



DPSD BIOS ENGINEERING

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DATE: June 27th, 2003

P17-0043 (Production 17, build 0043)

About This Release

- June 27th, 2003
- LY84510A.86A.0043.P17.0306270645
- Core Baseline version 01.03.00
- VBIOS build 2759
- UNDI 4.1.08

New Fixes/Features:

- Banner changed.

Known Errata:

B17-0042 (Beta 17, build 0042)

About This Release

- June 25th, 2003
- LY84510A.86A.0042.B17.0306252157
- Core Baseline version 01.03.00
- VBIOS build 2759
- UNDI 4.1.08

New Fixes/Features:

- Added work-around for COM2 issue, where COM2 not functioning properly in Windows (made COM2 a static device).
- Fixed fail to boot-up with Windows Recovery CD version 3.
- Fixed issue where Adaptec 1200A IDE RAID card is not bootable.
- Fixed typo error under Advanced -> Video Configuration -> Primary Video Adapter. Currently shows PCI Vide, should be PCI Video.
- Fixed issue where system gets lock up when running MemTest86 or MemStress.

Known Errata:

P16-0040 (Production 16, build 0040)

About This Release

- April 25th, 2003
- LY84510A.86A.0040.P16.0304250802
- Core Baseline version 01.03.00
- VBIOS build 2759
- UNDI 4.1.08

New Fixes/Features:

- Banner changed.

Known Errata:

B16-0039 (Beta 16, build 0039)

About This Release

- April 23rd, 2003
- LY84510A.86A.0039.B16.0304230425
- Core Baseline version 01.03.00
- VBIOS build 2759
- UNDI 4.1.08

New Fixes/Features:

- Added "Additional System Information" in BIOS Setup.
- Added the fix of removing unwanted noise in SigmaTel codec by powering down CODEC output section even in suspend to RAM and hibernation mode.

Known Errata:

P15-0038 (Production 15, build 0038)

About This Release

- March 10th 2003
- LY84510A.86A.0038.P15.0303100232
- Core Baseline version 01.03.00
- VBIOS build 2759
- UNDI 4.1.08

New Fixes/Features:

- Banner changed.

Known Errata:

B15-0037 (Beta 15, build 0037)

About This Release

- March 07th 2003
- LY84510A.86A.0037.B15.0303071945
- Core Baseline version 01.03.00
- VBIOS build 2759
- UNDI 4.1.08

New Fixes/Features:

- Added support to boot from USB flash devices.
- Added minimum APM enabling BIOS support.
- Changed ACPI OEM Revision field for all ACPI tables to contain the BIOS build date as YYYYMMDD.

Known Errata:

P14-0036 (Production 14, build 0036)

About This Release

- March 05th 2003
- LY84510A.86A.0036.P14.0303050435
- Core Baseline version 01.03.00

- VBIOS build 2759
- UNDI 4.1.08

New Fixes/Features:

- Banner changed.

Known Errata:

B14-0035 (Beta 14, build 0035)

About This Release

- March 04th 2003
- LY84510A.86A.0035.B14.0303041826
- Core Baseline version 01.03.00
- VBIOS build 2759
- UNDI 4.1.08

New Fixes/Features:

- Changed mouse control CMOS map per TME request.

Known Errata:

P13-0034 (Production 13, build 0034)

About This Release

- February 25th 2003
- LY84510A.86A.0034.P13.0302250138
- Core Baseline version 01.03.00
- VBIOS build 2759
- UNDI 4.1.08

New Fixes/Features:

- Banner changed.

Known Errata:

B13-0033 (Beta 13, build 0033)

About This Release

- February 24th 2003
- LY84510A.86A.0033.B13.0302241734
- Core Baseline version 01.03.00
- VBIOS build 2759
- UNDI 4.1.08

New Fixes/Features:

- Added ASF Support enable/disable switch in BIOS setup.

Known Errata:

P12-0032 (Production 12, build 0032)

About This Release

- February 19 2003
- LY84510A.86A.0032.P12.030219181

- Core Baseline version 01.03.00
- VBIOS build 2759
- UNDI 4.1.08

New Fixes/Features:

- Banner changed.

Known Errata:

B12-0031 (Beta 12, build 0031)

About This Release

- February 16 2003
- LY84510A.86A.0031.B12.0302161924
- Core Baseline version 01.03.00
- VBIOS build 2759
- UNDI 4.1.08

New Fixes/Features:

- Replaced Firmware code for P4 Processors.
- Implemented Dynamic date update for Copyright.
- Fixed WHQL failure that reported "FADT RESET_REG Register Bit Width can only be 8.
- Fixed issue with password less than 7 characters.
- Fixed an issue of ADC self test fail on MCH register FC BIT2.
- Make double reset on Audio Chip for proper functionality.
- Fixed the unwanted noise in SigmaTel codec by powering down CODEC output section before power is removed. The fix was recommended by SigmaTel per the application note.
- Enabled the on Screen POST code display.

Known Errata:

About This Release

LY84510A.86A.0029.P11.0212121810

- VBIOS build 2759
- Intel Base-Code, PXE-2.1 (build 083)
- Intel Boot Agent 4.1.08

Features/Errata Fixed in This Release

P11-0029 - December 12th, 2002

- Implemented the Chipset Revision ID support.
- Corrected USB Configuration help text in BIOS setup menu.
- Added LBA 48 bit hard disk fix.
- Fixed issue where PS/2 mouse was non-functional after resuming from S3 in Windows 98 SE/ME while pressing multiple keys on the PS/2 keyboard and using the Microsoft PS/2 mouse driver.
- Fixed issue where Windows 98SE and Windows ME will show "Device Problem" in Windows Registry if PS/2 devices are not attached.

P10-0027 - November 15th, 2002

- Updated Video BIOS to build 2759.
- Update from AMI Core 08.00.05 to 08.00.07.

- Fixed issue where system will not wake from S1 if the keystroke is hit before system enters S1 standby.
- Fixed the issue of the minute in setup being reset to 00 if MFG jumper installed.
- Added MPS support.
- Fixed password is required to enter maintenance mode issue.
- Added Machine check.
- Fixed floppy issue with floppy 3-mode enabled.
- Enabled 3-mode floppy support.
- Added Support for HT LOGO.
- Fixed issue where when an HT processor and Hyper-Threading disabled in Setup, XP still showed 2 processors in Task Manager.
- Fixed issue of MTRR register failure when running HT Technology Readiness utility.
- Fixed issue of some registers not being saved and restored correctly when running HT Technology Readiness utility.
- Fixed issue where the power button doesn't work after booting.

P09-0023 - October 25th, 2002

- Corrected cache size detection code to properly detect P4 Celerons (R).
- Added Support for HT LOGO.
- Fixed issue where PC-DOS would not boot from an emulated CD-ROM image.

P08-0022 - October 1st, 2002

- Per Intel's marketing requirement, use small letter "p" for "processor" string, no display of "HT Technology" for processor string on POST.
- Fixed issue where Windows 98SE and Windows ME will show yellow bangs in Device Manager for PS/2 devices if the OS is not installed with PS/2 devices attached.
- Fixed the issue where certain USB mouse will drop after resume from S1 under W2K.
- Fixed a problem where Fan configuration change warning message can be seen on older Heceta motherboard after updating BIOS.
- Fixed a problem where Fan configuration change warning message was not displayed when exiting Maintenance mode Setup.
- Fixed the problem where BMI runtime interface could not return the correct FAN thermal data.
- Fixed a potential Setup hang problem with Fan Configuration Setup menu.

P07-0021 - September 7th, 2002

- Added support for BIOS IDE detection to be more tolerant of drive configurations with slower spin-up times.
- Added the hard-disk pre-delay functionality.
- Added BMI 1.1 support.
- Added support for generation of Intel Integrator Toolkit (ITK) 2.0 BIOS map file.
- Updated video BIOS to 2686.
- Removed 3-mode floppy support.
- Fixed an issue where the Memory speed will be displayed incorrectly in Setup for Manufacturing Mode.
- Updated SMBIOS TYPE 8 connector information
- Updated SMBIOS processor information for HT enabled CPU (Type 4)

- Only one Type 4 structure populated per physical HT processor in SMBIOS.
- Enhanced thermal trip detection logic.
- Display "Intel(R) Pentium(R) 4 Processor with HT Technology" during sign-on for HT CPU.
- If no "Treliaible" value is available in BMI data Flash logical block, the field is populated with 0FFh (as per BMI Spec 1.09c)
- Fixed issue where chassis intruder was unable to log to event log.
- Fixed issue where viewing event log will display garbage if intruder event occurred.
- Fix issue where IOMEGA Zip drive was not able to emulate as hard disk. Also added fix to disable hard disk emulation when the drive's jumper is configured as floppy.

B-0018 - August 27th, 2002

- Updated Intel Boot Agent to 4.1.08.
- Added Hyper-Threading Technology enable/disable switch in setup.
- Updated memory reference code to 1.50.
- Added the workaround to support backward compatibility in recovery with BL010100 BIOS.
- Added fix to correctly preserve register 70/74 across SMIs.
- Fixed thermal trip detection code for MFG.
- Updated to Baseline BL_01.01.01.
- Fixed issue where USB device slows to activate from standby.
- Fixed installation hang with Windows .NET when UDMA/133 drives are attached to the system.
- Fixed issue where COM port resource being wrongly allocated.
- Fixed the issue of not booting to certain CDROM drives.
- Fixed the issues with USB Floppy boot.
- Fixed an issue where system will hang when coming out of S4 with USB mouse attached.
- Added Heceta chip support.
- Removed Wake On Modem Ring question in BIOS setup.
- Fixed issue where Windows 2000 would reload hardware profile after entering BIOS.

P06-0012 - August 5th, 2002

- Updated to AMI release 8.00.05 Core
- Added S.M.A.R.T. enable/disable question in the Advance IDE Setup menu for each of the IDE channels
- Added SMBUS module updates
- Added ASF support
- Added Chassis Intrusion support
- Added support to dynamically update the SMBIOS information for onboard devices based off the status of the hardware currently in the system
- Enabled 3Mode floppy support
- Fixed an issue where some arbitrary data area was written over by BIS DMI structure initialization
- Fixed the issue of not being able to wake the system up in S3 using the PING command

**** There is an errata in P05-0011 and earlier which does not allow Recovery from a P06-0012 BIOS or later to a P05-0011 BIOS or earlier ****
**** It is still possible to flash from P06-0012 to a P05-0011 BIOS or earlier, but it is not possible to Recover ****

P05-0011

- Removed the Power Management Tab in Windows for the PS2 Keyboard and Mouse. This functionality is now always enabled.
- Fixed an issue where the bus numbers for devices and PCI slots sitting behind the Pci-to-Pci bridge in the ICH4 were not being saved correctly.
- 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.
- Some previously missing string translations are added.
- Fixed a memory issue that could potentially cause boot failures or blue screens.
- Updated Video BIOS to build 2637.
- Enabled TCO_EN earlier in POST.
- Fixed the issue with small logo getting scrolled with POST messages
- Fixed issue where Reserved Bits were being set in the BIS SMBIOS structure.
- Added POST messages for network boot (F12 hotkey).
- Fixed the issue "Press <F4> to run setup" message displayed after entering wrong user/supervisor password.
- Fixed the issue where system boots to OS in Config Mode, if there is no keyboard (PS2 nor USB) attached.
- New strings translation.
- Added support to scan User Binary code before Video init such that if resource allocations are required they will be provided by the BIOS.
- Fixed issue where POST does not display all the installed option ROMs

P04-0010

- Fixed issue where certain early rev Pentium 4® CPUs were appearing as Celeron® processors.
- Fixed an issue where system will not resume from S1 on W2K.

P03-0009

- Fixed issue where boards would hang at 00h on manufacturing line.
- Fixed issue where LS-120 drives would not work as slaves.
- **Enhanced functionality of one time boot selection menu.**
- **Fixed issue where system would report Type 7 SMBIOS errors.**

P02-0008

- Fixed issue where SMBios information for Celeron Processor cache information and the cache associativity value for most Pentium 4 processors.
- Fixed the issue with OEM setup defaults.
- Fixed system hang with Hauppauge WinTV card.
- Fixed issue where system would power back on immediately after the power button was pressed if "Wake on Ring" was enabled.
- Added help text for ISA Enable Bit setup question.
- Fixed POST hang with "3D Prophet DDR-DVI" AGP card when LAN/PXE enabled in Setup.
- Added a fix for possible memory hangs with older DIMMs.
- Added the ability to detect "Available" versus "In Use" status for the AGP slot in the SMBios tables.

- Fixed the system hang problem where user repeats Win98 Shutdown to DOS many times.
- Fixed issue where POST does not display all the installed option ROMs.
- Added support to notify user when a Pentium 4 thermal trip occurs.
- Added RPM (Replaceable Module) support.
- Added new foreign string translations.
- Added ability to support S1 or S3 as the default sleep state based on board SKU.
- Added warning message that is displayed when a system is booted with a 533MHz system bus processor and a chipset which only supports 400MHz system bus speeds.

P01-0007

- Fixed issue where system would lock when time would roll over from one day to the next in DOS when USB legacy was enabled.

P01-0006

- Added S3 work around for video drivers.
- Added Celeron strings to Post, Setup, and SMBios.
- Set French as the Default alternate language.
- Changed setup text to reference Integrated Video versus AGP Video.
- Added support for Small/Splash logos from GPNV user area. This includes support for background and foreground logos from GPNV user area during Silent Boot. Added dynamic Celeron/Pentium 4 logos during POST.
- Fixed issue where selecting Setup option "Mark Events As Read" clears all event logs.
- Made USB device connect/disconnect wake the system from Standby.
- Reduced time required to come out of S3 by approximately two seconds.
- Fixed Win98 hang problem with Sandisk USB compact flash reader attached.
- Made the Setup items Discard Changes and View Event Log accessible when the user was in View Only or Limited Access mode.
- Fixed system hang with Plextor PX-S88TU USB CD-ROM drive.
- Fixed the problem where BIOS cannot detect USB legacy devices after the system was shutdown by pressing the power button for four seconds under Windows, when USB 2.0 drivers are loaded.
- Fixed a problem where the system would not wake from S1, S4, or S5 from magic packet ping.
- Fixed issue where system would intermittently fail booting to a ZIP drive using floppy emulation mode.

P01-0005

- Fixed issue where the OEM ID and the OEM Table ID for each ACPI table was not set correctly
- Added support to change Latency Timer register in PCI devices and ISA Enable bit in PCI-PCI bridges
- Fixed issue where the Event Logging page was inaccessible when User Access Level was set to View Only
- Fixed the problem of USB 2 controller not being disabled in Windows (yellow bang) even when the control option is set to disable in BIOS setup
- Fixed issue where setup menu was corrupted when using languages other than the default
- Fixed issue where system hangs in POST with Adaptec 2940 and 29160 SCSI cards when PXE boot enabled in Setup

- Fixed SMBIOS Type 6 structure
- Added string to the Chipset Configuration menu in setup
- Fixed a problem where the power management tab on the keyboard did not work correctly in S3 when it was set to disabled
- Added Intel 845G Performance Optimizations
- Fixed the SMBIOS type 0 BIOS Characteristics to not always set the ISA bit
- Added foreign string translations
- Fixed an issue where the Date was invalid in the ACPI table
- Fixed the issues with USB ZIP drive failure under DOS
- Fixed the problem where the system could not boot to a legacy Floppy when a Sandisk USB compact flash reader was attached to the system during POST.
- Fixed issue where system hangs in PSOT with Adaptec 3940 and NCR 8250S SCSI cards installed in the system at once
- Added support for SSID changes required for the 9766 and 9750 SigmaTel Audio codecs
- Fixed Num-Lock behavior when only a USB keyboard is installed during POST.
- Fixed issue where system would hang when multiple boot devices were changed between boots.
- Fixed a problem where the USB mouse/Keyboard did not function correctly in an OS environment if USB legacy was disabled in setup
- Fixed INT15, function DA92h to correctly report system bus frequency when 533FSB processors are installed
- Fixed an issue with POST screen scrolling
- Added new flash configuration that gives another 32kBytes of space for the BIOS area.
- Fixed system hang in memory detection after loading custom defaults that were stored when a different memory configuration was present in the SUT.

B-0004

- Fixed issue where system would not wake from ACPI sleep with an external modem on COM1.
- 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.
- Corrected Event Log Configuration string.
- Remove infrared support from COM2.
- Fixed issue where, after CMOS corruption, the system would boot to the OS without a CMOS checksum error.
- Fixed hang when Integrator Toolkit was run with "install -cmos" option.
- Added display of board MFG and product strings when switchboard data display is enabled.
- Fixed system hang after loading custom defaults stored with a different memory configuration.
- Fixed WHQL failures related to ESCD.
- Improved POST boot speed.
- Fixed incorrect display of processor frequency when using a 533MHz FSB processor on 845GL, which only supports 400MHz FSB.
- Fixed Linux GRUB loader hang.
- Fixed issue where system hangs in POST when several PCI option ROMs are loaded.

- Fixed issue where CD-ROM recovery was failing with certain processors present in the system.
- Fixed AC97 modem wake events.
- 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.

B-0003 - March 14, 2002

- Fixed issue where boot to LAN was failing.
- Updated processor support code.
- 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 issue where system would hang after a Power Failure if the memory configuration changed. Fixed issue where the system would not recognize memory configuration changes after a power failure.
- Added error reporting for no keyboard in system.
- Forced correct display of whole line when displaying "Memory Size Decrease" message.
- Forced correct display of whole line when displaying "Press <F4> to Run SETUP" message.
- Fixed issue where Tape Drives would not show up in setup.
- Added BIOS SETUP IDE Configuration Page look and feel of previous DPSD products.
- Fixed issue where the system would bounce out of ACPI sleep when a COM port loopback was plugged into the system.
- Fixed issue where system hang in POST when PXE/LAN enabled. This issue is seen only in certain configurations, depending upon the number and/or size of other option ROMs.
- Added support to skip boot to USB boot devices.
- Fixed display of Total Memory Size in Setup when more than 1000MB of RAM was installed.
- Removed incorrect display of Security screen BIOS setup question "Password Check".
- Updated the help text in Setup.
- Fixed corruption of the memory size string on the POST text screen when USB legacy was disabled.
- Fixed a problem where the system would hang when you try to do a reset or shut down after you have done a S3 resume, and the High speed USB controller was disabled in setup.
- Fixed issue where boot order would become corrupted when the boot device configuration changed.
- Fixed Issue where system would hang upon resume from S3 in Win98SE when a USB device was on the system and USB legacy was enabled.
- 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.
- Fixed security hole where a user with limited access could enable/disable the "Silent Boot" and "Intel(R) Rapid BIOS Boot" Setup options.
- Fixed a problem where the PS/2 mouse wouldn't work after Win98SE S3 resume. This only happened when the ports were not swapped.
- Added additional power savings in S1.
- Fixed POST configuration summary screen display of IDE HDD size.
- Fixed issue where the system would not boot to Windows 98 SE/ME with hard disk drives attached to the system.

- Removed "Checking NVRAM.." message from the POST text screen.
- Modified BIOS to always load PXE basecode.
- Fixed failure of BIOS Setup "Load Custom Defaults" when "Save Custom Defaults" was used under a different DIMM configuration.
- Changed color of title bar in Setup to black text on a cyan background.
- Fixed issue where recovery was failing when certain processors were used.
- Added support for new Celeron processors.
- Added support to dynamically update the SMBIOS Type 10 information (enable or disable) for onboard devices based off the status of the hardware currently in the system.
- Corrected OEMCMOS programming hang when calling the Int15 function.
- Fixed USB legacy keyboards after shutting down to DOS in Win98SE.
- Fixed hang during boot with Windows 98SE and Windows Millennium. The system would hang at the Windows splash screen.
- Added new memory type (DDR) for SMBIOS type 17 structure.
- Fixed a problem where the system would hang coming out of S3 while using internal graphics.
- Fixed string corruption on the title bar in Setup when switching between languages.
- Added foreign string translations.
- Fixed issues with calculation of processor frequencies.
- Fixed a problem where the LED's did not turn on correctly during POST.
- Corrected Serial Port initialization.
- Improved boot times during POST.
- Corrected the system behavior of not halting the system with the change jumper message in Maintenance Mode when the user exits setup without saving settings.
- Fixed issue where the bottom half of a small POST logo was being chopped off.
- Fixed several IDE register programming issues.
- Fixed issue where Adaptec 2940 SCSI cards were hanging system during POST.
- Fixed the problem where USB legacy support doesn't work after Win98 shutting down to DOS.
- Fixed "External Clock Frequency" field in the SMBIOS Type 4 structure. This field was incorrect when using processors that run at a 133 MHz system bus frequency.

B-0002 - February 25, 2002

- Fixed a problem where the system would not wake from S1 or S3 using PME.
- Fixed issue where CMOS Checksum errors weren't always reported.
- Fixed SPD Tolerant Timing Overrides.
- Removed extra PCI resets to cut down boot time.
- Fixed Win 2k install with large DIMMs.
- Fixed multiple language support.
- Fixed issue where burst length 8 was sometimes not enabled even though the DIMMs supported it.
- Fixed the problem where USB legacy support doesn't work after Win98 shutting down to DOS.
- Updated processor frequency display in POST and in Setup to handle newest processors.

- Fixed issue where waking the system from S1 or S3 using PS/2 took 2 inputs.
- Corrected the security hole of the plus/minus keys being able to change items in setup even when the security level is not valid for the current user.
- Fixed issues with "Primary Video Adapter" Setup option. The option did not work correctly for all slots when no AGP card was installed.
- Fixed issue where LAN was "Yellow Banged" upon resume from S3.
- Fixed the problem where BMI write function returns an error even if BMI data format is correct.
- Added PCI Slot 4 to BIOS Setup.
- Fixed issue where the system will not power-down to S3 in Windows 98 SE with a PS/2 mouse populated in the system.
- Fixed issues with not booting or not being able install Windows with certain CD-ROM drives attached to the system
- Added support for event logging.
- Fixed yellow bang on ICH4 SMBus 2.0 driver.
- Fixed issue where Active Monitor would display no information on the "Cooling" and "Power" tabs.
- Replaced "AMIBIOS Version :" with "BIOS Version" on main page of BIOS setup screen.
- Fixed a problem where the WHQL Unreported memory test did not finish.
- Added a worked-around for certain PORT 80 debug cards.
- Fixed the PCI routing.
- 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.
- Enabled the Setup question for LAN.
- Enabled the COM B question in setup.
- Fixed issues with WinME install hanging with certain CD-ROMs.
- 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 ability to detect if LAN is populated on the board.
- Fixed misspelled word in Setup. Changed "Removeable" to "Removable".
- The BIOS will no longer prompt for a password at boot time if there is no USER password installed.
- Fixed an issue where if LAN is disabled in the BIOS setup, it will show up in the Windows Device Manager after S3.
- Fixed issue where PS/2 port-swapping was not working correctly for certain keyboards. Fixed POST hang condition on warm reboot with certain auxiliary devices attached to the system.
- Changed the BBS Popup Menu hot key to <F10>.
- Changed POST string to display "processor" instead of "Processor".
- Added "Clear All Passwords" Setup option to the maintenance page.
- Added "Clear BIS Credentials" Setup option to the Maintenance page.
- Removed <F10> from being a Setup entry key.
- Changed IDE Configuration to display IDE model types on the initial IDE Configuration screen.

B-0001 - February 13, 2002

- Initial Beta check-in