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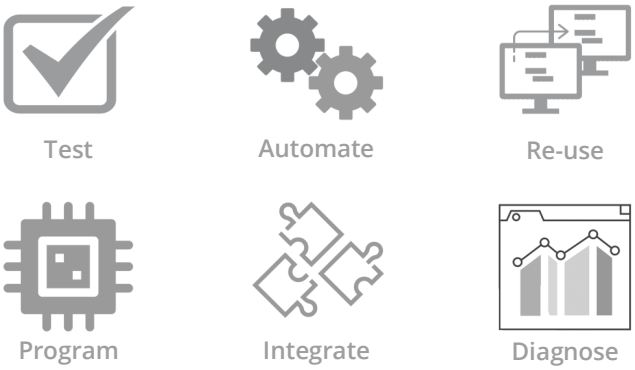



ScanExpress TPG™

# Intelligent Automatic Test Pattern Generator

## Features

- Intuitive wizard that guides the user through complete test procedure development
- Automatically generates test patterns for infrastructure, interconnect, memories, FIFOs, clusters, and resistors using proven boundary-scan test algorithms
- Test management functions for creating project revisions and test variations within a single parent test project
- Detects and supports industry-standard CAD netlist formats
- Identifies the boundary-scan chain order and draws a graphical representation of the boundary-scan chain
- Finds and classifies all resistors and resistor packs as either pull-up, pull-down, series, differential termination, or non-testable resistor types
- Complex script language with integrated debugging environment assists in writing custom boundary-scan test steps
- Constructs test plans for integration into the ScanExpress Runner™ test execution sequencer (sold separately)
- Assembles detailed fault coverage analysis reports for use with the ScanExpress DFT Analyzer™ (sold separately)
- Single Integrated Development Environment (IDE) for all JTAG applications, simplifying test development, execution, and analysis
- Complies with IEEE standards 1149.1 and 1149.6
- Works with Microsoft Windows

## Benefits

- Minimizes the learning curve for JTAG-based testing
- Significantly reduces the time it takes to develop boundary-scan tests
- Automates the test vector generation process to identify defects quickly and accurately
- Helps reduce ICT usage and related fixture costs
- Creates standardized, consistent test procedures based on an intuitive development flow
- Improves test procedure quality, enhancing overall product reliability

To deliver a product meeting the highest standards of quality and reliability, design engineers and test engineers alike must maintain test capabilities throughout the entire product life cycle, from prototype to manufacturing. Automation in test-generation is essential to ensure that tests keep up with the rapid development of modern products.

The **ScanExpress TPG** Intelligent Test Pattern Generator provides a highly advanced, automated boundary-scan test design environment—perfect for quick and efficient creation of complete boundary-scan tests for all IEEE-1149.1 and IEEE-1149.6 compliant circuit boards.

## Applications

**Design Engineers**
TPG automatically creates tests to detect and isolate faults for all boundary-scan testable nets of a PCB prototype.

**Test Engineers**
TPG increases PCB fault coverage and reduces boundary-scan test program development time.

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# ScanExpress TPG™

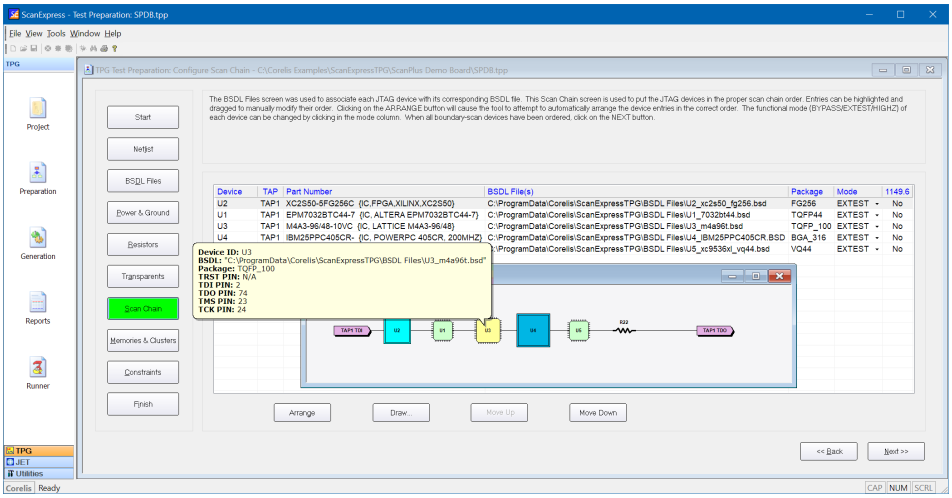
## The ScanExpress TPG Interface

TPG leverages a versatile IDE to provide automation and guidance for all users without sacrificing customizability and power. Development consists of two distinct phases: Preparation and Generation. By guiding the user through the process of defining the UUT, TPG creates a comprehensive boundary-scan test in a matter of minutes.

## Test Project Management

ScanExpress TPG test projects can be managed across multiple UUT revisions and variations. Each test project can include multiple sets of test development files, making it easy for users to maintain different test sets for each revision of a product.

The project management tools can be used to create new projects, add new revisions to existing projects, and create variations of projects without modifying the original file set.




The ScanExpress Preparation Windows with Topology Viewer

## The Preparation Phase

ScanExpress TPG test development begins by gathering details about the UUT from the user in an interactive session through a series of steps. The intelligent preparation engine assists the user with assigning input files, identifying special nets, and modeling devices on the UUT.

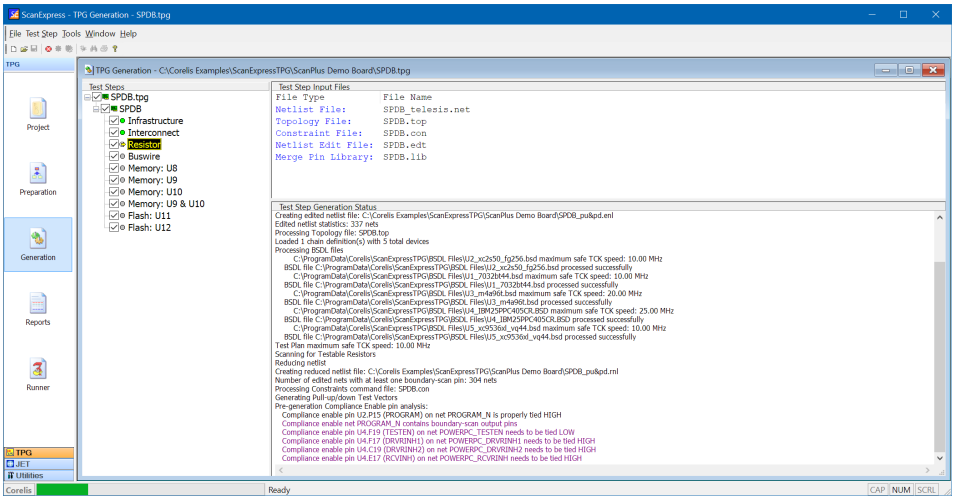
TPG features a comprehensive and ever-expanding library of device models for popular devices including resistors, buffers, RAM, Flash, and many more. The automatic association features quickly find models every step of the way.

ScanExpress TPG optionally records all part numbers and associated data within each project for re-use in additional projects, further reducing new test development time.

## The Generation Phase

The Generation phase provides tools to further personalize, fine tune, and generate test files. The user is free to directly modify the input files, add customized test steps, and utilize TPG's advanced "C"-style boundary-scan scripting language with integrated debugging environment to edit or create adaptive and interactive test steps.

When the user is ready to compile tests, the state-of-the-art automatic test pattern generation (ATPG) engine creates test steps ready-to-run in the ScanExpress Runner™ test execution sequencer.




The ScanExpress TPG Generation Window

## Ordering Information

**Part Number - 20400**

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