



BIOS Update Release Notes

PRODUCTS: D955XBK, D955XCS (Standard 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 lflash, 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.

BIOS Version 2015

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.

BIOS Version 2010

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.

BIOS Version 1784

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.

BIOS Version 1767

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.

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.

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.
- 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.

BIOS Version 1290

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.

BIOS Version 1234

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.