Intel® Server Boards S3000AHLX, S3000AH, and S3000AHV

Intel® Server Systems SR1530AH and SR1530AHLX

Specification Update

June 2008

Enterprise Platforms and Services Marketing

Revision History

Date	Modifications
November 2006	Initial release
January 2007	Added documentation change 1.
February 2007	Added errata items 11, 12, and 13.
April 2007	Removed errata items 2 and 4, updated errata item 6, and added errata items 12, 13, and 14.
August 2007	Added documentation change items 2 and 3; updated errata item 14.
September 2007	Added documentation change item 4.
January 2008	Added documentation change item 5.
March 2008	Added errata items 15.
May 2008	Added errata items 16.
June 2008	Update errata status

Disclaimers

The Intel® Server Boards S3000AH, S3000AHLX, and S3000AHV, and Intel® Server Systems S1530AHLX and S1530AH may contain design defects or errors known as errata that may cause the product to deviate from the published specifications. Current characterized errata are documented in this Specification Update.

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Preface

This document is an update to the product definition specified in the *Intel® Server Board S3000AH Technical Product Specification, and the Intel® Server System SR1530AH Technical Product Specification* (Order Number D72579-001, and D77400-003). It is intended for hardware system manufacturers and software developers of applications, operating systems, or tools. It will contain specification changes, specification clarifications, errata, and document changes.

Nomenclature

- **Specification Changes** are modifications to the current published specifications for the Intel® Server Boards S3000AHLX, S3000AH, and S3000AHV, and the Intel® Server Systems SR1530AHLX and SR1530AH. These changes will be incorporated in a future release of the given document.

- **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 a future release of the given document.

- **Documentation Changes** include typos, errors, or omissions from documents that are currently published. These documents may include Product Specs and Users Guides. These changes will be incorporated in a future release of the given document.

- **Errata** are design defects or errors. Errata may cause the Intel® Server Boards S3000AHLX, S3000AH, and S3000AHV, and the Intel® Server Systems SR1530AHLX and SR1530AH behavior to deviate from published specifications. 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.

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Product Scope

Below are the specific boards, BIOS, and components covered by this.

Baseboard SKU	Baseboard PBA #	BIOS Revision / Build #
S3000AHLX	D40858-204	R31
S3000AH	D40859-204	R31
S3000AHV	D52072-204	R31
S3000AHLX	D40858-205	R34
S3000AH	D40859-205	R34
S3000AHV	D52072-205	R34
S3000AHLX	D40858-207	R39
S3000AH	D40859-207	R39
S3000AHV	D52072-207	R39
S3000AHLX	D40858-208	R44
S3000AH	D40859-208	R44
S3000AHV	D52072-208	R44
S3000AHLX	D40858-208	R46
S3000AH	D40859-208	R46
S3000AHV	D52072-208	R46

Summary Tables of Changes

The following tables indicate the errata and the document changes that apply to the Intel® Server Boards S3000AHLX, S3000AH, and S3000AHV, and the Intel® Server Systems SR1530AHLX and SR1530AH. Intel intends to fix some of the specified errata in future updates to the server board and system. Documentation changes will be made in future updates to the given document. The tables use the following notations:

Doc:	Intel intends to update the appropriate document in a future revision.
Investigating	Intel is investigating the issue.
Fix:	Intel intends to fix this erratum in a future update of the board or chassis.
Fixed:	This erratum has been addressed.
NoFix:	There are no plans to fix this erratum.
Shaded:	This erratum is either new or has been modified from the previous specification update.

Table 1. Errata Summary

No.	Plans	Description of Errata
1.	Fix	Newer PBA version is required to support Quad-Core Intel® Xeon® processor 3200 series and Intel® Core™2 Extreme Processor QX6700.
2.	Fixed	Resetting the Intel® AMT password requires a specific BIOS version.
3.	NoFix	User defined provision server parameters need to be set again after an AC power cycle.
4.	Fixed	Two unknown devices appear in the Microsoft Windows* Device Manager.
5.	NoFix	USB controller and FAN control are disabled after downgrading to a BIOS version earlier than R34.
6.	Fixed	BIOS boot timeout value is not changeable.
7.	NoFix	The Intel® AMT web page does not show asset information of hard disk drives configured in RAID mode.
8.	Fixed	Intel® System Management Software 1.5 displays incorrect sensor values on the Intel® Server Board S3000AH using an SMSC* 5017 super I/O controller.
9.	NoFix	Intel® AMT web console may show "unspecified platform event" in the event log.
10.	NoFix	The HDD serial number gathered by Intel® AMT is not correct.
11.	Fix	The front panel power LED remains on when the system is powered off.
12.	NoFix	USB keyboard and mouse are not functional when loading an un-signed RAID driver during Microsoft Windows* installation.
13.	NoFix	Adaptec* ASC-48300 SAS adapter driver installation issue under SuSE* Linux Enterprise Server 10.
14.	NoFix	The refresh rate of the BIOS screen is slow when using console redirection running at 9600 baud rate.

15.	Fixed	The screen will incorrectly show USB keyboard and mouse detected when USB controller is disabled.
16.	Fix	Some types of PCIE and PCIX cards will cause the hang issue under some conditions

Table 2. Documentation Changes

No.	Plans	Description of Documentation Change
1	NoFix	Network adapter teaming is not supported with the Intel® 82573E Ethernet Controller.
2	Doc	Set the "AMT option" to disabled by default when running a NIC diagnostic utility.
3	Doc	The Intel® Server Board S3000AH does not support 1333 FSB processors.
4	Doc	Environmental altitude operation specification updated to indicate adequate thermal performance to 900 meters.
5	Doc	Added new document information in the Reference Documents section of the Intel® Server Board S3000AH TPS.

Following are in-depth descriptions of each erratum / documentation change indicated in the tables above. The errata and documentation change numbers below correspond to the numbers in the tables.

Errata

1. Newer PBA version is required to support Quad-Core Intel® Xeon® processor 3200 series and Intel® Core™2 Extreme Processor QX6700.

Problem   Intel® Server Board S3000AH with PBA number Dxxxxx-205 and earlier versions do not support the Quad-Core Intel® Xeon® processor 3200 series and Intel® Core™2 Extreme Processor QX6700.

Implication   Customers will not be able to use the Quad-Core Intel® Xeon® processor 3200 series and Intel® Core™2 Extreme Processor QX6700 in Intel® Server Board S3000AH with PBA Dxxxxx-205 and earlier versions.

Workaround   Customers need to use Intel® Server Board S3000AH with PBA number Dxxxxx-206 and later with these processors.

Status   Intel will support these processors with PBA number Dxxxxx-206 and later. Please see PCN106975 for details.

2. Resetting the Intel® AMT password requires a specific BIOS version.

Problem   BIOS R31 and earlier versions do not support Intel® AMT password reset.

Implication   With BIOS R31 and earlier versions, the Intel® AMT password cannot be reset.

Workaround   None.

Status   This erratum has been fixed in BIOS R33. The option to reset the Intel® AMT password is integrated into the setup menu of BIOS R33 and later versions. Brief procedure is as follows: connect pins **2-3** of the on-board jumper **J1H3** and enabled ASF in the BIOS setup menu (no need to save change and reset); the Intel® AMT password reset option is now available in the BIOS setup menu.

3. User defined provision server parameters need to be set again after an AC power cycle.

Problem   After an AC power cycle, the user defined server IP address and port setting values change to default settings.

Implication   These parameters are stored in volatile memory. After an AC power cycle, the information in volatile memory is erased.

Workaround   After an AC power cycle, these parameters will need to be reset to user defined values.

Status   This erratum will not be fixed.

4. Two unknown devices appear in the Microsoft Windows* Device Manager.

Problem | On Microsoft Windows*, after installing all the drivers (onboard LAN, video, and chipset), the Microsoft Windows* Device Manager displays "PCI Device" and "PCI Serial Port" with a yellow question mark.

Implication | The "PCI Device" and "PCI Serial Port" devices are components of Intel® AMT. Intel® AMT is not available without the driver installed for these two devices.

Workaround | None.

Status | The .inf file for these devices are included in the LAN driver package (10.4 or later), rather than the Intel® Chipset driver package. After extracting the LAN driver package, the .inf drivers are found in \PLATFORM\ IntelAMT\Drivers.

5. USB controller and FAN control are disabled after downgrading to a BIOS version earlier than R34.

Problem | After downgrading the BIOS from a newer version to an earlier version than R34 on the Intel® Server Board S3000AH, the USB controller and FAN control BIOS options may be disabled.

Implication | Customers who downgrade the BIOS to a version earlier than R34 may find that the system will not boot.

Workaround | Clear CMOS is required after downgrading the BIOS to a version earlier than R34.

Status | This erratum will not be fixed.

6. BIOS boot timeout value is not changeable.

Problem | After saving the changes made to boot timeout value and resetting, the boot timeout value still has the default setting.

Implication | Users will not be able to adjust BIOS boot timeout value.

Workaround | None.

Status | This issue is fixed in BIOS R35 and later.

7. The Intel® AMT web page does not show asset information of hard disk drives configured in RAID mode.

Problem | When a hard disk drive is configured in RAID mode, the Intel® AMT web page detects its model number and serial number as "No Information Available".

Implication | Through the Intel® AMT web page, customers can only obtain hard disk drive asset information when the drive is configured in non-RAID mode.

Workaround   None.

Status   This erratum will not be fixed. When a hard disk drive is configured in RAID
                  mode, it presents itself as a logical drive that has no model number or serial
                  number.

8. Intel® System Management Software 1.5 displays incorrect sensor values on the Intel® Server Board S3000AH using an SMSC* 5017 super I/O controller.

Problem   On an Intel® Server Board S3000AH that uses an SMSC* 5017 super I/O
                  controller (please see PCN 106772 for details on production information), Intel®
                  System Management Software 1.5 (with a Microsoft Windows* operating
                  system) will show incorrect values for some sensors.

Implication   The management software may incorrectly indicate that the server is in a
                  critical state.

                  Note: Information indicated by Intel® System Management Software 1.5 is
                  correct on the Intel® Server Board S3000AH using an SMSC* 5027 super I/O
                  controller.

Workaround   None.

Status   This erratum has been fixed by an Intel® System Management Software 1.5
                  patch. With this patch installed, the management software will display correct
                  information on the Intel® Server Board S3000AH, regardless of which super I/O
                  controller is present. This patch can be found at
                  http://downloadfinder.intel.com/scripts-df-
                  external/Product_Filter.aspx?ProductID=2569&lang=eng with a title of "Update
                  Pack for the Intel® System Management Software 1.5 [S3000AH_Update.ZIP]"

9. Intel® AMT web console may show "unspecified platform event" in the event log.

Problem   The Intel® AMT web console will show some logs as "unspecified platform
                  event" in the "event log" page every time you boot up the server.

Implication   The events point to the "System Firmware Progress Event when Starting OS
                  boot process". This is an informational message that won't affect the system
                  performance. This is due to an Intel® AMT 1.0 event logging limitation that
                  cannot acknowledge all BIOS events.

Workaround   None.

Status   This erratum will not be fixed on the Intel® Server Board S3000AH.

10. The HDD serial number gathered by Intel® AMT is not correct.

Problem   The HDD serial number gathered by Intel® AMT web console is not correct.

Implication   Intel® AMT web console cannot display the correct HDD serial number. Use
                  Intel® System Management Software to obtain the correct serial number of
                  HDDs.

Workaround   None.

Status   This erratum will not be fixed on the Intel® Server Board S3000AH.

11. The front panel power LED remains on when the system is powered off.

Problem   The front panel power LED of Intel® Server Board S3000AH (PBA number
                  Dxxxxx-205 and earlier) remains on when the system is powered off.

Implication   Customers may encounter this front panel power LED issue when using Intel®
                  Server board S3000AH with PBA Dxxxxx-205 or earlier version.

Workaround   None.

Status   Intel has fixed this issue with PBA number Dxxxxx-206 and later. Please see
                  PCN106975 for details.

12. USB keyboard and mouse are not functional when loading an un-signed RAID driver during Microsoft Windows* installation.

Problem   When loading an un-signed RAID driver during Microsoft Windows* installation,
                  a USB keyboard and mouse are not functional.

Implication   Loading an un-signed driver results in a warning message, prompting user
                  confirmation, before proceeding with the Microsoft Windows* installation. A
                  USB keyboard and mouse are not functional during the warning message
                  confirmation.

Workaround   Use a PS2 keyboard or mouse to proceed with the installation.

Status   This erratum will not be fixed on the Intel® Server Board S3000AH.

13. Adaptec* ASC-48300 SAS adapter driver installation issue under SuSE* Linux Enterprise Server 10.

Problem   During SuSE* Linux Enterprise Server 10 installation, after loading the ASC-
                  48300 adapter driver, HDDs may still be displayed in a non-RAID configuration.

Implication   None.

Workaround   When performing the operating system installation, boot from the OS install CD
                  and press F5 for driver installation, and then type "brokenmodules=aic94xx".
                  This will prevent the aic94xx driver from loading and thereby enabling the
                  adp94xx HostRAID driver to claim control of the ASC-48300.

Status   This erratum will not be fixed on the Intel® Server Board S3000AH.

14. The refresh rate of the BIOS screen is slow when using console redirection running at 9600 baud rate.

Problem   The refresh rate of the BIOS screen is slow when using console redirection running at 9600 baud rate.

Implication   None.

Workaround   Customers can choose to use a higher baud rate, such as 115200.

Status   This erratum will not be fixed on the Intel® Server Board S3000AH.

15. The screen will incorrectly show USB keyboard and mouse detected when USB controller is disabled.

Problem   The screen will show "USB keyboard detected" and "USB mouse detected" information when "Quiet boot" and "USB controller" are disable.

Implication   None

Workaround   This will not occur if the USB controller is not disabled.

Status   This erratum will be fixed in Bios.

16. Some types of PCIE and PCIX cards will cause the hang issue under some conditions.

Problem   Some cards will cause no boot issue and then show PCI buses resource allocation error on Bios 47.

Implication   None

Workaround   If have no boot issue,please tried to use previous version

Status   This erratum will be fixed in Bios.

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Documentation changes

1. Network adapter teaming is not supported with the Intel® 82573E Ethernet Controller.

Problem   Network adapter teaming is not supported with Intel® 82573E Ethernet Controller.

Implication   This adapter supports Intel® AMT technology and conflicts with teaming implementations. S3000AH, S3000AHLX, and S3000AHV SKUs are all affected.

Status   The information will be documented in a future update to the Intel® Server Board S3000AH TPS.

2. Set the "AMT option" to disabled by default when running a NIC diagnostic utility.

Problem   Set the "AMT option" to disabled when running a NIC diagnostic utility, otherwise it may cause the Intel® AMT test to fail.

Implication   Customers need to enable the ASF support and enable the Intel® AMT menu, then reboot the system and press CTRL-P to enter the Intel® AMT configuration menu to activate the Intel® AMT function. After doing so, the Intel® AMT test will pass.

Status   These steps will be documented in a future update to the Intel® Server Board S3000AH TPS.

3. The Intel® Server Board S3000AH does not support 1333 FSB processors.

Problem   The Intel® Server Board S3000AH does not support 1333 FSB processors.

Implication   Please use the 1333 FSB processors on the Intel® Server Board S3200SH/S3210SH.

Status   The information will be documented in a future update to the Intel® Server Board S3000AH TPS.

4. Environmental altitude operation specification updated to indicate adequate thermal performance to 900 meters.

Problem   The thermal performance test data needs to be updated.

Implication   The Intel® Server Systems SR1530AH and SR1530HAHLX have been thermally tested at 900 meters and passed.

Status   This information will be documented in a future release of the Intel® Server Board S3000AH TPS.

5. Added new document information in the Reference Documents section of the Intel® Server Board S3000AH TPS.

Problem   There was missing information in the Reference Documents section in the Intel® Server Board TPS.

Implication   Customers were missing links to information for the Intel® Server Boards S3000AHV, S3000AH, and S3000AHLX.

Status   Updated document information has been added to the latest release of the Intel® Server Board S3000AH TPS.