



# Intel<sup>®</sup> Desktop Board D945GCLF Specification Update

July 2008

Order Number: E47517-002US

The Intel<sup>®</sup> Desktop Board D945GCLF 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.

# Revision History

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Revision	Revision History	Date
-001	This document is the first Specification Update for the Intel® Desktop Board D945GCLF	July 2008

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The Intel® Desktop Board D945GCLF 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.

Contact your local Intel sales office or your distributor to obtain the latest specifications before placing your product order.

Copies of documents which have an ordering number and are referenced in this document, or other Intel literature, may be obtained from:

Intel Corporation  
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# Specification Update for the Intel® Desktop Board D945GCLF

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This document is an update to the specifications contained in the *Intel® Desktop Board D945GCLF Technical Product Specification* (Order Number E35968). 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 apply to this desktop board, refer to the following:

- *Intel® Atom Processor 200 Series Specification Update (Order Number 319978)*

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® 945 Express Chipset Family Specification Update* (Order Number 307503) for specification updates concerning the 82945GC GMCH Controller and that may apply to the desktop board D945GCLF. 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 Hub7 (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 D945GCLF. 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.

# Terminology

**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 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.

# General Information

## Basic Desktop Board D945GCLF Identification Information

AA Revision	BIOS Revision	Notes
E27042-301	LF94510J.86A.0038	1,2
E27044-303	LF94510J.86A.0038	1,2
E27042-302	LF94510J.86A.0038	1,2
E27044-304	LF94510J.86A.0038	1,2
E27042-303	LF94510J.86A.0038	1,2
E27044-305	LF94510J.86A.0038	1,2
E27042-304	LF94510J.86A.0038	1,2
E27044-306	LF94510J.86A.0038	1,2

Notes:

1. The AA number is found on a small label on the component side of the board.
2. The 945 Chipset kit used on this AA revision consists of two components as follows:

Device	Stepping	S-Spec Numbers
82945GC	A2	SLA9C
82801GB	A1	SL8FX

# Summary of Changes

The following table indicates the Specification Changes, Errata, Specification Clarifications, or Documentation Changes that apply to the Intel® Desktop Board D945GCLF. 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.

The following notations are used in the 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	Documentation Changes
1	Doc	Correction of a Table reference number in Section 2.5.1 of the Technical Product Specification
No.	Plans	Errata
		There are no characterized erratum for this product

## Documentation Changes

Changes to the feature description in the board technical product specification. Typically the customer does not have to do anything to achieve proper device functionality as a result of the change.

1. Correction of a Table reference number in Section 2.5.1 of the Technical Specification.

### 2.5.1 Power Supply Considerations



#### CAUTION

*The +5 V standby line from the power supply must be capable of providing adequate +5 V standby current. Failure to do so can damage the power supply. The total amount of standby current required depends on the wake devices supported and manufacturing options.*

Additional power required will depend on configurations chosen by the integrator.

The power supply must comply with the indicated parameters of the ATX form factor specification.

- The potential relation between 3.3 VDC and +5 VDC power rails
- The current capability of the +5 VSB line
- All timing parameters
- All voltage tolerances

For example, for a system consisting of a D945GCLF board (with integrated Intel® Atom processor at 4 W), 2 GB DDR2 RAM, one hard disk drive, one optical drive, and all board peripherals enabled, the minimum recommended power supply is 75 W. Table 21 lists the recommended power supply current values.

**Table 21. Recommended Power Supply Current Values**

Output Voltage	3.3 V	5 V	12 V1	12 V2	-12 V	5 VSB
Current	0.51 A	7.75 A	0.52 A	0.32 A	0.018 A	0.3 A