American Megatrends

Aptio MMTool 5.01 Release Notes

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Document Revision 1.12

Document Owner: Utility Group

January 16, 2015

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Document Change History

Date	Version	Description
2009-08-24	1.00	Initial draft
2010-02-10	1.01	Library updated with different run-time relocation and Optimize size support. Fix issues reported by QA.
2010-03-02	1.02	Updated for the build 23, incremented the build number.
2011-06-13	1.03	Update for release 4.52
2011-07-14	1.04	Update Document Standard
2012-01-12	1.05	Update for build 31.
2013-04-10	1.06	Updated for MMTool 4.53.0042 release
2013-10-07	1.07	Updated for MMTool 5.00.0004 release
2014-01-02	1.08	Updated supported OS list
2014-03-14	1.09	Updated for MMTool 5.00.0007 release
2014-04-07	1.10	Updated for MMTool 5.00.0008 release
2014-04-16	1.11	Updated for MMTool 5.00.0009 release
2015-01-16	1.12	Updated for MMTool 5.01.0012 release

Release

- Release 5.01.0012

Deliverables

- AMI_Aptio_5.x_MMTool_User_Guide_NDA.pdf
- AMI_Aptio_MMTool_Release_Notes_NDA.pdf
- MMTool.exe
- MMTool64.exe

Features

This list of features is supported from GUI as well as from Command Line.

- Insert Module
- Replace Module
- Delete Module
- Extract Module
- Manage Compressed Modules
- Support PEI/DXE Modules
- Compatible with the FFS Spec
- Supports Command Line Options
- Modifies the F/w Image without requiring rebuild
- User Friendly Graphical User Interface
- Displays all Modules contained in the Firmware Image.
- Insert Option ROM
- Extract Option ROM
- Replace Option ROM
- Delete Option ROM
- Insert, extract, and delete CPU patch data
- Insert, extract, and replace ROM holes
- Create Report on contents of Firmware image
- Supports LZMA
- Single executable
- Capsule File Support.
- Supports APTIO V.
- Supports multiple CPU Microcode Patch files.
- Block execution on non Aptio V ROM image.
- Support to update unsigned areas without invalidating signature.
- Support for BIOS with FIT.

- Replace section data support (command line mode).

Supported Operating Systems

MMTOOL Firmware Module Management Utility is supported by the following operating systems:

- Microsoft® Windows® 2000
- Microsoft® Windows® XP
- Microsoft® Windows® 2003
- Microsoft® Windows® Vista
- Microsoft® Windows® 7
- Microsoft® Windows® 8
- Microsoft® Windows® 8.1
- Microsoft® Windows® Server 2008 R2
- Microsoft® Windows® Server 2012 R2

Compatibility

- Compatible with the FFS Spec (referred the documents FFS_0-9.pdf, FV_0-9.pdf, FvBlock_0-9.pdf and "Volume 3 Shared Architectural Elements")
- Compatible with APTIOV.
- Preserves top-down allocated volumes created by FWBuild 1.16.16 or later.
- Compatible with firmware volume containing 999 FFSs.
- Compatible with BIOS containing packed option roms.
- Compatible with images produced by other tools using Optimize size and PEI relocation support.
- Supports update of BIOS ESEC table.
- Support SMM file types from PI 1.2 specification.
- Compatible with UEFI 2.1 images.
- Allows saving secure ROM file and capsule file by invalidating the signature and provides a warning message.
- Allows saving AMI secure/unsecure capsule files as ROM file. Non AMI capsule files can be saved as only CAP file.

Command Line Options

MMTool can be used from command line also and the usage is documented in AMI_Aptio_5.x_MMTool_User_Guide_NDA.pdf

Limitations

1. The application allows RAW Files to be compressed and added to F/w volume. However, the specification does not allow for this operation so the file is added uncompressed.

2. For Aptio Firmware, DXEMain (1st module in DXE Firmware Volume) should not be deleted and inserted or replaced. This is a limitation of Aptio firmware, not a limitation of MMTool.

3. It is not possible to rebase PEIM files contained in capsules files since MMTool cannot determine runtime addresses of volumes within capsules.

4. MMTool in some cases does not allow insertion or deletion of CPU microcode patches for Intel patches because it has no way to unambiguously determine how the patches are blocked. This limitation does not apply if the patch description table is available in the firmware patch file. MMTool will always fully display Intel patches with block sizes of 1 or 2048 but other sizes require the description table. MMTool assumes that there is only one patch file and operates on the first one found in the image.

5. MMTool currently has no way of knowing that the BIOS supports packed option roms. For this reason MMTool imposes the following restrictions to packing:

   (i) The option rom firmware file must contain at least one option rom in packed format.
   (ii) If the user deletes all option roms then packing will not be possible for future insertions.

Version History

Version 5.01.0012   01/16/2015

New Features
1. Block execution on non Aptio V ROM image.
2. Support to update unsigned areas without invalidating signature.
3. Support for BIOS with FIT.
4. Replace section support in MMTool (command line mode).
5. Save BIOS file using Aptio V build process.

Version 5.00.0009   04/16/2014

Issues Fixed
1. Replace Option ROM using the same extracted OpROM file is making the another OpROM entry's vid, did as 'N/A' – EIP – 163116

Version 5.00.0008   04/07/2014

Issues Fixed
1. Rom utilities may fail to save Aptio V images built with tools 24.

Version 5.00.0007   03/05/2014

New Features
6. Add support for Option ROM insert for AptioV
7. Add Command Line support for AptioV Option rom in MMTool
8. Add display of option rom vendor and device id to MMTool
9. Ignore Rebase for Fixed FFS and the vtf file

Issues Fixed

1. MMTool fails to save image with stripped TE section that has not been moved.

Version 4.53.0042   10/4/2013

New Features

1. Microcode patch description table support
2. Save an AMI Capsule as a ROM file support
3. MMTool to save an AMI Capsule as a ROM file

Version 4.52.0031   01/12/12

New Features

1. Prohibit saving AMI secure capsule files.
2. Add support for SMM file types.
3. Capsule file support updated for alternative layout.
4. Add support for SMM file types.

Version 4.50.0023   03/02/10

New Features

1. Library updated with different run-time relocation and Optimize size support

Version 4.40.0020   07/02/09

New Features

1. Support packed option roms
2. Support more than 256 files per firmware volume.
3. Make compatible with AMI debugger
4. Add CPU patch feature
5. Add ROM hole feature

Version 4.39.0013   11/13/08

New Features

1. Improved error reporting

Version 4.30   09/28/07

New Features

1. Single executable

Version 4.18.0001   08/29/07

New Features

1. Use compression consistent with latest build tools.
2. Fixed issue with alignment.

3. Correctly fixing PEIMain location references and AP reset vector.

Version 4.17.0006   07/20/07

New Features
1. Added LZMA support and fixed issues with nested FVs
2. FVDLL with complete FFS spec support.
3. Modifications to GUI.
4. Create reports added for GUI and Command line.

Version 4.16.0001   2/8/07

Issues Fixed
1. Resolved issue with PEIRebase and PEIDebugFixup.

Version 4.15   11/28/05

New Features
1. Added the ability to correctly manage replacing and inserting and deleting PEI modules.
2. Added Alaska support.

Ver 4.13   10/06/04

Issues Fixed
1. Fixed application failure when using the replace and delete features.
2. Fixed faulty assumption about GUID of compressed logo.
3. Fixed application failure in saving of file where the firmware volume grows beyond its initial size.

Ver 4.09   10/04/04

Issues Fixed
1. Fixed issue with improper error handling in attempting to extract a non-existing file index.
2. Fixed issue with improper error handling when entering a non-existing drive.

Ver 4.08   09/30/04

Issues Fixed
1. Fixed application failure occurring when firmware is repeatedly loaded.
2. Removed fixed position for NVRAM.

Ver 4.04   09/29/04

Issues Fixed
• Fixed issue of corrupted image after deleting a module.

Ver 4.02   08/17/04

Issues Fixed

- Fixed issue with improper error handling in attempting to use an invalid volume index.
- Fixed issue causing load failure with firmware containing files of type EFI_RAW.

Ver 4.01   08/12/04

New Features

- Added the following functions to the FvDll
    1)fnAPI_CompressAndAddFile
    2)fnAPI_DecompressData
    3)fnAPI_UpdatePBAImage

Ver 4.00   08/10/04

New Features

- Added "Uncompress / As is" option to the Extract tab.
- Added "Compress / as is" option to the Insert tab.

Ver 1.00   06/04/04

- Changed the display order of image information.
- Changed open image dialog filter to "*.*".
- Disabled maximize button.
- Initial support for insert/extract/replace/delete functions.
- No command line support.