



OPSD BIOS ENGINEERING

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TO: OPSD Business Unit

CC: iPG / OPSD BIOS Engineering

FROM: iPG / OPSD BIOS Engineering

SUBJECT: GB85010A.86A Standard BIOS P18

About This Release

- GB85010A.86A.0078.P18.0110081719
- PXE-2.0 [Intel Boot Agent Version 4.0.14 (build 82)] for ICH2 LAN Controller

Features/Errata Fixed In This Release

P18-0078:

- Reprogrammed ADM1031 to use internal thermo sensor.

P17-0076:

- Banner changed to P17-0076.
- Added AMI BBS 3.1.
- Fixed yellow bang in Windows device manager for "System Board Extension for ACPI BIOS".
- Fixed issue with language update option not being displayed on the iflash menu.
- Disabled I/O APIC if ACPI S3 mode is selected and the ICH2 stepping is B1'.
- Fixed ACPI table which incorrectly reported that the board can wake via USB from ACPI S4 mode (this is not possible).
- Corrected language information for SMBIOS Type 13 structure.
- Fixed register programming for ATA66 and ATA100.
- Fixed Ultra DMA timing and programming for ATA-100 devices in ICH2 platforms.
- Added support for issuing the Security Freeze Lock (command code 0xF5) command on resume from S3 to IDE devices that support the Security feature set. This may help eliminate the possibility of installing password into the devices by any unauthorized entity.
- Fixed the issue where the BIOS would not release IRQ 12 when the PS/2 mouse port was not being used.
- Fixed issue where system could not transition from S3 to S4 in Windows using the timed Power Options.
- Removed the clearing of ICH2 Power Management Status registers upon resume from ACPI S3 mode.
- Fixed an issue where the Fault Tolerant Boot Block Test would fail and not be able to boot if ECC was enabled during the test.
- Forced VGA mode 12h for all BIOS (ADM V3.0 release version).
- Fixed issue that the logo displays slowly.
- Added support to skip boot to USB boot devices. A Setup question "USB Boot" has been provided in Setup's Boot page.
- Fixed issue where BIOS failed to load custom defaults boot order correctly.
- Added WFM 2.0 Remote Lockout support. This is one of the PC 2001 requirements.
- Implemented WFM INT 15h functions:
 - 2500h -- Inquire Lockout Capabilities
 - 2501h -- Get Remote Lockouts
 - 2502h -- Set Remote Lockouts

This implementation locks/unlocks soft on/off switch, mouse, CTRL+ALT+DEL key combination, and all keyboard activity expect CTRL+ALT+DEL. It doesn't lock/unlock reset button because reset button on the DPSD board is hardwired to the board and cannot be trapped.

- Fixed an issue where "Force Network Boot" could be activated when CMOS was corrupted. It wasn't being reset when a checksum error was found since it is not included in the CMOS checksum. This fix disables network boot whenever there is a checksum error.
- Fixed issue with a Tape Backup Unit not being seen in Windows 2000 when set as a master and a HDD is set as a slave on the same channel.
- Fixed ECC Logging functionality for the Event Log.
- Added an ECC error handler to the SMM code.
- Fixed issue where the INT13 seek command (function 0Ch) was not writing the Sector Number register.
- Added support to boot from network directly if F12 Key is pressed during POST.
- Fixed issue where pressing keys during Option ROM scan hangs the system. This hang is seen with some SCSI adapters cards. When scanning these cards, if any BIOS special key is pressed that toggles the screen (such as <F2> key), the system hangs.
- Fixed issue where the system was always reporting 80-conductor IDE cable type (regardless of actual cable type) for certain ATAPI devices.
- Fixed issue where the PS/2 mouse was being displayed in Device Manager when a PS/2 mouse was not attached to the system.
- Fixed APM so that drives would correctly power down in APM mode.
- Dynamically updates number of PCI slots available for IRQ priority screen in Setup.
- Releases IRQ 12 when the PS/2 mouse is not installed.
- Simplified BIOS Language configuration.
- Core SMBIOS enumerates and determines the proper number of SMBIOS structures for PCI slots.
- Disabled I/O APIC for ICH2 steppings that do not support it.

P14-0063

- Added Processor Update.

P13-0060

- Added support for Communication and Networking Riser (CNR) version 1.1 and multi-channel audio upgrade.
- Fixes issue where AC97 was enabled as a wake event after a soft off from DOS.
- Fixed a problem where the VPD area did not get updated correctly after a BIOS recovery.
- Corrected SMBIOS information for AGP slot.
- Fixed issue where Windows* XP would hang on resume from ACPI S3 with certain AGP video cards.
- Fixed issue where if an IDE interface is disabled, Device Manager shows yellow exclamation point.
- Changed manufacturing mode defaults so that the BIOS defaults will be loaded on the first boot after manufacturing mode is disabled.

P12-0058

- Fixed an issue when returning from S3.
- Fixed an issue where the event log would not display correctly if Quiet Boot was disabled.
- Memory size is no longer stored when saving Custom Defaults in Setup.
- Fixed an issue with audio codec signature value for multi-channel CNR audio upgrades.

P11-0057

- Added new Pentium® 4 logo that is faster and no longer requires VESA mode 101h.
- Fixed an issue with Alert On LAN POST events.
- Changed the legacy floppy detection routine to save time during POST.

P10-0056

- Fixed an issue with the display of the event log in setup
- Corrected functionality of the LBA Mode Control option in BIOS Setup

- Fixed an issue so that the system will report an error code and halt for certain unsupported RIMM* configurations.
- Updated setup so that it will appear correctly on video cards that no longer support VESA mode 101h.
- BIOS setup will now properly report UDMA/100 drives on the IDE Configuration screen.
- Added Processor Update.

P09-0054

- Correctly programs the 5th Voltage ID PIN on the hardware-monitoring chip.
- Added support for AGP PRO50 video cards for those boards, which have an (optional) AGP Pro 1.5V Connector.
- Fixed problem that kept 256Mb, 16d bank, 2KB page size RDRAMs from being recognized as supported devices.

P08-0053

- Fixed issue where SMI (System Management Interrupt) was not initialized coming out of ACPI S3.
- Fixed an issue where BIOS could not detect PME wakeup correctly (SMBIOS type 1 structure would wakeup for the wrong reason and was incorrectly updated).
- Added feature to disable Wake on PME from ACPI S4.
- Fixed an issue where onboard audio detection was not happening properly in some situations.
- Fixed multi-channel CNR audio upgrade detection.
- Added new code for USB polling.
- Added support for PCI IDE Bus Mastering (DMA) for BIOS INT 13h hard disk reads and writes on IDE devices that support IDE Bus Mastering.
- Added BBS Runtime function support to the BIOS.
- Added new release of PXE code.
- Changed Type 8 SMBIOS structures to correctly reflect internal connectors. Internal connectors in Type 8 structures now conform to version 2.3.1 of the "System Management BIOS Reference Specification".
- Corrected problem with SCSI controller resource conflict in Windows® 2000 when using AGP video.
- Fixed APM so that drives would correctly power down in APM mode.
- Updated ICH2 code to account for ICH2 BIOS Specification Update (for B4 Stepping ICH2 Support).
- Added support to update the VPD area in BIOS recovery process.
- Fix a potential issue with the boot sequence could take longer due to the boot data not being correctly initialized
- Updated Intel Express BIOS to Version 1.11
- SMBIOS corrected to reflect that the SMBus is routed to PCI slot # 2
- Fixed issue where the system was always reporting 80-conductor IDE cable type (regardless of actual cable type) when certain ATAPI devices were connected as the slave device on the IDE channel.
- Added support for doing 32-bit IDE PIO mode data transfers inside BIOS INT 13h.
- Added AMI BBS 3.0 and USB boot functionality
- Added support for programming the back-panel diagnostic LEDs to all green on resume from ACPI S3 (Suspend-to-RAM).
- Changed Setup and POST to eliminate issues regarding shifted characters.
- Optimized AGP Timer settings according to Intel 82850/82860 Chipset BIOS Specification rev 0.77.
- Made "Language" setup item non-editable when user setup access level is set to "View Only".

P07-0048

- Fixed an issue to load the proper setup settings for Floppy Controller.

P06-0047

- Corrected System Bus Speed to display 400Mhz.

- Changed the default and mfg. value for the PCI Master Latency Timer from 64 to 32 PCI clocks.
- Fixed an issue where the BIOS did not disable the resources for COM Port B on boards that do not have the optional COM Port B.
- Fixed an issue where the SMBIOS information for the onboard Audio (On Board Devices Information TYPE 10) always returned "Device status" set to Enabled, even when the onboard audio was not present on the board or when it was disabled in setup on the board with onboard audio.
- Fixed an unattended start issue with USB Legacy Enable (default) and PS/2 keyboard/mouse in Windows NT* 4.0 and Windows* 2000.

P05-0046

- Add processor update.
- Corrected issue with infrequent keyboard/mouse drop off after S3.

P04-0044

- Fixed SMI handler so that the PCI configuration register is reliably restored upon exit.
- COM Port B will no longer appear in configuration mode. D850GB supports COM Port A only.
- Fixed NumLock light failure and dropped key failure if PS/2 keyboard was not present.
- Fixed a SMBIOS issue where the Type 9 (AGP) System slot - "current usage" field always showed up as "unknown" instead of "Available"/"In Use" for the AGP slot.
- Fixed an issue where the SMBIOS information for the onboard Audio (On Board Devices Information TYPE 10) always returned "Device status" set to Enabled, even when the onboard audio was not present on the board or when it was disabled in setup on the board with onboard audio.

P03-0040

- First Production Release of the D850GB BIOS

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| Known Errata with This Release |
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- None