BIOS Update Release Notes

PRODUCTS: D975XB2 (Standard BIOS)

**BIOS Version 2838**

**About This BIOS:**
- September 03, 2008
- BX97520J.86A.2838.2008.0903.1859
- SATA RAID info:
  - Intel(R) RAID for SATA - v5.6.2.1002
  - Marvell* 88SE6145 SATA BIOS - v1.1.0.34
- PXE UNDI: Initializing Intel(R) Boot Agent GE v1.2.28
- PXE Base Code: Intel(R) Boot Agent GE PXE-2.1 build 085

**New Fixes/Features:**
- Added workaround to remove "-" at the back of the Processor Temperature Margin value in Hardware Monitoring.
- Fixed system hang while language is not selected after language list message pop-out.
- Fixed issue where Language selection and language display mismatch after press Ctrl+Alt+Del.
- Added workaround to fix language option not showing correctly.
- Fixed issue where the change in BIOS language does not take place cleanly.
- Fixed issue where user loses control of setup browser if the setup page shows only text.
- Fixed an issue where pressing ESC key and answering NO will cause the highlight for the selected option to disappear.
- Fixed issue where language selection and language display are not matched after user pressed F9/loaded default in BIOS setup.

**BIOS Version 2836**

**About This BIOS:**
- July 28, 2008
- BX97520J.86A.2836.2008.0728.1946
- SATA RAID info:
  - Intel(R) RAID for SATA - v5.6.2.1002
  - Marvell* 88SE6145 SATA BIOS - v1.1.0.34
- PXE UNDI: Initializing Intel(R) Boot Agent GE v1.2.28
- PXE Base Code: Intel(R) Boot Agent GE PXE-2.1 build 085

**New Fixes/Features:**
- Fixed issue where the upper portion of the EAX and EDX register were getting corrupted during INT9 (keyboard handler) execution on no-SIO systems.
- Fixed incorrect restore of PIC mask register
- Added workaround to fix system won't boot intermittently when optical drive is connected to SATA port 2.
- Fixed issue where keys pressed in POST are visible after boot in the BIOS Data Area (BDA) keyboard buffer.

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• Added some USB device ID on unsupported list which only use in Windows Environment.
• Fixed a problem where USB devices were not detected during POST.
• Fixed Incorrect Memory Size Decrease report.
• Updated Express BIOS Update.

**BIOS Version 2831**

**About This BIOS:**
- April 23, 2008
- BX97520J.86A.2831.2008.0423.2112
- SATA RAID info:
  - Intel(R) RAID for SATA - v5.6.2.1002
  - Marvell 88SE6145 SATA BIOS - v1.1.0.34
- PXE UNDI: Initializing Intel(R) Boot Agent GE v1.2.28
- PXE Base Code: Intel(R) Boot Agent GE PXE-2.1 build 085

**New Fixes/Features:**
- Fixed issue where system keep looping when there is 3GB memory and 3 PCIe x16 display card present on the system.
- Fixed S3 Resume more than 2 second.
- Fixed 0xC4 blue screen error when running Driver Verifier on TPM.SYS.
- Fixed failing TCG TPM Interface Test with Microsoft Vista* Windows Logo Kit (WLK) 1.1.
- Added workaround for STMicro* PVG TPM parts to pass the Microsoft Windows Vista TCG TPM Integration Test.
- Added workaround to prevent 82573 disappears in PCI Configuration Space when L0s and L1 PCIe* Link.
- Fixed issue where the boot order is not synchronized in Intel® Integrator Toolkit with F2 setup when boot devices are disabled in Normal mode and re-enabled in Advance mode.
- Fixed issue where Intel® Desktop Control Center fails to initialize.
- Updated processor support.

**BIOS Version 2813**

**About This BIOS:**
- January 14, 2008
- BX97520J.86A.2813.2008.0114.2256
- SATA RAID info:
  - Intel(R) RAID for SATA - v5.6.2.1002
  - Marvell* 88SE6145 SATA BIOS - v1.1.0.34
- PXE UNDI: Initializing Intel(R) Boot Agent GE v1.2.28
- PXE Base Code: Intel(R) Boot Agent GE PXE-2.1 build 085
- Intel® Active Management Technology info:
  - Intel® AMT BX Firmware: v1.2.3

**New Fixes/Features:**
- Fixed issue with certain SCSI controller where Windows XP* shows a blue screen error after wake from S3.
- Fixed issue where VGA is not found behind a bridge.
- Added workaround on option ROM which has invalid PCI Expansion ROM Header.

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 BIOS Version 2809

About This BIOS:
• December 13, 2007
• BX97520J.86A.2809.2007.1213.0017
• SATA RAID info:
  • Intel(R) RAID for SATA - v5.6.2.1002
  • Marvell® 88SE6145 SATA BIOS - v1.1.0.34
• PXE UNDI: Initializing Intel(R) Boot Agent GE v1.2.28
• PXE Base Code: Intel(R) Boot Agent GE v1.2.42
• Intel® Active Management Technology info:
  • Intel® AMT BX Firmware: v1.2.3

New Fixes/Features:
• Updated processor support.
• Fixed issue where Samsung SAS HBA card was not booting.

 BIOS Version 2802

About This BIOS:
• October 25, 2007
• BX97520J.86A.2802.2007.1024.1947
• SATA RAID info:
  • Intel(R) RAID for SATA - v5.6.2.1002
  • Marvell® 88SE6145 SATA BIOS - v1.1.0.34
• PXE UNDI: Initializing Intel(R) Boot Agent GE v1.2.28
• PXE Base Code: Intel(R) Boot Agent GE v1.2.42
• Intel® Active Management Technology info:
  • Intel® AMT BX Firmware: v1.2.3

New Fixes/Features:
• Updated processor support.
• Fixed issue where the BIOS SETUP C1E Enable question was not working.
• Digitally signed flexbios64.sys and invoker64.sys to comply with x64 Vista® requirements.

 BIOS Version 2797

About This BIOS:
• October 09, 2007
• BX97520J.86A.2797.2007.1008.1941
• SATA RAID info:
  • Intel(R) RAID for SATA - v5.6.2.1002
  • Marvell® 88SE6145 SATA BIOS - v1.1.0.34
• PXE UNDI: Initializing Intel(R) Boot Agent GE v1.2.28
• PXE Base Code: Intel(R) Boot Agent GE v1.2.42
• Intel® Active Management Technology info:
  • Intel® AMT BX Firmware: v1.2.3

New Fixes/Features:
• Fixed issue with SCSI controller detection.

 BIOS Version 2792

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About This BIOS:

- September 06, 2007
- BX97520J.86A.2792.2007.0905.1804
- SATA RAID info:
  - Intel(R) RAID for SATA - v5.6.2.1002
  - Marvell* 88SE6145 SATA BIOS - v1.1.0.34
- PXE UNDI: Initializing Intel(R) Boot Agent GE v1.2.28
- PXE Base Code: Intel(R) Boot Agent GE v1.2.42
- Intel® Active Management Technology info:
  - Intel® AMT BX Firmware: v1.2.3

New Fixes/Features:

- Fixed issue where system unable boot to connected bootable device, when all devices in Advanced mode are disabled.
- Added ITK Data Var Type 3 to store VAREQ variable.
- Fixed issue where IIA or ITK could not set boot order correctly.
- Fixed issue where ITK/IIA could not set Boot Order if the Boot Menu Type in the BIOS Setup was set to Advance.
- Implemented changes to support the ITK Map File Specification version 1.15.
- Fixed issue where ITK or IIA could not read boot drives' model strings.
- Fixed an intermittent failure seen with EFI_VARIABLE in Windows* environment.
- Fixed issue where ITK or IIA could not access Boot Priority List when all the boot devices disabled in the BIOS Setup.

**BIOS Version 2785**

About This BIOS:

- August 29, 2007
- BX97520J.86A.2785.2007.0828.2335
- SATA RAID info:
  - Intel(R) RAID for SATA - v5.6.2.1002
  - Marvell* 88SE6145 SATA BIOS - v1.1.0.34
- PXE UNDI: Initializing Intel(R) Boot Agent GE v1.2.28
- PXE Base Code: Intel(R) Boot Agent GE v1.2.42
- Intel® Active Management Technology info:
  - Intel® AMT BX Firmware: v1.2.3

New Fixes/Features:

- Sorted the priority of microcodes to be fit into .ROM for production line verification purpose.

**BIOS Version 2777**

About This BIOS:

- August 06, 2007
- BX97520J.86A.2777.2007.0805.1747
- SATA RAID info:
  - Intel(R) RAID for SATA - v5.6.2.1002
  - Marvell* 88SE6145 SATA BIOS - v1.1.0.34
- PXE UNDI: Initializing Intel(R) Boot Agent GE v1.2.28
- PXE Base Code: Intel(R) Boot Agent GE v1.2.42
- Intel® Active Management Technology info:

*Other names and brands may be claimed as the property of others.
• Intel® AMT BX Firmware: v1.2.3

New Fixes/Features:
• Updated processor support.
• Fixed "Validate the Consistency of the TCPA EventLog" failure with Windows* Logo Kit 1.0c TPM BIOS Interface Logo Test.
• Fixed issue where flashing custom BIO file does not set OemDefault settings in ITK 3.2.0.143.
• Fixed for initializing OemDefault variable to proper size.
• Fixed issue where flashing a large BMP Logo caused inability to reflash and possibly not boot.
• Fixed issue where CD-ROM retries were not functioning after the "No bootable device -- insert boot disk and press any key" message.
• Fixed issue where certain USB bar code scanners would drop a single character if used under USB Legacy.
• Fixed issue where certain keyboard does not work with USB Legacy support.
• Fixed issue where some USB 2.0 boot devices become disabled late in POST or at boot.
• Fixed the problem where disabling USB legacy support hanged the legacy free system during POST.
• Changed VT Technology default to disable.
• Fixed Heceta issue T-control + 6 when user loaded Bmi using ITK.

BIOS Version 2770

About This BIOS:
• June 13, 2007
• BX97520J.86A.2770.2007.0613.1403
• SATA RAID info:
  • Intel(R) RAID for SATA - v5.6.2.1002
  • Marvell* 88SE6145 SATA BIOS - v1.1.0.34
• PXE UNDI: Initializing Intel(R) Boot Agent GE v1.2.28
• PXE Base Code: Intel(R) Boot Agent GE v1.2.42
• Memory reference code equivalent to MRC 1.2+
• Intel® Active Management Technology info:
  • Intel® AMT BX Firmware: v1.2.3

New Fixes/Features:
• Updated processor support.
• Fixed resource allocation issues with PCI cards with multiple P2P bridges.

BIOS Version 2747

About This BIOS:
• May 23, 2007
• BX97520J.86A.2747.2007.0523.1129
• SATA RAID info:
  • Intel(R) RAID for SATA - v5.6.2.1002
  • Marvell* 88SE6145 SATA BIOS - v1.1.0.34
• PXE UNDI: Initializing Intel(R) Boot Agent GE v1.2.28
• PXE Base Code: Intel(R) Boot Agent GE v1.2.42
• Intel® Active Management Technology info:
  • Intel® AMT BX Firmware: v1.2.3

*Other names and brands may be claimed as the property of others.
New Fixes/Features:
- Updated processor support.
- Updated the Heceta6 Voltage conversion constants.
- Fixed an issue where with certain processor fan goes 100%.
- Fixed S3 wake-up fails when drives are attached to Marvell* RAID controller.
- Fixed PXE always attempts to load when drives are attached to Marvell* controller.
- Fixed audio Code subsystem ID problem after resuming S3.

**BIOS Version 2692**

**About This BIOS:**
- April 03, 2007
- BX97520J.86A.2692.2007.0403.1844
- SATA RAID info:
  - Intel(R) RAID for SATA – v5.6.2.1002
  - Marvell* 88SE6145 SATA BIOS – v1.1.0.34
- PXE UNDI: Initializing Intel(R) Boot Agent GE v1.2.28
- PXE Base Code: Intel(R) Boot Agent GE v1.2.42
- Intel® Active Management Technology info:
  - Intel® AMT BX Firmware: v1.2.3

New Fixes/Features:
- Updated processor support.

**BIOS Version 2674**

**About This BIOS:**
- March 15, 2007
- BX97520J.86A.2674.2007.0315.1546
- SATA RAID info:
  - Intel(R) RAID for SATA – v5.6.2.1002
  - Marvell* 88SE6145 SATA BIOS – v1.1.0.34
- PXE UNDI: Initializing Intel(R) Boot Agent GE v1.2.28
- PXE Base Code: Intel(R) Boot Agent GE v1.2.42
- Intel® Active Management Technology info:
  - Intel® AMT BX Firmware: v1.2.3

New Fixes/Features:
- Fixed failures with the TCG ACPI Event Log when running the Vista DTM TCG TPM BIOS Interface Test.
- Fixed issue where system would hang booting Windows XP with OEM Activation 2.0 data programmed, EIST enabled, and certain processor installed in the system.
- Modified IRQ table to evenly distribute IRQs for devices.
- Fixed priority issue in Advance Boot Mode when Legacy Floppy is installed without a media.

**BIOS Version 2663**

**About This BIOS:**
- March 05, 2007
- BX97520J.86A.2663.2007.0305.1750
- SATA RAID info:

*Other names and brands may be claimed as the property of others.*
• Intel(R) RAID for SATA - v5.6.2.1002
• Marvell* 88SE6145 SATA BIOS - v1.1.0.34
• PXE UNDI: Initializing Intel(R) Boot Agent GE v1.2.28
• PXE Base Code: Intel(R) Boot Agent GE v1.2.42
• Intel® Active Management Technology info:
  • Intel® AMT BX Firmware: v1.2.3

New Fixes/Features:
• Updated processor support.
• Fixed a problem where Setup F9 key caused unexpected page movement at submenu option.
• Fixed a missing highlight cursor problem in Setup after pressing F10 and no response.
• Fixed Setup cosmetic issue where garbage characters are printed outside of string input box.
• Fixed F10 boot menu showing two lines of duplicated title.
• Added AMT1.0 support for certain SKUs.
• Fix POST hang when SATA Controller is set to disable and IDE/ATA Mode is set to legacy mode.
• Fixed issue where certain host adapter cards not functional.
• Added support for loading the Microsoft Windows Vista* native TPM 1.2 driver.
• Fixed yellow bang in Windows XP* Device Manager for the TPM 1.2 device.

BIOS Version 2634

About This BIOS:
• February 16, 2007
• BX97520J.86A.2634.2007.0216.1057
• SATA RAID info:
  • Intel(R) RAID for SATA - v5.6.2.1002
  • Marvell* 88SE6145 SATA BIOS - v1.1.0.34
• PXE UNDI: Initializing Intel(R) Boot Agent GE v1.2.28
• PXE Base Code: Intel(R) Boot Agent GE v1.2.42
• Intel® Active Management Technology info:
  • Intel® AMT BX Firmware: v1.2.3

New Fixes/Features:
• Added support for ACPI Serial Port Console Redirection (SPCR) table for AMT SOL.
• Added support for Windows Vista* Media Center OCUR Host Firmware Support.
• Added fix for ITK where Parallel Port is always hidden.
• Added fix for Windows Vista* where EBIOSPost.exe had error while returning EBU status.

BIOS Version 2618

About This BIOS:
• February 12, 2007
• BX97520J.86A.2618.2007.0212.0954
• SATA RAID info:
  • Intel(R) RAID for SATA - v5.6.2.1002
  • Marvell* 88SE6145 SATA BIOS - v1.1.0.34
• PXE UNDI: Initializing Intel(R) Boot Agent GE v1.2.28

*Other names and brands may be claimed as the property of others.
• PXE Base Code: Intel(R) Boot Agent GE v1.2.42
• Intel® Active Management Technology info:
  • Intel® AMT BX Firmware: v1.2.3

New Fixes/Features:
• Updated Microsoft Vista* support for STAC9227 and STAC9274D Audio Codecs.
• Fixed boot order for SCSI HDD with certain SCSI controllers.
• Adding Serial Port enable/disable setup question in Standard BIOS.
• Added programming of PCI Subsystem Vendor ID and Subsystem ID for the PCIe Graphics bridge.
• Fixed issue where system would not boot after installing a Vista* OEM Activation string.
• Fixed issue where certain host bus adapter card was not functional.
• Added code to program the OEM SVID and SSID for onboard Marvell* controller.
• Reduced S3 resume time related to processor detection.
• Fixed issue where 64-bit operating system installs would blue screen with certain processors.

BIOS Version 2507

About This BIOS:
• January 23, 2007
• BX97520J.86A.2507.2007.0123.0952
• SATA RAID info:
  • Intel(R) RAID for SATA - v5.6.2.1002
  • Marvell* 88SE6145 SATA BIOS – v1.1.0.34
• PXE UNDI: Initializing Intel(R) Boot Agent GE v1.2.28
• PXE Base Code: Intel(R) Boot Agent GE v1.2.42
• Intel® Active Management Technology info:
  • Intel® AMT BX Firmware: v1.2.3

New Fixes/Features:
• Fixed issue where ECC Mode was not properly displayed when Performance Memory Profiles set to Manual in BIOS Setup.
• Added workaround for HDD LED always being lit when Secondary SATA Controller is disabled in BIOS Setup.
• Fixed boot order for add-in SCSI controller.
• Added support for certain SAS controller.
• IRQ Fix for USB Interrupts.
• Fixed failures seen with Vista* DTM BitLocker Drive Encryption BIOS Interface Logo Test.
• Fixed issue where Microsoft* Vista BitLocker System Check would not pass.
• Fixed issue where system would not recognize CTRL+ALT+DEL key sequence from boot cycling machine.
• Fixed failures with the TCG ACPI Event Log when running the Vista DTM TCG TPM BIOS Interface Test.
• Fixed issue where system hangs when trying to load FreeDOS* bootable CD from a USB CD drive.
• Fixed ACPI failures when running the Vista DTM TCG TPM Integration Test.

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BIOS Version 2431

About This BIOS:
- January 11, 2007
- BX97520J.86A.2431.2007.0110.1629
- SATA RAID info:
  - Intel(R) RAID for SATA - v5.6.2.1002
  - Marvell* 88SE6145 SATA BIOS - v1.1.0.34
- PXE UNDI: Initializing Intel(R) Boot Agent GE v1.2.28
- PXE Base Code: Intel(R) Boot Agent GE v1.2.42
- Intel® Active Management Technology info:
  - Intel® AMT BX Firmware: v1.2.3

New Fixes/Features:
- Added Hardware Watchdog Timer feature
- Fixed display of L2 Cache in BIOS Setup for multi-core processors
- Added "HPET Enable/Disable" BIOS setup option and set default state to "Disable"
- Fixed calculation and display of the nominal (TCL-TRCD-TRP-TRASMin) memory timing values in BIOS Setup
- Fixed issue where certain processors would not resume from standby

BIOS Version 2395

About This BIOS:
- December 20, 2006
- BX97520J.86A.2395.2006.1220.1100
- SATA RAID info:
  - Intel(R) RAID for SATA - v5.6.2.1002
  - Marvell* 88SE6145 SATA BIOS - v1.1.0.34
- PXE UNDI: Initializing Intel(R) Boot Agent GE v1.2.28
- PXE Base Code: Intel(R) Boot Agent GE v1.2.42
- Intel® Active Management Technology info:
  - Intel® AMT BX Firmware: v1.2.3

New Fixes/Features:
- Added feature to always display the latest event's date and time of event log.
- Fixed a problem where the system would boot to the wrong boot device in AHCI or RAID mode.
- Fixed a problem where the setup option for Floppy did not display correctly.
- Fixed the potential issue where all fans are on 100% when CPU is changed.
- Fixed the display alignment of the output values on the BIOS setup hardware monitoring page.
- Fixed the display of negative value on BIOS setup Hardware Monitoring Page with some CPUs.
- Added work-around for IDE-R 6 hour open session issue in a host software package.
- Fixed system continues to boot to next bootable device when no IDE-R media present during AMT IDE-R & SOL session.
- Fixed issue where POST errors may be displayed during Maintenance Mode boot.
- Fixed issue where system hangs after AC Loss if the Reference Frequency is overridden.

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• Hide "Clear TPM" option in Maintenance setup page if TPM is not enabled or not supported.
• Fixed issue where Intel® Audio Studio does not launch with 3GB Memory and certain PCI-E video card.
• Removed USB 2.0 Enable/Disable question from setup.
• Fixed AMT system only able to provision when USB device is present.
• Fixed issue where TPM Physical Presence was not cleared and locked intermittently at the end of POST.
• Added fix to eliminate fan speed surge after reset.
• Fixed issue where Vista would hang during boot on systems with Atmel TPM if the TPM was enabled in BIOS SETUP.
• New PXE Base code : Intel(R) Boot Agent GE v1.2.42

**BIOS Version 2333**

**About This BIOS:**
• November 27, 2006
• BX97520J.86A.2333.2006.1127.1450
• SATA RAID info:
  • Intel(R) RAID for SATA - v5.6.2.1002
  • Marvell* 88SE6145 SATA BIOS - v1.1.0.34
• Initializing Intel(R) Boot Agent GE v1.2.28
• Intel® Active Management Technology info:
  • Intel® AMT BX Firmware: v1.2.3

**New Fixes/Features:**
• Fixed issue where ICH7 controller would not come up in the proper mode in certain circumstances.

**BIOS Version 2330**

**About This BIOS:**
• November 16, 2006
• BX97520J.86A.2330.2006.1116.1034
• SATA RAID info:
  • Intel(R) RAID for SATA - v5.6.2.1002
  • Marvell* 88SE6145 SATA BIOS - v1.1.0.34
• Initializing Intel(R) Boot Agent GE v1.2.28
• Intel® Active Management Technology info:
  • Intel® AMT BX Firmware: v1.2.3

**New Fixes/Features:**
• Fixed issue where “Clear BIOS Passwords” feature in Maintenance Page of BIOS Setup was not working.
• Updated Marvell* 88SE6145 Option ROM to version 1.1.0.34.
• Fixed issue where BIOS Setup defaults would overwrite current user settings when entering Maintenance Mode.
• Added Microsoft* Vista* support for STAC9227 and STAC9274D audio codecs.
• Expanded overclocking functionality.
• Added IDCC version 2.02 support.
• Fixed an issue where auto-recovery from a corrupt image wasn't working.
• Fixed fan speed surge during initial power on.
• Fixed higher than normal Fan noise with certain processors.

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- Fixed potential issue where Fan speed stuck at 100%.
- Fixed issue where attempting to use the One Time Boot Menu appeared to hang POST.
- Fixed issue where Recovery status screen is blank.

**BIOS Version 2214**

**About This BIOS:**
- October 23, 2006
- BX97520J.86A.2214.2006.1023.1710
- SATA RAID info:
  - Intel(R) RAID for SATA - v5.6.2.1002
  - Marvell* 88SE6145 SATA BIOS - v1.1.0.17
- Initializing Intel(R) Boot Agent GE v1.2.28
- Intel® Active Management Technology info:
  - Intel® AMT BX Firmware: v1.2.3

**New Fixes/Features:**
- Fixed issue where Marvell* SATA Controller is Disabled by default on first board boot.

**BIOS Version 2212**

**About This BIOS:**
- October 21, 2006
- BX97520J.86A.2212.2006.1021.1659
- SATA RAID info:
  - Intel(R) RAID for SATA - v5.6.2.1002
  - Marvell* 88SE6145 SATA BIOS - v1.1.0.17
- Initializing Intel(R) Boot Agent GE v1.2.28
- Intel® Active Management Technology info:
  - Intel® AMT BX Firmware: v1.2.3

**New Fixes/Features:**
- Improved overclocking headroom in some cases.
- Fixed potential POST hang.
- Fixed intermittent hang when margining the host clock.
- Supports OEM Activation 2.0. For details on the OEM Activation Program, send email to oasignh@microsoft.com
- Fixed the corrupted display which shows incorrect digits of RPM for fans when they are stopped.
- Fixed PCIe frequency margining not working in some cases.
- Fixed issue where S3 did not work with certain processors.
- Fixed issue where operating system installation would blue screen with certain processors.

**BIOS Version 1846**

**About This BIOS:**
- September 29, 2006
- BX97520J.86A.1846.2006.0929.0913
- SATA RAID info:
  - Intel(R) RAID for SATA - v5.6.2.1002
  - Marvell* 88SE6145 SATA BIOS - v1.1.0.17
  - Initializing Intel(R) Boot Agent GE v1.2.28

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• Intel® Active Management Technology info:
  • Intel® AMT BX Firmware: v1.2.3

New Fixes/Features:
• Initial production bios release

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