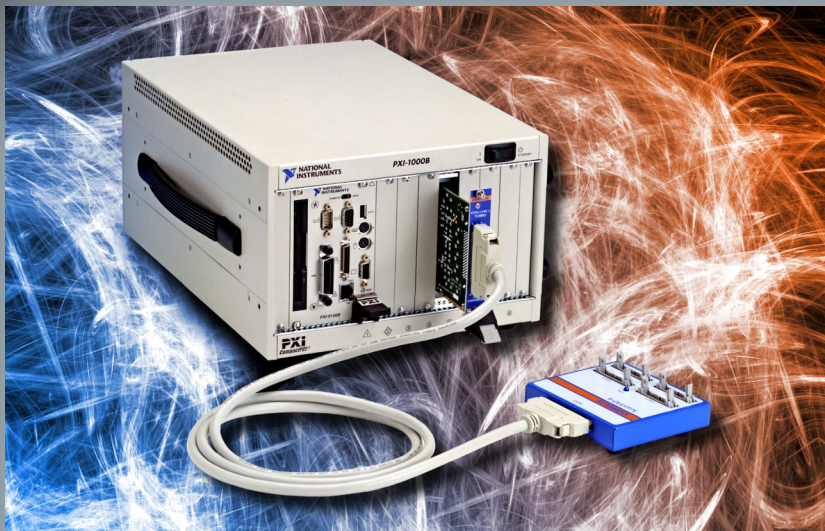# CPXI-1149.1/Turbo™

High-Performance Boundary-Scan Test and
In-System Programming Controller

CORELIS
An *EWA* Company

Boundary-scan has proven itself time and again to be a versatile interface for structural test, embedded functional test, built-in self test (BIST), software debug, and in-system programming. Supporting such diverse applications requires a controller with high performance specifications and extended features.

The **CPXI-1149.1/Turbo** is a high-performance boundary-scan controller for multi-TAP (Test Access Port) and concurrent JTAG test and in-system programming. When combined with a ScanTAP™ intelligent pod, the CPXI-1149.1/Turbo offers up to 80 MHz clock rates on 4, 8, or 32 TAPs with features such as external write strobe, direct programming, and analog voltage measurement.
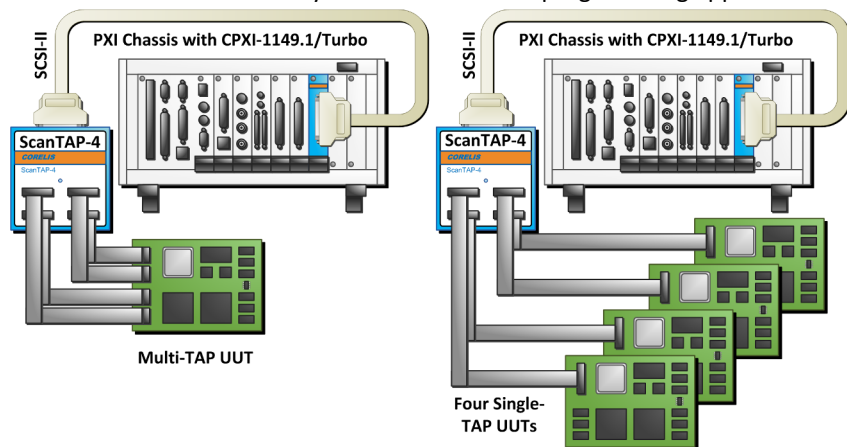
Features

- High-performance CompactPCI and PXI JTAG controller.

- Multi-TAP and/or concurrent (gang) testing and In-System Programming (ISP) on up to 32 UUTs for high volume test.

- Works with the ScanTAP™ series of intelligent pods for up to 32 TAPs.

- Up to 30 feet of extended distance from the PC to the pod—no TAP extenders required.

- User-programmable JTAG TCK rate up to 80 MHz.

- External write strobe and Ready/Busy signaling for increased Flash programming performance.

- 16 inputs and 16 outputs of programmable parallel I/O.

- Supports Windows® XP, Windows Vista®, Windows® 7, and Linux operating systems (32-bit and 64-bit).

Benefits

- **Save time** at test stations with high performance—up to 80 MHz on all TAPs for lightning fast test and in-system-programming.

- **Reduce costs** associated with fixtures; ScanTAP intelligent pods can connect to up to 32 TAPs for multi-TAP and/or gang operation.

- **Compatible** with the complete ScanExpress™ family of boundary-scan and JTAG embedded test products.

Applications

- **Boundary-Scan Test -** Use boundary-scan to test, debug, and verify hardware through all phases of a product's life cycle—from development through production and into the field.

- **JTAG Embedded Test -** Control a microprocessor through the JTAG debug port to run functional tests, without requiring boot code.

- **In-System Programming -** Read, erase, program, and verify Flash Memories, serial PROMs, CPLDs, FPGAs, and other programmable devices directly within a circuit or system design.

- **High Volume Production -** Run concurrent tests and ISP on up to 32 UUTs with ScanExpress Runner™ Gang Edition.

Learn More: For more information about Corelis products, please visit **www.corelis.com**

High Performance, Versatility

The Corelis CPXI-1149.1/Turbo JTAG controller is fully compliant with the IEEE Standard 1149.1 for test access. The controller fits in a cPCI or PXI slot on the host PC or PXI chassis and connects by SCSI-II cable through a ScanTAP pod to up to 32 TAP connectors on any JTAG-based target system. Support for both multi-TAP and concurrent (gang) test execution with in-system programming, voltage measurement capabilities, and integrated serial interfaces on each TAP connector make the CPXI-1149.1/Turbo with ScanTAP ideal for all boundary-scan and serial bus programming applications.

CPXI-1149.1/Turbo with ScanTAP-4 Configurations.

Scan Function Library

For applications that require a low level interface or integration with third party software, Corelis offers a Scan Function Library (SFL). The SFL is provided as a 32-bit DLL for Microsoft Windows and provides all functions necessary to operate the JTAG port and send or receive JTAG instructions and data to the target system. Users can incorporate the drivers in their own application software or integrate the SFL with third party systems such as National Instruments LabVIEW, National Instruments TestStand, and Agilent VEE.

Ordering Information

Part Number—10357A

CPXI-1149.1/Turbo and ScanTAP-4. Includes 6' SCSI cable, four 10-pin TAP cables, one 16-pin TAP cable, and one 20-pin TAP cable.

Part Number—10365

CPXI-1149.1/Turbo and ScanTAP-8. Includes 6' SCSI cable, four 10-pin TAP cables, one 16-pin TAP cable, and one 20-pin TAP cable.

Part Number—10330

Spare CPXI-1149.1/Turbo. Must be used with a ScanTAP.

For more information about Corelis hardware and software products, please visit our website at

http://www.corelis.com/

CPXI-1149.1/Turbo Hardware Specifications[1]

General	
Card Outline Dimensions	CompactPCI 3U front board specification
Certifications	RoHS Compliant
CompactPCI Interface	
Bus Width	32-bit
Memory Space Size	132 MB
ScanTAP Interface	
Boundary-Scan Connector	86-pin SCSI II type (AMP p/n 787171-7 or equiv.)
Maximum TCK Frequency	80 MHz
TAP Specifications	*See ScanTAP datasheet for TAP information*
Parallel I/O Interface	
Input Port Connector	34-pin Header (3M p/n 2534- 6002UB or equiv.)
Output Port Connector	34-pin Header (3M p/n 2534- 6002UB or equiv.)

[1]For complete specifications, please see the CPXI-1149.1/Turbo User's Manual.

Software Support

ScanExpress Tools

Corelis offers a complete family of boundary-scan test, JTAG embedded test, and in-system-programming tools, all compatible with the CPXI-1149.1/Turbo and ScanTAP advanced features.

CORELIS

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