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ADS7-V2EBZ HIGH SPEED EVALUATION BOARD

Preface

The ADS7-V2 Evaluation Board was developed to support the evaluation of Analog Devices high speed A/D converters, D/A converters and Transceivers with JESD204B bit rates up to 12.5 Gbps. 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 ADS7-V2 for HIgh Speed A/D Converter Evaluation). The ADS7-V2 is intended to be used only with specified Analog Devices Evaluation Boards. The ADS7-V2 is not intended to be used as a development platform, and no support is available for standalone operation. Please refer to Xilinx and its approved distribuitors for FPGA Development Kits.

ADS7-V2EBZ Features

1. Xilinx Virtex-7 XC7VX330T-3FFG1157E FPGA (326,400 logic cells).

2. One (1) FMC-HPC connector.

3. Ten (10) 13.1 Gbps transceivers supported by one(1) FMC-HPC connector.

4. Two (2) DDR3-1866 DIMMs.

5. Simple USB port interface (2.0).

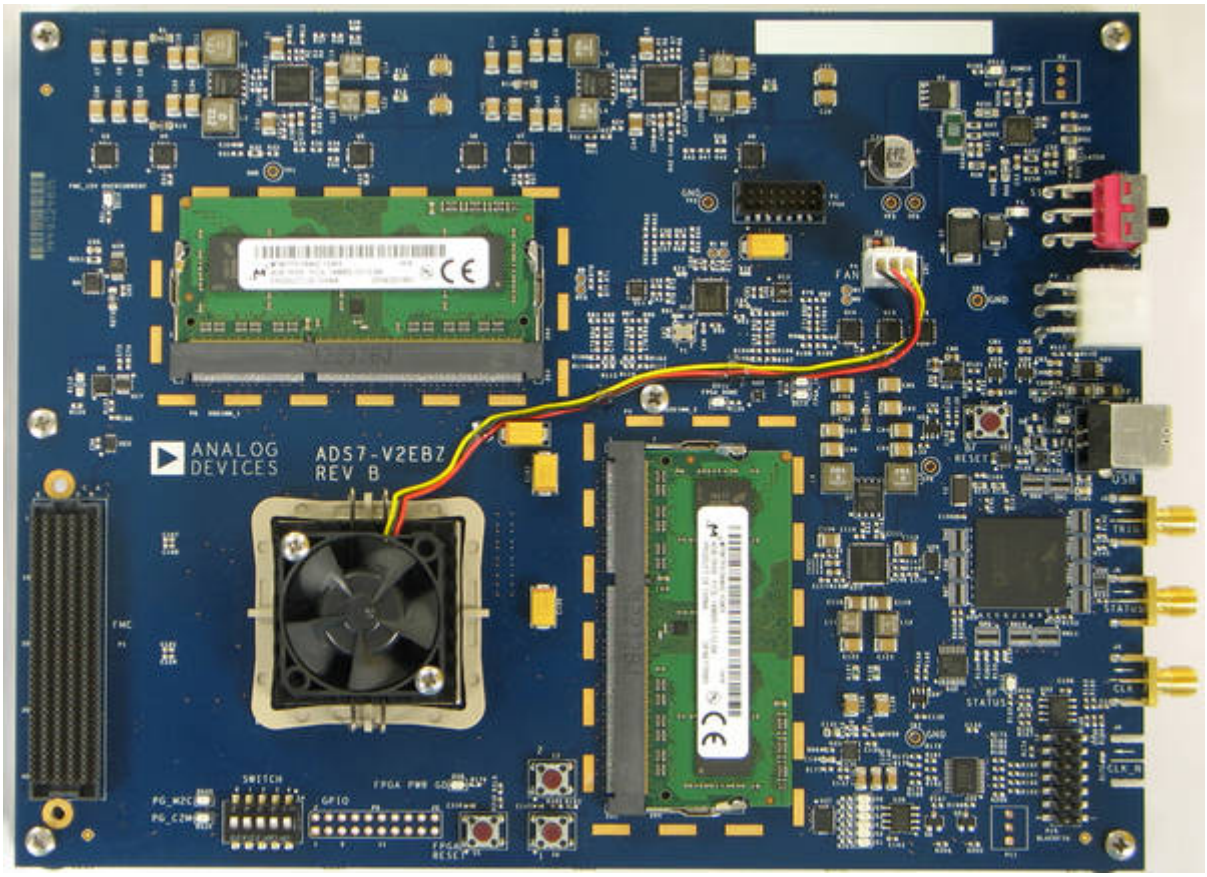

Figure 1. ADS7-V2EBZ High Speed Evaluation Board

Using the ADS7-V2EBZ to evaluate High Speed A/D Converters

Overview

When connected to a specified Analog Devices high speed adc evaluation board, the ADS7-V2 works as a data acquistion board. Designed to support the highest speed JESD204B A/D Converters, the FPGA on the ADS7-V2 acts as the data receiver, while the ADC is the data transmitter. A typical test setup is shown below.

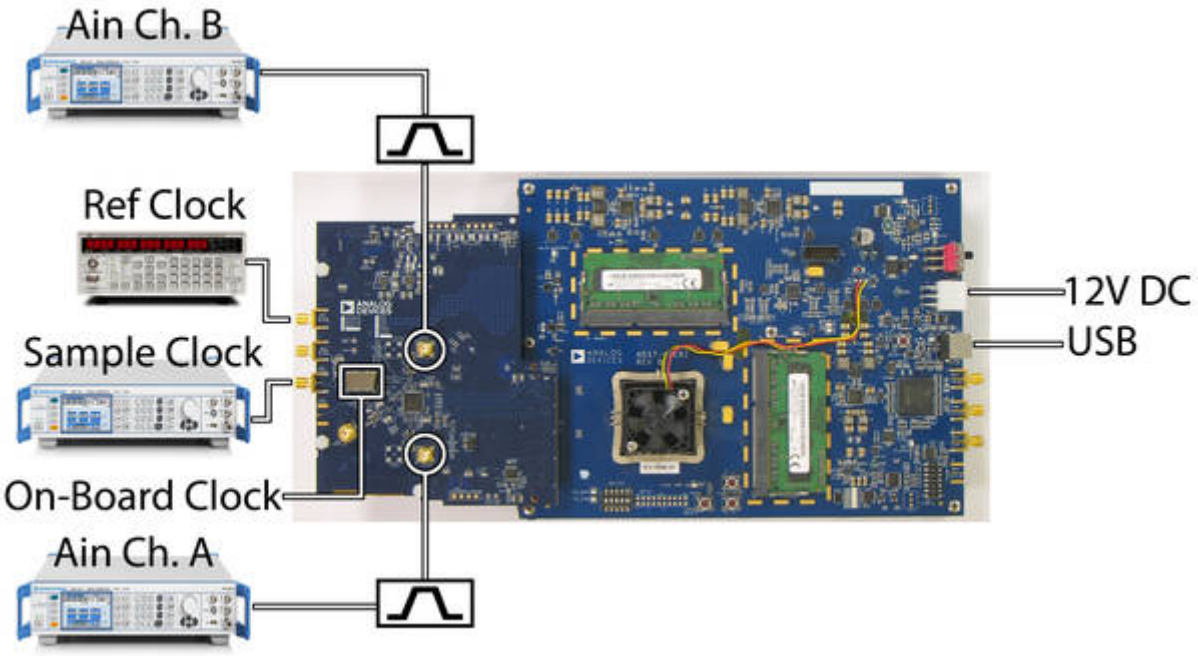

Figure 2. ADS7-V2 connected to High Speed A/D Converter Evaluation Board

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

Design and Integration Files

- Schematic, ads7-v2ebz_13052_revb_schematic.pdf

- Cadence BRD file, ads7-v2ebz_13052b_brd.zip
- BOM, ads7-v2_rev_b_bom_public.xls

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.

ADS7-V2EBZ 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 ADS7-V2EBZ compatible ADC evaluation boards.

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