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Balboa Chassis Specification Update

Release Date: July, 1998

Order Number 681656-007

The Balboa Chassis may contain design defects or errors known as errata that may cause the product to deviate from published specifications. Current characterized errata are documented in this Specification Update.

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Specification Update for the Balboa Chassis

REVISION HISTORY

Date of Revision	Description
June 1997	This document is the first Specification Update for the Intel Balboa Chassis.
July 1997	No new information.
August 1997	Added a new issue and updated an issue.
September 1997	Updated an issue and updated the Identification Information Table.
October 1997	Updated two issues.
November 1997	No new information.
December, 1998	No new information.
January, 1998	No changes.
February, 1998	No changes.
March, 1998	No changes.
April, 1998	No changes.
May, 1998	No changes.
June, 1998	No changes.
July, 1998	No changes.

PREFACE

This document is an update to the specifications contained in the *Balboa Server Chassis Technical Product Specification* (Order Number 282969). It is intended for hardware system manufacturers and software developers of applications, operating systems, or tools. It will contain Specification Changes, Specification Clarifications, Errata, and Document Changes.

Refer to the *B440FX DP Server Platform Baseboard Specification Update* (Order Number 282968) for specification updates concerning the B440FX DP Server Platform Baseboard. Items contained the B440FX DP Server Platform Specification Update that either do not apply to the *Balboa* Server Chassis or have been worked around are noted in this document.

Refer to the *Pentium® Pro Processor Specification Update* (Order Number 242689) for specification updates concerning the Pentium Pro processor. Items contained in the *Pentium Pro Processor Specification Update* that either do not apply to the *Balboa* Server Chassis or have been worked around are noted in this document.

Refer to the *Intel 82440FX PCIset Specification Update* for specification updates concerning the Intel 82440FX PCIset. Items contained in the *Intel 82440FX PCIset Specification Update* that either do not apply to the *Balboa* Chassis or have been worked around are noted in this document. Otherwise, it should be assumed that any PCIset errata for a given stepping are applicable to the Printed Board Assembly (PBA) revisions(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.

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.

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

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Specification Update for the
Balboa Chassis

GENERAL INFORMATION

Identification Information

Below are the chassis, specific boards, and components covered by this update

Chassis TA #	Power Supply TA #	Power Share Board TA #	SCSI Backplane TA #	Front Panel TA #	Bezel TA #	Country Kit TA #
651031-004	658841-004	651006-242	651038-311	654034-101	651653-004	656157-004
651031-005	658841-004	651006-242	651038-311	654034-101	651653-004	656157-005

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ERRATA

The following table indicates the Errata, Specification Changes, Specification Clarifications, and documentation changes which apply to the Balboa Server Platform Chassis. Intel intends to fix some of the errata in the future, 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 hardware or software associated with the Balboa Chassis.
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.

#	Status	Summary
1	Fix	Hard drive read failures occurring due to vibration.
2	Fix	Possible ESD issue with the hot-swap backplane.
3	Fix	Order code correction.
4	NoFix	SCSI cable out of specification.
5	Doc	Updated the identification information table to include current shipping product.
6	NoFix	Balboa rackmount kit top cover interferes with chassis wire clip.

1. *Hard drive read failures due to vibration.*

PROBLEM: Balboa chassis hard drive mounting tolerances and structural integrity are not adequate to prevent one drive's vibration from coupling to adjacent drive's vibration, which causes write faults and retries.

IMPLICATION: Some high-performance hard drives might be incompatible with the Balboa chassis.

WORKAROUND: None identified.

STATUS: This issue will be corrected with a new hard drive carrier with a projected ship date of September 1997.

2. *Possible ESD issue with the hot-swap backplane.*

PROBLEM: A condition exists that may induce an electrostatic discharge to the backplane that will cause hard drives to go offline. This condition occurs when a 4KVa static discharge occurs on the hard drive bay. Intel has observed no hard drive failures from this issue.

IMPLICATION: There is a remote possibility a RAID pack may fail as a result of forcing drives back on-line.

WORKAROUND: None identified.

STATUS: This issue is the result of incomplete contact with the ESD clips on the hard drive carrier. Intel is currently developing and testing an enhanced clip which provides complete contact throughout the entire insertion motion.

3. *Order code correction.*

PROBLEM: Previous versions of the Balboa Specification Update have referenced the wrong Server Platform Basedboard Specification Update.

IMPLICATION: When ordering the baseboard specification update, a wrong order code will result in an incorrect document or an error in the ordering system.

WORKAROUND: None identified.

STATUS: This issue has been corrected in this edition and all future editions of the Balboa Specification Update.

4. *SCSI cable out of specification.*

PROBLEM: The SCSI cable on the BB440FX DP Server Platform is currently out of the specification according to the SCSI 3 specification.

IMPLICATION: None have been identified.

WORKAROUND: A cable is available by AMP (P/N#: 621540-2) which could be used in place of the supplied cable by Intel.

STATUS: There have been no reported failures using the cable supplied by Intel with the Balboa chassis. An investigation is underway by Intel engineering to determine the validity of the SCSI-3 cable specification in this area.

6. Balboa chassis incompatible with rackmount kit.

Problem: Some versions of the rackmount kit for Balboa 1 do not have the correct clearance cut-outs in the top-cover. Top covers in these kits will collide with plastic cable-ties mounted on the Balboa 1 chassis.

Implication: If the top-cover of these kits is forced on the chassis, the top cover may interfere with the plastic cable tie mounted on the chassis.

Workaround: Intel recommends that users remove the interfering clip before placing the top cover on the system. The Balboa chassis features multiple redundant wire clips to maintain cable routing. Loss of one clip will not interfere in the proper cable routing.

If customers wish to have an additional clip in place of the removed clip, an adhesive-backed clip is recommended. The following is a possible solution for customers desiring adhesive backed clips:

Manufacturer: Richco, P/N: MWSB-1-01A-RT

Status: Intel will not fix the top cover of the rackmount kit. Users requiring same number of wire clips should purchase the part specified in the Workaround section.