riolab™

RIOLAB™ Provides Testing for Vendors and OEMs Designing with RapidIO® Technology

Benefits

Accelerated Time-to-Market
Assured of interoperability, OEMs can shorten prototyping intervals and accelerate time-to-market.

Delivers Crucial Information to OEMs
For the first time, OEMs designing with RapidIO have access to vital interoperability reports for RapidIO as they solidify and spec-out designs.

Consistent Reporting
RIOLAB's consistent interoperability test method and report format ensures OEMs have access to reliable results.

Impartial Environment
As an impartial testing facility, RIOLAB advances unbiased multi-vendor interoperability testing.

Cost Effective
RIOLAB avoids duplication of establishing individual labs by providing an independent facility available to all commercial semiconductor vendors, FPGA and ASIC providers.

Industry Participation

RIOLAB continues to receive overwhelming support from the RapidIO eco-system.

"The interoperability lab will provide TI with an additional tool to show customers that our next-generation RapidIO products are the right choice for wireless infrastructure."

Dr. Alan Gatherer, chief technology officer of Texas Instruments Communications Infrastructure Group

About RIOLAB

RIOLAB, the world's first RapidIO Interoperability Lab, conducts comprehensive RapidIO Device Interoperability and Specification Compliance testing designed to meet the growing needs of silicon vendors and OEMs. As a division of Fabric Embedded Tools Corporation (FET), this state-of-the-art facility performs testing at graduated levels of interoperability that align with the increasing complexity of both the RapidIO specification and the needs of the market.

Using customized proven test scripts based on the RapidIO Trade Association's Device Interoperability and Specification Compliance-Checklists, RIOLAB delivers consistent, impartial test results.

"The existence of a RapidIO community interoperability lab is timely given the proliferation of new products. With the support of other leading ecosystem vendors, RIOLAB provides a facility where vendors can verify the function of their devices, thereby reassuring customers that their development work can be applications focused."

Tom Cox, executive director, RapidIO Trade Association

Companies using RIOLAB will have access to joint marketing and public relations opportunities with RIOLAB. These programs are designed to clearly communicate the independent findings and promote positive results throughout the design engineering community and increase the deployment of RapidIO technology.

Qualified Vendor Program

Through its Qualified Vendor Program (QVP), RIOLAB ensures that all vendors using the lab for testing benefit from the most advanced equipment available for interoperability and specification compliance testing. Qualified Vendors must have demonstrated compliance to the RapidIO® specification and make a commitment to deliver hardware or software for permanent use in RIOLAB.

In addition, all Qualified Vendors agree to provide upgrades or new products to RIOLAB on a continuing basis, ensuring that lab customers can experience their products and test equipment in a practical lab environment with other state-of-the-art products that comply with the RapidIO® specification.

RIOLAB's QVP not only ensures the integrity of results, but broadens involvement from both the RapidIO ecosystem and the industry as a whole. RIOLAB benefits from the breadth of RapidIO eco-system participation and products while becoming a world-class testing facility and eco-system vendors achieve greater visibility of the interoperability of their products and equipment.

FABRIC EMBEDDED TOOLS
NEXUS TECHNOLOGY
freescale™ semiconductor
Tektronix®
TUNDRA®

Industry Participation continued ...

"Altera's FPGA's and IP offerings have successfully supported RapidIO over several years and RIOLAB is further evidence of the maturity of RapidIO as a next-generation interconnect technology and comes at a time when customer demand requires the level of certification that can only be delivered by an independent interoperability lab."
Steve Mensor, director of IP & Technology Marketing at Altera

"It is very encouraging to see the formation of this lab at a time when there is an immediate and expanding need for interoperability testing of products currently on the market as well as new RapidIO-based devices that continue to be introduced by a growing number of semiconductor manufacturers."
Dave Wickliff, distinguished member of technical staff at Lucent Technologies and chairman of the RapidIO Trade Association's Steering Committee

"The establishment of RIOLAB will further strengthen RapidIO interoperability efforts and accelerate the establishment of an independent third-party lab facility to support the RapidIO Trade Association. We look forward to performing vendor interoperability tests between our products and other RapidIO devices."
Tracy Richardson, director of the Silicon Solutions Group, Advanced Solutions Business Unit at Mercury Computer Systems, Inc.

"With the availability of RapidIO IP cores for Virtex™ 4 FX FPGAs, it is even more important for Xilinx to see the realization of a formal RapidIO Interoperability Lab through which we can demonstrate interoperability with a growing number of other end point and switch vendors."
Kourosh Matloubi, senior manager PCIe, RIO, ASI IPs at Xilinx, Inc.

How RIOLAB Works

RIOLAB addresses the need to ensure that components, systems and software using RapidIO technology have the ability to operate effectively together. Comprehensive interoperability testing increases the likelihood of achieving interoperability objectives in OEM designs and can result in significant savings in engineering time and costs.

Prior to testing at RIOLAB, customers must review all documentation, execute RIOLAB services and non-disclosure agreements, and submit all pre-requisite test results. Complete details and all documents are available at www.rio-lab.com.

Lab customers are required to provide two sets of device hardware, one of which will become a permanent part of RIOLAB's Hardware library upon completion of successful testing. In addition, for processor vendors all required support software for the test must be provided to RIOLAB.

Tests are completed over a two to ten day period depending on the DI and SC level being tested. At the end of the test session, customers receive a detailed Results Report.

Test Levels

RIOLAB tests are aligned with the graduated levels of interoperability that address the immediate needs of silicon vendors and OEMs. RIOLAB is working closely with the RapidIO Trade Association, to provide Device Interoperability (DI) tests where "Device A" is proven to pass a given test with "Device B," and Specification Compliance (SC) tests. Both the DI and SC tests are separated into three levels.

Device Interoperability Test Levels

- √ **DIL-1** is the lowest level of interoperability testing, and a requirement for entering RIOLAB for more advanced testing. RIOLAB will conduct DIL-1 tests to formally validate vendor results prior to running any other tests.
- √ **DIL-2** provides further evidence of device interoperability and requires protocol validations with off-the-shelf test equipment. Customers must have passed DIL-1 to begin DIL-2 testing.
- √ **DIL-3** tests interoperability between specific endpoints and may include a basic level of protocol violation testing. Successful completion of DIL-3 can only be claimed by devices that have successfully passed DIL-2. To undergo DIL-3 testing, devices must have secured DIL-1 validation through RIOLAB.

Specification Compliance Level Tests

- √ **SCL-1** tests a PE is against protocol violations and requires the use of test equipment to analyze adherence to the RapidIO protocol. The pre-requisite for SCL-1 is successful completion of DIL-3 with the minimum hardware PE configuration.
- √ **SCL-2** utilizes specialized hardware to explore device interoperability in greater depth. Only devices that have successfully completed SCL-1 can pass the SCL-2 tests. RIOLAB requires a Pass in DIL-3 prior to testing any device for SCL-1.
- √ **SCL-3** covers most of the remaining checklist items. While SCL-3 represents the final level of specification compliance testing, it does not represent Certification. To participate in SCL-3, devices must have received SCL-1 validation through RIOLAB. Until parts successfully secure SCL-2 test, they cannot claim to have passed SCL-3 interoperability.

Contact RIOLAB

Book your test session today.
Call 613 271-9636, email info@rio-lab.com, or fax 613 248-5089. For more information, visit **www.rio-lab.com**

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