



## BIOS Update Release Notes

---

### PRODUCTS: D955XBK, D955XCS (Standard BIOS)

---

#### BIOS Version 2049

##### About This BIOS:

- Febraury 13, 2007
- BK95510J.86A.2049.2007.0213.1654
- SATA RAID info:
  - Intel(R) RAID for SATA - v5.6.2.1002
  - Silicon Image RAID for SATA - v5.2.11
- Initializing Intel(R) Boot Agent GE v1.2.28
- Intel® AMT info:
  - AMTBX Firmware: v1.2.3

##### New Fixes/Features:

- Fixed failures with the TCG ACPI Event Log when running the Vista\* DTM TCG TPM BIOS Interface Test.
- Fixed SMBIOS Type 0 and Type 1 structure size failures in Windows Vista\* DTM SMBIOS HCT tests.
- Fixed issue where Intel® Audio Studio does not launch with 3GB Memory and certain PCI-E video card.
- Fixed ACPI failures when running the Vista\* DTM TCG TPM Integration Test.
- Fixed issue where certain host adapter card was not functional.
- Fixed issue where system hangs when trying to load bootable CD from a USB CD drive.

#### BIOS Version 2046

##### About This BIOS:

- November 27, 2006
- BK95510J.86A.2046.2006.1127.1501
- SATA RAID info:
  - Intel(R) RAID for SATA - v5.6.2.1002
  - Silicon Image RAID for SATA - v5.2.11
- Initializing Intel(R) Boot Agent GE v1.2.28
- Intel® AMT info:
  - AMTBX Firmware: v1.2.3

##### New Fixes/Features:

- Added setup option to control Power LED Off/Blink in S3 state.
- Fixed SMBIOS HCT failure where Type 0 "Enable Targeted Content Distribution" bit is not set.
- Supports OEM Activation 2.0. For details on the OEM Activation Program, send email to [oassignh@microsoft.com](mailto:oassignh@microsoft.com)
- Fixed issue where changing certain Setup Options and using F10 to Save and Exit would not cause a system reset.
- Fixed consecutive read and/or writes of password supplied secure variables.

- Fixed Legacy Floppy and USB Flash Drive not accessible from DOS.
- Updated Heceta6 BMI sequence.
- Added new UQI tokens.
- Removed redundant SDRAM references from Memory Configuration page in Setup.
- Fixed issue where operating system could not initialize TPM 1.2 for BitLocker support.
- Fixed issue where disk partitions are sometimes not seen during operating system installation.
- Fixed issue where BitLocker System Check would not pass.
- Fixed issue where system would not recognize CTRL+ALT+DEL key sequence.

<b>BIOS Version 2043</b>
--------------------------

**About This BIOS:**

- August 22, 2006
- BK95510J.86A.2043.2006.0822.1752
- SATA RAID info:
  - Intel(R) RAID for SATA - v5.6.2.1002
  - Silicon Image RAID for SATA - v5.2.11
- Initializing Intel(R) Boot Agent GE v1.2.28

**New Fixes/Features:**

- Defined AMT Type 130 SMBIOS structure.
- Fixed FDD test failure on certain floppy drives.
- Fixed the issue where IDCC will not launch if FSB margins set higher than 10%
- Added work-around for IDE-R 6 hour open session issue in a host software package.
- Fixed a problem where the system would "hang" at POST code 34h for ~3minutes before it continued to boot.
- Added code to honor Greyed-out or Hidden options when loading F9 Setup Defaults.
- Fixed issue where the SOL terminal is not functional on the first reboot after AMT SOL is activated.
- Fixed yellow bang in Device Manager for the TPM 1.2 device.
- Fixed issue with CPU All Fans On temp needing a -3 offset for user defined BMI sequences.
- Setup Date option change day to 01 if the current day is invalid for the selected month or year.
- Fixed issue where certain floppy-emulation images were unable to load from USB CD-ROM drives.
- Corrected error codes from some TCG TPM INT1A functions.
- Modified SMBIOS Runtime Plug-and-Play functions to return "Not Supported" on systems not supporting SMBIOS Runtime functions.
- Fixed issue where TPM Physical Presence was not cleared and locked intermittently at the end of POST.
- Added workarounds to fix several TPM issues including unreliable enabling/disabling and PCRs not getting cleared at system reset intermittently.
- Fixed issue where EFI boot floppy would not boot from USB floppy drives.
- Fixed issue where USB HID keyboard bar code scanners were dropping characters under DOS.

- Fixed issue where certain USB flash drive was not detected by the BIOS.
- Fixed issue where some CompactFlash IDE adapters are not detected by the system BIOS.
- Moved USB Port setup option to USB configuration page.
- Changed the code to not reset video mode for every OPROM
- Fixed incorrect fan speed reporting.
- Fixed issue where USB mouse only would not work with certain HDD protection card.
- Fixed issue where OS recovery hangs at certain steps when using only a USB mouse.
- Fix to resolve the USB HID keyboard typematic issue.
- Fixed POST delay at POST code 5A when certain CD-ROM drives are attached to the system.
- Fix issue where a device behind multiple bridges (2+) will get an invalid IRQ assignment.
- Fixed no BIOS SETUP text in Hyperterminal after first remote AMT SOL request to enter BIOS SETUP.

<b>BIOS Version 2036</b>
--------------------------

**About This BIOS:**

- April 27, 2006
- BK95510J.86A.2036.2006.0427.1408
- SATA RAID info:
  - Intel(R) RAID for SATA - v5.6.2.1002
  - Silicon Image RAID for SATA - v5.2.11
- Initializing Intel(R) Boot Agent GE v1.2.28
- Intel® AMT info:
  - AMTBX Firmware: v1.2.3

**New Fixes/Features:**

- Fixed out of sync power-cycle after AC loss on performance boards.
- Fixed Silicon Image SATA controller getting disabled after flash update.
- Added support for IDCC Version 2.1.00.
- Fixed issue where legacy floppy drive was not seen in Windows if "Boot to Removable Devices" is set to "Disabled".
- Fixed incorrect Front & Rear fan speed tach setting on BTX/uBTX form factors.
- Added feature to allow changing USB flash drive DOS emulation from BIOS SETUP.
- Fixed multiple TPM issues.
- Fixed issue where certain SCSI host controller cards were not functional.
- Fixed certain ATM card reader causing POST delay when USB Legacy "Enabled."
- Added a new feature for System Wake from S5.
- Fixed HPET always showing in Device Manager.
- Fixed issue where system may hang in DOS accessing USB flash drives.
- Enable USB Keyboard during only POST even if USB Legacy is disabled in Setup.
- Fixed issue where USB 2.0 speed was not working under BIOS USB legacy support.

- Fixed issue where USB mice would not work with option ROMs and DOS applications that take direct hardware control of IRQ12 and the 8042 keyboard controller without using BIOS INT15 C2xx mouse functions.
- Fixed a problem where PEG video devices that contain bridges do not work as the primary video device.
- Fixed "CMOS Timer Not Set" event has incorrect event count and incorrect time stamp.
- Prevent 'up arrow' key from entering Setup.
- Fixed the issue where Boot Menu will not display correctly after F9 Load Default under certain scenario.
- Fixed a problem where Boot Order in Setup will revert back to default if the user "ESC" from other sub-menu.
- Fixed BIOS Setup arrows in date/time fields didn't move predictably.
- Fixed issue BIOS not able to detect CMOS battery failure.
- Fixed issue where system would hang with certain third-party IDE controllers installed in the system.
- Fixed display of cache for multi-core processors.
- Fixed issue with Front Side Bus Overrides causing power cycling after an AC Loss.
- Added ability to display effective Processor Speeds when Front Side Bus Frequency is overridden.
- Fixed FDD test failure on certain floppy drives.
- Added Flex Language Module Support.
- Fixed issue where default value for Serial Port was not getting loaded after Flash update.
- Fixed issue where PS/2 mouse is not functional when PS/2 keyboard is not connected.
- Fixed a problem where the password did not get cleared if the password length was set to zero.
- Fixed Yellow Bang on PCI-PCI bridge on PCIe cards.
- Added support for a new SLP area at F000:E7F0 for 16 bytes.
- Added support for duplicating SLP string to multiple locations with a single BIOS.

## BIOS Version 2024

### About This BIOS:

- January 16, 2006
- BK95510J.86A.2024.2006.0116.1352
- SATA RAID info:
  - Intel(R) RAID for SATA - v5.1.2.1002
  - Silicon Image RAID for SATA - v5.2.11
- Initializing Intel(R) Boot Agent GE v1.2.28
- Intel® AMT info:
  - AMTBX Firmware: v1.2.3

### New Fixes/Features:

- Updated Heceta6 Support.
- Fixed issue where Default Modules were not getting loaded upon Iflash "/md" switch.
- Added Onboard LAN Mac Address display in Bios Setup.

## BIOS Version 2022

**About This BIOS:**

- December 27, 2005
- BK95510J.86A.2022.2005.1227.1330
- SATA RAID info:
  - Intel(R) RAID for SATA - v5.1.2.1002
  - Silicon Image RAID for SATA - v5.2.11
- Intel® AMT info:
  - AMTBX Firmware: v1.2.3

**New Fixes/Features:**

- Added New Intel Splash Screen logo.
- Hide ASF Support setup question on Intel® AMT supported skus.
- Fixed security issue with Intel® AMT. This fix resolved failure where AMTBX was not getting invoked.
- Added New Intel Master Brand Logo and Pentium Logo.
- Fixed an issue where the system hangs while resuming from S3 with certain processors. This fix also addresses Core speed difference failure.
- Removed C1E option from setup.
- Fixed "NULL" string in F10 boot menu.
- Fixed issue where serial ports would stop functioning after call to INT14 Function 04 (Extended COM Port Initialize).
- Modified USB Ports Enable/Disable Setup Option to Maintenance Page.
- Adding Serial Port enable/disable setup question under Peripheral Menu.
- Added Heceta6 support for certain processors.
- Fixed the problem where operating system could not get Wake up cause after resuming S4.
- Added HPET support.
- Allowed PCI and PCIe devices to wake from S4 when 'ACPI Suspend State' set to S1.
- Fixed the issue where during the first boot BIOS is forced to be in legacy mode.
- Fixed Setup Browser would not refresh with F9 default Language.
- Fixed illegal pop-up message box display in setup.
- Added feature to enable USB bootable devices to boot the system first.
- Fixed issue where Intel® AMT Virtual LS-120 was not bootable if other boot devices are present in the system.
- Added remote PXE boot capability to Intel® AMT.
- Fix for Intel(R) Integrator Toolkit where iToolkit cannot flash to an original .bio file if a particular custom graphic .bio file is already loaded on the system.
- Fixed issue where Iflash, reboot method (/rb), would fail to update the BIOS ID.
- Added support for SST25VF080B SPI flash.
- Fixed a problem where the BIOS update would report an error trying to flash update the microcode.
- Changed ASF! Table to signify that ASF PXE boot is supported when ASF is supported.

<b>BIOS Version 2015</b>
--------------------------

**About This BIOS:**

- November 11, 2005

- BK95510J.86A.2015.2005.1111.0907
- SATA RAID info:
  - Intel(R) RAID for SATA - v5.1.2.1002
  - Silicon Image RAID for SATA - v5.2.11
- Initializing Intel(R) Boot Agent GE v1.2.28
- Intel® AMT info:
  - AMTBX Firmware: v1.2.1

**New Fixes/Features:**

- Fixed issue where Hyper-Threading CPU logo will always be displayed regardless of Hyper-Threading setup option.
- Modified BIOS password character length to 2 through 19.
- Added feature to display BIOS Setup string "Intel(R) Integrator Toolkit has modified this BIOS." when appropriate.
- Added support for multiple EHCI controllers with USB Legacy.
- Fixed issue where certain SCSI card would not function properly.
- Made BIOS TPM 1.2 compliant.
- Added VT Enabled/Disable setup option.
- Added SLP area at F000:E130 for 16 bytes.
- Fixed issue where certain Video card combinations would cause system hang when Primary Video Adaptor option set to Ext PCI Graphics.
- Fixed CPU microcode did not get updated for dual core CPU.
- Fixed issue where certain drives hang during certain DOS IDE reads or writes.
- Added USB Ports Enable/Disable Setup Option.

<b>BIOS Version 2010</b>
--------------------------

**About This BIOS:**

- October 3, 2005
- BK95510J.86A.2010.2005.1003.0954
- SATA RAID info:
  - Intel(R) RAID for SATA - v5.1.1.1002
  - Silicon Image RAID for SATA - v5.2.11
- Initializing Intel(R) Boot Agent GE v1.2.28

**New Fixes/Features:**

- Fixed issue where Silicon Image 3114 device would be disabled after an S3.
- Fixed performance issue when using onboard Silicon Image RAID Controller.
- Fixed low throughput on PCI bus.
- Fixed issue where Iflash, reboot method (/rb), would fail to update the BIOS ID.
- Fixed BIOS Version update failure during Iflash update.
- Fixed a problem where the microcode updates did not work if the flash update was using no reboot method.
- Fixed long system delays while booting with AMT IDER enabled and SATA drives attached to the system.
- Fixed Key Help alignment and format in setup.
- Fixed dual display of message pop-up box in Setup.
- Fixed Discard Changes pop-up message box display in setup.
- Fixed User Access Level question scope in Full Access mode.

- Fixed issue where certain combinations of PS/2 and USB keyboards and mice would not function with USB legacy.
- Fixed a problem where F2 enter setup key only worked after Option ROM scan.
- Fixed SMBIOS Type 16 Memory Error Correction reporting.
- Fix a logic error for the AMT extend scan key delay algorithm that seen in previous implementation.
- Allow BIOS to unprovision AMT without password.
- Added support for displaying remote terminal color while using AMT Serial-Over-LAN (SOL).
- Fixed issue where certain applications video output would not display on the remote terminal while AMT Serial-Over-LAN (SOL) is active.
- Fixed issue where terminal arrow keys and terminal F1-F4 keys were not recognized by AMT Serial-Over-LAN (SOL).
- Fixed issue where terminal Escape key was sometimes not recognized using AMT Serial-over-LAN (SOL).
- Fixed issue where top line of terminal video was not shown in AMT Serial-over-LAN (SOL).
- Improved ATAPI CD read performance for AMT IDER CD device read access.
- Added support for universal 16-bit TPM 1.2 driver binary. This binary can be used with any TPM 1.2 solution.
- Added S3 support for TPM.
- Fixed issue where Sony\* USM128U2 USB thumb drive is not seen in BIOS SETUP.
- Added code to allow single Video cards installed in Second PEG Slot to be initialized as Primary Adaptor.
- Allowed Ctrl-Alt-Del when no boot device detected by EFI Bios.
- Fixed a problem where PCIx devices behind the PCIx bridges off the ICH7 did not work if a PCI to PCI bridge was connected with a video card behind it.
- Update Quick Resume Technology to Bios spec. rev0.95.
- Fixed issue where overriding VID and Ratio Multiplier would cause POST hangs with certain processors.
- Fixed issue with incorrect SMBIOS PCI/PCIx slot information.
- Fixed Windows Blue Screen seen when installing Windows\* XP over IDER.
- Fixed ITK workspace issue.
- Fixed issue where system could not boot Windows\* XP installation CD from a Plextor\* PX-712SA SATA CD-ROM.
- Fixed a problem where the PCI slot 2 would not work if the system was in manufacturing mode.
- Fixed boot order for SCSI HDD.
- Fixed PXE intermittent fail to download Remote Boot Image (NBP).

**Known Errata:**

- Recovery to CDROM drive feature has been removed because of space constraints. Should still be able to recover to FDD.
- Configuration Override Settings that hang the system will not gracefully recover automatically. Enter Maintenance Mode to clear "bad" settings to defaults.
- SMBIOS Slot Type 9 structure for the PCIx x4 slot will always show as "In Use" even when slot is not occupied.
- On first power on and Serial Over LAN connection from Intel AMT the pre-boot BIOS text will not be properly displayed. If one re-

issues the RCO CMD to the client/target the pre-boot BIOS text will be properly displayed.

## BIOS Version 1959

### About This BIOS:

- August 26, 2005
- BK95510J.86A.1959.2005.0826.1723
- SATA RAID info:
  - Intel(R) RAID for SATA - v5.1.0.1022
  - Silicon Image RAID for SATA - v5.2.11
- Initializing Intel(R) Boot Agent GE v1.2.28

### New Fixes/Features:

- Fixed issue where overriding VID and Ratio Multiplier would cause POST hangs with certain processors.
- Added Audio Subsystem ID for specific OEM SKU.
- Added support for ITK Data export.
- Added setup option for USB Legacy Enable/Disable.
- Added support for USB mass device emulation in BIOS SETUP boot order.
- Added support for Dynamic BIOS Setup changes based on Intel AMT.
- Fixed a problem where the system would generate multi-bit ECC errors and hang or reset if more than 2GB of memory was installed.
- Fixed numerous ASF PET message issues & added Stop ASF WDT.
- Fixed dual display of message pop-up box in Setup.
- Corrected flow to send Start ASF Watchdog Timer and OS Boot PET msg.
- Updated to AMTBX 1.2.1 release with 16 bit legacy error code return values supported.
- Lowered FSB to Processor Multiplier Ratio in Setup.
- Added BTX form factor support for IDCC.
- Fixed APM function "Set Power State" "off" not functioning.
- Fixed EBU fail to reboot but shutdown system if FP Audio attached.
- Corrected functionality of the "USB ZIP Emulation Type" BIOS SETUP question.
- Fixed priority issue in Advance Boot Mode when Legacy Floppy is installed without a media.
- Fixed "Exit Discard Changes" functionality in Setup.
- Allow system to wake from S4 via PCI/PCIx devices when ACPI Suspend State set to S1.
- Fixed POST hang with x8 PCI Express SCSI card.
- Fixed delay at checkpoint 0x5A when certain CD drives are attached to the system as master drives.
- Fixed long delay in POST with ZIP 750 attached as a single master drive in the system.
- Fixed issue where Pioneer DVD-120 drive was not detected in BIOS SETUP.
- Fixed an issue of no Audio after S3 resume.
- Updated the ICH7 RAID option ROM to version Intel(R) RAID for SATA - v5.1.0.1022.
- Fixed Key Help & Pop-up message strings to reflect current language in Setup.
- Enhanced PCI express support.
- Fixed SMBIOS Type 10 Onboard video device status reporting.



- Fixed USB Floppy not bootable when Legacy Floppy installed without a media.
- Fixed issue where a particular USB floppy disk drive was inaccessible in DOS after ejecting floppy media.
- Fixed issue where PCI SERR and NMI are being disabled at system boot.

**Known Errata:**

- Recovery to CDROM drive feature has been removed because of space constraints. Still able to recover to FDD.
- Configuration Override Settings that hang the system will not gracefully recover automatically. Enter Maintenance Mode to clear "bad" settings to defaults.
- SMBIOS Slot Type 9 structure for the PCIx x4 slot will always show as "In Use" even when the slot is not occupied.

<b>BIOS Version 1784</b>
--------------------------

**About This BIOS:**

- July 15, 2005
- BK95510J.86A.1784.2005.0715.1529
- SATA RAID info:
  - Intel(R) RAID for SATA - v5.0.0.1032
  - Silicon Image RAID for SATA - v5.2.11
- Initializing Intel(R) Boot Agent GE v1.2.28

**New Fixes/Features:**

- Fixed issue where system would fail to restart from Windows when more than 4GB of system memory is installed.
- Fixed issue where FSB Speed Override was causing the system to power cycle.

**Known Errata:**

- Recovery to CDROM drive feature has been removed.
- SMBIOS Slot Type 9 structure for the PCIx x4 slot will always show as "In Use" even when slot is not occupied.

<b>BIOS Version 1767</b>
--------------------------

**About This BIOS:**

- July 13, 2005
- BK95510J.86A.1767.2005.0713.1337
- SATA RAID info:
  - Intel(R) RAID for SATA - v5.0.0.1032
  - Silicon Image RAID for SATA - v5.2.11
- Initializing Intel(R) Boot Agent GE v1.2.28

**New Fixes/Features:**

- Added feature to Enable/Disable Maximum CPUID Value Limit.
- Fixed dependency of ASF setup option on AMT BX Setup entry option.
- Fixed no video when PCIx x4 slot Video and PCI Video present together.
- Fixed some BIOS Setup Popup boxes displaying strings with incorrect colors.
- Fixed the problem where F9 key Load Setup defaults loads existing Setup values instead of BIOS defaults in Configuration mode.

- Fixed USB boot issue to match "Boot to USB" setup question.
- Fixed a problem where certain DDR667 memory failed on some of boards.
- Fixed issue where system would not boot with certain processors installed.
- Fixed USB Floppy not bootable when Legacy Floppy installed without a media.
- Fixed hang with certain hardware configurations when performing specific types of Resets.
- Fixed POST hang with x8 PCI Express SCSI card.
- Mask Completion timeout errors on the PCI express ports off the ICH.
- Added support for issuing ATA Security Freeze Lock to IDE devices on resume from S3.
- Fixed an issue of no Audio after S3 resume.
- Modified the TRP, and TRCD values used when a bad or errant SPD value is found in one or more of the DIMMs.
- Fixed SOL display when booting DOS.
- Fixed Spurious Interrupt Test failure with the Intel RAID Option ROM Integration Test Suite.
- Added S3 support for TPM.
- Fixed flash issue with BMP logo where badges would disappear.
- Fixed convert and restore flash process.
- Added support for writing SMBIOS data securely via EFI variables.
- Fixed a problem where the system would hang during execution of the IDCC application or any software calling the INT15 sub function 0xEF.
- Corrected functionality of the "USB ZIP Emulation Type" BIOS SETUP question.
- Clear ICH7 SPI Access Request bit on S3 Resume.
- Fixed issue where 16-bit PCMCIA cards were not detected correctly in Windows.
- Fixed several second delay in POST while performing PS/2 port swapping.
- Fixed issue where Masterview+ CS114A KVM switch would reset just before system boot.
- Added workaround where system unable to boot to OS with 1066FSB and Atmel\* FWH.
- Fixed intermittent system hang or long delay just before boot to USB device.
- Fixed AmtBx setup entry and added FRU and ASF Push messages for OS boot.
- Updated to AMT BX 1.2 release.
- Updated the iAMT Firmware Image to version 1.1.33.
- Removed unused ICH7 PATA timing code and 40-80 pin cable code.
- Fixed issues with Intel AMT SOL and SATA boot hang.

**Known Errata:**

- Recovery to CDROM drive feature has been removed because of space constraints. Should still be able to recover to FDD.
- Configuration Override Settings that hang the system will not gracefully recover automatically. Enter Maintenance Mode to clear "bad" settings to defaults.
- SMBIOS Slot Type 9 structure for the PCIx x4 slot will always show as "In Use" even when slot is not occupied.

## BIOS Version 1615

### About This BIOS:

- June 17, 2005
- BK95510J.86A.1615.2005.0617.1657
- SATA RAID info:
  - Intel(R) RAID for SATA - v5.0.0.1032
  - Silicon Image RAID for SATA - v5.2.11
- Initializing Intel(R) Boot Agent GE v1.2.28

### New Fixes/Features:

- Corrected PCI Slot 4 clock enabling issue for D955XCS.
- Made CPU override options available for all unlocked CPUs in Burn-in-mode.
- Fixed EIST setup question based on processor capability.
- Corrected string listed for CAS latency in the aggressive settings.
- Fixed issue where some CD-ROM drives are not detected in BIOS SETUP.
- Fixed issue where some drives supporting the Security Feature set were not issued the Security Freeze Lock command during POST.
- Fixed issue where some CD-ROMs/DVD-ROMs attached as master with no slave were causing long delays in POST.
- Fixed issue where Sony\* CDU76E CD-ROM is not detected and not bootable by the BIOS.
- Fixed the issue PSC T1 is not running at rated frequency.
- Implemented a default Intel inside logo display method in case the target CPU badge doesn't exist in Flash.
- New smaller standard Logo.
- Added Master Boot Record (MBR) measurement support for TPM.
- Fixed several second delay in POST while performing PS/2 port swapping.
- Fixed the issue - "System hangs with PSL-2.8GHz CPU".
- Fixed a problem where the BIOS would consume too much system memory for BIOS usage.
- Fixed issue where the specific 3rd party SCSI card was not able to boot.

## BIOS Version 1554

### About This BIOS:

- May 31, 2005
- BK95510J.86A.1554.2005.0531.1407
- SATA RAID info:
  - Intel(R) RAID for SATA - v5.0.0.1032
  - Silicon Image RAID for SATA - v5.2.11
- Initializing Intel(R) Boot Agent GE v1.2.28

### New Fixes/Features:

- Fixed slow POST when certain CD-ROMs are attached to the system.
- Fixed issue where Windows was unable to enable DMA on SATA drives attached to the system.
- Fixed long delay in POST when some CD-ROMs are attached as an IDE master device.
- Added Flex Logo & Optional Module support.

- Fixed TPM enable/disable setup question.
- Fixed issue with incorrect SMBIOS PCI/PCIx slot information.
- Added support for sending Security Freeze Lock command during POST to drives that support the security feature set.
- Fixed slow POST when certain CD-ROMs are attached to the system.
- Fixed Intel AMT Serial Over LAN due to definition changes.
- Fixed issue with Type 17 SMBIOS information.
- Added missing Message Translations.
- Added Capsule Flex Module List generation utility.
- Adding Setup warning message for "Exit without Changes".
- Enhanced BoardID usage to allow proper SKU'ing of features.
- Save Board ID as variable so that others driver can use it.
- Fixed a problem where the setup option for XD (Execute Disable) bit did not work correct.
- Added setup option for SW Single Processor Mode.
- Fixed a hang in 3D Mark with specific set of x16 graphics cards.
- Fixed a problem where video devices that contains bridges do not work as the primary video device.
- Added non-shared SPI AMT implementation.
- SMBios Type 4 CPU Information Family type detection fixes.
- SMBios Type 4 CPU Information instance generation.
- Added support for an unreleased processor.
- Fixed EIST issue with mobile fused SMF CPUs.
- Fixed issue where fifth BIOS drive (84h) is not accessible via INT13h in certain system configurations.

**Known Errata:**

- Recovery to CDROM drive feature has been removed
- SMBIOS Slot Type 9 structure for the PCIx x4 slot will always show as "In Use" even when slot is not occupied.

<b>BIOS Version 1513</b>
--------------------------

**About This BIOS:**

- May 11, 2005
- BK95510J.86A.1513.2005.0511.1146
- SATA RAID info:
  - Intel(R) RAID for SATA - v5.1.0.1013
  - Silicon Image RAID for SATA - v5.2.11
- Initializing Intel(R) Boot Agent GE v1.2.28

**New Fixes/Features:**

- Hide/show the SATA configuration option under Advanced/Drive Configuration menu according to the ICH features capability.
- Added non-shared SPI AMT implementation.
- Added Silicon Image\* 3114 SATA Controller Option ROM Version 5.2.11.
- Fixed issue where system unable to go into S5 when "Wake on LAN from S5" option is set to "Power on".
- Fixed WHQL failure surrounding Sub-system Vendor ID for onboard Silicon Image\* SATA Controller.
- Hide TPM Setup Option when Intel AMT SOL operational.
- Added display of "System in Manufacturing Mode".
- Updated to ICH7 register programming according to ICH7 BIOS spec update rev 1.2.

- Updated the UNDI for LAN to version 1.2.28.
- Updated programming of PCI express register on the MCH to be restored correct after S3.
- Fixed a problem where the system would hang loading the OS, because the E820 did not report any available memory below 1MB.
- Fixed errors with some memory stress tests when USB keyboard is plugged in the system.
- ASF support updates.
- Solve Hardware Monitoring menu thermal sensor reading freeze up issue on Remote thermal sensor location.
- Added handlers for logo screen items position customization.
- Added handlers for logo screen color customization.
- Fixed a problem where a CD-ROM drive would not work after S3 if the IDE controllers were set to operate in legacy mode.
- Fixed the issue of high definition front panel audio and legacy front panel audio being programmed incorrectly.
- Added Convert (CVT) / Restore (RST) support.
- Fix SATA drive boot issue.

**Known Errata:**

- Recovery to CDROM drive feature has been removed because of space constraints in PEI. Should still be able to recover to FDD.
- Configuration Override Settings that hang the system will not gracefully recover automatically. Enter Maintenance Mode to clear "bad" settings to defaults.

<b>BIOS Version 1452</b>
--------------------------

**About This BIOS:**

- April 30, 2005
- BK95510J.86A.1452.2005.0430.1606
- SATA RAID info:
  - Intel(R) RAID for SATA - v5.1.0.1013
  - Silicon Image RAID for SATA - v5.2.00
- Initializing Intel(R) Boot Agent GE v0.0.05

**New Fixes/Features:**

- Fixed issues with calling INT15 sub function 0xEF.
- Enhanced Board ID usage to allow proper SKU'ing of features.
- Clear Peer Write bit.
- Fixed a problem where the system would hang on S3 resume path at POST code 25h if 4GB or more memory was present in the system.
- Fixed a problem where the system would power on, even if the setup option for power state after AC loss was set to power off.
- Updated the Audio Verb table for Sigmatel\* codec.
- Updated programming of PCI Express register on the MCH to be restored correct after S3.
- Fixed a problem where some of the buffer strength registers for SATA was not restored correct after S3.
- Fixed power cycling hang at postcode 34h with TPM.
- Fixed issue where Processor related BIOS updates were not being loaded in certain scenarios.
- Fixed a problem where the BIOS update would report an error trying to flash update the microcode.
- Fixed issue where system rebooted after exiting setup using menus in Configuration Mode.

---

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

- Fixed a problem where the system could hang during execution of the iDCC application or any software calling the INT15 sub function 0xEF.
- Updated ICH7 registers for USB according to ICH7 BIOS spec update rev 1.0.
- Fixed incorrect length reported in legacy multiprocessor tables.
- Fixed TPM enable/disable setup question.
- Fixed "Incorrect Password" & password length popup message not getting displayed.
- Fixed issue where ASF tables were only showing up with ASF disabled in setup.
- Updated Audio SSID's to correspond to 5-jack/3-jack Audio solution based on Board ID.

**Known Errata:**

- Recovery to CDROM drive feature has been removed because of space constraints in PEI.
- Configuration Override Settings that hang the system will not gracefully recover automatically. Enter Maintenance Mode to clear "bad" settings to defaults.

<b>BIOS Version 1290</b>
--------------------------

**About This BIOS:**

- April 15, 2005
- BK95510J.86A.1290.2005.0415.1529
- SATA RAID info:
  - Intel(R) RAID for SATA - v5.1.0.1013
  - Silicon Image RAID for SATA - v5.2.00

**New Fixes/Features:**

- Added feature to fill in Socket Designation field within SMBIOS Type 4 structure.
- Fixed issue where certain settings are unable to be hidden in Integrator Toolkit (ITK).
- Fixed issue with intermittent Audio Driver reloading.
- Updated programming of SATA control registers to comply with the ICH7 Spec Update 1.1.
- Updated Memory code to equivalent to MRC 1.00.
- Added support for reporting greater than 4GB of memory to the E820.
- Fixed issue with enabling HW single processor mode.
- Fix the undetectable USB thumb drive issue.

**Known Errata:**

- Recovery to CDROM drive feature has been removed because of space constraints in PEI. Should still be able to recover to FDD.
- Configuration Override Settings that hang the system will not gracefully recover automatically. Enter Maintenance Mode to clear "bad" settings to defaults.

<b>BIOS Version 1234</b>
--------------------------

**About This BIOS:**

- April 11, 2005
- BK95510J.86A.1234.2005.0411.1858
- SATA RAID info:

- Intel(R) RAID for SATA - v5.1.0.1013
- Silicon Image RAID for SATA - v5.2.00

**About This BIOS:**

- Initial release.

**Known Errata:**

- The recovery to CDRom drive feature has been removed.
- Configuration Override Settings that hang the system will not gracefully recover automatically. Enter Maintenance Mode to clear settings to defaults.
- Memory support for greater than 4GB of Memory is not implemented.

---

---

**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 registered trademark of Intel Corporation.  
Copyright (c) 2006 Intel Corporation.