NetUSB-1149.1/E™

High-Performance LAN & USB 2.0
Boundary-Scan Controller

CORELIS
An EWA Company

Preferred JTAG Solutions—Acclaimed Technical Support

Features

- High-performance JTAG controller with I^2C and SPI interfaces.
- Concurrent (gang) testing and In-System Programming (ISP) on up to four UUTs for high volume test.
- Four TAP connections for UUT designs with multiple scan chains.
- User programmable JTAG TCK rate up to 70 MHz.
- Independently configurable output voltage and input voltage threshold.
- Automatic signal delay compensation for long cable lengths.
- Eight ±50V analog voltage measurement channels; two per TAP.
- Dual interface with High-speed USB 2.0 and 10/100Base-T Ethernet.
- 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 70 MHz on all four TAPs for lightning fast test and in-system-programming.
- **Increase programming rate** for in-system-programming; the advanced architecture provides persistent scan vector output and extraction, ensuring that throughput remains high at all times.
- **Reduce costs** associated with fixtures; the multi-TAP controller connects to up to four TAPs for multi-TAP and or gang operation.
- **Compatible** with the complete ScanExpress™ family of boundary-scan and JTAG embedded test products.

Boundary-scan has proven itself time and again to be a truly 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 diverse features.

The **NetUSB-1149.1/E** is a high performance, multi-feature boundary-scan controller for multi-TAP and concurrent JTAG test and in-system programming. Featuring dual-interface USB and LAN support with four independent Test Access Ports (TAPs), direct serial programming capability and voltage sense support, the NetUSB-1149.1/E fits a multitude of boundary-scan applications.

Applications

- **Boundary-Scan Test -** Use boundary-scan to test, debug, and verify hardware through all phases of the product 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 four UUTs with ScanExpress Runner™ Gang Edition.

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

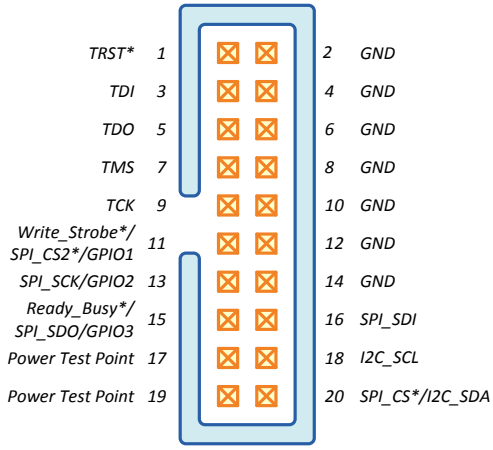
NetUSB-1149.1/E™

High Performance, Versatility

The Corelis NetUSB-1149.1/E JTAG controller is fully compliant with the IEEE Standard 1149.1 for test access. The standalone unit connects between the host PC through a high-speed USB port or Ethernet connection and up to four TAP connectors on any JTAG-based target system. Support for concurrent (Gang) test execution with in-system programming, voltage sense capabilities, and integrated serial interfaces on each TAP connector make the NetUSB-1149.1/E ideal for multi-TAP, high-volume JTAG and serial bus programming integration.

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.



NetUSB-1149.1/E Pin Assignments

NetUSB-1149.1/E Hardware Specifications[1]

General	
Mechanical Dimensions	5.2 inches x 7.1 inches x 1.5 inches
Certifications	RoHS Compliant
USB Interface	
USB Transfer Rate	High-speed USB 2.0
USB Cable	Ships with a 6 foot USB 2.0 A to B cable
Ethernet Interface	
Compliance	IEEE 802.3u 100BASE-FX
Target Interface	
TAPs	4 individually programmable TAPs
Connectors (connects to target cable)	20-pin (2x10) header (0.100 x 0.100 inches) 3M part no. 3428-6302 or equivalent
TAP Cable Length	12” cables included (Additional options available)
Output Voltage	Programmable from 1.25V to 3.30V in 0.05V steps
Threshold Voltage	Programmable from 0.50V to 3.30V in 0.05V steps
JTAG Interface	
Compliance	IEEE-1149.1 Compliant Interface
Maximum TCK Clock Rate	70 MHz
I^2C Interface	
SCL Clock Rate	100 kHz
SPI Interface	
Supported Chip Selects	2 per TAP
SCK Clock Rate	1 MHz

[1]For complete specifications, please refer to the NetUSB-1149.1 User’s Manual.

Ordering Information

Part Number—10337B

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 NetUSB-1149.1/E advanced features.

For more information about ScanExpress products, please contact the Corelis sales department.

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