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**DATE:** May 31, 2000

**FROM:** Intel Customer Support

**SUBJECT:** 4J4NBOX1.86A Standard BIOS Production Release P20, Build 0043

#### About This Release

- 4J4NBOX1.86A.0043.P20
- ATI Rage Pro Turbo AGP video BIOS identified as “ATI MACH64 SGRAM BIOS P/N GB-gtintl.04b-3.092”
- Intel 82558 network bios identified as “Intel UNDI, PXE-2.0 (build 074)”

#### Features/Errata Fixed In This Release

##### P20-0043

- Updated the BIOS in order to accommodate the latest processors.
- The L2 Cache enable/disable option is now unavailable in BIOS setup when using either Pentium® III or Celeron™ processors.

##### P19-0042

- Update onboard video and LAN option ROMs to latest versions
- Remove unused ATI RageIIC video option ROM
- AC Power Loss setup question now effective under ACPI as well as APM
- Slow fan to half-speed in W98SE ACPI Standby
- Corrected failure to hang on multi-bit ECC error
- Corrected Event Log reporting of bursts of single-bit ECC errors

##### P18-0041

- Corrected onboard AGP VGA Subsystem ID handling so plug-in ATI VGAs are unaltered
- Recognize extra PCI slot on some OEM risers
- Added processor updates

##### P17-0040

- Corrected ACPI power button behavior so system can wake from standby
- **Corrected ACPI IRQ routing for onboard video devices**
- Pause at end of POST if there was a CMOS error
- Corrected reporting of Upper Memory Block usage to ACPI

##### P16-0039

- Added warning message for unsupported processors
- Added setup option for PCI or AGP video
- Added setup question to Reserve IRQ12 when PS/2 mouse is not installed
- Removed CTL-ALT-L security hotkey
- New processor updates
- Corrected a potential video corruption around password dialog box
- Corrected APM Alarm Wake Function
- Corrected DMI reporting

##### P15-0038

- Updated support for Pentium® III C0 processors.

- Corrected Processor Serial Number to be disabled by default.

#### P14-0037

- Add support for 768 MB of 100 MHz memory.

#### P13-0036

- Added Pentium(R) III processor C0 stepping support.
- Fix for Crystal Audio not being properly initialized in Windows NT\*.
- Fixed issue of 5 IDE resets causing slow boot.
- Updated to current Processor Serial Number code to disable Processor Serial Number earlier in POST.

#### P12-0035

- Add Support For Pentium (r) III Processors
- Added processor serial number enable/disable setup option.
- Added code to display a warning message and halt the system when using 500MHz and faster Pentium(r) III processors on boards with older voltage regulators.
- Added Windows\* 2000 support.
- Fixed unreported memory issue in Windows 98
- Fixed video corruption issue in setup general help menus.
- Fixed issue with BIOS recovery
- Updated Intel and Phoenix Copyright dates from 1998 to 1999.
- Added SMBIOS 2.3 Support
- Added support for simple boot flag specification
- Disable CPU Speed setup node when locked processor is installed.
- Added Windows 2000 Support

#### P10-0030

- Fixed issue that prevented multi-monitor video cards from working properly.
- Memory size decreased errors are now recorded in the DMI Event Log.
- Fixed bugs affecting user logos.
- Fixed display of SMBIOS POST strings.
- Fixed a security hole that allowed a user with view only /limited Setup access to change the "Boot-Time Diagnostic Screen" option.

#### P09-0028

- Added code to hide the processor speed select option when a fixed-speed processor is detected.
- Fixed power button sleep/wake functionality. Now the drives & fan spin down as well as the monitor.
- Added "On POST Errors" Setup option to the DMI menu. The system will now display the error and continue to boot.

#### P07-0023

- Updated BIOS strings.
- Added code so that COM1 behaves properly when PnP OS is set to yes.
- Updated floppy code so that the BIOS would only be able to report 2 floppy drives per Win98 spec.
- Updated LANDesk (r) Service Agent 2.0 driver to v.99j.
- Updated 440BX chipset code.
- Fixed APM 1.2 suspend issue.
- Updated SMBIOS code.

#### P06-0020

- Upgraded LAN node to only display in setup if the PCI LAN device is detected on-board.
- Updated Alert On LAN code.

- Fix intermittent hang if keyboard is password-locked.
- Changes manufacture default boot order to hard drive and removable.
- Changed sub-system device id for ATI(tm) Rage Pro to 04A4Eh from 06A6Eh.
- Corrected Windows HCT issues.
- Added UUID/GUID into the SMBIOS tables and updated DMI for Type 3 information.
- Improved fix of intermittent corruption of RTC YEAR in BIOS Setup.
- Updated Year 2000 Code.
- Updated USB code.
- Updated SMBIOS voltage support for MMX processors.
- Fixed issue with DMI Eventlog Full function.
- Fixed VESA Power Down option in setup.
- Added ability to log ECC errors to the DMI Event Logging.
- Fixed an issue with system hanging at POST code 28h when reset button was held for more than 1 second.
- Display "Intel Celeron(TM) Processor" when this processor is detected.
- Added support for reading DIMM's SPD through the SMBIOS Function 54h Subfunction 4008h.
- Changed 'Clear User' to 'Clear User Password' in the Security setup menu.
- Added ACPI support.
- Corrected German help text translations.
- Added foreign language translations for 'User Setup Access" in the Security setup menu.
- Added foreign language translations for 'NumLock' in the Advanced setup menu.
- Added the IRQ 12 entry to the Advanced/Resource Configuration setup menu.
- Added IRQ 12 resource freeing/reserving support when a PS/2 mouse is not detected.
- Added capability to display messages during POST to inform users that non-SPD memory is used.
- Added support to remove 'Cache RAM' informative setup when there is no L2 Cache present.

#### Prod-0002

- Initial Release

#### Known Errata With This Release

- None