WAVECREST

Signal Integrity Analysis Solutions

applications

PCI Express™

Put Your Trust in Wavecrest

Within design, characterization and production facilities worldwide, engineers trust Wavecrest solutions to meet their toughest challenges in signal integrity analysis.

Wavecrest's leadership role in numerous reference standard committees and our technical expertise in measurement and analysis methodologies, enable us to actively educate engineers and technicians about current and future timing, jitter and signal integrity analysis issues, and to contribute to many specifications written for compliance standards.

Recently, significant signal integrity design and system challenges have arisen due to the transition from a 66 MHz PCI bus to a 2.5 Gb/s PCI Express™ serial data link. At these high data rates, signal integrity becomes the most critical test for determining overall performance and interoperability. Wavecrest helps you deal with these challenges by packaging our knowledge and methodologies into an easy to use, comprehensive diagnostic software toolset specifically designed for any PCI Express application. These tools allow you to complete timing and voltage tests in seconds with a simple pass/fail compliance indication for each test parameter.

In addition, with the patented Tailfit™ algorithm, the industry-standard approved methodology for separating and identifying various jitter components, you can accurately predict the performance of a device or system to a bit error rate of 10^{-12} or lower. This methodology assures the long term reliability and interoperability of your products.

Wavecrest solutions are designed for both lab and ATE environments. By using identical solutions from design/debug phase through device characterization and production, you are assured of seamless correlation from test to production, whether those facilities are in the same building or on separate continents.

From working one-on-one with you and your staff, to providing you with the tools for comprehensive analysis for your high-speed applications, we'll be with you at the start and along the way, taking the mystery out of signal integrity analysis.

Comprehensive Diagnostics for PCI Express Applications

Gain confidence in your device performance with Wavecrest comprehensive diagnostic tools. In contrast to other testing solutions that yield pass/fail results without specific information, Wavecrest's GigaView™ software pinpoints and displays exact problem areas. Now you can determine the root cause of problems with devices that fail or just marginally pass PCI Express compliance specification parameters. For example, you can quickly isolate and quantify unwanted deterministic jitter due to crosstalk or EMI with graphical views in the frequency domain, helping you quickly isolate noise components.

The comprehensive diagnostics with pass/fail compliance testing ensure your devices are characterized well, and will meet industry standards and product specifications. As a result, you'll shorten your debug and characterization time considerably and get your products to market faster.

WAVECREST Comprehensive Timing, Voltage and Diagnostic Tools

Perform eye diagram analysis for a quick qualitative view of device performance.

Quickly isolate and quantify unwanted deterministic jitter due to crosstalk and EMI with a spectral view of jitter.
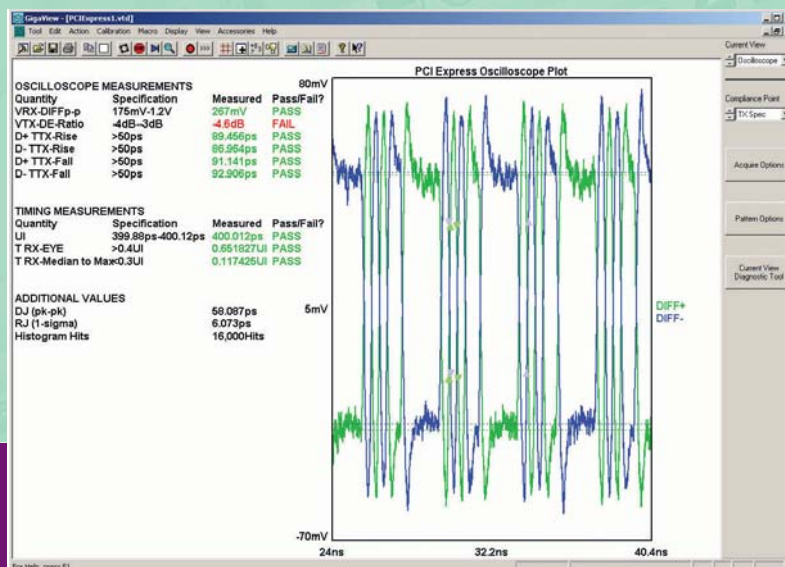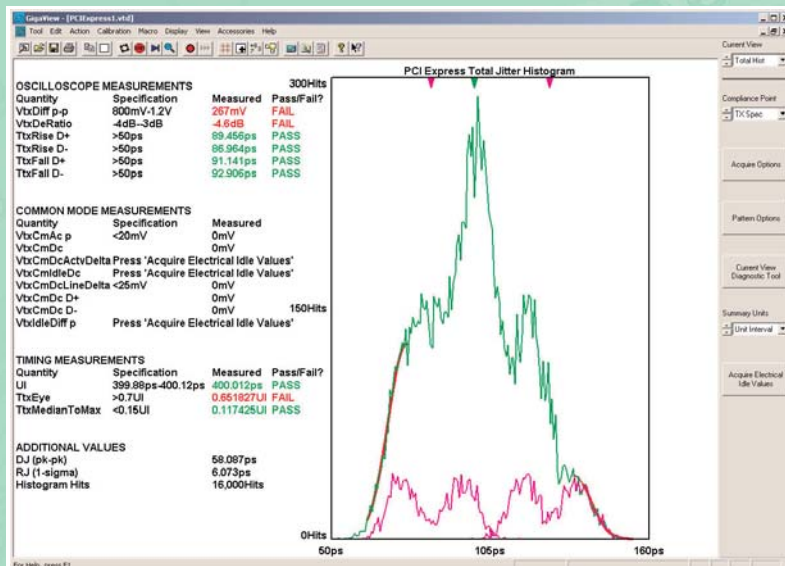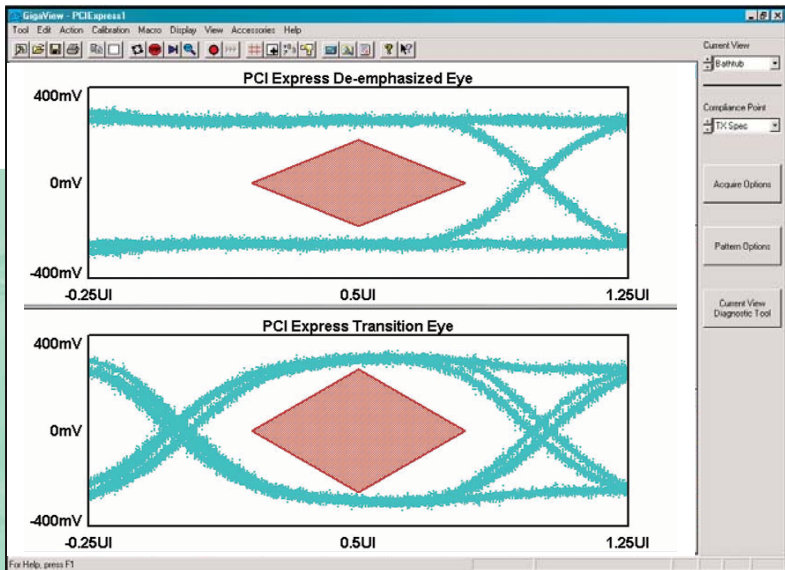
Accurately determine device performance by quantifying random and deterministic jitter components, and measure total jitter to 10^{-12} BER.

Determine pass/fail results of specification parameters with the easy to use, single button PCI Express compliance tool.

Solutions are available for design, characterization and production environments

expertise

The Reference Standard in Signal Integrity Analysis

Wavecrest has been the pioneer and leader in signal integrity analysis for high-speed applications years before traditional test instrument companies realized the need. That's why serial communication standards such as PCI Express™, Fibre Channel and Serial ATA look to Wavecrest to participate in and lead industry standards working groups. For example, Wavecrest was recently Co-Chair of the PCI Express Jitter Working Group of PCI-SIG, making major contributions to the 1.1 Specification document.

Wavecrest is the technical expert in signal integrity with 8 patents in jitter alone, with 8 more pending patents. In addition, our products have become the reference standard for compliance testing of high data rate applications.

Committee involvement, knowledge and technical expertise give engineers worldwide the confidence that their toughest challenges in signal integrity analysis will be solved with a Wavecrest solution.

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PCI EXPRESS

RapidIO™

INFINIBAND™

SERIAL ATA

Fibre Channel

10 GEA — 10 GIGABIT ETHERNET ALLIANCE

SAS

XAUI

LVDS

Recommended SIA Configurations for PCI Express Applications

Model	Max. Timing Measurement Freq.	Oscilloscope Bandwidth
3300D	2.5	6 GHz
3600D	6.0	6 GHz

WAVECREST
Be certain of the signal you send.

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