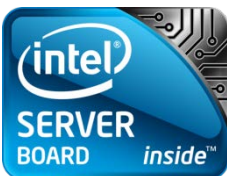


Monthly Specification Update

Intel® Server Board S2400BB

Intel® Server System R1000BB Product Family

Intel® Server System R2000BB Product Family



December 2012

Intel® Enterprise Platforms and Services Division

Revision History

Date	Modifications
November 2012	Initial release
December 2012	Updates to errata list and document change list. Changes identified in BLUE text

Disclaimers

The specified Intel® server board or Intel® server System 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 serves as an update to content and specifications provided in the following documents:

1. *Intel® Server Board S2400BB Technical Product Specification*
2. *Intel® Server System R1000BB Product Family Technical Product Specification*
3. *Intel® Server System R2000BB Product Family Technical Product Specification*

It is intended for system manufacturers and software developers of applications, operating systems, or tools. It provides specification changes, specification clarifications, errata, and document changes.

Nomenclature

1. **Specification Changes** are modifications to the current published specifications for Intel® server boards and/or Intel® server systems. These changes will be incorporated in the next release of the specified document.
2. **Specification Clarifications** describe a specification in greater detail or further highlight a specification's impact to a complex design. These clarifications will be incorporated in the next release of the specified document.
3. **Documentation Changes** include typos, errors, or omissions from the current published documentation. These changes will be incorporated in the next release of the specified document.
4. **Errata** are design defects or functional deviations of a current published specification. Errata may cause the server board or server system behavior 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.

Product Scope

The following server boards, BIOS and components are covered by this update:

Product Code	Baseboard PBA Revision	BIOS Revision	BMC Revision	FRU/SDR Revision	ME Revision
S2400BB4	G27007-350	01.03.0002	1.10.3560	1.02	02.01.05.107

Summary Tables of Changes

The following tables provide an overview of known errata and known document changes that apply to the specified Intel Server Products. The tables use the following notations:

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

Fix: Intel intends to fix this erratum in the future.

Fixed: This erratum has been previously fixed.

No Fix: 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.	Fix	Linux* Operating Systems are not supported on RSTe mode
2.	Fix	UEFI Operating System installation is not supported on ESRT2 mode
3.	Fixed	RSTe GUI installation may fail if there are no devices attached to any onboard AHCI ports
4.	Fix	Hard drives connected through SAS expander can't be detected in legacy mode
5.	Fixed	On-board VGA cannot be set to the highest resolution (1920x1080 and higher)
6.	Fix	Hard drive locate LED may not instantly respond to the locate command if backplane is connected through SAS expander to a RAID controller
7.	Fix	Integrated BMC Web Console – Sensor Readings Page – Memory Throttling sensor status will stay “Critical” once triggered
8.	Fixed	WOL (Wake on LAN) may not function under Red Hat* Linux 6.2 64bit OS
9.	Fixed	POST Code Diagnostic LEDs may continue to display a status after POST has completed
10.	Fix	System only reports the first occurrence of power redundancy loss
11.	Fix	No internal SSD support on current shipping 2U server system SKUs
12.	Fix	Microsoft Windows 2003* x86 installation failure under Pass-through mode of SCU controller
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Table 2. Documentation Changes

No.	Plans	Description of Documentation Change	Document Name
1	Fix	IO Module Support Correction	Intel® Server S2400BB TPS Rev 1.0
2	Fix	POST Progress Code Table Correction	Intel® Server S2400BB TPS Rev 1.0 Intel® Server System R1000BB TPS Rev 1.1 Intel® Server System R2000BB TPS Rev. 1.1
3	Fix	2U Internal fixed mount SSD support change	Intel® Server System R2000BB TPS Rev. 1.1

The following sections provide in-depth descriptions of each erratum/documentation change indicated in the tables above. The errata and documentation change numbers referenced in the following sections correspond to the numbers in the tables above.

Errata

1. Linux* Operating Systems are not supported on RSTe mode

Problem	Intel® RSTe mode is not supported on Red Hat* Linux and SUSE* Linux.
Implication	User may not be able to install Red Hat* Linux and SUSE* Linux on Intel® C600 Series Chipset based Server Boards under Intel® RSTe mode.
Status	This issue may be fixed in future driver or BIOS releases.
Workaround	None.

2. UEFI Operating System installation is not supported on ESRT2 mode

Problem	UEFI OS installation of Microsoft Windows*, Red Hat* Linux or SUSE* Linux may fail on AHCI or SCU controller when “EFI Optimized Boot” and “Use Legacy Video for EFI OS” are both enabled.
Implication	User may not be able to install UEFI OS under ESRT2 mode on Intel® C600 Series Chipset based Server Boards.
Status	This issue may be fixed in a future BIOS revision.
Workaround	None.

3. RSTe GUI installation may fail if there are no devices attached to any onboard AHCI ports

Problem	When Microsoft Windows 2008* R2 is installed on SCU ports, the installation of RSTe drivers and the Graphic User Interface (GUI) in Windows 2008* R2 will fail, if the AHCI controller is enabled while no device is attached to the AHCI SATA ports.
Implication	User may not be able to install RSTe GUI under mentioned configuration when the AHCI controller is enabled and no devices are attached to the AHCI SATA ports.
Status	Fixed - Issue was corrected in system BIOS revision 01.03.0002 and later
Workaround	The workaround is to either plug a SATA device into one of the AHCI SATA ports, or disable the onboard AHCI controller in BIOS.

4. Hard drives connected through SAS expander can't be detected in legacy mode

Problem	If hard drives are connected through expander to SCU ports and configured under RSTe mode, the hard drives can't be detected by system in legacy mode (default BIOS setting).
Implication	Users can't use the hard drives connected through expander as boot device to install OS. But users can install OS to other hard drives which are not connected through expander and load RSTe driver to make the hard drives connected through expander visible to OS. Or users can change Boot Options -> EFI Optimized Boot to "Enabled" in BIOS Setup so that hard drives connected through expander can be detected by the system.
Status	This issue may be fixed in a future BIOS release.
Workaround	None.

5. On-board VGA cannot be set to the highest resolution (1920x1080 and higher)

Problem	The Graphics ID register in the on-board video controller is getting set incorrectly.
Implication	The video cannot be set to the highest resolutions listed here: [1920x1080,High 256 Color, 60 Hertz] [1920x1200,High 256 Color, 60 Hertz] [1920x1080,High Color(16bit), 60 Hertz] [1920x1200,High Color(16bit), 60 Hertz]
Status	Fixed - This issue is corrected with BMC Firmware 01.16.4010 and later
Workaround	None.

6. Hard drive locate LED may not instantly respond to the locate command if backplane is connected through SAS expander to a RAID controller

Problem	If backplane is connected through SAS expander to a RAID controller, the hard drive locate LED may not instantly respond to the locate command from the RAID controller. The LED may blink after up to 2 minutes.
Implication	The symptom doesn't happen if backplane is directly connected to the RAID controller. Root cause has been identified in the motherboard BMC.
Status	This issue may be fixed in a future BMC release.
Workaround	None.

7. Integrated BMC Web Console – Sensor Readings Page – Memory Throttling sensor status will stay “Critical” once triggered

Problem	When Memory Throttling is triggered, the Memory “P1 MTT and/or P2 MTT” sensor status will stay at “Critical” status in the Integrated BMC Web Console even after throttling has stopped.
Implication	User may observe Memory “P1 MTT and/or P2 MTT” status as “Critical” even when there is no throttling. No functional impact to the system.
Status	This issue may be fixed in a future ME release.
Workaround	Need a AC cycle or reset ME through IPMI to reset the MTT sensor status.

8. WOL (Wake on LAN) may not function under Red Hat* Linux 6.2 64bit OS

Problem	With Intel® LAN driver version 17.1, WOL (Wake on LAN) may not function under Red Hat* Linux 6.2 64bit OS.
Implication	You may not be able to wake system through onboard NIC port.
Status	Fixed - Issue is corrected in LAN driver package 17.4 and later.
Workaround	None.

9. POST Code Diagnostic LEDs may continue to display a status after POST has completed

Problem	All POST Code Diagnostic LEDs should be in an off state after the POST process has completed. Instead, the LEDs may continue to display status code changes after the Operating System boot process has begun. The codes observed could change at any time after POST and have any value.
Implication	The POST Code Diagnostic LEDs may not be all off after POST has completed.
Status	Fixed – Issue corrected in BMC Firmware release 01.17.4151 and later
Workaround	None. All POST Code Diagnostic LED states displayed after the OS begins to boot should be ignored as they do not reflect an actual platform boot status.

10. System only reports the first occurrence of power redundancy lost events.

Problem	The integrated platform management subsystem will only report the first occurrence of a power redundancy loss event. Any additional power redundancy loss events that may occur after the initial event, will not be reported unless an AC cycle is applied.	
Implication	With the first power redundancy lost event detected, the status LED will change states to flashing Green and the system event log will display the event as shown below.	
	Power Unit, Pwr Unit Redund (#0x2) Pwr Unit Redund reports full redundancy has been lost. Integrated BMC - LUN#0 (Channel#0)	Informational event:
	After hot swapping the faulty power supply, which would change the state of the system back to normal (Status LED goes back to solid Green), the system will NOT report any further power redundancy lost events, until an AC cycle of the system is performed.	
Status	This issue will be fixed in a future BMC firmware release.	
Workaround	None..	

11. No internal SSD support on current shipping 2U server system SKUs.

Problem	First production Intel® Server System R2000BB product family SKUs that include an air duct with mounting locations for two SSDs do not pass unpackaged shock testing when 1 or 2 Solid State Devices (SSDs) were mounted to the air duct.	
Implication	With 1 or 2 SSDs mounted to the air duct, the air duct may dislodge and shift if the system is dropped or suffers a sudden shock. An air duct that is not seated properly may not allow for proper air flow over critical components in the system causing them to over heat.	
Status	This issue will be corrected with a design change to the air duct latching mechanism and limiting the internal mounted SSD support to one device. The new air duct design will be integrated in to all new Intel® Server System R2000BB product family SKUs assembled in early 2013.	
Workaround	None	

12. Microsoft Windows 2003* x86 installation failure under Pass-through mode of SCU controller.

Problem	An RSTe driver issue exists where an installation error will occur when attempting to install Microsoft Windows Server 2003* x86 when the the onboard SCU ports are configured to support RSTe pass-through mode.	
Implication	User may not able to install Microsoft Windows Server 2003* x86 with onboard SCU ports configured as RSTe pass-through mode.	
Status	This issue may be fixed in a future RSTe driver release.	
Workaround	Install Microsoft Windows Server 2003* x64	

Product Documentation Corrections

1. I/O Module Support correction

Document	Intel® Server Board S2400BB Technical Product Specification Rev. 1.0
Section	3.2.3.2 I/O Module Support
Issue	The I/O module attaches to a high density 80-pin connector on the server board (J2B1) labeled "IO_Module" and is supported by x8 PCIe Gen3 signals from the IIO module of the CPU #1 processor.
Change	The I/O module attaches to a high density 80-pin connector on the server board (J2B1) labeled "IO_Module" and is supported by x8 PCIe Gen3 signals from the IIO module of the CPU #2 processor.
Status	Correction to be implemented in a future update of the document.

2. POST Progress Code Table Correction

Document	Intel® Server Board S2400BB Technical Product Specification Rev. 1.0 Intel® Server System R1000BB Technical Product Specification Rev. 1.1 Intel® Server System R2000BB Technical Product Specification Rev. 1.1
Section	POST Code Diagnostic LED Decoder table
Issue	POST progress codes for E0h thru E3h were incorrectly displayed in the table. The upper nibble bits incorrectly showed 1101 .
Change	The upper nibble bits for POST progress codes E0h thru E3h will be changed to 1110 .
Status	Correction to be implemented in a future update of the affected documents

3. 2U system Internal fixed mount SSD support change

Document	Intel® Server System R2000BB Product Family Technical Product Specification Rev. 1.1
Section	5.4 Internal Fixed mount SSD support
Issue	Change in documented supported feature. See Errata #11
Change	The document will be changed to reflect support for one SSD instead of two.
Status	Change to be implemented in the 1.2 revision of the effected document