

# PCI-410 HARDWARE KIT WITH FOUR PORT LOW VOLTAGE POD

## **OVERVIEW**

The PCI-410 hardware kit is a high throughput, flexible boundary-scan test (BST)/JTAG controller and pod for the ScanWorks® platform for embedded instruments. The PCI-410 kit is intended for high-volume manufacturing environments and multi-TAP united under test (UUTs). It applies the test and programming operations created with the ScanWorks BST software, supporting structural tests such as shorts and opens testing, scan path verification, interconnect tests and memory access tests. With its high speed test clock (TCK) and parallel programming capabilities make it an ideal solution for the in-system programming of devices already soldered to a circuit board.



## **FEATURES**

The PCI-410 hardware kit comes with a four-port low-voltage boundary-scan pod for connecting to the unit under test (UUT). The pod can be up to 50 feet from the controller card and still support boundary scan's maximum TCK frequency of 50 MHz. ScanWorks supports up to three PCI-410 controller cards in one personal computer (PC). Each controller card supports two pods for a total of 24 test ports in a maximum configuration. Its connection to the UUT is quite flexible. For example, through software it can manage multiple scan paths on a motherboard, daughtercard or interface boards, or it can concatenate multiple scan paths together. For controlling and monitoring non-boundary-scan signals, the PCI-410 has 20 discrete I/O (DIO) signals that can be manipulated individually. Voltages for each TAP port and DIO signal can be controlled individually via software. Individual termination that can be selected through software is available on each TAP signal.

# **OPTIONAL PODS**

Additional four-port low voltage boundary-scan interface pods can be configured on the same PC so that more TAPs on multiple boards can be accessed simultaneously. This increases the throughput of testing and programming operations on high-volume production lines.



## PARALLEL TEST AND PROGRAMMING

The four test ports on the PCI-410's pod can be connected to four scan paths on a single UUT or to four identical UUTs for high volume production testing. When connected to four scan paths on one UUT, ScanWorks and the PCI-410 treat the four scan paths as one, avoiding the excessive overhead of managing multiple scan paths. When the PCI-410's pod is connected to four identical UUTs, the same tests are applied to all four. Moreover, flash programming operations are applied to all four UUTs in parallel, significantly reducing overall





test and programming times.

The PCI-410 provides programming operations such as flash programming, PLD configuration, and the programming of I2C or SPI devices. Your flash programming speeds can be optimized because the PCI-410 supports individual control of write enable and ready busy signals.

## **POWERFUL DEBUGGING**

The debugging capabilities with the PCI-410 are very powerful. You can run actions step-by-step in real time, and read/write to any register, pin or bus on the UUT from the integrated action debug tools.

## PCI-410 HARDWARE KIT

The PCI-410 Hardware Kit includes the following items:

- PCI Controller Card
- Four-Port Low Voltage Pod
- Controller Cable
- Four Pod-to-UUT Cables
- Power Cable
- Four Adapters

#### SCANWORKS PLATFORM FOR EMBEDDED INSTRUMENTS

ScanWorks Platform for Embedded Instruments is a seamless software environment to access, run and collect data from any instrument in your chips, circuit boards or systems. The ScanWorks Platform includes products for Boundary-Scan Test (BST), Processor-Controlled Test (PCT), High-Speed I/O (HSIO) Validation and FPGA-Controlled Test (FCT).

## **ASSET CONTACTS:**

Please contact your ScanWorks sales representative for more information.

ASSET InterTech, Inc. 2201 N. Central Expy., Ste 105 Richardson, TX 75080 +1 888 694-6250 or +1 972 437-2800 <u>http://www.asset-intertech.com</u>

#### **Key Features**

1-4 TAP ports to the UUT

20 DIO, 4 per TAP + 4 Common

Software-selectable TAP and DIO voltages, o.8V-3.3V (5V tolerant)

160kHz to 50MHz TCK

Broadcast flash programming

High volume production

Up to 24 test ports in a system Extended distances between the PC and UUT



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