

Intel MPG Aptio Release Notes

Montevina Platform

1 Component Revision List

Current System Firmware (ICH9/Cantiga):	30
Cantiga MRC:	0.60
ICH9 BIOS Specification	1.11
Current Microcode Patch (Penryn):	405
Integrated VBIOS:	1545
RAID OPROM:	8.0.0.1006
PXE OPROM:	1.5.33.0
MEBx:	4.0.1.007
Current System Firmware (ICH9):	16
Current KSC:	1.09
ME Firmware, minimum version:	1030

2 System Firmware Revision History (Pillar Rock / Silver Cascade - Cantiga)

System Firmware 30 – October 16, 2007

- Add call to S3 end-of-POST driver
- Set global reset lock bit to prevent OS from resetting ME
- Added release version of BIOS ACM
- Corrected VT-d BAR programming
- Added support for MX25L1605A SPI flash

System Firmware 29 – October 8, 2007

- Added setup option for number of stop grant cycles
- Updated PTID to PTID BWG2.0
- Updated thermal support for both TS on DIMM and On-Board TS programming
- Updated ETM support for setting trip points, and PCPC method to MCD4

System Firmware 28 – October 1, 2007

- Changed LAN device ID to 0x10BE
- Updated ICH9 SPI code to latest shared version
- Added setup option to always leave PEG slot enabled
- Integrated MEBx 4.0.1.007
- Updated to latest AMI CSM (resolves RAID option ROM boot issue)
- Added support for custom VID table

- Added reset after TPM configuration change during POST
- Fixed issue with report generation failure after completion of SCT
- Changed SmartTimer driver to read ACPI base address instead of using hard coded value
- Updated to version of Cantiga MRC .60
- Updated HDCP support based on latest specification change
- Added VBIOS version 1545
- Fixed issue with end of POST message when first message attempt fails
- Removed delay before calling MEBx
- Added 'Performance' option in 'Advanced' setup menu
- Use setup option to control enabling/disabling thermal MRC
- Added support for PTID SSDT
- Moved APIC ID programming from ICH reference code to platform code

System Firmware 27 – September 24, 2007

- **Changed default BIOS image size to 1.5MB**
- Synchronized with latest version of ICH reference code
- Modified stall function to make delay time more accurate
- Fixed issue with S4 resume on OS with native EFI boot support
- Fixed issue with Winbond SPI device support
- Added code to display current TPM status
- Added check for fab ID when configuring GPIOs
- Fixed compile issue with SoftSDV support disabled

System Firmware 26 – September 12, 2007

- Fixed S4 resume issue with TPM enabled
- Added pre-alpha version (8.0.0.1006) of RAID option ROM to build
- Added PXE boot option ROM built with IER tool version 1.5.33.0
- Fixed issue with SATA command register being incorrectly saved/restored
- Fixed issue with SCT being unable to save results
- Added support for SMM interrupt handler
- Added POST codes to SEC phase
- Fixed PCI resource allocation issue when booting with 4GB RAM

System Firmware 25 – September 5, 2007

- Added support for programming CLOCK_FLEX_MAX MSR on extreme edition processors
- Added support for Winbond SPI flash
- Integrated vbios version 1533

System Firmware 24 – August 29, 2007

- Updated PPM code based on new (.71) reference code
- Added monitor/mwait support for APs
- Correctly restore TSEG base on S3 resume

- Fixed issue with system doing global reset after calling MEBx
- Added initial HDCP support

System Firmware 23 – August 22, 2007

- Fixed command ready issue in TPM code
- Enabled iAMT mode in CK505 before MRC
- Leave MTRRs enabled in SMM
- Integrated MRC version .55
- Disabled DTS in BIOS by default
- Added legacy MEBx version 4.0.1.0005

System Firmware 22 – August 13, 2007

- Updated setup code so that reset is required for most setup changes
- Updated POST code table
- Integrated VBIOS version 1529
- Changed CPU PEI initialization to use HOB to locate TSEG
- Fixed issue with flash writes across 4KB boundary

System Firmware 21 – August 6, 2007

- Added workaround for S3 resume issue with Penryn processor
- Fixed CMP CMOS/Setup option synchronization issue
- Re-enable CPU prefetchers after CAR is disabled
- Fixed processor information strings in setup

System Firmware 19 – July 23, 2007

- Integrated updates for Cantiga BIOS specification version .54
- Integrated final version of Cantiga MRC version .54
- Enable/disable pci clock run functionality based on setup option
- Integrated MEBx version 4.0.1.003
- Fixed global reset message sent via MEBx

System Firmware 18 – July 17, 2007

- Enabled processor power management by default
- Added support (including setup option) for native ASPM
- Updated to MRC .54
- Fixed SOL/IDE-R issue
- Updated HECI device ID to Cantiga
- Added support for virtual dock switch
- Added support for WOL from S5
- Changed SATA port 5 to external configuration
- Fixed issue with Sx callback functions not being executed

System Firmware 17 – July 3, 2007

- Updated MEBx loader for Cantiga
- Integrated initial MEBx version 4.0.1.0002
- Enabled DTS by default
- Fixed recalculate parameter used in MRC wrapper so that memory configuration is calculated on S3 resume
- Fixed issue with CMOS clear jumper not resetting setup variables

System Firmware 16 – June 26, 2007

- Add support for configurable SATA signal trace
- Updated docking support for Saddle String II
- Added native PCIe support
- Added support for “Add Boot Option” in setup
- Fixed SMBIOS utility failure, moved SMBIOS table below 1MB
- Fixed FWH flash update failure

System Firmware 15 – June 13, 2007

- Updated MRC to release .53
- Synchronized with latest PPM reference code
- Fixed ICH/MCH stepping strings
- Synchronized with Santa Rosa release 49

System Firmware 14 – June 6, 2007

- Synchronized with latest version of ICH9 reference code
- Use IchSpi driver for flash access

System Firmware 13 – May 29, 2007

- Remove legacy SMIs for ALS
- Fix casting issue in PPM code
- Add support FSB1067 in PPM code
- Synchronized source with Santa Rosa release 47
- Added setup option for spread spectrum

System Firmware 12 – May 23, 2007

- Added support for WinBond and Intel SPI flash
- Fixed TSEG size issue in MRC wrapper
- Fixed coding error in PCI express initialization
- Updated ICH9 code based on BIOS specification 1.1

System Firmware 11 – May 17, 2007

- Synchronized code base with Santa Rosa Aptio release 45
- Fixed USB recovery issue with certain USB ports
- Updated Saddle String II docking support

System Firmware 10 – May 9, 2007

- Synchronized ICH9 code with reference code release
- Updated TPM code to fix TPM detection issues, updated TPM ASL code.
- Updated Cantiga code to match BIOS specification version 0.52
- Synchronized MRC with release 0.52

System Firmware 09 – May 2, 2007

- Re-enabled recovery support
- Enabled serial gpio driver

System Firmware 08 –April 25, 2007

- Fixed issue with IGD GSM memory size initialization
- Added support for SMSC SIO-1000 LPC card
- Fixed issue with USB not working on Cantiga systems
- Added fast infrared device support
- Added new TPM module with TCG 1.2 support
- Added MCU for Penryn A1
- Re-arranged MCH setup options so DMI ASPM isn't under PEG
- Added C6 enable/disable option to CPU setup page
- Added support for C6 enable/disable option in PPM
- Added support for ICH9 BIOS specification version 1.0
- Upgraded USB support to version 8.07.10
- Added setup option for PEG x1

3 Known Issues (Pillar Rock CRB - Cantiga)

- Only SATA ports 0-1 are usable by BIOS when system is configured for AHCI mode
- CMOS should be cleared using CMOS_CLR jumper after updating to a new BIOS version.

4 Supported Hot Keys

CTRL+ALT+SHIFT+<KEY> causes a Hot-Key Event to the SBIOS. The specific <KEY> to complete the sequence is defined below:

ACPI Hot-keys:

F1	IGD Display Switch using Toggle List 1.
F2	IGD Display Switch using Toggle List 2.
F3	IGD Display Switch using Toggle List 3.
F4	IGD Display Switch using Toggle List 4.
F5	Virtual Power Switch Event (Toggle between Virtual AC and Virtual Battery Mode)
F8	IGD Panel Fitting Hot-Key
F9	IGD LCD Brightness Level – Decrease 10% if percentage > = 10%
F10	IGD LCD Brightness Level – Increase 10% if percentage < = 90%
1/!	10% Virtual Battery
2/@	20% Virtual Battery
3/#	30% Virtual Battery
4/\$	40% Virtual Battery
5/%	50% Virtual Battery
6/^	60% Virtual Battery
7/&	70% Virtual Battery
8/*	80% Virtual Battery
9/(90% Virtual Battery
0/)	100% Virtual Battery
-/_	Virtual Battery % = Virtual Battery – 2%
=/+	Virtual Battery % = Virtual Battery + 2%

Note 1: The Virtual Battery hot-key values are a single key with dual purposes.

Note 2: IGD hot-keys are only supported when IGD is present and is the Primary Display Device. If that is not the case, the hot-keys will be disabled.

Note 3: The virtual battery hot-keys are only valid when a virtual battery is present. If any real battery is present at all, these hot-keys are disabled. Additionally, the user will only be allowed to decrease battery percentages when in virtual battery mode and will only allow the user to increase battery percentages when in virtual AC Mode. Also, please note that some OSes only display battery percentage differences that are > = +- 4%.

Note 4: All of the above hot-keys work in ONLY ACPI aware OSs.