



# Intel<sup>®</sup> Server Chassis SBCE

## *Specification Update*

*Intel Order Number C83537-012*

**December, 2005**



**Enterprise Platforms and Services Marketing**

---

## *Revision History*

<b>Date</b>	<b>Modifications</b>
07.20.2004	Initial release.
12.14.2004	Update CMM firmware and errata.
03.10.2005	Update CMM firmware
04.26.2005	No update.
05.26.2005	No update.
06.26.2005	Update CMM firmware and errata.
07.25.2005	Update specification clarification.
08.23.2005	No update.
09.23.2005	No update.
10.26.2005	Update errata.
11.23.2005	Update CMM firmware revision level.
12.21.2005	No update.

## ***Disclaimers***

The Intel® Server Chassis SBCE 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.

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 2005.

# Contents

<b>Preface</b> .....	<b>1</b>
<b>Specification Clarifications</b> .....	<b>3</b>
1.    SBCE Chassis Power Management.....	3
<b>Summary Tables of Changes</b> .....	<b>4</b>
<b>Errata</b> .....	<b>5</b>
1.    Chassis Rear Stabilizers Displace SPC EMC Gaskets .....	5
2.    Optical Pass-Thru Module May Not Power Up On Insertion.....	5
3.    Remote mouse cursor does not track correctly. ....	5
<b>Documentation Changes</b> .....	<b>10</b>
No documentation changes are outstanding at this time.....	10

**This page intentionally left blank**



## Preface

---

This document is an update to the specifications contained in the Intel® Server Blade Chassis *SBCE Installation and User's Guide* and Intel® Server Blade Chassis *SBCE 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.

## 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, firmware and components covered by this update.

### Intel® Server Blade Chassis SBCE Production Shipping Configuration:

Feature	Production Shipping Configuration
Internal Drives	1 - Slim IDE Floppy Drive (C27007-001) 1 – Slim IDE CDROM Drive (C27004-002)
Management Module	1
Management Module FW	Main Application, Rev 16 (BRE052A) Boot ROM, Rev 16 (BRB052A) Remote Control, Rev 16 (BRR052A) PS/2 to USB Conversion, Rev 1 (BREZ14) MM to USB Interface, Rev 1 (BRPI15)
Switches	None
Blowers	2 (C47344-001)
Chassis	7U (bezel included) 1 – mounting rail Kit (left rail–C54226-001 right rail C54225-001 )
Filler Panels	13 Blade filler panels, 2 power supply filler panels, 4 switch module filler panels
Power Subsystem	2 – 2000W Power Supplies (C65363-001)
Power Cords / Circuits	None shipped with system; Two separate 208 V AC 20A circuits required
Board set	Midplane (C38224-200) Media Tray Board (C26940-100) Front Panel (C26936-100)

## Firmware Updates

### SBCECMM Management Module Firmware:

The following versions of the MM firmware are included in package V4.0:

Firmware Type	Build ID	File Name	Released	Revision
Main Application	BRE082F	CNETMNUS.PKT	10-11-05	Rev 16
Remote Control	BRE082F	CNETRGUS.PKT	10-11-05	Rev 16

The build ID, file name, and revision may be verified by checking the” **Firmware VPD**” section in the management module web interface.

# Specification Clarifications

---

## 1. SBCE Chassis Power Management

The current shipping configuration for the Intel® Blade Server Chassis SBCE includes two, 2000W power supply units which provide shared and redundant power to the first power domain of the chassis. An additional two, 2000W power supply units may be added to provide shared and redundant power to the second power domain of the chassis.

There are three customer programmable power redundancy and over subscription policies that can be applied to the 2000W power supply units and are described below. **Redundant with Performance Impact** is the default program setting.

- **Redundant with Performance Impact (throttle) mode** - blades will be powered even if there is not enough power to fully power them with the loss of a power supply - newly released blades can be run in a power conservation (blade processors are throttled back) mode in the event of a power supply failure, so that all blades continue to function.
  - This is the standard configuration. It allows blades to power on until they reach “uncontrollable over subscription”.
- **Redundant without Performance Impact (degradation) mode** - a blade will not be powered unless it can continue to run at full performance even with a power supply failure.
  - For customers that are insistent on no possible performance loss this is the one to choose. This might mean that some blades will not be allowed to power on.
- **Non- Redundant mode** - blades are powered without consideration of power supply redundancy.
  - All blades will power on – in the event of a power loss some blades may go down until chassis is returned to a supportable power level

Selection of the redundancy and over subscription policy is done within the Fuel Gauge Section of the Chassis Management Module (CMM). Also within the Fuel Gauge Section is detail about configuration of the power domains, status of the power domains and detail on power allocation.

Depending on the redundancy and over subscription policy selected, a warning may appear in the Fuel Gauge.

See the **Intel® Blade Server Management Module SBCECMM: Installation and User’s Guide** for more specific information.

## Summary Tables of Changes

---

The following tables indicate the errata and the document changes that apply to the Intel®P Server Chassis SBCE. 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.	NoFix	Chassis Rear Stabilizers Displace SPC EMC Gaskets
2.	NoFix	Optical Pass-Thru Module May Not Power Up On Insertion.
3.	NoFix	Remote mouse cursor does not track correctly.

**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. Chassis Rear Stabilizers Displace SPC EMC Gaskets

**Problem** The rear stabilizers supplied with the SBCE system interfere with, and displace the EMC gasket on the side of the SPC chassis.

**Status** Will not be fixed.

### 2. Optical Pass-Thru Module May Not Power Up On Insertion.

**Problem** The Optical Pass-thru Module (OPM) occasionally does not power up on insertion. About 1 in 50 inserts, the switch module will not automatically power up. The problem is specific to a human event driven insertion (it does not occur on power cycle) and is easily recovered.

**Workaround** Recovery is possible either by reinserting the OPM switch module or by cycling the OPM power on the chassis.

### 3. Remote mouse cursor does not track correctly.

**Problem** Remote mouse cursor does not track correctly when using Linux in combination with the SBCE management module's remote control features. Some of the problems that may be seen include:

- a. **Remote mouse cursor does not track correctly.**
- b. **Remote mouse alignment issues under the graphical login screen (KDM or XDM)**
- c. **Remote and local mouse not synchronized during remote control session.**
- d. **No mouse cursor.**
- e. **Single clicks from the remote mouse do not work.**

**Workaround** For different problems, please using the following solutions.

- a. **Remote mouse cursor does not track correctly.**

It is necessary that the mouse handler (mousedev) in Linux get the correct resolution information in order to track the remote mouse cursor properly. If the host (Blade) resolution is not 1024x768:

1. Enter the following commands to provide the correct resolution data to mouse handler:

```
init 3 (Switch to text mode if necessary) rmmod mousedev (Unload the mouse driver module)
```

2. Add the following statement to /etc/modules.conf (for SUSE LINUX Enterprise 8 or RHEL 2.1 and 3) or to /etc/modprobe.conf (for SUSE LINUX Enterprise 9 and RHEL 4 or later):

```
options mousedev xres=X yres=Y
```

(Notify the mouse driver of the video resolution where X and Y specify the video resolution)

3. Enter the following commands:

```
insmod mousedev (Reload the mouse driver module) init 5 (Return to GUI mode if necessary)
```

**Note:** It is also necessary to set the mouse acceleration and threshold values to 1. The default settings in Linux will not allow the remote mouse to track properly. To change mouse acceleration and threshold values for the current session open a terminal window and type `xset m 1 1` and press **Enter**.

**b. Remote mouse alignment issues under the graphical login screen (KDM or XDM)**

## GNOME

1. Using the keyboard press **CTRL+ESC** keys to bring a menu on the desktop.
2. From this menu select: Programs -> Settings -> Session -> Session properties and startup programs.
3. Select the **Startup Programs** tab.
4. Select Add option to open another window.
5. In the command line type `xset m 1 1` and click **OK** to save this command.
6. Click **Apply** and then **OK** to exit this window.
7. Log out from this session and be sure to check the save current setup check box on the Log out window.

The next time you log in, the remote and local mouse will be synchronized.

### **KDE**

1. Using the keyboard press **ALT+F1** to bring a menu on the desktop.
2. From this menu, press Preferences -> Peripherals -> Mouse.
3. Select the **Advanced** Tab and change the Pointer Acceleration and Threshold values to 1.
4. Click **Apply** and then **OK** to exit this window.
5. Log out from this session and be sure to check the save current setup check box on the Log out window.

The next time you log in, the remote and local mouse will be synchronized.

### **WindowMaker**

**Note:** It may be easier to make changes with the local keyboard/mouse.

1. Using the keyboard press **F12** to bring a menu on the desktop.
2. Select **WindowMaker** and then **WPrefs** to launch WindowMaker Preferences Utility.
3. Select the **Mouse Preferences** Icon and change the acceleration and threshold values to 1.
4. Save changes and Close the window.
5. Log out from this session and be sure to check the **Save workspace State** check box on the Log out window.

The next time you log in, the remote and local mouse will be synchronized.

### **MWM**

**Note:** It may be easier to make changes with the local keyboard/mouse.

1. Open a terminal window and type `xset m 1 1` and press **Enter**.
2. See the instructions under section labeled "Remote and local mouse not synchronized during remote control session" for additional help if needed.

The change is not saved between sessions so you will have to repeat this every time you login.

### **TWM**

**Note:** It may be easier to make changes with the local keyboard/mouse.

1. Open a terminal window and type `xset m 1 1` and press **Enter**.

See the instructions under section labeled "Remote and local mouse not synchronized during remote control session" for additional help if needed.

The change is not saved between sessions so you will have to repeat this every time you login.

### **Remote mouse alignment issues under the graphical login screen (KDM or XDM)**

1. At the login screen, switch to a console by pressing **Ctrl + Alt + F2**
2. Log into the system as the root user.
3. Switch out of the graphical run level (5) by running the command:

```
init 3
```

4. Press Enter to get the command prompt back.
5. For SUSE, edit the '/etc/X11/xdm/Xsetup' file. Insert the following line at the end of the file, but before the line that says 'exit 0':

```
$xset m 1 1
```

6. For Red Hat, add the following entry to the /etc/X11/xdm/Xsetup\_0 file:

```
xset m 1 1
```

7. Switch back to GUI mode by running the command:

```
init 5
```

- c. Remote and local mouse not synchronized during remote control session.

If the remote and local mouse are not synchronized properly, there is a constant off set between them on the remote client window then move the mouse towards the bottom of the video screen in the remote client window. Then move the local mouse back in the window. This will fix the alignment between the two mice.

- d. **No mouse cursor.**

To fix this for SUSE do the following (using your keyboard as the root user):

1. Open a terminal window.
2. Type sax2 -F mouse and press **Enter**.
3. The utility will start and display auto-detected values and the mouse should work. Select **Apply**.
4. Select **Finish** option.
5. On the next screen select **Start** to test the settings. The utility should display a test screen with current settings.
6. Select Save Configuration option
7. Exit the utility.

To fix this for RHEL do the following:

1. Open a terminal window.
2. Type setup
3. Select **Mouse Configuration**.
4. Scroll down and select the generic or two-button USB mouse.
5. Select **OK**.
6. Select **Yes** to update the X Window System Configuration.
7. Exit the utility.
8. Press **Ctrl+Alt+Backspace**.

**e. Single clicks from the remote mouse do not work.**

To fix this for SUSE LINUX do the following as root using a terminal window or the console prompt:

1. Type sax2 -F mouse and press **Enter**.
2. Delete the mouse settings by selecting Remove.
3. Select **Finish** and Save Configuration option
4. Exit the utility.
5. Reboot the server
6. Login (text mode since no pointer is defined yet)
7. Type sax2 and press **Enter**.

8. The SaX2 utility will display a screen with auto-detected values and the mouse should work now.
9. To change settings (e.g. resolution) select Alter and then Change Configurations. Do NOT use any previous configuration files detected by the system.
10. Select **Next** to change settings (do not change settings that are working or okay - e.g. Mouse).
11. After making changes select **Finish** and then **Start** to test the new settings. The utility should display a test screen with the new settings.
12. Select Save Configuration option
13. Exit the utility.
14. Type startx at the prompt for the changes to take effect.

To fix this for RHEL do the following:

1. Open a terminal window.
2. Type setup
3. Select **Mouse Configuration**.
4. Scroll down and select the generic or two-button USB mouse.
5. Select **OK**.
6. Select **Yes** to update the X Window System Configuration.
7. Exit the utility.
8. Press **Ctrl+Alt+Backspace**.

The next time you log in to the X Window System, the remote mouse will work correctly.

## Documentation Changes

---

No documentation changes are outstanding at this time.