



Intel® Desktop Board D810E2CA3 Specification Update

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The Intel® Desktop Board D810E2CA3 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® D810E2CA3 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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CONTENTS

| | |
|--|----|
| REVISION HISTORY | v |
| PREFACE | vi |
| Specification Update for the Intel® Desktop Board D810E2CA3 | |
| GENERAL INFORMATION | 3 |
| ERRATA..... | 5 |
| SPECIFICATION CLARIFICATIONS..... | 6 |



REVISION HISTORY

| Date of Revision | Version | Description |
|------------------|---------|--|
| March 2001 | -001 | This document is the first Specification Update for the Intel® Desktop Board D810E2CA3. Added Erratum 1. |
| May 2001 | -002 | Added Erratum 2. |
| June 2001 | -003 | Added Erratum 3. |
| November 2003 | -004 | Added Specification Clarification 1. |

PREFACE

This document is an update to the specifications contained in the *Intel® Desktop Board D810E2CA3 Technical Product Specification* (Order number A43979). 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® III Processor Specification Update* (Order number 244453) for specification updates concerning the Pentium III processor. Items contained in the *Pentium III Processor Specification Update* that either do not apply to the desktop board D810E2CA3 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 *Intel® Celeron™ Processor Specification Update* (Order number 243748) for specification updates concerning the Intel Celeron processor. Items contained in the *Intel Celeron Processor Specification Update* that either do not apply to the desktop board D810E2CA3 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 *Intel® 82810 Chipset: 82810E Graphics and Memory Controller Hub (GMCH) Specification Update* (Order Number 290659) for specification updates concerning the 82810 GMCH Controller. Items contained in the *82810E GMCH Specification Update* that either do not apply to the desktop board D810E2CA3 or have been worked around are noted in this document. Otherwise, it should be assumed that any GMCH errata for a given stepping are applicable to the PBA revision(s) associated with that stepping.

Refer to the *Intel® 82801 I/O Controller Hub (ICH) Specification Update* (Order Number 290677) for specification updates concerning the 82801 I/O Controller Hub. Items contained in the *Intel 82801 ICH Specification Update* that either do not apply to the desktop board D810E2CA3 or have been worked around are noted in this document. Otherwise, it should be assumed that any ICH 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 desktop board D810E2CA3 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 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 D810E2CA3**

GENERAL INFORMATION

Basic Desktop Board D810E2CA3 Identification Information

| AA Revision | PBA Revision | BIOS Revision | Notes |
|-------------|--------------|-----------------------|-------|
| A32316-302 | A32317-302 | CA81030A.86A.0009.P03 | 1-6 |
| A32316-303 | A32317-303 | CA81030A.86A.0010.P04 | 1-6 |
| A32316-304 | A32317-304 | CA81030A.86A.0016.P09 | 1-6 |

NOTES:

- The PBA number or AA number is found on a small label on the component side of the board.
- The 82810E Chipset kit used on this PBA revision consists of three components as follows:

| Device | Stepping | S-Spec Numbers |
|------------------|----------|----------------|
| 82810E GMCH | A3 | SL3MD SL3Q4 |
| 82801BA ICH2 | B1 | SL4HM |
| SST 49LF004A FWH | NA | NA |

- The following errata are contained in the *Pentium® III Processor Specification Update* (Order Number 244453) for the Pentium III processor and either do not apply to the desktop board D810E2CA3 or have been worked-around in this PBA and/or BIOS revision: 2. All other errata associated with the processor apply to this PBA revision.
- The following errata are contained in the *Intel® Celeron™ Processor Specification Update* (Order Number 243748) for the Celeron processor and either do not apply to the desktop board D810E2CA3 or have been worked-around in this PBA and/or BIOS revision: None. All other errata associated with the processor apply to this PBA revision.
- The following items are contained in the *Intel® 82810E Graphics and Memory Controller Hub (GMCH) Specification Update* (Order Number 290659) and either do not apply to the desktop board D810E2CA3 or have been worked around in this PBA and/or BIOS revision: None. All other errata associated with the GMCH apply to this PBA revision.
- The following items are contained in the *Intel® 82801 I/O Controller Hub Specification Update* (Order Number 290677) and either do not apply to the desktop board D810E2CA3 or have been worked around in this PBA and/or BIOS revision: None. All other errata associated with the ICH 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 desktop board D810E2CA3. 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. |
| Fix: | This erratum is intended to be fixed in a future revision of the Desktop Board 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 | Fixed | USB keyboards may cause intermittent system hang when returning from ACPI S3 state while using Microsoft Windows* 2000. |
| 2 | Fixed | Intel® Pentium® III processor Erratum E76 |
| 3 | Fix | System BIOS does not support multi-channel audio Communications Network Riser (CNR) cards |
| NO. | PLANS | SPECIFICATION CLARIFICATIONS |
| 1 | Doc | Clarification of SMBus routing |

ERRATA

1. ***USB Keyboards May Cause Intermittent System Hang When Returning From ACPI S3 State While Using Microsoft Windows* 2000.***

PROBLEM: When returning from an ACPI S3 sleep state, USB keyboards may intermittently cause the system to hang in the Windows* 2000 operating system.

IMPLICATION: The user may experience intermittent system hangs if using a USB keyboard in the Windows 2000 operating system.

WORKAROUND: None.

STATUS: This erratum was fixed in BIOS revision CA81030A.86A.0010.P04.

2. ***Intel® Pentium® III Processor Erratum E76***

PROBLEM: For a complete description of the Pentium® III processor erratum E76, see the Pentium III Specification Update, order number 244453 found at <http://developer.intel.com/design/PentiumIII/specupdt/>.

IMPLICATION: For a complete description of the Pentium III processor erratum E76, see the Pentium III Specification Update, order number 244453 found at <http://developer.intel.com/design/PentiumIII/specupdt/>.

WORKAROUND: Update the D810E2CA3 desktop board with BIOS revision CA81030A.86A.0011.P05.

STATUS: This erratum was addressed in BIOS revision CA81030A.86A.0011.P05.

3. ***System BIOS Does Not Support Multi-Channel Audio Communications Network Riser (CNR) Cards***

PROBLEM: During the system boot process, the system BIOS compares the multi-channel signature stored in BIOS with the multi-channel signature stored in the audio CNR EEPROM in order to program the device ID in the PCI Configuration space. The BIOS for this desktop board does not contain the multi-channel signature information needed to compare with the audio CNR EEPROM.

IMPLICATION: Users who install a multi-channel audio CNR card will encounter the following error during POST: "CNR Multi-Channel Audio Upgrade Not Compatible With This Motherboard. Audio Function Has Been Disabled. Press F1 to Continue". Subsequent boots will continue to display this error message until the Audio CNR card is removed from the system.

WORKAROUND: None.

STATUS: This erratum is intended to be fixed in a future BIOS revision.

SPECIFICATION CLARIFICATIONS

The Specification Clarifications listed in this section apply to the *D810E2CB Desktop Board Technical Product Specification* (Order Number A43979). All Documentation Clarifications will be incorporated into a future version of that specification.

1. Clarification of SMBus Routing

Section 2.8.2.2 will add note and change in its entirety as follows:

2.8.2.2 Add-in Board and Peripheral Interface Connectors

Figure 10 shows the location of the add-in board and peripheral interface connectors. Note the following considerations for the PCI bus connectors:

- All of the PCI bus connectors are bus master capable.
- PCI bus connector 2 has SMBus signals routed to it. This enables PCI bus add-in boards with SMBus support to access sensor data on the board. The specific SMBus signals are as follows:
 - The SMBus clock line is connected to pin A40
 - The SMBus data line is connected to pin A41

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.