PCIe-1149.1™
High-Performance Boundary-Scan Test and In-System Programming Controller

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 Corelis PCIe-1149.1 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 PCIe-1149.1 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.

Learn More: For more information about Corelis products, please visit [www.corelis.com](http://www.corelis.com)

**Features**

- High-performance PCI Express (x1) 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).

**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.

**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.
High Performance, Versatility

The Corelis PCIe-1149.1 JTAG controller is fully compliant with the IEEE Standard 1149.1 for test access. The controller fits in a PCIe slot on the host PC 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 PCIe-1149.1 with ScanTAP ideal for all boundary-scan and serial bus programming applications.

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.

PCele-1149.1 with ScanTAP-4 Configurations.

Ordering Information

Part Number—10371
PCIe-1149.1 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—10372
PCIe-1149.1 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—10370
Spare PCIe-1149.1. Must be used with a ScanTAP.

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

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 PCIe-1149.1 and ScanTAP advanced features.

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PCele-1149.1 Hardware Specifications

| General | 3.9 ± 0.25 inches x 6.8 ± 0.25 inches |
| PCI Interface | x1 |
| Memory Space Size | 132 MB |
| ScanTAP Interface | 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 | 34-pin Header (3M p/n 2534-6002UB or equiv.) |

1For complete specifications, please see the PCIe-1149.1 User’s Manual.