Automated MIPI Compliance Package Addresses Physical and Protocol Layer Test in the Oscilloscope

CHESTNUT RIDGE, N.Y., /PRNewswire/ -- LeCroy announced a comprehensive testing solution for the mobile phone industry specifically targeted to MIPI (Mobile Industry Processor Interface) standards. The MIPI standards are driving the next generation of mobile devices -- allowing for faster data transfer, lower power consumption, and higher resolution displays and cameras.

Chip designers working with this standard demand tools to test these technologies well before they are ever released to the market. LeCroy is addressing these needs with an automated compliance package for the D-PHY physical layer that drives current generation cameras and displays, as well as decoder solutions that solve protocol layer challenges.

The QualiPHY MIPI-DPHY (QPHY-MIPI-DPHY) Test Solution provides automated control of LeCroy oscilloscopes when performing transmitter physical layer tests as described by the MIPI Alliance Specification for D-PHY version 1.00.00.

QPHY-MIPI-DPHY enables the user to obtain the highest level of confidence in their D-PHY interface by measuring a large number of cycles in a very short period of time so that the user can be confident that they are catching the true maximum and minimum points for their measurement. QPHY-MIPI-DPHY also displays and records the worst case instance of the test that is being performed. This worst case instance will be zoomed and captured in the compliance report.

In addition to automated characterization of MIPI D-PHY signals, QPHY-MIPI-DPHY enables powerful debug capability for MIPI D-PHY signals inside the oscilloscope. The integrated MIPI D-PHY Debug utility and decoders are the perfect combination for identifying the root cause of compliance failures.

The LeCroy QualiPHY platform provides an easy to configure user interface, allows for custom test and limit selection, displays connection diagrams to the user to

ensure proper connectivity, and generates a comprehensive test report. In addition, all of the waveforms tested by QPHY-MIPI-DPHY can be saved to easily share information or rerun the tests at a later time.

The D-PHY decoder is the perfect complement to the QualiPHY MIPI-DPHY package to provide a complete level of debug. The D-PHY decode package decodes the physical layer (D-PHY), as well as the camera (CSI-2) and the display (DSI) layers. The D-PHY decode package can quickly decode up to four lanes of data using a color-coded overlay on various sections of the waveform for an easy to understand visual display.

The D-PHY decoder offers debug tools consisting of protocol table views and search options, usually found only with bus analyzers. The table view turns the oscilloscope into a protocol analyzer by listing the decoded data packets in a tabular format. The D-PHY decoder offers up to 28 search options allowing for an easy debug method to pinpoint specific bits or groups within the data.

The MIPI DigRF 3G standard is focused on the wireless mobile RFIC to BBIC interfaces in mobile devices. The benefit of the DigRF 3G standard to mobile devices is to reduce pin count, minimize power consumption, and provide a reliable physical layer so the phones will work cheaper, faster, and error free. As a result the digital I Q runs at a higher speed rate, adding complexity to decode and analysis for design engineers working in this area.