ScanExpress Debugger

Boundary-scan Interactive Analyzer & Toolkit

CORELIS An EWA Company

Preferred Boundary-Scan Solutions—Acclaimed Technical Support

Features

- Interactive control and observation of all boundary-scan controllable inputs and outputs
- Comprehensive pin and net browser with grouping, sort, and filter capability for easy identification and selection of boundary-scan pins
- Two scripting modules—advanced and basic—provide easy, automated access to boundary-scan signals
- Advanced script debugger boasts powerful code development capabilities including break points, single step, watch window, and more
- Intuitive software assists with short and open fault identification on and between BGA and other fine-pitch components
- Powerful JTAG protocol command interface for low-level access using simple JTAG scans
- TCK finder tool determines the maximum clock rate for a given unit under test (UUT)
- Real-time data checking prevents conflicts and unsafe values
- Graphical User Interface (GUI) for desktop debug applications
- Interfaces with NI LabVIEW, NI LabWindows/CVI, Agilent VEE, Visual Basic, and other third party test executives
- Fully complies with IEEE standard 1149.1
- Supports Corelis high-performance JTAG controllers
- Compatible with Windows XP, Windows Vista, Windows 7, and Windows 8

Benefits

- Speed up hardware development on products with BGA and fine-pitch components that are not accessible with external probes.
- Decrease test complexity by utilizing non-intrusive boundary-scan technology for virtual access.
- Modular JTAG toolkit makes boundary-scan test tasks easy for all users.

Test probe access is a luxury—modern electronic system design techniques such as blind and buried vias or ball-grid-array (BGA) devices guarantee limited signal access. Test points quickly reduce precious board real-estate and can even degrade performance. ScanExpress Debugger overcomes these limitations to provide the control and visibility necessary to quickly debug and test hardware, using a simple JTAG port to interface with IEEE-1149.1 compliant devices.

Whether debugging prototype hardware, enhancing production tests with boundary-scan control, or diagnosing a faulty board in the field, ScanExpress Debugger's easy-to-use and versatile interface helps engineers test and debug systems faster and more efficiently.

Applications

Development

Debug hardware faults in systems with JTAG, even on components with no physical access.

Production

Integrate boundary-scan control and test scripts into automated test routines.

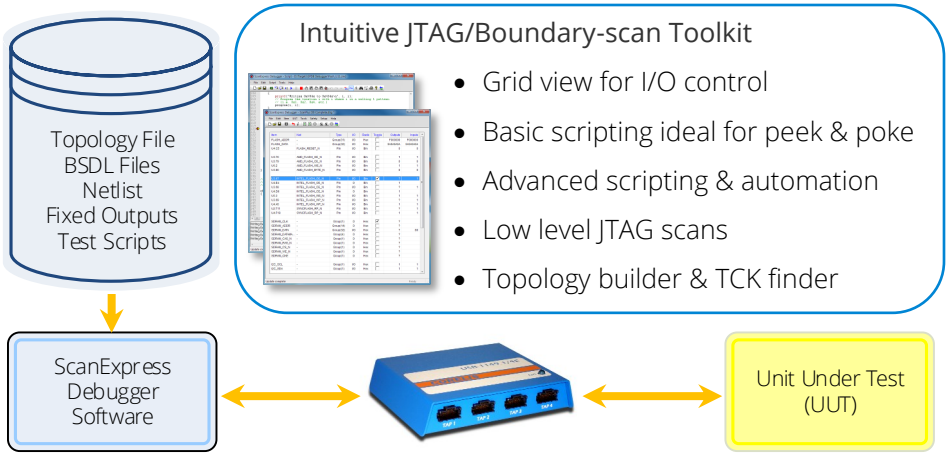
Service & Repair

Troubleshoot hard-to-find faults with just a desktop JTAG controller and a PC.

ScanExpress Debugger

Overview

ScanExpress Debugger is a software application designed to assist engineers with hardware debug during prototype design verification and testing as well facilitate boundary -scan control in both automated and manual test environments. Utilizing a high-performance Corelis JTAG controller along with user-friendly and intuitive Windows-based software and a powerful software API, ScanExpress Debugger can take control of a UUT boundary-scan chain and control board signals.



ScanExpress Debugger uses a simple JTAG interface with multiple tools to control and observe signals on the UUT

Graphical User Interface

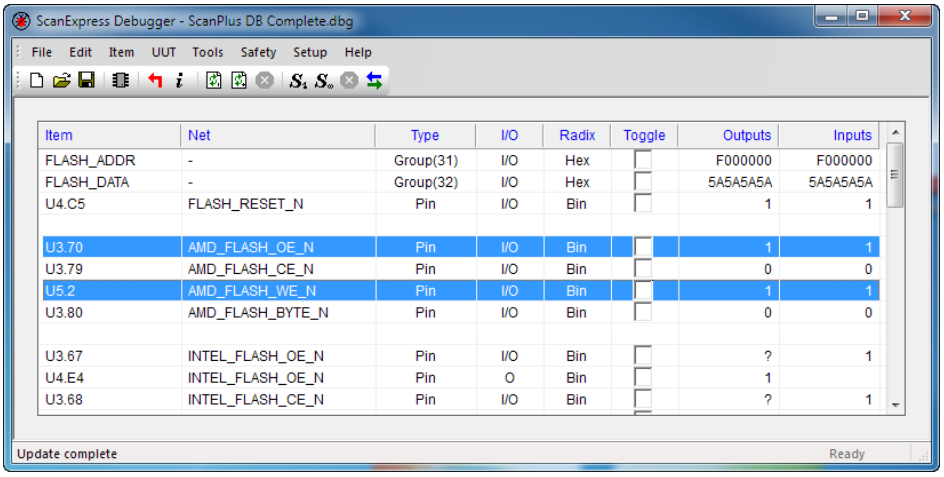
ScanExpress Debugger features an interactive GUI with two main views: the pin grid and the script debugger.

The pin grid features controls to set and monitor the state of individual pins and groups of pins on the UUT. Data editing and manipulation is easy—common user interface functions such as copy, cut, and paste as well as insertion, deletion, and clearing of data table rows are included. Additional functions allow resetting or updating of the Unit Under Test, selecting board safety options, and enabling continuous sample or update mode.

The script debugger features an integrated development environment for debug and execution of user-created scripts. The "C"-style scripting language should be familiar to users with a programming background.

Additional Tools

ScanExpress Debugger includes additional tools to make debugging JTAG systems easy. The protocol command interface can be used for low-level register scans, while the simple script interface is ideal for peek-and-poke operations. Finally, the TCK finder module tests available clock rates to find the maximum stable speed of a UUT.



The ScanExpress Debugger Grid View allows control and observation of all boundary-scan signals in a system

Application Programming Interface (API)

ScanExpress Debugger includes a DLL interface with powerful JTAG functions for integration into user applications and test environments. Developers can take advantage of boundary-scan access for in-system monitoring and stimulus as well as interfacing with external equipment.

The API can be integrated into C language applications or used with popular test executive systems such as National Instruments LabVIEW, National Instruments TestStand, and Agilent VEE to add boundary-scan control to any test environment.

Ordering Information

- Part Number 20409

For more information about Corelis ScanExpress products, please visit our website at http://www.corelis.com/

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