Shield™

A Platform for Automated NVH Assessment

Automate defect detection and confirm functional performance using dynamic data and metric-based decision making.

Improve Process, Improve Quality
Shield's workflow empowers improved quality through improved process. Large, structured datasets are a wealth of information made available on demand for exploration and reprocessing. When the answers to quality and process improvement reside in the data history, the Shield platform will give you the tools to extract, study, and report it.

Designed for Automation
Shield's system architecture offers both structure and flexibility for creating and managing automated data acquisition, processing, and archival from a single test stand to the largest parallel station installations.

NVH and Functional Test
Measure dynamic signals from a wide range of sources, including traditional NVH sensors, tachometers, pressures, temperatures, and CAN data.

An Embedded NVH Solution
Shield's NVH controller is the acquisition and computation engine that can be embedded under your machine's own sequencing system. The NVH controller can integrate with a variety of communication protocols such as Ethernet/IP, PROFINET, OPC/UA, and DeviceNet.

Design Metrics

Shield's metric design capabilities include frequency and order spectra, nth octave spectra, specific loudness, order cuts, periodic and random impulse detection, preprocessing to introduce filters, integration, enveloping, and multi-channel virtual signals. 2D feature math and metric math capabilities capture complex interactions between channels and metrics, all of which are assigned to parallel metric recipes and used for global pass/fail.

Trove

Trove is a server-based tool that implements fully autonomous archival of all data from every test conducted by one or more Shield systems. The power of the data is harnessed by Trove through its batch processor and reporting engine, enabling what-if scenarios and analytics beyond what is run on the plant floor.

About Signal.X Technologies

Since 2004, Signal.X has specialized in test and measurement products for noise and vibration (NVH), production and laboratory test automation, functional test design, large data management, and custom application development.