

Intel® Atom™ Processor D400/D500 Storage Platform

Specification Update

March 2010



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The Intel® Atom™ Processor D400/D500 Series Storage Platform 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 and before placing your product order.

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Revision History

Revision	Description	Date
001	• Initial Release	March 2009

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Preface

This document is update to the specifications contained in the documents listed in the following Affected Document/Related Documents table. It is compilation of device and document errata and specification clarifications and changes, and is intended for hardware system manufacturing and for the software developers of applications, operating system, and tools.

Information types defined in the Nomenclature section of this document are consolidated into this update document and are no longer published in other documents.

Affected Documents

Document Title	Document Number/Location
<i>Intel® Atom™ Processor D400 and D500 Series Datasheet – Volume 1 and 2</i>	322844 322845
<i>Intel® Atom™ Processor D400 and D500 Series Thermal Mechanical Design Guidelines</i>	322856

Related Documents

Note: Specific silicon erratum/sightings are not covered in this document. Please refer to the document listed below for additional detail.

Document Title	Document Number/Location
<i>Intel® 82801Ix I/O Controller Hub (ICH9) – Specification Update</i>	361421/CDI
<i>Intel® Atom™ Processor D400 Series Specification Update</i>	322861
<i>Intel® Atom™ Processor D500 Series Specification Update</i>	322862
<i>Intel® Atom™ Processor D400/D500 Series Storage Platform Design Guide Addendum</i>	323311
<i>Intel® 64 and IA-32 Architecture Software Developer's Manual, Volume 1: Basic Architecture</i>	253665
<i>Intel® 64 and IA-32 Architecture Software Developer's Manual, Volume 2A: Instruction Set Reference, A-M</i>	253666
<i>Intel® 64 and IA-32 Architecture Software Developer's Manual, Volume 2B: Instruction Set Reference, N-Z</i>	253667
<i>Intel® 64 and IA-32 Architecture Software Developer's Manual, Volume 3A: System Programming Guide</i>	253668



<i>Intel® 64 and IA-32 Architecture Software Developer's Manual, Volume 3B: System Programming Guide</i>	253669
<i>Intel® Processor Identification and CPUID Instruction Application Note (AP485)</i>	241618
<i>Intel® 64 and IA-32 Architecture Application Note TLBs, Paging-Structure Caches, and their Invalidation</i>	317080
<i>Intel® 64 and IA-32 Architecture Software Developer's Manual Documentation Changes</i>	252046
<i>Intel® 82574 Family Gigabit Ethernet Specification Update 2.0</i>	320708



Nomenclature

Errata are design defects or errors. They may cause the platform's behavior to deviate from published specifications. Hardware and software designed to be used with any given stepping must assume that all errata documented for that stepping are present on all devices.

Specification Changes are modifications to the current published specifications. These changes will be incorporated in the next release of the specifications.

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.

Note: Errata remain in the specification update throughout the product's lifecycle, or until a particular stepping is no longer commercially available. Under these circumstances, errata removed from the specification update are archived and available upon request. Specification changes, specification clarifications and documentation changes are removed from the specification update when the appropriate changes are made to the appropriate product specification or user documentation (datasheets, manuals, etc.).

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Summary Tables of Changes

The following table indicates the Specification Changes, Errata, Specification Clarifications or Documentation Changes, which apply to the listed MCH stepping. Intel intends to fix some of the errata in a future stepping of the component, 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

Stepping

- X: Erratum, Specification Change or Clarification that applies to this stepping.
- (No mark) or (Blank Box): This erratum is fixed in listed stepping or specification change does not apply to listed stepping.

Status

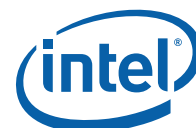
- Doc: Document change or update that will be implemented.
- PlanFix: This erratum may be fixed in a future stepping of the product.
- Fixed: This erratum has been previously fixed.
- NoFix: There are no plans to fix this erratum.

Row

- Shaded: This item is either new or modified from the previous version of the document.

Specification Changes are modifications to the current published specifications. These changes will be incorporated in the next release of the specifications.

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Item Numbering

Each Specification Update item is prefixed with a capital letter to distinguish the product. The key below details the letters that is used in Intel’s microprocessor specification updates:

SP_A = Intel® Atom™ Processor D400/D500 Series Storage Platform BIOS

SP_B = Intel® Atom™ D400/D500 Processor Series

SP_C = Intel® 82801IR I/O Controller

SP_D = Intel® Atom™ Processor D400/D500 Series Storage Platform

SP_E = Intel® 82574L Gigabit Ethernet Controller

SP_F = Intel® GbE Physical Layer Transceiver (PHY)

Number	Board Stepping	Status	Errata Description
		Errata	There are no errata’s in this revision of the specification update.

Number	SPECIFICATION CHANGES
	There are no Specification Changes in this revision of the specification update.

Number	SPECIFICATION CLARIFICATIONS
SP_C1	Port Multiplier support for Intel® Atom™ Processor D400/D500 Storage Platform.
SP_C2	Port Multiplier is not supported with Intel® Rapid Storage Technology RAID Stack.
SP_C3	Intel® Quiet System Technology is not supported with Intel® Atom™ Processor D400/D500 Storage Platform.
SP_E1	Teaming & Load-Balancing features are not supported with Add-In 82574L GbE Controllers.

Number	DOCUMENTATION CHANGES
	There are no Documentation Changes in this Specification Update revision.



Errata

There are no Errata in this Specification Update revision.



Specification Changes

There are no specification changes in this Documentation Update revision.



Specification Clarifications

SP_C1 **Port Multiplier support for Intel® Atom™ Processor D400/D500 Storage Platform.**

Description Port Multiplier is supported feature with this platform when the *Intel® Storage AHCI driver for Consumer/SOHO* is used. The port multipliers that are validated with this platform is Silicon Image 3726.

SP_C2 **Port Multiplier is not supported with Intel® Rapid Storage Technology (RST) RAID Stack.**

Description Port Multiplier is not a supported feature with RST RAID stack, while eSATA devices are supported.

SP_C3 **Intel® Quiet System Technology is not supported with Intel® Atom™ Processor D400/D500 Storage Platform.**

Description Intel® Quiet System Technology is not supported as this functionality requires Microcontrollers that is not supported with Intel® Atom Processor D400/D500 Series Processors.

SP_E1 **Teaming & Load-Balancing features are not supported with Add-In 82574L GbE Controllers.**

Description In 82574L, features like "Teaming" and "Load-Balancing" are supported ONLY when the LAN controller is down on the motherboard. While, the feature would be not supported in 82574L Add-in controllers.



Documentation Changes

There are no updates to the Specification Clarification section.