# SCANWORKS® BOUNDARY-SCAN TEST MANUFACTURING

OVERVIEW

ScanWorks® Boundary-Scan Test (BST) Manufacturing software is an easy-to-use and effective way to implement boundary-scan-based test and in-system programming in a manufacturing environment. Building on the extensive test development capabilities of the ScanWorks BST Development software, a BST Manufacturing software delivers the full benefits of your efforts developing boundary-scan tests for prototype debug by enabling the re-use of these tests in manufacturing.

VECTOR AND PROGRAM CREATION

Test vector creation begins with any of the automated or procedural methods provided in the ScanWorks, BST Development or Programming software. The software automatically generates test vectors for a scan path infrastructure and the boundary-scan accessible interconnects on the path. Once the test and programming vectors have been created, they are organized as a test program by ScanWorksAPIs, which functions in conjunction with LabVIEW, LabWindows, Test Stand, Agilent (HP)-VEE, Visual Basic, Tcl, Perl, C, C++, C#, and other tools that create test programs. The test programs, which are called actions by ScanWorks, can also be organized into a sequence that contains multiple actions. Actions and sequences can be applied with a simple operator interface that comes with all ScanWorks software.
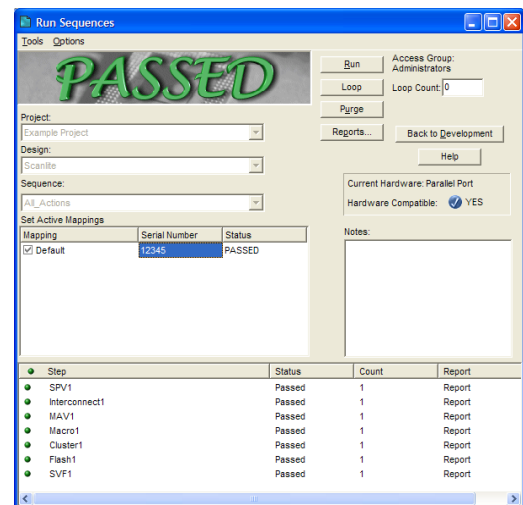
When the functionality of the vectors and programs has been verified, they are exported to manufacturing as a single compressed file. This file has design information that includes the boundary-scan controller hardware parameter settings such as the test clock (TCK) frequency needed to support this particular design. The design information also can include information that lets you control the level of access your test engineers, technicians and operators have to the data. For more information on vector or program creation, refer to the descriptions of the ScanWorks BST Development or Programming software on the ASSET web site.

TEST APPLICATION

When the test program is complete, you are ready to set up your manufacturing application software and hardware. The ScanWorks BST Manufacturing software can use any type of boundary-scan controller hardware regardless of the controller that was used to develop the tests. ScanWorks supports several types of controllers including the high-performance, multi-port PCI-410 controller, or the cost-effective, single-port PCIe-1000 or USB-100 controllers for

single units under test (UUTs). For more information on ScanWorks controllers, refer to the descriptions on our web site.

To apply tests on a ScanWorks BST Manufacturing software, test vectors and programs are imported from one of the development software. Your boundary-scan controller hardware is automatically set to support the requirements of the UUT. You then apply the test programs and acquire responses from the unit being tested. The response vectors can be analyzed immediately as go/no-go tests or diagnostics can be performed on the test failures. The response vectors can also be saved for diagnosis later on a ScanWorks BST Diagnostic & Repair software.

USER INTERFACE

Included with the manufacturing test application software is a user interface that allows you to import existing sequences and apply them to the unit being tested. Once a sequence is selected, the actions within that sequence are displayed along with their status. If sequence notes were included when the sequence was created, the notes are shown in the notes field. If you wish to, you can add a serial number for the unit to which the sequence is applied. This serial number appears in the sequence log. The results are shown in the window at the top of the dialog box. Additional details are shown next to each action in the list. A standard report displays a sequence log that shows the results of each step and links to the detailed information for that step.

SCANWORKS PLATFORM FOR EMBEDDED INSTRUMENTS

ScanWorks Platform for Embedded Instruments is a seamless software environment to access, run and collect data from any instrument in your chips, circuit boards or systems. The ScanWorks Platform includes products for Boundary-Scan Test (BST), Processor-Controlled Test (PCT), High-Speed I/O (HSIO) Validation, FPGA-Controlled Test (FCT) and IJTAG test.

ASSET CONTACTS:

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