

4 | 8

4 or 8-TAPs



USB 2.0



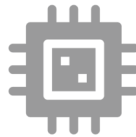
Ethernet



100 MHz



Test



Program



NetUSB II™

High-Performance LAN & USB JTAG Controller

Features

- High-performance JTAG 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 for high volume test
- Four or eight TAP connections for UUT designs with multiple scan chains
- Configurable TAP pinout for custom JTAG, SPI, I2C, and GPIO functions
- 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 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 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 high-performance specifications and diverse features.

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.

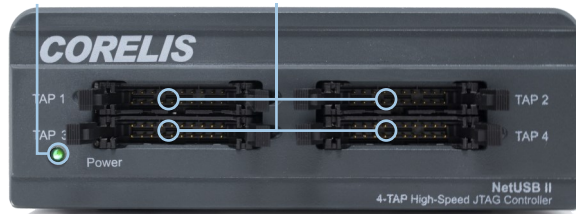
Benefits

- Save time at test-stations with high performance up to 100 MHz on all TAPs for lightning-fast test and in-system-programming.
- 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.



CMMIDEV / 3SM
CMMIDEV 2.0 / Exp. 2024-05-20 / Approval 154 016

Power/Status LED 4 or 8 JTAG TAPS



Power Switch Power In Gigabit Ethernet Hi-Speed USB



High Performance & Versatility

The Corelis NetUSB II is fully compliant with the IEEE Standard 1149.1 (commonly referred to as JTAG) 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. Each TAP includes 11 versatile signal pins for JTAG, SPI, I²C, and GPIO operation. 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 a target system. The SFL can be incorporated into custom application software or integrated with third-party systems such as NI LabVIEW, NI TestStand, and Keysight VEE.

Hardware Specifications

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 × 10 pin shrouded headers. 0.1 inch × 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

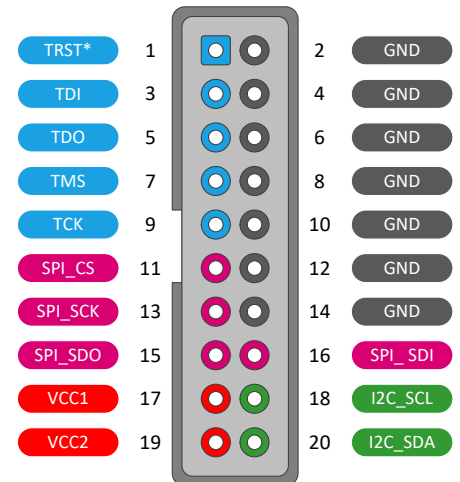
I²C Interface

SCL frequency 100 kHz

SPI Interface

SCK frequency range 0.1 MHz to 50 MHz

Please refer to the NetUSB II User's Manual for complete specifications.



The NetUSB II features 11 signal pins per TAP; each signal can be configured for JTAG, SPI, or I²C (default pinout shown)

Ordering Information

NetUSB II 4-TAP - 10504

NetUSB II 8-TAP - 10508

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