

## What is Scanworks and Why Do I Need It.?

Scanworks is an integrated software and hardware boundary scan test and development system developed by Asset-Intertech ([www.asset-intertech.com](http://www.asset-intertech.com)). The software consists of a graphical user interface, cad translation tools, model library management, test development and debug, fault coverage analysis and fault analysis tools. The hardware consists of several forms of PC based interfaces from the software to a boundary scan compliant PCB. From single port USB pods to multi port PCI based pods.

With the increasing density of modern PCB designs and the devices populating PCBs the ability to test for defects in the manufacturing process has decreased dramatically. Access to signal nets quite often are too small or nonexistent thus limiting or completely preventing conventional In-Circuit testing of PCBs. Since conventional mechanical test methods are becoming unviable in some PCB designs alternate methods of test have been developed. One of these increasingly common test methods is boundary scan (also known as JTAG) testing. With as few as four pins much of a boundary scan enabled PCB can be tested.

The limitations of the boundary scan test are that the only signals that can be tested must originate from a boundary scan device and be captured by a boundary scan device. Therefore at minimum two boundary scan enabled devices or one boundary scan device and memory devices controlled by the single boundary scan device are required. If there are multiple boundary scan devices and they are separated by interface logic or analog devices the components can be modeled and tested in conjunction with the boundary scan devices.

One advantage of the boundary scan test process is code transportability. The code used for testing a board for manufacturing defects can also be used as for bench top testing and field test. This same code can be integrated into conventional In-Circuit and Functional test systems.