



4 or 8-TAPs





USB 2.0

USB 2.0

Test







Program



NetUSB II™ **High-Performance LAN & USB JTAG Controller**

Features

- High-performance ITAG controller with I²C and SPI interfaces
- Robust TAP interface with pin protection for harsh test environments
- Concurrent (gang) testing and In-System Programming (ISP) on up to eight UUTs för high volume test
- Four or eight TAP connections for UUT designs with multiple scan chains
- Configurable TAP pinout to accommodate custom [TAG connections
- User-programmable JTAG TCK rate up to 100 MHz on each TAP
- Independently configurable output voltage and input voltage threshold
- Adjustable signal delay compensation to maximize achievable clock rate
- Up to 16 total analog voltage measurement channels; two per TAP
- Dual interface with high-speed USB and gigabit Ethernet
- Supports Microsoft Windows and Linux operating systems

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 to the field.

ITAG 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 memory, 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 eight UUTs with ScanExpress Runner[™] Gang Edition.

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 highperformance specifications and diverse ˈfeatures.

The **NetUSB II** 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 or eight independent and configurable Test Access Ports (TAPs), direct serial programming capability and voltage sense support, the NetUSB II fits a multitude of boundary-scan applications.

Benefits

- Save time at test-stations with high performance up to 100 MHz on all TAPs for lightning-fast test and in-systemprogramming.
- Maintain high throughput with TAP interfaces designed for demanding production environments.
- Reduce costs associated with fixtures; the multi-TAP controller connects to up to eight TAPs for multi-TAP and/or gang operation.
- Compatible with the complete ScanExpress™ family of boundary-scan and JTAG embedded test products.



Power Switch Power In Gigabit Ethernet Hi-Speed USB

Link

0-1100 21

Power/Status LED 4 or 8 JTAG TAPs

CORELIS \cap \bigcirc \bigcirc TAP 4 NetUSB II 4-TAP High-Speed JTAG Controller

High Performance & Versatility

The Corelis NetUSB II is fully compliant with the IEEE Standard 1149.1 (commonly referred to as |TAG) for test access. The standalone unit connects between the host PC through a high-speed USB port or Ethernet connection and up to four (4-TAP version) or eight (8-TAP version) TAP connectors on any JTAG-based target system. Support for concurrent (Gang) test execution and in-system programming, voltage sense capabilities, configurable pinout, and integrated serial interfaces on each TAP connector make the NetUSB II ideal for multi-TAP and 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 DLL for Microsoft Windows and provides all functions necessary to operate the JTAG port to send and receive JTAG instructions and data from the target system. The SFL can be incorporated in custom application software or integrated with third-party systems such as National Instruments LabVIEW, National Instruments TestStand, and Keysight VEE.

Hardware Specifications

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General	
Mechanical dimensions (4-TAP)	5.42 inches × 5.90 inches × 1.84 inches
Mechanical dimensions (8-TAP)	5.42 inches × 5.90 inches × 2.77 inches
Certifications	RoHS compliant, CE Marked
Host Interface	
Ethernet interface	10/100/1000Base-T (IEEE 802.3, 802.3u, or 802.3ab)
USB interface	High-speed USB 2.0
Interface cables	Includes one 6-foot USB 2.0 A to B cable and one 7-foot Ethernet cable
Target Interface	
Test access ports (TAPs)	Four (4-TAP) or eight (8-TAP) individually programmable TAPs
TAP connectors (connects to target cable)	Four (4-TAP) or Eight (8-TAP) 2 \times 10 pin shrouded headers. 0.1 inch \times 0.1 inch spacing with long ejectors (3M 3428-6302 or equivalent)
JTAG Interface	
Compliance	IEEE-1149.1 compliant interface
TCK frequency range	0.1 MHz to 100 MHz
l ² C Interface	
SCL frequency	100 kHz
SPI Interface	
SCK frequency range	0.1 MHz to 50 MHz
Please refer to the NetUSB II Use	r's Manual for complete specifications.

TRST*	1		2	GND
TDI	3	$\odot \circ$	4	GND
TDO	5	$\odot \circ$	6	GND
TMS	7	$\odot \circ$	8	GND
ТСК	9	$ \bigcirc \bigcirc $	10	GND
GPI01	11	$\bigcirc \bigcirc$	12	GND
GPIO2	13	$\odot \circ$	14	GND
GPIO3	15	$\bigcirc \bigcirc \bigcirc$	16	GND
VCC1	17	\bigcirc	18	NC
VCC2	19	\bigcirc	20	NC

The NetUSB II default pinout includes 3 GPIOs and two voltage sense pins

Ordering Information NetUSB II 4-TAP - 10504 NetUSB II 8-TAP - 10508

For more information or to order this product online, please visit our website at www.corelis.com



www.corelis.com

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