



# **Intel® Storage System SSR212CC**

## ***Tested Hardware and Operating System List (THOL)***

**Revision 1.5**

**Aug, 2007**

**Server Platform Group Technical Marketing**

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## Revision History

<b>Date</b>	<b>Revision Number</b>	<b>Modifications</b>
May 19, 2006	1.0	Release copy.
July 20, 2006	1.1	Added updates for RoHS ECO: BIOS 10. Added Enclosure Management SW revisions.
November 6, 2006	1.2	Added SuSE 9.3 Professional OS support (Chapters 2 & 6), added Western Digital 250 & 320 GB hard disk drives (Chapter 6), added 3 <sup>rd</sup> Party Software Application Support note (Chapter 3).
February 6, 2007	1.3	Added several new hard disk drives (Chapter 6).
March 8, 2007	1.4	Added several new hard disk drives (Chapter 6).
August 20, 2007	1.5	Added several new hard disk drives (Chapter 6).

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# 1. Introduction

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This document is intended to provide users of the Intel® Storage System SSR212CC with a guide to the different operating systems, adapter cards, and peripherals tested by Intel on this platform.

This document will continue to be updated as new adapters, peripherals, and operating systems are tested or until the Intel® Storage System SSR212CC is no longer in production. Each new release of the document will present updated information as well as continue to provide the information from previous releases.

Intel will only provide support for those adapters and peripherals under the specified system configuration (System BIOS and Firmware revisions) and operating systems versions with which they were tested.

## 1.1 Test Overview

Testing performed on the Intel® Storage System SSR212CC is classified as Adapter / Peripheral Compatibility and Stress Testing.

- ⇒ The latest version of the operating system signifies the latest supported version at the time of the actual test run. Each new release of this document may have a newly supported release of a given operating system. Previous releases of a supported operating system may not be tested beyond the basic installation test process.

### 1.1.1 Adapter / Peripheral Compatibility and Stress Testing

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

**Platform:** Each platform will successfully install the 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 platform performs with adapters under the operating system. These tests are designed to show hardware compatibility between the cards and the server platform and include functional testing only. No heavy stressing of the systems or the cards is performed for CV testing.

**Stress Testing:** This test sequence uses configurations that include Ethernet add-in adapters in the one available slot, or a minimum 24-hour test run without injecting errors. Each configuration passes an installation test, a Network/Disk Stress test. Any fatal errors that occur will require a complete test restart.

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

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

- Intel will provide support for customer issues with the operating system involving installation and/or functionality of the server board with or without the adapters and peripherals listed in this document as having been tested under the particular operating system.
  - Support is defined as assistance in root causing issues, and determining a customer acceptable resolution to the issue associated with the operating system. The resolution may include, but is not limited to, on-board controller driver changes, engaging the vendor for resolution, BIOS changes, firmware changes, or determining a customer acceptable workaround for the issue.
  - Intel will go through some of the steps to achieve certification to ensure its customers do not run across any problems, but the actual certification is the responsibility of the individual customer.
- ⇒ For operating systems, adapter cards, and peripherals not listed in this document, there is no support commitment. Intel will consider support requests on a case-by-case basis.

## 1.2 Pass/Fail Test Criteria

For each operating system, adapter, and peripheral configuration, a test passes if specific criteria are met. Specific configurations may have had particular characteristics that were 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 SSR212CC 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 client to server and back compare to the original with zero errors reported.
- Clients remain connected to the server system.
- Industry standard test suites run to completion with zero errors reported.

All Intel® Storage System SSR212CC testing was performed using its 2U rail mount chassis.

## Intel® Storage System SSR212CC System Configuration 1

The following table lists the base system configuration tested. Each base system configuration is assigned an identifier number that is referenced in the tables throughout this document. New base system configurations are added with each new release of this document.

- ⇒ Intel will only provide support for adapters and peripherals under the specified system configuration and operating system versions with which they were tested.

SE7501JR2 BIOS Revision	SE7501JR2 BMC/IMM Firmware Revision	SE7501JR2 mBMC Firmware Revision	SE7501JR2 FRU/SDR	Backplane Firmware	SRCS28X Firmware Revision
7.40 10.0	0.48	2.40	0.0.6	2.00	814G

Windows* Server 2003 based Enclosure Management	Windows* Storage Server based Enclosure Management	Linux* based Enclosure Management	Intel Server Management
V 1.0.0-20	V 1.0.0-17	V 1.0.0-48	8.4

## 2. Supported Operating Systems

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The following table provides a list of supported operating systems compatible with the Intel® Storage System SSR212CC. Each of the listed operating systems was tested for compatibility with Intel® Storage System SSR212CC system configuration listed in Section 1 of this document.

Identifier number	Operating System	Base System Configuration Tested & Type of Testing
1	Microsoft* Windows* Server 2003 Enterprise Edition, SP1.	Configuration 1 – Compatibility & Stress
2	Microsoft* Windows* Storage Server 2003.	Configuration 1 – Compatibility & Stress
3	Microsoft* Windows* Storage Server 2003, R2. (No Enclosure Management Software GUI available for this platform! Interface available in the form of a MMC plug-in on support.intel.com.)	Configuration 1 – Compatibility & Stress
4	Red Hat* Enterprise Linux* Server Edition 4, Update 2.	Configuration 1 – Compatibility & Stress
5	SuSE* Linux 9.3 Professional (32-bit and 64-bit).	Configuration 1 – Compatibility & Stress



### 3. Supported Software Applications

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The following table provides a list of software applications compatible with the Intel® Storage System SSR212CC. Each of the listed applications was tested for compatibility with Intel® Storage System SSR212CC system configuration listed in Section 2 of this document.

Software Application	Base System Configuration Tested & Type of Testing	Operating System
Microsoft* SQL Server 2000 with SP4	Configuration 1 – Compatibility	1
Microsoft* SQL Server 2005	Configuration 1 – Compatibility	1, 2
Oracle* 10G Enterprise Server	Configuration 1 – Compatibility	4

NOTE: Several 3<sup>rd</sup> party independent software vendors (ISV's) have performed their own software application validation. Please contact the ISV's directly for product information and support. The current list of ISV's can be found at <http://www.intel.com/design/servers/storage/ssr212cc/index.htm>

## 4. Supported Client Systems

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The following table provides a list of supported client systems\* compatible with the Intel® Storage System SSR212CC

\* based on the Intel server board or system listed below.

Manuf	Model	Operating System	Notes
Intel	SE7520BD2	1, 2, 4.	
Intel	SE7221BK1-E	1, 2, 4.	
Intel	SE7525GP2	1, 2, 4.	
Intel	SE7320SP2	1, 2, 4.	
Intel	SE7210TP1-E	1, 2, 4.	
Intel	SSR212MA	1, 2, 4.	iSCSI connectivity
Intel	SS4000-E	1, 2, 4.	CIFS connectivity

## 5. Adapters and Peripherals

Add-in adapter card and peripheral compatibility and stress testing will only be performed with operating systems as indicated Chapter 2 of this document.

Manufacturer	Model Name	Model Number	Interface	Comments	OS
<b>5.1 SATA Host Bus Adapter</b>					
Intel	Intel RAID Controller	SRCS28X	PCI-X133	Pre-installed in SSR212CC PCI slots 2 & 3.	1, 2, 3, 4
<b>5.2 PCI NIC</b>					
Intel	PRO/1000 MT Single Port Gigabit Server Adapter	PWLA8490 MT	PCI-X133	Should be installed in SSR212CC PCI slot 1 only.  Can not be aggregated with the dual On-Board NICs.	1, 2, 3, 4
Intel	PRO/1000 MT Dual Port Gigabit Server Adapter	PWLA8492 MT	PCI-X133	Should be installed in SSR212CC PCI slot 1 only.  Can not be aggregated with the dual On-Board NICs.	1, 2, 3, 4
<b>5.3 Disk On Module™ (DOM)</b>					
Power Quotient International Co, Ltd (PQI)*	512 MB	DJ0512M44 NG0	IDE	Can be used to image a bootable OS.	
<b>5.4 USB CD/DVD Drives</b>					
TEAC	External CD-ROM	CDW552G/K IT/USB2	USB 2.0		1, 2, 4
Plextor	External USB CD-RW/DVD-RW drive	PX-740UF	USB 2.0		1, 2, 4
<b>5.5 USB Floppy Drives</b>					
Sony	VAIO External 3 1/2" Floppy drive	PCGA-UFD5	USB		1, 2, 4

Manufacturer	Model Name	Model Number	Interface	Comments	OS
TEAC	External 3 ½" Floppy drive	FD-05PUB	USB		1, 2, 4
<b>5.6 USB Flash Drive (Key)</b>					
Iomega	Micro Mini™ 1GB Drive	SKU 33136	USB 2.0	Because of chassis mechanical interference, you must use either a USB extension cable, or a USB Hub with this device.	1, 2, 4
Lexar	1GB USB Flash Drive	JD1GB-80-231	USB 2.0	Because of chassis mechanical interference, you must use either a USB extension cable, or a USB Hub with this device.	1, 2, 4
Memina	1GB Pocket Rocket Flash Drive	829222120101	USB 2.0		1, 2, 4
<b>5.7 USB Hub</b>					
Belkin	4 port Hub	F5U231	USB 2.0		1, 2, 4
Dlink	7 port Hub	HUB-H7	USB 2.0		1, 2, 4
<b>5.8 Keyboard</b>					
AOPen	Keyboard	KB-858	PS/2		1, 2, 3, 4
Keytronic	PRO Pilot Keyboard	Pro Pilot	PS/2		1, 2, 3, 4
<b>5.9 Mouse</b>					
Logitech	MX310 Optical Mouse	830823-0000	PS/2 & USB		1, 2, 3, 4
Logitech	Optical Mouse	831087-A000	PS/2 & USB		1, 2, 3, 4
Microsoft	Intellimouse Optical	X09-52405	PS/2 & USB		1, 2, 3, 4

Manufacturer	Model Name	Model Number	Interface	Comments	OS
<b>5.10 Keyboard, Video and Mouse (KVM) Switch</b>					
Belkin	Omniview PRO2 Series 8 port keyboard/mouse/video (KVM)	F1DA108T	PS/2		1, 2, 3, 4
Raritan	IP Reach / Master Console II 8 port keyboard/mouse/video (KVM)	MCC8	PS/2		1, 2, 3, 4

## 6. Hard Disk Drives

The hard drives listed in the following table have been tested with the Intel® Storage System SSR212CC by Intel in its validation labs and/or by individual drive vendors. The following operating system identifiers are used in the table to specify which OS each drive was tested under.

Identifier number	Operating System
1	Microsoft* Windows* Server 2003 Enterprise Edition, SP1.
2	Microsoft* Windows* Storage Server 2003.
3	Microsoft* Windows* Storage Server 2003, R2.
4	Red Hat* Enterprise Linux* Server Edition 4, Update 2.
5	SuSE* Linux 9.3 Professional (32-bit and 64-bit).
6	SuSE* Enterprise Linux 10.1 (32-bit and 64-bit).

Note that not all hard drives were tested under all operating systems. The following notation is used in the tested hard drives table below to indicate the support level that Intel provides for a particular hard drive with a particular operating system:

Number (i.e. 1)	This hard drive has been tested and is supported under the operating system identified by the operating system identification number.
SD (Similar Drive)	The hard disk drive is supported, but not tested. This hard drive model/capacity has not been tested with the SSR212CC, but Intel will support it based on successful testing of a larger capacity hard drive from the same hard drive family. Intel has high confidence that this hard drive will function correctly with the server board. This drive uses the exact same firmware and drivers as a larger capacity hard drive that has been successfully tested with this server board. The only difference between this drive and the one that was used in testing is the storage capacity. Intel provides the same level of support for all hard drives listed in this document, regardless of whether the drive was tested or not. Customers should always test hard drives as part of the final system configuration prior to deployment. Given the fact that a larger capacity hard drive from the same drive family has successfully completed testing on the SSR212CC, this particular hard drive capacity point will not be tested.
IHVT (IHV Tested)	The hard disk drive was tested according to Intel-approved guidelines and test procedures by the Independent Hardware Vendor (IHV) that manufactured the drive. Intel provides the same level of support for all hard drives listed in this document, regardless of whether the drive was tested in an Intel lab or not. IHV test reports remain the property of the IHV (Intel cannot provide copies of these reports).

Manufacturer	Product Family	Model Number	Interface	RPM	Drive size (GB)	Tested firmware revision	Notes/OS Tested
<b>3.0 Gb/s Serial ATA (SATA II) Hard Drives</b>							a
Hitachi	Deskstar 7K500	HDS725050KLA360	SATA/300	7200	500	K2A0	1, 2, 3, 4
Hitachi	Deskstar 7K500	HDS725050VLA360	SATA/300	7200	500	V560A52A	SD
Hitachi	<b>Gemini-K 7K1000</b>	<b>HDS721010KLA330</b>	<b>SATA/300</b>	<b>7200</b>	<b>1000</b>	<b>70M</b>	<b>1,2,3,4,6, IHVT</b>
Hitachi	<b>Gemini-K 7K1000</b>	<b>HDS721075KLA330</b>	<b>SATA/300</b>	<b>7200</b>	<b>750</b>	<b>70M</b>	<b>1,2,3,4,6, IHVT</b>
Hitachi	<b>Gemini-K 7K1000</b>	<b>HUA721010KLA330</b>	<b>SATA/300</b>	<b>7200</b>	<b>1000</b>	<b>70M</b>	<b>SD</b>
Hitachi	<b>Gemini-K 7K1000</b>	<b>HUA721075KLA330</b>	<b>SATA/300</b>	<b>7200</b>	<b>750</b>	<b>70M</b>	<b>SD</b>
Hitachi	<b>Gemini-K 7K1000</b>	<b>HUA721050KLA330</b>	<b>SATA/300</b>	<b>7200</b>	<b>500</b>	<b>70M</b>	<b>SD</b>
Hitachi	<b>Kurofune-II E7K500</b>	<b>HDS725050KLA360</b>	<b>SATA/300</b>	<b>7200</b>	<b>500</b>	<b>D1A</b>	<b>1,2,3,4,6, IHVT</b>
Maxtor	Maxline Pro	7H500F0	SATA/300	7200	500	HA43	1, 2, 3, 4
Seagate	NL35	ST3500641NS	SATA/300	7200	500	3.AEH	1, 2, 3, 4
Seagate	NL35	ST3500841NS	SATA/300	7200	500	3.AEH	SD
Seagate	NL35.2	ST3250824NS	3 Gbps	7200	250	3.03	SD
Seagate	NL35.2	ST3250624NS	3 Gbps	7200	250	3.03	SD
Seagate	NL35.2	ST3400833NS	3 Gbps	7200	400	3.03	SD
Seagate	NL35.2	ST3400633NS	3 Gbps	7200	400	3.03	SD
Seagate	Barracuda ES 7200.8	ST3750840NS	3 Gbps	7200	750	3.AEG	1,4, IHVT
Seagate	Barracuda ES 7200.8	ST3750640NS	3 Gbps	7200	750	3.AEG	1,4, IHVT
Seagate	Barracuda ES 7200.8	ST3500830NS	3 Gbps	7200	500	3.AEG	1,4, IHVT
Seagate	Barracuda ES 7200.8	ST3500630NS	3 Gbps	7200	500	3.AEG	1,4, IHVT
Seagate	Barracuda ES 7200.8	ST3400820NS	3 Gbps	7200	400	3.AEG	1,4, IHVT
Seagate	Barracuda ES 7200.8	ST3400620NS	3 Gbps	7200	400	3.AEG	1,4, IHVT
Seagate	Barracuda	ST3320820NS	3 Gbps	7200	320	3.AEG	1,4, IHVT

Manufacturer	Product Family	Model Number	Interface	RPM	Drive size (GB)	Tested firmware revision	Notes/OS Tested
	ES 7200.8						
Seagate	Barracuda ES 7200.8	ST3320620NS	3 Gbps	7200	320	3.AEG	1,4, IHVT
Seagate	Barracuda ES 7200.8	ST3250820NS	3 Gbps	7200	250	3.AEG	1,4, IHVT
Seagate	Barracuda ES 7200.8	ST3250620NS	3 Gbps	7200	250	3.AEG	1,4, IHVT
Western Digital	Raid Edition 2	WD5000YS	SATA/300	7200	500	0.70	1, 2, 3, 4
Western Digital	Raid Edition	WD3200YS	SATA/300	7200	320	21.00M21	1,5
Western Digital	Raid Edition	WD2500YS	SATA/300	7200	250	20.06C03	4, 5
<b>1.5 Gb/s Serial ATA (SATA I) Hard Drives</b>							a
Seagate	Barracuda 7200.8	ST3400832AS	SATA/150	7200	400	3.03	1, 2, 3, 4
Seagate	Barracuda 7200.8	ST3250823AS	SATA/150	7200	250	3.03	SD
Seagate	NL35	ST3400632NS	SATA/150	7200	400	5.01	1, 2, 3, 4
Seagate	NL35	ST3250823NS	SATA/150	7200	250	5.0	1, 2, 3, 4
Western Digital	Caviar EL 150	WD1500ADFD	SATA/150	10,000	150	20.0	1, 2, 3, 4
Western Digital	Caviar EL 150	WD1500AHFD	SATA/150	10,000	150	20.0	SD

**NOTES:**

- a. Requires specific Hard Disk Drive Firmware revision listed in table, or later.



## 7. Network Switches

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The network switches listed in the following table have been tested with the Intel® Storage System SSR212CC by Intel in its validation labs.

Manufacturer	Model Name	Type	Notes
3Com	SuperStack 3 3870	10/100/1000 Ethernet	
3Com	SuperStack 2 3900	10/100 Ethernet	
3Com	SuperStack 3 4924	10/100/1000 Ethernet	
Asante	IntraCore 36480	10/100/1000 Ethernet	
Dell	PowerConnect 5324 / PC5324	10/100/1000 Ethernet	