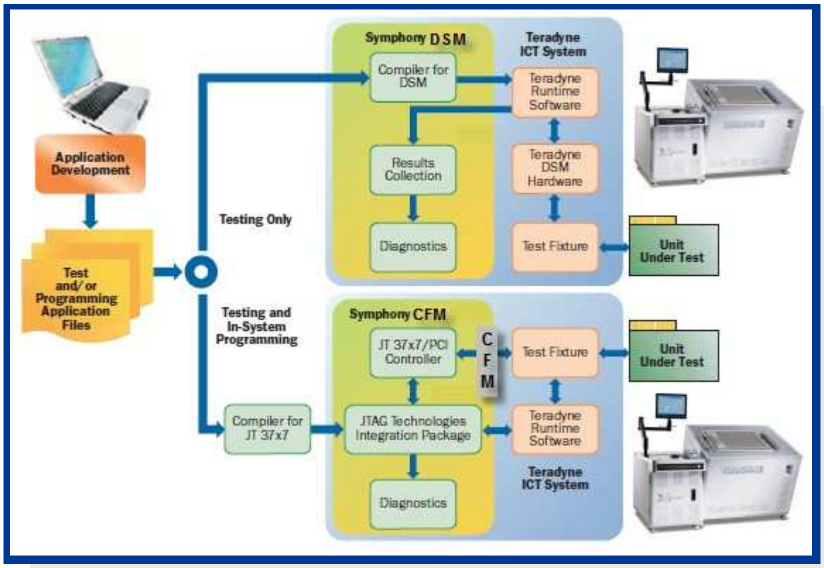
Symphony Boundary Scan Solution

Advanced Boundary Scan Test Option for TestStation™ and 228X Test Systems



For maximum flexibility Symphony supports both hardware and software implementations.

Key Features:

- *Offline boundary scan programming and development capabilities*
- *Consolidation of test techniques in a single test platform*
- *Effective software only solution or high performance hardware option*
- *Integrates with Teradyne's Deep Serial Memory or Custom Function Board options*
- *Supports full range of IEEE 1149.1 tests*
- *Supports IEEE 1149.6 testing of advanced digital networks*
- *Transportable boundary scan tests can be re-used at other manufacturing stations*
- *Improved fault coverage and diagnostics*
- *Support for programming FLASH memories and CPLDs.*

Symphony is an advanced boundary scan solution designed in partnership with JTAG Technologies for manufacturers using Teradyne's popular TestStation™ and legacy GR228X family of In-Circuit Test systems. Because boundary-scan and ICT are complementary test methodologies, this combination of test techniques provides an optimal test strategy with lowest overall cost and maximum fault coverage.

As shown in the Block Diagram above, there are two implementations of Symphony that are supported. ***Symphony CFM*** directly uses JTAG Technologies' boundary scan Controller and TAP Interface modules. The boundary scan controller is installed in a PCI slot of the TestStation's PC controller and it is cabled over to a JTAG Custom Function Module (CFM) that is installed on Teradyne's Custom Function Board (CFB). The CFB can plug into the accessory or pin board slot inside the ICT receiver bay. Specialized Teradyne test programming language for the CFB is utilized to control the relays that connect the boundary signals to the board under test.

Symphony CFM uses the same JTAG ***ProVision***™ run time test execution software and test project files to control the JTAG hardware and run the boundary scan tests as is used by the standalone benchtop ***ProVision*** development solution. Developers who are familiar with JTAG's ***ProVision*** development environment will find it easy to use the ***Symphony CFM*** solution.

The second implementation, called ***Symphony DSM,*** is a software only solution that does not require any JTAG hardware to be installed in the in-circuit test system. The software consists of a JTAG-to-Teradyne boundary scan vector converter and a boundary scan diagnostic module. The software converter translates JTAG Technologies' boundary scan test vectors to Teradyne's native test programming language so they can be applied efficiently using Teradyne's Driver/Sensor and Deep Serial Memory in-circuit test instrumentation. If the boundary scan test vectors fail, the results are written to a file and interpreted by JTAG's boundary scan diagnostic software.

The JTAG Technologies' ***ProVision*** development tools support automatic generation of tests for the infrastructure, inter-connections, memory cluster interconnections and clusters of non-scan devices. In addition, the ***Symphony CFM*** solution has programming capabilities that can be utilized for those manufacturers who are interested in performing in-system programming of flash memory and CPLDs.

Symphony Product Options

Option	Description	Comment
Symphony TS / PCI-17 / CFM	Symphony CFM Package for TestStation and 228X systems. Includes: • JT 3717 / PCI Controller • JT 2147 / CFM Custom Function Module w/ 1 TAP • Cable • Execution software for testing and Flash/PLD programming • Result Collector and Bscan Diagnostics software • User Manuals	Additional JT 2147 / CFM modules can be added (up to 3) to support a max of 4 TAP ports Requires one Teradyne Custom Function Board – second CFB required if more than two JT 2147 / CFM modules are used. ProVision development software not included, can be purchased separately from JTAG Technologies
Symphony TS / DSM	Symphony DSM Package for TestStation and 228X systems. Includes: • JTAG to Teradyne test vector conversion software • Result Collector and Bscan Diagnostics software • User Manuals	Requires Teradyne's Deep Serial Memory (DSM) option
Additional JT 2147 / CFM	Custom Function Module with 1 TAP	Optional. Up to 4 TAP modules are supported (2 per CFB)
ProVision ProV_AST /N	ProVision Development Software licensed for test generation, debug, and diagnostic	Purchased separately through JTAG Technologies or their authorized distributors

Contact your Teradyne sales representative for more information or visit www.teradyne.com/atd.

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