



Transportation Technology ODM Assures Rail Safety with XJTAG Boundary Scan

“Electronic equipment for public transport infrastructure must be tested to high standards, to provide the safety assurances that operators and, ultimately, passengers expect. XJTAG boundary scan has enabled Life Elettronica, a specialist in producing electronic products for railway and automotive applications, to maximise test coverage while also raising productivity.”

Life Elettronica of Modena, Italy was founded in 1982 to produce printed circuit boards and systems for leading companies in different sectors of the electronics industry, offering a wide range of services that cover the entire product life cycle. Prioritising flexibility and fast response, the company is equipped to fulfil various roles from straightforward industrialisation and assembly of customers' products as an Electronic Manufacturing Services (EMS) provider to an Original Design Manufacturing (ODM) role providing comprehensive product design and development.

Life Elettronica is certified according to the International Railway Industry Standard (IRIS) as well as ISO 9001 and automotive ISO-TS quality systems. As such, the company is trusted by major railway technology brands to produce advanced signalling equipment that surpasses the extreme quality standards required of typically mission-critical and safety-critical systems.

Seeking the fastest and most efficient solution to achieve a high test coverage target in a recent project involving railway transmitter receiver boards, Life Elettronica's Engineering Manager, Stefano Fantini, decided to add XJTAG boundary scan to the combination of test techniques employed.

“XJTAG makes boundary scan easy to understand and use,” he says. “Netlist, schematic and BOM information are easily loaded and we are very quickly able to run interconnect tests on the circuit. The Schematic and Layout Viewers show both the logical and physical location

of defects, which takes our repairers straight to the cause of the failure and saves time-consuming troubleshooting.

Boundary scan is performed on each board before it undergoes conformal coating and functional testing. This allows the engineers to easily pinpoint certain faults that would be significantly harder to diagnose after coating is applied.

By quickly isolating defective boards before coating, XJTAG helps increase productivity and reduces the time spent to do necessary repairs. “Introducing XJTAG boundary scan before functional test has saved about 50 percent of the time usually spent fault-finding and re-testing boards,” confirms Stefano Fantini.

“We knew XJTAG was the right boundary scan solution for us almost immediately,” he adds. “XJTAG's engineers showed great willingness to answer our questions, before we committed to the system, and subsequent customer support has always been responsive and helpful.”

XJTAG contains many features that help customers quickly get up

to speed and start using boundary scan effectively without needing to understand the underlying technology. Tests are easy to create using the high-level scripting language, XJEase, and ready-to-use tests are provided for many common component types.

In addition to its ease of use, XJTAG is also flexible and ready to integrate with other test executives and in-circuit test equipment. Stefano Fantini explains that this is the next step for Life Elettronica, as boundary scan has quickly become ingrained in the company's test culture thanks to XJTAG.

“We expect to integrate XJTAG into our SPEA 3030 bed-of-nails tester and probably also to our SPEA 4060 flying probe machine.”

opinion

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Engineering Manager
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Data Bank



Company	Life Elettronica S.r.l. HQ Italy
Nature of business	One of the leading Original Design Manufacturers (ODM) and Electronics Manufacturing Services (EMS) providers for OEMs in Italy
Customers	Diverse range of market sectors including semiconductor testing, Rail, Automotive, Radiofrequency, Biomedical, Racing, Hydraulics
Founded	1982
Employees	120
Revenues	€17.5 million (2020)
Location	Modena, Italy
Web site	www.lifeelettronica.com