Intel® Server Board SE7501CW2

Intel® Server Chassis SC5200 Base & BRP

Intel® Server Chassis SC5250-E

Intel® Entry Server Chassis SC1350-E

Specification Update

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Intel Order Number C50048-001

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August, 2004

- **Enterprise Platforms and Services Marketing**

Revision History

Date	Modifications
April, 2003	Initial release.
May, 2003	Added comments on Windows* Server 2003 support.
June, 2003	Added information for the D1 stepping BIOS support, and Windows 2003 support
July, 2003	Added LANDesk Client Manager 6.3 Windows 2003 errata. Rolled old erratum's into TPS v1.10, and Intel® Xeon™ Processor 1MB Cache support.
August, 2003	Updated LANDesk* Client Manager 6.3.
September, 2003	Added additional LANDesk* issues related to BIOS v1.06.
October, 2003	No update
November, 2003	Added errata 7, updated errata 4,5,6
December, 2003	Updated errata 7
January, 2004	Added errata 8
February, 2004	Updated errata 7,8
March, 2004	No update
April, 2004	Updated errata 6
May, 2004	Updated document errata 1, added document errata 2
June, 2004	No update
July, 2004	Added document errata 3
August, 2004	No update

Disclaimers

The Intel® Server Board Intel® Server Board SE7501CW2, or the Intel® Server Chassis SC5200 Base/BRP, or the Intel® Server Chassis SC5250-E, or the Intel® Server Chassis SR1350-E 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

This document is an update to the product definition specified in the Intel® Server Board *Intel® Server Board SE7501CW2 Technical Product Specification* (Order Number C33371-002), Intel® Server Chassis SR1350-E Technical Product Specification (Order Number TBD), Intel® SC5250-E Technical Product Specification (Order Number TBD), and Intel® Server Chassis SC5200 Technical Product Specification (Order Number A99108-001). It is intended for hardware system manufacturers and software developers of applications, operating systems, or tools. It will contain specification changes, specification clarifications, errata, and document changes.

Refer to the *Intel® Xeon™ Processor Specification Update* for specification updates concerning the Intel® Xeon™ processor. *Items contained in the Intel® Processor Specification Update* that either do not apply to the Server Board SE7501CW2 or have been worked around is noted in this document. Otherwise, it should be assumed that any processor errata for a given stepping are applicable to the Printed Board Assembly (PBA) revisions(s) associated with that stepping.

Nomenclature

- **Specification Changes** are modifications to the current published specifications for the Server Board SE7501CW2, and Server Chassis SC5200. These changes will be incorporated in a future release of the given document.

- **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 a future release of the given document.

- **Documentation Changes** include typos, errors, or omissions from documents that are currently published. These documents may include Product Specs and Users Guides. These changes will be incorporated in a future release of the given document.

- **Errata** are design defects or errors. Errata may cause operation of a specified product 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. Errata listed in this document that have no plans to be fixed will be listed in later revisions of current published specifications for the given product.

Product Scope

Below are the specific SE7501CW2 board revisions covered in this document.

Product Code	Order Code (MM#)	Top Assembly # (TA#)	Baseboard PBA #	BIOS Rev. / Build #	HSC Revision	Product Change Notification #
BCW533BB SE7501CW2	852948 852945	C28924-302 C30360-001	C26740-302 C26740-302	1.00	.11	(1st Production)
BCW533BB SE7501CW2	852948 852945	C28924-302 C30360-001	C26740-302 C26740-302	1.01	.11	Web-post only
BCW533BB SE7501CW2	852948 852945	C28924-302 C30360-002	C26740-303 C26740-303	1.03	.11	103278-02
BCW533BB SE7501CW2	852948 852945	C28924-303 C30360-002	C26740-303 C26740-303	1.04	.11	Web-post only
BCW533BB SE7501CW2	856163 852945	C28924-304 C30360-003	C26740-304 C26740-304	1.06	.11	103507-01
BCW533BB SE7501CW2	860091 852945	C28924-305 C30360-004	C26740-305 C26740-305	1.07	.11	103860-00

Below are the specific Intel® Server Chassis SC5200 revisions covered in this document. May want to check the numbers below with the systems guys, the TA# are obsoleted in Speed

Product Code	Order Code (MM #)	Top Assembly # (TA #)	Front Panel PBA#	HSC Firmware Rev.	Power Supply Module Part #	Product Change Notification #
KHD3BASE450	844923	A85319-001	835851	NA	844924	NA 1st Production
KHD3BASE450	844923	A85319-002	835851	NA	844924	PCN 102640-01
KPTBASE450	852511	C25401-001	C26802-101	NA	A85459-005	NA
KPTBASE450BLK	852295	C25402-002	C26802-101	N/A	A85459-005	NA

Below are the specific Intel® Server Chassis SC5250-E revisions covered in this document.

Product Code	Order Code (MM #)	Top Assembly # (TA #)	Front Panel PBA#	HSC Firmware Rev.	Power Supply Module Part #	Product Change Notification #
KPTBASE450	853511		NA	NA	NA	Beige
KPTBASE405BLK	852295		NA	NA	NA	Black
KPTBASE450	854463		NA	NA	NA	
KPTBASE450BLKNA	864465		NA	NA	NA	

Below are the specific Intel® Server Chassis SR1350-E revisions covered in this document.

Product Code	Order Code (MM #)	Top Assembly # (TA #)	Front Panel PBA#	HSC Firmware Rev.	Power Supply Module Part #	Product Change Notification #
SR1350ENA	853585					
SR1350E	853585					

Summary Tables of Changes

The following tables indicate the errata and the document changes that apply to the Intel® Server Board SE7501CW2. Intel intends to fix some of the specified errata in future updates to the server board. Documentation changes will be made in future updates to the given document. The tables use the following notations:

Doc: Intel intends to update the appropriate document in a future revision.

Investigating Intel is investigating the issue.

Fix: Intel intends to fix this erratum in a future update of the board.

Fixed: This erratum has been addressed.

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	**LANDesk* Client Manager 6.3 contains a SMBUS incompatibility with Microsoft Windows* 2003**
2.	Fixed	**What version of BIOS supports the new Intel® Xeon™ processors with the 1MB on chip cache?**
3.	NoFix	**Gradient fan control has been removed between BIOS v1.04 and v1.06. This appears to be noticeable on the SC5250-E Chassis.**
4.	Fixed	**LANDesk* Client Manger 6.3 reports CPU fans at twice the speed of BIOS <F2> | Advanced |Hardware monitor.**
5.	Fixed	**BIOS <F2> Hardware monitor periodically displays System Fan 1 and System Fan 2 as not installed even though I never unplug them.**
6.	Fixed	**LANDesk* Client Manager 6.3 running with BIOS V1.06 reports Chassis and System Fan 3 at half the speed of that BIOS <F2> | Advanced | Hardware Monitor does.**
7.	Fixed	**In SR1350-E Chassis, Mitsumi SR244W1 fails to be detected by SE7501CW2 if SR244W1 is connected to the interface board coming with SR1350-E CD Floppy Kit(Product Code AKACDFLOPPY)**
8.	Fixed	**What version of BIOS supports Intel® Xeon™ 3.2G processor with 2MB L3 cache?**

Table 2. Documentation Changes

No.	Plans	Description of Documentation Change
1.	Doc	**Server Board SE7501CW2 Technical Product Specification v1.00 doesn't include MTBF numbers for forecasted failure rate.**
2.	Doc	**Server Board SE7501CW2 Technical Product Specification v1.10 included unnecessary power on and power off steps for CMOS configuration reset by CMOS clear jumper located on the baseboard.**
3.	Doc	**Server Board SE7501CW2 Technical Product Specification v1.10 doesn't include System MTBF numbers for SE7501CW2 board with SR1350-E Chassis.**

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. Server Board SE7501CW2 Resource CD contains a SMBUS driver incompatible with Microsoft Windows* 2003.

Problem Current version of LANDesk* Client Manager 6.3 on SE7501CW2 resource CD, won't install in a Windows 2003 environment.

Implication The SMBUS driver with this version of LANDesk 6.3 available on resource CD C29967-004 won't install on Windows 2003.

Workaround There is a new updated version found at: http://downloadfinder.intel.com/scripts-df/filter_results.asp?strOSs=84&strTypes=BIO%2CDRV%2CSPH%2CUTL&ProductID=925&OSFullName=Windows*+Server+2003&submit=Go%21

LANDesk will install with a compatible SMBus 2003 driver, though it remains unsigned. Control panel will display a yellow question mark. Microsoft has provided Amended Contingency approval ID 335 to get certification with unsigned driver for LDCM support on SE7505VB2: ***The Driver software you are installing for Intel (R) ICH4/ICH4-M SMBUS controller 24C3 (Intel(r) SMBUS 2.0) has not been properly signed with Authenticode™ technology. Therefore, Windows can not tell if the software has been modified; since it was published. The publisher's identity can not be verified because of a problem. The third party INF does not contain digital signature information.***

Status There is a new resource CD C29967-005 that contains an updated unsigned SMBus driver which will now install on Windows* 2003 there are no plans to make this driver signed. Also, for existing LANDesk Client Manager installations it may be necessary to delete the existing the existing SMBus driver (smb.inf,smb.sys) in device manager, reboot, and reinstall with the newer version of LANDesk. The newer version contains the SMBus driver which supports Windows 2003.

2. What version of BIOS supports the new Intel® Xeon™ processors with the 1MB on chip cache?

Problem What version of BIOS supports the new Intel® Xeon™ processors with the 1MB on chip cache?

Implication Newer processors will fail to boot with the old BIOS v1.03 or below

Workaround None

Status Fixed in BIOS v1.04 which is available at http://downloadfinder.intel.com/scripts-df/Product_Filter.asp?ProductID=925

3. Gradient fan control has been removed between BIOS v1.04 and v1.06. This appears to be noticeable on the SC5250-E, and SC5200 based chassis's.

Problem BIOS versions above v1.05 no longer will reduce fan speed for acoustic reasons as on the SE7505VB2 board. It has been determined that the existing fan circuit was too unstable and hence this feature was removed. See erratum's 4 and 5 for details.

Implication Only BIOS version v1.04 and below will decrease the RPM in certain chassises including the SC5250-E and SC5200 BRP.

Workaround The chassis noise will be marginally higher and fans may run up to 1500 RPM faster in minimally configured servers (i.e. 1 processor, minimum memory and no PCI cards).

Status It has been determined that the existing fan circuit was too unstable and hence this BIOS feature was removed.

4. LANDesk* Client Manager 6.3 reports CPU fans at twice the speed of BIOS <F2> | Advanced |Hardware monitor when running with BIOS v1.04.

Problem BIOS versions 1.04 and LANDesk* Client Manager 6.3 may report CPU fans at twice the speed BIOS <F2> | Advanced | Hardware Monitor. In other words, the <F2> setting would report 6600PRM whereas LANDesk* Client Manager would report 13320 RPM.

Implication Customer may be confused that the fans are running at 13320 RPM when they are running at only 6660 RPM.

Workaround None

Status Fixed in BIOS v1.06 which is available at http://downloadfinder.intel.com/scripts-df/Product_Filter.asp?ProductID=925

5. BIOS <F2> Hardware monitor periodically displays System Fan 1 and System Fan 2 as not installed even though I never unplug them.

Problem BIOS <F2> Advanced | Hardware Monitor periodically displays System Fan 1 and System Fan as "Not Installed" under BIOS v1.04 even if the fans are always running.

Implication A user may incorrectly think the fans are faulty, and or off.

Workaround None

Status Fixed in BIOS v1.06 which is available at http://downloadfinder.intel.com/scripts-df/Product_Filter.asp?ProductID=925

6. LANDesk* Client Manager 6.3 running with BIOS V1.06 reports Chassis and System Fan 3 at half the speed of that BIOS <F2> | Advanced | Hardware Monitor does.

Problem LANDesk* Client Manager 6.3 running with BIOS V1.06 may report Chassis and System Fan 3 at half the speed of that BIOS <F2> | Advanced | Hardware Monitor does has for System Fan 3 and System Fan 4.

Implication Customer may believe that the fans are running at 1800 RPM when they are actually running at only 3600 RPM.

Workaround None

Status Fixed in LANDesk Client Manager 6.3 updated version which is available at http://downloadfinder.intel.com/scripts-df/Detail_Desc.asp?agr=N&Inst=Yes&ProductID=925&DwnldID=4786.

7. In SR1350-E Chassis, Mitsumi* SR244W1 fails to be detected by SE7501CW2 if SR244W1 is connected to the interface board coming with SR1350-E CD Floppy Kit(Product Code AKACDFLOPPY)

Problem In SR1350-E Chassis, Mitsumi SR244W1 fails to be detected by SE7501CW2 if SR244W1 is connected to the interface board coming with SR1350-E CD Floppy Kit(Product Code AKACDFLOPPY), while it could be detected successfully when it's connected to a Mitsumi CD-ROM backplane kit.

Implication Mitsumi SR244W1 cannot be used with SE7501CW2 board when installed in SR1350-E Chassis and the interface board coming with SR1350-E CD Floppy Kit is used.

Workaround None.

Status Fixed in BIOS v1.07. Please download at http://downloadfinder.intel.com/scripts-df/Detail_Desc.asp?agr=N&Inst=Yes&ProductID=925&DwnldID=6641 when available.

8. What version of BIOS supports Intel® Xeon™ 3.2G processor with 2MB L3 cache?

Problem What version of BIOS supports Intel® Xeon™ 3.2Ghz processors with a 2MB L3 cache?

Implication Intel® Xeon™ 3.2Ghz processors with 2MB L3 cache are not supported on BIOS v1.06 or below.

Workaround None.

Status Supported in BIOS v1.07. Please download at http://downloadfinder.intel.com/scripts-df/Detail_Desc.asp?agr=N&Inst=Yes&ProductID=925&DwnldID=6641.

Documentation Errata

1. Server Board SE7501CW2 Technical Product Specification v1.00 doesn't include MTBF numbers for forecasted failure rate.

Problem Server Board SE7501CW2 Technical Product Specification v1.00 doesn't include MTBF numbers for forecasted failure rate.

Implication MTBF is not available in SE7501CW2 TPS v1.00.

Workaround The anticipated Mean Time Between Failures (MTBF) is predicted to be 100,496 hours under normal conditions on the SE7501CW2 Server Board.

Status Fixed in TPS ver1.10.

2. Server Board SE7501CW2 Technical Product Specification v1.10 included unnecessary power on and power off steps for CMOS configuration reset by CMOS clear jumper located on the baseboard.

Problem In Server Board SE7501CW2 Technical Product Specification v1.10, the steps involved to clear the CMOS by CMOS clear jumper are documented as below,

1. Power off the system
2. Remove the jumper from pins 9 and 10 (storage location) and place it onto pins 5 and 6 of jumper block J32
3. Power on the system
4. Power off the system after it begins beeping
5. Replace the jumper onto pins 9 and 10
6. Power on the system

Step 3 and step 4 listed above are unnecessary.

Implication Unnecesary steps documented in TPS will confuse the users.

Workaround The correct steps involved to clear the CMOS by CMOS clear jumper are as below,

1. Power off the system
2. Remove the jumper from pins 9 and 10 (storage location) and place it onto pins 5 and 6 of jumper block J32
3. Replace the jumper onto pins 9 and 10
4. Power on the system

Status Will be fixed in SE7501CW2 Technical Product Specification v1.20.

3. Server Board SE7501CW2 Technical Product Specification v1.10 doesn't include System MTBF numbers for SE7501CW2 board with SR1350-E Chassis.

Problem Server Board SE7501CW2 Technical Product Specification v1.10 doesn't include System MTBF numbers for SE7501CW2 board with SR1350-E Chassis.

Implication System MTBF for SE7501CW2 board with SR1350-E Chassis is not available in SE7501CW2 TPS v1.10.

Workaround The MTBF numbers for SR1350-E Chassis and the system with SE7501CW2 board

and SR1350-E Chassis are as below,

Subassembly (Server in 35oC ambient air)	MTBF(hours)	FIT(flrs/10^9 hrs)
350W Power Supply	100,000	10,000
Cooling fans (no redundancy)	80,000	12,500
Floppy/CD Interposer	2,500,000	400
PCI riser card	4,000,000	250
Front Panel board & Intrusion Switch	3,000,000	333
SR1350-E Chassis Total =	42600	23,483
SE7501CW2 Board	100,496	9,950
SE7501CW2 Board plus SR1350-E Chassis	30000	33,433

Status Will be fixed in SE7501CW2 Technical Product Specification v1.20.