STUBView – The industry’s first high-resolution stub measurement for production environments.

Made for High Resolution Stub Defect Detection
The process of backdrilling excessive stubs in printed wiring board vias is essential for ensuring signal integrity and mitigating attenuation as high frequency signals pass from layer to layer. Up till now however, a misaligned or partially completed backdrill process have proven difficult to detect. Now, Introbotix introduces STUBView, a high resolution stub measurement system than can help ensure your mission critical wiring boards are performing just as they were designed.

Fast to setup and calibrate... and even easier to use.
STUBView is made for production environments, and with it comes a easy-to-use interface and setup process. Run the system and product calibration, dial in the stub length tolerance, identify your trace points and then you’re ready to begin testing. STUBView then measures each via and its stub and reports a pass or fail based on maximum stub length tolerance. Simple to operate and easy to read results allow an operator with minimal training to detect an excessive stub length, or defect that could prevent a wiring board from performing as it should.

Scalable from a Low-Volume Station to 100% Robotic Testing.
Depending on your needs STUBView can be equipped with a probing station for low-volume work. But for mission critical 100% testing, STUBView also works as a robotically controlled high speed system capable of performing thousands of tests in one operation.
STUBView

Built on a proven High Frequency TDR platform

STUBView utilizes high frequency electrical measurements to determine the stub length present in up to 100% of all PCB vias. This is done by generating 50GHz step pulses utilizing TDR instrumentation. These test signals are inserted into the DUT at the via location with either single-ended or differential odd mode stimulus. The resultant waveforms from the DUT injection are collected and then processed through a fast fourier transform (FFT) algorithm to generate the frequency domain response. The results produce a characteristic loss vs. frequency (dB/freq) profile for each via from which a stub length is determined and evaluated to ensure that it is less than the maximum accepted length (mils).

Test System Calibrations
System calibrations are simple directed operations conducted prior to stub length testing operations.

Part Number DUT Calibration
STUBView allows the testing of via stub lengths in all locations of the board/backplane. The testing is independent of PWB trace length, layer routing and trace impedance. For each new board part number, a guided calibration procedure is conducted which determines the specific high frequency response of each backdrill depth on the board. STUBView allows the definition of up to 36 separate backdrill depths and utilizes a calibration coupon built one time for the new part number.

Creating Testing Specifications
Prior to start of the testing operations, an operator will create a Test Spec (recipe) which defines the vias to be tested. The test specification includes simply the name of the via location, whether the location is a single-ended or differential structure, and what backdrill depth was assigned to the via. STUBView test spec generation supports the testing of up to 20,000 vias per part number.

Testing Operations
Testing operations begin with the operator selection and loading of a previously generated test recipe. The recipe will define how many single-end and/or differential test points will run on a part number. Testing is conducted sequentially with the operator or automated probing system being guided as to where to place the probe for each test point. Serial numbers are automatically incremented at the completion of testing each for each part.

Probe Options
High frequency probes are available to fit most board land configurations including within BGA lands areas and connector grid land patterns on backplanes.

Reporting
At any time including the completion of all testing, a summary report can be generated that includes all important information of the testing operations including serial number of the board, location of each via and the corresponding pass/fail results.
From the Innovator in High Frequency Testing

Introbotix is an award winning pioneer and industry leader in high frequency testing—providing the manufacturing and design industry with solutions for production loss testing with the ACCU-Prober open platform, the CI1000 robotic impedance tester, and now STUBView. The industry’s first high-resolution stub measurement tool for production environments.

ACCU-Prober

SPP, SET2DIL and TVNA Production Loss Testing

ACCU-Prober from Introbotix is an open platform TDR measurement system designed to meet and exceed today’s testing needs, as well as those of the future. It is compliant with most widely used standards in manufacturing and design and is able to test to frequencies as high as 50GHz.

CI1000

Robotic Controlled Impedance Tester

The CI1000 from Introbotix is the perfect testing and reporting solution for boards, coupons, prototypes and 100% testing of batch jobs. The CI1000 is an easy to learn and operate system that includes computer guidance software, test results storage, test failure alerts with results reporting locally or over a network.