

Signal Integrity Testing Solutions

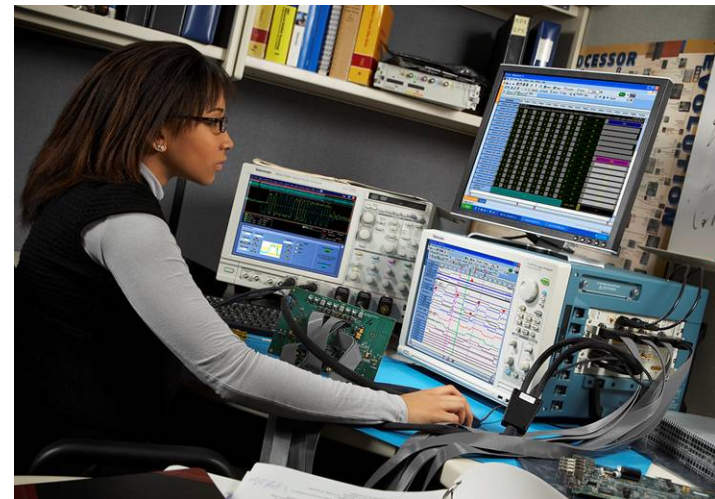
Powerful and Complete Portfolio to Overcome Signal Degradation Challenges

Application Fact Sheet

The task of isolating and eliminating signal integrity problems anywhere in the system is challenging. Tektronix delivers the bandwidth and time-saving features you need to properly address high-speed signal deviations, quickly locate and trace faults back to their source, and eliminate schedule delays and reliability issues.

Signal Integrity Testing Challenges:

Design Problems	<ul style="list-style-type: none">▪ Clock distribution▪ Signal path design▪ Noise margin▪ Impedances, loading, and terminations▪ Transmission line effects▪ Signal path return currents▪ Decoupling and power distribution
Digital Timing Issues	<ul style="list-style-type: none">▪ Bus contention▪ Setup and hold violations▪ Metastability▪ Undefined conditions▪ Inter-symbol interference (ISI)
Analog Deviations	<ul style="list-style-type: none">▪ Amplitude problems▪ Edge aberrations▪ Reflections▪ Crosstalk▪ Ground bounce▪ Jitter



Signal Integrity Testing Solutions

Powerful and Complete Portfolio to Overcome Signal Degradation Challenges

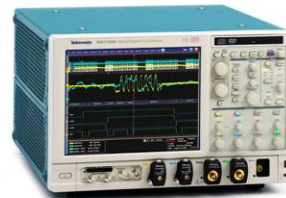
Application Fact Sheet



Digital Validation and Debug

**TLA Series Logic Analyzers, Probes,
and Software**

- Find elusive glitches and events with MagniVu™ acquisition's high speed timing resolution of 20 ps
- Eliminate double probing with iCapture™ multiplexing to achieve simultaneous digital and analog acquisition through a single logic analyzer probe
- Gain complete system visibility with digital/analog correlation using iView™ display
- Quickly find signal integrity issues with multi-channel bus analysis using oscilloscope-generated eye diagram in iVerify™ analysis



Electrical Validation and Debug

**DPO/MSO Series Oscilloscopes,
Probes, Analysis Software, and AWG
Series Arbitrary Waveform Generators**

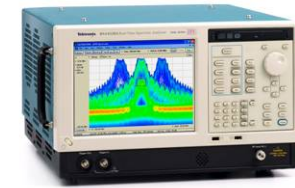
- Highly accurate oscilloscopes with full sample rate across all four channels for the greatest flexibility
- DPOJET analysis software decomposes jitter and isolates random jitter components from deterministic jitter (periodic, clock and data-dependent)
- Quickly find intermittent events with DPX® acquisition technology that displays up to 300,000 wfms/s
- Save time by capturing, sharing, and analyzing waveforms later without the DUT connected
- Arbitrary waveform generators enable real world signal generation for receiver limit and stress testing



Signal Path Characterization

**DSA Series Sampling Oscilloscopes,
Probes, and Application Software**

- 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)



Frequency Domain Analysis

**RSA Series Spectrum Analyzers
and Application Software**

- Discover signal behavior previously unseen with proprietary DPX® spectrum display
- Accelerate troubleshooting by pinpointing the root cause of problems with multi-domain analysis
- Isolate hard to find hardware and software anomalies with cross domain triggering between multiple instruments
- Observe the entire duration of signal events, like frequency hopping, PLL settling times, turn on transients, and multiple pulses by seamlessly capturing data into deep memory