



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.

Information in this document is provided in connection with Intel products. No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document. Except as provided in Intel's Terms and Conditions of Sale for such products, Intel assumes no liability whatsoever, and Intel disclaims any express or implied warranty, relating to sale and/or use of Intel products including liability or warranties relating to fitness for a particular purpose, merchantability, or infringement of any patent, copyright or other intellectual property right. Intel products are not intended for use in medical, life saving, or life sustaining applications. Intel may make changes to specifications and product descriptions at any time, without notice.

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

Intel, Itanium, Pentium, and Xeon are trademarks or registered trademarks of Intel Corporation.

*Other brands and names may be claimed as the property of others.

Copyright © Intel Corporation 2010.

Contents

Preface..... 6

Summary Tables of Changes..... 7

Errata..... 8

1. Syscfg utility hangs when executed in EFI with USB keyboard/mouse. 8
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. 8
3. NetWare* does not properly detect Intel® Xeon® processors during installation. 8
4. Onboard LSI* RAID array cannot be detected even after loading the driver during the SLES10 SP1 installation..... 9
5. POST LED still on under Linux* operating system. 9
6. BMC firmware roll back is not supported if the BMC firmware is older than Rev 21.10
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. 10
8. There is a warning message “sn#0F processor IERR” issue asserted in the System Event Log (SEL). 10
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..... 11
10. There are some abnormal warning messages in the System Event Log after an AC power on/off cycle to the server board..... 11
11. You cannot install Microsoft Windows 2003* if Adaptec* 29160 adapter is in PCI slot1 on the server board..... 11
12. Lack of DUD driver support for the ICH9R chipset in RedHat* AS 5.0 and SuSE* 10 operating system kernels..... 12
13. HSC and LCP updates may take a long time. 12
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. 13
15. Cannot power on/off/reset system remotely by using the DPCCLI tool. 13
16. IPMI tool command “SOL activate” does not work for User ID6-User ID15..... 13
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..... 14
18. Stop error 0x7B observed while installing Microsoft Windows 2003 Enterprise Server* using AXXSATADVDRWROM (firmware version U000, September 2007). 14

19. S3200SH/3210SH based systems cannot boot using a “bootable” Microsoft* DOS CD/DVD when RAID (or AHCI) is Enabled via BIOS Setup. 15

20. Intel® Server Board S3200SH/S3210SH (ICH9-R chipset) - based systems do not support Microsoft Windows 2000 Advanced Server* Operating System..... 15

21. Low HDD performance under Linux when SATA mode is set to IDE in BIOS..... 15

22. Cannot update Expandable SAS Hot Swap Back Plane firmware on Intel® Server Board S3200SH/S3210SH based systems 16

23. Intel® Server Board S3200SH/S3210SH (ICH9-R chipset) - based systems do not support Microsoft Windows 2000 Advanced Server* Operating System..... 16

24. After installing Solaris* 10 U5, NIC1(Intel® 82541) and NIC2(Intel® 82566DM) appear to be reversed..... 17

25. PS2 keyboard and mouse doesn't work when E5200 processor is used on Intel® Server Board S3200SH/S3210SH based systems.....17

26. Windows* Server 2003 may hang when log in to Intel® Raid Web Console2 version 3.04-05 with ESRTII Raid enabled.....18

This page intentionally left blank

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	<p>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.</p> <p>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.</p>
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 3 rd 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). 1) System Firmware Progress #0x06 System Firmware Error (POST Error). POST Code: 8190 - Watchdog Timer Failed on Last Boot Asserted Event. 2) System Firmware Progress #0x06 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 U000, 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 U000, 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 "Ctrl+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	<p>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:</p> <ul style="list-style-type: none">- BAD_POOL_HEADER Error code: STOP 0x00000019- IRQL_NOT_LESS_OR_EQUAL Error code: STOP 0x000000D1
Implication	<p>This issue is caused by a minor bug in Intel® Raid Web Console2 software code.</p>
Status	<p>This erratum may be fixed in a future Intel® Raid Web Console2 revision.</p>
Workaround	<p>Downgrade the Intel® Raid Web Console2 version to v2.92-01.</p>