

**Evaluation Board for the AD4131-8, 8-Channel, Ultra-Low Power, 16-Bit Sigma-Delta ADC with Integrated Front End****FEATURES**

- ▶ Full featured evaluation board for the [AD4131-8](#)
- ▶ PC control in conjunction with Analog Devices, Inc. System Demonstration Platform ([EVAL-SDP-CK1Z](#))
- ▶ PC software for control and data analysis (time domain)
- ▶ Standalone capability

**EVALUATION KIT CONTENTS**

- ▶ EVAL-AD4131-8WARDZ evaluation board

**ONLINE RESOURCES**

- ▶ Documents Needed
  - ▶ [AD4131-8 data sheet](#)
  - ▶ [EVAL-AD4131-8WARDZ user guide](#)
- ▶ Required Software
  - ▶ [AD4131-8 ACE Plugin](#)

**EQUIPMENT NEEDED**

- ▶ EVAL-AD4131-8WARDZ 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-AD4131-8WARDZ evaluation kit features the AD4131-8 16-bit, ultra-low power, low noise analog-to-digital converter (ADC).

The EVAL-AD4131-8WARDZ 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 AD4131-8 and support all necessary components.

The AD4131-8 ACE Plugin fully configures the AD4131-8 device register functionality and provides DC time domain analysis as waveform graphs, histograms, and associated noise analysis for ADC performance evaluation.

The EVAL-AD4131-8WARDZ is an evaluation board that evaluates the features of the ADC. The user PC software executable controls the AD4131-8 over the USB through the EVAL-SDP-CK1Z (SDP) board.

The product data sheet provides the full specifications of the AD4131-8. Consult the AD4131-8 data sheet in conjunction with this user guide when working with the EVAL-AD4131-8WARDZ evaluation board.

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**REVISION HISTORY**

**2/2023—Revision 0: Initial Version**

EVAL-AD4131-8WARDZ BLOCK DIAGRAM

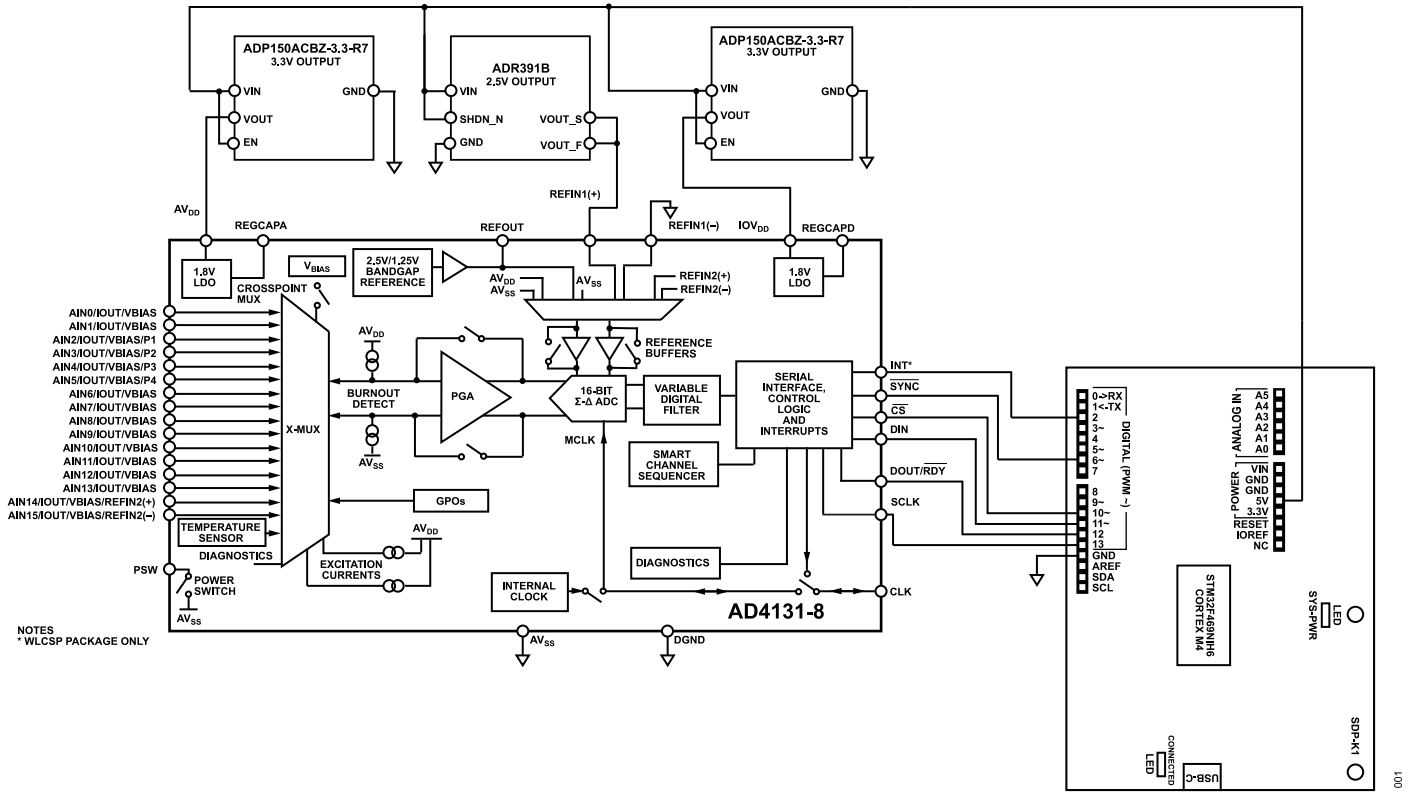


Figure 1. EVAL-AD4131-8WARDZ Block Diagram

## EVAL-AD4131-8WARDZ 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 [www.analog.com/ACE](http://www.analog.com/ACE). 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 EVAL-AD4131-8WARDZ 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<sup>®</sup> 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 AD4131-8 ACE Plugin (see the Launching the Software section).

For more details on the evaluation board or the demo mode, visit <https://wiki.analog.com/resources/eval/user-guides/EVAL-AD4131-8>.

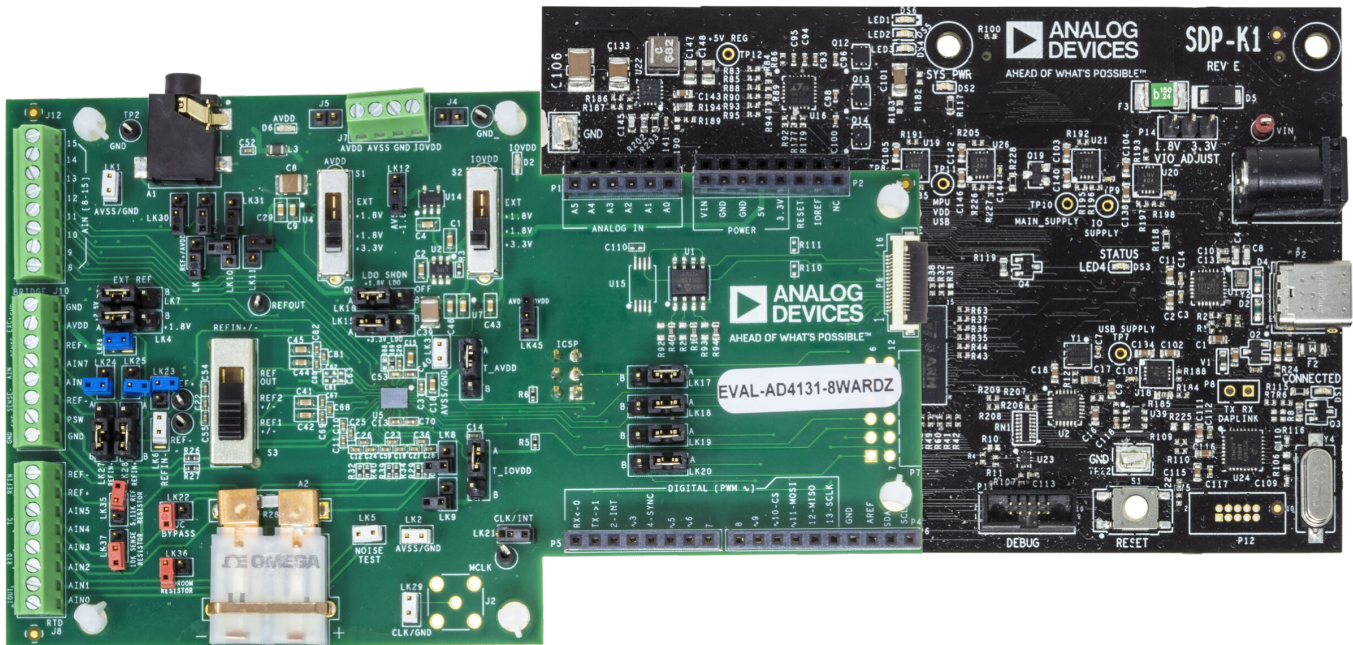


Figure 2. Hardware Configuration, Setting up the EVAL-AD4131-8WARDZ Evaluation Board

## NOTES

**ESD Caution**

**ESD (electrostatic discharge) sensitive device.** Charged devices and circuit boards can discharge without detection. Although this product features patented or proprietary protection circuitry, damage may occur on devices subjected to high energy ESD. Therefore, proper ESD precautions should be taken to avoid performance degradation or loss of functionality.

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