# Intel® Server Board SDS2

## Specification Update

intel®

## *Revision History*

| Date | Modifications |
|------|---------------|
| 1/16/02 | Initial release. |
| 2/13/02 | Added errata 15 and 16; changed the status of errata 2, 3, 4, 6, and 10 from Fix to Fixed. |
| 3/13/02 | Added errata 17, 18, 19, and 20; updated errata 1, 8, and 9. |
| 4/17/02 | Added errata 21, 22, 23, and 24; updated errata 1, 11, 12, 15, and 20. |
| 5/15/02 | Moved closed errata 1, 2, 3, 4, 5, 6, 8, 9, 10, 11, 12, 15, 17, 20, 21, 22, 23, and 24 to the SDS2 TPS document.  Renumbered errata.  Updated erratum 3.  Added errata 7, 8, and 9. |
| 6/24/02 | Updated erratum 9.  Added documentation beep codes. |
| 9/11/02 | Updated errata 2, 4, 5, 6, and 7.  Added erratum 10. |
| 10/11/02 | Added new errata: 11,12,13,14,15,16,17,18,19,20,21,22,23.  Added Fab5 PBA and BIOS P3.0 |
| 11/18/02 | No Changes or new errata |
| 12/16/02 | Renumbered errata.  Moved closed and will not fix errata to SDS2 TPS document. |
| 1/15/03 | No changes or new errata |

## *Disclaimers*

The Intel® Server Board SDS2 may contain design defects or errors known as errata that may cause the product to deviate from the published specifications. Current characterized errata are documented in this Specification Update.

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# Contents

# Preface

This document is an update to the specifications contained in the *SDS2 Technical Product Specification* (Order Number A85874-001). 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® Pentium® III Processor Specification Update* (Order Number 244453-036) for specification updates concerning the Pentium® III processor. Items contained in the *Pentium® III Processor Specification Update* that either do not apply to the Intel® Server Board SDS2 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 the SDS2 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 SDS2 server board's 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.

| Baseboard FAB # | Baseboard PBA # | BIOS | Baseboard Management Controller (BMC) Firmware | Processor CPUID | Processor Code Name | Processor Stepping | Chipset Stepping (Server Works* ServerSet* HE-SL CNB20, CIOB20, & CSB5) |
|---|---|---|---|---|---|---|---|
| FAB 4 | A58285-402 | Production Release 2 | BMC v. 28 | 68A | Coppermine | D0 | CNB20:  A1.0 CIOB20:  B5.0 CSB5:  A2.0 |
| FAB 4 | A58285-403 | Production Release 2.5 | BMC v. 28 | 68A | Coppermine | D0 | CNB20:  A1.0 CIOB20:  B5.0 CSB5:  A2.0 |
| FAB 5 | A58285-502 | Production Release 3.0 (Build 50) | BMC v. 28 | 68A, B0, 6B1, 6B4 | Tualatin & Coppermine | D0, A0, A1, B1 | CNB20: A1.0 CIOB20: B5.0 CSB5: A2.1 |

# Summary Tables of Changes

The following tables indicate the errata and the document changes that apply to the Intel®
Server Board SDS2. Intel intends to fix some of the errata in a future stepping of components,
and to account for the other outstanding issues through documentation or specification changes
as noted. The tables use the following notations:

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

**Fix:**         Intel intends to fix this erratum in a future release of the component.

**Fixed:**      This erratum has been previously fixed.

**NoFix:**      There are no plans to fix this erratum.

**Shaded:**     This erratum is either new or has been modified from the previous specification
                update.

### Table 1. Errata Summary

| No. | Plans | Description of Errata |
|-----|-------|-----------------------|
| 1. | Fix | Intel® Server Board SDS2 onboard network interface controller (NIC) reports failures in Microsoft* Windows 2000* event viewer |
| 2. | Fixed | Adaptec* 2000S RAID controller causes intermittent system hang during POST |
| 3. | Fix | Using Adaptec 2940U2W causes hang w/Red Hat 7.3 on Dodson |
| 4. | Fix | Netware 6 ATI rage XL video driver causes video corruption |

### 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.    Intel® Server Board SDS2 onboard network interface controller (NIC) reports failures in Microsoft* Windows* 2000 event viewer

Problem:           When running a stress configuration under Microsoft* Windows*2000 Advanced Server, the Intel Server Board SDS2 onboard NICs report failues in the Windows 2000 event viewer.  The failure message is as follows:

Adapter Intel 8255x-based PCI Ethernet Adapter (10/100):  Hardware failure detected:  Event ID 6.

This issue has been seen using NIC driver set 5.12 v. 5.14.27 and also 5.01 v. 5.40.11.  No copy compare failures are present when this failure message occurs.  This issue also occurs when using Microsoft* Windows NT* 4.0.

Implication:       The onboard NIC may report failures in the Microsoft* Windows* 2000 event viewer when running stress testing on the Intel Server Board SDS2.

Workaround:      The workaround can be to limit the amount of throughput on the 32bit/33MHz PCI bus.  Errors only occur when significant stress is generated on the 32bit/33MHz PCI bus.  Reducing the number of 32bit/33MHz adapters or throughput on the legacy bus resolves the reporting of error to the event log.

Status:            Fix.  Intel is currently investigating a fix for this issue.

include a fix for this issue.

## 2.    Adaptec* 2000S RAID controller causes intermittent system hang during POST

Problem:           When an Adaptec* 2000S RAID controller is installed in the SDS2 server board, intermittent system hangs may occasionally occur during POST.

Implication:       Intermittent system hangs during POST may occasionally be encountered when using the Adaptec* 2000S RAID controller with the SDS2 server board.

Workaround:      A workaround for this issue is to reboot the SDS2 server system.

Status:            Fixed.  This issue has been resolved when using Adaptec* 2000S RAID controller BIOS 1.5.2 and SDS2 BIOS Production Release 2.5, Build 48, or later versions.

## 3.    Red Hat 7.3 and Adaptec 2940U2W causes hang during installation of OS.

Problem:  When using the card as an addin. the OS would load fail to load. Error message is;

>           Loading scsi_mod module
>           SCSI subsystem driver revision 1.00
>           Loading sd_mod module
>           kmod: failed to exec /sbin/modprobe -s -k scsi_hostadapter, errno = 2
>           Loading aic7xx module

Implication:   Unable to load Red Hat 7.3 OS using the Adaptec 2940U2W.

Workaround:  None.  Red Hat 7.3 is not a supported operating system at this time.

Status:          Fix will be investigated.


## 4.    Netware 6 ATI rage XL video driver causes video corruption

Problem:          Once Netware 6 with server pack SP1 is installed, when you try to change the video within the console on the server to the correct one,  ATI Rage XL, the video becomes corrupt.

Implication:      Unable to use full feature set of the ATI Rage XL embedded video component.

Workaround:       Use the "super vga"  driver for the embedded ATI Rage video component.

Status:           The future Novell Netware SP3 will contain a new driver to correct this issue. SP3 is not available at this time.

Video corruption using Netware 5.1 ATI Rage XL distribution driver with SP5.

Problem:          With OS Netware 5.1  and sp5 installed, attemping to changed the video driver to that of the ATI XL 4meg O/S dist driver will cause video corruption. This requires the user to use the default VGA driver.

Implication:      Unable to use full feature set of the ATI Rage XL embedded video component.

Workaround.       None:  Use the default VGA driver until Netware has a new driver available.

Status:           Fixed with SP5

# Documentation Changes

**1.    None**