SBT2 Server Board Specification Update

Release Date: November 2000

Order Number: A44371-001

The SBT2 server board 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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REVISION HISTORY

Date of Revision	Description
November, 2000	This document is the first Specification Update for the SBT2 Server board.

PREFACE

This document is an update to the specifications contained in the *SBT2 Server Board Technical Product Specification* (Order Number A44370-001). 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.
Refer to the *Intel® Pentium® III Xeon™ Processor Specification Update* (Order Number 244460-021) for specification updates concerning the Pentium® Xeon™ III processor. Items contained in the Pentium® III Xeon™ Processor Specification Update that either do not apply to the SBT2 server board 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.

Nomenclature

Specification Changes are modifications to the current published specifications for the SBT2 server boards. These changes will be incorporated in the next release of the specifications.
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 the next release of the specifications.
Documentation Changes include typos, errors, or omissions from the current published specifications. These changes will be incorporated in the next release of the specifications.
Errata are design defects or errors. Errata may cause the SBT2 server board's 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.

Specification Update for the SBT2 Server Board

GENERAL INFORMATION

Identification Information

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

Baseboard Fab #	Baseboard PBA #	BIOS	SSU	Processor Stepping	Chipset Stepping (ServerWorks* ServerSet* III LE CNB30LE & ROSB4)
1	A28258-100	Release 1.1	Release 1R1	Pentium® III Xeon™ processor: B0, C0	RCC-NB6635-P02(2.2) RCC-IB6566-P03(A4.0)
1	A28258-101	Release 1.5	Release 2R1	Pentium® III Xeon™ processor: B0, C0	RCC-NB6635-P03(2.3) RCC-IB6566-P04(B1.0)

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Summary Table of Changes

The following tables indicate the Errata and the Document Changes that apply to the SBT2 Server Board. Intel intends to fix some of the errata in a future stepping of the component, and to account for the other outstanding issues through documentation or specification changes as noted. These tables use the following notations:

CODES USED IN SUMMARY TABLE

Doc: Intel intends to update the appropriate documentation in a future revision.

Fix: This erratum is intended to be fixed in a future stepping of the component.

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.

NO.	Plans	ERRATA
1	**NoFix**	4GB memory size reported incorrectly during POST
2	**NoFix**	Arrowhead card fails installation under Microsoft* Windows 2000*
3	**Fix**	DOS load fails with Fujitsu* IDE hard drive model MPE3084AE
4	**Fixed**	BIOS update process does not ask for confirmation
5	**NoFix**	BMC firmware update process power down the system automatically upon completion
6	**NoFix**	BMC firmware corruption is a non-recoverable condition.
7	**NoFix**	PIO IDE mode 3 drives cause no boot condition
8	**Fixed**	SC5000 350 watt power supply fan failure not reported in the SEL
9	**Fix**	Boot order issue with SCSI CDROM drives
10	**Fixed**	Three percent no boot failure following battery replacement due to Super I/O errata
11	**Fixed**	Red Hat Linux 6.1 installation issue
12	**Fix**	Processor Errors during POST following quick system power cycling
13	**NoFix**	SC5000 chassis HSC firmware update is not possible with the SBT2 server board installed
14	**NoFix**	The SBT2/SC5000 network activity, hard drive activity, and fault front panel LEDs do not work

NO.	Plans	DOCUMENT CHANGES

Errata

1. 4GB memory size reported incorrectly during POST

PROBLEM: When 4 GB total memory is installed in the SBT2 server board, the BIOS reports the extended memory size as 3,999 MB during POST. The expected extended memory size is 4095 MB. The OS can access all of the installed memory.

IMPLICATION: The BIOS will report the extended memory size as 3,999 MB during POST when 4 GB total memory is installed in the SBT2 server board. The OS can access all of the installed memory, so this issue has no impact on product functionality.

WORKAROUND: No workaround exists for this issue.

STATUS: NoFix. This issue is caused by an errata in the ServerWorks* III LE chipset. No fix is planned at this time.

2. Arrowhead card fails installation under Microsoft Windows 2000**

PROBLEM: The Arrowhead server management card will not complete installation when used with the SBT2 server board and Microsoft* Windows 2000*. A black screen is encountered during installation.

IMPLICATION: The Arrowhead server management card cannot be utilized with the SBT2 server board and Microsoft* Windows 2000*.

WORKAROUND: No workaround exists for this issue.

STATUS: NoFix.

3. DOS load fails with Fujitsu IDE hard drive model MPE3084AE

PROBLEM: DOS cannot be loaded to Fujitsu IDE hard drive model MPE3084AE. The system hangs during the installation.

IMPLICATION: The Fujitsu IDE hard drive model MPE3084AE cannot be utilized with the SBT2 server board.

WORKAROUND: No workaround exists for this issue.

STATUS: Fix. Intel is working with Fujitsu to root cause and correct this issue.

4. BIOS update process does not ask for confirmation

PROBLEM: When a SBT2 BIOS update is performed, the SBT2 BIOS update utility immediately begins programming the BIOS upon boot from the BIOS update diskette, without prompting for confirmation first. This is different than the BIOS update process for other Intel server products, which prompts the user to confirm the BIOS update before proceeding.

IMPLICATION: SBT2 BIOS updates will be performed immediately after booting to the BIOS update diskette, without user confirmations.

WORKAROUND: No workaround exists for this issue.

STATUS: Fixed. This issue has been fixed in SBT2 BIOS Release 1.5 (Build 16) and later versions.

5. BMC firmware update process powers down the system automatically upon completion

PROBLEM: When a SBT2 BMC firmware update is performed, the SBT2 BMC firmware update utility automatically powers down the system upon successful completion, without prompting for power down confirmation first. This is different than the BMC firmware update process for other Intel server products.

IMPLICATION: The SBT2 system will automatically power down when a BMC firmware update is successfully completed. This is expected behavior.

WORKAROUND: No workaround exists for this issue.
STATUS: NoFix.

6. BMC firmware corruption is a non-recoverable condition

PROBLEM: If BMC firmware corruption occurs on a SBT2 board during the BMC firmware update process or by other means, this is a non-recoverable condition. This is different from some other Intel server boards which include a BMC force update jumper to allow recovery from BMC firmware corruption.
IMPLICATION: Since BMC firmware corruption is a non-recoverable condition, extra care should be taken to not accidentally power down the SBT2 system when a BMC firmware update is in process.
WORKAROUND: No workaround exists for this issue.
STATUS: NoFix.

7. PIO IDE mode 3 drives causes no boot condition

PROBLEM: The SBT2 server board will not boot with a PIO IDE mode 3 drive connected. Only PIO modes 0 and 4 IDE drives work with the SBT2 server board.
IMPLICATION: PIO IDE mode 3 drives cannot be utilized with the SBT2 server board.
WORKAROUND: No workaround exists for this issue.
STATUS: NoFix.

8. SC5000 350 watt power supply fan failure not reported in the SEL

PROBLEM: When a SBT2 server board is installed in the SC5000 chassis, a 350-watt power supply fan failure will not cause a system event log (SEL) entry for this failure.
IMPLICATION: SC5000 chassis 350-watt power supply fan failures will not be recorded in the SBT2 server board SEL.
WORKAROUND: No workaround exists for this issue.
STATUS: Fixed. This erratum has been fixed in SBT2 FRU/SDR v. 4.3.7.

9. Boot order issue with SCSI CDROM drives

PROBLEM: The SBT2 server board changes the boot order of an installed SCSI CDROM drive when a CDROM is not loaded in the CDROM drive. The SCSI CDROM drive is moved to a bottom of the boot priority list in BIOS setup when the system is booted without a CDROM in the CDROM drive.
IMPLICATION: The customer may need to set the boot order of the SCSI CDROM drive in <F2> BIOS setup prior to booting the system from a bootable CDROM, otherwise the system may not boot from the bootable CDROM.
WORKAROUND: Set the boot order of the SCSI CDROM drive in <F2> BIOS setup just prior to booting the system from a bootable CDROM.
STATUS: Fix. This issue will be fixed in a future BIOS release.

10. Three percent no boot failure following battery replacement due to Super I/O errata

PROBLEM: Due to an erratum with the Super I/O PC97317 component, approximately three percent of SBT2 server boards will not boot following user replacement of an expired battery.
IMPLICATION: When the battery is replaced on the SBT2 server board following battery expiration, there is a three percent chance that the board will not boot.
WORKAROUND: No workaround exists for this issue.
STATUS: Fixed. This issue has been fixed in SBT2 BIOS Release 1.5 (Build 16) and later versions.

11. Red Hat Linux 6.1 installation issue

PROBLEM: The driver for the onboard Adaptec* AIC-7899 SCSI controller included in the Red Hat Linux 6.1 distribution does not load during the first part of the installation. The error message "SCSI HOST 0 ABORT TIMED OUT – RESETING" appears.

IMPLICATION: Difficulties installing Red Hat Linux 6.1on the SBT2 server board may be encountered.

WORKAROUND: Red Hat Linux 6.2 SBE2 includes the correct drivers to allow normal installation. Install Red Hat Linux 6.2 or update the Adaptec drivers in Red Hat Linux 6.1.

STATUS: Fixed. This erratum is fixed in Red Hat Linux 6.2 SBE2.

12. Processor Errors during POST following quick power cycling

PROBLEM: Processor errors may appear during POST following quick system power cycling. If the SBT2 server board is powered on and then powered off before the FRB3 timer completes (about 10 seconds), the SBT2 BIOS does not stop the FRB3 timer. Additionally, the BMC firmware also does not stop the FRB3 timer automatically, so a FRB3 timeout occurs, disabling the boot strap processor (BSP). This causes a processor error to appear during POST the next time that the system is powered on.

IMPLICATION: Processor errors may appear during POST following quick system power cycling.

WORKAROUND: The processor errors may be cleared by entering BIOS F2 Setup and select Main → Processor → Clear Processor Errors, and press F10 and Enter to Save Changes and Exit. The processor errors should not appear on the next boot.

STATUS: Fix. This erratum will be fixed in a future BMC firmware release.

13. SC5000 chassis HSC firmware update is not possible with the SBT2 server board installed

PROBLEM: It is not possible to update the SC5000 chassis' HSC firmware with the SBT2 server board installed in the chassis. This is because the SBT2 server board does not support an I2C interface connection between the server board and the chassis' hot swap backplane / SAF-TE card. The universal versions of the SC5000 chassis include the latest version of HSC firmware available. Any changes to the chassis HSC firmware will be made by incorporated by the ECO process.

IMPLICATION: It is not possible to update the SC5000 chassis' HSC firmware with the SBT2 server board installed.

WORKAROUND: It is possible to update the SC5000 chassis' HSC firmware with the L440GX+ server board installed. If a non-universal version of the SC5000 chassis requires an update to the HSC firmware, a L440GX+ board may be installed in the chassis in order to perform the HSC firmware update.

STATUS: NoFix.

14. SBT2/SC5000 network activity, hard drive activity, and fault front panel LEDs do not work

PROBLEM: When the SBT2 server board is installed in the SC5000 chassis, the network activity, hard drive activity, and fault front panel LEDs do not work. This is because there are no connections for network activity, hard drive activity, and fault LEDs on the SBT2 server board.

IMPLICATION: When the SBT2 server board is installed in the SC5000 chassis, the network activity, hard drive activity, and fault front panel LEDs will not function.

WORKAROUND: Examine the system event log for indication of system faults.

STATUS: NoFix.