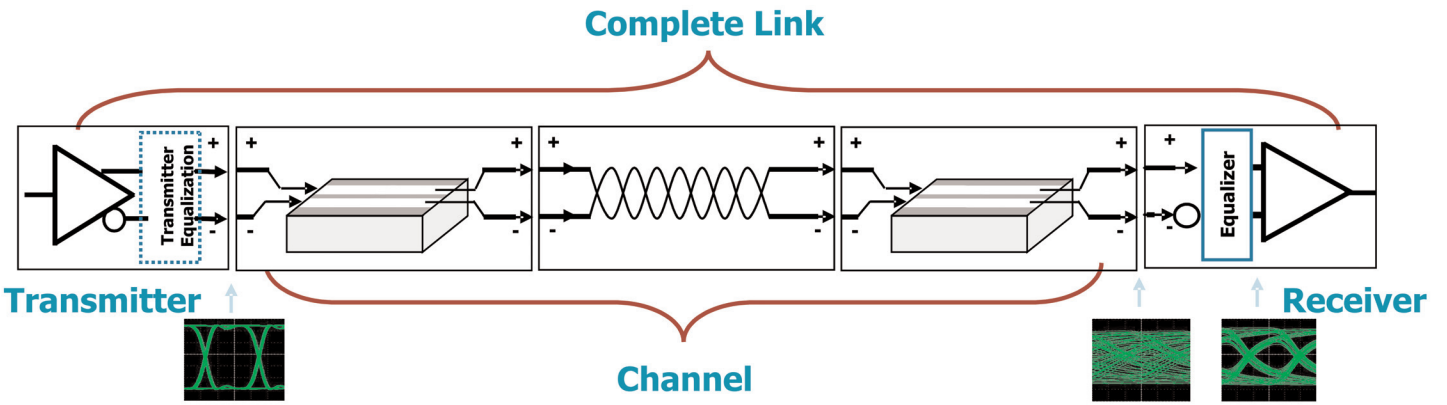
Tektronix Serial Data Network & Link Analysis Solutions

The Only Integrated Solution Addressing The Complete Multi-Gigabit Serial Data Link



Tektronix' comprehensive, integrated tool set for the latest high-speed serial technologies – TDR/TDT verification, S-Parameter measurement, Jitter, Noise and BER analysis - enables you to resolve design challenges quickly and efficiently. Tektronix' Equalization and Channel Emulation capabilities ensure you can see the effect of the channel on the eye and observe a realistic signal at the input of your receiver.

As serial data speeds increase, loss and distortion caused by the channel must be equalized in the receiver for the signal to be recognizable. Meanwhile, effects of loss and crosstalk must be fully verified in both time- and frequency-domains. A powerful, flexible test solution that addresses these requirements maximizes characterization throughput and improves time to market.

- **Transmitter Analysis**

  Precise Insight Into Causes of Eye Closure and BER Degradation

  Pre-emphasis, de-emphasis

  SSC analysis and measurement support

  Eye Contour and BER Eye

  Jitter separation and analysis

  Noise separation and analysis

  Virtual probing with fixture de-embedding

- **Channel Analysis**

  Full Compliance Test and Characterization of the Channel Through TDR and S-Parameters

  Impedance measurements

  Insertion & return loss

  Crosstalk in time and frequency domains

  True differential measurements in time and frequency domains

  Single-instrument toolkit for all cable assembly and PCB compliance and test automation needs

- **Receiver Equalization and Link Analysis**

  Characterization of Signal Inside the Receiver, Optimization of the Link Signal Integrity

  Emulation of channel effect on jitter, noise, BER eye

  Advanced (FFE, DFE) equalization

  Impairment compensation via equalization and de-embedding filters

  Complete end-to-end link signal integrity analysis with a number of emulated channels, varying levels of emphasis and equalization

Tektronix®

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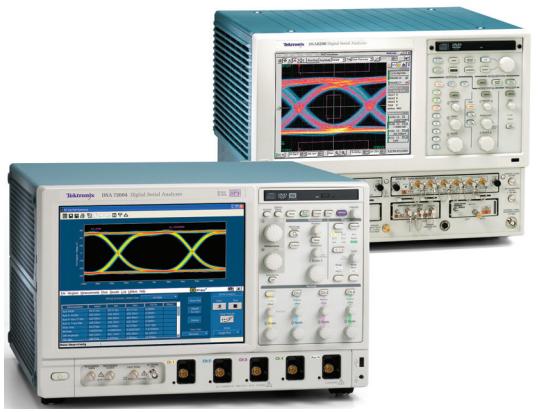

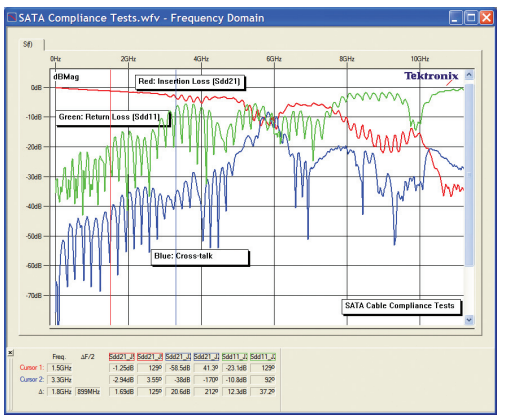

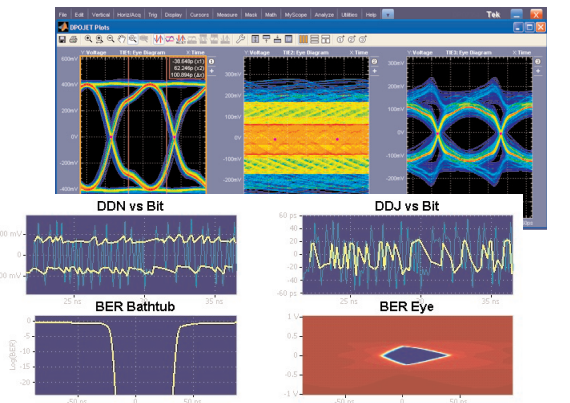

- **Superior Performance with Extraordinary Versatility - Digital Serial Analyzers**

  DSA8200 for Waveform Precision

  High speed characterization for data rates of 8 Gb/s and above

  Superior measurement system fidelity with up to 4 true differential channels

  Lowest noise 450uVRMS at 60GHz

  Optical support up to 100+ Gb/s

  DSA70000 for Versatility

  20 GHz real time bandwidth to the probe tip and 50 GS/s on all channels

  Fastest waveform capture rate with >300,000 wave-forms per second; 400 fs jitter noise floor

  Unique Serial Pattern Triggering up to 3.125 Gb/s and 8b/10b Standard Protocol Triggering and NRZ Serial Test Pattern Triggering up to 6.25Gb/s

- **The Versatile, Time- and Cost-Effective Choice for Signal Path Characterization**

  TDR/TDT/IConnect® for Serial Data Network Analysis

  50 GHz true differential TDR/TDT system

  50 GHz S-Parameters, highly accurate impedance and loss measurements

  Standards specified, cost-effective alternative to expensive VNAs

  1M record length enables measurements of long interconnects at higher frequency

  Automatic SPICE model extraction for integrated analysis with simulation models

  Automated procedures minimize errors & reduce test time

  Command line interface for manufacturing applications

- **Serial Data Link Analysis with Transmitter and Receiver Equalization and Channel Emulation Capabilities**

  Complete link analysis with closed-loop support for simulation

  Impairment compensation with DFE & FFE equalization

  Arbitrary filters for custom signal conditioning

  Separation of both Jitter and Noise enables highly accurate BER contour and eye closure calculations

  Advanced transmitter analysis with SSC, pre-/de-emphasis supports

  Virtual probing with fixture de-embedding

  Multiple eye plots for side by side comparison of each link element such as transmitter, channel or receiver

  Equalization algorithms correlated to industry standards

www.tektronix.com/oscilloscopes