



photos: Saab

## Saab cuts costs and boosts productivity with XJTAG boundary scan

“Defence and Security company Saab selected the XJTAG development system to speed up the process of debugging and testing multi-layer development boards destined for its IDAS and CIDAS projects used in electronic warfare systems.”

**Saab serves the global market with world-leading solutions, products and services ranging from military defence to civil security. With operations and employees on every continent, Saab continuously develops, adapts and improves new technology to meet customers’ changing needs. Saab operates in five business areas: Aeronautics, Dynamics, Electronic Defence Systems, Security and Defence Solutions, and Support and Services.**

The versatility of the XJTAG system made it an attractive choice for world-leading defence and security specialist Saab, which needed a reliable test solution to test multi-layer development boards destined for airborne and naval electronic warfare systems used in its IDAS and CIDAS products.

“We have initially used XJTAG in the production environment to test our complex, high density, multi-layered board designs containing FPGAs and CPLDs, and have recently introduced the solution to the development and debug stage with great success,” says Eduard Stander, who works for the Controllers Group at Saab’s Electronic Defence Systems, South Africa.

“Using XJAnalyser has allowed us to reduce initial debug issues, and to debug errors in a shorter time than our existing tools allowed us.”

“We have found that using the XJTAG solution, and the Layout Viewer in particular, has quantifiably reduced the cost of developing product test jigs in our production test department, because of the fast and accurate diagnosis the system provides.”

“We now can test products that have processors, SDRAM and FLASH memories, Ethernet PHYs, A/D Converters, real time clocks, serial ports, voltage regulators.”

The team at Saab opted for XJTAG because of its superior cost-to-performance ratio and, like many of XJTAG’s customers, they were particularly impressed with the flexibility of the system.

XJTAG makes it easy to write test routines for devices and allows users

to store them in a library so they can be reused again when the same, or a similar component, is used.

The XJTAG Professional System provides an extensive library of reusable scripts while XJEase, XJTAG’s high-level test description language, allows engineers to write and customise tests for JTAG and non-JTAG components without needing to understand how boundary scan works. These tests can be re-used throughout the product lifecycle as well as in subsequent projects wherever the same component is used.

“The reuse of tests on the XJTAG system is a big time saver,” says Eduard. “The design for test (DFT) reports help us ensure that a very high percentage of our circuits are testable

before we go into serial production and, with the aid of boundary scan tests, we get closer to our goal of 100% test coverage on production Shop Replaceable Units (SRU).”

He adds: “XJTAG’s high-level test description language XJEase is central to this flexibility. The ability to design low level test with XJEase is a real advantage as the test scripts let you drive the non-JTAG components directly.”

Eduard says the company’s next step is to integrate XJTAG’s portable boundary scan oscilloscope product – XJTAG Expert – with its functional test equipment. “XJTAG is easy to use, highly effective and flexible enough to evolve with our test strategies as we focus on improving speed and productivity.”

opinion

Eduard Stander  
Controllers Group  
Saab

“The reuse of tests on the XJTAG system is a big time saver. The design for test (DFT) reports help us ensure that a very high percentage of our circuits are testable before we go into serial production and, with the aid of boundary scan tests, we get closer to our goal of 100% test coverage on production Shop Replaceable Units (SRU).”

“We have initially used XJTAG in the production environment to test our complex, high density, multi-layered board designs containing FPGAs and CPLDs, and have recently introduced the solution to the development and debug stage with great success.”

<b>Data Bank</b>	 <span style="font-size: 1.5em; font-weight: bold; margin-left: 10px;">SAAB</span>
<b>Company</b>	Saab HQ Sweden
<b>Nature of business</b>	Defense and security solutions
<b>Customers</b>	Global market with world-leading products, services and solutions from military defence to civil security
<b>Locations</b>	Operations on every continent
<b>Employees</b>	13,000
<b>Revenue</b>	SEK 23,5 billion 20% related to R&D
<b>Web site</b>	www.saabgroup.com