



# **SBT2 Server Board Specification Update**

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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**

<b>Date of Revision</b>	<b>Description</b>
November, 2000	This document is the first Specification Update for the SBT2 Server board.
December, 2000	No updates. Changed order numbers.
January, 2001	Added DOC errata 1 Added DOC errata 2 Update errata 7 Changed status of errata 9 from Fix to Fixed Changed status of errata 12 from Fix to Fixed Added erratum 15 Added erratum 16 Added erratum 17



## SBT2 SERVER BOARD SPECIFICATION UPDATE

### 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.



## SBT2 SERVER BOARD SPECIFICATION UPDATE

### **Specification Update for the SBT2 Server Board**



## SBT2 SERVER BOARD SPECIFICATION UPDATE

### GENERAL INFORMATION

#### *Identification Information*

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

<b>Baseboard Fab #</b>	<b>Baseboard PBA #</b>	<b>BIOS</b>	<b>SSU</b>	<b>Processor Stepping</b>	<b>Chipset Stepping (ServerWorks* ServerSet* III LE CNB30LE &amp; ROSB4)</b>
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 1.6	Release 2R1	Pentium® III Xeon™ processor: B0, C0	RCC-NB6635-P03(2.3) RCC-IB6566-P04(B1.0)



## SBT2 SERVER BOARD SPECIFICATION UPDATE

### 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: Intel intends to fix this erratum in a future release 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	Fixed	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	Fixed	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
15	NoFix	Power LED does not blink when system in ACPI Standby mode
16	Fixed	Failing DIMM location not shown in SSU
17	Fix	Redhat Linux 6.2 SBE2 and 7.0 only recognizing 64MB system RAM with BIOS Releases 1.5 and 1.6



## SBT2 SERVER BOARD SPECIFICATION UPDATE

NO.	Plans	DOCUMENT CHANGES
1	Fix	Quick Start Guide processor changes
2	Fix	Product Guide processor 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 Windows 2000. A black screen is encountered during installation.

**IMPLICATION:** The Arrowhead server management card cannot be utilized with the SBT2 server board and 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 are supported on 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:** Fixed. This issue is fixed in BIOS Release 17 Build 18.

**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 erratum is 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 – RESETTING” appears.

**IMPLICATION:** Difficulties installing Red Hat Linux 6.1 on 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:** Fixed. This erratum is fixed in BMC firmware Release 1.17 and later.

**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.

**15. SBT2 Power LED does not blink during ACPI System Standby mode**

**PROBLEM:** When the SBT2 server board requested to go into ACPI Standby mode, the power LED does not blink.

**IMPLICATION:** When the SBT2 server board requested to go into ACPI Standby mode, the power LED does not blink, typically using Windows\* 2000.

**WORKAROUND:** No workarounds exist for this issue.

**STATUS:** NoFix.

**16. SBT2 SSU does not show the location of a failing DIMM**

**PROBLEM:** In the event that the SBT2 server board has a failing DIMM, the location is not reported in SSU.

**IMPLICATION:** In the event that the SBT2 server board has a failing DIMM, Server Control software cannot see the location of the failing DIMM.

**WORKAROUND:** This erratum is fixed in SSU 2.R.1.

**STATUS:** Fixed.

**17. Red Hat Linux 6.2 SBE2 and 7.0 only recognize 64MB of memory with BIOS Release 1.5 and 1.6**

**PROBLEM:** SBT2 server boards programmed with BIOS Release 1.5 (Build 16) or BIOS Release 1.6 (Build 17) running Red Hat Linux 6.2 SBE2 or 7.0 will recognize only 64MB of the total installed memory, regardless of the actual memory size installed on the server board. Other operating systems recognize the total installed memory size.

**IMPLICATION:** Red Hat Linux 6.2 SBE2 or 7.0 will recognize only 64MB of the total installed memory.

**WORKAROUND:** This issue will be fixed in future releases of the system BIOS.

**STATUS:** Fix.

## Documentation Changes

### *1. Quick Start Guide Processor changes*

**PROBLEM:** Page 25 shows 900MHz processor and should read 933MHz (Both English and Japanese).

**STATUS:** Fix. This issue is fixed in future releases of the Quick Start Guide.

### *2. Product Guide Processor changes*

**PROBLEM:** Pages 10 and 25 show BX80526KB1000256 and should read BX80526KB001256 as well as showing BX80256KB8001M and should read BX80526KB933256.

**STATUS:** Fix. This issue is fixed in future releases of the Product Guide.