



XJTAG boundary scan maximises performance of modular test platform

“XJTAG is the boundary scan system chosen by 6TL Engineering, a builder of modular, expandable production test stations used by contract electronic manufacturers and OEMs. 6TL chose XJTAG for its ability to integrate efficiently with the LabVIEW™ test environment, and for its unbeatable combination of performance, features and price.”

6TL Engineering, headquartered close to Barcelona, Spain, produces modular test platforms that fast-track development of customised electronic production test equipment. The platforms save specialist integrators and in-house test-engineering teams from spending time and effort to implement core functionalities such as control processing, power supplies, instrumentation and commonly used test functionality. Standardised interfaces allow customers to connect their own test fixtures and add specific test capabilities quickly and easily using 19-inch rack modules or, optionally, PXI modules.

With their highly modular architecture and extensive use of open standards, the platforms provide a cost-effective solution incorporating robust, high-quality components from leading companies like Virginia Panel and National Instruments. Within this select shortlist XJTAG is the chosen partner supplying the boundary scan test gear featured in the 6TL-22, which combines functional test, ICT and visual inspection capabilities. “We surveyed the boundary scan systems on the market, and identified XJTAG as offering the best performance and the most competitive price,” says David Batet, Business Division Manager at 6TL.

One of 6TL’s customers, a nearby contract manufacturer, is using the 6TL-22 with XJTAG as the basis of a complete end-of-line test solution for the main computer boards in a family of slot machines. The board has two boundary scan compatible devices; a microprocessor embedded in an FPGA, and a CPLD. “The

boundary scan devices provide access to test a number of BGA components on the board, which have I/O pins that cannot be reached using pins or probes,” explains David Batet. “Adding boundary scan to the 6TL-22 reduces the amount of hardware needed to achieve the required test coverage, and allows in-circuit test

fixtures to have fewer pins. This helps eliminate false fails caused by electrical contact errors.”

The XJTAG system has its own graphical user interface, but can be integrated with other test control software such as NI LabVIEW™. 6TL is taking advantage of this flexibility and the supporting XJTAG Virtual Instruments, which are available free of charge, to integrate XJTAG seamlessly into this environment.

As each slot machine board is tested, the 6TL-22 achieves 80% of the customer’s test coverage target using XJTAG boundary scan tests controlled via LabVIEW. “The XJIO board has helped us achieve this very high coverage by enabling

signals to be verified all the way through to external connections,” explains 6TL’s David Batet. The XJIO board is an expansion unit unique to XJTAG, which can be used to reach digital and analogue I/O pins that are inaccessible to other types of equipment.

“Choosing XJTAG has delivered benefits throughout the project. It provides features enabling fast and uncomplicated integration, is easy to use, and provides high test capabilities. When using the 6TL-22, our customer is running XJTAG tests from within LabVIEW on the factory floor using the basic XJRunner license, making this an extremely cost-effective and straightforward solution.”

LabVIEW is a registered trademark of National Instruments.

opinion

David Batet
Business Division Manager
6TL Engineering

“Adding boundary scan to our platforms enables customers’ testability targets to be satisfied using less hardware, and allows in-circuit test fixtures to have fewer pins thereby improving reliability. The XJTAG system offers the best performance in the market at the most competitive price.”

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**Data
Bank**

**6TL
Engineering**

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| Company | 6TL Engineering (A division of S.A. Sistel) HQ Spain |
| Nature of business | ATE, electronics test systems, functional test, test integration |
| Main product | Modular, reconfigurable, standard COTS (commercial off-the shelf) turn-key test solutions and rack&stack instruments for test engineers |
| Customers | Test Integrators, Automotive, Aerospace, Communications, Consumer industry worldwide |
| Location | Barcelona, Spain |
| Incorporated | 1982 |
| Web site | www.6tl.es |