

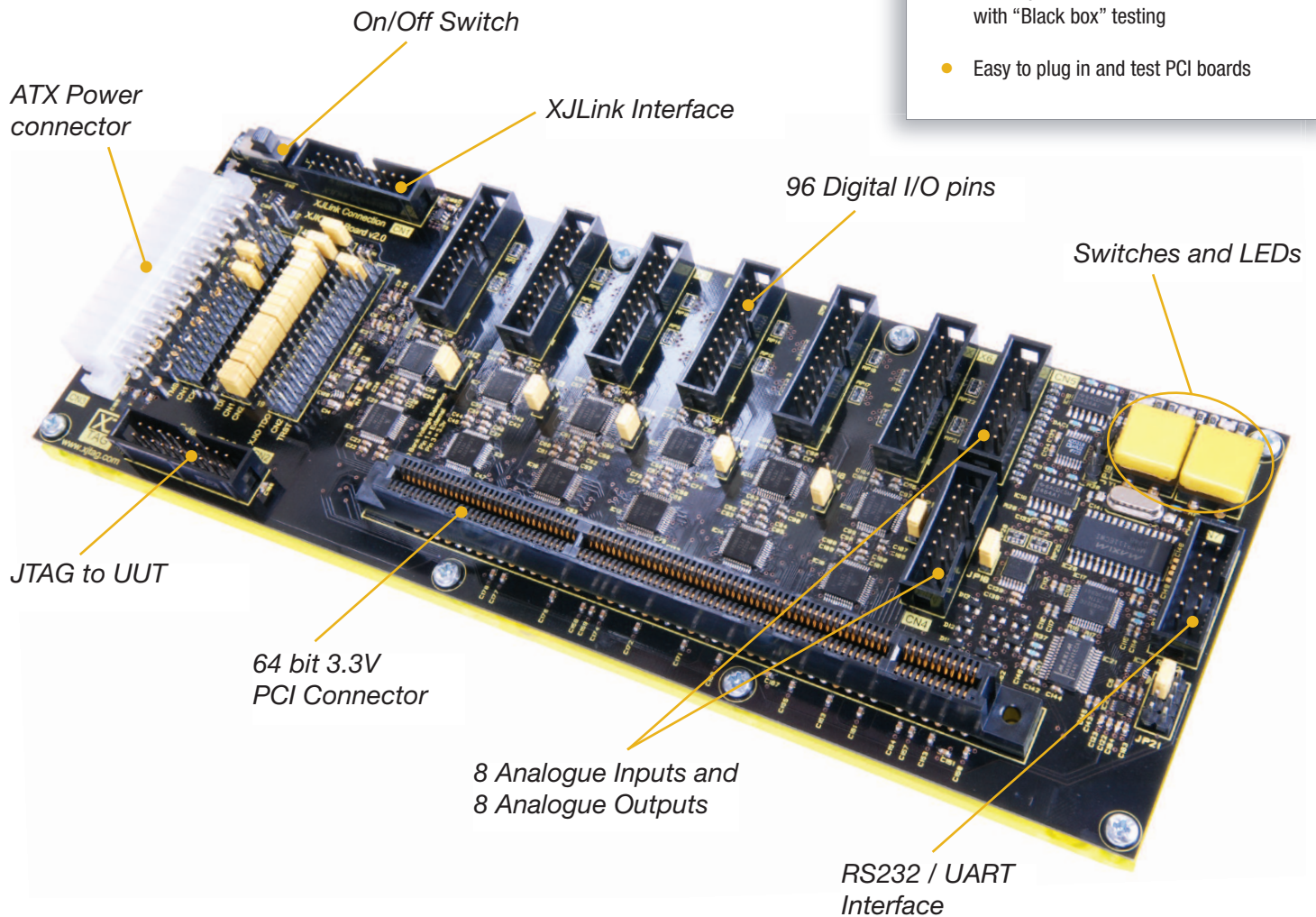
Overview

The XJIO-PCI board is an expansion unit that will integrate with your XJTAG test system. It allows you to plug in and test your PCI cards and provides access to otherwise inaccessible areas of your circuit.

With a range of digital and analogue I/O on the XJIO-PCI board, you can increase test coverage and improve fault diagnosis.

Key Benefits

- Improve reliability of your boards by increasing analogue, digital and interface test coverage
- Reduce your debug time by enhanced fault diagnosis
- Reduce the cost and complexity of your custom test jigs
- Reach your devices on non-JTAG boards with "Black box" testing
- Easy to plug in and test PCI boards



Increased testing

You can test more of your boards for opens and shorts by connecting signals from your Unit Under Test (UUT) to the XJIO-PCI board.

Although often overlooked in test, connectors are a common source of

manufacturing faults, especially with the increased use of high density connectors.

By adding an XJIO-PCI board to your test system, XJTAG can identify the nature and location of faults not only on

nets connected to the JTAG chain of the UUT, but also on nets connected to the PCI interface and other connectors.

Using this functionality, even boards with no JTAG components can be "Black box" tested with XJTAG.

Digital interface

With 96 bidirectional digital I/O pins as well as the 64 digital I/O pins on the PCI connector, the XJIO-PCI board has been designed for maximum connectivity. The I/O pins are all 5V tolerant. The default logic level is 3.3V, or you can re-configure the 96 I/O pins, in blocks of 16, to use any externally supplied voltage between 1.8V and 3.3V.

Analogue interface

The XJIO-PCI board has 8 analogue inputs and 8 analogue outputs, controllable via the JTAG interface. The on-board ADC enables analogue measurement — e.g. testing a power rail is within limits. The DAC allows analogue inputs on the UUT to be stimulated, improving test coverage of the target board.

RS232 interface

This interface can be used to further improve test coverage. There is a UART capable of communication up to 230 Kbaud and a RS232 transceiver that can be driven directly from the JTAG chain.

Power supplies

There is a standard ATX connector to power both the XJIO-PCI board and your PCI UUT. In applications where the XJIO-PCI board is not required to power a PCI card, the board can be powered from the XJTAG hardware interface.

Configurable JTAG chain

The JTAG TAP control signals can be routed either directly through the PCI connector or to another header on the UUT using the external JTAG connector on the XJIO-PCI.

User interaction

The switches and LEDs give further flexibility by providing you with a way to interact with your test system.

Expandable

If more PCI slots or general purpose I/O pins are required, all types of XJIO board can be daisy-chained together to reach the required capacity. All of the general purpose digital I/O connectors on the XJIO-PCI board are standard IDC, for economical and efficient cable assemblies.

Integration

You can use the XJIO-PCI board with the whole XJTAG product range:

Software

XJDeveloper includes an advanced connection test to automatically check for shorts and opens on the nets around your JTAG chain. Testing and programming non-JTAG devices is achieved simply by using scripts written in a high-level test description language. Many such scripts can be downloaded from the XJTAG website; other scripts can be written quickly as the XJEase language is device-centric and separates the description of how to test a device from the details of how to implement that test in a particular circuit.

XJAnalyser is a powerful tool for real time JTAG chain visualisation and debugging. You can consider XJAnalyser as a logic analyser and signal generator for the pins on your JTAG devices, allowing greater fault isolation and rapid debug. It also has the facility to run SVF and STAPL files for device programming.

XJRunner is the specialised run-time environment for executing XJEase tests. With a range of special features it is particularly aimed at board manufacturers and/or in-field testing.

Features

- You can configure the voltage of the 96 digital I/O pins — 1.8V to 3.3V (5V tolerant)
- On-board 8 channel ADC and DAC
- Fully expandable to meet your needs
- Switches and LEDs for user interaction
- 'Black box' testing for non-JTAG boards
- Reusable, replacing multiple custom test jigs
- Standard IDC connectors
- ATX power connector
- 64 bit 3.3V PCI connector
- RS232 / UART



Other test executives: XJTAG test systems can be run using many test executives such as NI LabVIEW™, LabWindows™/CVI, and custom .NET and COM applications.

Hardware interfaces

XJLink2 is the USB to JTAG connector. The simple USB connection allows you to take your XJTAG test system with you wherever you go.

PXI-01/02 allows the XJTAG system to be run from a PXI rack alongside the rest of your test equipment.

Both of these hardware interfaces contain your XJTAG licence and allow you to connect your computer with your circuit.