
Press Release**Serial Bus TDME Options for Oscilloscopes****Media contact:**

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Teledyne LeCroy Adds Eye Diagrams to Serial Trigger & Decode Solutions – an Industry First!

Chestnut Ridge, NY, 24 June 2016 — Teledyne LeCroy is further expanding the Serial Data Analysis capabilities for its oscilloscope solutions by introducing as first oscilloscope manufacturer Eye Diagram capabilities in the new TDME Serial Bus options

Comprehensive Low-speed Serial Data Capabilities

Teledyne LeCroy today is offering the widest range of Trigger (T), Decode (D), Measure/Graph (M or G) and Eye Diagram and Physical Layer (E or P) options and they nearly universally available across our entire oscilloscope product line.

The user can isolate events using the serial bus trigger and view color-coded protocol information on top of analog or digital waveforms. Timing and bus measurements allow quick and easy characterization of a serial data system. Measurement data can be graphed to monitor system performance over time. Identify physical layer anomalies with eye diagram mask testing and mask failure locator.

Eye Diagram & Physical Layer Testing

Rapidly display an eye diagram of you packetized low-speed serial data signal without additional setup time. Use eye parameters to quantify system performance and apply a standard or custom mask to identify anomalies. Mask failures can be indicated and can force the scope into Stop mode.

Up to four serial data signals can be decoded and displayed as eye diagrams at one time. These can be different protocols, or the same protocol measured at different points (e.g., transmits and receive, different nodes, or different standard-defined test points). You can apply a user-defined filter to each eye diagram to only display specific signals in the eye.

The signal quality of physical layer can be qualified in the eye by applying parameters for Eye Height, Eye Width, and Number of Mask Failures. Some packages (e.g. FlexRay TDMP) go a step further and include additional measurements defined in the standard.

A user-defined or pre-defined mask may be added to the eye diagram so as to objectively evaluate if the physical layer signal intrudes too far into the eye opening. Apply a filter to include or exclude specific messages from the Eye so as to determine failure source (e.g., messages from a specific node or with a specific ID). Mask failures are indicated with a red circle and can be displayed in a table. Touch the failure table to open a zoom of the failed area for further inspection.

Some standards, due to their speed or nodal complexity, provide specific guidance on what eye diagrams or measurements should be made and exactly how they should be performed. FlexRay and MIPI DPHY are examples. In these cases, the Eye Diagram (“E”) capability is augmented with additional specialized “P” capability (for Physical Layer Measurements), per the standard. In these cases, the “E” capabilities previously described are also available. Eye Diagram is available for the following standards: I2C, SPI, UART RS-232, CAN, CAN FD, FlexRay, LIN, ARINC429, MIL-STD-1553, USB 2.0, 8b/10b, LPDDR2, DDR2, DDR3, D-PHY/CSI-2/DSI, M-PHY, NRZ

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