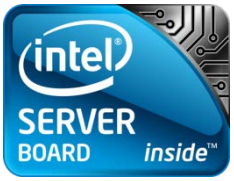
Monthly Specification Update

Intel® Server Board S2600CP Family, Intel® Server System P4000CP Family



June, 2012

Enterprise Platforms and Services Marketing

Revision History

Date	Modifications
March, 2012	Initial release.
April, 2012	Added item #15, #16, #17
May, 2012	Added item #18, #19, #20, #21
June, 2012	Updated item #10, #19, #21

Disclaimers

This Monthly Specification Update of the 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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Contents

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Preface

This document is an update to the specifications contained in the *Intel® Server Board S2600CP Family and Intel ® Server System P4000CP Family Technical Product Specification*. 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.

1. Nomenclature

Specification Changes are modifications to the current published specifications for Intel® server boards. 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. Errata may cause the server board 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.

2. Product Scope

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

Product Code	Baseboard PBA Revision	BIOS Revision	BMC Revision	FRU/SDR Revision	ME Revision
S2600CP2 S2600CP2J S2600CP4	-50x	01.01.0001 01.01.1002	1.00	1.00	02.01.05.069
S2600CP2 S2600CP2J S2600CP4	-50x	01.02.0003	1.04	1.04	02.01.05.069

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 Windows Server 2008* R2 SP1 installation on SCU ports may fail under RSTe RAID mode
3.	Fix	UEFI Operating System installation is not supported on ESRT2 mode
4.	Fix	HDD status LEDs do not function under specific configuration
5.	Fix	RSTe GUI installation may fail if there are no devices attached to any onboard AHCI ports
6.	Fixed	BMC continuously sends RAID volume rebuild event in RSTe mode of the SCU controller
7.	Fix	System may halt under specific BIOS configurations
8.	Fix	Microsoft Windows 2003* x86 installation failure under Pass-through mode of SCU controller
9.	Fix	System may halt under unsupported configuration in ESRT2 mode
10.	Fixed	Extra events may be seen in the System Event Log (SEL) during system global reset
11.	Fixed	System may continuously report a faulty or assert/deassert log when having blank HDD carriers or un-configured HDDs
12.	Fix	Integrated BMC Web Console – Power Statistics page – Minimum wattage reads as zero
13.	Fix	Integrated BMC Web Console – Power Control page – Perform Action button not functional.
14.	Fix	IPMI Get Chassis Status command returns incorrect Chassis Identify State
15.	Fix	The BIOS and ME Firmware can't be updated successfully via Intel® One Boot Flash Update Utility(OFU) under SuSE Linux Enterprise Server 11* (64-bit) with SP2
16.	Fix	BMC continuously sends HDD assert/de-assert event during HDD RAID rebuild under ESRT2 mode of the SCU controller
17.	Fix	High CPU utilization may occur when installing or running Microsoft* Windows* Server 2008 R2 or Microsoft* Windows* 7 with default NIC driver
18.	Fixed	Intel® RAID C600 Upgrade Key replacement Issue
19.	Fixed	ESRT2 RAID is not supported on Intel® Server Board S2600CP2/S2600CP2J
20.	Fixed	System may detect unrecognized sensors
21.	Fixed	Intel® LAN driver installation failure on Windows* 7

Table 2. Documentation Changes

No.	Plans	Document Name	Description of Documentation Change

1.			
2.			
3.			

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 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 Windows Server 2008* R2 SP1 installation on SCU ports may fail under RSTe RAID mode

Problem System may encounter blue screen when installing Windows Sever 2008* R2 SP1 under UEFI with below configurations:

1. Intel® C600 RAID Upgrade Key is installed and SAS HDDs are used on SCU ports.

2. BIOS options “EFI Optimized Boot” and “Use Legacy Video for EFI OS” are enabled.

3. Under RSTe RAID mode.

Implication User may not able to install UEFI Windows Server 2008* R2 SP1 on Intel® C600 Series Chipset based Server Boards with mentioned configuration.

Status This issue may be fixed in a future BIOS release.

Workaround None.

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

Problem UEFI OS installation of 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.

4. HDD status LEDs do not function under specific configuration

Problem If drives are connected through expander to SCU ports and configured under RSTe mode, the HDD status LEDs may not function properly.

Implication HDD status LED may not show the HDD locate, HDD fault or RAID rebuild message.

Status This issue may be fixed in a future RAID driver.

Workaround None.

5. 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 This issue may be fixed in a future RAID driver.

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.

6. BMC continuously sends RAID volume rebuild event in RSTe mode of the SCU controller

Problem When RSTe RAID is in degraded mode and a drive is inserted to start the RAID rebuild, System Event Log (SEL) records drive plug and rebuild events and then continuously sends a rebuild event message.

Implication User may see the SEL flooded with RAID volume rebuild event entries.

Status This issue was fixed in latest RSTe driver ver 3.0.0.3020.

Workaround None.

7. System may halt under specific BIOS configurations

Problem Once BIOS options “EFI Optimized Boot” and “Memory Mapped I/O Above 4GB” are both enabled, and RSTe mode is selcted, system may halt during the system POST.

Implication User may see system hang with mentioned configuration.

Status This issue may be fixed in a future RSTe UEFI driver release.

Workaround None.

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

Problem Microsoft Windows Server 2003* x86 installations on SCU RSTe pass-through mode fail.

Implication User may not able to install Microsoft Windows Server 2003* x86 on mentined BIOS configuration.

Status This issue may be fixed in a future RSTe driver release.

Workaround None.

9. System may halt under unsupported configuration in ESRT2 mode

Problem If no Intel® C600 RAID upgrade key (any of RKSAS4, RKSAS4R5, RKSAS8, RKSAS8R5) is installed to enable SAS support capablity under ESRT2 mode while SAS drivers are used, the system may halt at the boot stage.

Implication User may see a system halt with no RAID keys installed with SAS drivers used and ESRT2 enabled. User should use SATA drives only if no RAID key installed.

Status This issue may be fixed in a future BIOS release.

Workaround None.

10. Extra events may be seen in the System Event Log (SEL) during system global reset

Problem The BMC may sporadically log extra reset event during a system DC reset (global reset). These events may appear as there is an extra reset during BIOS POST.

The following SEL entries indicate two resets in a POST process:

Informational event: Pwr Unit Status reports the power unit is powered off or being powered down.

Informational event: Pwr Unit Status reports the power unit is powered off or being powered down.

Implication The SEL log may indicate that system has an occasional reset in a normal POST during DC cycle test (global reset).

Status This issue was fixed in BMC 1.04.

Workaround None.

11. System may continuously report a faulty or assert/deassert log when having blank HDD carriers or un-configured HDDs

Problem With ESRT2 SATA RAID 5 config with 3 HDDs, put the 4th HDD in drive carrier and set it to either unconfigured or global hot spare. System event log may be flooded with HDD faulty entries.

With ESRT2 SAS RAID 1 with 2 HDDs, put 3rd HDD and set to unconfigured or global hot spare. System event log may be flooded flood with HDD faulty entries.

Implication User may see the SEL flooded with HDD faulty entries when either of the two scenarios above are used.

Status This issue was fixed in BMC 1.04.

Workaround None.

12. Integrated BMC Web Console – Power Statistics page – Minimum wattage reads as zero.

Problem On some systems the Integrated BMC Web Console Power Statistic page may display the Minimun wattage as zero (0W) after the system has been powered. This reading will stay at zero until the next power cycle of the system.

Implication This is an incorrect reading only and does not affect operation.

Status This issue may be fixed in a future BMC release

Workaround None.

13. Integrated BMC Web Console – Power Control page – Perform Action button not functional.

Problem After performing a Graceful shutdown from the Integrated BMC Web Console Power Control page the Perform Action button gets grayed out and cannot be pressed to request another action.

Implication You cannot perform a power on of the system.

Status This issue may be fixed in a future BMC release

Workaround Select another page in the Integrated BMC Web Console and then return to the Power Control Page. The Perform Action button will then be available.

14. IPMI Get Chassis Status command returns incorrect Chassis Identify State.

Problem When a Get Chassis Status command is issued, after the Chassis Identify LED has been forced on, the status of off (00b) is returned for Chassis Identify State (response data byte 4 – bits [5:4]).

Implication Unable to correctly read when the Chassis Identify LED is on.

Status This issue may be fixed in a future BMC release

Workaround None.

15. The BIOS and ME Firmware can't be updated successfully via Intel® One Boot Flash Update Utility(OFU) under SuSE Linux Enterprise Server 11* (64-bit) with SP2

Problem OFU will fail to update BIOS & ME under SuSE Linux Enterprise Server 11* (64-bit) with SP2 Operating System.

Implication If the system is running SuSE Linux Enterprise Server 11* (64-bit) with SP2 Operating System, using OFU to update System Firmware Update Package(SFUP) will fail.

Status This issue may be fixed in a future OFU version.

Workaround Update System Firmware Update Package(SFUP) from EFI environment using iFlash32, FWPIAUpdate and FRUSDR Utility

16. BMC continuously sends HDD assert/de-assert event during HDD RAID rebuild under ESRT2 mode of the SCU controller

Problem HDD fault will keep asserting and de-asserting frequent during RAID rebuild under ESRT2

Implication During HDD ESRT2 RAID rebuild, there's flood HDD fault assert/deassert(SAS RAID) or Rebuild/remap (SATA RAID) logs into SEL.

Status This issue may be fixed in a future BIOS release

Workaround None.

17. High CPU utilization may occur when installing or running Microsoft* Windows* Server 2008 R2 or Microsoft* Windows* 7 with default NIC driver for Intel® Gigabit ET Dual Port Server Adapter E1G42ET and Intel® Gigabit ET Quad Port Server Adapter E1G44ET

Problem There has been high CPU load observed when installing or running Microsoft Windows Server 2008 R2 or Microsoft Windows 7 with default NIC (Network Interface Card) driver for Intel® Gigabit ET Dual Port Server Adapter E1G42ET and Intel® Gigabit ET Quad Port Server Adapter E1G44ET.

Implication When the ports are not electrically "linked" and the embedded driver is loaded the DPC rate steadily increases until the system slows to the point where it is essentially unusable.

Status This issue may be fixed in a future driver release.

Workaround None.

18. Intel® RAID C600 Upgrade Key replacement Issue

Problem With Manageability Engine (ME) Firmware 02.01.05.069, the Intel® Server Board S2600CP and Intel® Server System P4000CP may detect the incorrect Storage Control Unit (SCU) Redundant Array of Inexpensive/Independent Disks (RAID) information after installing or replacing the RAID upgrade key. The board or system may still show the previous RAID information even if you replace the key with a new one.

Implication With the ME firmware 02.01.05.069, the system may not detect the new RAID activation key during the first time AC power on.

Status The issue is fixed with ME firmware 02.01.05.091.

Workaround Do a second AC power cycle to the system after the RAID upgrade key has been installed or replaced to ensure the correct type of key is identified.

19. ESRT2 RAID is not supported on Intel® Server Board S2600CP2/S2600CP2J

Problem The Intel® Embedded Server RAID Technology 2 (ESRT2) is not supported on the Intel® Server Board S2600CP2 and Intel® Server Board S2600CP2J. With the current ESRT2 drivers that are available now, these server boards cannot detect storage devices during the Operating System (OS) installation process for all Operating Systems.

Implication The OS installation process will fail under ESRT2 mode with ESRT2 driver v15.00.0224.2012 on Intel® Server Board S2600CP2 and Intel® Server Board S2600CP2J. The Intel® Server Board S2600CP4 board is not impacted by this issue.

Status The issue is fixed in ESRT2 driver 15.00.0528.2012.

Workaround None.

20. System may detect unrecognized sensors

Problem Prior to updating the sytem with the FRU/SDR package, the system may detect unrecognized sensors.

Implication The system may have additional System Event Log (SEL) for the unrecoginzed sensors being detected, system status LED may turn amber and system FAN may boost.

Status The issue may be fixed in a future firmware release.

Workaround Update the system with FRU/SDR package

21. Intel® LAN driver installation failure on Windows* 7

Problem The Intel® LAN driver version 16.8 and below may not be installed sucessfully on Windowns* 7 with the .bat installation scripts in the driver package.

Implication The LAN driver can not be installed by the .bat installation scripts in the driver package.

Status The issue is fixed in Intel® LAN driver version 17.1

Workaround Two workarounds are availalbe:

1. The LAN driver can be manually installed.

2. User can lower the “User Account Control” to “Never Notify”, then the driver can be installed with the .bat installation scripts.

Documentation Changes

N/A