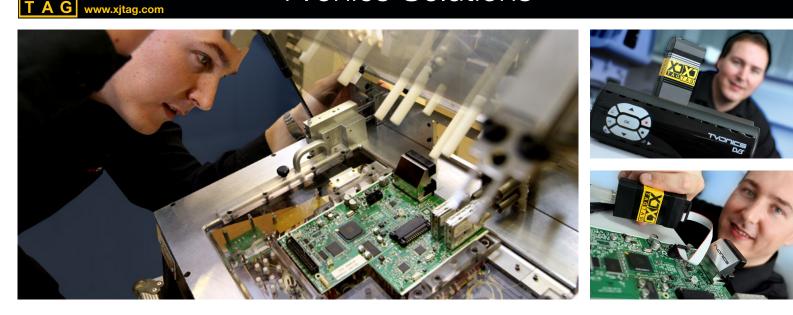# TVonics Solutions debugs, tests and programs quicker with XJTAG

"TVonics is using the XJTAG boundary scan development system to debug BGA boards during development. They have also integrated XJTAG in production at their manufacturing partner's site, Sony Manufacturing, making it possible to test and program boards in a single step."

TVonics Solutions is an award-winning digital television device manufacturer which holds a significant share of the UK set-top box market. TVonics designs and manufactures digital TVs, receivers and recorders under its own brand as well as making products for retailers including Argos, DSGi, Tesco and Marks & Spencer.

TVonics has brought together a talented design team with more than 60 years of experience in the television market. Their expertise in designing semiconductor devices means they have an in-depth understanding of the entire system. As a result of this expertise, TVonics now has a diverse range of energy-efficient digital TV devices. However, there is always pressure to keep production timescales short.

Andy Carr, the engineering director at TVonics Solutions, feels that: "It's essential that we have the right tools in place to enable our engineering teams to be confident of meeting production timescales. This is particularly important as we extend our range of products to address the emerging strong demand for High Definition TV reception for Terrestrial, Satellite and Broadband networks across Europe and the UK."

The cost-effective solution

TVonics selected the XJTAG boundary scan development system to debug, test and program its products because:

- the XJTAG Professional system has an excellent range of features for its price

- the floating licence allows boards to be tested across different sites
- the programming language is very easy to learn
- XJTAG provides an extensive library of re-usable test scripts.

Mike Jones, the TVonics hardware manager explains: "The XJTAG Professional system is an extremely cost-effective and flexible boundary scan solution. It is helping us to further shorten our already challenging development cycles, which is so critical in the fast-changing consumer electronics market."

TVonics use XJTAG across the product lifecycle

Engineers at the TVonics design facility in Bridgend, South Wales (UK) are using the XJTAG development system to speed-up the debugging and testing of their ball grid array (BGA) populated printed circuits boards. These boards contain a wide range of electronic devices, including:

- MPEG source decoder chips
- Flash memory
- Ethernet controllers
- I2C devices
- termination resistors.

Sony Manufacturing in Pencoed, South Wales is the manufacturing partner that makes the devices for TVonics. Here, TVonics has integrated the XJTAG system with

the production line, as Mike Jones explains: "We are using XJTAG right across the product lifecycle. Our designers are using it to get prototype boards up and running more quickly, and our production engineers have built XJTAG into an automated in-line JIG tester, which has greatly improved our production line test times. We are currently using this JIG to test our latest freeview DVR (digital video recorder) and, as part of the same process, to program a small boot loader into the NOR Flash memory prior to the main software download via the hard disk interface."

opinion
**Mike Jones
hardware manager
TVonics**

"The XJTAG Professional system is helping us to shorten our already challenging development cycles. We looked at other boundary scan systems, but opted for XJTAG due to its price, the easy-to-learn programming language and the extensive library of re-usable scripts for testing non-JTAG devices. Having floating licences has also been a major benefit, as the system is not tied to one computer and can be moved around the lab or even to another site. Technical support has also been first rate, which is important to a small design team with relatively limited resources."

Data Bank	**TVONICS**
Company	TVonics Solutions (part of the Contact Group)
Brief history	TVonics reunites a talented former Sony design team who collectively have over 60 man years of experience in the design and manufacture of Digital Set–top Boxes and Televisions
Main product	Digital television devices, receivers and recorders, Set–top Boxes and Freeview digital video recorders (DVRs)
Location	Wales (UK)
Revenues	£6m in 2007
Employees	22
Web site	www.tvonics.com