

Tektronix Jitter Measurement 2.0 Solution

Fast, Accurate and Complete Solution to get Answers about Complex Jitter Issues

Jitter degrades system performance and eludes troubleshooting efforts just when you can't afford the time to track it down. Dealing with jitter is now a mandatory part of any high-speed design and many serial data standards require extensive jitter compliance tests as well.

Jitter characterization involves complex signal analysis. Measurement needs range from straightforward to intricate; and interactions between transmitter and the channel result in requirements for complete serial data link analysis. No matter what your specific requirement, Tektronix enables you to resolve design challenges quickly and efficiently.

Innovative measurement solutions such as digitizing oscilloscopes, logic analyzers, real-time spectrum analyzers, time-domain reflectometers, signal generators, high-fidelity probes and analysis software have emerged to help you deal with Jitter.

Finding and Fixing Jitter Sources

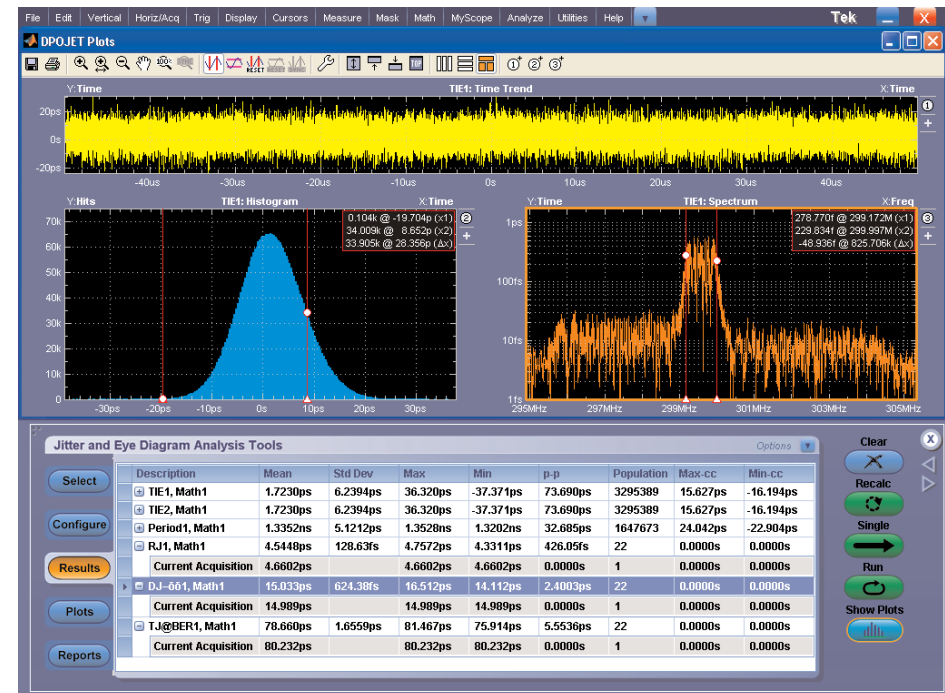
- Find:
 - Periodic jitter effects
 - Harmonic jitter relationships
- View jitter results as:
 - Phase noise
 - Eye diagram
- Determine jitter decomposition using accurate convolution models or use industry specific dual-dirac models

Obtain Standard Specific Compliance

- Standard specific Jitter and Eye Diagram
- Margin measurements and limits testing
- Pass/Fail measurement and real-time Mask Testing

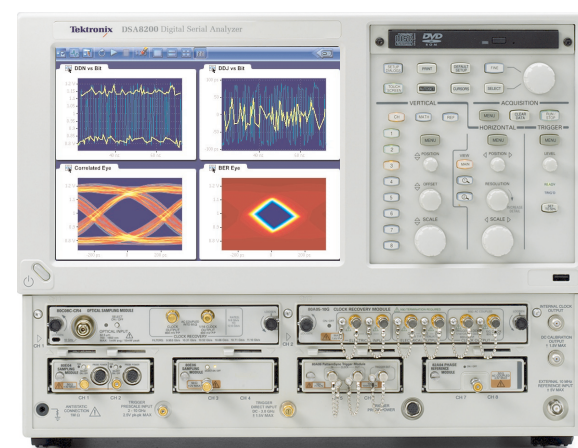
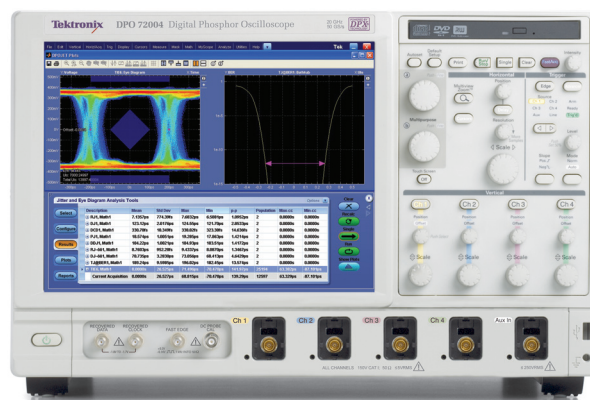
Finding and Fixing Effects of Jitter and Noise on the Complete Link

- Understanding channel effects
- Understanding equalization effects at the receiver
- Predict BER contours at the receiver
- Complete channel emulation including equalization to observe the actual eye at the receiver's comparator



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Jitter and Timing Analysis for Debug & Design Verification

DPO/DSA Real Time Oscilloscopes with DPOJET Jitter Application Software & Probing

- Cover all standards with Industry's highest real-time bandwidth
- Pinpoint timing anomalies with full sample rate and record length across all 4 channels
- Quickly find intermittent events with DPX® acquisition technology that displays up to 300,000 wfms/s
- Decompose jitter and isolate random jitter components from deterministic jitter (periodic, clock and data-dependent) with DPOJET analysis software
- Industry's only analysis tool to include spectral averaging and peak detection to find low probability and low level jitter
- Save time by capturing, sharing, and analyzing waveforms later without the DUT connected

Jitter and Eye Diagram Analysis for Compliance Testing

DPO/DSA Real Time Oscilloscopes with DPOJET Jitter Application Software & Probing

- Compliance test software to cover the latest serial data standards
- Industry's most accurate and most accepted real-time TJ@BER results.
- Oscilloscopes and measurement software for complete physical layer compliance testing
- Industry's only solution that performs differential clock to data "dual port" capture and measurements (no probes required)
- Capture of required 1 Million Unit Intervals of PCIe 2.0 with a single acquisition
- Industry's only real-time OneTouch Jitter Wizard and Jitter Guide for built-in expertise

Jitter & Noise Analysis for the Complete Serial Data Link (SDLA)

DSA Sampling Oscilloscopes with 80SJNB Advanced Application Software & Probing

- Reduce measurement errors resulting from test fixture signal degradation with IConnect® software's integrated TDR and S-Parameter measurements
- Accurately analyze signal paths to predict crosstalk and jitter to ensure reliability with Serial Data Network Analysis (SDNA)
- Determine precise causes of eye closure with jitter, noise, and BER analysis, plus maximize the eye opening at the receiver by quickly evaluating various FFE/DFE equalization setups using Serial Data Link Analysis (SDLA)

www.tektronix.com/jitter