



DATE: April 5, 2001
TO: Intel® Workstation Board OR840 Customers
CC:
FROM: EPD Workstation Software Engineering
SUBJECT: Workstation Board OR840 Production BIOS Release Notes, Build 255

About This Release

- OR840703.86E.0255.P04.0103291658
- Build Date: 3/29/2001
- Checksum: 0x38FF
- Boot Block Revision: 3.1

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The Intel Workstation Board OR840 BIOS may contain design defects or errors, known as errata, which may cause the product to deviate from published specifications. Current characterized errata are available on request.

Copies of documents that have an ordering number and are referenced in this document, or other Intel literature, may be obtained from <http://www.intel.com/design/litcentr>. Literature related specifically to Intel Workstation Boards can be found at <http://support.intel.com/support/motherboards/workstation>.

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Revision History

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| 0255.P04 | <ul style="list-style-type: none">• Updated boot block to revision 3.1• Modified processor initialization routine which resolves intermittent boot hang on some single processor configurations.• Added support for 512MB RIMMs. (Note: 512MB RIMMs are supported only on boards with AA#750701-701 and higher and AA#750780-701 and higher.)• Modified IDE device configuration to allow UDMA-100 devices to function properly. |
| 0248.P04 | <ul style="list-style-type: none">• Added step to verify correct RIMM SPD checksum to memory initialization procedure.• Fixed issue where BIOS INT 13h routine returned with no error when given a logical drive number that was not present.• Removed S3 selection from Stand-by Mode list. S3 is no longer supported on the 840 chipset.• Modified USB initialization procedure to resolve a boot issue with 1GHz processors and Adaptec* 29160N SCSI adapter.• Modified BIOS function to support video cards with multiple option ROMs.• Adjusted processor junction temperature threshold values to match the Pentium® III Processor data sheets. |

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| 0245.P04 | <ul style="list-style-type: none"> • Resolved issue where system would not boot to SCSI HDD if IDE HDD is installed. • Resolved resource conflict on system configurations with AGP card and SCSI RAID card. • Implemented change in memory detection algorithm so that memory configuration routine is run if the SPD checksum changes. • Increased USB hub power-on delay to 200ms. • Prevented missing keyboard or mouse beep code from sounding twice in succession if BIOS 235 or later was used. |
| 0244.P04 | <ul style="list-style-type: none"> • Updated the recovery (boot) block to revision 2.11. • Resolved a processor acceptance issue. |
| 0243.P04 | <ul style="list-style-type: none"> • Removed dead battery prompt from manufacturing mode. No changes to normal mode operation. |
| 0242.P04 | <ul style="list-style-type: none"> • Updated the recovery (boot) block to revision 2.10. • Added support for the C0 stepping of the Pentium III Processor. • Fixed a problem with SMBIOS Type 7 (Cache Information) structure showing that the cache is still installed after the application processor has been removed. • Fixed a problem with the keyboard lights not turning off in sleep state S4. • Fixed problem that allowed a PS/2 device to wake the system while it was not enabled to wake from standby. • Fixed problem that caused occasional hang of PS/2 devices after resume from S1. • Fixed problem so that one PS/2 wake event is needed to wake from S1, instead of two wake events. • Fixed problems with restoring keyboard, mouse, and video services and general slow performance after resuming from S3 sleep state. • Fixed a problem that prevented the system from booting with a SCSI controller card in slot 4. • Fixed a problem with the control focus in Configuration Manager (IDE and Security Tabs). |
| 0235.P04 | <ul style="list-style-type: none"> • Updated the Recovery Boot Block to version 2.9 (no functionality changes from version 2.8). • Allow the "enter" key to be used to submit a password from the password verification dialog. • Added a delay between the beeps in the beep codes. • Corrected how the focus is returned to the Password and Verify Password windows after an Error Message window is closed. • Fixed a problem with UDMA 4. • Fixed a problem with application processors not initializing properly after resuming from S3 sleep state. • Fixed a problem that caused Linux to lock-up during boot. • Fixed minor keyboard usage issues in Configuration Manager. • Fixed problem with dual monitor support in Windows 2000 and Windows 98. • Fixed problem with USB keyboard not working after the system resumes from S3 sleep state. • Changed "Upgrade" field in the SMBIOS processor record from "Unknown" to "Slot 1". • Fixed problem of systems not recognizing the keyboard and mouse after resuming from S3 sleep state. • Added feature to display warning message on boot if a dead on-board battery is detected. • Removed patch for E & S Lightning 1200 graphics card (the vendor has implemented the proper fix into the video BIOS). • Disabled PERR and SERR error logging to prevent excessive error logging. |

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| 0225.P03 | <ul style="list-style-type: none"> • Updated the Recovery Boot Block to version 2.8. • Fixed Print Scrn key functionality problem on USB keyboards. • Fixed a problem with the BIOS runtime reporting different dates in different operating systems. • Fixed a problem booting when the first boot device is set to Network and the third or fourth device is set to SCSI. • Fixed a problem with recognizing the special Windows keys on USB keyboards. • Fixed slow response time to Caps Lock, Num Lock, and Scroll Lock LEDs on USB keyboards. • Fixed a problem with the Configuration Manager Num Lock option not working with USB keyboards. • Fixed a problem entering the option ROM setup programs on add-in cards (SCSI BIOS Setup, for example) in systems with USB keyboards. • Fixed a problem booting from SCSI when the system is configured with a LAN card that has a boot option ROM. • Fixed a problem with ACPI operating systems not recognizing the parallel port when the parallel port mode is set to EPP or bi-directional mode. |
| 0219.P03 | <ul style="list-style-type: none"> • Added Boot Block Revision field to the System BIOS Tab in Configuration Manager. • Enhanced the error logging to include PERR# errors, RDRAM thermal trip events, SERR# errors, CMOS Time Not Set, and CMOS Battery Dead errors. • Changed format of error log display from hexadecimal codes to English error messages. • Fixed a problem with booting when the system includes a Mitsubishi MF3576-2-211UAL LS-120 drive with the media installed in the drive. • Fixed a problem assigning IRQs to RAID controllers with on-board PCI-to-PCI bridges (Adaptec AAA-131U2/AAA-133U2). • Fixed problem with parallel port option in Configuration Manager not correctly freeing the resources used by the parallel port when the parallel port is disabled. • Implemented workaround for intermittent memory initialization lock-up with some RDRAM devices. • Corrected S4 Wake on RTC ACPI table entry. • Updated the Recovery Boot Block to version 2.7. • Fixed problem with timing loops based on the processor speed causing boot failures. The dependency on the processor speed was removed. |
| 0216.P03 | <p>First release of P03-series (English).</p> <ul style="list-style-type: none"> • Added support for ACPI S3 (Suspend to RAM) sleep state. Added "Stand-by Mode" option to the Power Events Tab. • Fixed a problem with SCSI hard drive initialization. • Fixed a problem with the Floppy drive disable option not working properly with the AMI runtime. • Fixed the IDE initialization routine to detect the presence of the 80-pin cable needed ATA-66 cable before selecting the transfer mode. |
| 0215.P02 | <p>(End of the P02-series)</p> <ul style="list-style-type: none"> • Fixed a problem that caused the BIOS to load the factory default settings for Configuration Manger instead of retaining the user's settings. |

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| 0214.P02 | <ul style="list-style-type: none"> • Updated boot block to support BIOS recovery from Matshita (Panasonic) LKM-F734, LKM-F934, and Mitsubishi MF357G-2111UAL LS-120 drives. • Fixed a problem with Mitsumi CD-ROM drives causing a system hang during BIOS recovery. • Fixed problem with PC-99 test failure related to PCI PME. • Fixed problem booting from a floppy disk with both SCSI and IDE drives in the system and Boot Options set to boot from Floppy first, the SCSI drive. • Changed the BIOS to write-protect the baseboard IDROM after booting. • Changed SMBIOS Type 7 record, Cache Configuration element, Operational Mode bits 8:9 to "varies with memory size" (value=10b), and Location Relative to CPU, bits 6:5 to "internal" (value=00b). • Added "Force Full Fan Speed" option to the General Tab in Configuration Manager. This option has no effect on -60x and earlier revisions of the Workstation Board. • Fixed video corruption problem with E & S Lightning 1200 graphics adapter. |
| 0213.P02 | <ul style="list-style-type: none"> • Fixed problem using fdisk in systems with both IDE and SCSI hard drives. |
| 0212.P02 | <ul style="list-style-type: none"> • Added support for PCI to CardBus bridge. • Added support for 3-mode floppy drives. • Fixed problem with applying microcode patches to dual-processor systems with mixed steppings. • Fixed problem with Mitsumi FX810T and Sony CDU311 CD-ROM drives. • Fixed problem that caused the BIOS to boot from an attached SCSI CD-ROM drive even when SCSI devices were not included in the boot order. • Fixed problem with the BIOS not detecting a Matshita LS-120 drive (model LKM-F934-1). • Fixed error in the Fixed Disk Parameter Table Extension checksum byte. • Fixed problem booting Windows NT 4.0 from a SCSI CD-ROM drive. • Fixed problem with Wake on RTC alarm. • Fixed a problem with CardBus Bridge devices not being recognized. |
| 0208.P02 | <ul style="list-style-type: none"> • The system event log now logs "CMOS battery dead" and "RTC not set" errors along with ECC errors. • Fixed a problem that caused the PS/2* keyboard LEDs remaining on in the S5 sleep state. • Fixed a problem with ATAPI devices that caused long boot delays in Windows* NT. • Fixed a problem that caused an error in the PXE Option ROM initialization in systems with four or five SCSI adapters. • Fixed problems with CDRW drives causing keyboard and mouse lock-ups. • Fixed a performance problem with certain memory configurations. • Fixed a problem with booting from SCSI CD ROM. • Fixed a problem that caused the floppy drive to disappear after booting from a CD ROM. |

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| 0207.P02 | <p>First release of P02-series (English).</p> <ul style="list-style-type: none"> • Added Memory Speed and ECC information to the Memory Tab in Configuration Manager. • Updated SMBIOS to fix compliance problem with Type 7 records. • Changed IDE Controller Enable checkbox in Configuration Manager to preserve the previous settings for each channel. The previous settings for each channel are restored when IDE Controller Enabled is checked. • Fixed problem booting with four or five SCSI controller cards installed. • Fixed issue with the performance monitor reporting 50% CPU usage in an idle state due to a spurious interrupt. • Updated the PXE boot option ROM (PXE Build 76). • Fixed problem with slow boot with IDE controller disabled. • Changed SMBIOS Type 1 record wake-up type from "unknown" to "other." • Fixed a problem that prevented the drivers for the Random Number Generator (RNG) in the FWH from loading. • Added boot support for LS-120 drives. • Changed the Boot Options Tab in Configuration Manager to remove the 3.5-inch drive if it is not present in the system. • Added support for BIOS recovery and flash updates from LS-120 drives. |
| 0129.P01 | <p>Maintenance release (English). (End of P01-series.)</p> <ul style="list-style-type: none"> • Fixed problem with "Load Factory Settings" button in CM not loading the factory defaults for the System Event Log. • Changed SMBIOS Type 1 Record (System Information) <i>manufacturer</i> and <i>product name</i> strings to "Not Available" if the corresponding strings in the baseboard IDROM are null. • Fixed the disable System Event Log option. • Improved flash update capability for OEM's. • Removed the High Speed Fan Threshold option from the Configuration Manager. |
| 0128.P01 | <p>Not released.</p> <ul style="list-style-type: none"> • Fixed problem with disabling processor serial numbers in DP configurations. • Fixed problem with fan speed control. |
| 0127.P01 | <p>First release (English).</p> |

Specifications and User Guides

- *Intel Workstation Board OR840 Technical Product Specification* (Order Number A00629)
- *Intel Workstation Board OR840 BIOS User's Guide*

Specification Updates

- *OR840 Workstation Board Specification Update*, (included when you order the Technical Product Specification, or available separately at: <http://support.intel.com/support/motherboards/workstation>)