Intel® Storage Server SSR212MC2, SSR212MC2R, SSR212MC2BR and SSR212MC2RBR

Specification Update

February 2008

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The Intel® Storage Server SSR212MC2R and Intel® Storage Server SSR212MC2 may contain design defects or errors known as errata which may cause the product to deviate from published specifications. Current characterized errata are available on request.

Contact your local Intel sales office or your distributor to obtain the latest specifications and before placing your product order.

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Revision History

Date	Revision	Description
May 8, 2007	1.0	May Release copy.
May 21, 2007	1.1	Updated to correct version of EM Card Firmware.
May 24, 2007	1.2	Clarified Errata # 4.
June 7, 2007	1.3	June Release Copy.
July 17, 2007	1.4	July Release copy.
December 3, 2007	1.5	December Release copy.
February 20, 2008	1.6	February Release copy.

Preface

This document is an update to the specifications contained in the Affected Documents/Related Documents table below. This document is a compilation of device and documentation errata, and specification clarifications and changes. It is intended for hardware system manufacturers and software developers of applications, operating systems, or tools.

Information types defined in Nomenclature are consolidated into the Specification Update and are no longer published in other documents.

This document may also contain information that was not previously published.

Affected Documents/Related Documents

Title
Intel® Storage Server SSR212MC2 Technical Product Specification (TPS)

Nomenclature

Errata are design defects or errors. These may cause the Intel® Storage Server SSR212MC2 behavior to deviate from published specifications. Hardware and software designed to be used with any given system must assume that all errata documented for that system are present on all devices.

Specification Changes are modifications to the current published specifications. These changes will be incorporated in any new release of the specification.

Specification Clarifications describe a specification in greater detail or further highlight a specification's impact to a complex design situation. These clarifications will be incorporated in any new release of the specification.

Documentation Changes include typos, errors, or omissions from the current published specifications. These will be incorporated in any new release of the specification.

Note: Errata remain in the Specification Update throughout the product's lifecycle, or until a particular stepping is no longer commercially available. Under these circumstances, errata removed from the Specification Update are archived and available upon request. Specification Changes, Specification Clarifications and Documentation Changes are removed from the Specification Update when the appropriate changes are made to the appropriate product specification or user documentation (Technical Product Specification, etc.).

General Information

Identification Information

The specific revisions covered by this Specification Update are as follows:

Product Codes	S5000PSL BIOS Revision	S5000PSL BMC Firmware Revision	S5000PSL FRU/SDR	EM Card Firmware	SRCSAS144E Firmware Revision
SSR212MC2 SSR212MC2R	74	0.58	XYSL42	1.0.0-30	1.03.00-0211
SSR212MC2BR SSR212MC2RBR	82	0.61	XYSL45	1.0.0-45	1.03.00-0211
SSR212MC2BR **SSR212MC2RBR**	**82**	**0.61**	**XYSL45**	**1.0.3-55**	**1.12.00-0310**

Summary Table of Changes

The following table indicates the Errata, Specification Changes, Specification Clarifications, or Documentation Changes that apply to the Intel® Storage Server SSR212MC2. Intel may fix some of the errata in a future stepping of the component, and account for the other outstanding issues through documentation or specification changes as noted. This table uses the following notations:

Codes Used in Summary Table

Page

(Page):	Page location of item in this document.

Status

Doc:	Document change or update will be implemented.
Fix:	This erratum is intended to be fixed in a future release of the product.
Fixed:	This erratum has been previously fixed.
NoFix:	There are no plans to fix this erratum.
Shaded:	This erratum is either new or modified from the previous version of the document.

Row

▌	Change bar to the left of table row indicates this erratum is either new or modified from the previous version of the document.

Errata

No.	Page	Status	ERRATA
1	10	Fixed	Does not support Hot Swap Fans.
2	10	Fixed	Does not support 2.5” SATA boot drives.
3	10	Fix	Hard Disk Drive LED does not work correctly.
4	11	Fix	Does not meet the acoustic noise specification.
5	11	Fix	Battery Backup Unit (BBU) may go off-line.
6	11	Fix	Hard Disk Drive Carrier LED’s are illuminated with no Hard Disk Drives installed.
7	12	Fixed	RAID card Physical Device numbers are not reset.
8	12	Fixed	Some versions of Enclosure Management Firmware do not properly support Quad Core Xeon™ processors.

Specification Changes

No.	Page	Status	SPECIFICATION CHANGES
			None for this revision of this specification update.

Specification Clarifications

No.	Page	Status	SPECIFICATION CLARIFICATIONS
			None for this revision of this specification update.

Documentation Changes

No.	Page	Status	DOCUMENTATION CHANGES
			None for this revision of this specification update.

Errata

1. Does not support Hot Swap System Fans

Problem: The Intel® Storage Server SSR212MC2 and SSR212MC2R does not support Hot Swapping of system fans.

Implication: The Intel® Storage Server SSR212MC2 and SSR212MC2R may corrupt or loose data contained on the data hard disk drives, if a system fan is removed with power applied (Hot Swapped).

Workaround: The Intel® Storage Server SSR212MC2 and SSR212MC2R must be shut down to replace a failed system fan.

NOTE: If a fan is misstakenly removed with power applied to the system, make sure and power down the system before re-inserting the fan.

The fans have Blue colored touch points, not Green (which indcates Hot Swap).

Status: Fixed.

2. Does not support 2.5” SATA boot drives

Problem: The Intel® Storage Server SSR212MC2 and SSR212MC2R does not support 2.5” SATA boot drives.

Implication: Due to excessive vibration within the boot drive enclosure, 2.5” SATA hard disk drives used as a boot device may go off line.

Workaround: Use 2.5” SAS boot drives, use a DOM boot device, or install the Operating System on one of the 12 data drives.

Status: Fixed.

3. Hard Disk Drive LED does not work correctly

Problem: The Intel® Storage Server SSR212MC2R HDD ID LED does not work correctly.

Implication: If all Hard Disk Drive ID LED’s are illuminated via Storview* and a single drive is removed from its slot, all remaining drive ID LED’s will also shut off.

Workaround: Re-boot the system.

Status: This erratum is intended to be fixed in a future release of the product.

4. Does not meet the acoustic noise specification

Problem: The Intel® Storage Server SSR212MC2 and SSR212MC2R do not meet a measured acoustic sound power level of 6.7 BA in order to publish the "declared" value of 7.0 BA (a statistical requirement ensuring all systems meet 7.0 BA measured).

Implication: Measured sound power is 7.0 BA on a system loaded with up to 6 hard drives. User may only detect this difference of 0.3 BA if tested in a calibrated acoustic chamber. On configurations with more than 6 hard drives installed, the system fan speeds increase to ensure proper memory cooling , resulting in a measured sound power of 7.2 BA.

Workaround: None.

Status: This erratum is intended to be fixed in a future release of the product.

5. BBU may go off-line

Problem: The Intel® Storage Server SSR212MC2R's Battery Backup Unit (BBU) may be automatically turned off due to BBU signal integrity issues.

Implication: In the unlikely event that the BBU does goes off-line, the internal data cache will be disabled to prevent any data loss in the event of a power failure, and consequently Hard Disk Drive performance may be de-graded, depending upon the mode the drives are be acessed.

Workaround: Re-boot the system., or operate the system with the possiblity of de-graded performance.

Status: This erratum is intended to be fixed in a future release of the product.

6. Hard Disk Drive Carrier LED's are illuminated with no Hard Disk Drives installed

Problem: The Intel® Storage Server SSR212MC2's (all product codes) Hard Disk Drive Carrier LED's are illuminated when no Hard Disk Drives installed.

Implication: The Hard Disk Drive carrier LED's are illuminated when no HDD's are installed in the carriers, giving the appearance that a HDD is installed.

Workaround: Apply the supplied labels to the Hard Disk Drive carrier to cover the LED's when no hard disk drive is installed. Remove when a hard disk is installed.

Status: This erratum is intended to be fixed in a future release of the product.

7. RAID Card Physical Device numbers are not reset

Problem:	The Intel® Storage Server SSR212MC2R and SSR212MC2RBR's RAID card Physical Device (PD) numbering is not reset to 0 thru 11.
Implication:	The RAID card PD numbers may not start at 0 thru 11, as they should. They could start at 12 thru 23, or 24 thru 35, etc. depending upon which test suites the system was subject to at the factory. There is no negative consequence, just an FYI that the numbering could be different from system to system.
Workaround:	None.
Status:	**Fixed.**

8. Some versions of Enclosure Management Firmware do not support Quad Core Xeon™ processors

Problem:	**The Intel® Storage Server SSR212MC2R's Enclosure Management (EM) Firmware (FW) may not support Quad Core processors.**
Implication:	**If your Intel® Storage Server SSR212MC2R has EM FW -30 or -45, it will not support Quad core processors properly.** **The 2nd core pairs are not monitored for temperature, and may throttle without causing any increase in fan speed, resulting in possible performace degradation.**
Workaround:	**Ignore the alarms/errors, or install EM FW -1.0.3-55 or later.**
Status:	**Fixed in Enclosure Management FW release 1.0.3-55.**

Specification Changes

None for this revision of this specification update.

Specification Clarifications

None for this revision of this specification update.

Documentation Changes

None for this revision of this specification update.