



# **Intel® RAID Controller SRCASLS4I**

## ***Tested Hardware and Operating System List***

**Revision 1.0**

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**Enterprise Platforms and Services Marketing**

## ***Revision History***

<b>Date</b>	<b>Revision Number</b>	<b>Modifications</b>
March, 2008	1.0	Initial release

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# 1. Introduction

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This document provides users of the Intel® RAID Controller SRCASLS4I with a guide to the operating systems, server boards, chassis, disk drives, and other peripherals that Intel tested for use with this RAID controller.

This document will be updated as additional testing is performed, or until the Intel® RAID controller is no longer in production. Each new release of the document will include the information from previous releases.

Intel will only provide support for this RAID controller when it is installed in a system configured with the specified server boards, and when the server board is configured with the tested RAID firmware, system BIOS / firmware, and operating system versions.

Thorough testing has been performed on the RAID controller with Intel® server boards, Intel® drive enclosures, and the third party devices listed in this document. However, it is not practical to test the RAID controller in every possible combination of server board, drive enclosure, hard drive, and peripheral device. Sample combinations have been tested to gain confidence in their compatibility, and the devices listed were tested in one or more configuration.

## 1.1 Test Overview

Testing performed on the Intel® RAID Controller SRCASLS4I is classified under two categories:

- Compatibility Testing
- Stress Testing.

### 1.1.1 Basic Compatibility Testing

Compatibility testing is performed with each supported operating system. Basic compatibility testing validates that the RAID controller can be used to install the operating system and that the base hardware feature set is functional. A small set of peripherals are used for installation purposes only. No additional add-in cards are tested. Testing may include network connectivity and running of proprietary and industry standard test suites.

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**Note:** *The latest version of an operating system signifies the latest supported version at the time of testing. New releases of this document may include a newly supported release of an operating system. Previous releases of a supported operating system may not be tested beyond the basic compatibility test process.*

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### 1.1.1.1 Support Commitment for Basic Installation Testing

Intel commits to the following level of customer support for operating systems that receive only basic installation testing:

- Intel will provide tested operating system drivers for each of the integrated controllers on the server board, as long as the controller vendor has a driver. Vendors are not required by Intel to develop drivers for operating systems that they do not already support. This may limit the functionality of certain server board integrated controllers.
- Intel will provide support to customers who experiences issues with the integrated controllers due to the installation or functionality of an operating if a driver is available.
- Intel does not provide support for issues related to the use of add-in adapters or peripheral installed in the server system with an operating system that received only basic installation testing.
- Support is defined as helping a customer to root cause an issue and determining an acceptable resolution to the operating system problem. The resolution may include, but is not limited to, onboard controller driver updates, engaging the vendor, BIOS changes, firmware changes, or determining an acceptable workaround for the issue with the customer.

### 1.1.2 Adapter / Peripheral Compatibility and Stress Testing

Adapter / Peripheral Compatibility and Stress testing is performed only on the most current release of a supported operating system at the time of testing. The Adapter / Peripheral Compatibility and Stress testing process consists of three areas:

- **Base Platform:** Each base platform will successfully install a given operating system, successfully run a disk stress test, and successfully run a network stress test.
- **Adapter Compatibility:** Adapter compatibility validation (CV) testing uses test suites to gain an accurate view of how the server performs with a wide variety of adapters under the primary supported operating systems. These tests are designed to show hardware compatibility between the cards and the server platform and include functional testing only. CV testing does not include heavy stressing of the systems or the cards.
- **Stress Testing:** This test sequence uses configurations with add-in adapters installed in all available slots (depending on chassis used), and runs for a minimum of 72-hours without injecting errors. Each configuration passes an installation test, a network/disk stress test, and tape backup test. Any fatal errors require a restart of the test.

### 1.1.2.1 Support Commitment for Adapter / Peripheral Compatibility and Stress Testing

Intel will provide the following level of customer support for operating systems that receive Adapter / Peripheral Compatibility and Stress testing:

- Intel will provide support to customers who experience issues with tested operating systems if they involve the installation or functionality of the server board with or without the adapters and peripherals listed in this document as having been tested under the operating system.
- Support is defined helping a customer to root cause an issue and determining an acceptable resolution to the problem. The resolution may include, but is not limited to, on-board controller driver updates, engaging the vendor, BIOS changes, firmware changes, or determining a workaround for the issue.
- Intel provides and test operating system drivers for each on-board video, network, and storage controller.
- Intel enables vendors to provide driver support for add-in adapters using these operating systems.
- Intel completes steps to achieve certification to ensure customers do not encounter problems. The actual certification is the responsibility of the customer.

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**Note:** Intel does not provide a support commitment for operating systems, adapter cards, and peripherals not listed in this document. Intel will consider requests for support on a case-by-case basis.

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## 1.2 Pass/Fail Test Criteria

For each operating system, adapter, and peripheral configuration, a test passes if specific criteria are met. Specific configurations with particular characteristics will be addressed on a case-by-case basis. In general, a configuration passes testing if the following conditions are met:

- The operating system installed without error.
  - Manufacturer's installation instructions or Intel's best-known methods were used for the operating system installation.
  - No extraordinary workarounds were required during the operating system installation.
  - The server system behaved as expected during and after the operating system installation.
  - Application software installed and executed normally.
- Hardware compatibility tests ran to completion without error.

- Test software suites executed successfully:
  - Test and data files were created in the correct directories without error.
  - Files copied from the client to the server and back match the original without error.
  - Clients remain connected to the server system.
  - Industry standard test suites run to completion without error.



## 2. Firmware Configurations

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The following table lists the controller and firmware configurations tested. This document will be updated with additional configurations as new revisions of the Intel® RAID Controller SRCASLS4I or firmware versions for that controller are released. Each configuration is assigned an identifier number which is referenced in the tables throughout this document.

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**Note:** *Intel will only provide support for adapters and peripherals in the configuration with which they were tested.*

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Base System Identifier #	Product Code	Part Number	Firmware Revision
1	SRCASLS4I	896952	Ver.1.12.122-0393

### 3. Operating Systems

The following table provides a list of supported operating systems for the Intel® RAID Controller SRCASLS4I. Each operating system was tested for compatibility with Intel® RAID Controller SRCASLS4I configuration listed in Section 2. Operating systems are only supported in the specified base system configuration(s) they were tested with.

The following table also indicates whether each operating system received Basic Installation testing, or Adapter / Peripheral Compatibility and Stress Testing. See Section 1 for information on the support commitments for Basic Installation Testing and Adapter / Peripheral Compatibility and Stress Testing.

Any variations to the standard operating system installation process are documented in the Installation Guidelines section of this document. If there is no installation note listed in the following table, then the operating system installed as expected using the manufacturer's installation instructions or Intel's best-known methods.

**Note:** *The operating systems listed below have been tested for compatibility with the RAID Controller SRCASLS4I, but the operating system and its associated driver may not have been tested for compatibility with the server board you have selected. Refer to the supported operating system list for your server board to verify operating system compatibility with the server board. This document lists testing performed on Intel® server boards only.*

Ident#	Operating System	Base System Configuration Tested and Type of Testing	Comment
1	Microsoft Windows 2003*, SP1	Configuration 1 – Compatibility & Stress	
2	Microsoft Windows 2003*, SP1, x64	Configuration 1 – Compatibility & Stress	
3	Microsoft Windows Vista*	Configuration 1 – Compatibility & Stress	
4	Microsoft Windows Vista* , x64	Configuration 1 – Compatibility & Stress	
5	Red Hat* Enterprise Linux ES 4.0, U5	Configuration 1 – Compatibility & Stress	
6	Red Hat* Enterprise Linux ES 4.0, U5, x86_64	Configuration 1 – Compatibility & Stress	
7	Red Hat* Enterprise Linux ES 5.0	Configuration 1 – Compatibility & Stress	
8	Red Hat* Enterprise Linux ES 5.0, x86_64	Configuration 1 – Compatibility & Stress	
9	SuSE* Linux Enterprise Server 9.0, SP3	Configuration 1 – Compatibility & Stress	
10	SuSE* Linux Enterprise Server 9.0, SP3 x86_64	Configuration 1 – Compatibility & Stress	
11	SuSE* Linux Enterprise Server 10.0, SP1	Configuration 1 – Compatibility & Stress	
12	SuSE* Linux Enterprise Server 10.0, SP1 x86_64	Configuration 1 – Compatibility & Stress	
13	Microsoft Windows 2008*	Configuration 1 – Compatibility & Stress	

Ident#	Operating System	Base System Configuration Tested and Type of Testing	Comment
14	Microsoft Windows 2008* , x64	Configuration 1 – Compatibility & Stress	

### 3.1 Operating System Certifications

Listed below are the operating systems that Intel will certify with the Intel® RAID Controller SRCASLS4I. Each customer is responsible for their own certification from the individual operating system vendors. In many cases, customers may leverage their operating system certifications from the testing completed by Intel. See the “Comments” column next to each operating system in the table below for additional information. Intel’s certifications, pre-certification, and operating system testing may help reduce some of the risk in achieving customer certifications with the operating system vendors.

Operating System	Certification Listing	Comment
Microsoft Windows 2003* Enterprise Server	Intel® RAID Controller SRCASLS4I	OEM must request certification by Microsoft for their specific product. Search on SRCASLS4I. <a href="http://www.microsoft.com/hwdq/hcl/search.asp">http://www.microsoft.com/hwdq/hcl/search.asp</a> <a href="http://developer.intel.com/design/servers/whql.htm">http://developer.intel.com/design/servers/whql.htm</a>
Microsoft Windows 2008* Enterprise Server	Intel® RAID Controller SRCASLS4I	OEM must request certification by Microsoft for their specific product. Search on SRCASLS4I. <a href="http://www.microsoft.com/hwdq/hcl/search.asp">http://www.microsoft.com/hwdq/hcl/search.asp</a> <a href="http://developer.intel.com/design/servers/whql.htm">http://developer.intel.com/design/servers/whql.htm</a>

## 4. Intel® Server Boards

This list includes the Intel® server board software versions that the server boards were configured with at the time of testing.

Intel® Server Board	Microsoft Windows 2003*	Microsoft Windows Vista*	Microsoft Windows 2008*	Red Hat* Linux 4.0 U5	Red Hat* Linux ES 5.0	SUSE* Linux ES 10.0 SP1	SUSE* Linux ES 9.0 SP3	Microsoft Windows 2003* X64	Microsoft Windows Vista* x64	Microsoft Windows 2008 x64	Red Hat* Linux ES 4.0 U5 X86_64	Red Hat* Linux ES 5.0 x86_64	SUSE* Linux ES 9.0 SP3 X86_64	SUSE* Linux ES 10.0 SP1 X86_64
S5000VCL \ SR1530HCL BIOS BMC FRU/SDR HSC R085 59 43 2.06									X	X		X		
S5400SF BIOS BMC FRU/SDR HSC R19 07 07 2.07		X	X											
S5000VSA BIOS BMC FRU/SDR HSC R081 59 43 2.06					X		X							
S5000PSL / S5000XSL / S5000XVN BIOS BMC FRU/SDR HSC R081 59 43 2.06				X										
S7000FC4UR BIOS BMC FRU/SDR HSC R15 14 10 2.08	X													
S5000PAL / S5000XAL BIOS BMC FRU/SDR HSC R081 59 43 2.05								X						

## 5. Enclosures, PCI Adapters, and Peripherals

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Testing of enclosures, add-in cards, and peripherals was performed on the Intel® RAID Controller SRCASLS4I by Intel Labs, independent test labs, or by the vendor. Compatibility and stress testing was performed with the latest version of an operating system available at the time of testing.

Although a large sample of configurations were tested, not all devices were tested under all operating systems, and not all possible combinations or configurations of third-party devices were tested for inter-compatibility due to the large number of possible configurations. Refer to the *Tested Hardware and Operating System List* for the server board to verify compatibility.

Add-in adapter card and peripheral compatibility and stress testing is performed with the latest version of an operating system at the time the validation testing occurred. The following table shows the operating system and base system configurations used to validate each device. The adapters are divided into categories based on their functionality. All integrated onboard devices are tested by default and are therefore not included in the following tables.

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**Note:** *Not all adapter cards and peripherals were tested under all operating systems.*

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Any variations to the standard adapter installation process or to expected adapter functionality are documented in the Installation Guidelines section of this document. If there are installation guidelines affecting a particular adapter and operating system combination, these are referenced in the following table. If there are no installation guidelines noted in the following table, then the adapter was installed and functioned as expected using the manufacturer's installation instructions or Intel's best-known methods.

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**Note:** *Adapter cards are normally tested with unused add-in adapters and onboard controller expansion ROMs disabled in BIOS Setup. Intel recommends that customers disable the option ROM for add-in controllers and/or the onboard controllers when not booting from the controller or needing to use its built-in utilities.*

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### 5.1 External Storage

None.

## 5.2 Internal Storage

**Note:** Enclosures are only listed if they were attached to the Intel® RAID Controller SRCASLS4I during testing. There is no out-of-band enclosure management for a second backplane, so the only way to get enclosure management with two backplanes is to use at least one expander backplane and the Intel® RAID Controller SRCASLS4I.

Manufacturer	Model Name	Model Number	Interface	Comment	Operating System Identifier
Intel	Intel® Backplane AXX6DRV3GEXP	AXX6DRV3GEXP	SAS/SATA		1,2,3,4,5,6,7,8,9,10,11, 12,13,14
Intel	Intel® Backplane AXX6DRV3G	AXX6DRV3G	SAS/SATA		1,2,3,4,5,6,7,8,9,10,11, 12,13,14
Intel	Intel® Backplane AXX4DRV3GEXP	AXX4DRV3GEXP	SAS/SATA		1,2,3,4,5,6,7,8,9,10,11, 12,13,14
Intel	Intel® Backplane AXX4DRV3G	AXX4DRV3G	SAS/SATA		1,2,3,4,5,6,7,8,9,10,11, 12,13,14

## 5.3 CD-ROM Drives

**Note:** CD-ROM drives are only listed if the operating system was installed from this device.

Manufacturer	Model Name	Model Number	Interface	Comment	Operating System Identifier
Panasonic	AXXDVDFloppy	SR-8177-B	IDE		1,2,3,4,5,6,7,8,9,10,11, 12,13,14
Sony	CDU5211	CDU5211	IDE		1,2,3,4,5,6,7,8,9,10,11, 12,13,14

## 5.4 Tape Drives

None.

## 5.5 Hard Disk Controllers

None.

## 5.6 SCSI / SAS / SATA RAID Controllers

Manufacturer	Model Name	Model Number	Interface	Comment	Operating System Identifier
Intel	Intel® RAID Controller SRCASPH16I	SRCSASPH16I	PCI Express*		1,2,3,4,5,6,7,8,9,10,11,12,13,14
Intel	Intel® RAID Controller SRCASBB8I	SRCSASBB8I	PCI Express*		1,2,3,4,5,6,7,8,9,10,11,12,13,14
Intel	Intel® RAID Controller SASMF8I	SASMF8I	PCI Express*		1,2,3,4,5,6,7,8,9,10,11,12,13,14

## 5.7 Network Interface Controllers

Manufacturer	Model Name	Model Number	Interface	Comment	Operating System Identifier
Intel	Intel® PRO/1000PT Gigabit Server Adapter	EXPI9400PT	PCI Express*		1,2,3,4,5,6,7,8,9,10,11,12,13,14

## 6. Hard Disk Drives

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Intel Labs, independent test labs, or vendors have performed enclosure, add-in card, and peripheral testing with the Intel® RAID Controller SRCSASLS4I. The compatibility and stress testing is performed with the latest version of an operating system available at the time of testing. Although a large sample of configurations was tested, not all devices were tested under all operating systems, and not all possible combinations or configurations of third-party devices were tested for inter-compatibility due to the large number of possible configurations. Refer to the Tested Hardware and Operating System List for the server board to verify compatibility.

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**Note:** *Not all adapter cards and peripherals were tested under all operating systems.*

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Any variations to the standard adapter installation process or to the expected adapter functionality are documented in the Installation Guidelines section of this document. If there are installation guidelines affecting a particular adapter and operating system combination, these are referenced in the following table. If there are no installation guidelines noted in the following table, then the adapter installed and functioned as expected using manufacturer's installation instructions or Intel's best-known methods.



## 6.1 Hard Disk Drives

**Note:** Hard drives are only listed in the table below if they were attached to the Intel® RAID Controller SRCASLS4I during testing.

Manufacturer	Model Name	Model Number	Interface	RPM	Drive Size	Tested Operating Systems
Hitachi	Deskstar* T7K250	HDT722516DLA380	SATA3.0 Gb	7200	160 GB	1,2,3,4,5,6,7,8,9,10,11,12,13,14
Hitachi	Deskstar* 7K80	HDS728080PLA380	SATA3.0 Gb	7200	80 GB	1,2,3,4,5,6,7,8,9,10,11,12,13,14
Hitachi	Deskstar* E7K500	HDS725050KLA360	SATA3.0 Gb	7200	500 GB	1,2,3,4,5,6,7,8,9,10,11,12,13,14
Hitachi	Deskstar* E7K100	HTE721060G9SA00	SATA1.5 Gb	7200	60 GB	1,2,3,4,5,6,7,8,9,10,11,12,13,14
Western Digital	WD Caviar* SE	WD800JD	SATA3.0 Gb	7200	80 GB	1,2,3,4,5,6,7,8,9,10,11,12,13,14
Western Digital	WD Caviar* SE	WD1600JS	SATA3.0 Gb	7200	160 GB	1,2,3,4,5,6,7,8,9,10,11,12,13,14
Western Digital	WD Caviar* SE	WD2500JS	SATA3.0 Gb	7200	250 GB	1,2,3,4,5,6,7,8,9,10,11,12,13,14
Western Digital	WD RE2	WD5000YS	SATA3.0 Gb	7200	500 GB	1,2,3,4,5,6,7,8,9,10,11,12,13,14
Toshiba	HDD2D60	MK1637GSX	SATA3.0 Gb	5400	160 GB	1,2,3,4,5,6,7,8,9,10,11,12,13,14
Fujitsu	MHV2 BH Series	MHV2060B	SATA1.5 Gb	5400	60 GB	1,2,3,4,5,6,7,8,9,10,11,12,13,14
Samsung	SpinPoint* P80SD	HD040GJ	SATA3.0 Gb	7200	40 GB	1,2,3,4,5,6,7,8,9,10,11,12,13,14
Maxtor	DiamondMax* 10	6B300S0	SATA3.0 Gb	7200	300 GB	1,2,3,4,5,6,7,8,9,10,11,12,13,14
Maxtor	Atlas Genesis* SAS	8K147S0	SAS 3.0 Gb	10K	147 GB	1,2,3,4,5,6,7,8,9,10,11,12,13,14
Seagate	Savvio* 10K.1 SAS	ST936701SS	SAS 3.0 Gb	10K	36 GB	1,2,3,4,5,6,7,8,9,10,11,12,13,14
Seagate	Cheetah* 15K.4 SAS	ST336754SS	SAS 3.0 Gb	15K	36 GB	1,2,3,4,5,6,7,8,9,10,11,12,13,14
Seagate	Cheetah* 15K.4 SAS	ST3146854SS	SAS 3.0 Gb	15K	146 GB	1,2,3,4,5,6,7,8,9,10,11,12,13,14
Seagate	Cheetah* 15K.4 SAS	ST373454SS	SAS 3.0 Gb	15K	73 GB	1,2,3,4,5,6,7,8,9,10,11,12,13,14
Seagate	Barracuda* 7200.7	ST380013AS	SATA1.5 Gb	7200	80 GB	1,2,3,4,5,6,7,8,9,10,11,12,13,14
Seagate	Barracuda* 7200.9	ST3250824AS	SATA3.0 Gb	7200	250 GB	1,2,3,4,5,6,7,8,9,10,11,12,13,14
Seagate	Barracuda* 7200.9	ST3500641AS	SATA3.0 Gb	7200	500 GB	1,2,3,4,5,6,7,8,9,10,11,12,13,14
Seagate	Barracuda* ES	ST3750640NS	SATA3.0 Gb	7200	750 GB	1,2,3,4,5,6,7,8,9,10,11,12,13,14

