



October 11, 2013

JESD204B FPGA Debug Software Accelerates High-speed Design

Free, on-chip, 2-D statistical eyescan software enables fast in-system verification of high-speed data converter-to-FPGA signal integrity.

NORWOOD, Mass.--(BUSINESS WIRE)-- [Analog Devices, Inc.](http://www.analog.com) (NASDAQ: ADI), a global leader in high-performance signal processing technology, released today an [FPGA-based reference design](#) with software and HDL code that reduces the design risk of high-speed systems incorporating JESD204B-compatible converters. Called the JESD204B Xilinx Transceiver Debug Tool, it supports the 312.5-Mbps to 12.5-Gbps [JESD204B data converter](#)-to-FPGA serial data interface and Xilinx® Inc., 7 series FPGAs and Zynq®-7000 All Programmable SoCs. It is available at no cost with ADI converters and provides an on-chip, 2-D statistical eyescan that helps designers of radar arrays, software-defined radio and other high-speed systems more quickly verify the signal integrity of JESD204B data converter-to-FPGA designs using gigabit transceivers.

- Download the reference design: <http://www.em.avnet.com/en-us/design/drc/Pages/Analog-Devices-Linux-JESD204B-Eyescan-Software.aspx>
- View a video on JESD204B A/D converters, FPGAs and eyescan diagrams: <http://videos.analog.com/video/products/analog-to-digital-converters/2534598195001/High-Speed-ADC-FMC-Development-Board-with-JESD204B/>
- Learn more about Xilinx FPGAs: www.xilinx.com/jesd204

"The Analog Devices JESD204B Xilinx Transceiver Debug Tool provides on-chip eyescanning that augments the test and measurement process by statistically determining signal integrity inside the FPGA," said Revathi Narayanan, High Speed I/O product manager, Xilinx. "Where other techniques probe the outside of the FPGA package and acquire the signal before it's been processed by Xilinx's automatic gain control and equalizer blocks, ADI's approach yields a more accurate result by utilizing the Xilinx transceiver on-chip eyescan feature to allow developers to monitor the signal integrity and design margin on their JESD204B links inside the FPGA."

ADI's reference design gathers data directly from the on-chip Rx margin analysis feature in the 7 series IBERT core and manages the data locally inside the FPGA or one of the ARM® dual-core Cortex™A9 MPCore™ processors, displaying the data on an HDMI monitor or over Ethernet to a remote monitoring station. Typically, other scanning tools measure signals off-chip and require costly test and measurement equipment or transfer the data back over JTAG to be viewed on a host/development PC in the lab.

'Live' Data Capture Monitors Equipment Health

Alternative scanning tools typically measure high-speed data links by generating a pseudo-random bit stream (PRBS) that is checked for bit-level correctness in a closed development environment. This approach does not describe how well the design is performing or if it might be on the verge of failure. ADI's reference design measures link robustness using actual JESD204B serial data running to the FPGA. This use of "live" data enables signal fidelity to be monitored even after the design has been deployed in the field, which allows for real-time and predictive maintenance over the life of the product.

Pricing and Availability

Product	Availability	Price
JESD204B Xilinx Transceiver Debug Tool	NOW	Free with ADI Converters

About Analog Devices

Innovation, performance, and excellence are the cultural pillars on which Analog Devices has built one of the longest standing, highest growth companies within the technology sector. Acknowledged industry-wide as the world leader in data conversion and signal conditioning technology, Analog Devices serves over 60,000 customers, representing virtually all types of electronic equipment. Analog Devices is headquartered in Norwood, Massachusetts, with design and manufacturing facilities throughout the world. Analog Devices is included in the S&P 500 Index. <http://www.analog.com>

Follow ADI on Twitter: http://www.twitter.com/ADI_News

Subscribe to *Analog Dialogue*, ADI's monthly technical journal: <http://www.analog.com/library/analogDialogue/>

Photos/Multimedia Gallery Available: <http://www.businesswire.com/multimedia/home/20131011005007/en/>

Analog Devices, Inc.

Bob Olson, 781-937-1666

bob.olson@analog.com

or

Porter Novelli

Andrew MacLellan, 617-897-8270

andrew.maclellan@porternovelli.com

Source: Analog Devices, Inc.

News Provided by Acquire Media