



Intel® Desktop Board D845EPI Specification Update

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Order Number: C50839-003

The Intel® Desktop Board D845EPI 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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The Intel® desktop board D845EPI may contain design defects or errors known as errata which may cause the product to deviate from published specifications. Current characterized errata are available on request.

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REVISION HISTORY

Date of Revision	Version	Description
September 2003	-001	This document is the first Specification Update for the Intel® Desktop Board D845EPI.
October 2003	-002	Added Erratum 1.
November 2003	-003	Updated Erratum 1. Added Erratum 2. Added Specification Clarification 1.

PREFACE

This document is an update to the specifications contained in the *Intel® Desktop Board D845EPI Technical Product Specification* (Order number C46810). 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 *Intel® Pentium® 4 Processor Specification Update* (Order number 249199) for specification updates concerning the Intel Pentium 4 processor and that may apply to the desktop board D845EPI. Unless otherwise noted in this document, it should be assumed that any processor errata for a given stepping are applicable to the Altered Assembly (AA) revision(s) associated with that stepping.

Refer to the *Intel® 82845E Memory Controller Hub (MCH) for DDR Specification Update* (Order Number 290743) for specification updates concerning the 82845E MCH Controller and that may apply to the desktop board D845EPI. Unless otherwise noted in this document, it should be assumed that any MCH errata for a given stepping are applicable to the Altered Assembly (AA) revision(s) associated with that stepping.

Refer to the *Intel® 82801DB I/O Controller Hub 4 (ICH4) Specification Update* (Order Number 290745) for specification updates concerning the 82801DB I/O Controller Hub and that may apply to the desktop board D845EPI. Unless otherwise noted in this document, it should be assumed that any ICH 4 errata for a given stepping are applicable to the Altered Assembly (AA) 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 desktop board D845EPI's behavior to deviate from published specifications. Hardware and software designed to be used with any given Altered Assembly (AA) and BIOS revision level must assume that all errata documented for that AA and BIOS revision level are present on all desktop boards.

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 the Intel® Desktop Board D845EPI

GENERAL INFORMATION

Basic Desktop Board D845EPI Identification Information

AA Revision	BIOS Revision	Notes
C44604-201	VA84510A.86A.0019.P07	1-5

NOTES:

1. The AA number is found on a small label on the component side of the board.
2. The 82845E Chipset kit used on this AA revision consists of two components as follows:

Device	Stepping	S-Spec Numbers
82845E MCH	E0	SL6PA
82801DB ICH	A1 B0	SL66K SL6DM

3. Refer to the *Intel® Pentium® 4 Processor Specification Update* (Order Number 249199) for errata related to the Pentium 4 processor and that may apply to the desktop board D845EPI.
4. Refer to the *Intel® 82845E Memory Controller Hub (MCH) for DDR Specification Update* (Order Number 290743) for errata related to the 82845E MCH that may apply to the desktop board D845EPI.
5. Refer to the *Intel® 82801DB I/O Controller Hub 4 (ICH4) Specification Update* (Order Number 290745) for errata related to the 82801DB I/O Controller Hub that may apply to the desktop board D845EPI.

Summary Table of Changes

The following table indicates the Specification Changes, Errata, Specification Clarifications, or Documentation Changes that apply to the desktop board D845EPI. Intel intends to fix some of the errata in a future revision of the desktop board, 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.
Plan Fix:	This erratum may be fixed in a future revision of the desktop board, driver, or BIOS.
Fixed:	This erratum has been previously fixed.
No Fix:	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	Fixed	PCI add-in video cards will not function as the primary video adapter
2	Fixed	PCI video add-in cards will not display video when used as a stand alone video solution
NO.	PLANS	SPECIFICATION CLARIFICATIONS
1	Doc	Clarification of SMBus routing

ERRATA

1. ***PCI Add-In Video Cards Will Not Function as the Primary Video Adapter***

PROBLEM: If PCI is chosen as the primary video adapter option in the Advanced/Video Configuration submenu of BIOS Setup, the video adapter will not function.

IMPLICATION: Users that desire to have either PCI only video adapters or have multiple video adapters such as a PCI video adapter in conjunction with an AGP video adapter, cannot set the PCI adapter as the primary video adapter in BIOS setup.

WORKAROUND: Ensure that the Primary Video Adapter is set to "AGP" in BIOS setup.

STATUS: This issue was fixed in BIOS revision VA84510A.86A.0023.P08.

2. ***PCI Video Add-in Cards Will Not Display Video When Used as a Stand Alone Video Solution***

PROBLEM: If an add-in PCI video card is used without an AGP video adapter and PCI is selected as primary video in the BIOS configuration menu, no video will be displayed.

IMPLICATION: Users who intend to utilize a PCI add-in video card as the sole device will not have video capability.

WORKAROUND: None

STATUS: This issue was fixed in BIOS revision VA84510A.86A.0023.P08.

SPECIFICATION CLARIFICATIONS

The Specification Clarifications listed in this section apply to the *Desktop Board D845PESV Technical Product Specification* (Order Number C46810). All Specification Clarifications will be incorporated into a future version of that specification.

1. Clarification of SMBus Routing

Section 2.8.2.1 will change in its entirety as follows:

2.8.2.1 Expansion Slots

The Desktop Board has three PCI rev 2.2 compliant local bus slots. The SMBus is routed to PCI bus connector 2.

NOTE

The SMBus routing to the PCI bus connectors does not conform to the PCI Engineering Change Notice (ECN) “Addition of the SMBus to the PCI Connector ECN”, dated October 5th, 2000. The ECN specifies that SMBus signals must be routed to all PCI bus connectors. On this board, SMBus signals are routed to PCI bus connector 2 only.

Add-in cards that implement PCI bus connector pins A40 and A41 for any purpose other than SMBCLK (SMBus clock) and SMBDAT (SMBus data) should not be installed in PCI bus connector 2.

For information about

Addition of the SMBus to the PCI Connector ECN

Refer to

http://www.pcisig.com/data/specifications/smb_ecn_040501.pdf

NOTE

This document references back-panel slot numbering with respect to processor location on the Desktop Board. PCI slots are identified as PCI slot #x, starting with the slot closest to the processor. The ATX/microATX specifications identify expansion slot locations with respect to the far edge of a full-sized ATX chassis. The ATX specification and the Desktop Board’s silkscreen are opposite and could cause confusion. The ATX numbering convention is made without respect to slot type, but refers to an actual slot location on a chassis. Figure 6 on page 49 illustrates the Desktop Board’s PCI slot numbering.