

Boundary-Scan DFT and Test Services

"Corelis boundary-scan tools offer many compelling benefits: including functional testing, programming, and device validation. It is fixture-less and cost effective."

— **Andrew Murrietta, CFO**
Murrietta Circuits

"Boundary-scan significantly reduces the test cost per unit."

— **CP Chin, President**
Express Manufacturing

"Applications in boundary-scan have exploded..."

"The cost of finding problems amplifies as the product moves through its life cycle."

"A design-for-test review may be the most important project decision you make."

CORELIS

13100 Alondra Blvd.

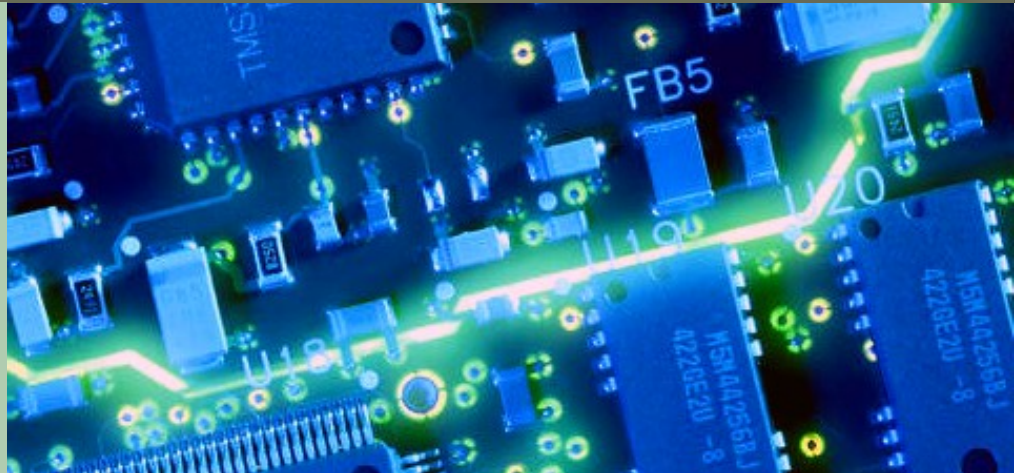
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The value of test is often easy to overlook. When products work correctly, praise is not directed toward test and sometimes even creates an illusion that test is unnecessary. It is only when products fail that the value of test shines.

The primary drivers of test are product reliability and safety. In many cases, shortcuts are introduced if there are no reliability issues. The cost of finding problems amplifies as the product moves through its life cycle, but an unreliable product may not even show up until it reaches the end user. If an organization takes testing for granted, the ramifications of this scenario can cast an unfavorable company image from which it may be impossible to recover.

Today's circuit designs are smaller, more dense, and highly complex. They require design and test engineers to work together to successfully define a strategy that balances product development with product manufacturability, all in an effort to get to market quickly. Successfully integrating boundary-scan into the design helps bridge the gap in that strategy.

Boundary-scan is no longer a "manufacturing-only" technology. Applications in boundary-scan have exploded and now provide complete structural and functional test solutions for both prototype and production boards. Built-In Self Test (BIST), In-Circuit Emulation (ICE), and In-System Programming (ISP) applications have also advanced in capabilities by utilizing the JTAG interface.

Invest in peace of mind by implementing boundary-scan early. Let Corelis analyze your PCB design for boundary-scan test capability to minimize reliability risk. Our staff of trained experts and select partners can determine existing test capability and offer recommendations and better ways to increase testability to get the most value when using boundary-scan. A design-for-test review may be the most important project decision you make. Contact Corelis to request a free DFT analysis today.

Boundary-Scan DFT and Test Services

Benefits

- ◆ Promotes Product Reliability
- ◆ Significantly Lowers Test Cost Per Unit
- ◆ Reduces Test Point Requirements
- ◆ Automatic Generation of Test Patterns
- ◆ Saves Engineering Time and Resources on Test Development
- ◆ Test Vectors are Reusable
- ◆ Fixtureless Testing
- ◆ Boards Do Not Need to be Bootable for Fault Diagnostics
- ◆ Pin-level and Net-level Diagnostic Detail
- ◆ Statistical Test Coverage Analysis
- ◆ Integrates with Other Test Technologies
- ◆ Reduces Debug Time
- ◆ Early Fault Detection
- ◆ Theoretical Programming Times
- ◆ Detects Opens, Shorts, and Stuck-at Faults
- ◆ Test Capabilities Include
 - Scan-chain Integrity Testing
 - Interconnect Testing
 - Resistor Testing
 - Memory Testing
 - Functional Testing
 - BIST Execution
 - Component Discovery
- ◆ Program Devices, such as:
 - CPLD
 - FPGA
 - Flash (NOR & NAND)
 - SEEPROM (SPI & I²C)

Applications

- ◆ BGA Component Testing
- ◆ Dead Board Debug
- ◆ Prototype Testing
- ◆ Production Testing
- ◆ Repair Station Debug
- ◆ In-System Programming (ISP)
- ◆ In-Circuit Emulation (ICE)
- ◆ Built-In Self Test (BIST)
- ◆ Field Upgrades
- ◆ 3rd Party Tools / ICT Integration
- ◆ Chip Level Test
- ◆ Board Level Test
- ◆ System Level Test
- ◆ Industries
 - Aerospace
 - Automotive
 - Consumer Electronics
 - Contract Manufacturing
 - Medical
 - Military
 - Networking
 - Space Exploration
 - Telecommunications
 - Transportation

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Requirements

- ◆ The PCB has one or more IEEE-1149.1 compliant devices.
- ◆ The JTAG port on each IEEE-1149.1 compliant device is accessible by external test equipment.
- ◆ A BSDL file is available for each IEEE-1149.1 compliant device.
- ◆ Compatible Design Netlist
- ◆ Bill of Materials (BOM)
- ◆ Schematic Design in Searchable PDF Format

