog Way, Wilmington, MA 01887-2356, U.S.A.



#### **Documents / Resources**



ANALOG DEVICES UG-2087 Evaluation Board [pdf] User Guide UG-2087 Evaluation Board, UG-2087, Evaluation Board, Board

## References

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- ► EVAL-AD4129-8 Evaluation Board | Analog Devices
- Mixed-signal and digital signal processing ICs | Analog Devices
- ▶ AD4130-8 Evaluation Board User Guide [Analog Devices Wiki]
- Analysis | Control | Evaluation (ACE) Software | Design Center | Analog Devices
- AD4129-8 Datasheet and Product Info | Analog Devices
- ► EVAL-AD4129-8 Evaluation Board | Analog Devices
- ■ SDP-K1 Evaluation Board | Analog Devices

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