



## Aptio AMIBCP User Guide

# Aptio AMIBCP 4.53 User Guide

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5555 Oakbrook Parkway  
Suite 200  
Norcross, GA 30093 (USA)

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# Table of Contents

<b>Document Information .....</b>	<b>5</b>
Purpose .....	5
Audience .....	5
Change History .....	5
<b>Preface .....</b>	<b>7</b>
Disclaimer .....	7
<b>Chapter 1 – Introduction.....</b>	<b>8</b>
Overview .....	8
AMIBCP Features.....	8
Requirements .....	9
<i>Supported Operating Systems.....</i>	<i>9</i>
<i>BIOS Requirements .....</i>	<i>9</i>
<b>Chapter 2 - Quick Setup .....</b>	<b>10</b>
Installing and Running AMIBCP .....	10
<b>Chapter 3 – User Interface.....</b>	<b>11</b>
AMIBCP Icons and Menus .....	11
<i>Basic Screen Information.....</i>	<i>11</i>
<i>Menu Items .....</i>	<i>13</i>
<b>Chapter 4 - Features and Functions.....</b>	<b>17</b>
Overview .....	17
Setup Configuration Tab.....	18
<i>Fields.....</i>	<i>19</i>
<i>Buttons .....</i>	<i>19</i>
<i>Help Messages .....</i>	<i>19</i>
<i>Setup Structures .....</i>	<i>19</i>
PCI IRQ Routing Tab.....	20
<i>Fields.....</i>	<i>21</i>
<i>Using the PCI IRQ Routing Tab.....</i>	<i>21</i>
BIOS Strings .....	22
<i>Fields.....</i>	<i>23</i>
<i>Using the BIOS Strings Tab.....</i>	<i>23</i>
DMI Tables .....	24
<i>Fields.....</i>	<i>24</i>
<i>Buttons .....</i>	<i>25</i>
<i>Using the DMI Tables Tab .....</i>	<i>25</i>
Boot Order .....	26
<i>Fields.....</i>	<i>27</i>
<i>Buttons .....</i>	<i>27</i>
<i>Using the Boot Order Tab.....</i>	<i>27</i>
BIOS Features Tab.....	27

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<i>Fields.....</i>	<i>29</i>
<i>Using the BIOS Features Tab.....</i>	<i>29</i>

## Document Information

### Purpose

This document is intended to provide information about AMIBCP utility.

### Audience

The intended audiences are Generic Chipset Porting Engineers, OEM Porting Engineers, and AMI OEM Customers.

### Change History

Date	Revision	Description
2005-12-14		Initial release
2006-03-07		Alpha-1 release
2006-08-04		Release 4.02 for fixes for Alpha 1 release issues. Added capsule file support.
2007-03-02		FVDLL with complete FFS spec support. Modifications to GUI. PEIRbase support added. Multilingual support
2007-06-01		Removed inconsistencies between features and documentation. Provided indication that Features Tabs are not displayed if firmware does not support those features. Included all file types that AMIBCP supports.
2007-08-23	1.00	Updated document format.
2007-09-12	1.01	Added product version number to page 1.
2008-02-06	1.02	Updated for new version release based on single executable.
2009-02-07	1.03	Added ability to edit numeric defaults. Fixed various issues reported from last QA cycle.
2009-05-06	1.04	Document updated with new screen shots and formatting changes done.
2009-05-22	1.05	Limitation for the number of Setup pages and their Controls added.
2009-06-09	1.06	Eng language strings are not allowed to remove.
2009-06-16	1.07	Limitation of number of languages mentioned in BIOS Strings section.
2009-06-18	1.08	Language string size limitation added.
2009-07-16	1.09	Removed inconsistencies between features and documentation (Removed Register Edit feature). Updated version, title, and legal page.
2009-08-19	1.10	Screen shots updated.
2009-09-10	1.11	Review and approval

2009-10-05	1.12	Corrected the revision number in header.
2009-11-06	1.13	Added support for TSE 2.0 setup structures.
2010-01-06	1.14	Added support for UEFI 2.1 string and font packages.
2010-03-03	1.15	Changed the Boot order screenshot and included the description for Undo button
2010-06-14	1.16	Changed Features screenshot
2010-10-11	1.17	Restore footers
2010-10-14	1.18	Reflow/Properties
2010-01-26	1.19	Add capsule file open notes
2011-02-24	1.20	Updated Generic Screenshots, and modified the document according to standards.
2011-03-15	1.21	Update description of major/minor version numbers on features page.

## Preface

### Disclaimer

This manual describes the operation of the AMIBCP for APTIO. Although efforts have been made to insure the accuracy of the information contained here, American Megatrends expressly disclaims liability for any error in this information, and for damages, whether direct, indirect, special, exemplary, consequential or otherwise, that may result from such error, including but not limited to the loss of profits resulting from the use or misuse of the manual or information contained therein (even if American Megatrends has been advised of the possibility of such damages). Any questions or comments regarding this document or its contents should be addressed to American Megatrends at the address shown on the cover.

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## Chapter 1 – Introduction

### Overview

AMIBCP stands for American Megatrends BIOS Configuration Program. It provides you, the OEM or system integrator, with an easy way to customize some of the APTIO features without coding. This means that you do not have to contact American Megatrends every time a minor change has to be made in your system's APTIO.

With AMIBCP, you can customize your APTIO F/w Image. This can speedup system development and allow you a greater degree of freedom in adding or changing system features.

AMIBCP is a 32-bit application. It has a consistent and easy to use GUI interface.

### AMIBCP Features

The AMIBCP Firmware Configuration Program allows you to do the following:

- Configure the APTIO System Setup
- Edit PCI IRQ Routing Table
- View and Edit APTIO Strings
- View and Modify APTIO DMI Tables
- Supports LZMA
- Boot Order Grouping
- Single Executable
- Supports drag-and-drop feature that allows you to open files by dragging. (NEW!)
- Compatible with UEFI 2.1 string and font packages. (NEW!)
- Compatible with images produced by other tools using Optimize size and PEI relocation support. (NEW!)

These features are explained in detail in chapter 4, [Features and Functions](#).

## Requirements

### Supported Operating Systems

AMIBCP is supported by the following operating systems:

- Microsoft® Windows® 2000
- Microsoft® Windows® XP
- Microsoft® Windows® 2003
- Microsoft® Windows® Vista
- Microsoft® Windows® 7

### BIOS Requirements

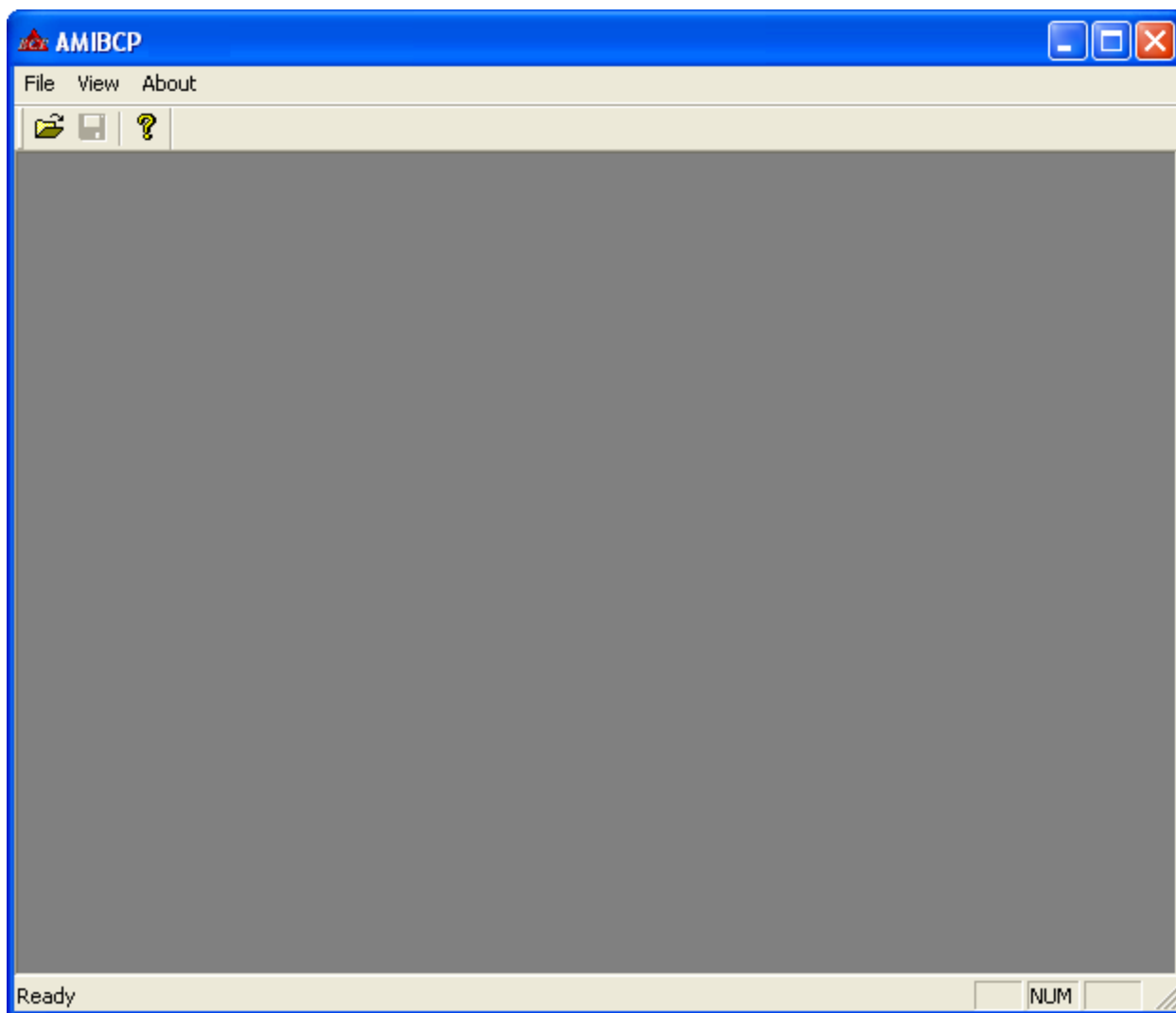
AMIBCP requires that the input file be an APTIO Firmware (.fd or .rom) file or a capsule file (.cap).

- Compatible with Aptio 3, 4, and 4.5 and later. However, Aptio 3 has not been instrumented to support AMIBCP. The limitation is not with the tool itself.
- For Aptio 4.6 it is recommended to use AMIBCP version 4.40 or above.

## Chapter 2 - Quick Setup

### Installing and Running AMIBCP

To install AMIBCP, unzip the released zip file and copy its contents to the hard disk drive. And to run the AMIBCP program, double left click on the AMIBCP.exe icon.

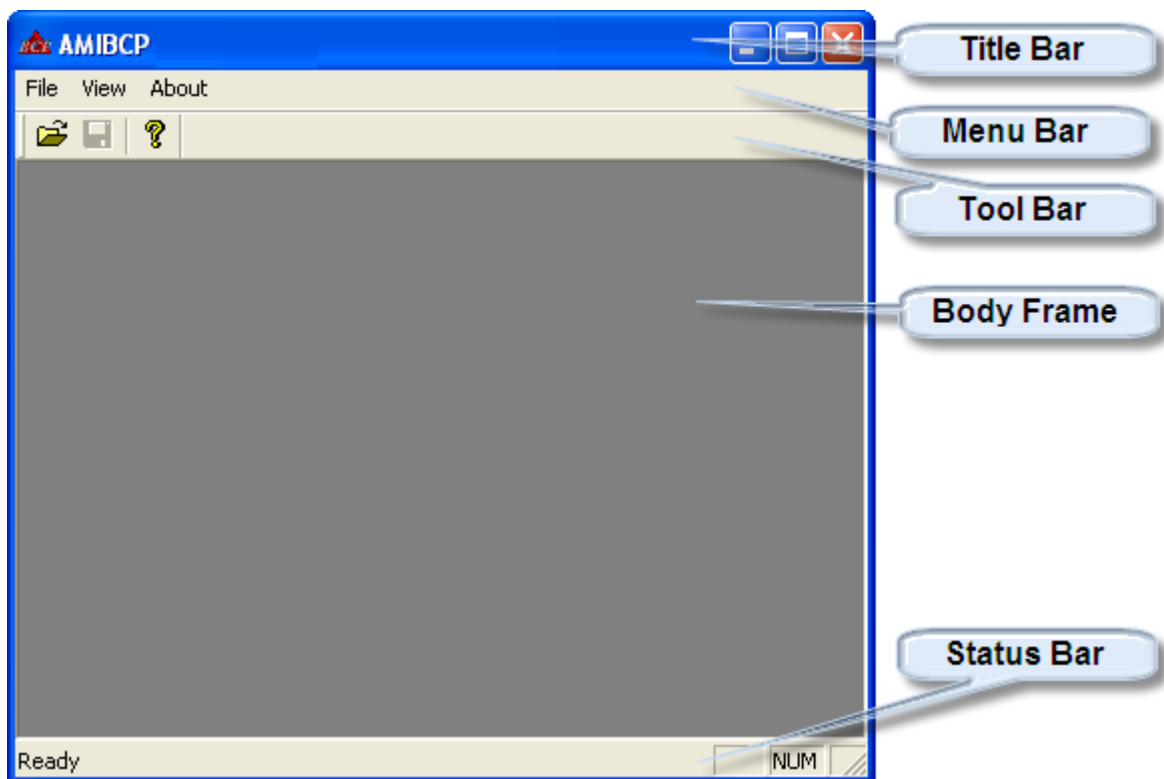


## Chapter 3 – User Interface

### AMIBCP Icons and Menus

#### Basic Screen Information

The AMIBCP screen contains five basic sections. This chapter contains information about each of the following sections:



#### Title Bar

The Title Bar is located at the top of the AMIBCP window. The Title Bar contains the following:

- Restore dropdown menu item
- Move dropdown menu item

- Size dropdown menu item
- Minimize dropdown menu item
- Maximize dropdown menu item
- Close dropdown menu item

These menu headers are explained in detail in this chapter.




## Menu Bar

The Menu Bar is located at the top of the AMIBCP screen. The Menu Bar contains the following:

- File dropdown menu items
- View dropdown menu items
- Window dropdown menu items
- Help dropdown menu items

## Toolbar

The Toolbar is located under the Menu. It contains three icons. The Toolbar icons are explained in the following table:

Item	Icon	Description
Open		The <i>Open</i> toolbar icon allows you to open an APTIO Firmware file.
Save		The <i>Save</i> toolbar icon allows you to save any changes you have made to the APTIO Firmware file.
About		The <i>About</i> toolbar icon allows you to view the AMIBCP version number and copyright information.

## Body Frame

The Body Frame is the main frame of AMIBCP. It is located under the Menu bar and Toolbar. The AMIBCP main functions are displayed in the body frame screen.

## Status Bar

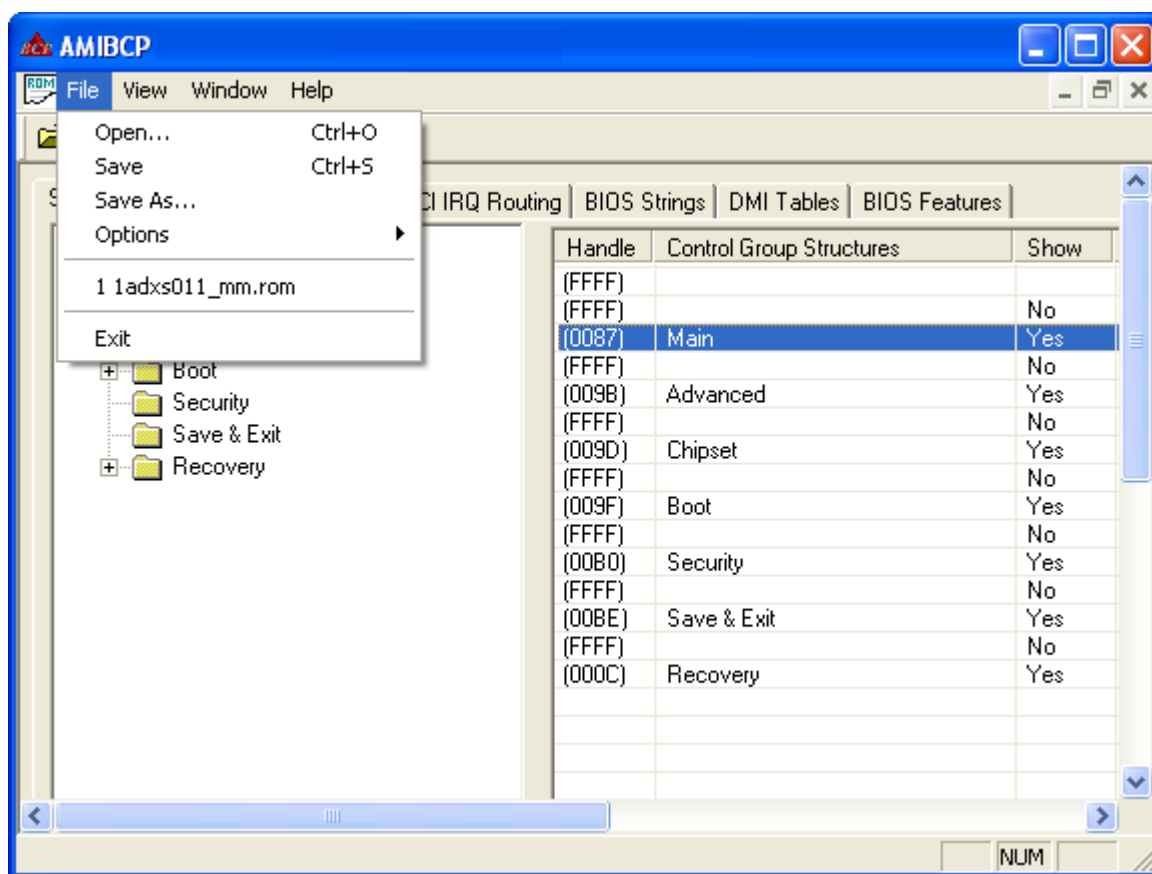
The Status Bar is located under the Body Frame. The right area of the Status Bar indicates if any of the following keys are latched:

Item	Description
CAP	The Caps Lock key is latched down.
NUM	The Number Lock key is latched down.
SCRL	The Scroll Lock key is latched down.



## Menu Items

### File Menu Item

When you left click on File, the File menu drops down as shown in the following screen:



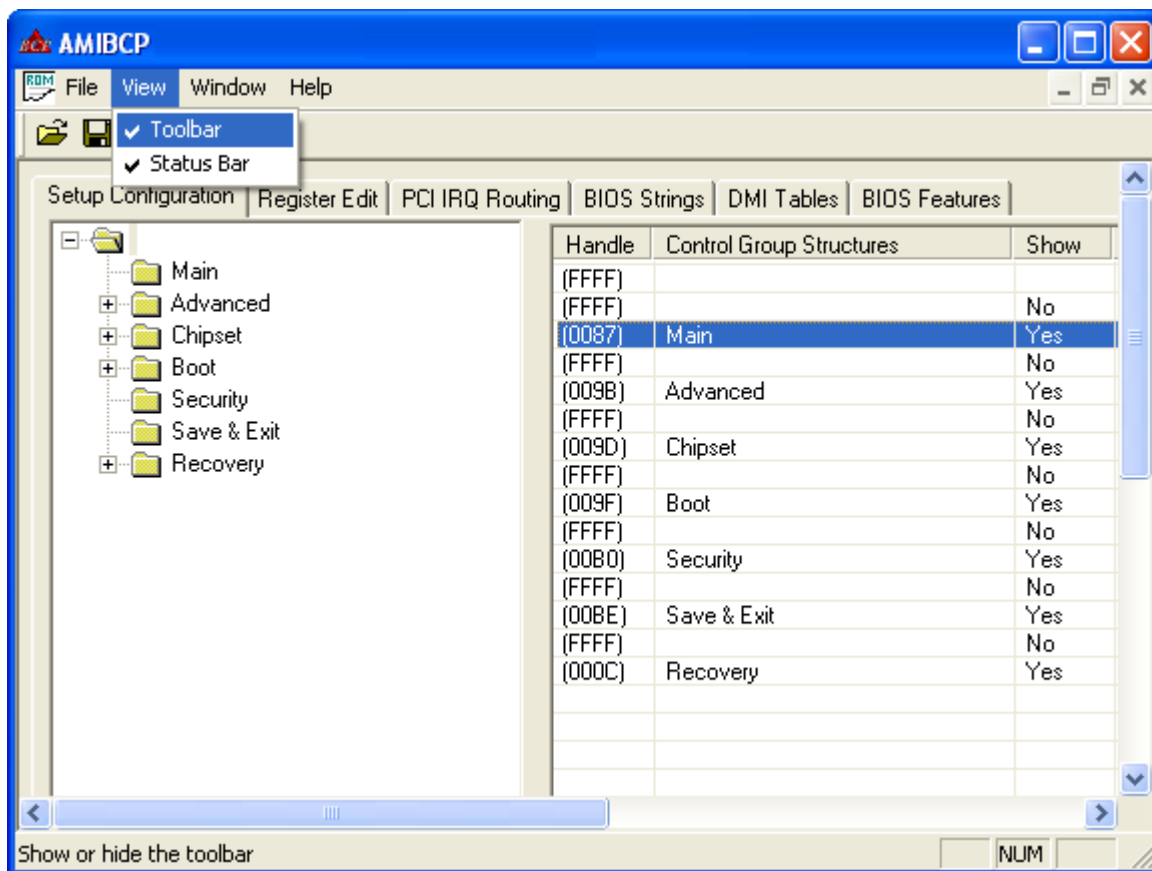
The File dropdown menu items are explained in the following table:

Menu Item	Description
Open 	The <i>Open</i> menu item allows you to open an APTIO Firmware file. <b>Note:</b> You can also left click on the <i>Open</i> toolbar icon to open an APTIO Firmware file. <b>Note:</b> If you open a file with the .cap (capsule) extension, BCP will give a load error if the file does not have the proper format for a capsule file. To open a capsule file that does not have the .cap extension, you must select '*.cap' from the "Files of type" drop-down box in the open dialog box.
Close	The <i>Close</i> menu item allows you to close the APTIO Firmware file.
Save 	The <i>Save</i> menu item allows you to save any changes you have made to the APTIO Firmware file. <b>Note:</b> You can also left click on the <i>Save</i> toolbar icon to save any changes you have made to the APTIO Firmware file.

Save as	The <i>Save as</i> menu item has the same feature as the <i>Save</i> menu item. In addition, it also allows you to specify the location and to change the exiting file name.
Options	The <i>Options</i> menu item allows you to select preferences for AMIBCP output and configuration.
String Optimization	The <i>String Optimization</i> menu item allows you to indicate that in the final saved ROM image you want to use the string optimization feature. String optimization is achieved by not including empty strings in the final BIOS image when it is saved. The firmware must be able to support this option. Aptio 4.5 and later support string optimization. If the menu item is checked, (by default it is checked) then string optimization is turned on.
Exit	The <i>Exit</i> menu item allows you to close the AMIBCP program. <b>Note:</b> You can also exit AMIBCP program by left click on the upper right corner of the AMIBCP window.

## View Menu Item

When you left click on *View*, the *View* menu drops down as shown in the following screen:

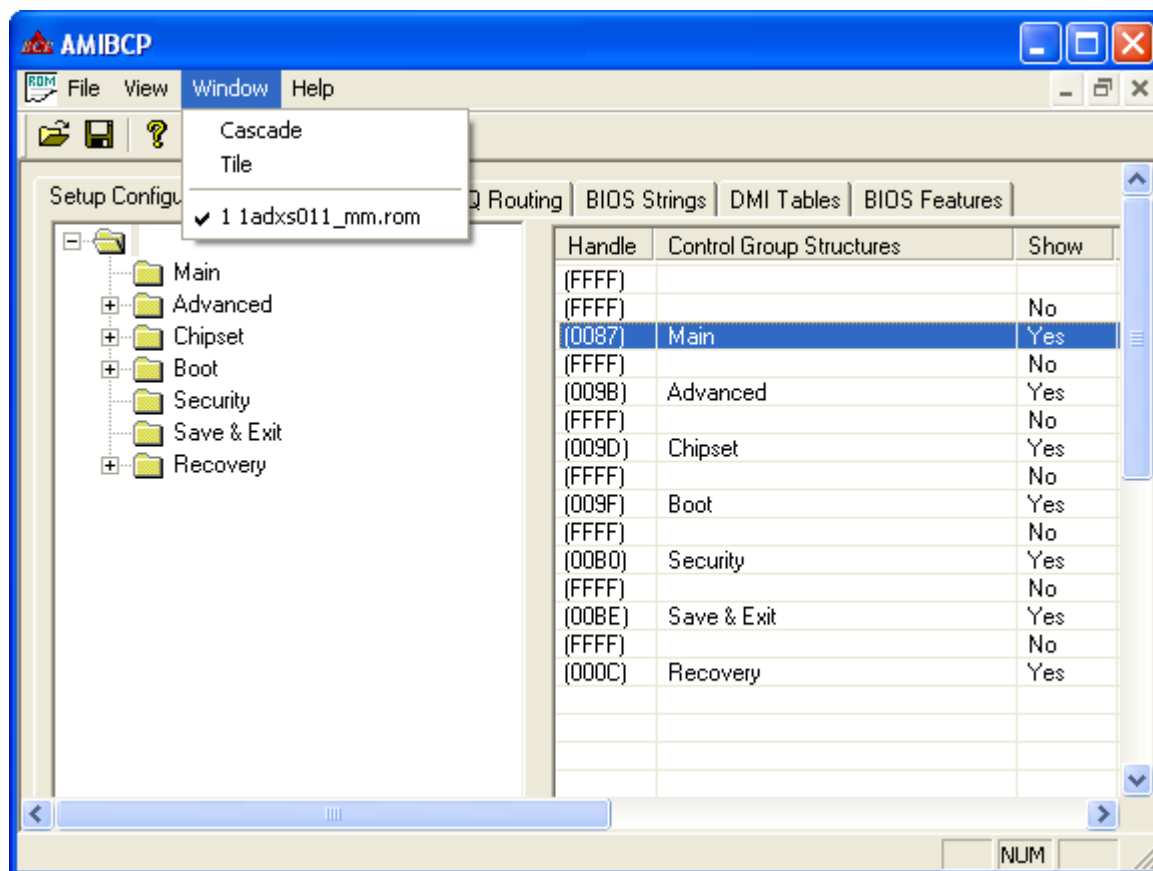


The View dropdown menu items are explained in the following table:

Menu Item	Description
Toolbar	The <i>Toolbar</i> menu item allows you to enable or disable the <i>Toolbar</i> by simply selecting or deselecting it. When selected, a check mark is displayed to the left of the <i>Toolbar</i> menu item. The <i>Toolbar</i> is then displayed at the top of the <i>AMIBCP</i> program window. When deselected, the check mark is not displayed to the left of the <i>Toolbar</i> menu item. The <i>Toolbar</i> is then not displayed at the top of the <i>AMIBCP</i> program window.
Status Bar	The <i>Status Bar</i> menu item allows you to enable or disable the <i>Status Bar</i> by simply selecting or deselecting it. When selected, a check mark is displayed to the left of the <i>Status Bar</i> menu item. The <i>Status Bar</i> is then displayed at the bottom of the <i>AMIBCP</i> program window. When deselected, the check mark is not displayed to the left of the <i>Status Bar</i> menu item. The <i>Status Bar</i> is then not displayed in the <i>AMIBCP</i> program window.

## Window Menu Item

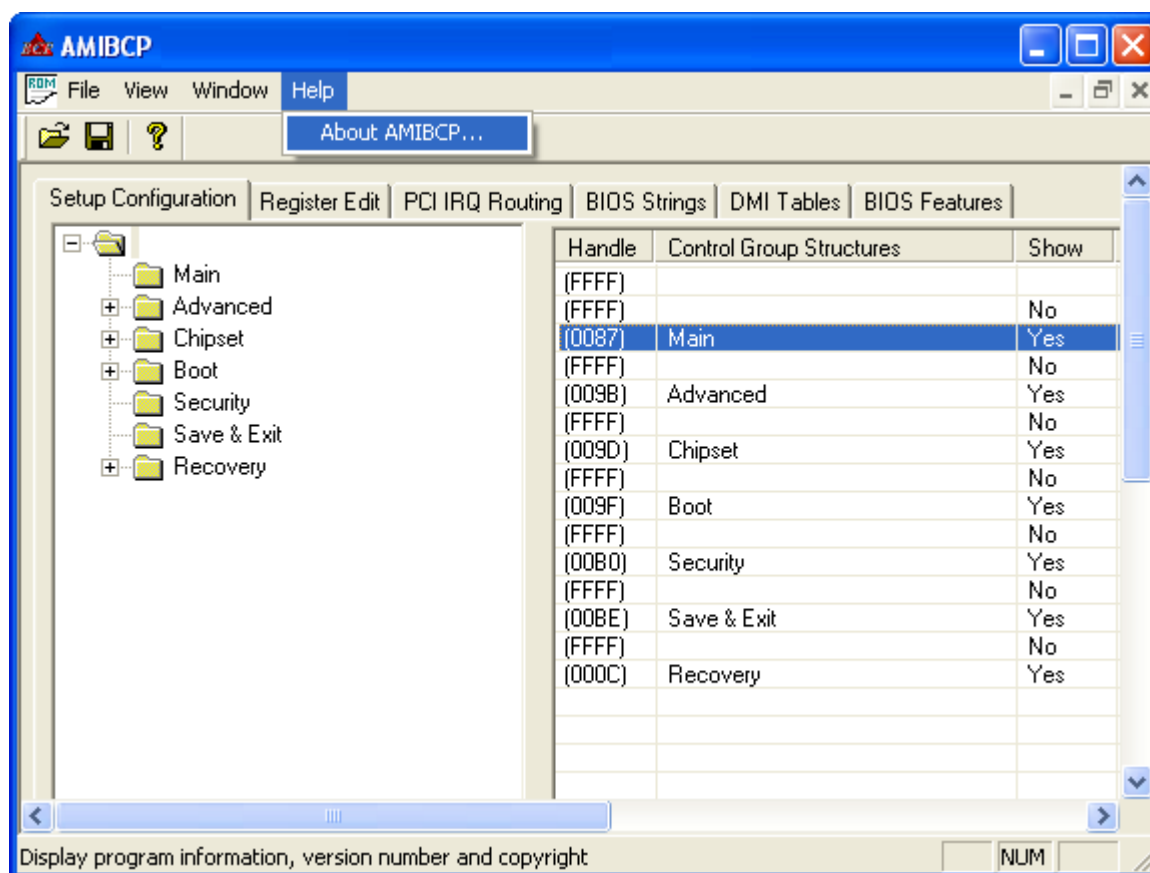
When you left click on Window, the Window menu drops down as shown in the following screen:




Window dropdown menu items are explained in the following table:

Menu Item	Description
New Window	The <i>New Window</i> menu item allows you to open a new window.
Cascade	The <i>Cascade</i> menu item allows you to arrange the <i>AMIBCP</i> windows so that they overlap one another.
Tile	The <i>Tile</i> menu item allows you to view all <i>AMIBCP</i> windows at the same time.

## Help Menu Item



The Help menu item is explained in the following table:

Menu Item	Description
About AMIBCP	The <i>About AMIBCP</i> menu item allows you to view the <i>AMIBCP</i> version number and copyright information.
	<b>Note:</b> You can also left click on the <i>About</i> toolbar icon to view the <i>AMIBCP</i> version number and copyright information.

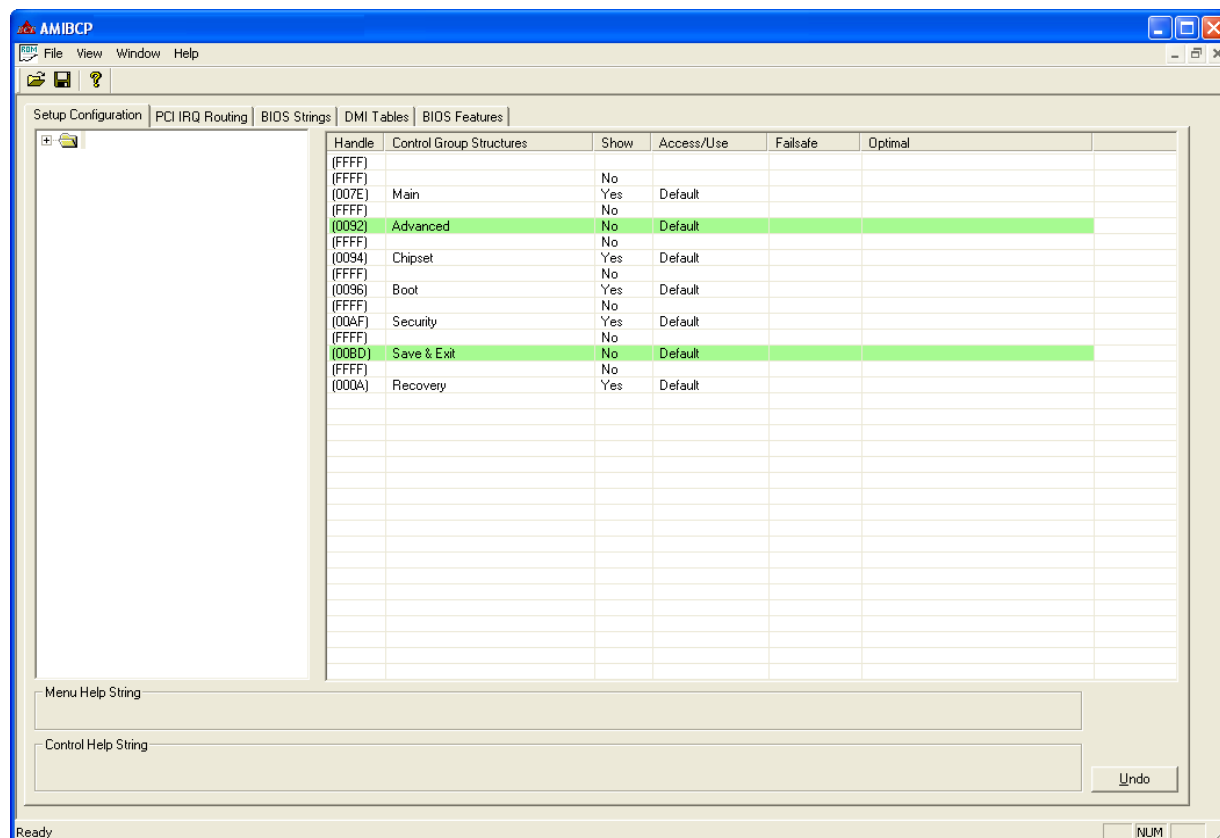
## Chapter 4 - Features and Functions

### Overview

AMIBCP allows you to view and modify the firmware file image. You can perform various actions using the following configuration tabs:

- Setup Configuration Tab
- PCI IRQ Routing Tab
- BIOS Strings Tab
- DMI Tables Tab
- Boot Order Tab
- BIOS Features Tab

AMIBCP includes a tab for each of these major functions. However, some firmware versions do not support all of these features. If a feature is not supported by the firmware, the corresponding tab will not be displayed.



## Setup Configuration Tab

The *Setup Configuration* tab allows you to change the APTIO setup options. By using the *Setup Configuration* tab, you can perform the following actions:

- Edit the control group structures names
- Show or hide setup screens and setup questions
- Modify access levels and usage
- Edit failsafe and optimal values

An example of the *Setup Configuration* tab is shown below:

[illegible]

**Limitation:** The Setup Configuration tab will not be displayed if the Setup data of given ROM image exceeds the maximum limit of 0x100 PAGES and 0x150 CONTROLS (or Questions). For e.g. In the above screen, the parents in the tree control will count PAGES and all their corresponding controls listed right side will count CONTROLS/Questions.


## Fields

The *Setup Configuration* fields are explained in the following table:

Field/Check Box	Description
Control Group Structures	This field displays the string handle ( <i>Token</i> ) and setup item's name that appears in the APTIO setup screen.
Show	This field allows you to display or hide a particular setup item from the APTIO setup screen.
Access/Use	This field allows you to control the access levels and usage of the setup item.
Failsafe	This field allows you to program the setup item with the safest possible settings that can be used if the system behaves erratically.
Optimal	This field allows you to program the setup item with the best system performance settings.

## Buttons

The *Setup Configuration* buttons are explained in the following table:

Name	Buttons	Description
Undo		The <i>Undo</i> button allows you to restore the original setup settings.  <b>Note:</b> The <i>Undo</i> button is used the same way throughout the AMIBCP program.

## Help Messages

Individual setup help messages are displayed in the Control Help String group box present at the bottom of the tab. All the menu help strings will be displayed in the Menu Help String group box.

**Note:** Help messages are displayed only when available in the APTIO Firmware file.

## Setup Structures

The *Setup Structures* consist of setup controls, such as questions, date, time, password, and setup control group items.

**Note:** AMIBCP supports TSE 2.0 setup structures.

Examples of Setup Structures are shown in the following table:

Example	Description
Setup Controls	For setup questions, you can modify the show, access/use, failsafe, and optimal fields. Setup questions strings can be edited.  For the date, time, and password controls, you can modify the show and access/use fields.  <b>Note:</b> Setup question strings can be edited or replaced in the BIOS Strings tab (explained later in this chapter).
Control Group Items	For the separator control group item, you can modify the show field and type of separator to display (blank line/single, thin line/double, or thick line). For the static-text control group item, you can modify the show field and usage (normal/title). For the dynamic-text control group item, you can modify the show field and refresh on/off value of the dynamic text (refresh or no refresh).  <b>Note:</b> If the refresh option is selected, the text refreshes once per second.

## PCI IRQ Routing Tab

The PCI IRQ Routing tab allows you to view and modify the PCI IRQ Routing table that is used by APTIO during POST and runtime.

You can view and modify the following fields:

- PCI Bus
- Dev.#
- Int A-B-C-D Reg
- Int A-B-C-D Bit
- Phys. Slot

An example of the PCI Routing tab is shown below:

[illegible]

## Fields

The *PCI IRQ Routing* fields for each PCI device and slot are explained in the following table:

Field	Description
PCI Bus	This field displays the PCI bus that the device/slot is on.  <b>Note:</b> Most boards contain a single PCI bus, so this field is usually set to 0.
Dev.#	This field displays the PCI device/slot number. The value of this field is set to a slot or device address on the PCI bus shifted left by three bits (the device number must be in bits 7:3 and bits 2:0 must be 000).
Int A,B,C,D Reg	This field displays the chipset register number that controls the PCI slots (or device) Int A, B, C, and D Pin. The value in this field is basically arbitrary. Slots and devices that share the same chipset interrupt signal must have the same value for this field.  For example: If Slot 1 Int A pin and Slot 2 Int B pin are both connected to the same chipset interrupt signal, then the chipset register value for Slot 1 Int A must match Slot 2 Int B. If a slot or device has nothing connected to its Int A pin, then this field must be set to 0. If a slot or device has its Int A pin hardwired directly to an IRQ, then this field is set to 0F <sub>x</sub> h (where x is 0-F for IRQ 0 - IRQ 15). This is useful if a motherboard has a PCI IDE chip that has its Int A pin hardwired to IRQ 14.
Int A,B,C,D Bitmap	This field displays the IRQ that the chipset is capable of routing to in the slots (or device) Int A, B, C, and D pin.  <b>Note:</b> If the value for Chipset Register is set to 0, then all bits in this field are set to 0.  <b>Note:</b> If the value for chipset register was set to 0F <sub>x</sub> h to indicate a hardwired connection to a certain IRQ, then only one bit corresponding to that IRQ must be set in this field.
Phys. Slot	This field display the slot number of a PCI slot as it appears to the end user. Numbers like 1, 2, 3, and 4 must be used.  <b>Note:</b> Onboard PCI devices such as PCI IDE chips must have this field set to 0 to indicate that the device is not a removable PCI adapter card.

## Using the PCI IRQ Routing Tab

To use the *PCI IRQ Routing* tab, follow the steps outlined below:

Step	Description
1	To modify any field in the PCI IRQ Routing table, simply left click on any field and type in a new value.  <b>Note:</b> You can add a new PCI entry into the table if all fields in the entry are set to zeros.
2	To save any changes you have made to the APTIO Firmware file, left click on the <i>File</i> menu bar. Then left click on the <i>Save</i> menu item. You can also left click on the <i>Save</i> toolbar icon to save any changes you have made.  <b>Note:</b> You can left click on the <i>Undo</i> button to restore the original table information before saving any new changes.

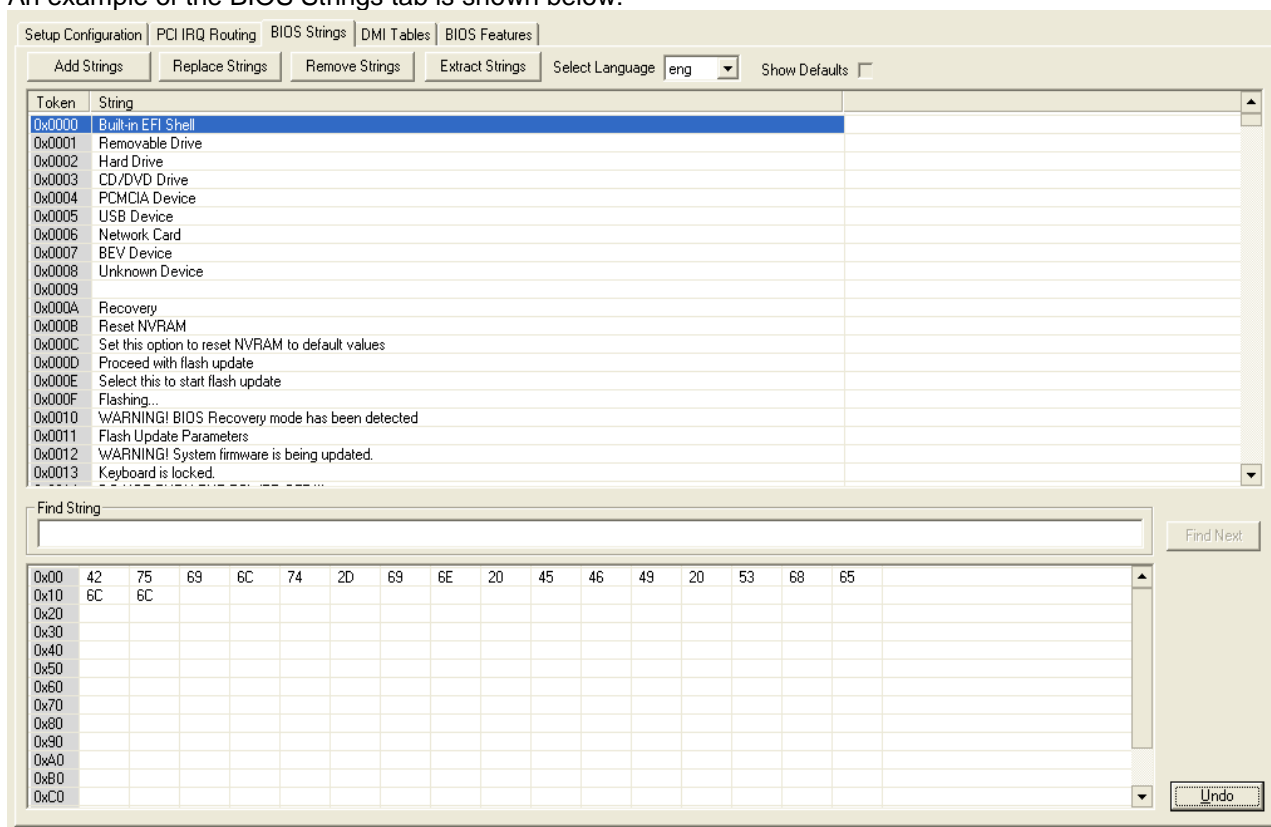
## BIOS Strings

The BIOS Strings tab allows you to view and edit APTIO strings. AMIBCP for APTIO has multi-lingual support.

### **Limitations:**

- BCP supports a maximum of 16 languages to be added with BIOS Strings tab.
- The strings inside the language file should not exceed 0x400 in size.
- BCP supports a maximum of 16 languages to be added with BIOS Strings tab. In addition, each language string size is limited to 0x400.

An example of the BIOS Strings tab is shown below:



Token	String
0x0000	Built-in EFI Shell
0x0001	Removable Drive
0x0002	Hard Drive
0x0003	CD/DVD Drive
0x0004	PCMCIA Device
0x0005	USB Device
0x0006	Network Card
0x0007	BEV Device
0x0008	Unknown Device
0x0009	
0x000A	Recovery
0x000B	Reset NVRAM
0x000C	Set this option to reset NVRAM to default values
0x000D	Proceed with flash update
0x000E	Select this to start flash update
0x000F	Flashing...
0x0010	WARNING! BIOS Recovery mode has been detected
0x0011	Flash Update Parameters
0x0012	WARNING! System firmware is being updated.
0x0013	Keyboard is locked.

Token	42	75	69	6C	74	2D	69	6E	20	45	46	49	20	53	68	65
0x00																
0x10	6C	6C														
0x20																
0x30																
0x40																
0x50																
0x60																
0x70																
0x80																
0x90																
0xA0																
0xB0																
0xC0																

## Fields

The *BIOS Strings* fields are explained in the following table:

Field/button	Description
Token	The <i>Token</i> field displays the string handle that is used by APTIO to reference the string.
String	The <i>String</i> field displays the APTIO string as it appears in the APTIO setup or POST screen. This field is editable.
Undo button	The <i>Undo</i> button allows you to restore the original strings.
Find String button	The <i>Find String</i> button allows you to find the string which has the string in the edit box entered as substring.
Find Next button	The <i>Find Next</i> button allows you to find the next string from the highlighted string.
Select Language Combobox	The <i>Select Language</i> combo box allows you to switch between the languages present in the firmware image.
Add Strings button	The <i>Add Strings</i> button allows you to add the strings to the selected language.
Replace Strings button	The <i>Replace Strings</i> button allows you to replace the strings to the selected language.
Remove Strings button	The <i>Remove Strings</i> button allows you to remove the strings from the selected language. <b>Note:</b> You cannot remove eng language strings.
Extract Strings button	The <i>Extract Strings</i> button allows you to extract the strings from the selected language.
Show Defaults button	The <i>Show Defaults</i> button will show either Undefined/English strings when the corresponding string is not present for that selected language.

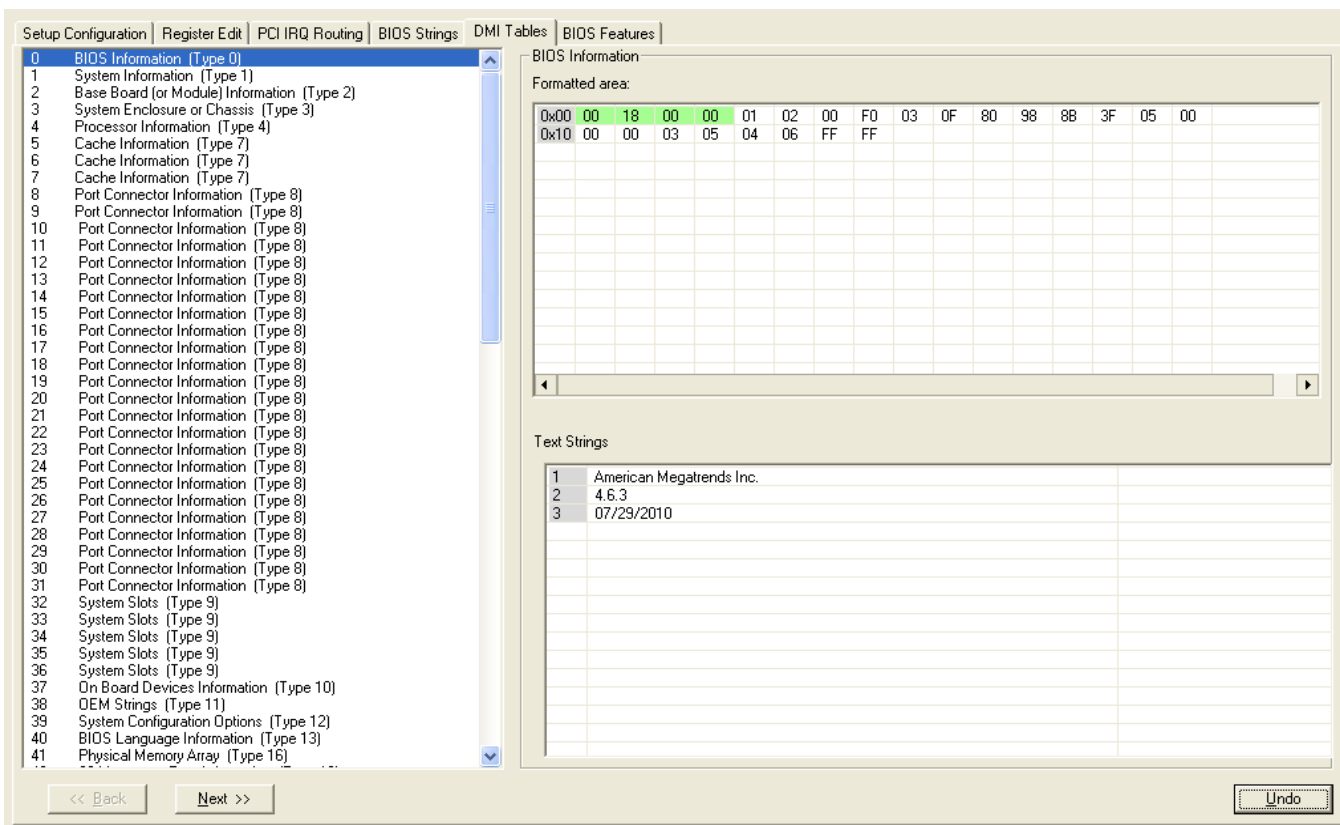
## Using the BIOS Strings Tab

To use the *BIOS Strings* tab, follow the steps outlined below:

Step	Description
1	To modify any <i>String</i> , left click on it and type in the new string.
2	To save any changes you have made to the APTIO Firmware file, left click on the <i>File</i> menu bar. Then left click on the <i>Save</i> menu item. You can also left click on the <i>Save</i> toolbar icon to save any changes you have made.  <b>Note:</b> You can left click on the <i>Undo</i> button to restore the original strings before saving any new changes.
3	To cancel any of the changes done to the strings, press "Undo" button.
4	To find a string in the list of the strings displayed, enter the string in the Find String edit box and press Enter.
5	To find the next string of the kind mentioned in the Find String edit box/ any string that is subsequent to the current highlighted string (where\ the cursor is), press Find Next.
6	To add strings to particular language, press "Add strings" button, then "Add Strings" dialog box will appear, which allows user to select string file for addition.
7	To replace strings to particular language, press "Replace strings" button, then "Replace Strings" dialog box will appear, which allows user to select string file for replacing.
8	To remove strings to particular language, press "Remove strings" button, then "Remove Languages" dialog box will appear which allows user to select language from the combo box.
9	To extract strings of a particular language, press "Extract strings" button, then "Extract Languages" dialog box will appear which allows user to select language from the combo box and the location of the file in which the strings file to be created.

## DMI Tables

The DMI Tables tab allows you to view and modify APTIO DMI Tables such as Firmware information, system information, baseboard, and so on. An example of the DMI Tables tab is shown below:



Setup Configuration | Register Edit | PCI IRQ Routing | BIOS Strings | **DMI Tables** | BIOS Features

0 BIOS Information (Type 0)

1 System Information (Type 1)

2 Base Board (or Module) Information (Type 2)

3 System Enclosure or Chassis (Type 3)

4 Processor Information (Type 4)

5 Cache Information (Type 7)

6 Cache Information (Type 7)

7 Cache Information (Type 7)

8 Port Connector Information (Type 8)

9 Port Connector Information (Type 8)

10 Port Connector Information (Type 8)

11 Port Connector Information (Type 8)

12 Port Connector Information (Type 8)

13 Port Connector Information (Type 8)

14 Port Connector Information (Type 8)

15 Port Connector Information (Type 8)

16 Port Connector Information (Type 8)

17 Port Connector Information (Type 8)

18 Port Connector Information (Type 8)

19 Port Connector Information (Type 8)

20 Port Connector Information (Type 8)

21 Port Connector Information (Type 8)

22 Port Connector Information (Type 8)

23 Port Connector Information (Type 8)

24 Port Connector Information (Type 8)

25 Port Connector Information (Type 8)

26 Port Connector Information (Type 8)

27 Port Connector Information (Type 8)

28 Port Connector Information (Type 8)

29 Port Connector Information (Type 8)

30 Port Connector Information (Type 8)

31 Port Connector Information (Type 8)

32 System Slots (Type 9)

33 System Slots (Type 9)

34 System Slots (Type 9)

35 System Slots (Type 9)

36 System Slots (Type 9)

37 On Board Devices Information (Type 10)

38 OEM Strings (Type 11)

39 System Configuration Options (Type 12)

40 BIOS Language Information (Type 13)

41 Physical Memory Array (Type 16)

BIOS Information

Formatted area:

0x00	00	18	00	00	01	02	00	F0	03	0F	80	98	8B	3F	05	00
0x10	00	00	03	05	04	06	FF	FF								

Text Strings

1	American Megatrends Inc.
2	4.6.3
3	07/29/2010

<< Back    Next >>    Undo

## Fields

The *DMI Tables* fields are explained in the following table:

Field	Description
Formatted area	This field displays the <i>DMI Tables</i> values (in hex). You can modify all DMI table values except the first two bytes.  <b>Note:</b> The first two bytes of the <i>DMI Tables</i> are used to define the table type and size.
Text Strings	This field displays the <i>DMI Tables</i> strings. You can modify these strings but you cannot change the number of strings.

## Buttons

The *DMI Tables* buttons are explained in the following table:

Name	Buttons	Description
Back	<< Back	The Back button allows you to go to the previous DMI table in the table list.
Next	Next >>	The Next button allows you to go to the next DMI table in the table list.
Undo	Undo	The <i>Undo</i> button allows you to discard any changes you have made.

## Using the DMI Tables Tab

To use the *DMI Tables* tab, follow the steps outlined below:

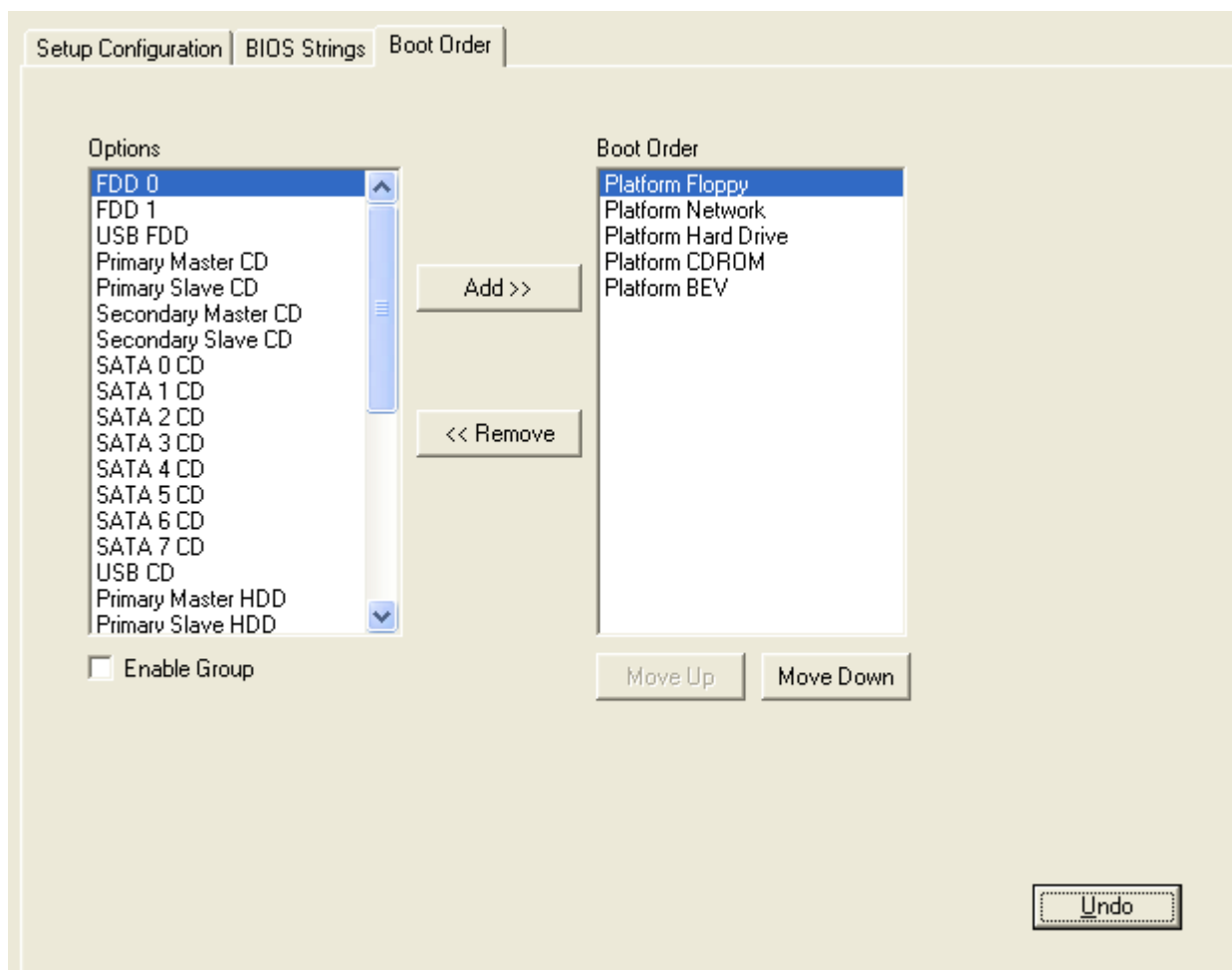
Step	Description
1	From the displayed <i>DMI Tables</i> list, select the table you want to view.
2	To edit the table, simply type in new values in the formatted or text strings areas.
3	To save any changes you have made to the APTIO Firmware file, left click on the <i>File</i> menu bar. Then left click on the <i>Save</i> menu item. You can also left click on the <i>Save</i> toolbar icon to save any changes you have made.  <b>Note:</b> You can left click on the <i>Undo</i> button to restore the original <i>DMI Tables</i> values before saving any new changes. In addition, <i>DMI Table</i> now supports up to 3000 entries.

**Note:** For more information on the *DMI Tables*, see the (System Management BIOS Specification version 2.3.4).

## Boot Order

The Boot Order Tab allows you to view and modify the sequence of boot order devices in APTIO. Modification can be made as a single device or as a device group.

An example of Boot Order tab is given below,



## Fields

The Boot Order fields are explained in the following table:

Field	Description
Options	This field displays the available device list in a particular ROM image.
Boot Order	This field displays the selected boot order sequence.
Enable Group	Based on this field, devices will be treated as individuals or as a group. If this field is unchecked, the program will run under individual mode. If checked, all the operations will affect devices of the same group.

## Buttons

The *Boot Order Tab* buttons are explained in the following table:

Name	Button	Description
Add	Add >>	This button moves the selected item(s) from the Options ListBox to the Boot Order ListBox.
Remove	<< Remove	This button moves the selected item(s) from the Boot Order ListBox to the Options ListBox.
Move Up	Move Up	In individual mode, this button moves the selected item above one item in the Boot Order ListBox. However, under group mode this button moves the selected item(s) of the same group above one group in the Boot Order ListBox.
Move Down	Move Down	In individual mode, this button moves the selected item below one item in the Boot Order ListBox. However, under group mode this button moves the selected item(s) of the same group below one group in the Boot Order ListBox.
Undo	Undo	The Undo button allows you to discard any changes you have made.

## Using the Boot Order Tab

To use the *Boot Order* tab, follow the steps outlined below:

Step	Description
1	Select the mode of boot order modification by checking or not checking the "Enable Group" box.
2	Select and move the item(s) as your desired boot order sequence in the Boot Order List Box.
3	To save any changes made to the APTIO Firmware file, left click on the <i>File</i> menu bar. Then left click on the <i>Save</i> menu item. You can also left click on the <i>Save</i> toolbar icon to save any changes you have made.

## BIOS Features Tab

The BIOS Features tab allows you to view and configure some of the APTIO features. You can view the following fields:

- BIOS Date
- BIOS Name
- Processor
- Major Version
- ID String 1

- BIOS Size
- BIOS Tag
- Reference Number
- Minor Version
- P6 Microcode Update Patches
- Sign On Message
- OEM Data (If available)

An example of the BIOS Features tab is shown below:

Setup Configuration | PCI IRQ Routing | BIOS Strings | BIOS Features

BIOS Date: 17/4/2009 BIOS Tag: 0AxE000 Major Version: 01  
 BIOS Name: Processor: Minor Version: 00  
 BIOS Size: 1024 KB Reference Number:  
 ID String 1:

Intel CPU MicroCode Patch Data Information

No	MicroCode ID	Platform Type	CPU ID	Update Revisi...	Date(YYYY/MM/DD)	Size
01	09DF4202	9D	0F42	02	2004/11/03	00000C
02	001F2529	01	0F25	29	2004/08/11	00000800
03	002F241F	02	0F24	1F	2003/06/05	00000800
04	004F241E	04	0F24	1E	2003/06/05	00000800
05	002F2205	02	0F22	05	2003/07/29	00000800

Sign On Message

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OEM Sign On String

OEM Data

OEM data

	4F	45	4D	20	64	61	74	61	00	00	00	00	00	00	00	00	00	00	OEM data.....
0x00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	.....
0x20	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	.....
0x30	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	.....

Undo

## Fields

The *BIOS Features* fields are explained in the following table:

Field/Button	Description
BIOS Date	This field displays the date when the APTIO Firmware file was built. The value in this field cannot be changed.
BIOS Name	This field displays the name associated with the APTIO Firmware file. The value in this field cannot be changed.
Processor	This field displays the number that is used to define the processor type. The value in this field cannot be changed.
Major Version	This field displays the project major version number. This field is editable.
ID String 1	This field displays the ID string that is associated with the APTIO Firmware file. The value in this field cannot be changed.
BIOS Size	This field displays the actual size of the APTIO Firmware file. The value in this field cannot be changed.
BIOS Tag	This field displays the eight-character tag that is associated with the APTIO Firmware file. The value in this field cannot be changed.
Minor Version	This field displays the project minor version number. This field is editable.
Intel CPU Microcode Patch Data Information	This field displays Intel processor patches that are contained in the APTIO Firmware file. The values in this field cannot be changed.
Sign On Message	This field displays the APTIO sign-on message that is displayed during POST. The APTIO copyright string is not editable. <b>Note:</b> The second field of Sign-On-Message is editable and it should not be than 80 characters in length.
OEM Data	This field displays the OEM data that is provided by the APTIO. This field is 62-bytes long and displayed in two modes (text and hexadecimal). This field is editable. <b>Note:</b> The OEM data area is supported on the APTIO.
Undo Button	The <i>Undo</i> button allows you to restore the original setup settings.

**Note:** The above fields will be filled when their information is present in the ROM image.

## Using the BIOS Features Tab

To use the *BIOS Features* tab, follow the steps outlined below:

Step	Description
1	To modify any editable field, left click on it and type in new values.
2	To save any changes you have made to the APTIO Firmware file, left click on the <i>File</i> menu bar. Then left click on the <i>Save</i> menu item. You can also left click on the <i>Save</i> toolbar icon to save any changes you have made.  <b>Note:</b> You can left click on the <i>Undo</i> button to restore the original setup setting before saving any new changes.