# Monthly Specification Update

**Intel**® **Server Board S3210SHLX**
**Intel**® **Server Board S3210SHLC**
**Intel**® **Server Board S3200SHL**
**Intel**® **Server Board S3200SHV**

**January 2010**

**Enterprise Platforms and Services Marketing**

# *Revision History*

| Date | Modifications |
|---|---|
| January 2008 | Initial release. |
| February 2008 | Added errata #18. |
| February 2008 | Added errata #19. |
| February 2008 | Added errata #20. |
| March 2008 | Added errata #21. |
| June 2008 | Added errata #22. |
| September 2008 | Added errata #23. |
| January 2009 | Added errata #24. |
| February 2009 | Added errata #25. |
| August, 2009 | Added errata #26 |
| January, 2010 | Updated errata #22 |

# *Disclaimers*

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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# Contents

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# Preface

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

- Intel® Server Board S3210SHLX
- Intel® Server Board S3210SHLC
- Intel® Server Board S3200SHL
- Intel® Server Board S3200SHV

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 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 was corrected.

**No Fix**     There are no plans to correct this erratum.

**Shaded**     This item is new or was modified from the previous specification update.

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

# Errata

## 1. Syscfg utility hangs when executed in EFI with USB keyboard/mouse.

Problem          Boot to EFI and set the utility path to the syscfg binaries located in the USB device. Execute "syscfg" or "syscfg /i". The utility displays rev and system information, and hangs after this; it does not respond to any keyboard input.

Implication      The syscfg utility cannot run under the EFI shell while using a USB keyboard/mouse.

Status           This issue is under investigation.

Workaround       Use a PS/2 keyboard/mouse when executing the syscfg utility under the EFI shell.

## 2. RAID volume is detected under Microsoft Windows*, RedHat*, or SuSe* Operating Systems under IDE/AHCI mode, if the disk was used as member of a matrix RAID array.

Problem          You cannot configure or remove the volume detected under Microsoft Windows*, and a message displays during the RedHat* or Suse* Linux installation process, which indicates one or more SW RAID array configurations were detected.

Implication      RAID volume is detected under Microsoft Windows*, RedHat*, or SuSe* operating systems under IDE/AHCI mode, if the disk was used as member of a matrix RAID array.

Status           This is an operating system issue.

Workaround       This is a known issue of Matrix RAID option ROMs. Metadata is still on the disk if it was once set to Matrix RAID, unless the volume is deleted and the disk is reset.

## 3. NetWare* does not properly detect Intel® Xeon® processors during installation.

Problem          With the introduction of the Intel® 3000 Chipset and Intel® 5000 Chipset, NetWare* does not properly detect Intel® Xeon® processors during installation; therefore, the correct ACPI driver is not installed.

Implication      The problem of loading the wrong driver causes certain issues to arise, such as not enabling all available processors. Also, ACPI Power Management features will not work as expected.

Status           This is an operating system issue.

| | |
|---|---|
| Workaround | You can solve this issue with an updated ACPIDRV.PSM driver for NetWare* 6.5 SP5 or SP6. You can download this patch from the following link: http://support.novell.com/servlet/downloadfile?file=/uns/nsd/psm7.exe/. |

To apply this driver update, complete the following steps:

A.              Create the DOS partition on the boot device.

B.              Create the c:\nwupdate\drivers directory.

C.              Place the contents of the \startup directory from this update in the directory created in Step B.

D.              Proceed with the installation. The NetWare* operating system will correctly detect the chipset for the machine and make the appropriate changes to the startup files.

## 4. Onboard LSI* RAID array cannot be detected even after loading the driver during the SLES10 SP1 installation.

| | |
|---|---|
| Problem | The onboard LSI* RAID array is not detected, even after loading the driver during the SLES10 SP1 installation. |
| Implication | SLES10 SP1 installation does not detect the onboard LSI* RAID array after loading the driver. |
| Status | The operating system always loads the AHCI driver to take control of onboard storage; this causes a conflict with RAID drivers. |
| Workaround | Add the "brokenmodules=ahci" installation parameter to tell the operating system to not load the AHCI driver. This eliminates the conflict. |

## 5. POST LED still on under Linux* operating system.

| | |
|---|---|
| Problem | The POST LED is still on under the Linux* operating system. |
| Implication | There is no implication to the system. |
| Status | This issue was fixed in firmware 0.29. |
| Workaround | Update firmware to version 0.29 or later. |

## 6. BMC firmware roll back is not supported if the BMC firmware is older than Rev 21.

| | |
|---|---|
| Problem | BMC firmware rolling back is not supported if the BMC firmware is older than Rev 21. |
| Implication | Rev 21 BMC firmware is the first formal official release of BMC firmware on the production Intel® Server Board S3200SH/S3210SH and Intel® Server Systems SR1530SH and SR1530HSH. Any BMC firmware prior to BMC Rev 21 is a pre-release engineering version for evaluation and validation. It is highly recommended customers do not roll back the BMC firmware to any version prior to Rev 21 in case any abnormal issue happens to damage your board. Intel does not commit to fix or resolve any board/system issues induced by rolling BMC firmware to a version prior to Rev 21. |
| Status | This is not an issue. |
| Workaround | Do not roll back your BMC firmware to any version prior to Rev 21. |

## 7. Customers must edit the FRUSDR master.cfg file to add in the fan speed control settings for their preferred 3rd party non-Intel chassis to enable the fan speed control functions.

| | |
|---|---|
| Problem | Simply selecting "other chassis" in FRUSDR updating does not make your 3rd party non-Intel chassis fan speed control function work. Customers must edit the master.cfg file in the FRUSDR update package by following the Fan Speed Control white paper provided by Intel to enable the fan speed control functions. |
| | After updating the master.cfg file, selecting "other chassis" in FRUSDR updating enables the fan speed control functions for the 3rd party non-Intel chassis. |
| Implication | Customers must edit the master.cfg file in the FRUSDR update package by following the Fan Speed Control white paper provided by Intel to enable the fan speed control functions. |
| Status | This is not an issue. |
| Workaround | Intel will provide the Fan Speed Control white paper to all NDA-covered customers to guide customers how to edit the master.cfg file to enable Fan Speed Control for non-Intel 3rd party chassis. |

## 8. There is a warning message "sn#0F processor IERR" issue asserted in the System Event Log (SEL).

| | |
|---|---|
| Problem | There is a warning message "sn#0F processor IERR" issue asserted in the System Event Log. |

| | |
|---|---|
| Implication | The system runs normally without a shut down or halt, meanwhile customers may have a concern on whether the system has some hardware or firmware related issue. |
| Status | This issue was fixed by firmware 0.25. |
| Workaround | Update to firmware 0.25 or later. |

## 9. The Intel® Server System SR1530HSH front panel hard drive working status LED is lit in red or amber without any actual hard drive issue.

| | |
|---|---|
| Problem | The Intel® Server System SR1530HSH front panel hard drive working status LED is lit in red or amber without any actual hard drive issue. |
| Implication | The lit LED indicates a hard drive fault, while there is no hard drive issue at all; this is a false warning. |
| Status | Fixed in BIOS. |
| Workaround | BIOS 30 and later version can fix this issue. |

## 10.    There are some abnormal warning messages in the System Event Log after an AC power on/off cycle to the server board.

| | |
|---|---|
| Problem | It is possible there may be one of the following warning messages in the System Event Log after an AC power on/off cycle to the server board while the system is running normally (without any other issues).<br><br>1) System Firmware Progress #0x06<br><br>System Firmware Error (POST Error). POST Code: 8190 - Watchdog Timer Failed on Last Boot Asserted Event.<br><br>2) System Firmware Progress #0x06<br><br>System Firmware Error (POST Error). POST Code: 0111. Asserted Event |
| Implication | Customers may be concerned with the issues logged in the SEL, but the system is running normally without any other issues. |
| Status | Fixed in BIOS and firmware. |
| Workaround | BIOS 29/firmware 0.23 and later versions can fix this issue. |

## 11.    You cannot install Microsoft Windows 2003* if Adaptec* 29160 adapter is in PCI slot1 on the server board.

| | |
|---|---|
| Problem | The system will hang while installing Microsoft Windows2003* if there is an Adaptec* 29160 adapter in PCI slot1 on the server board. |

Implication　　　　The system will hang and you cannot install Microsoft Windows 2003*.

Status　　　　This issue was fixed in BIOS 33.

Workaround　　　　Update BIOS to revision 33.

## 12.　Lack of DUD driver support for the ICH9R chipset in RedHat* AS 5.0 and SuSE* 10 operating system kernels.

Problem　　　　Lack of DUD driver support for the ICH9R chipset in RedHat* AS 5.0 and SuSE* 10 operating system kernels.

Implication　　　　Due to lack of DUD driver support for the ICH9R chipset in RedHat* AS 5.0 and Suse* Linux 10 operating system kernels, the SATA drive working modes are as described. If you plan to install RedHat* AS 5.0 and SuSe* Linux 10 operating systems, please pay attention to the SATA working mode.

In the BIOS setup menu SATA mode setting sub-menu, if you select:

1) IDE mode:　　The first 4 ports at "Legacy IDE mode" and last 2 ports at "native SATA" mode. No ICH9 DUD driver required for first 4 ports; the 4 SATA ports will run under PIO mode; low performance. You can use the last 2 ports under RedHat* AS 5.0 UP1 or Suse*10 SP1 as their operating system kernels embed the ICH9R DUD driver.

2) AHCI mode:　　NO ICH9 DUD driver required; maximum 6 ports supported under UDMA 133 MHz.

3) RAID mode:　　Requires SW RAID driver; no ICH9 DUD driver required.

Status　　　　Wait for the driver to be embedded into the next operating systems' releases.

Workaround　　　　Install RedHat* AS 5.0 UP1 or SuSE*10 SP1 operating systems.

## 13.　HSC and LCP updates may take a long time.

Problem　　　　The Hot Swap Controller (HSC) and Local Control Panel (LCP) updates may take a long time. The time to complete each update may exceed 30 minutes.

Implication　　　　Updating HSC and LCP may take a long time.

Status　　　　This erratum may be fixed in a future firmware revision.

Workaround　　　　None.

## 14.   The power restore policy setting in the BIOS is not available to change; an update to the setting will have no effect. The power supply is set to the turned off status no matter what the setting is in the BIOS.

Problem          In BIOS 26 and all previous BIOS releases, no matter what is set in the BIOS menu, the system power supply restore policy is set to the turned off status if the customer performs an AC power cycle to the server.

Implication       After an AC power off cycling to the system and plugging the AC power cable back to the power supply, the system is always turned off unless the power on button is pressed.

Status            This issue was fixed in BIOS 33.

Workaround       Update BIOS to revision 33 or later.


## 15.   Cannot power on/off/reset system remotely by using the DPCCLI tool.

Problem          Cannot power on/off/reset system remotely by using the DPCCLI tool.

Implication       Users cannot use the DPCCLI tool under console mode.

Status            This issue was fixed with a new DPCCLI tool.

Workaround       Use the DPCCLI included in ISMS 2.2.


## 16.   IPMI tool command "SOL activate" does not work for User ID6-User ID15.

Problem          IPMI tool command "SOL activate" does not work for User ID6-User ID15.

Implication       Customers cannot use the IPMI tool command "SOL activate" to use UserID6-15.

Status            This issue is under investigation.

Workaround       Will publish updated firmware release to make "SOL activate" work for User ID6-15.

## 17.   Setting the onboard SATA hard drives to AHCI mode and booting to Microsoft Windows 2003 Server* SP2 x86, one or more RAID volumes are detected and shown in the disk manager. The volume cannot be initialized or deleted.

| | |
|---|---|
| Problem | If a customer built a SATA RAID Array with Intel® Matrix RAID Technology on SATA hard drives before and did not erase the SATA RAID array information on the SATA hard drives, when the customer sets the onboard SATA hard drives to AHCI mode and boots to Microsoft Windows2003* SP2 X86, one or more RAID volumes are shown in the disk manager and the RAID volume cannot be initialized or deleted. |
| Implication | If you change the SATA hard drive work mode from RAID to AHCI or IDE in the BIOS, there is a requirement to reset /erase the SATA RAID array information on the SATA hard drives; otherwise, the previous SATA RAID array volume is shown under the Windows* disk manager and the RAID array cannot be initialized or deleted. |
| Status | This is not an issue; erase RAID array information on the SATA hard drives before changing the hard drive work mode from RAID to AHCI or IDE in BIOS. |
| Workaround | No workaround. |

## 18.   Stop error 0x7B observed while installing Microsoft Windows 2003 Enterprise Server* using AXXSATADVDRWROM (firmware version UO00, September 2007).

| | |
|---|---|
| Problem | Stop 0x0000007B (Inaccessible Boot Device) BSOD message observed while loading Microsoft Windows 2003 Enterprise Server* in RAID mode (0, 1, 5) using AXXSATADVDRWROM. |
| Implication | Microsoft Windows 2003 Enterprise Server* cannot be installed by a user in any of the supported RAID modes. |
| Status | The current DVDRWROM drive firmware, version UO00, was determined to be corrupted. |
| Workaround | Download the DVDRWROM firmware update pack from the following link: http://downloadcenter.intel.com/Detail_Desc.aspx?agr=Y&DwnldID=15552. and then update the DVDRWROM firmware. |

## 19.   S3200SH/3210SH based systems cannot boot using a "bootable" Microsoft* DOS CD/DVD when RAID (or AHCI) is Enabled via BIOS Setup.

Problem            Users cannot boot S3200SH/3210SH based systems using a "bootable" MS-DOS based CD/DVD when RAID (or AHCI) is enabled via the BIOS Setup.

Implication        Users needing to boot to any MS-DOS based diagnostic, pre-install, or application CDs (for example, Bart's PE), are limited to using only the "IDE" mode setting in BIOS. Please note: Operating system installation CDs are not affected by this issue since they typically use "iso-linux".

Status             This is a known limitation. Whenever the RAID (or AHCI) setting is selected, the Advanced Host Controller Interface Option ROM is loaded. Unfortunately, AHCI, is not supported by the Microsoft* Disk Operating System (MS-DOS).

Workaround         None.


## 20.   Intel® Server Board S3200SH/S3210SH (ICH9-R chipset) - based systems do not support Microsoft Windows 2000 Advanced Server* Operating System

Problem            ICH9-R chipset does not provide "native" support for the Microsoft Windows 2000 Advanced Server* Operating System.

Implication        Users are expected to run into conditions with no potential solution (or workarounds) from Intel (for example, you cannot install Microsoft Windows 2000 Advanced Server* with "slip-streamed" SP4 in LSI RAID mode).

Status             Although you can install Microsoft Windows 2000 Advanced Server* operating system in IDE mode, users may notice an "unknown device" in device manager, and/or potential RAID/driver related issues.

Workaround         None.


## 21.   Low HDD performance under Linux when SATA mode is set to IDE in BIOS.

Problem            Low HDD performance under Linux when SATA mode is set to IDE in BIOS.

Implication        The first four SATA ports run at "legacy IDE mode" when SATA mode is set to IDE in BIOS. Customers encounter low performance under Linux.

Status             This is a known issue.

Workaround         Prevent Legacy IDE ports from control by E-IDE drivers and leave the control to the Intel native SATA driver - ata_piix.ko, which also runs Legacy IDE at UDMA as well. Complete the following procedure:

A) For RHEL5.1 installation:

     1)     Type "linux ide0=noprobe ide1=noprobe"  as the boot option.
     2)     Continue the installation, after files are copied and when it prompts to first reboot, press "Crtl+Alt+F2" and switch to text console.
     3)     vi /mnt/sysimage/boot/grub/grub.conf, to add ide0=noprobe ide1=noprobe at end of each line of "kernel /vmlinuz- …" definition;
     4)     Save grub.conf , and continue to reboot and complete the rest of the installation.

B) If the operating system was already installed, then add ide0=noprobe ide1=noprobe at the end of each line of "kernel /vmlinuz- …" definition in grub.conf will work after reboot.

## 22.    Cannot update Expandable SAS Hot Swap Back Plane firmware on Intel® Server Board S3200SH/S3210SH based systems

Problem           Currently, updating expandable SAS Hot Swap Back Plane firmware on the Intel® Server Board S3200SH/S3210SH based systems is not supported.

Implication       Users cannot update Expandable SAS Hot Swap Back Plane firmware.

Status             This issue is resolved by new firmware update package.

Workaround     Use the proper firmware update package for your Hot Swap Back Plane.

AXX6DRV3GEXP Firmware for S3200SH/S3210SH
http://downloadcenter.intel.com/Detail_Desc.aspx?agr=Y&DwnldID=18392&lang=eng

AXX6DRV3G Firmware for S3200SH/S3210SH
http://downloadcenter.intel.com/Detail_Desc.aspx?agr=Y&DwnldID=18393&lang=eng

## 23.    Intel® Server Board S3200SH/S3210SH (ICH9-R chipset) - based systems do not support Microsoft Windows 2000 Advanced Server* Operating System

Problem           ICH9-R chipset does not provide "native" support for the Microsoft Windows 2000 Advanced Server* operating system.

Implication       Users are expected to run into conditions with no potential solution (or workarounds) from Intel (for example, you cannot install Microsoft Windows 2000 Advanced Server* with "slip-streamed" SP4 in LSI RAID mode).

Status             Although you can install Microsoft Windows 2000 Advanced Server* operating system in IDE mode, users may notice an "unknown device" in the device manager and/or potential RAID/driver related issues.

Workaround     None.

## 24.  After installing Solaris* 10 U5, NIC1(Intel® 82541) and NIC2(Intel® 82566DM) appear to be reversed

Problem          After installing Solaris* 10 u5, it is found that the NIC1 (Intel® 82541) is named as e1000g1 and NIC2 (Intel® 82566DM) is named as e1000g0 by system.

Status           Solaris does not care the MAC address and names the device by driver name and number (it always give 0 to the first device and then 1, 2, 3…). The naming sequence in Solaris complies with the NIC's appearing sequence in /etc/path_to_inst when using the same driver – in this case, Solaris can use the same driver e1000g for Intel® 82566DM and 82541. Intel® 82566DM appears before Intel® 82541 in this case – then 82566DM is named as e1000g0 while 82541 is named as e1000g1.

Workaround       Modify /etc/path_to_inst as below:


1)     vi /etc/path_to_inst

2)     You may find lines as the following  - there is "**e1000g**" at the end:

       ……
       "/pci@0, 0/pci8086, 34d0@19"  **0**  "e1000g"          *(Intel® 82566DM)*
       ……
       "/pci@0, 0/pci8086,244e@1e/pci8086, 34d0@2"  **1**  "e1000g"  *(Intel® 82541)*

       Exchange the "0" and "1" will correct the sequence.   So it looks like:
       "/pci@0, 0/pci8086, 34d0@19"  **1**  "e1000g"                        *(Intel® 82566DM)*
       ……
       "/pci@0, 0/pci8086,244e@1e/pci8086, 34d0@2"  **0**  "e1000g"          *(Intel® 82541)*

3)     Reboot the system.



## 25.  PS2 keyboard and mouse doesn't work when E5200 processor is used on Intel® Server Board S3200SH/S3210SH based systems

Problem          When you use E5200 processor on Intel® Sever board S3200SH/S3210SH based systems, PS2 keyboard and mouse doesn't work

Implication      Users cannot use PS2 keyboard and mouse.

Status           This issue has been fixed in BIOS R0047.

Workaround       Update BIOS to R0047 or later version.

## 26.    Windows* Server 2003 may hang when log in to Intel® Raid Web Console2 version 3.04-05 with ESRTII Raid enabled

Problem          When using windows* server 2003 with onboard ESRTII raid enabled, user may experience system hang when trying to log in to Intel® Raid Web Console2, BSOD(Blue Screen of Death) with either of the following messages may occur:

 - BAD_POOL_HEADER Error code: STOP 0x00000019
 - IRQL_NOT_LESS_OR_EQUAL Error code: STOP 0x000000D1


Implication       This issue is caused by a minor bug in Intel® Raid Web Console2 software code.

Status          This erratum may be fixed in a future Intel® Raid Web Console2 revision.

Workaround      Downgrade the Intel® Raid Web Console2 version to v2.92-01.