Tektronix Releases PCI Express® 4.0 Test Solution Including Support for 16 GT/s Data Rates
New Automated Transmitter, Receiver Test Tools Help Reduce Time to Market for PCI Express 4.0 and 3.0 Designs

BEAVERTON, Ore., June 28, 2016 /PRNewswire/ -- Tektronix, a leading worldwide provider of measurement solutions, today announced a series of enhancements to its suite of PCI Express® (PCIe) test solutions including support for the 16 GT/s data rate and the industry's first automated transmitter and receiver test solutions supporting the PCIe 4.0 architecture.

With the faster data rates for PCIe 4.0 technology come new test challenges such as major increases in channel loss, tightening of the total jitter budget and more complex link training and timing requirements. As design margins shrink, accurate and standard-specific measurement solutions play a vital role in debug, design verification and interoperability testing. All of these needs are fully met by the latest Tektronix test solutions for PCIe 4.0 and 3.0 in conjunction with DPO70000SX high performance oscilloscopes.

"As important industry specifications such as PCIe evolve over time, it's critical that our test and measurement tools keep pace," said Brian Reich, general manager, Performance Oscilloscopes, Tektronix. "Offering unmatched accuracy and scalability, DPO70000SX oscilloscopes along with the enhancements to our PCIe solutions enable our customers to debug and verify compliance to the latest versions of the PCIe specification while dramatically reducing compliance test times and boosting productivity."

PCIe 4.0 transmitter testing

Option PCE4 for Tektronix DPO/DPS70000SX and DPO/MSO70000DX high performance oscilloscopes provides new transmitter (Tx) measurements specific to the new PCIe 4.0 Base Specification including the 100 MHz reference clock, with its picosecond jitter requirements, used in all four generations of PCI Express: 2.5, 5.0, 8.0 and 16.0 GT/s. Other enhancements include support for the new U.2 form factor (formerly called SFF-8639) and additional optimizations to reduce the overall test time by about 30 percent. These same capabilities are also available as enhancements for Option PCE3, Tektronix' solution for PCI Express 3.0 technology.

PCIe 4.0 receiver testing

Tektronix now offers support for PCIe 4.0 and PCIe 3.1a Base Specification receiver testing. The solutions automate Tektronix BERTScope bit error rate testers and Tektronix high performance real-time oscilloscopes to calibrate stressed eye openings and test Rx conformance and jitter tolerance. Following industry-standard methodology, these solutions, offered in cooperation with Tektronix partner Granite River Labs, provide a simple user interface to automate complex PCIe testing and significantly reduce equipment calibration time. The solutions also support looping through a variety of timing and voltage parameters, using ranges defined by the user, to create 2-dimensional result plots.

Industry validation

The PCI Express Base Specification, Revision 4.0, Version 0.7, is quite complex, exceeding 1,000 pages, making it challenging for test engineers to quickly come up to speed. Tektronix works closely with industry organizations such as PCI-SIG® to help translate industry specification test requirements into easy-to-use turnkey test solutions that offer clear and concise characterization reports.

DPO70000SX Meets 4th Gen Performance Requirements

As engineering teams prepare for next generation serial standards in the rapidly growing cloud computing and storage segments, they need a measurement platform with extremely consistent and precise measurement for the high data rate signaling schemes used in PCIe 4.0 and other standards. The DPO70000SX, Tektronix' latest oscilloscope family, offers a number of advantages for 4th generation serial buses compared to previous generation oscilloscopes, including:

- High bandwidth, low noise ATI channels for the best signal fidelity and widest measurement margins
- A flexible architecture with room to grow, allowing units to be configured at the customer site from 23 GHz to 70 GHz with minimal downtime
- Industry-best triggering with 25 GHz edge trigger bandwidth to easily capture the fastest signals
- High-precision time base delivering extremely accurate timing and jitter measurements on today's fastest standards
- An integrated counter/timer that enables high precision timing measurements to characterize designs and debug problems

Pricing and availability

The new PCIe 4.0 transmitter test solution will be available in July. The receiver test solutions and updated PCIe 3.0 solutions are available now. Pricing starts at $7,290. Free trial licenses are available. For full details, go to: http://www.tek.com/pci-express

Wondering what else Tektronix is up to? Check out the Tektronix Bandwidth Banter blog and stay up to date on the latest news from Tektronix on Twitter and Facebook.

About Tektronix

Headquartered in Beaverton, Oregon, Tektronix delivers innovative, precise and easy-to-operate test, measurement and monitoring solutions that solve problems, unlock insights and drive discovery. Tektronix has been at the forefront of the digital age for over 70 years. Join us on the journey of innovation at TEK.COM.

About PCI-SIG

PCI-SIG is the consortium that owns and manages PCI specifications as open industry standards. The organization defines industry standard I/O (input/output) specifications consistent with the needs of its members. Currently, PCI-SIG is comprised of nearly 800 industry-leading member companies. To join PCI-SIG, and for a list of the Board of Directors, visit www.pcisig.com.

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