✓ This version (23 Jan 2018 22:02) was *approved* by TonyM.
The Previously approved version (05 Jan 2018 21:52) is available.

ADS8-V1EBZ HIGH SPEED EVALUATION BOARD

Preface

The ▶ADS8-V1 Evaluation Board was developed to support the evaluation of Analog Devices High Speed Data Converters with JESD204B bit rates up to 16Gbps. This Wiki site provides a high level overview of the platform. In addition, each use-case of the board has its own section (e.g. Using the ADS8-V1 for High Speed A/D Converter Evaluation). The ADS8-V1 is intended to be used only with specified Analog Devices Evaluation Boards. The ADS8-V1 is not intended to be used as a general purpose development platform, and no support is available for standalone operation. The ADS8-V1 may contain hardware features not fully productized or supported by our default customer evaluation configurations. Please refer to Xilinx and its approved distributors for general purpose FPGA Development Kits.

Additional DAC specific ▶ADS8-V1 Applications Support is available at
🌐 https://wiki.analog.com/resources/eval/dpg/ads8

ADS8-V1EBZ Features

1. Xilinx Kintex Ultrascale XCKU040-3FFVA1156E FPGA.

2. One (1) FMC+ connector.

3. Twenty (20) 16Gbps transceivers supported by one (1) FMC+ connector.

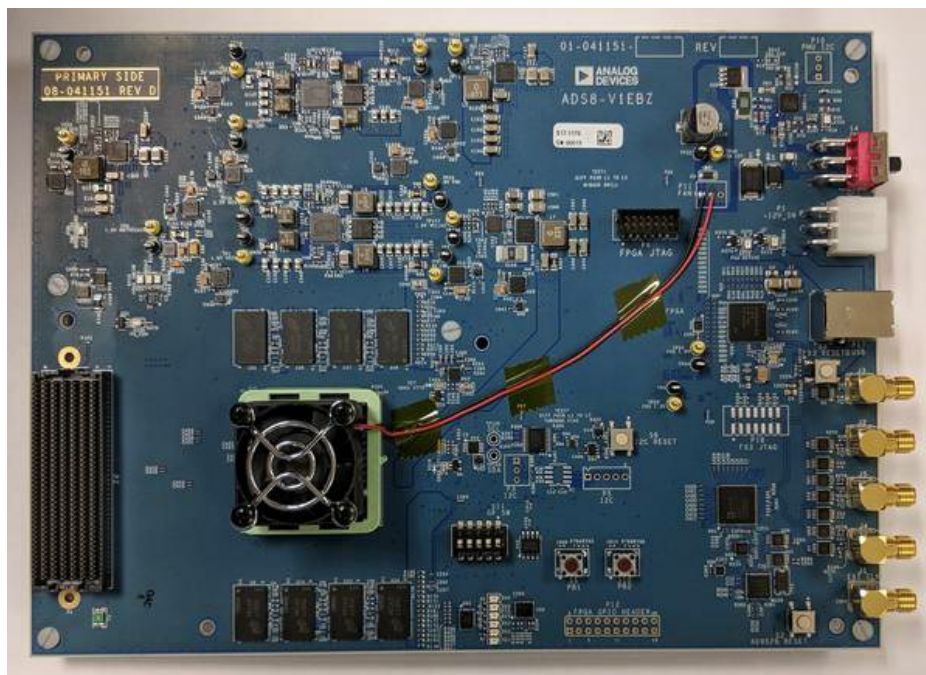4. DDR4 SDRAM.

5. Simple USB 3.0 port interface.

Figure 1. ADS8-V1EBZ High Speed Evaluation Board

Using the ADS8-V1EBZ to evaluate High Speed A/D Converters

Overview

When connected to a specified Analog Devices high speed adc evaluation board, the ADS8-V1 works as a data acquistion board. Designed to support the highest speed JESD204B A/D Converters, the FPGA on the ADS8-V1 acts as the data receiver, while the ADC is the data transmitter. A typical test setup is shown below.

Figure 2. ADS8-V1 connected to High Speed A/D Converter Evaluation Board

Helpful Documents

- ▶ AN-905 Application Note, *VisualAnalog Converter Evaluation Tool Version 1.0 User Manual*
- ▶ AN-878 Application Note, *High Speed ADC SPI Control Software*
- ▶ AN-877 Application Note, *Interfacing to High Speed ADCs via SPI*
- ▶ AN-835 Application Note, *Understanding ADC Testing and Evaluation*

Software Download Links

- High Speed ADC SPI Control Software, 🌐 http://www.analog.com/en/design-center/advanced-selection-and-design-tools/interactive-design-tools/spicontroller.html
- High Speed ADC VisualAnalog Software, 🌐 http://www.analog.com/en/design-center/advanced-selection-and-design-tools/interactive-design-tools/visualanalog.html
- Analysis | Control | Evaluation (ACE) Software, 🌐 http://www.analog.com/en/design-center/evaluation-hardware-and-software/ace-software.html

Design and Integration Files

- Schematic, BOM, & Cadence BRD File Archive, 🗜 20_041151d.zip

The ADC data sheets and User Guides provide additional product specific information and should be consulted when using the evaluation board. All documents and software tools are available at ▶ High Speed ADC Eval Boards. For additional information or questions, send an email to highspeed.converters@analog.com.

ADS8-V1EBZ Supported ADC Evaluation Boards

Refer to the Analog Devices High Speed ADC capture board product page at ▶ High Speed ADC Eval Boards for a table of ADS8-V1EBZ compatible ADC evaluation boards.

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