Intel® Server Boards

- **SE8500HW4**
- **SE8501HW4**

Intel® Server Platforms

- **SR4850HW4**
- **SR6850HW4**
- **SR4850HW4/M**
- **SR6850HW4/M**
- **SR4850HW4S**
- **SR6850HW4S**

Specification Update

Enterprise Platforms and Services Marketing

Revision History

Date	Modifications
September, 2005	Initial release.
October, 2005	Added errata 11, 12, 13, 14, 15.
November, 2005	Added errata 16.
December, 2005	Added errata 17, 18. Added document change 3.
January, 2006	Added errata 19, 20. Added document change 4.
February, 2006	Added document change 5.
March, 2006	Added errata 21. Added document change 6, 7.
April, 2006	Added PCN table updates. No other updates.
May, 2006	Added errata 22, 23.
June, 2006	Added server board SE8501HW4
	Added server platforms SR4850HW4/M and SR6850HW4/M
	Updated document Preface
	Added PCN tables.
	Added errata 24, 25.
July, 2006	Added errata 26 and 27.
August, 2006	
September 2006	
October 2006	Added PCN table updates
	Added server platforms SR4850HW4/M SAS and SR6850HW4/M SAS
November 2006	Added PCN table updates
December 2006	Added PCN table updates
January 2007	Added PCN table updates
February 2007	
March 2007	Update the errata status, added errata 29.added document change 8
April 2007	Added PCN table updates
May 2007	
June 2007	
July 2007	Added PCN table updates
August 2007	
September 2007	Update the errata status
October 2007	
November 2007	
December 2007	Added the PCN table updates, added the errata 30
January 2008	

Disclaimers

The Intel® Server Platforms referenced in this document 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.

Intel® Server Boards SE8500HW4, SE8501HW4; Intel® Server Platforms SR4850HW4, SR6850HW4, SR4850HW4/M, SR6850HW4/M Specification Update
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Contents

Preface

This document is an update to the specifications contained in the following documents:

- Intel® Server Board Set SE8500HW4 Technical Product Specification (Order Number D22893-001)
- Intel® Server Board Set SE8501HW4 Technical Product Specification (Order Number D24295-001)
- Intel® Server Platforms SR4850HW4 and SR4850HW4/M Technical Product Specification (Order Number D22226-002)
- Intel® Server Platforms SR6850HW4 and SR6850HW4/M Technical Product Specification (Order Number D23151-002)

This document is intended for hardware system manufacturers and software developers of applications, operating systems, or tools. It contains specification changes, specification clarifications, errata, and document changes.

See the *Intel® Xeon® Processor MP Specification Update* (Order Number 290741-xxx) for specification updates concerning the Intel® Xeon® Processor MP. Items contained in the *Intel® Xeon® Processor MP Specification Update* that either do not apply to the product 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, platforms, BIOS, and components covered by this update.

1. Product Code: SHW6UR – Intel® Server Platform SR6850HW4

MM#	Server TA #	Baseboard PBA #	Memory Board PBA #	BIOS Revision	Change Description (PCN #)
873098	C92308-002	C51891-602	C53307-501	3.0	Product launch
873098	C92308-003	C51891-602	C53307-501	3.0	
874583	C92308-004	C51891-603	C53307-501	4.0	105310-02
874583	C92308-005	C51891-603	C53307-501	4.0	105658-00
874583	C92308-006	C51891-603	C53307-501	4.0	105737-00
874583	C92308-007	C51891-603	C53307-501	4.0	105811-00
874583	C92308-008	C51891-603	C53307-501	4.0	105819-02
877485	C92308-009	C51891-603	C53307-501	6.0	105568-06
877485	C92308-010	C51891-604	C53307-501	6.0	106002-02
877485	C92308-011	C51891-604	C53307-501	6.0	106064-03

2. Product Code: SHW4UR – Intel® Server Platform SR4850HW4

MM#	Server TA #	Baseboard PBA #	Memory Board PBA #	BIOS Revision	Change Description (PCN #)
873092	C92307-002	C51891-602	C53307-501	3.0	Product launch
874581	C92307-003	C51891-603	C53307-501	4.0	105307-01
874581	C92307-004	C51891-603	C53307-501	4.0	105653-00
874581	C92307-005	C51891-603	C53307-501	4.0	105636-01
874581	C92307-006	C51891-603	C53307-501	4.0	105737-00
874581	C92307-007	C51891-603	C53307-501	4.0	105632-03
874581	C92307-008	C51891-603	C53307-501	4.0	105819-02
877483	C92307-009	C51891-603	C53307-501	6.0	105568-06
877483	C92307-010	C51891-604	C53307-501	6.0	106002-02
877483	C92307-011	C51891-604	C53307-501	6.0	106064-02
877483	C92307-012	C51891-604	C53307-501	6.0	106253-00

3. Product Code: BHWBASE – Intel® Server Board Set SE8500HW4 Main Board

MM#	Baseboard TA #	Baseboard PBA #	BIOS Revision	Change Description (PCN #)

868982	C95272-602	C51891-602	3.0	Product launch
875336	C95272-603	C51891-603	4.0	
877488	C95272-604	C51891-604	6.0	105993-00

4. Product Code: BHW4DIMM – Intel® Server Board Set SE8500HW4 Memory Board

MM#	Memory board TA #	Memory board PBA #	Change Description
868983	C95287-501	C53307-501	Product launch

5. Product Code: SHW6URM – Intel® Server Platform SR6850HW4/M

MM#	Server TA #	Baseboard PBA #	Memory Board PBA #	BIOS Revision	Change Description (PCN #)
877219	D35289-002	D22177-553	D21460-252	8.0	Product launch
879452	D35289-003	D35289-602	D21460-252	10. 0	106279-03
879452	D35289-003	D35289-602	D21460-252	10. 1	106945-00
879452	D35289-004	D35289-602	D21460-252	10. 1	
879452	D35289-005	D35289-603	D21460-252	10. 1	107022-01
879452	D35289-005	D35289-604	D21460-253	10. 1	107022-02
879452	D35289-006	D35289-604	D21460-253	10. 1	107329-01
879452	D35289-007	D35289-604	D21460-253	10. 1	107689-00
879452	D35289-008	D35289-604	D21460-253	10. 1	106912-03

6. Product Code: SHW4URM – Intel® Server Platform SR4850HW4/M

MM#	Server TA #	Baseboard PBA #	Memory Board PBA #	BIOS Revision	Change Description (PCN #)
877222	D35286-003	D22177-553	D21460-252	8.0	Product launch
877222	D35286-004	D22177-553	D21460-252	8.0	
879454	D35286-005	D22177-602	D21460-252	10.0	106279-03
879454	D35286-005	D22177-602	D21460-252	10.1	106945-00
879454	D35286-006	D22177-602	D21460-252	10.1	
879454	D35286-007	D22177-603	D21460-252	10.1	107022-01
879454	D35286-007	D22177-604	D21460-253	10.1	107022-01
879454	D35286-008	D22177-604	D21460-253	10.1	107329-01

879454	D35289-009	D35289-604	D21460-253	10.1	107689-00

7. Product Code: SHW4URM3SA – Intel® Server Platform SR4850HW4S

MM#	Server TA #	Baseboard PBA #	Memory Board PBA #	BIOS Revision	Change Description (PCN #)
881586	D46299-001	D22177-553	D21460-252	8.0	Product launch
886995	D46299-002	D22177-602	D21460-252	10.0	106279-03
886995	D46299-002	D22177-602	D21460-252	10.1	106945-00
886995	D46299-003	D22177-602	D21460-252	10.1	
886995	D46299-004	D22177-602	D21460-252	10.1	
886995	D46299-005	D22177-603	D21460-252	10.1	107022-01
886995	D46299-005	D22177-604	D21460-253	10.1	107022-02
886995	D46299-006	D22177-604	D21460-253	10.1	107329-01
886995	D46299-007	D22177-604	D21460-253	10.1	107689-00

8. Product Code: SHW6URM3SA – Intel® Server Platform SR6850HW4S

MM#	Server TA #	Baseboard PBA #	Memory Board PBA #	BIOS Revision	Change Description (PCN #)
881586	D46296-001	D22177-553	D21460-252	8.0	Product launch
887385	D46296-002	D22177-602	D21460-252	10.0	106279-03
887385	D46296-002	D22177-602	D21460-252	10.1	106945-00
887385	D46296-003	D22177-602	D21460-252	10.1	
887385	D46296-004	D22177-602	D21460-252	10.1	
887385	D46296-005	D22177-603	D21460-252	10.1	107022-01
887385	D46296-005	D22177-604	D21460-253	10.1	107022-02
887385	D46296-006	D22177-604	D21460-253	10.1	107329-01
887385	D46296-007	D22177-604	D21460-253	10.1	107689-00
887385	D46296-008	D22177-604	D21460-253	10.1	106912-03

9. Product Code: BHWBASEM – Intel® Server Board Set SE8501HW4 Main Board

MM#	Baseboard TA #	Baseboard PBA #	BIOS Revision	Change Description (PCN #)
876150	D30271-553	D22177-553	8.0	Product launch

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885977	D30271-602	D22177-602	10.0	106279-03
885977	D30271-603	D22177-603	10.1	106983-01
885977	D30271-604	D22177-604	10.1	107141-00

10. Product Code: BHW4DIMMM – Intel® Server Board Set SE8500HW4 and SE8501HW4 Memory Board

MM#	Memory board TA #	Memory board PBA #	Change Description
876163	D25272-252	D21460-252	Product launch
876163	D25272-253	D21460-253	107141-00

Summary Tables of Changes

The following tables indicate the errata and the document changes that apply to the InteIP®P Server Platforms, SR4850HW4/M, and SR6850HW4/M. 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.

No Fix: 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.	No fix	Microsoft Windows Server 2003*, Enterprise Edition install halts when certain bootable USB flash devices are attached
2.	Fixed	Memory throttling not enabled under all situations
3.	No Fix	Serial port COM 2 does not appear in BIOS setup
4.	No Fix	Memory hot upgrade crashes Microsoft Windows Server 2003*, Enterprise Edition (IA-32 version)
5.	No Fix	Some keystrokes may be lost on a Serial Over LAN connection
6.	No Fix	PCI hot plug is not supported for bridged components
7.	No Fix	Memory RAS configuration is lost when system is rebooted in a degraded state
8.	No Fix	USB flash devices cannot be used to load the RAID-on Motherboard (ROMB) driver for Microsoft Windows Server 2003*, Enterprise Edition
9.	No Fix	System appears unresponsive when installing supplemental storage drivers from a USB floppy on Microsoft Windows Server 2003*, Enterprise Edition*
10.	No Fix	ROMB configuration is not possible over console redirection
11.	Fix	ROMB with the Intel® RAID Smart Battery only enables Write Back mode when the battery is fully charged
12.	Fixed	Double-bit errors may be logged as correctable errors
13.	Fixed	POST Code 8300, Baseboard Management Controller Get Self Test Results displayed during boot
14.	Fixed	BIOS recovery fails from USB flash device when a hard drive with operating system is present
15.	No Fix	Onboard networking devices are not displayed under the embedded NIC menu in boot options maintenance
16.	Fixed	BIOS lacking support for processor steppings A0 and B0
17.	Fix	BIOS memory hot replace restrictions
18.	No Fix	Slot 2 power faults if hot-plug power is cycled too quickly
19.	No Fix	BMC may not capture processor changes under certain conditions
20.	Fixed	One active power supply may lead to processor throttling

No.	Plans	Description of Errata
21.	Fix	Server Configuration Wizard
22.	No Fix	Front USB Port Initialization
23.	Fixed	Intel® Local Control Panel may display unknown marks
24.	No Fix	Using BIOS Setup utility on a serial-attached terminal
25.	No Fix	Multiple inserts and removals of USB flash memory device causes EFI to display incorrect drive information
26.	No Fix	During the installation of the Intel-provided ATI* video drivers in Microsoft Windows 2000* AS SP4, a message is displayed that Direct X9* needs to be installed
27.	Fixed	Wake On LAN using a PCI Express* Intel® Pro 1000 PT does not wake up the server.
28.	Fixed	Installing Intel(R) Xeon(R) MP processor 7100 series processors of different types will cause an IERR to be reported
29.	No Fix	Linux is not able to use Write-Back as the default MTRR setting
30.	Fix	False PSU-presence logged in SEL

Table 2. Documentation Changes

No.	Plans	Description of Documentation Change
1.	Fixed	Support for Demand-Based Switching with Enhanced Intel SpeedStep® Technology
2.	Doc	Missing beep codes
3.	Doc	Video resolution support to 1024 x 768
4.	Doc	Control panel power button behavior
5.	Doc	Power supply power cord disconnect
6.	Doc	Post Progress LEDs
7.	Doc	Temporary Performance Reduction is Normal for Hot Memory Add
8.	Doc	Front Panel LAN Status LED

The rest of this document provides 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.   Microsoft Windows Server 2003*, Enterprise Edition installation halts when certain bootable USB flash devices are attached

Problem   Microsoft Windows Server 2003*, Enterprise Edition will not boot during installation with some bootable USB flash devices attached. This issue was seen with a SanDisk* Cruzer* mini 512 MB part. Other devices may be affected.

Implication   The operating system will not install when certain USB flash devices are attached.

Workaround   Remove any USB flash devices during operating system installation. Reinsert the device after the operating system has finished loading.

Status   Will not fix.

2.   Memory throttling not enabled under all situations

Problem   Firmware does not probe the top cover sensor or fan presence/fail during boot.

Implication   The server may overheat when the top cover is not installed or a system fan is removed or fails at boot. The system should throttle the memory bandwidth to decrease the heat generated from this subsystem when certain failure situations are encountered.

Workaround   Ensure the top cover is installed, all fans are present and no fans are in a failed state before powering up the system.

Status   Fixed in BMC34.

3.   Serial port COM 2 does not appear in BIOS Setup

Problem   COM2 is a Windows Hardware Quality Labs (WHQL) requirement and an internal port for Serial Over LAN (SOL) support.

Implication   COM2 still appears in the Microsoft Windows* Device Manager but it cannot be configured in BIOS setup.

Workaround   None.

Status   Will not fix.

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4.   Memory hot upgrade crashes Microsoft Windows Server 2003*, Enterprise Edition (IA-32 version)

Problem   The operating system does not support hot upgrading memory if the total memory is less than 4 GB after the upgrade. This is a known issue by Microsoft and is documented as Knowledge Base article KB875542. Microsoft Windows 2003*, Enterprise x64 Edition is not affected by this issue.

Implication   Memory hot upgrade will not work if the total system memory is less than 4 GB after the upgrade.

Workaround   Either perform memory hot upgrades with Microsoft Windows 2003*, Enterprise x64 Edition or with more than 4 GB of system memory.

Status   Will not fix.

5.   Some keystrokes may be lost on a Serial Over LAN connection

Problem   The firmware has a limitation of a 19.2k baud connection for Serial Over LAN. Very fast typing can exceed this bandwidth.

Implication   If too many keystrokes are received by the Serial Over LAN connection some may be dropped and characters will need to be retyped.

Workaround   Upgrading to BMC39 has improved the bandwidth over earlier versions of the firmware, but does not completely alleviate the issue.

Status   Will not fix.

6.   PCI hot-plug is not supported for bridged components

Problem   The BIOS resource padding algorithm is not compatible with the needs of Microsoft Windows Server 2003*, Enterprise Edition when hot adding devices that have bridges.

Implication   PCI Express* and PCI-X* adapters with bridged components cannot be used for PCI Hot-plug operations.

Workaround   None.

Status   Will not fix.

7. Memory RAS configuration is lost when system is rebooted in a degraded state

Problem   The BIOS does not retain the state of failed/removed boards in a memory RAS configuration.

Implication   When the BIOS is configured for memory mirroring or memory RAID modes, a memory board is removed or failed, and the system is turned off before the memory board is replaced the system will boot to the default maxiumum performance mode.

Workaround   Complete all memory board hot plug operations before powering off the server.

Status   Will not fix.

8. USB flash devices cannot be used to load the RAID-on-MotherBoard (ROMB) driver for Microsoft Windows Server 2003*, Enterprise Edition

Problem   USB storage devices default to hard disk drive emulation, however Microsoft Windows* will only recognize floppy devices for the F6 method to add device drivers during installation.

Implication   A USB flash device cannot be used to load the ROMB drivers for Microsoft Windows Server 2003*, Enterprise Edition

Workaround   A USB floppy disk drive and floppy disk must be used to load ROMB drivers for Microsoft Windows Server 2003*, Enterprise Edition

Status   Will not fix.

9. Server appears unresponsive when installing supplemental storage drivers from a USB floppy on Microsoft Windows Server 2003*, Enterprise Edition

Problem   USB enumeration intermittently fails during Microsoft Windows* runtime. This is usually noticed due to a non-functioning keyboard or mouse. However, because of the way Microsoft Windows* loads and unloads drivers during installation, this behavior is the most noticeable when using the F6 method of driver replacement.

Implication   When installing supplemental storage drivers from a USB floppy using the F6 method the user is prompted for input at about the "34 minutes remaining" point of the Graphical User Interface install. In some cases the keyboard and mouse may be unresponsive, giving the appearance of a hung system. Since the normal plug and play mechanisms are disabled during the installation, unplugging and then re-plugging the keyboard and mouse will not server as a work-around for this issue.

Workaround   In BIOS Setup, disable USB2.0 support before installing the operating system. After completing the installation, USB2.0 support can be re-enabled with no further issues.

Status   Will not fix.

10. ROMB configuration is not possible over console redirection

Problem   When console redirection is setup in BIOS, "Ctrl-M" and "Enter" are mapped to the same keystroke.

Implication   RAID configuration is not possible over console redirection.

Workaround   Perform the RAID configuration locally, with a Keyboard / Video / Mouse (KVM) or by using the operating system application.

Status   Will not fix.

11. ROMB with the Intel® RAID Smart Battery only enables Write Back mode when the battery is fully charged

Problem   The ROMB firmware will not allow the Write Back setting to be immediately enabled when the Intel® RAID Smart Battery is charging.

Implication   The Write Back setting will only take affect when the Intel® RAID Smart Battery is fully charged and in a good state. Changing this setting will have no affect until the battery has charged.

Workaround   Fully charge the Intel® RAID Smart Battery before attempting to set the Write Back state. Leaving the Intel® RAID Smart Battery attached to a server that is powered on overnight should fully charge the battery.

Status   WIII be fixed in future versions of ROMB firmware.

12. Double-bit errors may be logged as correctable errors

Problem   Double-bit errors on DIMM_1A may be incorrectly logged as single-bit errors in the System Event Log (SEL).

Implication   Double-bit errors found on a DIMM installed in socket DIMM_1A will be incorrectly logged as correctable errors. The system will continue to operate as expected and will correctly respond to double-bit errors.

Workaround   None.

Status   Fixed in BIOS P07.

13. POST Code 8300, Baseboard Management Controller Get Self Test Results displayed during boot

Problem   Several types of generic Baseboard Management Controller (BMC) errors are logged as POST code error 8300. The most frequent cause is a recoverable bus retry operation on an I^{2}C bus. Since this transaction is recoverable the system does not need to pause during POST.

Implication   The POST code lacks information to determine the source of the error and may incorrectly alert the operator to a recoverable warning.

Workaround   Remove AC power cord(s) from the system to allow standby current to drain. After five minutes, attach the power cord(s), boot the system and reflash the BMC firmware.

Status   fixed in BMC34.

14.   BIOS recovery fails from USB flash device when a hard drive with operating system is present

Problem   During a BIOS recovery, a hot swap disk drive has a higher boot priority than a USB flash device.

Implication   Instead of booting to the USB flash device the recovery process tries to boot from the hard disk drive and the BIOS recovery operation is skipped.

Workaround   Before performing a BIOS recovery, copy the files for the BIOS recovery to a bootable ROM-DOS* / FreeDOS* CD-ROM disk, or remove any hot-swap hard disk drives from the server.

Status   Fixed in BIOS P07.

15.   Onboard networking devices are not displayed under Embedded NIC menu in Boot Options Maintenance

Problem   The embedded network controller must register as a Legacy Bootstrap Entry Vector (BEV) device because it does not have INT13h support.

Implication   In the Boot Options Maintenance menu the embedded network controller is shown under Legacy BEV devices instead of under Embedded Network devices.

Workaround   To perform a Preboot eXecution Environment (PXE) boot with the embedded network controller, the operator must choose the device from Legacy BEV devices instead of Embedded Network devices.

Status   Will not fix.

16.   BIOS lacks support for processor steppings A0 and B0

Problem   The BIOS uses CPUID instruction to determine family and stepping. An A0 stepping of 64-bit Intel® Xeon® processors MP with 1MB L2 cache reports 0F41h. A B0 stepping reports 0F49H. P06 BIOS and earlier treat this as greater than a one stepping difference.

Implication   Mixed A0 and B0 stepping 64-bit Intel® Xeon® processors MP with 1MB L2 cache are not supported in P06 BIOS or earlier. Although processor specifications indicate that these processors are supported, this BIOS support is not yet available. BIOS support will be added in a future release.

Workaround   Ensure all 64-bit Intel® Xeon® processors MP with 1 MB L2 cache are of same stepping until this is corrected in the BIOS.

Status   Fixed in BIOS P07.

17. BIOS memory hot replace restrictions

Problem   The BIOS accepts only two hot replace operations in the Memory RAID mode with
                 RAID Upgrade Gap Size not set to "Disabled" in BIOS setup. The supported hot
                 replace operations are as follows:

       a. Hot Replace Total Memory = Original Memory
       b. Hot Replace Total Memory = Original Memory + RAID Upgrade Gap Size
          exactly

Implication   When RAID Upgrade Gap Size is set to a given size in BIOS setup, hot replace
                 only supports hot replacing the original memory DIMMs and the RAID Upgrade
                 Gap Size exclusively.

Workaround   None.

Status   Will be fixed in a future version of the BIOS.

18. Slot 2 power faults if hot-plug power is cycled too quickly

Problem   An isolated power fault may occure resulting in Slot 2 (PCI-X*) having no clock
                 if Slot 2 power cycles from off to on in less then 310ms.

Implication   There exists a very remote potential for Slot 2 to fail a hot-plug event if driven
                 by software without the actual replacement of the adapter. This will not occur
                 with a physical Hot-plug of a PCI-X* adapter.

Workaround   None.

Status   Will not fix.

19. BMC may not capture processor changes under certain conditions

Problem   While the platform power supply remains connected to a live circuit, the server
                 board still receives standby power regardless of being in an off state. This
                 standby power is 3.3 volt.

Implication   If processors are added or removed from the platform while AC power is
                 applied, regardless of DC state, the BMC will not report the change to the
                 number of processors. Additionally, a risk of damage remains to hardware and
                 processors and is against documented procedures listed in the product guides.

Workaround   As standard prodecure, all power to the platform should be secured before
                 opening the chassis. (Not a workaround)

Status   Will not fix.

20.   One active power supply may lead to processor throttling

Problem   A change to the PLD code is required to reduce the number of conditions, which can cause processor throttling to occur.

Implication   A platform with only one active power supply but both power supplies present will induce throttling of the processors.

Workaround   Connect both power supplies in each platform to the appropriate AC power source.

Status   Fixed.

21.   Server Configuration Wizard not updating asset tag

Problem   Server Configuration Wizard (SCW) is updating the Intel® Management Module FRU Asset Tag and not the mainboard FRU asset tag.

Implication   The asset tag will not display in Intel® Server Management and the embedded web server within the Intel® Management Module – Advanced edition.

Workaround   Use FRUSDR.exe included in the Software Update Package (SUP) to update the mainboard FRU asset tag.

Status   Will be fixed in future release of the Server Configuration Wizard.

22.   Front USB Port Initialization

Problem   In rare cases, the front USB hub is not configured correctly during POST.

Implication   Front panel USB ports may not be recognized by the operating system.

Workaround   Refresh the root USB hub from the device manger in Microsoft Windows*. Use any of the rear USB ports, or reboot the system without the USB device installed and hot plug after boot.

Status   Will not fix.

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23. Intel® Local Control Panel may display unknown marks

Problem   Intel® LCP FW has some issues with formatting SDR records.

Implication   It may appear that some sensor data records (SDRs) are displayed as
                  unknown marks.

Workaround   None.

Status   Fixed.

24. Use of BIOS Setup utility on serial-attached terminal

Problem   The BIOS Setup utility requires a terminal supporting 25 lines.

Implication   The BIOS Setup utility menu options become corrupted after scrolling through
                  them when the utility is used on a serial terminal that supports only 24 lines.

Workaround   Use a serial terminal that supports 25 lines.

Status   Will not fix.

25. Multiple inserts and removals of USB flash memory device causes EFI to display incorrect drive information

Problem   After inserting and removing a USB flash memory device multiple times while
                  booted to the EFI shell, the "map –r" command displays incorrect number of file
                  systems and block devices.

Implication   The EFI shell may not update the file system and block device information.
                  Information is not correctly displayed.

Workaround   Reboot the server to clear this condition.

Status   Will not fix.

26. During the installation of the Intel-provided ATI* video drivers in Microsoft Windows 2000* AS SP4, a message is displayed that Direct X9* needs to be installed

Problem   When using Windows 2000* AS SP4 the ATI* video driver installation program detects if Direct X9* is already installed.

Implication   If Direct X9* is not installed, then the ATI* drivers direct the installer to install Direct X9.

Workaround   Ignore this message and continue with the installation of the ATI drivers.

Status   Will not fix.

27. Wake On LAN using a PCI Express* Intel® Pro 1000 PT adapter does not wake up the server

Problem   When shutting down the server, the BIOS does not send the required state to the PCI-Express* Intel® Pro 1000 PT adapter.

Implication   The PCI-Express Intel® Pro 1000 PT adapter does not know a shutdown is occuring and the adapter performs a reset. Once reset, the adapter will not accept a WOL signal while the server is shutdown.

Workaround   Use the IBAUTIL.EXE utility to set the PCI-Express Intel® Pro 1000 PT adapter's configuration parameters:

         IBAUTIL -NIC=01 -WOLE
         IBAUTIL -NIC=01 -FE
         IBAUTIL -NIC=02 -WOLE
         IBAUTIL -NIC=02 –FE

         http://support.intel.com/support/network/adapter/pro100/bootagent/

Status   Fixed in BIOS P10.

28. Installing Intel® Xeon® MP processor 7100 series processors of different types will cause an IERR to be reported

Problem   Installing Intel® Xeon® MP processor 7100 series, which are not identical, into the same server may cause IERR.

Implication   Installing a server with multiple Intel® Xeon® MP processor 7100 series using different speeds or cache sizes results in an IERR instead of the expected CPU mismatch error and system halt. Installing processors that have different cache sizes, or more than one stepping difference is not supported.

Workaround   Install identical Intel® Xeon® MP processor 7100 series in the same server.

Status   Fixed by BIOS P11.

29.   Linux is not able to use Write-Back as the default MTRR setting

Problem   Linux is not able to use Write-Back as the default MTRR setting due to a chipset limitation that does not allow the MTRR default to be set to Uncachable.

Implication   Some memory ranges will not be addressable.

Workaround   None.

Status   Will not fix.

30.   Incorrect power supply presence entries occasionally recorded in the System Event Log (SEL)

Problem   Some combinations of Intel(R) Server Management Modules ending with -7xx and SE8501HW4 main boards are subject to a random false signal detection causing the BMC to believe a power supply has gone offline. This results in a false event in the SEL and the fans boosting their speeds until the system correctly detects the power supply presence signal.

Implication   Occasionally power supply presence warnings are logged in the SEL and sometimes have randomly spurious fan boosting even when there is no actual issue. These entries are warnings that can be ignored and do not affect system functionality.

Workaround   None.

Status   Will be fixed in xxxx-8xx revision of Intel® Server Management Modules.

Documentation Changes

Documentation changes will be incorporated into a future version of the appropriate Intel server product documentation.

1. Support for Demand-Based Switching with Enhanced Intel SpeedStep® Technology

Before BIOS P04, there was no support for Demand-Based Switching (DBS) with Enhanced Intel SpeedStep® Technology. Product guides and technical product specifications do not refer to this added feature.

2. Missing beep codes

The following diagnostic beep codes may occur, but are missing from the *Intel® Server Board Set SE8500HW4 Technical Product Specification*:

0	1-5-4-3 Chipset control failure
1	1-5-4-4 Power control fault

3. Video resolution support for 1024 x 768

The integrated ATI* video solution supports up to 1600 x 1200 to two video ports. However, with three video ports, the TV OUT port used for the Intel® Management Module – Advanced Edition port for video redirection and is limited to 1024 x 768.

For Intel® Server Board Set SE8500HW4 with Intel® Management Module – Advanced Edition, the ATI* integrated video resolution support is limited to 1024 x 768. This is due to the requirement to support three video ports, front/rear ports and the port for video redirection.

4. Control panel power button behavior

The control panel power button may reboot the platform if pressed while not booted to an operating system. While booted to an operating system, then power button needs to be depressed for at least four seconds to force the platform to an off state. From the off state, momentarily depressing and releasing the power button will power the platform to the on state.

5.   Power supply power cord disconnect

For the Intel® Server Platform SR6850HW4, the front panel system status LED remains green and blinks when a power cord is removed from the power supply.

For the Intel® Server Platform SR4850HW4, the front panel system status LED becomes amber when a power cord is removed from the power supply.

6.   POST Progress LEDs

The BIOS provides the current stage of the POST process via a block of eight LEDs. The LEDs shown below are updated to the correct reference designators.

POST Progress LED Location and Example

LED Reference Designator	Bit	Example: Initialize Memory	
DS7D1	7 (MSB)		
DS7D2	6		
DS7D3	5	On	
DS7D4	4		0x27
DS7D5	3		
DS7D6	2	On	
DS7D7	1	On	
DS7D8	0 (LSB)	On	

7.   Temporary performance reduction is normal for hot memory add

When adding memory to a running system the operating system must scan and initialize the added memory, then integrate and configure the memory into the operating system internal data structures whose purpose is to account for system memory. Additionally, the operating system must do this without disrupting or otherwise impacting existing memory and without corrupting any running system processes or applications. Accesses to the memory data structures in the operating system are typically interlocked operations. All these factors make this a fairly intensive and complex operation that will consume a noticeable amount of CPU time.

When the operating system detects newly added memory, it is normal for the processor usage to go up as the new pages are initialized. This process can take a significant amount of time, depending on the amount of memory added. If noticed, please check that the processor and network usage go back to normal within about 20-30 minutes after a hot memory add operation.

8.   Front Panel LAN Status LED

The functions shown below are updated to the correct reference stastus.

LED	Function		
LAN1, LAN2 Status LEDs (green)	Indicates LAN activity status		
	Off	Idle or Inactive	No access
	Blinking	Active	Access

Intel® Server Boards SE8500HW4, SE8501HW4; Intel® Server Platforms SR4850HW4, SR6850HW4, SR4850HW4/M, SR6850HW4/M Specification Update
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