

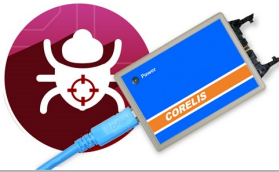
JTAG Starter Kit

Boundary-Scan Toolkit Software & Hardware Bundle



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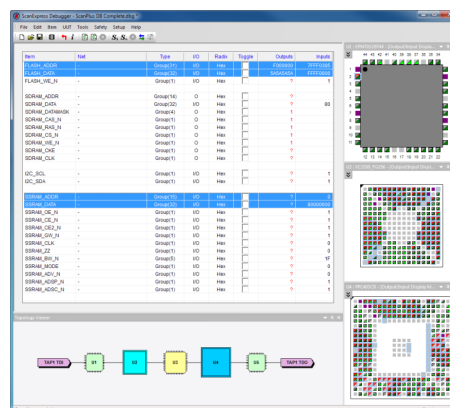
Revolutionize the way you think about test

Features

- Complete, easy-to-use hardware and software bundle for JTAG testing
- Interactive, real-time visual control and observation of all boundary-scan controllable input and output signals
- Two scripting modules—advanced and basic—provide powerful, automated access to boundary-scan signals
- JTAG protocol command module for direct low-level access to JTAG scans
- TCK test finds the maximum clock rate for a unit under test (UUT)
- Opcode discovery module identifies potential undocumented instructions for each device on the scan chain
- Customizable Graphical User Interface (GUI) with window docking
- Powerful API interfaces with popular third party test executives
- Fully complies with IEEE standard 1149.1
- Includes portable Corelis USB 2.0 JTAG controller
- Works with Windows XP, Windows Vista, Windows 7, and Windows 8/8.1

Benefits

- Speed up hardware development on products with BGA and fine-pitch components that are not accessible with external probes.
- Modular JTAG toolkit makes boundary-scan test tasks easy for any experience level.
- Free up engineering resources by eliminating the need to write functional tests.
- Reduce debug and troubleshooting time using a single, integrated toolkit.



The pin grid and display windows allow convenient control and observation of all boundary-scan signals in a system

JTAG test and debug has traditionally been reserved for highly experienced personnel with a deep understanding of the technology. The Corelis JTAG Starter Kit aims at providing engineers and technicians convenient and affordable access to getting started with JTAG test and debug.

The intuitive, easy-to-use software application is filled with powerful and useful tools that make hardware debug both enjoyable and cost effective. The interactive toolkit provides complete, real-time circuit visualization effectively eliminating the complexity of troubleshooting and debugging boards.

Complete with a portable USB 2.0 controller, the JTAG Starter Kit provides everything necessary to get started using JTAG, yet still provides a flexible upgrade path to higher performance controllers and integration with high-end Corelis applications.

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 JTAG adapter and a PC.

Overview

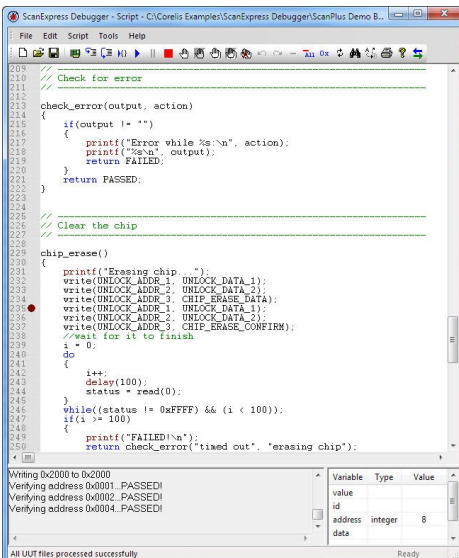
The Corelis JTAG Starter Kit includes the ScanExpress Debugger software application with a USB 2.0 JTAG controller. Engineers and technicians alike can use the system for a variety of tasks. The JTAG Starter Kit has an arsenal of features to control and observe system signals of a boundary-scan compatible UUT.

Software Features

The software features an interactive GUI with two main views: the script debugger and pin grid with component visualization.

Script Debugger

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.

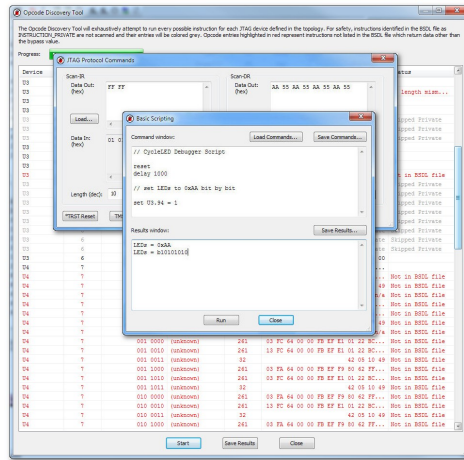


The script debugger can be used to develop and execute "C"-style boundary-scan scripts

Pin Grid & Component Visualization

The pin grid features controls to set and monitor the state of individual pins and groups of pins on the UUT. Component display windows can be enabled for any component on the boundary-scan chain, enabling at-a-

glance visualization of pin activity and convenient functions to control system signals. Actions performed in the pin grid will be reflected in the component display, and vice versa.



The JTAG Starter Kit includes software modules for a variety of common tasks

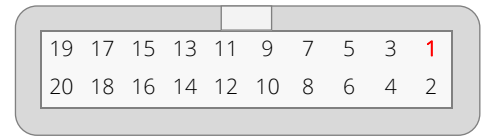
Additional Tools

Many software tools are included to aid in JTAG development and debug, including:

- Topology Definition Wizard
- Topology Viewer
- Chain Infrastructure Test
- Pin Browser with Group Editor and Detailed Filtering
- Maximum TCK Finder
- Basic Scripting
- Undocumented Opcode Discovery
- Low-Level Protocol Scans
- Many More...

Hardware Features

The JTAG Starter Kit includes a portable USB 2.0 JTAG controller with a single test access port (TAP). The hardware features selectable interface TAP voltages of 1.8V, 2.5V, and 3.3V, 3 general purpose I/O (GPIO) signals, and a configurable test clock (TCK) rate with a maximum speed of 30 MHz.



USB 2.0 JTAG 20-pin TAP Connector

Pin	Signal	Direction	Description
1	TRST*	Out	Test Reset
3	TDI	Out	Test Data In
5	TDO	In	Test Data Out
7	TMS	Out	Test Mode
9	TCK	Out	Test Clock
11	GPIO1	In/Out	GPIO1
13	GPIO2	In/Out	GPIO2
15	GPIO3	In/Out	GPIO3
17, 19	NC		No Connect
2, 4, 6, 8, 10, 12, 14, 16, 18, 20	GND		Ground

TAP Connection List

Additional Hardware Options

For designs that utilize more than one TAP and for users looking for higher performance options, the JTAG Starter Kit is also compatible with Corelis' complete line of high-performance JTAG controllers.

Ordering Information

Part Number 30660 includes:

- ScanExpress Debugger (includes one year of support & upgrades)
- USB JTAG Controller (includes USB cable & standard TAP cables)

For more information about Corelis JTAG/boundary-scan products, please visit our website at <http://www.corelis.com/>