



Intel[®] Desktop Board D955XBK Specification Update

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The Intel[®] Desktop Board D955XBK 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 D955XBK 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
April 18, 2005	-001	This document is the first Specification Update for the Intel® Desktop Board D955XBK.
June 2005	-002	Added board revisions to the General Information section. Added Erratum 1.
June 2006	-003	Added Documentation Changes 1. Updated Basic Desktop Board D955XBK Identification Information table.
July 2006	-004	Updated General Information table.
November 2006	-005	Added Erratum 2 and Specification Change 1.
February 2007	-006	Added Specification Change 2.



PREFACE

This document is an update to the specifications contained in the *Intel® Desktop Board D955XBK Technical Product Specification* (Order Number D14065). 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® Pentium® 4 Processor 6x1Δ Sequence Specification Update* (Order Number 310309)
- *Intel® Pentium® 4 Processor on 90 nm Process Specification Update* (Order Number 302352)
- *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® 955X Express Chipset Specification Update* (Order Number 306829) for specification updates concerning the 82955X MCH Controller and that may apply to the desktop board D955XBK. 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® IO Controller Hub 7 (ICH7) Family Specification Update* (Order Number 307014) for specification updates concerning the 82801GB I/O Controller Hub and that may apply to the desktop board D955XBK. Unless otherwise noted in this document, it should be assumed that any ICH7 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 D955XBK'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 D955XBK



GENERAL INFORMATION

Basic Desktop Board D955XBK Identification Information

AA Revision	BIOS Revision	Notes
C96732-403	BK95510J.86A.1075	1,2
C96732-404	BK95510J.86A.1234	1,2
C96732-405	BK95510J.86A.1290	1,2
C96732-406	BK95510J.86A.1452	1,2
C96732-500	BK95510J.86A.1452	1,2
C96732-501	BK95510J.86A.2015	1,2
C96734-403	BK95510J.86A.1513	1,2
C96734-404	BK95510J.86A.1668	1,2
C96734-500	BK95510J.86A.1668	1,2

NOTES:

1. The AA number is found on a small label on the component side of the board.
2. The 82955XE Chipset kit used on this AA revision consists of two components as follows:

Device	Stepping	S-Spec Numbers
82955X MCH	A1	SL8FW
82801GR ICH7	A1	SL8FY



Summary Table of Changes

The following table indicates the Specification Changes, Errata, Specification Clarifications, or Documentation Changes that apply to the Intel® Desktop Board D955XBK. 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	Plan Fix	Changes to Section 1.11.2 Audio Connectors
2	Doc	Changes to Section 1.12.1 Intel® 82573E/82573V/82574V Gigabit Ethernet Controller
NO.	PLANS	ERRATA
1	Plan Fix	IEEE-1394b Operation Limited to Maximum 400 Mbits/sec
2	Plan Fix	Voltage Regulator Controllers may cause system to hang/freeze during the operating system boot
NO.	PLANS	Documentation Changes
1	Doc	Change to Section 3.7.2, BIOS Boot Optimizations



SPECIFICATION CHANGES

1. *The following note will be added to the Technical Product Specification in Section 1.11.2 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.

2. ***Section 1.12.1 of the Technical Specification will be updated in its entirety as follows to remove reference to Jumbo frame support.***

1.12.1 INTEL® 82573E/82573V/82574V GIGABIT ETHERNET CONTROLLER

The Intel® 82573E/82573V/82574V Gigabit Ethernet Controller supports the following features:

- PCI Express link
- 10/100/1000 IEEE 802.3 compliant
- Compliant to IEEE 802.3x flow control support
- TCP, IP, UDP checksum offload
- Transmit TCP segmentation
- Advanced packet filtering
- Full device driver compatibility
- PCI Express Power Management Support



ERRATA

1. *IEEE-1394b Operation Limited to Maximum 400Mbps/sec*

Problem: Production IEEE-1394b device driver is not yet available.

Implication: IEEE-1394a and IEEE-1394b devices will operate at a maximum 400 Mbps/sec using the driver included with Microsoft® XP Service Pack 2.

Workaround: None.

Status: This erratum may be fixed in a future device driver.

2. *Voltage Regulator Controllers May Cause System to Hang/Freeze During the Operating System Boot*

PROBLEM: The voltage controller samples the Voltage ID (VID) lines every 200ns instead of 400ns as designed.

IMPLICATION: When booting the system the Operating System (OS) may hang or freeze.

WORKAROUND: None.

STATUS: This erratum may be fixed in a future hardware revision.



DOCUMENTATION CHANGES

The Documentation Changes listed in this section apply to the *Intel® Desktop Board D955XBK Technical Product Specification* (Order Number D14065). All Documentation Changes will be incorporated into a future version of that specification.

1. ***Change to Section 3.7.2, BIOS Boot Optimizations***

Section 3.7.2, will change in its entirety as follows:

3.7.2 BIOS BOOT OPTIMIZATIONS

Use of the following BIOS Setup program settings reduces the POST execution time:

- In the Boot menu, set the hard disk drive as the first boot device. As a result, the POST does not first seek a diskette drive, which saves about one second from the POST execution time.
- In the Peripheral Configuration submenu, disable the LAN device if it will not be used. This can reduce up to four seconds of option ROM boot time.

⇒ NOTE

It is possible to optimize the boot process to the point where the system boots so quickly that the Intel logo screen (or a custom logo splash screen) will not be seen. Monitors and hard disk drives with minimum initialization times can also contribute to a boot time that might be so fast that necessary logo screens and POST messages cannot be seen.

This boot time may be so fast that some drives might be not be initialized at all. If this condition should occur, it is possible to introduce a programmable delay ranging from three to 30 seconds (using the Hard Disk Pre-Delay feature of the Advanced Menu in the Drive Configuration Submenu of the BIOS Setup program).