



# **Intel® Server Platform SR870BH2**

## ***Specification Update***

**Revision 2.3**

**February 2007**

**Enterprise Platforms and Services Division Marketing**

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## ***Revision History***

<b>Date</b>	<b>Revision</b>	<b>Modifications</b>
September 2003	.9	Initial release.
October 2003	1.0	Errata update
November 2003	1.1	Errata update
December 2003	1.2	Errata update
January 2004	1.3	Main board revision and Errata update
March 2004	1.4	BIOS & Mainboard revision, Processor & Errata updates
April 2004	1.5	Board set AA & PBA updates, chassis update
August 2004	1.6	Added Errata 14,15,16
November 2004	1.7	Added Errata 17, 18, documentation change 1
May 2005	1.8	Updated Product Scope Table, updated Erratum 18
August 2005	1.9	Added Errata 19
September 2005	2.0	Added Errata 20
November 2006	2.1	Added Errata 21 & RoHS PN updates
December 2006	2.2	Added Errata 22
February 2007	2.3	Revised Errata 22, Added Documentation change 2

## ***Disclaimers***

The SR870BH2 Server 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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## Preface

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This document is an update to the specifications contained in the *SR870BH2 Boardset and System Technical Product Specifications*. 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® Itanium™ 2 Processor Specification Update* for specification updates concerning the Itanium™ 2 processor. Items contained in the *Intel® Itanium™ 2 Processor Specification Update* that either do not apply to the SR870BH2 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. The information in the table shows BIOS and firmware revisions associated with the PBA and TA numbers as they were shipped from the factory. Updated revisions of the BIOS and firmware may be available on IBL and not currently implemented in the factory.

<b>Product Code: BBHMAIN (Mainboard)</b>			
<b>Board P/N</b>	<b>BIOS Banner</b>	<b>Firmware</b>	<b>Change Description</b>
PBA:A67194-400 AA:C40483-400	86B.0131.P03	BMC 15 HSC 11 SDR 13	Gold Release, see release notes for additional change detail.
PBA:A67194-400A AA:C40483-400	86B.0131.P03	BMC 15 HSC 11 SDR 13	Add addressing capability for the full 1MB of BMC flash space to support future "on-line update" feature for BMC.
PBA:A67194-401 AA:C40483-401	86B.0131.P03	BMC 15 HSC 11 SDR 13	Change SDINT button functionality; add delay to front panel push button to reduce accidental SDINT events (PLD1 control).
PBA:A67194-402 AA:C40483-402	86B.0131.P03	BMC 15 HSC 11 SDR 13	Apply changes to NIC EEPROM setting relating to IPMI commands (TA T/A 0685-1), update label.
PBA:A67194-403 AA:C40483-403	86B.0165.P05	BMC 25 HSC 11 SDR 14	Update to BMC25 and SDR14 for OFU support Update BIOS to "PR5.1 BUILD 86B.0165." Replace 82546EB with 2546GB NIC. Add decoupling to 3.3V power input of LSI SCSI controller. Add decoupling to 1.8V power input of LSI SCSI controller. Update label.
PBA:A67194-404 AA:C40483-404	86B.0182.P06	BMC 26 HSC 11 SDR 14	Update BIOS to PR6.2 Update to BMC26 Add capacitors to VDDA signals at SCSI controller Change MCLK pull-down resistor at SCSI controller
PBA:A67194-405 AA:C40483-405	86B.0182.P06	BMC 26 HSC 11 SDR 14	Thumbscrews changed from stainless steel to carbon steel
PBA:A67194-406 AA:C40483-406	86B.0187.P03	BMC 30 HSC 14 SDR 15	Updated BIOS to version that supports Itanium® 2 Processor with up to 9M L3 Cache. Updated FW.
PBA:A67194-407 AA:C40483-407	86B.0187.P03	BMC 30 HSC 14 SDR 15	Substitute Flash Memory component with ROHS replacement. Reduce phase jitter, improve stability of 1.8V.
PBA:A67194-450 AA:C40483-450	86B.0225.P03	BMC 34 HSC 15 SDR 17	RoHS compliant version. Updated BIOS/FW to support transition to Itanium® 2 Processor 9000 Series

<b>Product Code: BBHPCIRISER (PCI Riser Board)</b>			
<b>Board P/N</b>	<b>BIOS</b>	<b>Firmware</b>	<b>Change Description</b>
PBA:A67239-200 AA: C40484-200	N/A	N/A	Initial Release
PBA: A67239-220 AA: C40484-220	N/A	N/A	Change SIOH to Q-Spec C2 step Update FRU with 01 code (T2PCIRSR01.FRU)
PBA: A67239-240 AA: C40484-240	N/A	N/A	Change SIOH to S-Spec C2 step Update FRU with 04 code (T2PCIRSR04.FRU)
PBA: A67239-241 AA: C40484-241	N/A	N/A	Thumbscrews changed from stainless steel to carbon steel



PBA: A67239-250 AA: C40484-250	N/A	N/A	RoHS compliant version
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<b>Product Code: BBHSCSI (SCSI Backplane board)</b>			
<b>Board P/N</b>	<b>BIOS</b>	<b>Firmware</b>	<b>Change Description</b>
PBA: C28410-100 AA: C35245-100	N/A	HSC05	Initial Release
PBA: C28410-101 AA: C35245-101	N/A	HSC05	Update PLD code to resolve Flash reset before GEM issue. Program PLD (New checksum 81EE) Remove socket at U6C1. 3. Mounting screws short, replace mounting screws with IPN C24282-001.
PBA: C28410-102 AA: C35245-102	N/A	HSC06	Upgrade to HSC06
PBA: C28410-103 AA: C35245-103	N/A	HSC08	Increase the margin for SCSI drive over-current trip point. Upgrade to HSC08. Upgrade PLD (New checksum A617)
PBA: C28410-104 AA: C35245-104	N/A	HSC11	Upgrade to HSC11
PBA: C28410-105 AA: C35245-105	N/A	HSC11	Thumbscrews changed from stainless steel to carbon steel
PBA: C28410-106 AA: C35245-106	N/A	HSC14	Updated FW
PBA: C28410-150 AA: C35245-150	N/A	HSC15	RoHS compliant version. Updated FW

<b>Product Code: BBHIDEADAPT (Peripheral adapter board)</b>			
<b>Board P/N</b>	<b>BIOS</b>	<b>Firmware</b>	<b>Change Description</b>
PBA: 742218-200 AA: A83782-200	N/A	N/A	Initial Release
PBA: 742218-201 AA: A83782-201	N/A	N/A	Increase LED Brightness for HDD carrier Change CSEL for compatibility with DVD drive
PBA: 742218-202 AA: A83782-202	N/A	N/A	Vendor change
PBA: 742218-212 AA: A83782-212	N/A	N/A	RoHS Compliant version

<b>Product Code: BBHFPPANEL (Front panel / Peripheral board)</b>			
<b>Board P/N</b>	<b>BIOS</b>	<b>Firmware</b>	<b>Change Description</b>
PBA: C28398-400 AA: C40486-400	N/A	N/A	Initial board build
PBA: C28398-401 AA: C40486-401	N/A	N/A	Replace video connector J5K2 IPN A73814-001 with A73814-003
PBA: C28398-402 AA: C40486-402 rev 01	N/A	N/A	USB Connector Part number change due to wrong AML on previous iPN , Replace connectors J5K1 and J6K1 with iPN 642575-129
PBA: C28398-402 AA: C40486-402 rev 02	N/A	N/A	Certifications granted so it is no longer required to cover up CE and Kanji silkscreen artwork. Remove white labels (IPN 200956-001) covering the CE and Kanji marks.
PBA: C28398-403 AA: C40486-403	N/A	N/A	Thumbscrews changed from stainless steel to carbon steel
PBA: C28398-450 AA: C40486-450	N/A	N/A	RoHS compliant version

Chassis Assembly			
Part Number	BIOS	Firmware	Change Description
C25772-008	N/A	N/A	Initial Release
C25772-009	N/A	N/A	Plastics modified to remove brominated flame retardants and resins (PBB, and PBDE). This change will be made to plastic parts >25 grams as listed in the European Restriction of Hazardous Substances (RoHS); in conformance with eco-labels such as TCO'99 (Sweden) and Blue Angel (Germany)
C25772-010	N/A	N/A	Changing the thumbscrews from stainless steel to carbon steel
C25772-011	N/A	N/A	RoHS compliant version

Table 1. Errata Summary

No.	Plans	Description of Errata
1.	To Be fixed	Drive mirror rebuild status not displayed under Linux
2.	Will not fix	System hangs when removing USB Memory Key while exiting command line at EFI
3.	Fixed	Intermittent recognition of USB devices during AC power cycles
4.	Fixed	Intermittent Network traffic issues with port 1 of the 82546EB Network Controller
5.	Will not fix	Pressing the SDINT button on the front panel during POST may cause the system to hang
6.	Fixed	Red Hat AS 2.1 installation fails despite low level HD formatting
7.	Fixed	Symmpi errors observed in the System Event Log (SEL).
8.	Will not fix	Baseboard Management Controller (BMC) cannot exit Firmware Transfer Mode after corruption of Operational Code.
9.	Fixed	SR870BH2 platform may become unresponsive to IPMI commands (T/A 0685-1)
10.	Will not fix	The location of the EFI boot partition required to install Microsoft Windows 2003 may vary without notification in multiple drive configurations
11.	Will not fix	Unsupported RAID Adapter
12.	Fixed	Red Hat Linux AS2.1 installation failure
13.	Fixed	SEL viewer may hang while loading SEL events
14.	Fixed	Cannot recover "failed BIST" processors with BIOS PR6.2 or BIOS PR2.0
15.	To be fixed	Sync Issues with onboard RAID mirror
16.	Will not fix	Memory error does not cause system LED to blink green
17.	Will not fix	Using Restore EFI Boot Manager Options in the Save/Restore Configuration Utility Will Cause Network Boot to Fail
18.	Fixed	"Shell: Cannot read from file – Device Error" Displayed after Completion of .nsh Script
19.	Fix	Cannot Install or Boot OS on Emulex* LP9802 SAN with EFI BIOS/FW
20.	Fixed	Unable to Install or Boot SUSE* Linux Enterprise Server 9
21.	Fixed	Potential Electrical Marginality in Intel® Itanium® 2 Processor Integer Register File
22.	Will not fix	System may hang / reset when doing processor test using Platform Diagnostic Utility

**Table2. Documentation Changes Summary**

<b>No.</b>	<b>Plans</b>	<b>Description of Documentation Changes</b>
1.	Doc	ISM is required for OS Watchdog Timer support

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

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### 1. Drive mirror rebuild status not displayed under Linux

Problem	When utilizing the on-board LSI SCSI component and the integrated mirroring feature, the drive rebuild status is not displayed when a mirror has been broken and re-established.
Status	A utility has been posted on the Intel web site to address this issue. The installation instructions are included with the utility. Intel is working with the vendor to provide a long term solution to be included in the Linux Operating system.
Resolution	A workaround has been posted until the issue can be addressed permanently in the Linux Operating system.

### 2. System hangs when USB Memory key is removed while exiting command line at EFI

Problem	The System may hang while removing the USB Memory key at the same time an EFI application or the EFI shell is being accessed. They system may display the following error: EASSERT FAILED" D:\work\t2rc114\efi\edk\drivers\usb\usbbus\usblib.c(646): "CR has Bad Singture"N
Status	The SR870BH2 platform does not support hot plug events while running EFI Shell applications, it should be noted that this does not impact hot plug capability at the O/S level. This issue may occur if the USB disk is removed while an EFI shell application is running or the USB disk is being accessed. The USB driver stack construct is not designed to support full hot plug events from applications and the EFI Shell is itself an application. The issue should only occur at the time the Shell Application is actually running code (i.e. pressing return at EFI Boot Menu, accessing the EFI Shell and at the same time removing the USB disk from the port.)
Resolution	Will Not Fix

### 3. Intermittent recognition of USB Devices during - AC power cycles

Problem	USB Devices attached to this platform may be subject to intermittent recognition during a power cycle, this results in a temporary loss of device functionality. This issue may occur during an initial or successive AC power cycle. The failure symptom has been observed to occur more frequently on the two USB ports located at the rear of system rather than on the two USB ports located on the front panel
Status	BIOS RC3.1 and later will include an automatic reset and delay, which significantly reduces this failure symptom. At power-on, the BIOS counts down 10 seconds and performs a system reset. The reset process lasts eight seconds, thus adding 18 seconds to the total system boot time
Resolution	Fixed

### 4. Intermittent Network traffic Issues with on-board 82546EB port 1 with TCO Receive Packets in IPMI mode

Problem	When the primary channel (channel 1) of the on board 82546EB network controller is subjected to heavy network traffic; while simultaneously used for remote server management, the management connection may be lost. This drop in connectivity only affects the management connection, regular network traffic is not affected.
Status	Current users that may experience this issue are encouraged to move network traffic to the secondary channel (channel 2) of the 82546EB network controller or to an add-in network card
Resolution	Intel is moving to the 82546GB "Anvik II" network controller on successive mainboard revisions to resolve this issue.

### 5. Pressing the SDINT button on the front panel during POST may cause the system to hang

Problem	Pressing the SDINT during an initial power-on while the system is in early POST (prior to video controller initialization or prior to POST code 002Ah) can cause the platform to Hang.
Status	The BIOS will install the proper INIT handler after memory is detected (POST code 002Ah). The platform has been designed to halt and reset (via the FRB3

timer in 6 minutes) to keep from entering an infinite loop while executing startup routines from ROM prior to the INIT handler load, early in POST.

Resolution This is an expected behavior and is working as designed – will not fix.

## 6. Red Hat AS 2.1 installation fails despite low level HD formatting.

Problem While installing Red Hat Advance Server 2.1 64bit, an error message may be observed, “Invalid argument during read on /tmp/sda Retry Ignore Cancel”.

Status The Issue has been root caused to an incompatibility between Linux GPT code and SCSI disks that use an odd-number of sectors.

Resolution Fixed in Update 1.

## 7. Symmpi errors observed in the System Event Log (SEL).

Problem Symmpi errors have been observed in the system event log but the system completes POST and continues to load Microsoft Windows XP without failure.

Status Non Fatal “Symmpi 15” and “Disk 11” errors may be seen on occasion in the SEL Log when loading the Microsoft Windows XP operating system.

Resolution Loading the current LSI driver for Microsoft Windows XP (1.09.06 or later) will address these errors. The driver can be downloaded from the LSI online support website at: [www.lsilogic.com/support](http://www.lsilogic.com/support)

## 8. Baseboard Management Controller (BMC) cannot exit Firmware Transfer Mode after corruption of Operational Code.

Problem: Although rare, OP Code corruption could occur if AC power is lost during an update of the BMC firmware. The SR870BH2 will remain in Firmware Transfer Mode when the Operational Code (OP Code) of the BMC is corrupted.

Status: If corruption of the BMC OP Code occurs, the system will go into Firmware Transfer Mode. The user will have the ability to re-flash the BMC while in this mode. The system will still boot and the user will be able to flash the BMC using the FWUpdate utility in the EFI Shell. After re-flashing the BMC, it is required to AC cycle the system to exit out of Firmware Transfer Mode.

Resolution: Will not fix.

## 9. SR870BH2 platform may become unresponsive to IPMI commands (T/A 0685-1)

**Problem:** SR870BH2 nodes may become unresponsive or completely fail to respond to IPMI commands sent via LAN when the platform is powered down in a cluster environment.

**Status:** The 82546EB Network Interface Controller EEPROM default configuration allows Address Resolution Protocol responses (ARPs) to route directly to the BMC when the system is in a powered down state (Powered down state = AC source connected and standby current is active). As the volume of ARP traffic increases the BMC becomes less responsive to IPMI commands sent via LAN, ultimately ignoring all commands and failing to respond completely.

The failure thresholds for this issue have been characterized. The thresholds are related to cluster or network scaling and the proportional increase in ARP traffic. The 82546EB Network Interface Controller EEPROM configuration bits can be modified to enable a filter that blocks ARPs that would otherwise be routed to the BMC.

**Resolution:** Please refer to Technical Advisory T/A 0685-1 (Available on IBL) for additional information and related resolution paths.

## 10. The location of the EFI boot partition required to install Microsoft Windows 2003 may vary without notification in multiple drive configurations

**Problem:** During the initial installation phase of Microsoft Windows 2003 the user may not be notified which drive the EFI boot loader will be placed on in a multiple drive configuration.

**Status:** During the initial installation phase of Microsoft Windows 2003 the operating system will automatically scan all available drives and place the boot loader on the first open sector it encounters. This function is performed with out prior notification or requesting user input. In a multiple drive configuration the user cannot specify which drive the EFI boot loader will be placed.

**Resolution:** Will not be fixed, This problem has been defined as an OS usability issue. Until such time a change is made to the operating system installation options, the target drive for the boot loader can be specified by physically disconnecting or removing all drives not targeted for the OS install prior the initial installation phase of the operating system.

## 11. Unsupported RAID Adapter

- Problem:** Adaptec does not support RAID on IA-64 platforms (as of 2-Apr-04). RAID support can be enabled with the current BIOS provided on the adapter. However if a RAID volume is initialized, the operating system will find a RAID controller that it does not have a driver for.
- Status:** A request for support has been submitted to Adaptec, However there has been no commitment to support this feature on IA-64 at this time.
- Resolution:** Will not be fixed, This feature will remain unsupported until such time a driver is provided by the adapter manufacturer.

## 12. Red Hat Linux AS2.1 installation failure

- Problem:** Red Hat AS 2.1 installation may fail despite low level HD formatting. When installing Red Hat Advance Server 2.1 64bit, a pop-up message "Invalid argument during read on /tmp/sda Retry Ignore Cancel" may be observed.
- Status:** This Issue has been root-caused to an incompatibility between Linux GPT code and SCSI disks that use odd-number of sectors.
- Resolution:** Fixed, This issue has been verified fixed in AS2.1 Update 1 and EL3.0

## 13. SEL viewer may hang while loading SEL events

- Problem:** The SEL viewer (within the SMU) load progress dialog box may hang at 50% while loading. The system hangs and the SEL entries are never displayed.
- Status:** The SEL log contains a record for each alert event. When multiple alerts are sent to the BMC in rapid succession, the SEL pointer can be incorrectly written to the SEL (corrupted event pointer). If this occurs the SEL viewer is unable to read the "current" and "next" record identifiers.
- Resolution:** BMC26 includes code changes to resolve this problem and prevent the issue from occurring. The firmware can only prevent future occurrences of this issue, In the event that the pointer corruption has already occurred this firmware revision will not correct the corrupted pointers; the SEL must be cleared.



#### **14. Cannot recover “failed BIST” processors with BIOS PR6.2 or BIOS PR2.1**

- Problem:** Executing “processor retest” from BIOS Setup will not recover processors that have been disabled due to “Processor XX Failed BIST” .
- Status:** This has been observed with BIOS PR6.2 and PR2.1, but it does not affect prior BIOS releases. The issue is under investigation.
- Workaround:** Set the clear CMOS jumper and boot the system. Enable the processor retest in BIOS setup, power off the system, and reset the clear CMOS jumper. Reboot the system, and the processor retest should execute successfully. Another workaround for PR6.2 is to flash back to PR5.1, and then do a processor retest.
- Resolution:** Fixed. Use BMC 27 w/ BIOS PR6.2 or PR2.1.

#### **15. Sync Issues with onboard RAID mirror**

- Problem:** Data corruption may on a configured mirror if the system is shut down while the mirror is in a sync and one of the disks is swapped. When the system restarts, the sync will continue from the last sync point, not from the beginning of the drive. This will lead to the disk not having the same data..
- Status:** The failure can occur only with overt user action. If the sync is allowed to complete before shutdown and then swap out the drive, the sync pointer will then be indexed to the beginning of the drive and no data loss will occur.
- Resolution:** To be fixed in a future BIOS release.

#### **16. Memory error does not cause system LED to blink green**

- Problem:** TPS states that system LED will blink green when DIMM has error. This is incorrect.
- Status:** Green blinking LED will not light as a result of a DIMM error.
- Resolution:** Will not be fixed.

#### **17. Using Restore EFI Boot Manager Options in the Save/Restore Configuration Utility Will Cause Network Boot to Fail**

- Problem** Using Save/Restore EFI Boot Manager Options to copy EFI boot configuration from one server to another will cause network boot to fail on the restored server.

This is because the MAC address from the original system is copied to the restored system.

**Workaround** Use the EFI Boot Manager or the *bcfg* shell command to manually configure Boot Manager Options.

**Status** This issue will not be fixed.

## 18. “Shell: Cannot read from file – Device Error” Displayed after Completion of .nsh Script

**Problem** The following error shows up on the screen immediately after a .nsh has completed in the EFI shell. “shell: Cannot read from file – Device Error”. The script still executes properly.  
This issue occurs on BIOS Version PR6.2.

**Status** This issue has been fixed in BIOS versions with build number 183 and greater.

## 19. Cannot Install or Boot OS on Emulex\* LP9802 SAN with EFI BIOS/FW

**Problem** The system may hang during OS installation or during boot phase when Emulex LP9802 HBA is being used with EFI BIOS/FW.  
This issue has been found on system BIOS PR2.1/PR1.3 for Itanium® 2 Processor with up to 9MB L3 cache and PR6.0/PR5.1 for Itanium® 2 Processor with up to 6MB L3 cache.

**Status** This issue has been fixed in BIOS PR2.3 for Itanium® 2 Processor with up to 9MB L3 cache and will be fixed in BIOS PR6.1 for Itanium® 2 Processor with up to 6MB L3 cache.

## 20. Unable to Install or Boot SUSE\* Linux Enterprise Server 9

**Problem** When performing a fresh installation of SUSE® LINUX Enterprise Server 9 on SR870BH2, which uses BIOS PR3.1 (build 187) for Itanium® 2 Processors with up to 9MB L3 Cache or BIOS PR7.1 (build 185) / PR8.0 (build 188) for Itanium® 2 Processors with up to 6MB L3 Cache, the OS installer program will reach a point to notify that it will proceed with Text Interface and not Graphical Interface. Selecting OK to continue is the only way and the system will freeze at that point after you press OK to proceed further.

If the BIOS of a SR870BH2, which has already installed SUSE® LINUX Enterprise Server 9, is being upgraded to BIOS PR3.1 (build 187) for Itanium® 2 Processors with up to 9MB L3 Cache or BIOS PR7.1 (build 185) / PR8.0 (build 188) for Itanium® 2 Processors with up to 6MB L3 Cache, the system will hang during boot.

The same issue applies to SUSE® LINUX Enterprise Server 9 Service Pack 1.

**Resolution:** Fixed. Using SUSE® LINUX Enterprise Server 9 Service Pack 2 will resolve this issue.

Before upgrading BIOS of a SR870BH2, which has already installed SUSE® LINUX Enterprise Server 9, to BIOS PR3.1 (build 187) for Itanium® 2 Processors with up to 9MB L3 Cache or BIOS PR7.1 (build 185) / PR8.0 (build 188) for Itanium® 2 Processors with up to 6MB L3 Cache, please upgrade SUSE® LINUX Enterprise Server 9 to SUSE® LINUX Enterprise Server 9 Service Pack 2 first

## 21. Potential Electrical Marginality in Intel® Itanium® 2 Processor Integer Register File

**Problem** Under certain specific and complex environmental and data conditions a signal race condition can occur that may affect some registers in the Intel® Itanium® 2 Processor (up to 9MB L3 cache –codename Madison 9MB family of products) integer register file.

**Implication:** This issue may result in a nested OS fault, an application fault or other unexpected behavior. A nested fault may manifest in Unix/Linux as a “Kernel Panic” and in Windows\* as a “blue screen”.

**Workaround:** None at this time.

**Status** Fixed for Madison 9MB family of processors shipped after September 2006. For further details see the *Intel® Itanium® 2 Processor Specification Update Erratum E167*.

## 22. System may hang / reset when doing processor test using Platform Diagnostic Utility

**Problem** System may hang / reset when doing processor test running Platform Diagnostic Utility Ver1.0 Build 14 through Resource CD with Intel® Itanium® 2 Processor up to 9MB L3 cache –codename Madison 9MB family of products.

**Implication:** This issue is caused by software compatibility. There is no real hardware damage. This issue doesn't exist with Intel® Itanium® 2 Processor 9000 Series

Workaround: Running the utility standalone from hard drive (not through Resource CD) will fix this issue.

- In the root directory of system EFI partition, create a directory as \efi\service\diagnostics, and make it as the current directory
- Copy all files from directory \Utilities\FieldDiags\ on Resource CD to \efi\service\diagnostics
- Execute fielddiags.efi. This will extract all the files.
- Execute fielddiags.nsh. This will launch the diagnostic utility GUI. You can do the test as usual.

Status Will not Fix

## Documentation Changes

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### 1. ISM is required for OS Watchdog Timer support

The BIOS Setup offers a control item that allows the OS load watchdog timer to be enabled or disabled. The default for the OS load watchdog timer function is Disabled. This menu item is located under the System Management Submenu. It is to be noted that the system must have Intel® Server Management (ISM) V6.0, or later loaded in order to refresh the timer or disable it.

### 2. Recovery from Itanium® 2 Processor with up to 9MB L3 cache to Itanium® 2 Processor with up to 6MB L3 cache removed from BIOS 225.P03 or later

BIOS recovery support from Itanium® 2 Processor with up to 9MB L3 cache (codename Madison 9MB family) to Itanium® 2 Processor with up to 6MB L3 cache (codename Madison 6MB family) was removed in BIOS PR3.4 (build 225.P03) or later. It is requested to do a BIOS downgrade to PR3.3 (build 191.P03) or earlier before performing BIOS recovery from Madison 9MB processor to Madison 6MB processor.