Tektronix Provides Choice for Serial Data Link Analysis

New SDLA Software for DSA70000 Series Oscilloscopes Provides Equalization and Channel Emulation; Ideal for Next Generation Serial Standards System Design

BEAVERTON, Ore., November 6, 2008 - Tektronix, Inc., a leading worldwide provider of test, measurement and monitoring instrumentation, announced new Serial Data Link Analysis (SDLA) Software for the DSA70000 real-time oscilloscope series to fully test high-speed serial data designs such as SATA 6 Gb/s, SuperSpeed USB, 6 Gb/s SAS andPCI-Express 3.0, from the transmitter through the receiver. The new SDLA software builds on the Tektronix history of providing link analysis and S-parameter tools for precise silicon designs with the DSA8200 sampling oscilloscopes. With SDLA software, engineers can now utilize a real-time oscilloscope to develop compliant high-speed serial designs on systems that operate as high as 8 Gb/sec.

For high-speed serial data technologies, the interactions between the transmitter, possible test fixture and the transmission line are so complex that analysis needs to include all possible signal impairment conditions along the path. If done manually, complete link analysis on high-speed serial data can be time-consuming and error-prone. The Tektronix SDLA Essentials software provides channel emulation, transmitter pre- and de-emphasis, test fixture de-embedding, time and frequency domain plots to aid debug. Additionally, the package provides a seamless interface with DPOJET, a comprehensive package for jitter and BER analysis.

An SDLA Advanced option adds Feed Forward Equalization (FFE) and Decision Feedback Equalization (DFE) with three modes of adaptation to emulate the waveform at the receiver. Through tight integration with DPOJET, digital designers gain simultaneous jitter and eye diagram feedback as they introduce different parameters to the link, from channel effects to equalization approaches. The software can eliminate the causes or adjust the impact of signal distortion and transmission failure across serial links.

"Faster data rates are narrowing serial data system timing margins," said Ian Valentine, general manager, Technology Solutions Group, Tektronix. "With the introduction of Serial Data Link Analysis software for the DSA70000 real-time oscilloscopes, engineers can evaluate all characteristics impacting a serial data link, from transmitter pre-emphasis through the transmission medium to equalization on the receiver. The SDLA and DPOJET packages for the DSA70000 oscilloscopes substantially improve jitter and timing analysis of high-speed serial designs."

Complete Link Impairment Compensation

Equalization is a broad term for several techniques of manipulating the signal shape in order to overcome frequency dependent loss of the channel. This loss changes the shape of the NRZ data signal at the receiver from the desired square-wave to severely distorted, closed eye waveform. SDLA software provides FFE and DFE equalization methods on the receiver side, and the generation and measurement of pre-emphasis and de-emphasis on the transmitter side.

SDLA also provides channel emulation. Through emulation, engineers are able to see waveform impairments due to channel transmission loss. For example, the testing specification for emerging Serial Attached SCSI (SAS) 6Gb/s standard requires that engineers de-embed the test channel and enable emulation of the test pattern to include a 3 tap DFE for full system evaluation. This measurement capability is now enabled by the Tektronix SDLA Advanced package. When using DPOJET in combination, SAS measurements are pre-configured and automated.

Price & Availability

SDLA Essentials and SDLA Advanced are available for order and delivery. U.S. MSRP for SDLA

Essentials is $3,000 and $7,000 for SDLA Advanced.

About Tektronix
Tektronix is a leading supplier of test, measurement, and monitoring products, solutions and services for the communications, computer, and semiconductor industries - as well as military/aerospace, consumer electronics, education and a broad range of other industries worldwide. With 60 years of experience, Tektronix enables its customers to design, build, deploy, and manage next-generation global communications networks, advanced and pervasive technologies. Headquartered in Beaverton , Oregon , Tektronix has operations in 19 countries worldwide. Tektronix' Web address is www.tektronix.com.

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