ScanIO™-300LV

High-Performance Boundary-Scan Digital I/O Module

CORELIS
An EWA Company

Complete boundary-scan testability is often out of reach with the unit under test (UUT) alone. Chip-to-chip interconnects can be tested internally with boundary-scan, but external I/O is necessary for that final elusive piece of test coverage.

That's where the Corelis **ScanIO-300LV** comes in. Each ScanIO-300LV module adds up to 300 channels of boundary-scan-controlled digital I/O to test systems. The ScanIO works with Corelis JTAG controllers for easy and quick integration.

Featuring a JTAG control interface, 300 signal pins per module, configurable voltage, LVDS support, and per-connector bypass, the ScanIO-300LV is the perfect way to extend test coverage.
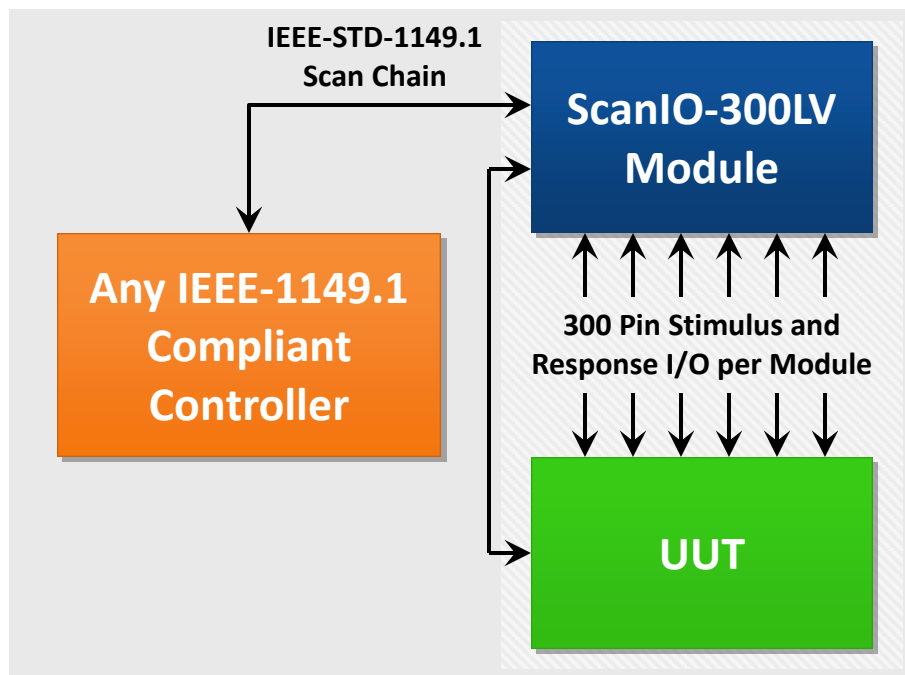
Features

- High-performance, high pin-count boundary-scan I/O module.
- Up to 300 single-ended or 150 differential individually controlled boundary-scan controllable digital I/O lines per module.
- JTAG and digital I/O port voltages are configurable from 1.25V to 3.3V in 15 increments, or as LVDS logic (I/O ports only).
- Each group of 50 I/Os can be bypassed to optimize scan time.
- Includes BSDL files for integrating the ScanIO-300LV with UUTs.
- TAP output port for single-chain configurations—one JTAG port can control the ScanIO and the UUT.
- Fully compatible with any IEEE-1149.1 compliant controller.
- Supports any test pattern generator capable of using a BSDL file.

Benefits

- **Add test coverage** to system connectors. The ScanIO-300LV provides the interconnections required to detect open and short faults.
- **Reduce cost.** The ScanIO-300LV provides boundary-scan stimulus-and-response at a fraction of the cost of traditional bed-of-nails.
- **Compatible** with existing automatic test pattern generators, including the complete Corelis ScanExpress™ family of test products.

Applications

- **Component Test & Verification -** Add boundary-scan capabilities to incoming inspection systems to test the internal scan path and bonding by exercising the electrical path between component leads and internal semiconductor.
- **Connector & Cable Testing -** Add boundary-scan test coverage to open edge connectors, cables, and test points on any UUT.
- **Non-scannable Element Testing -** Use the ScanIO to add boundary-scan and as a virtual "bed-of-nails" tester—even with components that do not natively feature boundary-scan.

The ScanIO-300LV digital I/O module combined with an IEEE-1149.1 controller provides additional digital interconnect capabilities to any test system. Using boundary-scan technology, each ScanIO-300LV module provides a total of 300 fully bidirectional test channels with virtually unlimited memory depth per pin. Included boundary-scan description language (BSDL) files allow the ScanIO-300LV to be used with any boundary-scan automated test program (ATPG) generation software, including Corelis ScanExpress TPG™. The ScanIO-300LV is also fully integrated with Corelis ScanExpress Merge™ for easy integration with existing test procedure files.

The ScanIO-300LV TAP and boundary-scan I/O voltage can be configured from 1.25V to 3.3V using the front panel rotary switch. Each set of two connectors can be configured as 100 individual, bidirectional channels, or as 50 LVDS differential pairs. Multiple ScanIO-300LV modules can be daisy chained together or with the UUT for easily expandable I/O capability.

TRST*	**1**	⊠ ⊠	**2**	*GND*
TDI	**3**	⊠ ⊠	**4**	*GND*
TDO	**5**	⊠ ⊠	**6**	*GND*
TMS	**7**	⊠ ⊠	**8**	*GND*
TCK	**9**	⊠ ⊠	**10**	*GND*
GPIO1	**11**	⊠ ⊠	**12**	*GND*
GPIO2	**13**	⊠ ⊠	**14**	*GND*
GPIO3	**15**	⊠ ⊠	**16**	*GND*
Reserved	**17**	⊠ ⊠	**18**	*Reserved*
Reserved	**19**	⊠ ⊠	**20**	*Reserved*

ScanIO-300LV TAP Connector Pinout

ScanIO-300LV Single Chain Test Configuration

Ordering Information

Part Number—10364

Includes ScanIO-300LV module, 20-pin TAP cable, power supply, and six 60-pin I/O interface cables.

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

http://www.corelis.com/

Also Available: ScanDIMM™

For memory socket test applications, see the Corelis **ScanDIMM** series of boundary-scan DIMM socket testers.

CORELIS

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ScanIO-300LV Hardware Specifications[1]

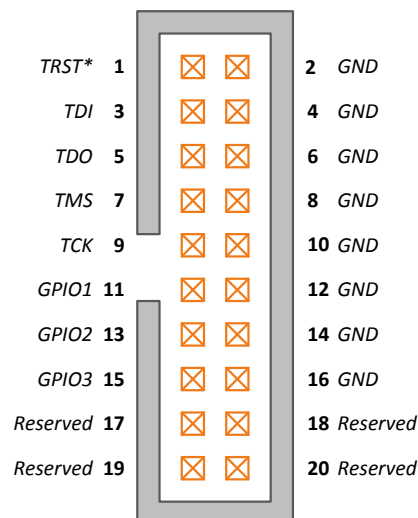|	
General	
Case Outline Dimensions	9.58” x 7.45” x 0.79”
Certifications	RoHS Compliant
TAP Interface	
JTAG Connectors	20-pin Header (3M p/n 3428-6302 or equiv.)
Maximum TCK Frequency	50 MHz
TAP Voltage	1.25 to 3.3V in 15 increments
Boundary-scan Controlled I/O Interface	
I/O Connectors	60-pin header (3M p/n 3372-6302 or equiv.)
Number of I/Os	300 digital I/O or 150 differential lines
Programmable I/O Voltage	1.25V to 3.3V in 15 increments

[1]For complete specifications, please see the ScanIO-300LV User's Manual.