

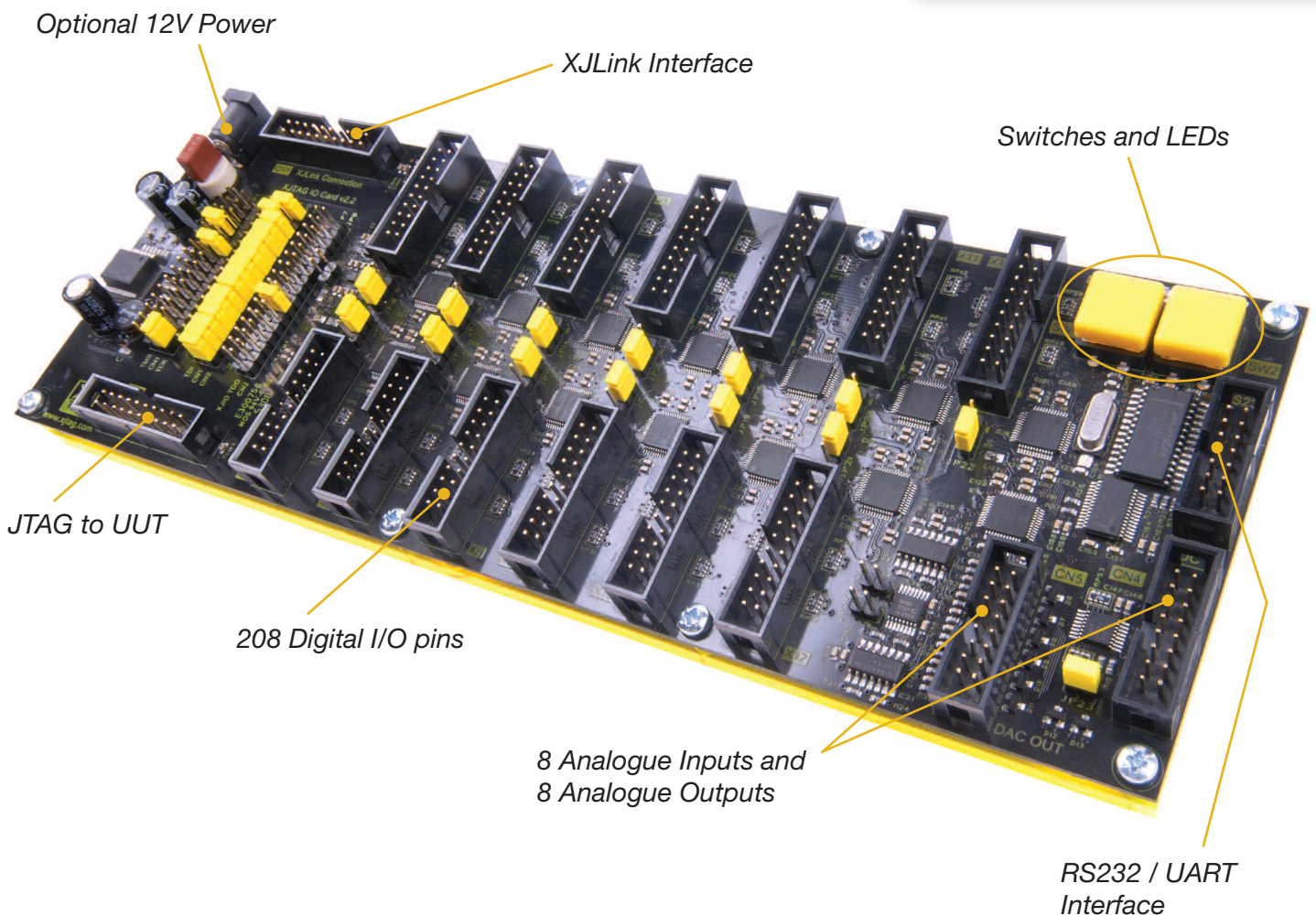
Overview

The XJIO board is an expansion unit that will integrate with your XJTAG test system to provide access to otherwise inaccessible areas of your circuit.

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

Key Benefits

- Improve reliability of your boards by increasing analogue and digital test coverage
- Reduce your debug time by enhanced fault isolation
- XJTAG can reduce the cost and complexity of your custom test jigs
- Reach your devices on non-JTAG boards with "Black box" testing



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 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 board to your test system, XJTAG can drive signals through your connectors and identify the nature and location of any faults.

With onboard DAC and ADC the XJIO board provides a mechanism for analogue as well as digital testing.

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

Digital interface

With 208 bidirectional digital I/O pins, the XJIO 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 I/O pins, in blocks of 16, to use any user-defined voltage between 3.3V and 1.8V.

Analogue interface

The XJIO 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 kbit/s and a RS232 transceiver that can be driven directly from the JTAG chain.

Power supplies

For quick and portable test setup the XJIO board can be powered from USB. Alternatively, if you need more than 80mA of current, there is a connector for a standard 12V power supply.

User interaction

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

Expandable

If more I/O pins are required, XJIO boards can be daisy-chained together via the reconfigurable external JTAG connector to reach the required capacity. All the connectors on the XJIO board are standard IDC, for economical and efficient cable assemblies.

Integration

You can use the XJIO 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 plug-and-play tool for 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.

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

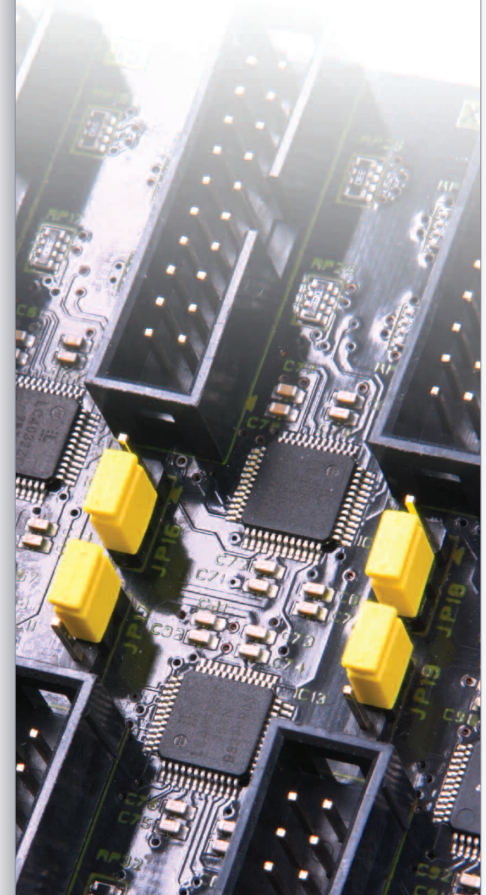
XJLink2 is the USB to JTAG connector. The simple USB connection allows you to take your XJTAG test system with you wherever you go.

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.

Features

- You can configure the voltage of the 208 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
- USB or 12V power supply
- RS232 / UART



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