Desktop Board CC820 Specification Update

Release Date: June 2000

Order Number: 749730-004

The Intel® Desktop Board CC820 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 CC820 desktop board 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
October 1999	-001	This document is the first Specification Update for the Intel® Desktop Board CC820.
December 1999	-002	Updated revision level tables in the General Information section.
April 2000	-003	Added Specification Changes 1-2.
June 2000	-004	Added Erratum 1.

PREFACE

This document is an update to the specifications contained in the Intel® Desktop Board CC820 Technical Product Specification (Order number 748475). 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 CC820 desktop board 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® 82820 Chipset: 82820 Memory Controller Hub (MCH) Specification Update* (Order Number 290630) for specification updates concerning the 82820 MCH Controller. Items contained in the *82820 MCH Specification Update* that either do not apply to the CC820 desktop board or have been worked around are noted in this document. Otherwise, it should be assumed that any MCH 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 CC820 desktop board 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.

Refer to the *Intel® 82802 Firmware Hub (FWH) Specification Update* (Order Number TBD) for specification updates concerning the 82802 Firmware Hub. Items contained in the *Intel 82802 FWH Specification Update* that either do not apply to the CC820 desktop board 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 CC820 desktop board's 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 Intel® Desktop Boards CC820

GENERAL INFORMATION

Basic Intel® Desktop Board CC820 Identification Information

AA Revision	PBA Revision	BIOS Revision	Notes
744831-406	744830-406	CC82010A.86A.0006.P04	1-6
744831-407	744830-407	CC82010A.86A.0006.P04	1-6
744831-601	744830-601	CC82010A.86A.0012.P06	1-6
744831-602	744830-602	CC82010A.86A.0014.P08	1-6
744834-406	744832-406	CC82010A.86A.0006.P04	1-6
744834-407	744832-407	CC82010A.86A.0006.P04	1-6
744834-601	744832-601	CC82010A.86A.0012.P06	1-6
744834-602	744832-602	CC82010A.86A.0014.P08	1-6
A01172-401	A01171-401	CC82010A.86A.0006.P04	1-6
A01172-402	A01171-402	CC82010A.86A.0006.P04	1-6
A01172-601	A01171-601	CC82010A.86A.0012.P06	1-6
A01172-602	A01171-602	CC82010A.86A.0014.P08	1-6

NOTES:

1. The PBA number or AA number is found on a small label on the component side of the board.
2. The 82820 Chipset kit used on this PBA revision consists of three components as follows:

Device	Stepping	S-Spec Numbers
82820 MCH	B1	SL3FT
82801AA ICH	B1	SL3MA
82802AB FWH	A0	SB48

3. 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 CC820 desktop board 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.
4. The following items are contained in the *Intel® 82820 Memory Controller Hub (MCH) Specification Update* (Order Number TBD) and either do not apply to the CC820 desktop board or have been worked around in this PBA and/or BIOS revision: None, All other errata associated with the MCH apply to this PBA revision.
5. 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 CC820 desktop board 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.
6. The following items are contained in the *Intel® 82802 Firmware Hub Specification Update* (Order Number TBD) and either do not apply to the CC820 desktop board or have been worked around in this PBA and/or BIOS revision: None. All other errata associated with the FWH 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 CC820 desktop board. 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	SPECIFICATION CHANGES
1	Doc	Diagnostic LED display changes
2	Doc	Add control jumper block
NO.	**PLANS**	**ERRATA**
1	Fix	BIOS does not support Wake On Ring functionality with an Add–In Audio Modem Riser modem card with Advanced Power Management events enabled in the system BIOS

The errata described in this specification update apply to combinations of PBA revision and BIOS revision as shown in the table below. Descriptions of the individual erratum referred to by number in the table below are found in the ERRATA section of this document.

PBA Revision	BIOS Revision	Errata That Apply
744830-406	CC82010A.86A.0006.P04	1
	CC82010A.86A.0011.P05	1
	CC82010A.86A.0012.P06	1
	CC82010A.86A.0013.P07	1
	CC82010A.86A.0014.P08	1
744830-407	CC82010A.86A.0006.P04	1
	CC82010A.86A.0011.P05	1
	CC82010A.86A.0012.P06	1
	CC82010A.86A.0013.P07	1
	CC82010A.86A.0014.P08	1
744830-601	CC82010A.86A.0006.P04	1
	CC82010A.86A.0011.P05	1
	CC82010A.86A.0012.P06‡	1
	CC82010A.86A.0013.P07	1
	CC82010A.86A.0014.P08	1
744830-602	CC82010A.86A.0006.P04‡	1
	CC82010A.86A.0011.P05‡	1
	CC82010A.86A.0012.P06‡	1
	CC82010A.86A.0013.P07‡	1
	CC82010A.86A.0014.P08	1
744832-406	CC82010A.86A.0006.P04	1
	CC82010A.86A.0011.P05	1
	CC82010A.86A.0012.P06	1
	CC82010A.86A.0013.P07	1
	CC82010A.86A.0014.P08	1
744832-407	CC82010A.86A.0006.P04	1
	CC82010A.86A.0011.P05	1
	CC82010A.86A.0012.P06	1
	CC82010A.86A.0013.P07	1
	CC82010A.86A.0014.P08	1

PBA Revision	BIOS Revision	Errata That Apply
744832-601	CC82010A.86A.0006.P04‡	1
	CC82010A.86A.0011.P05‡	1
	CC82010A.86A.0012.P06	1
	CC82010A.86A.0013.P07	1
	CC82010A.86A.0014.P08	1
744832-602	CC82010A.86A.0006.P04‡	1
	CC82010A.86A.0011.P05‡	1
	CC82010A.86A.0012.P06‡	1
	CC82010A.86A.0013.P07‡	1
	CC82010A.86A.0014.P08	1
A01171-401	CC82010A.86A.0006.P04	1
	CC82010A.86A.0011.P05	1
	CC82010A.86A.0012.P06	1
	CC82010A.86A.0013.P07	1
	CC82010A.86A.0014.P08	1
A01171-402	CC82010A.86A.0006.P04	1
	CC82010A.86A.0011.P05	1
	CC82010A.86A.0012.P06	1
	CC82010A.86A.0013.P07	1
	CC82010A.86A.0014.P08	1
A01171-601	CC82010A.86A.0006.P04‡	1
	CC82010A.86A.0011.P05‡	1
	CC82010A.86A.0012.P06‡	1
	CC82010A.86A.0013.P07	1
	CC82010A.86A.0014.P08	1
A01171-602	CC82010A.86A.0006.P04‡	1
	CC82010A.86A.0011.P05‡	1
	CC82010A.86A.0012.P06‡	1
	CC82010A.86A.0013.P07‡	1
	CC82010A.86A.0014.P08	1

‡ Note: This combination of BIOS revision and PBA revision has not undergone regression testing. Use of a PBA with down-revision BIOS is an untested combination and is undertaken at the user's risk.

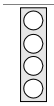
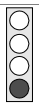
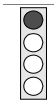
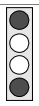
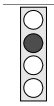
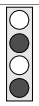
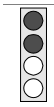
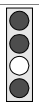
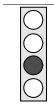
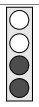
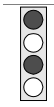
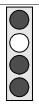
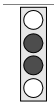
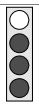
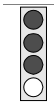
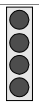
SPECIFICATION CHANGES

The Specification Changes listed in this section apply to the *CC820 Motherboard Technical Product Specification* (Order Number 748475). All Specification Changes will be incorporated into a future version of that specification.

1. Diagnostic LED Display Changes

In Section 5.6, Enhanced Diagnostics, Table 81 will be updated to reflect the following changes of the diagnostic LED's.

Table 81. Diagnostic LED Codes

Display	BIOS Operation	Display	BIOS Operation
 Amber Amber Amber Amber	Power on, starting BIOS	 Amber Amber Amber Green	Undefined
 Green Amber Amber Amber	Recovery mode	 Green Amber Amber Green	Undefined
 Amber Green Amber Amber	Processor, cache, etc.	 Amber Green Amber Green	Undefined
 Green Green Amber Amber	Memory, auto-size, shadow, etc.	 Green Green Amber Green	Undefined
 Amber Amber Green Amber	PCI bus initialization	 Amber Amber Green Green	Undefined
 Green Amber Green Amber	Video	 Green Amber Green Green	Undefined
 Amber Green Green Amber	IDE bus initialization	 Amber Green Green Green	Reserved
 Green Green Green Amber	USB initialization	 Green Green Green Green	Booting operating system

2. Add Control Jumper Block

Section 2.9.1, figure 16 and Table 47 will be added to the CC820 Technical Product Specification. All subsequent table numbers and figure numbers will be updated.

2.9.1 S5 Control Jumper Block

The addition of jumper block J6B1 provides additional user control over system wake events. When the jumper is in its default location (shorting pins 1-2) the system will resume from S5 when a PME or WOL event is asserted. If the jumper is placed on pins 2-3 the system will no longer resume from S5 when PME or WOL events are asserted. This jumper does not in any way impact S3 resume events. *Please note that in order for the system to resume from S5 the operating system and drivers must also be configured to enable these wake events.*

⚠ ***CAUTION***

Do not move any jumper with the power on. Always turn off the power and unplug the power cord from the computer before changing a jumper setting. Otherwise, damage to the CC820 board could occur.

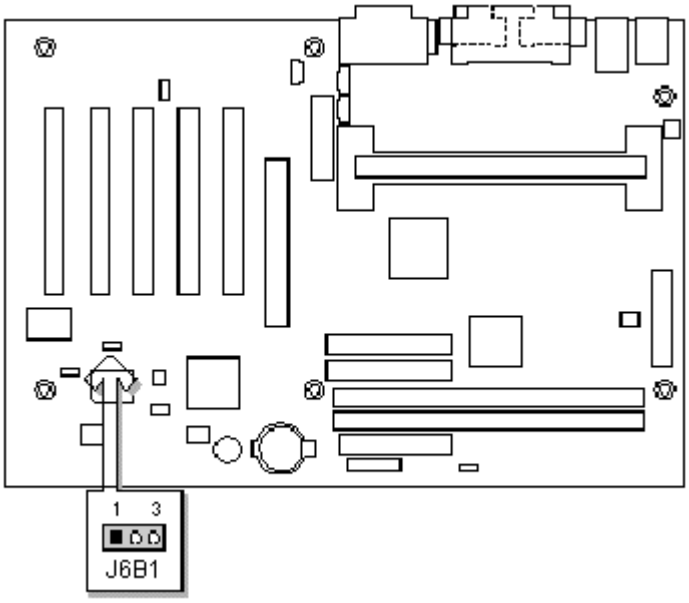


Figure 16. Location of the Jumper Block

Table 47. S5 Control Jumper Settings (J6B1)

Function/Mode	Jumper Setting		Configuration
Enable S5 wake events.	1-2	1 3 *(Default)*	System will resume from the S5 power state when a PME or WOL wake event is asserted.
Disable S5 wake events.	2-3	1 3	System will NOT resume from the S5 power state when a PME or WOL wake event is asserted.

ERRATA

1. BIOS Does Not Support Wake On Ring Functionality With an Add–In Audio Modem Riser Modem Card With Advanced Power Management Events Enabled in The System BIOS

PROBLEM: Some AMR modem cards may not wake on ring from a power off state when the system BIOS has wake events enabled.

IMPLICATION: It will not be possible to utilize the Wake On Ring function with an AMR modem card.

WORKAROUND: None.

STATUS: This erratum will be fixed in a future BIOS revision.