



Monthly Specification Update

Intel® Server Board S5520UR

Intel® Server System SR1600UR

Intel® Server System SR1625UR

Intel® Server System SR2600UR

Intel® Server System SR2625UR

Intel Order Number E69054-001

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Enterprise Platforms and Services Marketing

Revision History

Date	Modifications
April 2009	Initial release.

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The Intel Products Specified may contain design defects or errors known as errata that may cause the products to deviate from the published specifications. Current characterized errata are documented in this Specification Update.

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Preface

This document communicates product Errata and Documentation Changes and Corrections for the following Intel Server Products:

- Intel® Server Board S5520UR
- Intel® Server System SR1600UR
- Intel® Server System SR1625UR
- Intel® Server System SR2600UR
- Intel® Server System SR2625UR

For specification updates concerning the Intel® Xeon® Processor 5500 Series processors, refer to the *Intel® Xeon® Processor 5500 Series Specification Update*. Items contained in the *Intel® Xeon® Processor 5500 Series Specification Update* that either do not apply to the Monthly Specification Update or have been worked around are noted in this document. Otherwise, it should be assumed that any processor errata for a given stepping are applicable to the Printed Board Assembly (PBA) revisions(s) associated with that stepping.

The following defines items communicated in this document.

Specification Changes are modifications to the current published specifications for a given product. These include typos, errors, or omissions. Specified changes will be incorporated in the next release of the document.

Specification Clarifications describe a supported feature or function in greater detail or further highlight their impact to a complex design requirement. These clarifications will be incorporated in the next release of the document.

Errata are design defects or deviations from current published specifications for a given product. Published errata may or may not be corrected.

- Hardware and software designed to be used with any given processor stepping must assume that all errata documented for that processor stepping are present on all devices.

Summary Tables of Changes

The following tables provide an overview of known errata and known document changes that apply to the specified Intel Server Products. The tables use the following notations:

Doc	Intel intends to update the appropriate documentation in a future revision.
Fix	Intel intends to correct this erratum.
Fixed	This erratum has been corrected.
NoFix	There are no plans to correct this erratum.
Shaded	This item is new or has been modified from the previous specification update.

Table 1. Errata Summary

No.	Plans	Description of Errata
1	Fixed	System will hang while accessing RAID BIOS setup screen with RAID Midplane in hardware mode installed
2	Fix	Mixed PCI Express* (PCIe*) devices installed on the ASR26XXFHLPR riser full-height slots 1 and 2 may cause a system hang
3	Fixed	Cannot boot to SATA CD-ROM device with a SATA SW RAID enabled in conjunction with a 1064e backplane installed
4	Fixed	Changing console redirection setting in BIOS setup may result in loss of information in the Boot Manager page of BIOS setup
5	Fixed	BIOS recovery is not available using the on-board USB DVD/CD-ROM optical drive
6	Fixed	System may hang during POST if console redirection is set to 9600 baud
7	Fixed	POST messages do not correctly display when using console redirection over Serial Over LAN (SOL)
8	Fixed	False NMI being reported with certain versions of Linux operating system installations
9	Fix	Errors are reported during the installation of SuSE* Linux Enterprise Server 10 EM64T
10	Fix	Hyper-Threading cannot be disabled in the BIOS setup
11	No Fix	A critical interrupt is logged in the System Event Log (SEL) when installing SuSE* Linux Enterprise Server 10 32-bit
12	No Fix	Wake on LAN (WOL) does not work on 1GB I/O Modules
13	Fixed	The operating system may take more than four hours to install in SATA compatibility mode
14	Fix	Serial Console mode may display extra text or intermingled text
15	Fix	The PXE boot option is missing in BIOS setup
16	Fix	Fans may boost temporarily when the BMC is under load
17	Fix	Extra events may be seen in the SEL during system reset
18	Fix	BIOS setup may report an incorrect firmware version
19	Fix	Hard Drive status LED for blank drive slots may blink amber when system is in AHCI mode
20	Fixed	Yellow Bang may be seen in Microsoft Windows Server 2008* Device manager when using ASR26XXFHLPR riser
21	No Fix	Firmware will detect a missing server board battery as present and good

22	Fix	Server board cannot detect a 10Gb or QDR IB I/O Module without a PCI Riser installed
23	Fixed	Cannot Update DVD Drive Firmware when Six DIMMs are installed
24	Fix	Closed Loop Thermal Throttling (CLTT) is not automatically detected and set when using unbuffered memory (UDIMMs)
25	Fixed	Failed power supply fans in Intel® Server System SR2600UR/SR2625UR may cause continuous reboots
26	Fixed	Intel® Deployment Assistant cannot be used to perform unattended Microsoft Windows* OS installs

Table 2. Documentation Changes

No.	Plans	Document Name	Description of Documentation Change
1			

The following sections provide in-depth descriptions of each erratum / documentation change indicated in the tables above. The errata and documentation change numbers referenced in the following sections correspond to the numbers in the tables above.

Errata

1. System will hang while accessing RAID BIOS setup screen with RAID Midplane in hardware mode installed

Problem	On a system with the RAID midplane installed and with the I-button attached, the system will hang trying to enter the RAID BIOS menu (CTL+G).
Implication	A user will not be able to configure RAID settings for a hardware RAID configuration with the I-button installed on the RAID midplane.
Status	This issue was resolved in BIOS revision R0033.
Workaround	None

2. Mixed PCI Express* (PCIe*) devices installed on the ASR26XXFHLPR riser full-height slots 1 and 2 may cause a system hang

Problem	Adding mixed PCIe* devices (that is, NIC and RAID) in full-height slots 1 and 2 or the two low-profile slots of the ASR26XXFHLPR riser may result in a system hang while scanning for devices. This problem has only been seen with a few select pairings of cards.
Implication	Users may not be able to mix PCIe* devices in full-height slots 1 and 2 or the two low-profile slots of the ASR26XXFHLPR riser.
Status	This issue may be resolved in a future BIOS revision.
Workaround	Place similar cards in slots 1 and 2 of the riser.

3. Cannot boot to SATA CD-ROM device with SATA SW RAID enabled in conjunction with a 1064e backplane installed

Problem	If a 1064e midplane is installed in the system and SATA SW RAID is enabled in the BIOS setup, the system hangs when accessing a SATA CD-ROM device.
Implication	Enabling SATA SW RAID with a 1064e backplane installed is not a supported configuration and will result in a system hang if trying to boot from a SATA CD-ROM device.
Status	This issue was resolved in BIOS revision R0033.
Workaround	Disable SW RAID in the BIOS setup.

4. Changing console redirection settings in BIOS setup may result in loss of information in the Boot Manager page of BIOS setup

Problem	When the console redirection settings are changed and saved, a reboot into the BIOS setup may result in no information being displayed in the boot manager page when the Boot Manager page is accessed.
Implication	The user in this case will not have the option of booting to an alternate device from the Boot Manager page in the BIOS setup.
Status	This issue was resolved in BIOS revision R0033.
Workaround	None.

5. BIOS recovery is not available using the on-board USB DVD/CD-ROM optical drive

Problem	The system will hang when trying to recover the BIOS (using the BIOS recovery procedures outlined in the product <i>Technical Product Specification</i>) using the on-board USB DVD/CD-ROM optical drive.
Implication	Users will not be able to utilize the BIOS recovery procedure via the on-board USB/CD-ROM drive.
Status	This issue was resolved in BIOS revision R0033 and later.
Workaround	Use an external DVD/CD-ROM optical drive or another USB removable device.

6. System may hang during POST if console redirection is set to 9600 Baud

Problem	With an LSISAS1068E RAID card installed in the system and with quiet boot enabled in the BIOS setup, the system may hang during POST if the console redirection is set to 9600 Baud.
Implication	Users with the above configuration of their system may experience system hangs during POST.
Status	This issue was resolved in BIOS revision R0033 and BMC revision 34.
Workaround	Disable quiet boot mode in the BIOS setup.

7. POST messages do not correctly display when using console redirection or Serial Over LAN (SOL)

Problem	If using console redirection or SOL and observing the boot process, users may see missing lines or incomplete information during POST.
Implication	Users may not be able to fully identify messages being displayed during POST when utilizing SOL or console redirection.
Status	This issue was resolved in BIOS revision R0033 and BMC revision 34 and later.
Workaround	None.

8. False NMI being reported with certain versions of Linux operating system installations

Problem	During installation of some Linux releases, Linux may report the following error: <code>Uhhuh. NMI received for unknown reason 20. Dazed and confused, but trying to continue Do you have a strange power saving mode enabled? Uhhuh. NMI received for unknown reason 30. Dazed and confused, but trying to continue Do you have a strange power saving mode enabled?</code>
Implication	Users observing this error may not be able to successfully complete the operating system installation.
Status	This issue was resolved in BIOS revision R0033.
Workaround	None.

9. Errors are reported during the installation of SuSE* Linux Enterprise Server 10 EM64T

Problem	When installing SuSE* Linux Enterprise Server 10 EM64T with Advanced Error Reporting (AER) capabilities enabled, an AER error is logged in the operating system event log.
Implication	AER uses an optional ACPI requirement, -OCS, that is not available in the S5500 BIOS revisions. There is no functional impact.
Status	This issue may be fixed in a future BIOS revision.
Workaround	None.

10. Hyper-Threading cannot be disabled in the BIOS setup

Problem	In the Advanced > Processor menu of the BIOS Setup, setting the Hyper-Threading option to disabled initially indicates that the option is disabled. However, when the user re-enters the BIOS Setup, this option will be enabled.
Implication	Users that desire to disable Hyper Threading will not be able to do so.
Status	This issue may be fixed in a future BIOS revision.
Workaround	None.

11. A critical interrupt is logged in the System Event Log (SEL) when installing SuSE* Linux Enterprise Server 10 32-bit

Problem	A critical interrupt, PCIe* Fat Sensor –[severity] event: Critical Interrupt, is logged during the installation of SuSE Linux Enterprise Server 10 32-bit.
Implication	The user will see a PCIe* critical event logged. There is no functional impact.
Status	No Fix.
Workaround	Add “noisapnp” to the command-line option to prevent scanning of ISA plug and play devices.

12. Wake on LAN (WOL) does not work on 1 GB I/O modules

Problem	When a 1 GB dual- or quad-port I/O module is installed, the system will not be able to wake up from the S1 sleep state using the Wake on LAN (WOL) feature.
Implication	Users will not be able to utilize WOL with 1 GB dual- or quad-port I/O modules.
Status	No Fix.
Workaround	None.

13. The operating system may take more than four hours to install in SATA compatibility mode

Problem	When the SATA Mode option in the Mass Storage Controller Configuration screen of the BIOS setup (accessed using Advanced > Mass Storage Controller Configuration) is set to Compatibility mode, Red Hat* Enterprise Linux 5.x may take in excess of four hours to install.
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Implication	When the SATA Mode is configured as Compatibility mode, users may experience an extended installation time when installing Red Hat* Enterprise Linux 5.x.
Status	This issue was fixed in BIOS 33 and BMC 34.
Workaround	None.

14. Serial Console mode may display extra text or intermingled text

Problem	When operating in the serial console mode, the user may notice one of the following two conditions during POST: <ul style="list-style-type: none">• The user may see the numeral 10 displayed at the top right corner of the screen OR• The RAID controller information may be intermingled with the platform information displayed by BIOS.
Implication	There is no functional impact associated with this erratum.
Status	This may be fixed in a future BIOS revision.
Workaround	None.

15. The PXE boot option is missing in the BIOS Setup

Problem	If a user disables the primary (onboard) video in the BIOS Setup, the PXE boot option will disappear from the BIOS Boot Manager.
Implication	Users that desire to utilize the PXE boot option must leave the primary (onboard) video enabled.
Status	This issue may be fixed in a future BIOS revision.
Workaround	None.

16. Fans may boost temporarily when BMC is under load

Problem	The system fans may boost when the BMC is operating under a heavy load. This can include large sequential BMC tasks such as viewing the system event log, configuring the BMC or resetting the system. The fans return to normal automatically after the BMC operations complete.
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Implication	The systems fans will run at a higher state temporarily, thereby increasing acoustics.
Status	This issue may be fixed in a future BMC release.
Workaround	None.

17. Extra events may be seen in the SEL during system reset

Problem	The BMC may log periodic, spurious SEL events during a system reset. These events may appear as fan errors or duplicate instances of normal events. The spurious fan readings will only happen during reset and are not an indication of an actual fan failure. Fan failure events that occur during a reboot should be ignored.
Implication	The SEL log may indicate fan errors or duplicate instances of normal events intermittently.
Status	This issue may be fixed in a future BMC release.
Workaround	None

18. BIOS setup may report an incorrect firmware version

Problem	The BIOS setup screens that display the SDR and ME firmware versions may report incorrect versions. The version displayed may be of the previously installed version.
Implication	After firmware update, the BIOS screens may not show the correct version until the system is AC cycled.
Status	This issue may be fixed in a future BMC release.
Workaround	None.

19. Hard drive status LED for blank drive slots may blink amber when system is in AHCI mode

Problem	The hard drive status LEDs for empty drive slots may blink amber when the system is operating in AHCI mode.
Implication	The hard drive status LED may indicate a false status for an unpopulated drive slot.
Status	This issue may be fixed in a future BIOS or BMC release.

Workaround None.

20. Yellow Bang may be seen in Microsoft Windows Server 2008* Device manager when using ASR26XXFHLPR Riser

Problem A yellow bang may be seen in the device manager when using the 5-slot PCI Express* riser.

Implication There is no functional impact. Windows will report that a driver is missing.

Status This issue is fixed in BIOS 34 and later.

Workaround None.

21. Firmware will detect a missing server board battery as present and good

Problem The firmware will detect a server board battery as present and good even when it is missing.

Implication A missing battery will not be reported. If a battery is present, it will still accurately report the health of the battery. Problem is only seen when the battery is missing.

Status This issue will not be fixed.

Workaround None.

22. Server Board cannot detect a 10 Gb I/O Module or a Quad Data Rate InfiniBand* I/O Module without a PCI Riser installed

Problem When the riser is removed from the server board, the PCI Express* lane settings prevent a x8 PCI Express* I/O Module (10 GbE or QDR IB) from being detected.

Implication Problem is only seen with the x8 PCI Express* I/O Modules and only when a riser is removed. This problem does not affect the other I/O Modules.

Status This issue may be fixed in a future revision of the server board

Workaround Make sure that a riser is installed when using the 10 GbE or Quad Data Rate InfiniBand* I/O Modules.

23. Cannot update DVD Drive Firmware when Six DIMMs are installed

Problem	When all memory channels are populated and active, the Firmware update for the SATA DVD drive fails.
Implication	System must not have six or more DIMMs installed if updating the DVD Drive firmware.
Status	This issue may be fixed in a future BIOS revision.
Workaround	None.

24. Closed Loop Thermal Throttling (CLTT) is not automatically detected and set when using unbuffered memory (UDIMMs)

Problem	<p>When using UDIMMs, CLTT will not automatically be selected if using the “Auto” feature on the System Acoustics and Performance page of the BIOS setup</p> <p>Users must ensure that the Serial Presence Detect (SPD) on <i>ALL</i> installed DIMMs supports CLTT. If the user is unsure if <i>ALL</i> installed DIMMs support CLTT, then the user should maintain the system in Open Loop Thermal Throttling (OLTT).</p>
Implication	If users elect to utilize UDIMMs in their system, they must manually enable CLTT in the BIOS setup. If the setting is left on “Auto” with UDIMMs installed, the setting will revert to OLTT.
Status	This issue may be fixed in a future BIOS revision.
Workaround	None.

25. Failed power supply fans in Intel® Server System SR2600UR/SR2625UR may cause continuous reboots

Problem	If a power supply fan fails in Intel® Server System SR2600UR and Intel® Server System SR2625UR, the system may enter a continuous reboot cycle. If redundant supplies are populated, the system will only reboot if fans in both power supplies fail simultaneously.
Implication	If a power supply fan fails, the system may enter a reboot cycle. This problem will only occur in instances where a shutdown is expected. The system will reboot rather than shutting down.
Status	This issue may be fixed in a future version of the power supply.

Workaround None

26. Intel® Deployment Assistant (IDA) cannot be used to perform unattended Microsoft Windows* OS installs

Problem	The OCD.XML file included on the Resource CD is incorrect and prevents IDA from properly installing RAID drivers when preparing for an unattended installation.
Implication	IDA cannot be used to prepare unattended installations of Microsoft Windows* Operating Systems.
Status	This issue may be fixed in a future revision of the Resource CD.
Workaround	None

Documentation Changes

1. Proper Heatsink Installation and Removal Instructions are missing from Service Guide

- Problem:** The current documentation does not properly describe the installation and removal of the heatsink. Careful insertion and removal of the heatsink is required to prevent damage to the heatsink screws or backplate.
- Implication:** There is a possibility of damage to the heatsink if proper steps are not followed.
- Status:** Corrections incorporated into the latest version of the following Service Guides:
- Intel® Server System SR1600 Service Guide (Intel Order Number: E52880-003)
 - Intel® Server System SR1625 Service Guide (Intel Order Number: E52881-003)
 - Intel® Server System SR2600/SR2625 Service Guide (Intel Order Number: E51243-003)
- Workaround:** Perform the steps outlined below for installation and removal of the heatsink to avoid damage.

Removing the Heatsink

To remove the heatsink, follow these steps:

1. Loosen the four captive screws on the heatsink corners in a diagonal manner according to the numbers shown in **Error! Reference source not found.** as follows:
 - Starting with the screw at location 1, loosen it by giving it **two rotations** in the anticlockwise direction and stop. (**IMPORTANT:** Do not fully loosen.)
 - Proceed to the screw at location 2 and loosen it by giving it two rotations and stop.
 - Loosen screws at locations 3 and 4 by giving each screw two rotations and then stop.
 - Repeat steps 1a through 1c by giving each screw two rotations each time until all screws are loosened.
2. Do one of the following:
 - If removing the heatsink for the first time, do the following:
 - i. Lift the heatsink from the board.
 - ii. Remove and discard the spacer (see letter “C” in **Error! Reference source not found.**).

Note: The system is shipped with a spacer installed between the heatsink and the processor socket to protect the socket protective cover. This spacer will need to be removed and discarded before installing the processor.

- If a processor is already installed, do the following:
 - i. Twist the heatsink slightly to break the seal between the heatsink and the processor.
 - ii. Lift the heatsink from the processor. If it does not pull up easily, twist the heatsink again. Do not force the heatsink from the processor. Doing so could damage the processor.

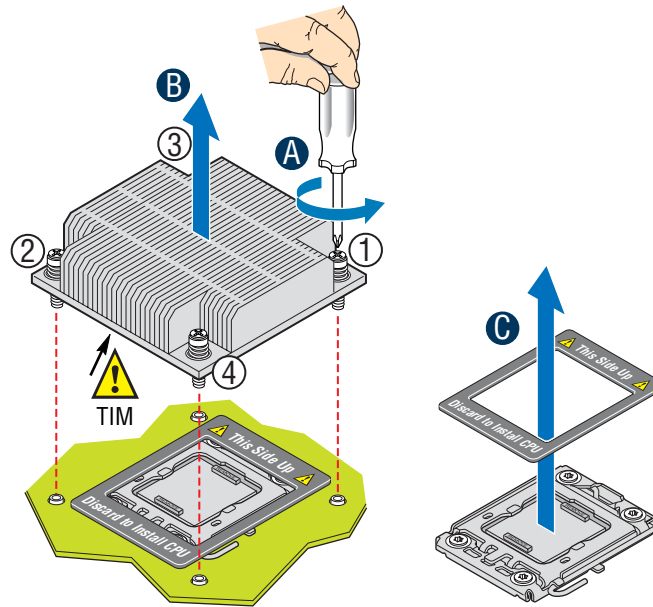


Figure 1. Removing the Heatsink

Installing the Heatsink

You must install the processor before installing the heatsink. For instructions, see the Service Guide.

CAUTION: The heatsink has Thermal Interface Material (TIM) located on the bottom of it. Use caution when you unpack the heatsink so you do not damage the TIM.

Note: New unused heatsinks have adequate TIM on the bottom. If you are reusing a heatsink from replacing a processor, make sure there is adequate TIM present on the heatsink to support processor cooling.

To install the heatsink, follow these steps:

1. Remove the protective film on the TIM if present.

2. Orient the heatsink over the processor as shown in Figure 2. The heatsink fins must be positioned as shown to provide correct airflow through the system.
3. Set the heatsink over the processor, lining up the four captive screws with the four posts surrounding the processor.
4. Loosely screw in the captive screws on the heatsink corners in a diagonal manner according to the numbers shown in Figure 2 as follows:
 - a. Starting with the screw at location 1, engage the screw threads by giving it **two rotations** in the clockwise direction and stop. (**IMPORTANT:** Do not fully tighten.)
 - b. Proceed to the screw at location 2 and engage the screw threads by giving it two rotations and stop.
 - c. Engage screws at locations 3 and 4 by giving each screw two rotations and then stop.
 - d. Repeat steps 4a through 4c by giving each screw two rotations each time until all screws are lightly tightened upto a maximum of 8 inch-lbs torque.

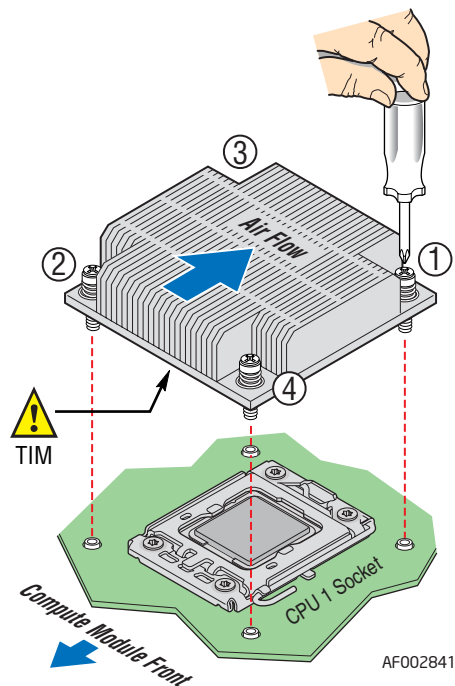


Figure 2: Installing the Heatsink