



## BIOS Update Release Notes

---

### PRODUCTS: DX58SO (Standard BIOS)

---

**BIOS Version 5561 - SOX5810J.86A.5561.2011.0516.2023**

**About This Release:**

- May 16, 2011
- SATA RAID Option ROM: 10.1.0.1008
- LAN Option ROM: Intel(R) Boot Agent PXE GE v1.3.65
- LAN Option ROM: Intel(R) Boot Agent PXE Base Code (PXE-2.1 build 089)

**New Fixes/Features:**

- Updated processor support.
- Updated the AHCI Option ROM Version ICBO SRC 01-06-2011.
- Fixed issue where fans run at full speed coming out of S3/S4/S5.

**BIOS Version 5559 - SOX5810J.86A.5559.2011.0405.2144**

**About This Release:**

- April 5, 2011
- SATA RAID Option ROM: 10.1.0.1008
- LAN Option ROM: Intel(R) Boot Agent PXE GE v1.3.65
- LAN Option ROM: Intel(R) Boot Agent PXE Base Code (PXE-2.1 build 089)

**New Fixes/Features:**

- Fixed issue where SATA drives connected to ICH10 SATA ports may not be detected in the operating system.
- Modified the microcode update message displayed during flash update.
- Fixed long delay when booting FreeDOS\* with two drives attached to Marvell\* 6121 controller.

**BIOS Version 5529 - SOX5810J.86A.5529.2010.1214.2317**

**About This Release:**

- December 15, 2010
- SATA RAID Option ROM: 10.1.0.1008
- LAN Option ROM: Intel(R) Boot Agent PXE GE v1.3.65
- LAN Option ROM: Intel(R) Boot Agent PXE Base Code (PXE-2.1 build 089)

**New Fixes/Features:**

- Updated ICH RAID Option ROM to revision 10.1.0.1008.
- Updated LAN PXE ROM to revision 1.3.65.
- Added codes to support error beep and front LED blink feature.
- Added codes to check firmware version to prevent BIOS recovery from an incorrect BIOS file.

\*Other names and brands may be claimed as the property of others.

- Fixed issue where the splash shows three times during POST when burning with a clean BIOS ROM file.

**BIOS Version 5506 - SOX5810J.86A.5506.2010.1109.0004**

**About This Release:**

- November 09, 2010
- SATA RAID Option ROM: 10.0.0.1046
- LAN Option ROM: Intel(R) Boot Agent PXE GE v1.3.51
- LAN Option ROM: Intel(R) Boot Agent PXE Base Code (PXE-2.1 build 086)

**New Fixes/Features:**

- Updated ICH RAID Option ROM to revision 10.0.0.1046.
- Updated processor support.
- Added support for new SPI Flash Part.
- Fixed issue where enabling UEFI causes all USB ports to stop working.
- Fixed issue where memory timings, DDR Multiplier and Uncore Multiplier are changed to non-default values after triggering watchdog timer with Intel® Desktop Control Center 5.5.0.46.
- Fixed issue in Intel® Desktop Utilities (IDU) where IDU only logged one warning message after stopping multiple fans in XTU.
- Fixed issues for Setup Compliance.
- Fixed issue where certain processors do not boot.

**BIOS Version 5456 - SOX5810J.86A.5456.2010.0830.0013**

**About This Release:**

- August 30, 2010
- SATA RAID Option ROM: 9.6.0.1014
- LAN Option ROM: Intel(R) Boot Agent PXE GE v1.3.51
- LAN Option ROM: Intel(R) Boot Agent PXE Base Code (PXE-2.1 build 086)

**New Fixes/Features:**

- Updated ICH RAID Option ROM to revision 9.6.0.1014.
- Updated processor support.
- Fixed issue where LAN has no connection after resuming from S3.
- Fixed display issue for processor cache information.

**BIOS Version 5417 - SOX5810J.86A.5417.2010.0727.1948**

**About This Release:**

- July 27, 2010
- SATA RAID Option ROM: 8.9.0.1023
- LAN Option ROM: Intel(R) Boot Agent PXE GE v1.3.51
- LAN Option ROM: Intel(R) Boot Agent PXE Base Code (PXE-2.1 build 086)

**New Fixes/Features:**

- Fixed issue where some fans stop working when the system resumes from S3.

- Fixed issue with Intel® Desktop Control Center where the PCI Express and PCI Bus Frequency always shows the default value after applying any PCIE value.

**BIOS Version 5390 - SOX5810J.86A.5390.2010.0614.1053**

**About This Release:**

- June 14, 2010
- SATA RAID Option ROM: 8.9.0.1023
- LAN Option ROM: Intel(R) Boot Agent PXE GE v1.3.51
- LAN Option ROM: Intel(R) Boot Agent PXE Base Code (PXE-2.1 build 086)

**New Fixes/Features:**

- Fixed issue with watchdog timeout in operating system not setting defaults.
- Fixed error in the table definition for continuous entries for BIOS setup questions that use a Numeric opcode.
- Fixed issue where some TPM PCRs were not measured correctly.
- Added BIOS workaround for POST hang with certain PCI graphics cards installed in the system.
- Fixed issue where system fails to boot with certain graphics installed.
- Change timing for when the XTU variables are initialized.
- Watchdog Update: reduced complexity and improved XTU WD handling.
- Improved watchdog timer response to failing host clock settings.
- Fixed issue where system hangs or reboots with multiple PCI Express graphics cards in the system.

**BIOS Version 5314 - SOX5810J.86A.5314.2010.0511.1115**

**About This Release:**

- May 11, 2010
- SATA RAID Option ROM: 8.9.0.1023
- LAN Option ROM: Intel(R) Boot Agent PXE GE v1.3.51
- LAN Option ROM: Intel(R) Boot Agent PXE Base Code (PXE-2.1 build 086)

**New Fixes/Features:**

- Added ECC Support.
- Fixed issue where watchdog timeout in operating system does not set defaults.
- Fixed system hang issue for XMP 2400.
- Fixed issue where boot order was not synchronized in Intel® Integrator Assistant when boot order is hidden.

**BIOS Version 5200 - SOX5810J.86A.5200.2010.0414.1420**

**About This Release:**

- April 14, 2010
- SATA RAID Option ROM: 8.9.0.1023
- LAN Option ROM: Intel(R) Boot Agent PXE GE v1.3.51
- LAN Option ROM: Intel(R) Boot Agent PXE Base Code (PXE-2.1 build 086)

**New Fixes/Features:**

- Fixed issue where watchdog timeout in operating system is not setting defaults.
- Fixed issue where operating system fails to resume from hibernation when user enters BIOS Setup during POST.
- Fixed issue where setting the Host Clock to 133 (default of 135) would hang the system.
- Added check to only display logo that is less than or equal to supported resolution 1024x768.
- Fixed issue where UEFI bootable devices are not recognized when AHCI/RAID is enabled.
- Added workaround for issue where system would hang just before INT19 when there is a large amount of USB traffic.
- Fixed issue where USB keyboard/mouse is not detected when UEFI boot is enabled.
- Added support allowing tRFC to be set to 140.
- Fixed setup display issue with 2.25 TB hard disk.
- Fixed issue where the Intel® Integrator Toolkit Map file contains features not supported on the board.
- Fixed Performance Status display with certain processors showing wrong multipliers.
- Fixed issue where string in BIOS does not match board silk screening (Processor vs CPU).
- Updated processor support.

<b>BIOS Version 5112 - SOX5810J.86A.5112.2010.0316.1030</b>
---

**About This Release:**

- March 16, 2010
- SATA RAID Option ROM: 8.9.0.1023
- LAN Option ROM: Intel(R) Boot Agent PXE GE v1.3.51
- LAN Option ROM: Intel(R) Boot Agent PXE Base Code (PXE-2.1 build 086)

**New Fixes/Features:**

- Fixed system hang issue when programming host clock to 133.
- Improved WatchDog handling.
- Resolved issue where ITK Map file contains features not supported on the board.
- Removed display of POST code 0x70 on SMM entry.
- Updated PXE UNDI to latest version 1.3.51.

<b>BIOS Version 5020 - SOX5810J.86A.5020.2010.0224.0938</b>
---

**About This Release:**

- February 24, 2010
- SATA RAID Option ROM: 8.9.0.1023
- LAN Option ROM: Intel(R) Boot Agent PXE GE v1.3.24
- LAN Option ROM: Intel(R) Boot Agent PXE Base Code (PXE-2.1 build 086)

**New Fixes/Features:**

- Added support for Intel's 6-core desktop processor, codenamed 'Gulftown'.
- Fixed watchdog timer and host clock display issues for XTU2.

\*Other names and brands may be claimed as the property of others.

- Fixed issue that was causing IFlash and Express BIOS Update to fail on subsequent flash updates.
- Reduced pre-video boot time by about 7 seconds.
- Added support to check the IOH stepping and if it is a B2 or earlier then set "QPI Power Management" default setting to disabled and if it is a B3 or later then set the default to enabled.
- Fixed setup option default setting for CPU C-States to be enabled and IMON to be disabled.
- Fixed issue with watchdog timer when running in the operating system and changing from one processor to another.
- Fixed XMP related issues:
  - When an XMP profile was selected the host clock was unchangeable.
  - When selecting Automatic mode the Uncore Multiplier was being set to 22 instead of the proper system default.
  - When selecting Manual mode the minimum supported ratio between Memory Ratio and the Uncore Multiplier will be used based on the processor installed.
- Fixed issue where the PCIe Compliance bit was being set incorrectly causing Secondary Boot Request to cause some cards to fail to train correctly.
- Set VT to be enabled by default.
- Fixed issue preventing greater than 160 for the Host Clock.

<b>BIOS Version 4598 - SOX5810J.86A.4598.2009.1211.1321</b>
---

**About This Release:**

- December 11, 2009
- SATA RAID Option ROM: 8.9.0.1023
- LAN Option ROM: Intel(R) Boot Agent PXE GE v1.3.24
- LAN Option ROM: Intel(R) Boot Agent PXE Base Code (PXE-2.1 build 086)

**New Fixes/Features:**

- Added XTU 2.0 support.
- Fixed F9 default value for TDC, TDP, and Turbo Ratio.
- Fixed watchdog timer and host clock display issues for XTU2.
- Fixed a setup display issue for 5-Core Ratio Limit.
- Fixed a display issue with the Turbo Boost Technology in setup when a processor is installed that does not have 4 cores.
- Updated processor support.

<b>BIOS Version 4405 - SOX5810J.86A.4405.2009.1020.1419</b>
---

**About This Release:**

- October 20, 2009
- SATA RAID Option ROM: 8.9.0.1023
- LAN Option ROM: Intel(R) Boot Agent PXE GE v1.3.24
- LAN Option ROM: Intel(R) Boot Agent PXE Base Code (PXE-2.1 build 086)

**New Fixes/Features:**

- Updated processor support.

\*Other names and brands may be claimed as the property of others.

- Enabled the selection of Video Device according to the Primary Video Adapter setup option.
- Expanded the default size of the NVS memory allocation.
- Blocked the on-board LAN PXE dispatch when on-board LAN is disabled.
- Fixed issue where the default video device was not set correctly if two video cards of same vendor and device id was present in system.
- Fixed issue where certain SATA RAID controller failed to boot according to the boot order.
- Fixed issue where system hangs at POST code 0xBA with two SATA optical drives attached and certain media in one drive.
- Fixed issue where certain SATA RAID controller failed to resume from S3.
- Added feature to block compressed BMP files from use as a custom logo with Intel® Integrator Toolkit.
- Enabled BIOS Setup to always be reset even if iFlash2 is interrupted when /f flag is set.

#### **BIOS Version 4196**

##### **About This Release:**

- July 16, 2009
- SOX5810J.86A.4196.2009.0715.1958
- SATA RAID Option ROM: 8.9.0.1023
- LAN Option ROM: Intel(R) Boot Agent PXE GE v1.3.24
- LAN Option ROM: Intel(R) Boot Agent PXE Base Code (PXE-2.1 build 086)

##### **New Fixes/Features:**

- Updated memory error beep code, according to Speaker beep codes and FP LED blink codes Specifications Document revision 1.0.
- Fixed issue where SMBIOS System Slot structures mismatch for PCIe Express Gen2 slots.
- Added XMP support using BCLK override.
- Updated Express BIOS Update to the latest version.
- Fixed BIOS setup page cosmetic issues.
- Fixed issue where system hangs if all bootable devices are disabled in BIOS Setup and no bootable devices are attached.
- Added updates to improve security.

#### **BIOS Version 4158**

##### **About This Release:**

- June 23, 2009
- SOX5810J.86A.4158.2009.0622.2125
- SATA RAID Option ROM: 8.9.0.1023
- LAN Option ROM: Intel(R) Boot Agent PXE GE v1.3.24
- LAN Option ROM: Intel(R) Boot Agent PXE Base Code (PXE-2.1 build 086)

##### **New Fixes/Features:**

- Updated ICH RAID Option ROM to revision 8.9.0.1023.
- Fixed issue where "Memory Size Decrease" event log does not work.

\*Other names and brands may be claimed as the property of others.

- Fixed issue where system hangs when loading option ROM with certain SCSI card installed and eSATA disabled.
- Added the BIOS downgrade update password security check.
- Removed no reboot BIOS update support.
- Added check for Supervisor/User password before allowing BIOS update.
- Fixed issue where INT 15h E820h Test failed.
- Changed BIOS Setup default for HPET to "Enabled".
- Fixed issue where newly-set password becomes invalid when loading defaults with "F9" and then reboot.
- Updated to skip Marvell\* 6212 option ROM if there is no drive connected at Marvell 6212.
- Updated SMBIOS information for memory DDR3 type and Intel Core i7 processor.
- Fixed POST0xA7 hang.
- Added workaround for issue where system hangs due to LAN device is not accessible under certain Performance variable changes.

### **BIOS Version 4121**

#### **About This Release:**

- May 28, 2009
- SOX5810J.86A.4121.2009.0528.0027
- SATA RAID info:  
Intel(R) RAID for SATA - ICH10: Raid Option ROM 8.7.0.1007  
ICH10R/DO.
- SATA AHCI info:  
Serial ATA AHCI BIOS, Version ICBO src 06-17-2008
- PXE info:  
Intel(R) Boot Agent PXE GE v1.3.24  
Intel(R) Boot Agent PXE Base Code (PXE-2.1 build 086)

#### **New Fixes/Features:**

- Added support for AA# E68555-503.
- Set Slot Power to 300W for PCI Express x16 slot.
- Updated to MRC 1.0 and QPI RC 1.0.
- Updated Marvell\* 6121 legacy mode (IDE) option ROM to 1.1.0.L72.
- Updated Secure Software manufacturing mode implementation.
- Enhanced F7 BIOS Flash update.
- Fixed issue where Windows\* show 4 logical processors only after flashing with BIOS ROM file.
- Fixed issue where system hangs at POST 0xEB using certain PCI Express RAID controller card.

### **BIOS Version 4014**

#### **About This Release:**

- May 8, 2009
- SOX5810J.86A.4014.2009.0507.1930
- SATA RAID info:  
Intel(R) RAID for SATA - ICH10: Raid Option ROM 8.7.0.1007  
ICH10R/DO.
- SATA AHCI info:  
Serial ATA AHCI BIOS, Version ICBO src 06-17-2008
- PXE info:

\*Other names and brands may be claimed as the property of others.

Intel(R) Boot Agent PXE GE v1.3.24  
Intel(R) Boot Agent PXE Base Code (PXE-2.1 build 086)

**New Fixes/Features:**

- Fixed issue where system hangs when loading option ROM with SCSI card installed and eSATA disabled.
- Fixed issue where ICH SATA RAID compliance test failed.
- Fixed issue where Intel® Desktop Control Center fails to launch after HCF value is applied to 136MHz or above.
- Fixed issue where Choices of value in PCI Express Frequency drop down box does not match with F2 BIOS PCI Express.
- Changed display string for Intel 64 Architecture support.
- Updated processor support.

**BIOS Version 3828**

**About This Release:**

- April 21, 2009
- SOX5810J.86A.3828.2009.0420.1948
- SATA RAID info:  
Intel(R) RAID for SATA - ICH10: Raid Option ROM 8.7.0.1007  
ICH10R/DO.
- SATA AHCI info:  
Serial ATA AHCI BIOS, Version ICBO src 06-17-2008
- PXE info:  
Intel(R) Boot Agent PXE GE v1.3.24  
Intel(R) Boot Agent PXE Base Code (PXE-2.1 build 086)

**New Fixes/Features:**

- Updated processor support.
- Fixed issue where user pressed 'Y' key cannot enter BIOS setup during POST overclocking failure message, if user has selected French language.
- Fixed issue where PCI BIOS INT1A calls would return incorrect values for PCI Express MMIO registers.
- Fixed issue where user setup is reset to F9 default after entering Maintenance mode.
- Fixed Intel® Integrator Assistant update failure.
- Fixed issue where XMP profile is not available with certain processors.
- Implemented Fault Tolerant Firmware ID solution.
- Fixed unexpected long S3 resume time.
- Fixed interrupt storm caused by USB HC's.
- Fixed system unable to boot with x4 2GB DIMMs.
- Updated Secure Software Manufacturing mode implementation.
- Added NTFS support to F7 Flash update.
- Fixed issue where display between BIOS and XTU for DIMM memory speed is different.

**BIOS Version 3504**

**About This Release:**

- February 18, 2009
- SOX5810J.86A.3504.2009.0218.0058
- SATA RAID info:

\*Other names and brands may be claimed as the property of others.



Intel(R) RAID for SATA - ICH10: Raid Option ROM 8.7.0.1007  
ICH10R/DO.

- SATA AHCI info:  
Serial ATA AHCI BIOS, Version ICBO src 06-17-2008
- PXE info:  
Intel(R) Boot Agent PXE GE v1.3.24  
Intel(R) Boot Agent PXE Base Code (PXE-2.1 build 086)

**New Fixes/Features:**

- Fixed issue causing ITK custom BIOS to reset late in POST.
- Added BIOS Setup performance improvement.
- Fixed a problem where the system would hang if the top swap bit got set and system did a reset.
- Added BIOS workaround for system hang during POST when certain RAID adapters are installed in the system. Note: The eSATA Port option on the Advanced->Peripheral Configuration menu may need to be set to DISABLE in the BIOS.
- Fixed intermittent hang at POST code 0x5A with certain Blu-Ray optical drives attached to the system.

**Known Errata:**

- None.

**BIOS Version 3435**

**About This Release:**

- February 11, 2009
- SOX5810J.86A.3435.2009.0210.2311
- SATA RAID info:  
Intel(R) RAID for SATA - ICH10: Raid Option ROM 8.7.0.1007  
ICH10R/DO.
- SATA AHCI info:  
Serial ATA AHCI BIOS, Version ICBO src 06-17-2008
- PXE info:  
Intel(R) Boot Agent PXE GE v1.3.24  
Intel(R) Boot Agent PXE Base Code (PXE-2.1 build 086)

**New Fixes/Features:**

- Added nVidia SLI support.
- Changed BIOS setup CPU C-state default to disable.

**Known Errata:**

- User should load F9 BIOS Default after performing BIOS update to S03044P or previous version.

**BIOS Version 3301**

**About This Release:**

- January 28, 2009
- SOX5810J.86A.3301.2009.0128.1132
- SATA RAID info:  
Intel(R) RAID for SATA - ICH10: Raid Option ROM 8.7.0.1007  
ICH10R/DO.
- SATA AHCI info:  
Serial ATA AHCI BIOS, Version ICBO src 06-17-2008
- PXE info:

\*Other names and brands may be claimed as the property of others.

Intel(R) Boot Agent PXE GE v1.3.24  
Intel(R) Boot Agent PXE Base Code (PXE-2.1 build 086)

**New Fixes/Features:**

- Enabled Secure Software Manufacturing mode.
- Updated ICH10 Raid Option ROM to Production Version 8.7.0.1007.
- Fixed issue where certain RAID cards did not work.
- Fixed issue where certain Linux\* USB thumb drives are not bootable.
- Added ACPI OS support for PCI Express Enhanced Capabilities.
- Added programming of PCI Bridge Subsystem Vendor Capability Identification Register for ICH PCI Express Root Ports.
- Fixed issue where Windows\* Vista\* SP1 fails to resume from hibernate when hot-plugging eSATA drives into the Marvell\* 6121 controller.
- Fixed non-responsive USB when system has a configuration with several large option ROMs loaded.
- Added support for Watchdog timer after post.

**Known Errata:**

- User should load BIOS Defaults (F9) after performing BIOS update to version 3044 or any previous version.

<b>BIOS Version 3044</b>
--------------------------

**About This Release:**

- December 19, 2008
- SOX5810J.86A. 3044.2008.1218.1457
- SATA RAID info:  
Intel(R) RAID for SATA - ICH10: Raid Option ROM 8.6.0.1007  
ICH10R/DO.
- SATA AHCI info:  
Serial ATA AHCI BIOS, Version ICBO src 06-17-2008
- PXE info:  
Intel(R) Boot Agent PXE GE v1.3.24  
Intel(R) Boot Agent PXE Base Code (PXE-2.1 build 086)

**New Fixes/Features:**

- Fixed issue where user was unable to enter certain RAID Controller card Setup.
- Improved S3 resume time.
- Fixed issue where system hangs if USB mouse/keyboard is interrupted when entering S3.
- Fixed issue where boot order memory corruption occurs when both ICH RAID and Marvell\* 6121 RAID are enabled.
- Added support for ignoring EFI El-Torito CD/DVD partition types.
- Fixed issue where PCI BIOS INT1A interface function B101 does not return the correct maximum PCI bus number.
- Added support in boot block to read EFI variables from VPD backup region if the system had reset in the middle of VPD reclaim.
- Fixed POST code 0x5A hang with certain ATAPI drives.
- Fixed issue where EFI boot images are not seen on IDE CD/DVD devices.
- Added help strings in BIOS setup.
- Fixed issue where audio verb table is not restored after S3 resume.

\*Other names and brands may be claimed as the property of others.

- Fixed F7 hotkey bad response issue.
- Updated the display string after BIOS update.
- Added BIOS workaround for WHQL PCIHCT "Assertion A6327544-4C4C-48CA-96C9-82C70F3DE6AA: FAILED. Bit 0 (Receiver Error Status) in the Correctable Error Status register (offset 10h) in the Advanced Error Reporting Capability table must be clearable.
- Enhanced overclocking capability using Host Clock override.
- Fixed issue where system boots up from G3 when "Wake on LAN from S5" = "Power On" and "After Power Failure" = "Stay Off".
- Fixed issue where "Description" field for SMBIOS Type 10 (On Board Devices Information) structure for On-board LAN is incorrect when On-board LAN is disabled.

## BIOS Version 2786

### About This Release:

- November 12, 2008
- SOX5810J.86A.2786.2008.1112.1500
- SATA RAID info:  
Intel(R) RAID for SATA - ICH10: Raid Option ROM 8.6.0.1007  
ICH10R/DO.
- SATA AHCI info:  
Serial ATA AHCI BIOS, Version ICBO src 06-17-2008
- PXE info:  
Intel(R) Boot Agent PXE GE v1.3.24  
Intel(R) Boot Agent PXE Base Code (PXE-2.1 build 086)

### New Fixes/Features:

- Fixed automatic mode for DDR Multiplier setting.
- Added flag to disable Secure Software Manufacturing mode.
- Updated Intel® Matrix Storage Manager option ROM to v8.6.0.1007.
- Fixed issues where memory reference voltage is incorrect at default.
- Fixed issue where memory voltage is at 1.50V in auto mode.
- Fixed a potential system hang issue.
- Fixed a potential VPD corruption issue.
- Added support for DDR3-1866.
- Fixed issue where language selection and language display are not matched after BIOS recovery.
- Added support for additional XMP timings.
- Updated XMP speed detection.
- Fixed the sort order for the Memory Multiplier option.
- Enabled MRC Dimm Vref training.
- Fixed BIOS setup reset to default values when entering Maintenance mode.
- Added support to load Command Rate from the XMP profile.
- Fixed POST hang 0x5A when certain DVD drive is attached.

## BIOS Version 2747

### About This Release:

- November 5, 2008
- SOX5810J.86A.2747.2008.1105.0847
- SATA RAID info:

\*Other names and brands may be claimed as the property of others.

Intel(R) RAID for SATA - ICH10: Raid Option ROM 8.5.0.1030  
ICH10R.

- SATA AHCI info:  
Serial ATA AHCI BIOS, Version ICBO src 06-17-2008
- PXE info:  
Intel(R) Boot Agent PXE GE v1.3.24  
Intel(R) Boot Agent PXE Base Code (PXE-2.1 build 086)

**New Fixes/Features:**

- Improved C-State residency during bus mastering except in the case of ICH SATA bus mastering.
- Changed BIOS setup string "Pause POST if Chassis Intrusion" to "Chassis Intrusion".
- Fixed issue where XMP profile can be not properly detected.
- Fixed issue where QPI voltage change in Intel® Desktop Control Center (IDCC) does not set Performance Memory Profile to 'Manual'.
- Fixed error in IDCC with display of CPU Voltages in XTU.
- Added control in IDCC for Dynamic CPU Voltage Offset.
- Updated support for changeable QPI data rate on production non-XE CPU.
- Updated the code in IDCC to allow all memory multipliers to be passed to XTU with Non-XE production parts.
- Added support for XMP 1.2 Profiles.
- Fixed issue where certain video card hangs with PCIe ASPM L1 enabled.
- Fixed issue where user was unable to enter Intel SCRU43E SCSI RAID SETUP if another bootable device was in the system.
- Fixed issue where failure happens during Intel® Integrator Toolkit (ITK) token extract operation.
- Fixed issue where invalid combination of "Uncore Multiplier" and "DDR Multiplier" is passed from IDCC.
- Fixed thermal range for IOH thermal sensor in IDCC.
- Fixed issue that could cause false indication that the watchdog timer fired.
- Fixed issue where IED buffer is not cleared.
- Fixed issue where WDT-fired message is shown after changing Host Clock Frequency from 136MHz (and above) to 135MHz (and below).
- Updated BIOS support for On Semiconductor Heceta6P (ADI\* ADT7490).
- Updated host clock real-time device creation based on SBPLL programming.
- QPI Voltage changes now require memory mode update.
- Fixed issue where XMP profile reported invalid value for tWRmin.
- Removed ASSERT\_CKE from the ResetFIFOs function to prevent possible tREFI violation on the S3 resume path.
- Disabled "Fast MRC" mode in warm boot when there is change in "QPI / Uncore Voltage".

<b>BIOS Version 2483</b>
--------------------------

**About This Release:**

- October 14, 2008
- SOX5810J.86A.2483.2008.1014.1606
- SATA RAID info:

\*Other names and brands may be claimed as the property of others.

Intel(R) RAID for SATA - ICH10: Raid Option ROM 8.5.0.1030  
ICH10R.

- SATA AHCI info:  
Serial ATA AHCI BIOS, Version ICBO src 06-17-2008
- PXE info:  
Intel(R) Boot Agent PXE GE v1.3.24  
Intel(R) Boot Agent PXE Base Code (PXE-2.1 build 086)

#### **New Fixes/Features:**

- Performance Status Display: Fixed hang when Setup UQI was not found.
- Updated UQI for Performance Status Display per new token UQI.
- Fixed invalid CMOS checksum error after Express BIOS Update to BIOS version 2394.
- Improved SATA performance under Windows\* with C-States enabled.
- Updated QPI RC to revision 0.90RC8.
- Updated MRC to revision 0.90RC9.
- Enabled F7 flash update and latest USB stack support.
- Fixed issue where QPI scrambling is not enabled.
- Added check for Intel® Desktop Control Center (IDCC) to determine if memory mode should be set to automatic.
- Fixed memory voltage default programming when watchdog timer fires.
- Watchdog: Use instaflush as an option for forced reboots.
- Updated processor support.
- Updated information on BIOS Setup Main Page.
- Added Secure Software manufacturing mode support.
- Fixed issue where intermittent memory beep code errors occur when overclocking and WDT is enabled.
- Removed additional reset through instaflush after Host Clock Frequency Override is changed.
- Removed non-productized BIOS setup items.
- Fixed possible hang when changing Host Clock Frequency Override from Automatic to Manual.
- Reduced Watchdog timer timeout constant for MRC.
- Updated BIOS setup items and help strings.
- Updated UQI for Intel® Desktop Control Center (IDCC) per new token UQI.
- For IDCC, fixed QPI Multiplier displayed in auto mode.
- For IDCC, report dynamic CPU voltage offset for non-XE processor.
- For IDCC, fixed Uncore Ratio in Auto Memory Mode.
- Fixed issue where invalid default is shown for certain processors.
- Fixed proposed memory speed in BIOS setup Performance page.

#### **BIOS Version 2394**

#### **About This Release:**

- October 1, 2008
- SOX5810J.86A.2394.2008.1001.0911
- SATA RAID info:  
Intel(R) RAID for SATA - ICH10: Raid Option ROM 8.5.0.1030  
ICH10R.
- SATA AHCI info:

\*Other names and brands may be claimed as the property of others.

Serial ATA AHCI BIOS, Version ICBO src 06-17-2008

- PXE info:  
Intel(R) Boot Agent PXE GE v1.3.24  
Intel(R) Boot Agent PXE Base Code (PXE-2.1 build 086)

**New Fixes/Features:**

- Added performance status display to BIOS setup.
- Fixed issue where QPI data rate changes to 6.4GT/s when Watchdog timer fires and power down does not occur before next boot up.
- Disabled "Fast MRC" mode in warm boot when there is any change in memory-related BIOS setup item.
- Fixed issue where POST 0xFF hang after changing host clock and loading defaults.
- Fixed incorrect Dynamic CPU Voltage Offset entry.
- Updated support for providing board specific sensor layout information to OS applications dynamically.
- Fixed issue where Processor Speed would show 0.0 GHz on Main page of BIOS Setup when loading F9 defaults from within Processor Override menu.
- Fixed issue where Core SMI handler is preventing resets for non-hardware hangs.
- Fixed Windows\* boot option issue.
- Updated Turbo Mode string to official name "Intel® Turbo Boost Technology".
- Set Memory Scrambling to enable as default.
- Updated sensor usage to VR instead of Memory.
- Fixed issue where Intel® Desktop Control Center (IDCC) would not load after thermal settings from Intel® Integrator Toolkit (ITK) were installed
- Updated QPI RC to revision 0.90RC7.
- Fixed issue where system cannot boot with memory setting from "Automatic" mode in "Manual" mode.
- Fixed issue where watchdog timer does not catch UnCore Multiplier hangs.
- Fixed issue where PCIe Clock is not at 100MHz when set to default.
- Updated processor support.
- Update MRC to revision 0.90RC8.
- Fixed USB recovery failure when SATA DVD-ROM is attached.

<b>BIOS Version 2127</b>
--------------------------

**About This Release:**

- September 14, 2008
- SOX5810J.86A.2127.2008.0914.1638
- SATA RAID info:  
Intel(R) RAID for SATA - ICH10: Raid Option ROM 8.5.0.1030  
ICH10R.
- SATA AHCI info:  
Serial ATA AHCI BIOS, Version ICBO src 06-17-2008
- PXE info:  
Intel(R) Boot Agent PXE GE v1.3.24  
Intel(R) Boot Agent PXE Base Code (PXE-2.1 build 086)

**New Fixes/Features:**

\*Other names and brands may be claimed as the property of others.

- Initial production BIOS release

---

---

## LEGAL INFORMATION

---

---

**Information in this document is provided in connection with Intel Products and for the purpose of supporting Intel developed server/desktop boards and systems.**

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document. Except as provided in Intel's Terms and Conditions of Sale for such products, Intel assumes no liability whatsoever, and Intel disclaims any express or implied warranty, relating to sale and/or use of Intel products including liability or warranties relating to fitness for a particular purpose, merchantability, or infringement of any patent, copyright or other intellectual property right. Intel Corporation may have patents or pending patent applications, trademarks, copyrights, or other intellectual property rights that relate to the presented subject matter. The furnishing of documents and other materials and information does not provide any license, express or implied, by estoppel or otherwise, to any such patents, trademarks, copyrights, or other intellectual property rights. Intel products are not intended for use in medical, life saving, or life sustaining applications. Intel may make changes to specifications and product descriptions at any time, without notice.

Intel is a trademark of Intel Corporation in the US and other countries.  
Copyright (c) 2010 Intel Corporation.

\*Other names and brands may be claimed as the property of others.