Tektronix Unveils Industry’s Most Cost-Effective Solution for MIPI Alliance M-PHYSM Testing

Tektronix announced the industry’s most cost-effective and only customer-proven solution for the MIPI Alliance M-PHY testing based on the newly-ratified M-PHY v1.0 specification. Building on the industry’s first M-PHY test offering introduced last September, Tektronix now offers mobile device hardware engineers a simple, integrated solution for M-PHY Transmitter and Receiver debug, validation and conformance testing needs.

Compared to competitive offerings for M-PHY test that require a complex array of instruments to cover the full range of M-PHY test mandates, the Tektronix solution is far simpler and requires only a Tektronix DPO/DSA/MSO70000 series oscilloscope and an AWG7000 Series arbitrary waveform generator. Developed in close cooperation with Synopsys and ST-Ericsson, the Tektronix “2-box” solution provides scope-integrated error detection for receiver tolerance testing and re-usability with a single set-up for both the M-PHY and lower-speed D-PHYSM specifications.

“We have worked hard with customers, partners and MIPI Working Groups to simplify M-PHY testing,” said Roy Siegel, general manager, Oscilloscopes, Tektronix. “We were first to market with our M-PHY test offerings and have been able further refine our solution in the field with customers leading up to availability of the full M-PHY v1.0 specification in June.”

“We worked closely with Tektronix to test our high-quality DesignWare MIPI M-PHY solution, giving designers further confidence that the IP is robust and fully compliant to the latest M-PHY v 1.0 specification,” said Navraj Nandra, senior director of marketing for mixed-signal and analog IP at Synopsys. “Synopsys used the Tektronix DPO70804 and DSA8200 oscilloscopes to help ensure that the silicon-proven DesignWare MIPI M-PHY met the necessary electrical characteristics and performance requirements.”

Synopsys recently released a video demonstrating the capabilities of the fully characterized DesignWare MIPI M-PHY using a Tektronix oscilloscope on its website at www.synopsys.com/mphy.

"As an active MIPI contributor, Tektronix products speed the assessment of D-PHY and M-PHY performance and signal integrity,” said Joel Huloux, chairman of the MIPI Alliance. "Tektronix is aiding the adoption of the new M-PHY interface by helping to simplify physical-layer test and validation."

M-PHY is a high-speed serial interface to the DigRF v4, UniPro, LLI, CSI-3 and DSI-2 interconnect standards of the MIPI Alliance and will be used in the development of mobile devices that offer increased performance, effective power management schemes, robustness against RF interferences and low RF emission. It is expected to

see broad adoption across the mobile device industry in the next few years.

The Tektronix "2-box" solution covers both Transmitter and Receiver tests, including comprehensive high-speed tests, Error-Detection, Pulse Width Modulation (PWM) signaling, PSD (Power Spectral Density) measurements, and DigRF verification. This solution significantly reduces equipment cost compared to alternatives from other vendors. The ability to perform PSD measurements on an oscilloscope is a patent pending capability exclusive to Tektronix. A new setup library and MOIs for Receiver Tolerance with Bit Error Rate testing is also available for verifying M-PHY Receivers.

The DPO/DSA/MSO70000 Digital and Mixed Signal oscilloscopes provide the most accurate real-time performance on the market with 100 GS/s sampling rate performance for lower noise and increased data points on 3x oversampled 33 GHz acquisitions. The AWG7000 Series Arbitrary Waveform Generators, with up to 24 GS/s and 10 bit vertical resolution, deliver the accuracy, performance and flexibility required for the full range of M-PHY debug and verification testing.

In addition to its M-PHY solution, Tektronix offers customers expanded support for MIPI specifications with trigger, decode and search for MIPI CSI-2 and DSI-1 serial buses on its MS Windows-based Oscilloscopes. Tektronix also offers a TekExpress full-automation toolset for one-button conformance testing of MIPI D-PHY and DigRFv.4 or CSI-2 or DSI-1 logic testing with TLA7000 Logic Analyzers.

Availability
The Tektronix M-PHY solution including an Opt. M-PHY upgrade for complete high speed tests, PSD measurements, and M-PHY Receiver Tolerance test is available through local Tektronix sales representatives.

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