

Title:	RIO Lab Interoperability and Compliance Level Test Definitions	File Number:	
Security Level:	Restricted	Release Status:	v 1.0
Owner Group:	RIOLAB	Revision Date:	10 February 2006

RIO LAB INTEROPERABILITY AND COMPLIANCE LEVEL TEST DEFINITIONS

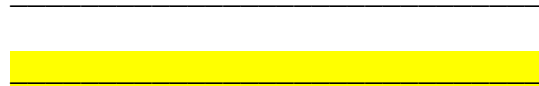
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1 APPROVALS

This document has been read and approved by the following departments responsible for its implementation:



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2 REVISION HISTORY

Release Status	Rev. #	Date	Author/ Reviser	Group	Description of Changes
Draft	0.75	30 January 2006	Jim Parisien	Product Management	Initial Draft.
First Release	1.0	10 February 2006	Geoff Roddick	Engineering	First Release

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3 INTRODUCTION

3.1 Purpose

This document defines the interoperability and compliance levels that are used within the RapidIO InterOperability Lab (RIO Lab or “Lab”).

3.2 Related Documents

The following documents were used in the creation of, or reference in this document.

- RTA Spec <We need to ensure that DIL and SCL documents always refer to a specific Spec version. We will have a set for 1.2 and 1.3 etc that remain archived so that people can test to any spec revision level.
- RTA checklist < same rational as above>
- Other DIL or CSL test documents
- Other RIO Lab related documents that may apply

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4 TEST LEVEL DEFINITIONS

There are two levels of Interoperability checklist items identified by the RTA. The first are essentially Device Interoperability (DI) tests where device A is proven to pass a given test with device B. The second group of checklist items is essentially associated with RapidIO Specification Compliance (SC). These are harder to test and involve specialized hardware and software.

Device interoperability tests are broken down into 3 levels as are specification compliance tests. These tests are roughly defined down as follows:

Device Interoperability Tests

Level	Description
DIL1	This represents the lowest level of interoperability testing. Proof of meeting this level is part of the entry criteria to the Lab as testing a further levels requires this fundamental capability. DIL1 level testing will be formally repeated as the first activity in the Lab. It essentially consists of support for initialization and enumeration and basic read and write packet transactions.
DIL2	This is the second level of device interoperability testing. Prerequisite: Proof of successful passing of DIL1. DIL2 tests explore device interoperability further. It requires protocol validation with off the shelf test equipment but does not require specialized hardware associated for validating and testing protocol violations.
DIL3	This is the third level of device interoperability testing. Prerequisite: DIL1 validation through the Lab but not necessarily DIL2. Note: Successful completion of DIL3 can only be claimed if DIL2 has successfully been passed. DIL3 represents the final level of interoperability testing between specific endpoints. It may include some level of protocol violation testing. Most of the "Interop" labeled RTA checklist items are addressed by this or lower levels.

Note: Some DIL level tests may go beyond the scope of the RTA defined checklists.

Specification Compliance Tests

Level	Description
SCL1	This represents the lowest level of Spec compliance testing. Prerequisite: Successful completion of DIL3 with the minimum hardware PE configuration. Testing at this level – and other SC levels - is done with by testing a given Processing Element (PE) against so called "Golden hardware and software" (GHS). SCL1 represents the first level where a PE is tested against protocol violations and significant use of test equipment is needed to analyze adherence to the RapidIO protocol.
SCL2	This is the second level of Spec compliance testing. Prerequisite:

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	DIL3 but not necessarily SCL1. Note: Successful completion of SCL2 can not be claimed until SCL1 has been successfully met. This test level makes use of GHS. SCL2 tests explore device interoperability further.
SCL3	This is the third level of device interoperability testing. Prerequisite: SCL1 validation through the Lab but not necessarily SCL2. Note: Successful completion of SCL3 can not be claimed until SCL2 has been successfully met. This test level makes use of GHS and covers most of the remaining RTA checklist items not covered in previous SCL or DIL testing. SCL3 represents the final level of specification compliance testing but does not represent Certification.

Note: Some DIL level tests may go beyond the scope of the RTA defined checklists.

Certification

Level	Description
CERT	This is the last level of Interoperability and Compliance testing. It represents coverage of all checklist items defined within the RTA Interoperability checklist. It also represents a depth and breadth of testing by a test facility which is recognized by the RapidIO Trade Association (RTA) as being a credible authority and able to claim RapidIO devices as being Certified. At the time of writing this document this level is not supported within the Lab.

This document describes the second level of interoperability tests – Device Interoperability Level2 or DIL2.