



Intel® Desktop Board D945PWM Specification Update

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The Intel® Desktop Board D945PWM 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 D945PWM 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 D945PWM

GENERAL INFORMATION 3

SPECIFICATION CHANGES 5

ERRATA 6



REVISION HISTORY

Date of Revision	Version	Description
February 13, 2006	-001	This document is the first Specification Update for the Intel® Desktop Board D945PWM.
July 2006	-002	Added Specification Changes 1, Erratum 1 and updated General Information table.
October 2006	-003	Added Erratum 2.
November 2006	-004	Added specification Changes 2.



PREFACE

This document is an update to the specifications contained in the *Intel® Desktop Board D945PWM Technical Product Specification* (Order number D44275). 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.

For specification updates concerning the Intel processor that may apply to this desktop board, refer to the following:

- *Intel® Pentium® D Processor 900Δ Sequence and Intel® Pentium® Processor Extreme Edition 955Δ, 965Δ Specification Update* (Order Number 310307)
- *Intel® Pentium® D Processor 800Δ Sequence and Intel® Pentium® Processor Extreme Edition 840Δ Specification Update* (Order Number 306832)
- *Intel® Celeron® D Processors 300Δ Sequence Specification Update* (Order Number 302354)
- *Intel® Pentium® 4 Processor Specification Update* (Order Number 249199)

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® 945G/945GZ/945P/945PL Express Chipset Family Specification Update* (Order Number 307503) for specification updates concerning the 82945G GMCH Controller and that may apply to the desktop board D945PWM. 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® I/O Controller Hub 7 (ICH7) Family EDS Specification Update* (Order Number 307014) for specification updates concerning the 82801GB ICH7 and 82801GR ICH7R I/O Controller Hub and that may apply to the desktop board D945PWM. Unless otherwise noted in this document, it should be assumed that any ICH 7 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 D945PWM'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 D945PWM



GENERAL INFORMATION

Basic Desktop Board D945PWM Identification Information

AA Revision	BIOS Revision	Notes
D42248-100	SN94510J.86A.0057	1-2
D42248-101	SN94510J.86A.0057	1-2
D42248-102	SN94510J.86A.0057	1-2

NOTES:

1. The AA number is found on a small label on the component side of the board.
2. The 82945P Chipset kit used on this AA revision consists of two components as follows:

Device	Stepping	S-Spec Numbers
82945P MCH	A1	SL8HT
82801GB ICH7	A1	SL8FX



Summary Table of Changes

The following table indicates the Specification Changes, Errata, Specification Clarifications, or Documentation Changes that apply to the Intel® Desktop Board D945PWM. 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.
PlanFix:	This erratum may be fixed in a future revision of the desktop board, driver, 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	SPECIFICATION CHANGES
1	Doc	Change to Section 2.8.2.3, Add-in Card Connectors
2	Doc	Changes to Section 1.9.2 Audio Connectors
NO.	PLANS	ERRATA
1	Plan Fix	The placement of capacitors behind PCI Express* x1 connector slot 1 may prohibit some PCI Express x1 add-in cards from properly connecting to the motherboard
2	Fixed	Design for the rear-panel MIC bias circuitry will not correctly amplify rear-panel microphone recording.



SPECIFICATION CHANGES

The Specification Changes listed in this section apply to the *Desktop Board D945PWM Technical Product Specification* (Order Number D44275). All Specification Changes will be incorporated into a future version of that specification.

1. ***The following note will be added to the Technical Product Specification in Section 2.8.2.3 Add-in Card Connectors:***



NOTE

Capacitors required for the audio circuitry are located within the ATX keep-out area near PCI Express* x1 slot 1, and may limit the use of some PCI Express x1 cards.

2. ***The following note will be added to the Technical Product Specification in Section 1.9.2 Audio Connectors:***



INTEGRATOR'S NOTES

Electrostatic discharge (ESD) can damage desktop board components. Front-panel connectors should provide sufficient protection to prevent ESD damage to components inside the chassis enclosure.



ERRATA

1. *The placement of capacitors behind PCI Express* x1 connector slot 1 may prohibit some PCI Express x1 add-in cards from properly connecting to the motherboard*

PROBLEM: Due to the design and placement of the audio circuitry on this motherboard, it was necessary to position capacitors in the keep-out zone behind PCI Express* x1 connector slot 1.

IMPLICATION: Some PCI Express x1 add-in cards may not fully connect to PCI Express x1 connector slot 1, due to interference between capacitors in the keep-out zone and I/O connectors on the add-in card that are located on the I/O bracket, in line with the edge fingers on the card.

WORKAROUND: None

STATUS: MAY BE FIXED IN A LATER HARDWARE REVISION.

2. *Design for the rear-panel MIC bias circuitry will not correctly amplify rear-panel microphone recording*

PROBLEM: Due to the transistor design for the rear-panel microphone circuitry, there is no audible recording level.

IMPLICATION: The rear-panel microphone will not record at correct volume levels

WORKAROUND: The front panel audio connector may be used as it is not affected by this issue and will produce an amplified microphone recording.

STATUS: Fixed.