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**DATE:** January 24, 2002

#### About This Release

- **BIOS String:** PT84520A.86A.0015.P08.0302261328
- **UNDI PXE Version:** ICH2 PXE 2.1 Build 083

#### Features/Errata Fixed in This Release

##### P08-0015

- Banner change to P08-0015

##### B-0014

- Fixed the issue with booting using 2.0Ghz processor.

##### P07-0013

- Updated Intel Copyright Date to 2003
- Updated processor frequency display in POST and in Setup to handle newest processors.

##### P07-0012

- Intel(R) Boot Agent FE v4.1.09
- Fixed issue where system will not wake from S1 if the key stroke is hit before system enters S1 standby.
- Fixed issue where flashing the previous BIOS through EBU in Windows XP generated CMOS checksum errors.
- Updated from AMI Core 08.00.05 to 08.00.07.
- Added new BBS codes to preserve the boot order.
- Added the update for System Configuration Data.
- Added Hardware Monitoring screen for setup.
- Added BMI 1.1 support.
- Fixed issue where flashing the previous BIOS through EBU in Windows XP generated CMOS checksum errors.
- Disabled Hyper Threading support.
- Fixed a potential system hang problem after CMOS corruption and incorrect CUSTOM CMOS defaults were installed.
- Fixed issue where the MFG CMOS defaults did not match the DFT spec.
- Fixed password is required to enter maintenance mode issue.
- Fixed PXE base ROM dispatching issues.
- Fixed system hang during SMBus ARP with certain memory sticks installed.
- Removed Wake On Modem Ring question in BIOS setup.
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##### P06-0011

- Fixed thermal trip detection code for MFG.
- Updated Intel Boot Agent to 4.1.08.
- Added fix to correctly preserve register 70/74 across SMIs.
- Updated SMBIOS TYPE 8 connector information.
- Added Hyper-Threading Technology enable/disable switch in setup.
- Added ASF support.
- Added support for Intel(R) Integrator Toolkit 2.0 and BMI 1.1.

- Fixed an issue of incorrect "Block mode" display of Secondary Slave on the IDE configuration screen.
- Added the ability to enable and disable S.M.A.R.T. hard disk drive capabilities.
- Fixed an issue where USB mouse is slow to respond coming out of S3 in Windows 2000.
- Fixed the loss of USB mouse upon resume from S4 under Windows 2000
- Added Hyper-Threading support.
- Added the workaround to support backward compatibility in recovery with BL010100 BIOS.
- Fixed a potential system hang problem after CMOS corruption and incorrect CUSTOM CMOS defaults were installed.
- Fixed the problem where BMI runtime interface could not return the correct FAN thermal data.
- Added the hard-disk pre-delay functionality.
- Added support for BIOS IDE detection to be more tolerant of drive configurations with slower spin-up times.
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#### **P05-0010**

- Added ASF support.
- Fixed issue where Windows 2000 would reload hardware profile after entering BIOS.
- Added Chassis Intrusion question in Setup.
- Added support for Integrator Toolkit (ITK) Lock/Hide BIOS specification.
- Added Hyper-Threading support.
- Fixed a potential CMOS checksum error problem after BIOS update.
- Added the workaround to support backward compatibility in recovery with BL010100 BIOS.
- Fixed installation hang with Windows .NET when UDMA/133 drives are attached to the system.
- Updated System Configuration Data.
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#### **P04-0009**

- Removed power management TAB for PS2 keyboard and mouse and enabled the devices wake all the time.
- Corrected Device Locator field and Bank Locator field of Type 17 SMBIOS structure.
- Fixed the issue where ECC option is not being displayed in setup once we are in manufacturing mode.
- Enabled BIS SMBIOS Structure.
- Added BIOS workaround for Windows 98 SE issue where ATAPI devices are not reprogrammed on resume from Suspend-to-RAM (S3).
- Fixed an issue where some arbitrarily data area was written over by BIS DMI structure initialization. This caused the ABSCMOS utility to fail.
- Fixed maximum processor speed field of SMBIOS Type 4 structure.
- Fixed issue where in some configurations, USB devices attached to a hub were not detected. BIOS would sometimes fail to detect Full speed USB devices through a USB hub when an unknown USB device (such as USB scanner) was attached to a lower number port on the same hub.
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#### **P04-0008**

- Added POST messages for network boot (F12 hotkey).
- Fixed the issue with small logo getting scrolled with POST messages.
- Fixed issue where Reserved Bits were being set in the BIS SMBIOS structure.
- Fixed the problem where BIOS could not detect USB HC Ownership change when the application follows Microsoft legacy support recommendation.
- Fixed the issue "Press <F4> to run setup" message displayed after entering wrong user/supervisor password.
- Fixed issue of hanging when using mouse in Symantec Ghost 6.51 in Dos 6.22
- Fixed the issue, where system boots to OS in Config Mode, if there is no Key Board (neither PS2 nor USB) is attached.

- Fixed issue where early revisions of P4s were reported as Celeron.
- Fixed an issue where the bus numbers for devices and PCI slots sitting behind Pci-to-Pci bridge in the ICH were not being saved correctly.

#### **P03-0007**

- Fixed a problem where the system would hang coming out of S3 resume, if USB legacy was disabled in setup.
- Added help text for ISA Enable Bit setup question.
- Added code to clear out CMOS during every boot in manufacturing mode.
- Added code to clear the Event Log when a "Load defaults on next boot" event is pending.
- Fixed issue where the system would not boot to or read from LS-120 as slave device.
- Fixed issue where POST does not display all the installed option ROMs.
- Fixed security hole where the user had access to F10 and F12 functionalities even when the Supervisor password set.
- Fixed POST hang with "3D Prophet DDR-DVI" AGP card when LAN/PXE enabled in Setup.
- Fixed issue where system would power back on immediately after the power button was pressed if "Wake on Ring" was enabled.

#### **P02-0006**

- Dynamically updated S1/S3 state based on the skus design.
- Fixed the issue with OEM setup defaults.
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#### **P01-0005**

- Made the Setup items Discard Changes and View Event Log accessible when the user was in View Only or Limited Access mode.
- Added support for Small/Splash logos in GPNV user area.
- Added support to dynamically update the SMBIOS Structure for the number of PCI slots according to the SKU.
- Fixed the issues with USB ZIP drive failure under DOS.
- Fixed the problem where BIOS cannot detect USB legacy devices after the system was shutdown by pressing the power button for 4 seconds when Windows USB 2.0 driver was loaded.
- Fixed Win98 hang problem with Sandisk USB compact flash reader attached.
- Fixed system hang issue with Plextor PX-S88TU USB CD-ROM drive.
- Added Celeron strings to Post, Setup, and SMBios.
- Fixed issue where selecting Setup option "Mark Events As Read" clears all event logs.
- Made USB device connect/disconnect wake the system from Standby.
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#### **P01-0004**

- Fixed a problem where the power management tab on the Key board did not work correctly in S3 when it was set to disabled.
- Fixed issue where system would not wake from ACPI sleep with an external modem on COM1.
- Fixed a problem where the system would hang coming out of S3 resume, if USB legacy was disabled in setup.
- Added BIOS SETUP IDE Configuration Page look and feel of previous DPSD products.
- Fixed issue where display mode is forced to BIOS during and after the scan of option ROMs when silent boot enabled.
- Fixed INT15, function DA92h to correctly report system bus frequency when 533FSB processors are installed.
- Fixed hang when ITK was run with "install -cmos" option.
- Display Board MFG and product strings when switchboard data display is enabled.
- Fixed system hang after loading custom defaults stored with a different memory configuration.
- Removed memory timing override options from configure mode. Placed new redesigned controls into normal setup Implemented failsafe mechanisms to reset timing parameters to automatic in the event of a failure condition. Adding ICS and Cypress clock generator code for enabling the Center.

- Fixed Numlock behavior when only a USB keyboard is installed during POST. Previously, Numlock would never be enabled during POST in this configuration.
- Fixed a problem where the USB mouse/Keyboard did not function correctly in an OS environment if USB legacy was disabled in setup.
- Fixed the problem where the system cannot boot to legacy Floppy when Sandisk USB compact flash reader is attached.
- Fixed WHQL failures related to ESCD.
- Added workaround to boot to SCSI CD-ROMs with floppy emulated media when legacy floppy disabled in Setup.
- Fixed issue where system hangs in POST with Adaptec 3940 and NCR 8250S SCSI.
- Fixed issue where CD-ROM recovery was failing with certain processors present in the system.
- Added SPD Tolerant (aka non-spd support and/or errant spd support) support and memory override timings.
- Fixed issue that caused poor performance when the "Frame Buffer Size" Setup option was set to 512kb or 1Mb.
- Fixed failure of BIOS Setup "Load Custom Defaults" when "Save Custom Defaults" was used under a different DIMM configuration.
- Fixed issue where RTC did not always start on first use.
- Fixed issue where system hangs in POST with Adaptec 2940 and 29160 SCSI cards when PXE boot enabled in Setup.
- Fixed issue where setup menu was corrupted when using languages other than the default.
- Fixed the problem of USB 2 controller not being disabled in Windows (yellow bang) even when the control option is set to disabled in BIOS setup.
- Fixed issue where the Event Logging page was inaccessible when User Access Level was set to View Only.
- Added support to change Latency Timer register in PCI devices and ISA Enable bit in PCI-PCI bridges.

#### **B-0003**

- Fixed issue where the system would bounce out of ACPI sleep when a COM port loop-back was plugged into the system.
- Fixed issue where LAN was "Yellow Banged" upon resume from S3.
- Fixed security hole where a user with limited access could enable/disable the "Silent Boot" and "Intel(R) Rapid BIOS Boot" Setup.
- Changed the quiet mode setup option default to enabled.
- Fixed the issue where after restoring Custom Defaults, the passwords show as installed in setup, but when the user saves and exits, the passwords disappear when restarting the system.
- Fixed display of Total Memory Size in Setup when more than 1000MB of RAM was installed.
- Corrected the system behavior when the exiting setup in Maintenance Mode without saving settings.
- Updated processor frequency display in POST and in Setup to handle newest processors.
- Added BIOS SETUP IDE Configuration Page look and feel of previous DPSD products.
- Added support for split PXE. Added "PXE Boot to LAN" Setup option to enable/disable loading of PXE base code and UNDI code.
- Added support to skip boot to USB boot devices.
- Added support for event logging.
- Added "Clear All Passwords" Setup option to the maintenance page.
- Added "Clear BIS Credentials" Setup option to the Maintenance page.
- Corrected the OEMCMOS programming hang.
- Fixed failure of BIOS Setup "Load Custom Defaults" when "Save Custom Defaults" was used under a different DIMM configuration.
- Fixed USB legacy keyboards after shutting down to DOS in Win98SE. Fixed issues with USB legacy device detection.
- Fixed issue where the bottom half of a small POST logo was being chopped off.

- Removed the press key to enter setup message from the screen if an error was detected and the system is waiting on user response for the error.
- Added support to dynamically update the SMBIOS information for onboard devices based off the status of the hardware currently in the system.
- Fixed issue where Tape Drives would not show up in setup.
- Fixed issue where boot order would become corrupted when the boot device configuration changed.
- Fixed issue where Drive Type setting in setup was set to CDROM on boot. This is a Manufacturing Mode DFT violation.
- Fixed a problem where the PS/2 mouse wouldn't work after Win98SE S3 resume.
- Fixed POST hang at checkpoint 0Bh when using a keyboard/video switchbox.
- Fixed confusing messages when a memory size decrease POST error was reported. We were displaying press F2 and press F4 messages. Now we only display press F4.
- Removed password check when entering Setup in configure mode.
- Fixed issue where Adaptec 2940 SCSI cards were hanging system during POST.
- Fixed issue where recovery was failing when a certain processors were present in the system.
- Fixed issue of SMBIOS structures Type 19 and 20 reporting incorrect memory address range.
- Programmed the memory frequency into the type 17 SMBIOS structures.
- Fixed issue of type 16 PMA structure specified incorrect ECC mode.
- Added new memory type (DDR) for SMBIOS type 17 structure.
- Added Memory Size decrease error reporting.
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#### **D-0014**

- Fixed a problem where the system would not wake from S1 or S3 using AC97, or PME.  
Added in event log support
- Fixed Setup display for Total Memory on main setup page.
- Fixed yellow bang on ICH4 SMBus 2.0 driver. Fixed issue where Active Monitor would display no information on the "Cooling" and "Power" tabs.
- Fixed the problem where Heceta 6 initialization sometimes fails.
- The BIOS will no longer prompt for a password at boot time if there is no USER password installed.
- Removed the press key to enter setup message from the screen if an error was detected and the system is waiting on user response for the error.
- Fixed issues with not booting or not being able install Windows with certain CD-ROM drives attached to the system.
- Fixed issue where the BIOS would report a Hard Disk POST error when only the Primary or Secondary IDE channel was enabled in BIOS SETUP.
- Added a worked-around for certain PORT 80 debug cards.
- Fixed issues with "Primary Video Adapter" Setup option. The option did not work correctly for all slots when no AGP card was installed.

#### **D-0010**

- Changed the quiet mode setup option to enabled by default.
- Fixed the issue of COMB not showing up in Windows.
- Fixed issue where CMOS Checksum errors weren't always reported.
- Fixed issue where POST hangs in checkpoint C7h after coming out of Reset.

#### **B-0002**

- Added IOAPIC support
- Added COMB in BIOS setup
- Added PXE boot option and the F12 functionality to boot to a network
- Added an error dialog box in Setup if a user attempts to enter a user/supervisor password that exceeds the maximum length (7 characters). Also, if the password exceeds the max length, we discard the whole thing rather than use the first 7 characters.
- CPU Speed above 1GHz in the Setup screen displayed in GHz instead of MHz.
- Added "Clear All Passwords" Setup option to the maintenance page.
- Added "Clear BIS Credentials" Setup option to the Maintenance page.
- Fixed issue where the "Supervisor Password [installed/not installed]" field wasn't displayed if Setup was entered using a user
- Changed IDE Configuration to display IDE model types on the initial IDE Configuration screen.
- Fixed PNPTST hang.
- Fixed issue where a memory size decreased error could appear after loading custom CMOS defaults.
- Fixed issue where certain ATAPI CD-ROM drives were causing false IDE 80-pin cable detection.
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#### **B-0001**

- Initial BIOS release

<b>Known Errata with This Release</b>
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