Intel® Storage System SSR316MJ2

Tested Hardware and Operating System List

Revision 2.2

December, 2006

Storage Group Technical Marketing

Revision History

Date	Revision Number	Modifications
June, 2004	0.1	Initial Draft
September, 2004	1.0	Initial release.
September, 2004	1.1	Added network switches and client system server boards.
September, 2004	1.2	Removed Hitachi* 400GB drive.
October, 2004	1.3	Removed SanDisk* Compact Flash.
December, 2004	1.4	Replaced erroneous Maxtor* HDD part number with the correct one.
December, 2004	1.5	Removed QLogic* quad port FibreChannel HBA, added iSCSI and FC driver versions, added Storage System Console versions, clarified testing description text.
April, 2005	1.6	Added Hitachi 400GB hard disk drive. Updated several similar device ("SD") hard disk drives. Added several new clients. Added QLA2340 FC HBA.
May, 2005	1.7	Added Seagate Barracuda 7200.8 400GB disk drives. Added several similar device ("SD") hard disk drives. - all new entries **bolded** in document
December, 2005	1.8	Added quarterly and release two updates
January, 2006	1.9	Added note that Maxtor Maxline IV 7H500F0, 500GB drive should not be used with Fibre Channel connectivity.
January, 2006	2.0	Added FW requirement for Hitachi HDS725050KLA360, 500GB drive
March, 2006	2.1	Removed Maxtor Maxline IV 7H500F0, 500GB; Added HDD FW revisions supported at time of test.
December, 2006	2.2	Added HDDs models validated in Q3; Removed EOL hardware items

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Table of Contents

1.   Introduction

This document is intended to provide users of the Intel® Storage System SSR316MJ2 with a guide to the different client operating systems, adapter cards, and peripherals tested by Intel on this platform.

This document will continue to be updated as new adapters, peripherals, and client operating systems are tested or until the Intel® Storage System SSR316MJ2 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 client operating systems versions with which they were tested.

1.1   Test Overview

Testing performed on the Intel® Storage System SSR316MJ2 is classified under as Adapter / Peripheral Compatibility and Stress Testing.

> ✒️   The latest version of an 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 a supported operating system (client or SSR316MJ2) at the time of a given validation run. The Adapter / Peripheral Compatibility and Stress testing process consists of three areas: Base Platform, Adapter Compatibility, and Stress.

Base Platform: Each base platform will successfully install the SAN 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. No heavy stressing of the systems or the cards is performed for CV testing.

Stress Testing: This test sequence uses configurations that include add-in adapters in all available slots, (depending on chassis used) for a minimum 72-hour test run without injecting errors. Each configuration passes an installation test, a Network/Disk Stress test, and tape backup 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 client operating systems that receive Adapter / Peripheral Compatibility and Stress testing:

- Intel will provide support for customer issues with these client operating systems 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 client operating system.
- Support is defined as assistance in root causing issues, and determining a customer acceptable resolution to the issue associated with the client 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 provide and test operating system drivers for each onboard network, and storage controller.
- 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 client 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 client and SAN 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 SSR316MJ2 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 SSR316MJ2 testing was performed using its 3U shelf mount chassis.

Intel® Storage System SSR316MJ2 Base System Configuration

The following table lists the base system configurations 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 systems versions with which they were tested.

Release One

System Fab Number	Baseboard PBA Number	Baseboard BIOS Revision	Baseboard Firmware Revision	Baseboard FRUSDR	SATA HS Backplane Firmware	SATA HBA SRCS16 Firmware Revision	SAN Software
C67449-005	A95718-306						6.0.25.0014
C67449-006	A95718-307	P14					6.0.25.0017
C67449-007	A95718-308	Build 0052	2.17	5.6.3	1.6	713L	6.0.25.0018
C67449-008							6.0.25.0024

Windows* Storage System Console	Linux Storage System Console	EBSD Windows* driver	EBSD Linux driver	Windows* iSCSI Initiator
6.0.25.0011	6.0.25.0011	6.0.25.0012	6.0.25.0015	1.06

Release Two

System Fab Number	Baseboard PBA Number	Baseboard BIOS Revision	Baseboard Firmware Revision	Baseboard FRUSDR	SATA HS Backplane Firmware	SATA HBA SRCS28X Firmware Revision	SAN Software
C67449-009	A95718-308	P22 Build 0052	2.17	5.6.3	1.6	814C	6.5.41.0009

Windows* Storage System Console	Linux Storage System Console	EBSD Windows* driver	EBSD Linux driver	Linux iSCSI Initiator	Windows* iSCSI Initiator
6.3.41.0005 6.3.41.0009	6.3.41.0005 6.3.41.0009	6.0.25.0012	6.0.25.0016	Open Source 3.6.1, 3.6.2, 3.6.3	2.0

Release Three

System Fab Number	Baseboard PBA Number	Baseboard BIOS Revision	Baseboard Firmware Revision	Baseboard FRUSDR	SATA HS Backplane Firmware	SATA HBA SRCS28X Firmware Revision	SAN Software
C67449-009	A95718-308	P22 Build 0052	2.17	5.6.3	1.6	814G	6.5.01.0017

Windows* Storage System Console	Linux Storage System Console	EBSD Windows* driver	EBSD Linux driver	Linux iSCSI Initiator	Windows* iSCSI Initiator
6.5.01.0015	6.5.01.0015	Not Supported	Not Supported	Open Source 4.0.1 (2.6 Kernel) 3.6.3 (2.4 Kernel)	2.02

2.   Supported Client Operating Systems

The following table provides a list of supported client operating systems compatible with the Intel® Storage System SSR316MJ2. Each of the listed client operating systems was tested for compatibility with Intel® Storage System SSR316MJ2 host base system configuration listed in Section 2 of this document. Client operating systems are supported only with the specified base system configuration(s) with which they were tested.

Operating System	Base System Configuration Tested & Type of Testing	Notes
Microsoft* Windows* Server 2003, Service Pack 1	Configuration 1 – Compatibility & Stress	FC & iSCSI drivers in both IP(ethernet) & FibreChannel networked configurations (direct connect & switched).
Microsoft Windows 2000 Server, Service Pack 4	Configuration 1 – Compatibility & Stress	FC & iSCSI drivers in both IP(ethernet) & FibreChannel networked configurations (direct connect & switched).
Red Hat* Enterprise Linux* AS 3.0 update 4	Configuration 1 – Compatibility & Stress	FC & iSCSI drivers in both IP(ethernet) & FibreChannel networked configurations (direct connect & switched).
SuSE* Linux Enterpise 9.0, Service Pack 1	Configuration 1 – Compatibility & Stress	FC & iSCSI drivers in both IP(ethernet) & FibreChannel networked configurations (direct connect & switched).
Red Hat* Enterprise Linux* AS 4.0 update 2	Configuration 1 – Compatibility & Stress	FC & iSCSI drivers in both IP(ethernet) & FibreChannel networked configurations (direct connect & switched).

3.   Supported Client Systems and Peripherals

The following table provides a list of supported client systems* compatible with the Intel® Storage System SSR316MJ2

* based on the Intel server board listed below.

Manufacturer	Model	Notes
Intel	**SE7501HG2**	
Intel	**SE7210TP1-E**	
Intel	**SE7505VB2**	
Intel	**SE7501WV2**	
Intel	**SE7221BK1-E**	
Intel	**SE7525GP2**	
Intel	**SE7520JR2**	
Intel	**SE7320SP2**	
Intel	**SE7320VP2**	

The following table provides a list of supported client system peripherals compatible with the Intel® Storage System SSR316MJ2.

Manufacturer	Model	Notes
Adaptec	**ASA – 7211C**	**Firmware version 1.20.40. Tested on SE7320EP2, SE7221BK1-E, SE7520JR2 and SPSH4**

4.   Adapters and Peripherals

Add-in adapter card and peripheral compatibility and stress testing will only be performed with the shipping version of the SAN operating system, as indicated Chapter 2 of this document.

Manufacturer	Model Name	Model Number	Interface	Comments	
4.1 PCI SATA HBA					
Intel	Stockton	SRCS28X	PCI-X133	Pre-installed in SSR3162MJ2 second release PCI slots 2, 3	
Intel	Sawtell	SRCS16	PCI-64/66	Pre-installed in SSR3162MJ2 first release PCI slots 2, 3, 4.	SSR316MJ Only
4.2 PCI Fiber Channel HBA					
QLogic*	Two Channel	QLA2342	PCI-X133	Should be installed in SSR316MJ2 PCI slot 1 only.	
QLogic*	Single Channel	QLA2340	PCI-X133	Should be installed in SSR316MJ2 PCI slot 1 only.	
QLogic*	Four Channel	QLA2344	PCI-X133	Should be installed in SSR316MJ2 PCI slot 1 only.	
4.3 PCI NIC					
Intel	PRO/1000MT Single Port Gigabit Server Adapter	PWLA8490MT	PCI-X133	Should be installed in SSR316MJ2 PCI slot 1 only.	
Intel	PRO/1000MT Dual Port Gigabit Server Adapter	PWLA8492MT	PCI-X133	Should be installed in SSR316MJ2 PCI slot 1 only.	
Intel	PRO/1000 MT Quad Port Server Adapter	PWLA8494MT	PCI-X133	Should be installed in SSR316MJ PCI slot 1 only.	SSR316MJ Only

Manufacturer	Model Name	Model Number	Interface	Comments	
4.4　Compact Flash Memory Cards					
Kingston*	256 MB	CF/255	IDE	Pre-installed in SSR316MJ2 compact flash slot 1 & 2	
SanDisk*	256MB	SDCFB	IDE	Release two only	

5.   Hard Disk Drives

The hard drives listed in the following table have been tested with the Intel® Storage System SSR316MJ2 by Intel in its validation labs and/or by individual drive vendors. The following identifiers are used in the table to specify particulars for each drive tested.

Identifier number	Notes
1	Drives must support staggered spinup and LED activity via pin 11 for release two hardware.
2	Mary require (based on date code) use of Western Digital Corporation* utility to enable pin 11 staggered spin up support. Please contact Western Digital Corporation for verification.
3	Requires specific hard disk drive firmware revision listed in table, or later.

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:

SD (Similar Drive)	The hard disk drive is supported, but not fully tested. This hard drive model/capacity may not have been tested with the SSR316MJ2, 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 SSR316MJ2, 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
Serial ATA (SATA) Hard Drives							
Western Digital	WD Raptor	WD740GD	SATA/150	10K	74		
Western Digital	WD Raptor	WD360GD	SATA/150	10K	36		SD
Western Digital	WD Raptor	WD1500ADFD	SATA/150	10K	150	20.07P20	
Western Digital	WD RE2	WD5000YS	SATA/300	7200	500	07.0	
Western Digital	WD RE2	WD3200YS	SATA/300	7200	320	21.00M21	
Western Digital	WD RE2	WD2500YS	SATA/300	7200	250	20.06C03	
Seagate	NL35.1	ST3400832NS	SATA/150	7200	400	5.0	1, 3
Seagate	NL35.1	ST3250823NS	SATA/150	7200	250	5.0	SD, 1, 3
Seagate	NL35.1	ST3500641NS	SATA/300	7200	500	3.AEH	
Seagate	NL35.1	ST3500841NS	SATA/300	7200	500	3.AEH	
Hitachi	Deskstar 7K500	HDS725050KLA360	SATA/300	7200	500	BOA	**1, 3**
Hitachi	Deskstar 7K500	HDS725050VLA360	SATA/300	7200	500	V560A52A	

Network Switches

The network switches listed in the following table have been tested with the Intel® Storage System SSR316MJ2 by Intel in its validation labs.

Manufacturer	Model Name	Type	Notes
3Com	4900	Ethernet	
Asante	IntraCore 36480	Ethernet	
Dell	PowerConnect 5324	Ethernet	
Brocade*	Silkworm 3200	FibreChannel	
Qlogic*	SanBox 5200	FibreChannel	