



AMI Aptio APFAT User Guide

Aptio APFAT User Guide

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Document Information

Purpose

This document provides information to use the Aptio APFAT to update the system BIOS.

Audience

Generic BIOS Engineers, OEM Engineers, and Aptio Customers.

Change History

Date	Revision	Description
2013-03-04	0.10	Initial draft

Chapter 1 Introduction

Overview

APFAT (AMI PFAT Firmware Update) is a package of utilities used to update the system BIOS under various operating systems. APFAT only works for APTIO with PFAT support.

APFATAPTIO Features

This list of features is supported from command line, command prompt, EFI Shell, or BSD/Linux shell.

- Flash ROM image
- Command line operating

Requirements

Supported Operating System

APFAT is supported by the following operating systems:

- Microsoft® Windows® 7 (32 bit)
- Microsoft® Windows® 7 (64 bit)
- Microsoft® Windows® 8 (32 bit)
- Microsoft® Windows® 8 (64 bit)
- EFI Shell
- DOS
- Linux

Firmware Requirements

- Compatible with Aptio 4, 4.5 and later.
- For supporting PFAT Flash, the following eModules are required:
 - Intel PFAT Technology (4.6.5.1_INTEL_PFAT_2_5)
 - NvramSmi (4.6.5.1_NvramSmi_3)
 - RomImage (4.6.5.3_RomImage_014)



Chapter 2 Getting Started

Installation

To run, extract all of the files from the folder with the name corresponding to the desired operating system.

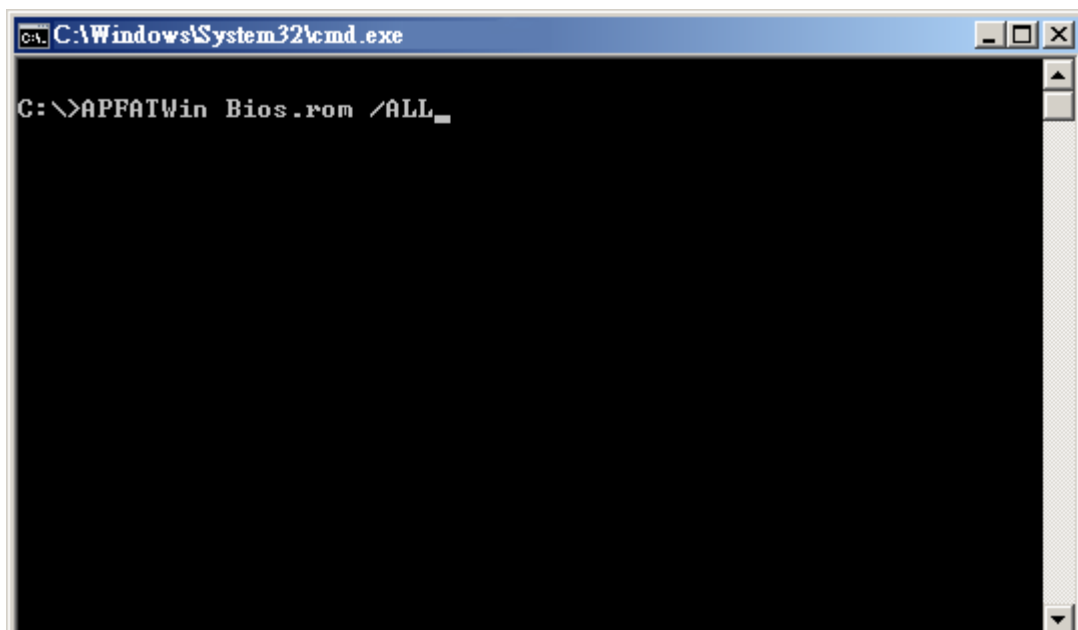
Chapter 3 APFATAPTIO Operation

Overview

This chapter explains the operation of APFATAPTIO.

The APFATAPTIO operation mode includes all of the APFATAPTIO features such as programming all regions with a BIOS ROM file and programming Main BIOS with a BIOS ROM file.

An example of APFATWin programming all regions with a BIOS ROM file command screen is shown below:



```
C:\Windows\System32\cmd.exe
C:\>APFATWin Bios.rom /ALL_
```

Chapter 4 Features and Functions

Overview

The APFATAPTIO offers the following features:

- Program all regions with a BIOS ROM file
- Program Main BIOS with a BIOS ROM file

These features are explained in more detail in this chapter.

Program all regions with a BIOS ROM file

The following command programs all regions with a BIOS ROM file:

APFATDOS <Input BIOS ROM File Name> /ALL

Where BIOS ROM File Name, the mandatory field is used to specify path/filename of the BIOS ROM file with extension.

Program Main BIOS with a BIOS ROM file

The following command programs Main BIOS with a BIOS ROM file:

APFATDOS <Input BIOS ROM File Name> /P

Where BIOS ROM File Name, the mandatory field is used to specify path/filename of the BIOS ROM file with extension.

Options

APFATDOS <BIOS ROM File Name> [Option 1] [Option 2]

Or

APFATDOS <BIOS ROM File Name> <Command>

BIOS ROM File Name

The mandatory field is used to specify path/filename of the BIOS ROM file with extension.

Commands

The mandatory field is used to select an operation mode.

- /BIOSALL Program all BIOS block
- /MEALL Program all ME region
- /ALL Program all (BIOS+ME)

Options

The optional field used to supply more information for flashing BIOS ROM. Following lists the supported optional parameters and format (*1):

- /DESC Program Descriptor region
- /GBE Program GBE region
- /ME Program ME region
- /N Program NVRAM
- /OA Program OA region
- /DATA Program DATA region
- /P Program Main BIOS
- /B Program Boot Block

* 1: This option list demonstrates the default setting. The list is determined by the design of the BIOS ROM in use. The option items, the item order and the item description can be customized during the BIOS implementation.

Rules:

- Any parameter enclosed by < > is a mandatory field.
- Any parameter enclosed by [] is an optional field.
- <Commands> cannot co-exist with any [Options].

Error Code Definition

CODE	Definition
0x0001	PFAT module detected an incompatibility with the installed CPU
0x0002	PFAT_DIRECTORY check failed
0x0003	A pre-execution check of the PPDT failed
0x0004	An inconsistency was found in the update package
0x0005	Unknown operator or name, or invalid syntax found in script
0x0006	An unimplemented flash object was referenced
0x0007	A JMP, JE, JNE, JG, JGE, JL, or JLE operator has a target that is not within the script buffer (between BEGIN and END inclusive)
0x0008	PUPC inconsistency found
0x0009	PFAT module SVN is lower than required by PPDT
0x000A	An EC related opcode found in a script when the PPDT indicates there is no EC in the system
0x8001	Buffer or flash operation exceeded object bounds
0x8002	An unsigned script attempted to write or erase a block of flash that overlaps with the SFAM
0x8003	An integer overflow occurred
0x8004	Total number of script opcodes retired exceeds either platform limit, or global limit
0x8005	An internal consistency check failed within the PFAT module
0xFFFF	CPU detected an error and did not execute the PFAT module