



SCB2 Server Board

SR1200 Server Chassis

SR2200 Server Chassis

Specification Update

Intel Order Number A81234-009

September 2002



Enterprise Platforms and Services Marketing

Revision History

Date	Modifications
November 2001	Initial release.
December 2001	Updated Intel Order number to A81234-002 Added errata 17 – 23
January 2002	Updated Intel Order number to A81234-003 Added errata 24 – 25
February 2002	Updated Intel Order number to A81234-004 No new errata
March 2002	No new errata
April 2002	No Update
May 2002	No Update
June 2002	Errata Updates
July 2002	Errata and documentation update added
August 2002	Incorporated SR1200 and SR2200 spec updates with SCB2 to create a single document; new errata listed
September 2002	Updates to product errata list, updates to product pedigree lists

Disclaimers

The SCB2 Server Board, SR1200 Server Chassis, and SR2200 Server Chassis may contain design defects or errors known as errata that may cause the product to deviate from the published specifications. Current characterized errata are documented in this Specification Update.

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Preface

This document is an update to the product definition specified in the *SCB2 Server Board Technical Product Specification* (Order Number A70821-002), *SR1200 Technical Product Specification* (Order Number A77772-001) and *SR2200 Technical Product Specification* (Order Number A77951-001). 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 *Intel® Pentium® III Processor Specification Update* (Order Number 244453-037) for specification updates concerning the Pentium® III processor. Items contained in the *Pentium® III Processor Specification Update* that either do not apply to the SCB2 Server 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 Printed Board Assembly (PBA) revisions(s) associated with that stepping.

Nomenclature

- **Specification Changes** are modifications to the current published specifications for the SCB2 server board, SR1200 Server Chassis, and SR2200 Server Chassis. These changes will be incorporated in a future release of the given document.
- **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 a future release of the given document.
- **Documentation Changes** include typos, errors, or omissions from documents that are currently published. These documents may include Product Specs and Users Guides. These changes will be incorporated in a future release of the given document.
- **Errata** are design defects or errors. Errata may cause operation of a specified product to deviate from published specifications. Hardware and software designed to be used with any given processor stepping must assume that all errata documented for that processor stepping are present on all devices. Errata listed in this document that have no plans to be fixed will be listed in later revisions of current published specifications for the given product.

Product Pedigree Lists

Below are the specific SCB2 board revisions covered in this document.

Product Code	Order Code (MM#)	Top Assembly # (TA#)	Baseboard PBA #	BIOS Rev. / Build #	BMC Revision	Product Change Notification #
SCB2SCSI SCB2ATA	837554 837553	A57951-001 A57953-001	A46044-606 A46043-606	1.0 / Build 11	44	NA (1 st Production)
SCB2SCSI SCB2ATA	837554 837553	A57951-002 A57953-002	A46044-607 A46043-607	1.01 / Build 13	48	PCN 101869
SCB2SCSI SCB2ATA	837554 837553	A57951-004 A57951-005 A57953-004 A57953-005	A46044-608 A46044-609 A46043-608 A46043-609	2.00 / Build 39	56	PCN 102045 PCN 102472
SCB2 SCSI SCB2ATA	837554 837553	A57951-006 A57953-006	A46044-610 A46043-610	2.09 / Build 65	63	PCN 102678

Below are the specific SR1200 chassis revisions covered in this document.

Product Code	Order Code (MM #)	Top Assembly # (TA #)	Front Panel PBA#	Power Supply Part Number	Product Change Notification #
KCR	836904	A63167-001	A46047-502	A47071-005	NA (1 st Production)
KCR	836904	A63167-002 A63167-003 A63167-004 A63167-005 A63167-006	A46047-502	A47071-006	PCN 102118 PCN 102236 PCN 102529 PCN 102730 PCN 102741
KCR	836904	A63167-007	A46047-504	A47071-006	PCN 102774

Below are the specific SR2200 chassis revisions covered in this document.

Product Code	Order Code (MM #)	Top Assembly # (TA #)	Front Panel PBA#	Back Plane PBA#	HSC Firmware Rev.	Power Supply Cage Part #	Power Supply Module Part #	Product Change Notification #
KSN	837365	A63162-001	A46047-502	A56188-302	0.04	A53593-003	A45295-006	NA 1 st Production
KSN	837365	A63162-002	A46047-502	A56188-302	0.04	A53593-003	A45295-006	PCN 101890
KSN	837365	A63162-003	A46047-502	A56188-303	0.04	A53593-003	A45295-006	PCN 102165
KSN	837365	A63162-004	A46047-503	A56188-303	0.04	A53593-003	A45295-006	PCN 102170
KSN	844587	A63162-005	A46047-503	A56188-303	0.04	A53593-003	A45295-006	PCN 102046
KSN	844587	A63162-006	A46047-503	A56188-304	0.05	A53593-003	A45295-006	PCN102474
KSN	844587	A63162-007	A46047-503	A56188-304	0.05	A53593-003	A45295-006	PCN 102609 PCN 102612
KSN	844587	A63162-008	A46047-503	A56188-304	0.05	A53593-003	A45295-006	PCN 102713
KSN	844587	A63162-009	A46047-504	A56188-304	0.05	A53593-003	A45295-006	PCN 102776

Summary Tables of Changes

The following tables indicate the errata and the document changes that apply to the SCB2 Server Board. Intel intends to fix some of the specified errata in future updates to the server board. Documentation changes will be made in future updates to the given document. The tables use the following notations:

Doc: Intel intends to update the appropriate document in a future revision.

Investigating Intel is investigating the issue.

Fix: Intel intends to fix this erratum in a future update of the board.

Fixed: This erratum has been addressed.

NoFix: There are no plans to fix this erratum.

Shaded: This erratum is either new or has been modified from the previous specification update.

Table 1. Errata Summary

No.	Plans	Description of Errata
1.	No Fix	SCB2 - Serial port speed of 56k not supported by BIOS Setup Utility
2.	No Fix	SCB2 - BIOS Recovery not beeping when expected
3.	No Fix	SCB2 - Only the first eight (8) HDDs connected to the on-board SCSI controller are listed as bootable devices in BIOS Setup
4.	No Fix	SCB2 - Row of numeric keys in a standard QWERTY keyboard are not the same as numeric keys from a 10-key Num-Pad for BIOS passwords
5.	No Fix	SCB2 - BIOS Recovery from LS-120 fails
6.	Fixed	SCB2 - Some USB devices may cause system to hang at POST
7.	Fixed	SCB2 - Some USB-to-PS2 adapters are not compatible on the SCB2 server board
8.	Fixed	SCB2 - System may hang or may function erratically when using Keyboard/Video/Mouse (KVM) Switch boxes
9.	No Fix	SCB2 - No support for ATAPI devices on ATA-100 controller
10.	Fix	SR1200 - Floppy/CDROM module not Inserting Smoothly into SR1200 Chassis
11.	No Fix	SR1200/SR2200 - CD-ROM tray bezels may jam with Floppy/CDROM Module bracket
12.	Fixed	SR2200 - HSBP may unseat from lances in bottom of SR2200 chassis during shipment
13.	No Fix	SR1200 - No support for fan fail on SR1200 power supply status LED
14.	Fixed	SR1200 - Top cover of SR1200 does not consistently depress the chassis intrusion switch
15.	Fixed	SCB2 – No support for PCI adapters requesting > 128MB of 32-bit address space
16.	Fix	SCB2 – Keyboard does not lock if a wrong password is entered 3 times when attempting to enter the Security submenu in BIOS setup

Table 2. Documentation Changes

No.	Plans	Description of Documentation Change
1.	Fixed	Update SCB2 TPS to remove sentence stating that ATAPI devices are supported on the Promise ATA Controller.

Following are in-depth descriptions of each erratum / documentation change indicated in the tables above. The errata and documentation change numbers below correspond to the numbers in the tables.

Errata

1. Serial port speed of 56k not supported by BIOS Setup Utility

Problem	The SCB2 Server board does not offer 57.6 kbps speed as an option for serial ports in the BIOS Setup Utility.
Implication	Serial port limited to operate at speeds 9600, 19.2k, 38.4k, 115.2 kbps for all functions.
Workaround	Set speed to 115.2 Kbps and allow devices to autonegotiate to fastest mutually supported speed.
Status	No Fix. Technical product Spec to be updated reflecting supported speeds]

2. BIOS Recovery not beeping when expected

Problem	While performing a BIOS Recovery in the SCB2 Server board, the beep to warn diskette absence is triggered only after a ~3 minute time out delay. Time-out delay increased for BIOS to search for legacy, ATAPI and USB floppy boot devices.
Implication	Delay notification to user when performing a BIOS Recovery without a floppy present.
Workaround	None.
Status	No Fix.

3. Only the first eight (8) HDDs connected to the on-board SCSI controller are listed as bootable devices in BIOS Setup

Problem	If there are more than eight drives connected to the on-board SCSI of the SCB2 Server board, only the first eight SCSI hard drives are listed in BIOS Setup under Boot Order. SCSI option ROM supports a maximum of 8 HDD for boot order based on the BIOS Boot Specification.
Implication	A bootable drive connected to the on-board SCSI controller must be configured to be between the first eight hard drives in order to be identified as bootable by BIOS.
Workaround	None.
Status	No Fix.

4. Row of numeric keys in a standard QWERTY keyboard are not the same as numeric keys from a 10-key Num-Pad for BIOS passwords

Problem	The SCB2 Server board BIOS Utility does not interpret the row of numeric keys (above letters) in a standard QWERTY keyboard the same as numeric keys from a Num-Pad when entering/defining passwords.
Implication	BIOS regards these as different characters; when entering a password, BIOS will not accept it as a valid password unless it is entered with the set of keys as it was defined.
Workaround	None.
Status	No Fix.

5. BIOS Recovery from LS-120 fails

Problem	If BIOS recovery is attempted from LS-120 system will not boot.
Implication	Cannot perform recovery from LS-120 devices.
Workaround	Utilize standard 3.5" 1.44MB Floppy removable device.
Status	No Fix.

6. Some USB devices may cause system to hang at POST

Problem	Some USB devices may cause the system to hang at POST when attached to any of the USB connectors.
Implication	Some USB devices may not be compatible for use with the SCB2 server board. Intel's investigation into the issue has so far uncovered that USB devices that are programmed with an 'FF' as a device type cause the system BIOS to think the device is a hard drive. The issue has been seen using USB security dongles, some USB CDROM drives, and some USB keyboards.
Workaround	None.
Status	Fixed – This issue has been addressed with SCB2 BIOS versions 2.09 and later

7. Some USB-to-PS2 adapters are not compatible for use on the SCB2 server board

Problem	When plugged into some USB-to-PS2 adapters, PS2 mice and keyboards may not function
Implication	No PS/2 keyboard or mouse support from USB port(s).
Workaround	Use PS/2 connector on the back of the server board. If the use of both devices are desired, use the PS/2 y-cable that shipped with the server board.
Status	Fixed – This issue has been addressed with SCB2 BIOS versions 2.09 and later

8. System may hang or may function erratically when using Keyboard/Video/Mouse (KVM) Switch boxes

Problem	System may hang during POST or function erratically when using some Keyboard/Video/Mouse (KVM) switch boxes.
Implication	The use of a single keyboard, monitor and mouse to control multiple systems may not be possible
Workaround	Testing has shown that multiple systems can be controlled with some KVM boxes when only a single device is attached to the PS2 connector on the server board. I.e) Only attach the mouse or the keyboard and do not use the y-cable to attach both
Status	Fixed – This issue has been addressed with SCB2 BIOS versions 2.09 and later

9. No support for ATAPI devices on ATA-100 controller (SCB2-ATA)

Problem	The Promise* PDC20267 ATA-100 controller does not support the ATAPI command set.
Implication	ATAPI devices attached to either of the ATA-100 channels on the SCB2-ATA board will not function.
Workaround	None
Status	No Fix

10. Floppy/CDROM Not Inserting Smoothly into SR1200 Chassis

Problem	CDROM/Floppy modules getting stuck during insertion in the flexbay of some SR1200 chassis.
Implication	Applying excessive force may result in CDROM/Floppy mating at high impact with piggyback board on backplane.
Workaround	None.
Status	Fix.

11. CD-ROM Tray Bezels May Jam With Floppy/CDROM Module Bracket

Problem	CD-ROM tray bezels may jam with the Floppy/CDROM module bracket if excessive force is applied on the cdrom tray during installation.
Implication	CDROM tray cannot be ejected.
Workaround	Eject CDROM tray manually via the recessed manual release button by inserting pin through hole in bezel and lightly pulling on the tray if necessary. Subsequent CDROM tray ejects should not jam given that it is unlikely user will apply great force to close tray once Floppy/CDROM module is installed.
Status	No Fix.

12. HSBP may unseat from lances in bottom of SR2200 chassis during shipment

Problem	SCSI HSBP held in place by 4 screws on top of board and lances at the base of chassis. Data exhibiting HSBP may unseat from lances during shipping.
Implication	Defect resulting on HDDs going off-line and abnormal behaviour from the SAF-TE controller.
Workaround	Inspect HSBP seating and re-seat HSBP between lances on bottom of chassis if necessary.
Status	Fixed – See product change notification (PCN) # 102609

13. No Support For Fan Fail on Power Supply Status LED

Problem	If a power supply fan fails, the power supply status LED does not change to amber.
Implication	No visual way to tell that a power supply fan has failed.
Workaround	None
Status	No fix – SR1200 Power supply spec revised to accurately describe LED operation. SR1200 TPS revision 2.0 has been updated to reflect LED operation more accurately.

14. Top Cover of SR1200 Does Not Consistently Depress Chassis Intrusion Switch

Problem:	On some SR1200 server chassis, when the top cover is slid into the close position, the metal tab used to depress the chassis intrusion switch may not consistently make the correct contact.
Implication:	This issue may cause some chassis to report a false chassis intrusion signal to the SCB2 BMC. The BMC will then generate false entries into the System Event Log (SEL), and if used, server management software may report false errors.
Workaround:	If this issue is seen, in most cases, the issues goes away when the top cover is reseated.
Status:	Fixed – A design change to the SR1200's top cover metal tab has been made to address this issue. Chassis assembled in September 2002 and beyond will have the redesigned top cover. See product change notification (PCN) # 102741

15. SCB2 – No support for PCI adapters requesting > 128MB of 32-bit address space

Problem:	PCI add-in cards that request over 128MB of the 32-bit address space will not be recognized by the system BIOS during POST.
Implication:	This may cause the add-in card not function or in some cases will cause the system to hang during POST.
Workaround:	None. Most PCI add-in cards do not use or require > 128MB of 32-bit address space.
Status:	Fixed: This issue has been addressed with SCB2 BIOS ver 2.10 build 69. This and all later version of the SCB2 BIOS will recognize PCI add-in cards that request upto 512MB of 32-bit address space.

16. SCB2 – Keyboard does not lock if a wrong password is entered three times when attempting to enter the Security submenu in BIOS setup

Problem: When the system is setup with either a User or Administrator password, the keyboard should lock up when the wrong password is entered 3 times when attempting to enter the Security submenu in BIOS setup. This is not working. The system will continue to ask for a password until the correct password is entered.

Implication: Someone trying to guess a password will have the ability to continue trying without having the keyboard lock up after 3 attempts.

Workaround: None

Status: Fix – This issue will be addressed in a future release of system BIOS.

Documentation Changes

1. No support for ATAPI devices using ATA-100 controller

Problem	Page 23 of the 1.1 release of the SCB2 Technical Product Specification (TPS) states that the on-board Promise* ATA-100 controller has support for ATAPI devices.
Implication	The onboard Promise ATA-100 controller on the SCB2-ATA board does not have support for ATAPI device. The Promise controller does not support the ATAPI command set, therefore any ATAPI devices that are connected to either of the ATA-100 channels will not function or be recognized by the controller.
Status	Fixed - Page 23 of the 2.0 release of the TPS has been corrected as follows: The ATA-100 controller supports the following features: <ul style="list-style-type: none">• The scatter / gather mechanism supports both Direct Memory Access (DMA) and Programmable I/O (PIO) IDE drives.• Support for ATA PIO Mode 0, 1, 2, 3, 4, DMA Mode 0, 1, 2, and Ultra DMA Mode 0, 1, 2, 3, 4, 5.• The IDE drive transfer rate is capable of up to 100 MB/sec per channel.• The host interface complies with <i>PCI Local Bus Specification Revision 2.2</i>.• 32-bit, 33-MHz bus speed and 132 MB/sec sustained transfer rate.