



BIOS Update Release Notes

**PRODUCTS: D945PSN, D945PLM, D945PVS, D945PAW, D945PLRN,
D945PWM (Standard BIOS)**

BIOS Version 0108

About This Release:

- August 17, 2008
- SN94510J.86A.0108.2008.0817.1811
- SATA RAID info:
 - Intel(R) RAID for SATA - v5.6.2.1002
- Initializing Intel(R) Boot Agent FE v4.1.17
- Initializing Intel(R) Boot Agent GE v1.2.28

New Fixes/Features:

- Fixed F9 Load Default menu selection issue.
- Fixed memory SMBIOS data mismatched.
- Corrected SMBIOS CPU socket type and designator information.
- Fixed SMBIOS Type 1 structure size failures in SMDXREF test.
- Added workaround to fix language option not showing correctly.
- Added supervisor password check for chassis intrusion event.
- Fixed issue where system hangs when trying to load FreeDOS bootable CD from a USB CD drive.
- Fixed issue where CD-ROM retries were not functioning after the "No bootable device -- insert boot disk and press any key" message.
- Fixed issue where keys pressed in POST are visible after boot in the BIOS Data Area (BDA) keyboard buffer.
- Changed display font from "(R)" to "@".

BIOS Version 0103

About This Release:

- September 03, 2007
- SN94510J.86A.0103.2007.0903.0338
- SATA RAID info: Intel(R) RAID for SATA - v5.6.2.1002
- Initializing Intel(R) Boot Agent FE v4.1.17
- Initializing Intel(R) Boot Agent GE v1.2.28

New Fixes/Features:

- Added support for reporting capsule invocation results.
- Added ITK Data Var Type 3 to store VAREQ variable.
- Flashing a large BMP Logo caused inability to reflash and possibly not boot.
- Workaround an intermittent failure seen with EFI_VARIABLE in Windows environment.
- Fixed issue where IIA or ITK could not set boot order correctly.
- Fixed issue where ITK/IIA could not set Boot Order if the Boot Menu Type in the BIOS Setup was set to Advance.

- Fixed issue where ITK or IIA could not read boot drives' model strings.
- Fixed issue where ITK or IIA could not access Boot Priority List when all the boot devices disabled in the BIOS Setup.
- Fixed issue where system unable boot to connected bootable Hard Disk device, when all devices in Advanced mode are disabled.
- Added support for Winbond W25X80 8Mb SPI part.

BIOS Version 0102

About This Release:

- July 20, 2007
- SN94510J.86A.0102.2007.0720.0604
- SATA RAID info: Intel(R) RAID for SATA - v5.6.2.1002
- Initializing Intel(R) Boot Agent FE v4.1.17
- Initializing Intel(R) Boot Agent GE v1.2.28

New Fixes/Features:

- Updated processor support.
- Fixed flashing custom BIO file does not set OEM Default settings.
- Added support for writing a new variable through bio capsule.
- Fixed issue where system would hang booting Windows XP* with OEM Activation 2.0 data programmed, EIST enabled, and certain processor installed in the system.

BIOS Version 0100

About This Release:

- January 11, 2007
- SN94510J.86A.0100.2007.0110.1630
- SATA RAID info: Intel(R) RAID for SATA - v5.6.2.1002
- Initializing Intel(R) Boot Agent FE v4.1.17
- Initializing Intel(R) Boot Agent GE v1.2.28

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 system would not recognize CTRL+ALT+DEL key sequence from certain boot cycling machine.
- Updated verb table to support Vista

BIOS Version 0097

About This Release:

- November 02, 2006
- SN94510J.86A.0097.2006.1101.1459
- SATA RAID info: Intel(R) RAID for SATA - v5.6.2.1002
- Initializing Intel(R) Boot Agent FE v4.1.17
- Initializing Intel(R) Boot Agent GE v1.2.28

New Fixes/Features:

- Updated Heceta6 BMI sequence.
- Added setup option to control Power LED Off/Blink in S3 state.
- If the system is in manufacturing mode, do not disable TPM INT1A interface if the BIOS SETUP TPM Enabled question is set to "Disabled".
- Fixed SMBIOS HCT failure where Type 0 "Enable Targeted Content Distribution" bit is not set.
- Removed redundant SDRAM references from Memory Configuration page in Setup.
- Added support for resetting setup defaults the next boot.
- Supports OEM Activation 2.0. For details on the OEM Activation Program, send email to oassignh@microsoft.com
- Fixed consecutive read and/or writes of password supplied secure variables.
- Fixed an issue where S3 resume did not work with dual core processors.
- 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 changing certain Setup Options and using F10 to Save and Exit would not cause a system reset.

BIOS Version 0096**About This Release:**

- August 22, 2006
- SN94510J.86A.0096.2006.0822.1131
- SATA RAID info: Intel(R) RAID for SATA - v5.6.2.1002
- Initializing Intel(R) Boot Agent FE v4.1.17
- Initializing Intel(R) Boot Agent GE v1.2.28

New Fixes/Features:

- Added workaround to skip the TCC POST Card and PCI SIG card detection.
- Fixed Yellow Bang on PCI-PCI bridge on PCIe cards.
- Fixed intermittent system hang at POST code 92.
- Fixed floppy test failure on certain floppy drives.
- Fixed issue where some CompactFlash IDE adapters are not detected by the system BIOS.
- Changed the code to not reset video mode for every OPROM
- 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.

BIOS Version 0095**About This Release:**

- August 01, 2006
- SN94510J.86A.0095.2006.0801.1135
- SATA RAID info: Intel(R) RAID for SATA - v5.6.2.1002
- Initializing Intel(R) Boot Agent FE v4.1.17
- Initializing Intel(R) Boot Agent GE v1.2.28

New Fixes/Features:

- Fixed display of cache for multi-core processors
- Fixed issue where USB mouse would not work with certain HDD protection card.
- Fixed issue where operating system recovery hangs at certain steps when using a USB mouse.
- Fixed USB HID keyboard typematic issue.
- Fixed issue where USB HID keyboard bar code scanners were dropping characters in DOS.

BIOS Version 0077

About This Release:

- June 19, 2006
- SN94510J.86A.0077.2006.0619.1530
- SATA RAID info: Intel(R) RAID for SATA - v5.6.2.1002
- Initializing Intel(R) Boot Agent FE v4.1.17
- Initializing Intel(R) Boot Agent GE v1.2.28

New Fixes/Features:

- Unhide "HPET Enable/Disable" BIOS setup option and set default state to "Disable."
- Moved USB Port setup option to USB configuration page.
- Setup Date option change day to 01 if the current day is invalid for the selected month or year.
- Fixed issue where EFI boot floppy would not boot from USB floppy drives.
- Fixed issue where certain USB flash drive was not detected by the BIOS.
- Fixed issue where USB HID keyboard bar code scanners were dropping characters under DOS.
- Fixed issue where TPM Physical Presence was not cleared and locked intermittently at the end of POST.
- Fixed issue where TPM did not get disabled after clearing TPM.
- Hide "Clear TPM" option in Maintenance setup page if TPM is not enabled or not supported.

BIOS Version 0072

About This Release:

- April 26, 2006
- SN94510J.86A.0072.2006.0426.1535
- SATA RAID info: Intel(R) RAID for SATA - v5.6.2.1002
- Initializing Intel(R) Boot Agent FE v4.1.17
- Initializing Intel(R) Boot Agent GE v1.2.28

New Fixes/Features:

- 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 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 issue where some CompactFlash-to-SATA cards were not accessible in DOS.
- Fixed issue where the PS/2 mouse was not functional in LSI/Intel Server Option ROM Setup.
- Fixed issue where USB 2.0 speed was not working under BIOS USB legacy support.
- Fixed the issue where Boot Menu will not display correctly after F9 Load Default under certain scenario.
- Fixed a problem where PEG video devices that contain bridges do not work as the primary video device.
- Fixed BIOS Setup arrows in date/time fields didn't move predictably.
- Prevent 'up arrow' key from entering Setup.
- Added a new feature for System Wake from S5.
- Added HPET support.
- Fixed issue where certain host adapter cards were not functional.
- Fixed issue where legacy floppy drive was not seen in Windows if "Boot to Removable Devices" is set to "Disabled".
- Fixed "CMOS Timer Not Set" event has incorrect event count and incorrect time stamp.
- Added workaround for issue where IDER CD-ROM device was intermittently not being.
- Fixed FDD test failure on certain floppy drives.
- Enable USB Keyboard during only POST even if USB Legacy is disabled in Setup.
- Fixed certain ATM card reader causing POST delay when USB Legacy "Enabled."
- Fixed issue where system may hang in DOS accessing USB flash drives.
- Fixed a problem where Boot Order in Setup will revert back to default if the user "ESC" from other sub-menu.
- Fixed issue where system would hang with certain third-party IDE controllers installed in the system.
- Added Flex Language Module Support.
- Added Onboard LAN Mac Address display in Bios Setup.
- Fixed issue where PS/2 mouse is not functional when PS/2 keyboard is not connected.
- Fixed Yellow Bang on PCI-PCI bridge on PCie cards.
- Fixed a problem where the password did not get cleared if the password length was set to zero.
- Fixed issue where default value for Serial Port was not getting loaded after Flash update.
- 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 0065

About This Release:

- January 16, 2006
- SN94510J.86A.0065.2006.0116.1603
- SATA RAID info: Intel(R) RAID for SATA - v5.1.2.1002
- Initializing Intel(R) Boot Agent FE v4.1.17
- Initializing Intel(R) Boot Agent GE v1.2.28

New Fixes/Features:

- Added new audio SSID.

- Fixed issue where Default Modules were not getting loaded upon Iflash "/md" switch.

BIOS Version 0063

About This Release:

- December 27, 2005
- SN94510J.86A.0063.2005.1227.1431
- SATA RAID info: Intel(R) RAID for SATA - v5.1.2.1002
- Initializing Intel(R) Boot Agent FE v4.1.17
- Initializing Intel(R) Boot Agent GE v1.2.28

New Fixes/Features:

- Added New Intel Splash Screen logo.
- Removed ClE option from setup.
- Changed ASF Table to signify that ASF PXE boot is supported when ASF is supported.
- Fixed an issue where the system hangs while resuming from S3 with certain processors. This fix also addresses Core speed difference failure.
- 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.
- Fixed a problem where the BIOS update would report an error trying to flash update the microcode.
- Fixed issue where Iflash, reboot method (/rb), would fail to update the BIOS ID.
- Allow system to wake from S4 via PCI/PCIe devices when ACPI Suspend State set to S1.

BIOS Version 0057

About This Release:

- December 06, 2005
- SN94510J.86A.0057.2005.1206.1043
- SATA RAID info: Intel(R) RAID for SATA - v5.1.2.1002
- Initializing Intel(R) Boot Agent FE v4.1.17
- Initializing Intel(R) Boot Agent GE v1.2.28

New Fixes/Features:

- Fixed issue where operating system could not get Wake up cause after resuming S4.
- Added "Serial Port" question in Setup.
- Added feature to enable USB bootable devices to boot the system first.
- Fixed Setup Browser would not refresh with F9 default Language.
- Fixed illegal pop-up message box display in setup.
- Added HPET support.
- 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.
- Removed FSB Override display option underneath existing FSB display option in Main menu.

- Allowed PCI and PCIe devices to wake from S4 when 'ACPI Suspend State' set to S1.
- Added support for SST25VF080B SPI flash.
- Fixed BIOS Version update failure during Iflash update.
- Fixed IFlash Update hang with FWH.
- 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).
- Fixed issue where certain SCSI card would not function properly.
- Fixed issue where certain hard drives hang during certain DOS IDE reads or writes.
- 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.
- Added USB Ports Enable/Disable Setup Option.
- Added VT Enabled/Disable setup option.
- Added feature to fill in Socket Designation field within SMBIOS Type 4 structure.
- Fixed issue where operating system installation or boot hung with Intel SCRU42X RAID card.
- Fixed error when installing operating system over IDER.
- Fixed the issue where during the first boot BIOS is forced to be in legacy mode.
- Allowed Ctrl+Alt DEL when no boot device detected by EFI Bios.

Known Errata:

- BIOS recovery from CD is temporarily removed.

BIOS Version 0050

About This Release:

- September 16, 2005
- SN94510J.86A.0050.2005.0916.1734
- SATA RAID info: Intel(R) RAID for SATA - v5.1.1.1002

New Fixes/Features:

- Fixed issue where system could not boot Windows XP installation CD from certain SATA CD-ROM.
- Fixed issue where certain USB thumb drive is not seen in BIOS SETUP.
- Disabled Compliance Test Pattern in MFG mode by default.
- Added Auxiliary Fan Speed display in Hardware Monitoring page of Setup.

Known Errata:

- BIOS recovery from CD is temporarily removed.

BIOS Version 0048

About This Release:

- September 9, 2005
- SN94510J.86A.0048.2005.0909.1250
- SATA RAID info: Intel(R) RAID for SATA - v5.1.1.1002

New Fixes/Features:

- Added features for the new D945PSN board sku.
- Fixed SMBIOS Type 16 Memory Error Correction reporting.
- Fixed Discard Changes pop-up message box display in setup.
- Fixed a problem where F2 enter setup key only worked after Option ROM scan.
- Improved ATAPI CD read performance for AMT IDER CD device read access.
- Fixed flash issue with BMP logo where badges would disappear.
- Fixed a problem where the microcode updates did not work if the flash update was using non-reboot method.
- Fixed User Access Level question scope in Full Access mode.
- Fixed IFlash update hang.

Known Errata:

- BIOS recovery from CD is temporarily removed.

BIOS Version 0047

About This Release:

- August 22, 2005
- SN94510J.86A.0047.2005.0822.1530
- SATA RAID info: Intel(R) RAID for SATA - v5.1.1.1002
- Initializing Intel(R) Boot Agent FE v4.1.17
- Initializing Intel(R) Boot Agent GE v1.2.28

New Fixes/Features:

- Updated the ICH7 RAID option ROM to version Intel(R) RAID for SATA v5.1.1.1002.
- Fixed intermittent system hang or long delay just before boot to USB device.
- Fixed long delay in POST with Iomega ZIP 750 attached as a single master drive in the system.
- Fixed issue where certain KVM switch would reset just before system boot.
- Fixed issue where RedHat* Linux install would hang with 4 SATA drives attached to the system.
- Fixed issue where PCI SERR and NMI are being disabled at system boot.
- Fixed issue where certain combinations of PS/2 and USB keyboards and mice would not function with USB legacy.
- Fixed issue where some USB thumb drives are not detected on hard power-on.
- Corrected functionality of the "USB ZIP Emulation Type" BIOS SETUP question.
- Added support for USB mass device emulation in BIOS SETUP boot order.
- Added setup option for USB Legacy Enable/Disable.
- Fixed "Exit Discard Changes" functionality in Setup.
- Fixed dual display of message pop-up box in Setup.
- Fixed Key Help alignment & format in setup.
- Lowered FSB to Processor Multiplier Ratio in Setup.
- Added support for PERR/SERR events detection and logging.
- Fixed issue where 16-bit PCMCIA cards were not detected correctly in Windows.
- Fixed USB boot issue to match "Boot to USB" setup question.

- Fixed USB Floppy not bootable when Legacy Floppy installed without a media.
- Fixed priority issue in Advance Boot Mode when Legacy Floppy is installed without a media.
- Fixed SMBIOS Typel0 Onboard Video Device status reporting
- Fixed Key Help & Pop-up message strings to reflect current language in Setup.
- Fixed issue BIOS not able to detect CMOS battery failure.
- 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 issue where sometimes ECC errors were not detected and logged.
- Added date/time information for ECC events.
- Added feature to Enable/Disable Maximum CPUID Value Limit.
- Added PXE support for Vidalia®.
- Fixed EBU fail to reboot but shutdown system if FP Audio attached.
- Dual Heceta6 Support.
- Fixed the key that directly goes to set a new password when user not key in any old password.
- Fixed SOL window of opportunity issues.
- Fixed issue where certain DVD drive was not detected in BIOS SETUP.
- 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.
- Fixed hang with certain hardware configurations when performing specific types of Resets.
- Fixed numerous ASF PET message issues & added Stop ASF WDT.

Known Errata:

- BIOS recovery from CD is temporarily removed.

BIOS Version 0044

About This Release:

- July 11, 2005
- SN94510J.86A.0044.2005.0711.1450
- SATA RAID info: Intel(R) RAID for SATA - v5.0.0.1032
- Initializing Intel(R) Boot Agent FE v4.1.17
- Initializing Intel(R) Boot Agent GE v1.2.28

New Fixes/Features:

- Fixed an issue of no Audio after S3 resume.
- Added support for issuing ATA Security Freeze Lock to IDE devices on resume from S3.

Known Errata:

- BIOS recovery from CD is temporarily removed.

BIOS Version 0043

About This Release:

- July 7, 2005
- SN94510J.86A.0043.2005.0707.1254
- SATA RAID info: Intel(R) RAID for SATA - v5.0.0.1032
- Initializing Intel(R) Boot Agent FE v4.1.17

- Initializing Intel(R) Boot Agent GE v1.2.28

New Fixes/Features:

- Fixed delay at checkpoint 0x5A when certain CD drives are attached to the system as master drives.
- Cleared ICH7 SPI Access Request bit on S3 Resume.
- Fixed the problem where F9 key Load Setup defaults loads existing Setup values instead of BIOS defaults in Configuration mode.

Known Errata:

- BIOS recovery from CD is temporarily removed.

BIOS Version 0042

About This Release:

- June 27, 2005
- SN94510J.86A.0042.2005.0627.1644
- SATA RAID info: Intel(R) RAID for SATA - v5.0.0.1032
- Initializing Intel(R) Boot Agent FE v4.1.17
- Initializing Intel(R) Boot Agent GE v1.2.28

New Fixes/Features:

- Fixed Spurious Interrupt Test failure with the Intel RAID Option ROM Integration Test Suite.
- Cleared CR4[10:9] before boot.
- Updated processor microcodes.
- Corrected string listed for CAS latency in the aggressive settings.
- Fixed issue where certain CD-ROM is not detected and not bootable by the BIOS.
- Fixed POST hang with x8 PCI Express SCSI card.
- Fixed several second delay in POST while performing PS/2 port swapping.
- Removed unused ICH7 PATA timing code and 40-80 pin cable code.
- Fixed convert and restore flash process.
- Added S3 support for TPM.
- Modified the TRP, and TRCD values used when a bad or errant SPD value is found in one or more of the DIMMs.
- Fixed a problem where the PEG slot was disabled if the card in the slot was a non-graphics card.
- Fixed TPM enable/disable functionality.
- Fixed the issue - "System hangs with PSL-2.8GHz CPU".
- Fixed issue where some CD-ROM drives are not detected in BIOS SETUP.
- Fixed issue where the NetCell SyncRAID 3100 card was not able to boot.
- Fixed the issue PSC T1 is not running at rated frequency.
- Fixed issue where some drives supporting the Security Feature set were not issued the Security Freeze Lock command during POST.
- Implemented a default Intel inside logo display method in case the target CPU badge doesn't exist in Flash.
- Fixed EIST setup question based on processor capability.
- Fixed issue where some CD-ROMs/DVD-ROMs attached as master with no slave were causing long delays in POST.

Known Errata:

- BIOS recovery from CD is temporarily removed.

BIOS Version 0037

About This Release:

- June 1, 2005
- SN94510J.86A.0037.2005.0601.1758
- SATA RAID info: Intel(R) RAID for SATA - v5.0.0.1032
- Initializing Intel(R) Boot Agent FE v4.1.17
- Initializing Intel(R) Boot Agent GE v1.2.28

New Fixes/Features:

- Added Flex Logo & Optional Module support.
- Fixed long delay in POST when some CD-ROMs are attached as an IDE master device.
- Fixed issue where Windows* was unable to enable DMA on SATA drives attached to the system.
- Added UQI language packages.
- Fixed a problem where PEG video devices that contains bridges does not work as the primary video device.
- Fixed slow POST when certain CD-ROMs are attached to the system.
- Fixed issue with Type 17 SMBIOS information.
- Fixed issue with incorrect SMBIOS PCI/PCIx slot information.
- Added Event Log Prompt support.
- Added display of System in Manufacturing Mode.
- Added support for writing SMBIOS data securely via EFI variables.
- Fixed errors with some memory stress tests when USB keyboard is plugged in the system.
- Fixed a hang in 3D Mark with Nvidia* PEG cards.
- 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 issue where system would reboot when calling TCG INT1A functions.

Known Errata:

- BIOS recovery from CD is temporarily removed.

BIOS Version 0031

About This Release:

- May 19, 2005
- SN94510J.86A.0031.2005.0519.1842
- SATA RAID info: Intel(R) RAID for SATA - v5.0.0.1032
- Initializing Intel(R) Boot Agent FE v4.1.17
- Initializing Intel(R) Boot Agent GE v1.2.28

New Fixes/Features:

- Updated board features table.
- Fixed issue where fifth BIOS drive (84h) is not accessible via INT13h in certain system configurations.

Known Errata:

- BIOS recovery from CD is temporarily removed.

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