



SE440BX-3 Motherboard Specification Update

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Order Number: 738242-003

The SE440BX-3 motherboard may contain design defects or errors known as errata which may cause the product to deviate from published specifications. Current characterized errata are documented in this Specification Update.

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REVISION HISTORY

Date of Revision	Version	Description
March 1999	-001	This document is the first Specification Update for the Intel® SE440BX-3 motherboard.
July 1999	-002	Added Erratum 3 and Documentation Change 1.
August 1999	-003	Added Erratum 4.

PREFACE

This document is an update to the specifications contained in the SE440BX-3 Motherboard Technical Product Specification (Order number 726984). It is intended for hardware system manufacturers and software developers of applications, operating systems, or tools. It will contain Specification Changes, Errata, Specification Clarifications, and Documentation Changes.

Refer to the *Pentium® II Processor Specification Update* (Order number 243337) for specification updates concerning the Pentium II processor. Items contained in the *Pentium II Processor Specification Update* that either do not apply to the SE440BX-3 motherboard 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 PBA revision(s) associated with that stepping.

Refer to the *82443BX Specification Update* (Order Number 290639) for specification updates concerning the 82443BX PCI A.G.P. Controller. Items contained in the *82443BX Specification Update* that either do not apply to the SE440BX-3 motherboard or have been worked around are noted in this document. Otherwise, it should be assumed that any controller errata for a given stepping are applicable to the PBA revision(s) associated with that stepping.

Refer to the *Intel® 82371EB (PIIX4E) Specification Update* (Order Number 290635) for specification updates concerning the 82371EB PIIX4E. Items contained in the *Intel 82371EB (PIIX4E) Specification Update* that either do not apply to the SE440BX-3 motherboard or have been worked around are noted in this document. Otherwise, it should be assumed that any PIIX4E errata for a given stepping are applicable to the Printed Board Assembly (PBA) revision(s) associated with that stepping.

Nomenclature

Specification Changes are modifications to the current published specifications. These changes will be incorporated in the next release of the specifications.

Errata are design defects or errors. Characterized errata may cause the SE440BX-3 motherboard's behavior to deviate from published specifications. Hardware and software designed to be used with any given Printed Board Assembly (PBA) and BIOS revision level must assume that all errata documented for that PBA and BIOS revision level are present on all motherboards.

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.

**Specification Update for
SE440BX-3 Motherboards**

GENERAL INFORMATION

Basic SE440BX-3 Motherboard Identification Information

AA Revision	PBA Revision	440BX AGPSet Stepping	BIOS Revision	Notes
730934-102	730935-102	C1	4S4EB2X1.86A. 0002.P01	1-5
730934-103	730935-103	C1	4S4EB2X1.86A. 0002.P01	1-5

NOTES:

1. The PBA number or AA number is found on a small label on the component side of the board.
2. The 440BX AGPset kit used on this PBA revision consists of two components as follows:

Device	Stepping	S-Spec Numbers
82443BX	C1	SL2VH SL378
82371EB	A0	SL2MY SL2T3 SL37M SL37Z

3. The following errata are contained in the *Pentium® II Processor Specification Update* (Order Number 243337) for the Pentium II processor and either do not apply to the SE440BX-3 motherboard or have been worked-around in this PBA and/or BIOS revision: 3, 10-11, 17, 27-28, 32, 41, 50, 1AP-3AP. All other errata associated with the processor apply to this PBA revision.
4. The following items are contained in the *Intel® 82443BX Specification Update* (Order Number 290639) and either do not apply to the SE440BX-3 motherboard or have been worked around in this PBA and/or BIOS revision: Erratum 3. All other errata associated with the AGPset apply to this PBA revision.
5. The following items are contained in the *Intel® 82371EB (PIIX4E) Specification Update* (Order Number 290635) and either do not apply to the SE440BX-3 motherboard or have been worked around in this PBA and/or BIOS revision: None. All other errata associated with the PIIX4E apply to this PBA revision.

Summary Table of Changes

The following table indicates the Specification Changes, Errata, Specification Clarifications, or Documentation Changes which apply to the SE440BX-3 motherboard. Intel intends to fix some of the errata in a future revision of the motherboard, and to account for the other outstanding issues through documentation or specification changes as noted. This table uses the following notations:

CODES USED IN SUMMARY TABLE

Doc:	Document change or update that will be implemented.
Fix:	This erratum is intended to be fixed in a future revision of the motherboard or BIOS.
Fixed:	This erratum has been previously fixed.
NoFix:	There are no plans to fix this erratum.
Shaded:	This erratum is either new or modified from the previous version of the document.

NO.	PLANS	ERRATA
1	NoFix	Advanced Power Management may suspend system during CD-ROM playback
2	Fix	System BIOS does not release IRQ when no mouse is attached
3	Fixed	BIOS setup allows all IRQs to be reserved
4	NoFix	BIOS does not implement S4BIOS power state
NO.	PLANS	DOCUMENTATION CHANGES
1	Doc	Change to description of Advanced Power Management

The errata described in this specification update apply to combinations of PBA revision and BIOS revision as shown in the table below. Descriptions of the individual errata referred to by number in the table below are found in the ERRATA section of this document.

PBA Revision	BIOS Revision	Errata That Apply
730935-102	4S4EB2X1.86A.0002.P01	1-3
	4S4EB2X1.86A.0006.P05	1-3
	4S4EB2X1.86A.00019.P07	1-2
	4S4EB2X1.86A.0020.P08	1-2
730935-103	4S4EB2X1.86A.0002.P01	1-3
	4S4EB2X1.86A.0006.P05	1-3
	4S4EB2X1.86A.00019.P07	1-2
	4S4EB2X1.86A.0020.P08	1-2

† Note: This combination of BIOS revision and PBA revision has not undergone regression testing. Use of a PBA with down-revision BIOS is an untested combination and is undertaken at the user's risk.

ERRATA

1. ***Advanced Power Management May Suspend System During CD-ROM Playback***

PROBLEM: ATAPI devices (such as CD-ROM and DVD drives) do not reset the inactivity timer that is used by Advanced Power Management to determine when to place the system into suspend mode.

IMPLICATION: When playback of an audio CD or a DVD file is the only system activity, the system will go into suspend mode when the inactivity timer expires.

WORKAROUND: Temporarily disable the Low-power standby and Shut off monitor options on the Display Properties, Screen Saver menu. This menu is available from the Windows* 95 Control Panel.

STATUS: This erratum will not be fixed.

2. ***System BIOS Does Not Release IRQ When No Mouse Is Attached***

PROBLEM: The system BIOS does not release IRQ12 to be reserved for use by an ISA legacy device when no PS/2 mouse is detected at system boot.

IMPLICATION: It may not be possible to install an ISA legacy device in the system if no other IRQ is available. IRQ12 is available for assignment to another device in the Windows 95 or Windows 98 Device Manager.

WORKAROUND: None.

STATUS: This erratum will be fixed in a future BIOS revision.

3. ***BIOS Setup Allows All IRQs to be Reserved***

PROBLEM: The BIOS Setup program allows the user to reserve all listed IRQs to be used by ISA devices. At least one IRQ must be available in order for PCI devices to function correctly.

IMPLICATION: If the user does not leave an IRQ unreserved, onboard and add-in PCI devices will function erratically or not function at all.

WORKAROUND: None.

STATUS: This erratum was fixed in BIOS revision 4S4EB2X1.86A.0019.P07.

4. ***BIOS Does Not Implement S4BIOS Power State***

PROBLEM: The S4BIOS (Suspend to Disk) power state has not been implemented in the motherboard BIOS.

IMPLICATION: The user will not be able to suspend the system to a state that includes saved context information.

WORKAROUND: None.

STATUS: This erratum will not be fixed.

DOCUMENTATION CHANGES

The Documentation Changes listed in this section apply to the *SE440BX Motherboard Technical Product Specification* (Order Number 726984). All Documentation Changes will be incorporated into a future version of that specification.

1. *Change to Description of Advanced Power Management*

In Section 3.4.1, Advanced Power Management, The third paragraph will be replaced in its entirety as follows:

While in standby mode, the system retains the ability to respond to external interrupts and service requests, such as incoming faxes or network messages. Any PS/2 keyboard or PS/2 mouse activity brings the system out of standby mode and immediately restores power to the monitor.

