



Intel[®] Server Compute Blade SBX44

Specification Update

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Enterprise Platforms and Services Marketing

Revision History

Date	Modifications
07.20.2004	Initial release.
12.14.2004	Update errata.
03.08.2005	Update errata.
05.03.2005	Update errata.
06.26.2005	Update BIOS FW information and errata.
07.25.2005	No update.
08.23.2005	No update.
09.23.2005	No update.
10.26.2005	No update.
11.23.2005	Update BIOS FW information.
12.21.2005	No update.

Disclaimers

The Intel® Server Compute Blade SBX44 System 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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Contents

Preface..... 1

Summary Tables of Changes..... 4

Errata..... 5

- 1. Unsupported processors not identified by SSU SELViewer. 5
- 2. BIOS reports shadow RAM overflow. 5
- 3. SLES9 Fails installation to RAID on LSI MegaIDE 5
- 4. SBX44 needs the BMC timestamp errata fix. 5
- 5. IFT-SOL Showing Garbled Text Under Microsoft ® Windows® 2003 6
- 6. RedHat® AS2.1 U2 Problems Mounting CD-ROM..... 6
- 7. SOL with Linux install has Garbled Characters 7
- 8. SLES – Mouse Fails to Work if Video Switched Away at OS Boot..... 7
- 9. Linux network configuration does not completely deactivate..... 7
- 10. SOL Console redirection fails to display current screen data on start-up..... 7
- 11. Remote Control session hangs..... 7

Documentation Changes..... 8

- No documentation changes are outstanding at this time..... 8

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Preface

This document is an update to the specifications contained in the *Intel®P Server Compute Blade SBX44 Installation and User's Guide* and in the *Intel®P Server Compute Blade SBX44 Hardware Maintenance Manual and Troubleshooting Guide*. 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 *Intel®P Server Compute Blade SBX44* 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 Intel® 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 server board 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.

Product Scope

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

Intel® Server Compute Blade SBX44 Production Shipping configuration:

Feature	Production Shipping Configuration
Xeon® Processor Supported	See ENABLED COMPONENTS section below.
Memory Supported	See Production Memory Qualification List Version 1.6 on Intel Business Link or contact your Field Representative.
IMB bus terminator card	<ul style="list-style-type: none"> 1
Internal Drives Supported	See Intel(R) Server Compute Blade SBX44 Tested Hardware and Operating System list for the most current list of supported drives.
Add-on I/O Devices	None
BIOS/FW	<ul style="list-style-type: none"> SBX44.86B.0002.P04 BMC Rev 0.22 SDR Rev 0.15 Diagnostics Rev 13A
Board set	<ul style="list-style-type: none"> Base Board PN C27691-501 IO Board PN C27692-402

SBCE/SBX44 Production Management Module Firmware configuration:

Firmware Type	Build ID	File Name	Version	Revision
Main Application	BRE082F	CNETMNUS.PKT	1.19D	Rev 16
Remote Control	BRE082F	CNETRGUS.PKT	1.19D	Rev 16

BIOS Updates

SBX44 Server Compute Blade BIOS release:

BIOS Release	Build ID	BUILD #	Revision	Build Date
SBX44.86B.0001.P06	P06	Production 6	Release 4	8 September 2005
SBX44.86B.0001.P06	P06	Production 6	Release 1	17 May 2005
SBX44.86B.0005.P05	P05	Production 5	Release 5	22 October 2004
SBX44.86B.0002.P04	P04	Production 4	Release 2	16 June 2004
SBX44.86B.0001.P02	P02	Production 2	Release 1	23 April 2004

Firmware Updates

SBX44 System Management Processor Firmware:

Firmware Type	Build ID	File Name	Revision
BMC	BRMK30A	BRMK30A.HEX	0.30

SDR	BRMK18A	BRMK18A.SDR	0.18
BMC	BRMK28A	BRMK28A.HEX	0.28
SDR	BRMK17A	BRMK17A.SDR	0.17
BMC	BRMK26A	BRMK26A.HEX	0.26
SDR	BRMK16A	BRMK16A.SDR	0.16
BMC	BRMK18A	BRMK22A.HEX	0.22
SDR	BRMK15A	BRMK15A.SDR	0.15

Diagnostics

Posting IBL	Status	Version	Release	Release Date
\$SBYDiag.001	1MB Image	13A - Part 1	1.00	23 April 2004
\$SBYDiag.002	1MB image	13A - Part 2	1.00	23 April 2004
Diag13.rom	2MB Image	13A – Full ROM	1.00	23 April 2004

Summary Tables of Changes

The following tables indicate the errata and the document changes that apply to the Intel®P Server Compute Blade SBX44. Intel intends to fix some of the errata in a future stepping of components, and to account for the other outstanding issues through documentation or specification changes as noted. The tables use the following notations:

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 has been modified from the previous specification update.

Table 1 Errata Summary

No.	Plans	Description of Errata
1.	Fix	Unsupported processors not identified by SSU SELViewer.
2.	Fix	BIOS reports shadow RAM overflow.
3.	Fix	SLES9 Fails installation to RAID on LSI MegaIDE
4.	Fix	SBX44 needs the BMC timestamp errata fix.
5.	NoFix	IFT-SOL Showing Garbled Text Under Microsoft® Windows® 2003
6.	NoFix	RedHat AS2.1 U2 Problems Mounting CD-ROM
7.	NoFix	SOL with Linux Install has Garbled Characters
8.	NoFix	SLES- Mouse Fails to Work if Video Switched Away at OS Boot
9.	NoFix	Linux network configuration does not completely deactivate
10.	NoFix	SOL Console redirection fails to display current screen data on start-up
11.	Fixed	Remote Control session hangs.

Table 2 Documentation Changes

No.	Plans	Description of Documentation Change
1.		

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. Unsupported processors not identified by SSU SELViewer.

Problem: When an unsupported processor stepping is installed, SSU SELViewer doesn't identify the processor number causing the error. For example, if slot #1 has a processor of unsupported stepping, the SEL Log displays: 8180 BIOS doesn't support current stepping.

Status: View POST messages during the boot process or view error messages via the management module web browser. Issue will be fixed in a future SSU SELViewer release.

2. BIOS reports shadow RAM overflow.

Problem: Intel® Server Compute Blade SBX44 BIOS reports shadow RAM overflow with serial console redirection enabled (default configuration in BIOS SETUP) when using BSE together with IDE RAID enabled.

Status: Under Investigation. There is insufficient shadow RAM space for a blade to operate with serial console redirection enabled (default configuration) while using the BSE with IDE RAID enabled. The BSE drives can not be seen by the OS when the BSE option ROM is not loaded. A user can disable the serial console redirection if it is not needed and boot the system. This will allow both IDE RAID and BSE option to load. If disabling Serial Console redirection does not address the issue, also ensure all NIC Option ROMs are disabled.

3. SLES9 Fails installation to RAID on LSI MegaIDE

Problem: IDE raid is currently not supported on SUSE9. Issue is caused by a native IDE raid driver in the kernel not allowing the specific Blade Driver to be loaded.

Status: Intel is driving SUSE to fix in a future update.

4. SBX44 needs the BMC timestamp errata fix.

Problem: The error will cause the BMC date/time stamp to loose one day when the error condition occurs. This issue only affects the BMC date/time stamp (viewable with SSU utility, ISM, or SEL.exe) because the CMM has its own date and time stamp.

Status: Will be fixed in next version of BIOS.

5. IFT-SOL Showing Garbled Text Under Microsoft® Windows® 2003

Problem: IFT-SOL showing garbled text under Microsoft® Windows® 2003. The problem can be re-created from the command prompt in a SOL session to the windows EMS. CD into the \windows directory. Repeatedly type dir and press enter. The screen will fill up and start writing characters all over the screen. The SOL session can be made unusable in this way.

Workaround: Run with SOL set to 9600 Baud Rate to ensure that the BMC will operate optimally.

6. RedHat® AS2.1 U2 Problems Mounting CD-ROM

Problem: User can not use **mount /mnt/cdrom** to mount the CD-ROM. Behavior appears sporadic after some series of power downs/reboots.

Workarounds: If you boot with CD media inserted during power on, the /dev/cdrom /mnt/cdrom entry exists in /etc/fstab. Then you can enter:

```
mkdir /mnt/cdrom
mount /dev/scd0 /mnt/cdrom
```

or

```
mkdir /mnt/cdrom
edit /etc/fstab
change /dev/cdrom to /dev/scd0
mount /mnt/cdrom
```

or

```
mkdir /mnt/cdrom
cd /dev
ln -s scd0 cdrom
mount /mnt/cdrom
```

You can use these methods without CD media inserted during boot as well, as long as /dev/cdrom is in /etc/fstab

For a bigger problem when /dev/cdrom entry is not in /etc/fstab...enter:

```
mkdir /mnt/cdrom
edit /etc/fstab
change /dev/cdrom to /dev/scd0
rmmod usb-ohci && insmod usb-ohci
mount /mnt/cdrom
```

or

```
mkdir /mnt/cdrom
cd /dev
ln -s scd0 cdrom
```

```
rmmod usb-ohci && insmod usb-ohci
mount /mnt/cdrom
```

7. SOL with Linux install has Garbled Characters

Problem: User seeing garbled text via SOL when installing RHEL3

Workaround: Linux installation SOL sessions works correctly if the baud rate is set to 9600 in BIOS setup AND in the Linux configuration file. Additionally, Linux must be running in text mode, which is standard for SOL installations on SBX44.

8. SLES – Mouse Fails to Work if Video Switched Away at OS Boot

Problem: Booting SLES 8 without the video/kb/mouse selected fails to enable the mouse.

Workaround: Run yast to redetect mouse or restart Xwindows.

9. Linux network configuration does not completely deactivate

Problem Deactivating eth3 will not completely deactivate it. Can still ping to the IP address.

Workaround Use /sbin/ip with the flush option */sbin/ip addr flush dev eth3*, the IP address related to the device eth3 will not be accessible.

10. SOL Console redirection fails to display current screen data on start-up

Problem SOL Console redirection fails to display on remote console, when the SOL session is activated while the BIOS is in the setup screen.

Workaround Get into the CLI command interface by typing "`^[("`, and then entering the screen redraw command "`ESC {`". Those two commands are "up-carrot,left bracket,left parentheses" and "escape key, left brace" respectively.

11. Remote Control session hangs

Problem On the client machine the "Remote Console" pane within the "Remote Control" child window freezes when KVM is switched from one SBXL52 Blade to another. The "KVM Media Tray" pane continues to work mostly but occasionally goes blank. Changing the KVM or media tray would change the local owner on the chassis accordingly but the "Remote Console" pane remains frozen. Requires CMM reset to kill the Remote Control session. Same behavior noted with both Laural and McCarran Blades. Various Blade

combination of SBXL52 only, SBX44 only or SBXL52 and SBX44 mixed together were tried and all resulted in same symptoms.

Status Fixed with SBXL52 BIOS BSEO22AUS, CMM FW BREO57K

Documentation Changes

No documentation changes are outstanding at this time.