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**DATE:** April 21, 2003

**SUBJECT:** MV850.10A.86A Production BIOS P25-0069

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**About This Release**

- MV85010A.86A.0069.P25.0304170949
- PXE-2.1 [Intel Boot Agent Version 4.1.09] for ICH2 LAN Controller

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**Features/Errata Fixed in This Release**

P25-0069

- Added latest processor support.

P24-0067

- Fixed processor frequency miss-reporting, in Setup and POST, which occurred on some newer boards.
- Added multi-language string translations.
- Updated to the latest processor support.
- BIOS now correctly reports up to 5 PCI slots instead of 6.

P23-0061

- Added 4 new options to the Hard Disk Pre-Delay question.

P22-0060

- Updated PXE [Intel Boot Agent Version 4.1.09]
- Restored functionality of the User Flash logo.

P21-0059

- Enabled logos for future processors.
- Fixed a SMI handler issue to assure compatibility with future processors.
- Machine Check enhanced to assure compatibility with future processors.
- Updated to latest processor support.

P20-0057

- Heceta 6 Fan Throttling settings updated.
- MP Tables updated
- UDMA mode 6 fix has been included

P19-0053

- Added support for additional processors.
- Adding support for MPS 1.4 for certain processors.
- Added BMI 1.1 support.
- Added support for iTK 2.0
- Updated detection method for PC1066 RIMM's.
- Added support for new hardware management ASIC.
- Added new memory descriptions in Setup for new types of memory.
- Added new Sub System Vendor I.D.'s (SSID) for the latest version motherboard.

P15-00038

- Updated a warning messages.
- Added ICH2 work around to support LAN Ping-wake in S3 state.
- Fixed possible problem whereby event log events could be lost after a reset.
- Added support to change Latency Timer register in PCI devices in PCI-PCI bridges.
- Added support for additional processors.

P14-0036

- Added support for additional processors.
- Added support for extending option ROM space by 32K.
- Moved the NEC USB Legacy data area to the top of conventional memory. This slightly reduces the amount of conventional memory available in the DOS environment.
- Updated code to support booting from more USB devices.
- Improved sleep state resume performance with higher speed memory.
- Added additional processor support.
- Added a warning message for unsupported processors.
- Default BIOS date updated to be in this millennium.

P13-0032

- Updated processor nomenclature fields.

P12-0030

- Added BIOS workaround for issue where the WHQL ACPI HCT would hang when run with no IDE devices connected to the system.

P11-0027

- Added support for additional processors.
- Enhanced memory support code for higher speed memory configurations.
- Changed several fields to display processor information when a new processor is inserted.
- Added the PC800-45 memory warning message.
- Added support for OEM PCMCIA controllers.
- Enabled S.M.A.R.T. and STANDBY features for 48-Bit LBA.
- Added a POST error message to indicate a S.M.A.R.T. error has been detected.
- Fixed an issue that if the mouse was moved when entering S1, the mouse and keyboard would not issue recognized wake events.
- Added latest Pentium® 4 processor support.
- Fixed an issue where boards with the USB2 chip down were causing Windows ME to fail, cycling the hibernate (S4) sleep state.
- Added the ability to detect unsupported processors and display a warning message.

P10-0025

- Changed memory timings for PC800 RIMM's when used with 533 MHz system bus processors, added support for more than 24 devices with unvalidated higher speed memory.
- Added warning messages for PC800 memory that do not meet the memory timing requirements for 533 MHz system bus speed.
- Fixed Wake on LAN from S4 sleep state issue.
- Created a warning message to be displayed when a 533 FSB processor is installed in a board that does not support it.
- Added the ISA Enable Bit into the setup screen.
- Updated code to support booting from more USB devices.

P08-0020

- High Speed USB setup question (on boards with this feature) is now being displayed properly.
- Added option to free up Option ROM space by disabling PXE.

- Added 48-bit LBA support for IDE drives.
- PXE remote boot is now disabled by default.
- Fixed issue where some PCI adaptors with option ROMs would not function properly.
- Added BIOS workaround for issue where the default Microsoft\* PS/2 mouse driver does not allow the mouse to wake the system from Suspend-to-RAM (S3) in Windows 98SE\* and Windows Millennium\*.

#### P07-0016

- Changed the AGP aperture to include 128 MB.
- Made video power down in APM mode the default.
- Fixed issue where Mouse and Keyboard wouldn't wake system from APM standby.
- Fixed APM errors with the resume timer.
- Fixed issue where ECC/Non-ECC memory question was disappearing in Setup.
- Removed a setup question that was not intended for this product.
- Added support for future processors.

#### P06-0013

- Fixed the issue for "Boot Block Fault Tolerance"
- Fixed S3 and S4 failure to resume
- Fixed the issue restarting from OS hangs In Win2K
- Fixed the yellow bangs for NEC\* Controllers
- Fixed the issue that OS can't be installed with USB Mouse & keyboard if USB Legacy is enabled
- Added USB Legacy support for the NEC USB 2.0 part. This code is made for a dynamic OHCI configuration. No EHCI support is included in the legacy code and this limits boot devices to USB 1.1 speeds until the EHCI drivers can take over control of the device.
- Corrected the display of Pentium® 4 processor speed from 1.6GHZ to 2 GHZ.
- Fixed an issue with invalid fault-tolerant configurations in manufacturing mode.
- Fixed the cache line size for PCI BUS Masters cache line size is 8, and will continue to be 8 for the rest of the life of veterans core.
- Fixed the problem where the system doesn't boot from USB CD-ROM not attached to primary Host Controller.
- Speed up POST time.
- Fixed issue where onboard IDE controller device PCI registers were getting programmed incorrectly during jumper recovery.
- Fixed the issue of not being able to wake from S5 using LAN.
- Resolved issue where APM suspend was shutting down to S3 and awakening in an unknown state
- Fixed issue where certain USB Mass Storage devices were hanging the system in POST.

#### P05-0011

- Added code to disable the USB controller #2 on the ICH2 if NEC USB 2.0 chip is detected.
- Added code to disable USB controller #1 on the ICH2 if NEC USB 2.0 chip is detected and there is no USB 1.1 installed.
- Added code to not display the "High Speed USB" BIOS option if NEC USB 2.0 chip is not detected.
- Changed USB legacy default to disabled.
- Added Pentium® 4 processor code updates.
- Fixed S3 issue when using USB 2.0.
- Disabled NEC USB Port 5 on CNR Slot if CNR is not on the board.

#### P04-0009

- Added System Locked Pre-installation (SLP) string that is now not linked to Type 1 SMBIOS.
- Added a message prompt to the POST screen to boot from the network by pressing F12 during POST.
- Added Boot from device selection menu to select a boot from device by pressing F8 during POST.
- Fixed issue of INT13 seek command (function 0Ch) was not writing the Sector Number register.

- Fixed an issue whereby the Reset Configuration Data question in setup was not resetting to No after being previously set to a Yes and system was rebooted.
- Added code to program the Subsystem ID and Subsystem Vendor ID into the NEC USB 2.0 part.
- Added a BIOS configuration SETUP option to enable/disable to skip booting from USB boot devices.
- Added a BIOS configuration SETUP option to enable/disable setting of the ISA Enable Bit for PCI bridges.
- Added a BIOS configuration SETUP option to enable/disable the NEC EHCI controller. This will correct the yellow bang found in Windows ME and 98 for this device.
- Fixed issue whereby the PS/2 mouse was being displayed in Device Manager when no PS/2 mouse was attached to the system.
- Added support for Heceta 6
- Corrected USB legacy support for SIO enabled.
- Corrected language information for Type 13 structure.

#### P03-0008

- Fixed the issue in which the BIOS incorrectly reports that the board can wake via USB from S4 (this is not possible).
- Fixed the issue with board SKUs that always forced the setup question to S1.
- Changed banner to P03-0007.
- Adding new SMM code and APIC support.
- Added AMI BBS 3.1.
- Added BICK support.
- Added processor support
- Allow CTRL, ALT, and SHIFT key states to be preserved throughout POST, so that shift states will be available to the OS for Safe Mode entry, bypass startup files.
- Fixed yellow bang in device manager when PS/2 devices were missing.
- Fixed a problem where pressing F10 while in Setup caused "Entering Setup..." to appear on the bottom of the screen.
- Fix a potential issue where the boot sequence will take longer since the boot data are not correctly initialized.
- Added setting of bit1 SMBIOS BIOS Characteristics Extension Byte2 to indicate BIOS support for function key-initiated network service boot.
- Fixed problem where some programs were detecting some types of Intel® Pentium® 4 processors as Intel Celeron® processors.
- Added WFM 2.0 Remote Lockout support.
- Added support to boot from network directly if F12 Key is pressed during POST.
- Updated to rev1.5 of the 82850 memory reference code.
- Fixed issue where pressing keys during Option ROM scan hangs the system.
- 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 an IDE channel.
- When loading custom defaults, the boot order would not always be restored correctly.
- Fixed issue where ATAPI Removable Devices that support UDMA modes were not getting programmed for UDMA mode.
- Fixed issue with a TBU not being seen in Windows 2000 when set as a master and a HDD is set as a slave on the same channel.
- Fixed the problem where Custom CMOS defaults cannot be copied correctly to OEM CMOS through OEM CMOS int 15h function.
- 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.
- Fixed issue where manufacturing default was incorrect when a CDROM was not installed in the system.
- Implemented the release of IRQ 12 when the PS/2 mouse is not installed in the system.
- Fixed issue where system could not transition from S3 to S4 in Microsoft\* Windows\* operating systems using the timed Power Options.

#### P02-0005

- Enabled COMB to wake on Ring from sleep.
- Sleep state default now updated dynamically for OEM and Boxed boards depending on SIO GPIO.
- Resolved intermittent failure when using 4 PCI HAVAC5 cards, and 1 AGP HAVAC2 cards.
- Removed PCI slot 6 IRQ priority from setup screen.
- Resolved COMB failure.
- Updated the Processor speed for Manufacturing default to 1.9G
- Added support for NEC\* USB 2.0 controller. This does not include any legacy USB support on the NEC part
- 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.
- Changed text strings that appear in BIOS Setup screens.
- Updated SMBIOS data structures.
- Added support to SMBIOS to indicate proper number of PCI slots dynamically.
- Changed a register in the SIO such that each USB port gets its power separately rather than shared.

P01-0002

Initial release.

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