

---

# XPC User Guide

---

For the : SH55J2

---

Shuttle®

## XPC Installation Guide

### Copyright

©2010 by Shuttle® Inc. All Rights Reserved.

No part of this publication may be reproduced, transcribed, stored in a retrieval system, translated into any language, or transmitted in any form or by any means such as electronic, mechanical, magnetic, optical, chemical, photocopy, manual, or otherwise, without prior written permission from Shuttle® Inc.

Other brands and product names used herein are for identification purposes only and may be trademarks of their respective owners.

### Disclaimer

Shuttle® Inc. shall not be liable for any incidental or consequential damages resulting from the performance or use of this product.

Shuttle® Inc. makes no representation or warranty regarding the contents of this manual. Information in this manual had been carefully checked for accuracy; however, no guarantee is given as to the correctness of the contents. For continuing product improvement, Shuttle® Inc. reserves the right to revise the manual or make changes to the specifications of this product at any time without notice and obligation to any person or entity regarding such change. The information contained in this manual is provided for general use by customers.

This device complies to Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must withstand any background interference including those that may cause undesired operation.

### Trademarks

Shuttle is a registered trademark of Shuttle Inc.

Intel and Pentium are registered trademarks of Intel Corporation.

PS/2 is a registered trademark of IBM Corporation.

AWARD is a registered trademark of Award Software Inc.

Microsoft and Windows are registered trademarks of Microsoft Corporation.

### General Notice

Other brand and product names used herein are for identification purposes only and may be trademarks of their respective owners.

---

---

## Safety Information

Read the following precautions before setting up a Shuttle XPC.

### CAUTION

Incorrectly replacing the battery may damage this computer. Replace only with the same or equivalent as recommended by Shuttle. Disposal of used batteries according to the manufacturer's instructions.

### Laser compliance statement

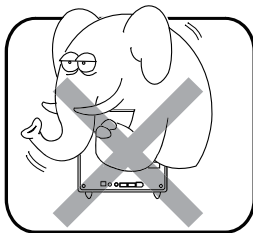
The optical disc drive in this server is a laser product. The drive's classification label is located on the drive.

### CLASS 1 LASER PRODUCT

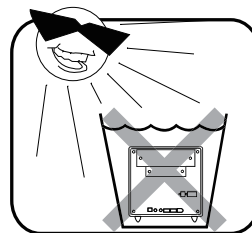
CAUTION : INVISIBLE LASER RADIATION WHEN OPEN.  
AVOID EXPOSURE TO BEAM.

## Installation Notices

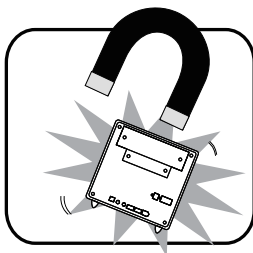
Do not place this device underneath heavy loads or in an unstable position.



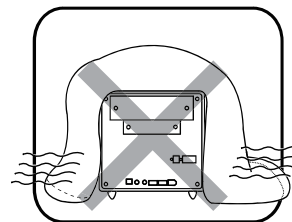
Do not expose this device to high levels of direct sunlight, high-humidity or wet conditions.



Do not use or expose this device around magnetic fields as magnetic interference may affect the performance of the device.



Do not block the air vents to this device or impede the airflow in any way.



# TABLE OF CONTENTS


---

Driver and Software Installation.....	1
Mainboard Driver DVD .....	1
User Manuals .....	2
Appendix.....	3
Starting BIOS .....	3
BIOS Setup Menu .....	3
Main Setup .....	5
Advanced .....	6
CPU Configuration .....	7
IDE Configuration.....	9
USB Configuration .....	12
Onboard Device Configuration.....	14
Power Management Configuration.....	16
Hardware Health Configuration.....	18
Frequency Voltage Configuration.....	19
Boot .....	23
Boot Settings Configuration .....	23
Boot Device Priority.....	25
Hard Disk Drives .....	26
Security .....	27
Exit .....	29

---

## Driver and Software Installation

### ■ Motherboard Driver DVD

 The DVD contents attached in SH55J2 Series motherboard are subject to change without notice.

The Motherboard Driver DVD contains all the motherboard drivers necessary to optimize the performance of this Shuttle Xvision in a Windows® OS. Install these drivers after installing Microsoft® Windows®.

Insert the attached DVD into your DVD-ROM drive. The DVD AutoRun screen should appear. If the AutoRun screen does not appear, double click on Autorun icon in My Computer to bring up Shuttle Mainboard Software Setup screen.

Navigation Bar Description :

- ☞ Auto Install Driver/ Utility.
- ☞ User Manuals - Motherboard Manual, Quick Guide.
- ☞ Link to Shuttle Website - Link to shuttle website homepage.
- ☞ Browse this DVD - Allows you to see contents of this DVD.



## ■ User Manuals

- ☞ Motherboard Manual
- ☞ Quick Guide



### Starting BIOS

AMIBIOS has been integrated into many motherboards for over a decade. In the past, people often referred to the AMIBIOS setup menu as BIOS, BIOS setup, or CMOS setup.

American Megatrends refers to this setup as BIOS. Specifically, it is the name of the AMIBIOS8 BIOS setup utility. This chapter describes the basic navigation of the BIOS setup screens.

### Enter the BIOS

To enter the BIOS setup screens, follow the steps below:

- Step1. Power on the motherboard.
- Step2. Press the <Delete> key on your keyboard when you see the following text prompt: **Press DEL to run Setup.**
- Step3. After you press the <Delete> key, the main BIOS setup menu displays. You can access the other setup screens from the main BIOS setup menu, such as the Chipset and Power menus.



This manual describes the standard look of the BIOS setup screen. The motherboard manufacturer has the ability to change any and all of the settings described in this manual. This means that some of the options described in this manual do not exist in your motherboard's AMIBIOS.



In most cases, the <Delete> key is used to invoke the BIOS setup screen. There are a few cases that other keys are used, such as <F1>, <F2>, and so on.

### BIOS Setup Menu

The main BIOS setup menu is the first screen that you can navigate. Each main BIOS setup menu option is described in this user's guide.

The Main BIOS setup menu screen has two main frames. The left frame displays all the options that can be configured. "Grayed-out" options cannot be configured. Options in blue can be.

The right frame displays the key legend. Above the key legend is an area reserved for a text message. When an option is selected in the left frame, it is highlighted in white.

Often a text message will accompany it.



AMIBIOS8 has default text messages built into it. The motherboard manufacture retains the option to include, leave out, or change any of these text messages. They can also add their own text messages. Because of this, many screen shots in this manual are different from your BIOS setup screen.

The BIOS setup/utility uses a key-based navigation system called hot keys. Most of the BIOS setup utility hot keys can be used at any time during the setup navigation process. These keys include <F1>, <F10>, <Enter>, <ESC>, <Arrow> keys, and so on.



There is a hot key legend located in the right frame on most BIOS setup screens.

Hot Key	Description
→ Left ← Right	The Left and Right <Arrow> keys allow you to select a BIOS setup screen. For example: Main screen, Advanced screen, Chipset screen, and so on.
↑ Up ↓ Down	The Up and Down <Arrow> keys allow you to select an BIOS setup item or sub-screen.
+/- Plus/Minus	The Plus and Minus <Arrow> keys allow you to change the field value of a particular setup item. For example: Date and Time.
Tab	The <Tab> key allows you to select BIOS setup fields.
F1	The <F1> key allows you to display the General Help screen. Press the <F1> key to open the General Help screen.
F10	The <F10> key allows you to save any changes you have made and exit BIOS Setup. Press the <F10> key to save your changes. Press the <Enter> key to save the configuration and exit. You can also use the <Arrow> key to select Cancel and then press the <Enter> key to abort this function and return to the previous screen.
ESC	The <Esc> key allows you to discard any changes you have made and exit the BIOS Setup. Press the <Esc> key to exit the BIOS setup without saving your changes. Press the <Enter> key to discard changes and exit. You can also use the <Arrow> key to select Cancel and then press the <Enter> key to abort this function and return to the previous screen.
Enter	The <Enter> key allows you to display or change the setup option listed for a particular setup item. The <Enter> key can also allow you to display the setup sub-screens.



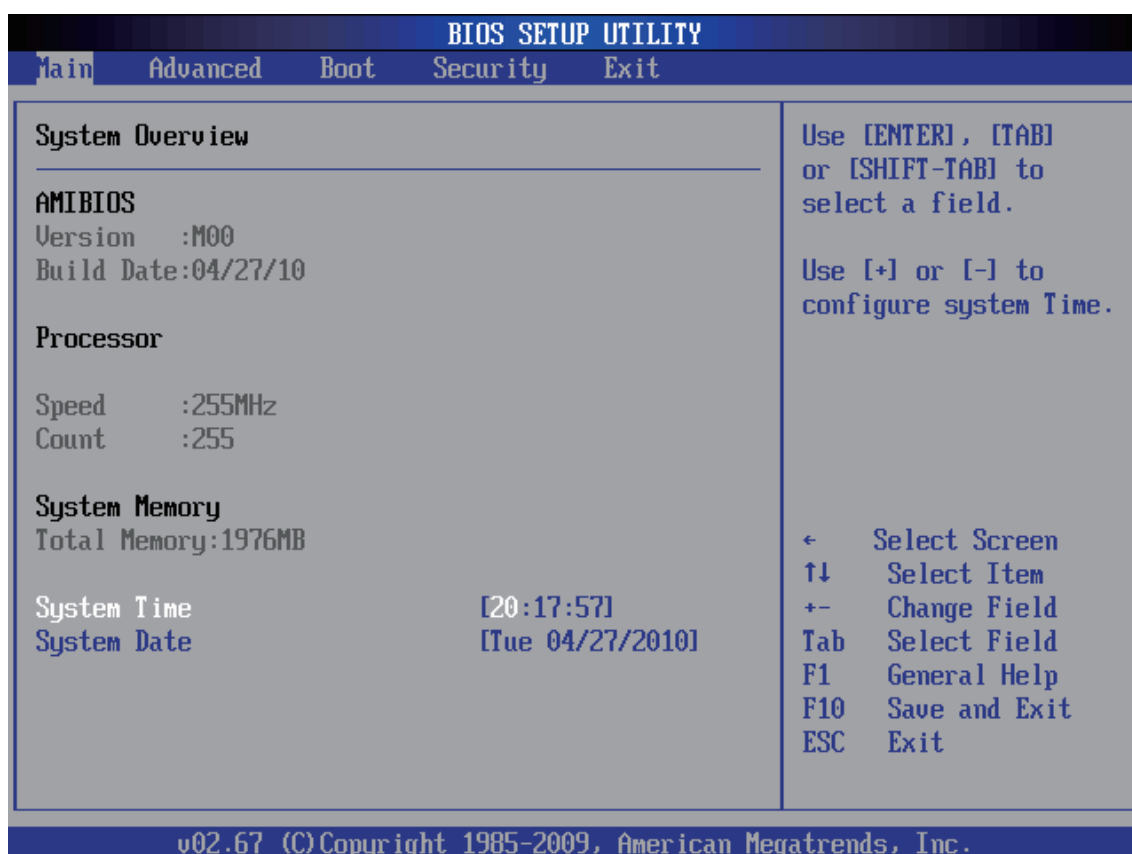
The <F8> key on your keyboard is the Fail-Safe key. It is not displayed on the BIOS key legend by default. To set the Fail-Safe settings of the BIOS, press the <F8> key on your keyboard. It is located on the upper row of a standard 101 keyboard. The Fail-Safe settings allow the motherboard to boot up with the least amount of options set. This can lessen the probability of conflicting settings.



## Main Setup

When you first enter the BIOS Setup Utility, you will enter the Main setup screen.

You can always return to the Main setup screen by selecting the Main tab. There are two Main Setup options. They are described in this section. The Main BIOS Setup screen is shown below.



### System Time/System Date

Use this option to change the system time and date. Highlight System Time or System Date using the <Arrow> keys. Enter new values through the keyboard. Press the <Tab> key or the <Arrow> keys to move between fields. The date must be entered in MM/DD/YY format. The time is entered in HH:MM:SS format.



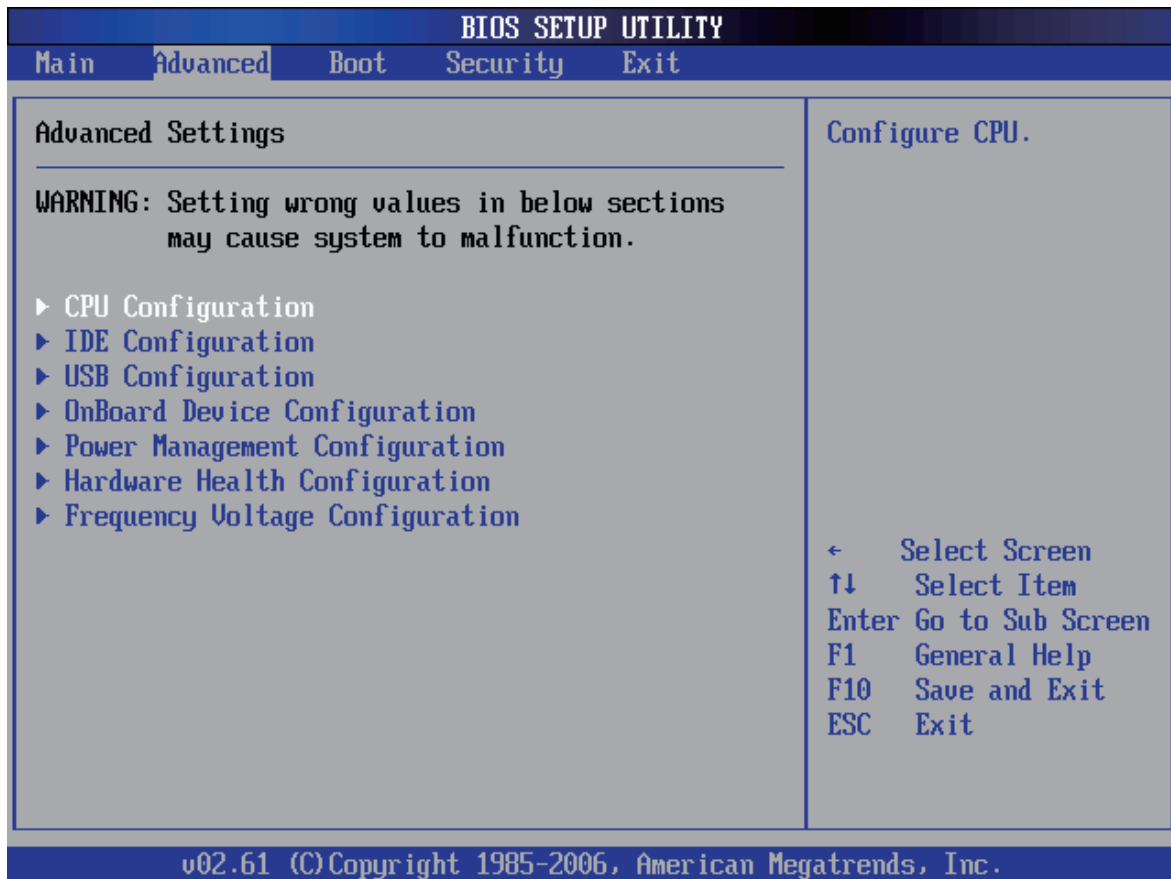
The time is in 24-hour format. For example, 5:30 A.M. appears as 05:30:00, and 5:30 P.M. as 17:30:00.

## Advanced

Select the Advanced tab from the BIOS setup screen to enter the Advanced BIOS Setup screen. You can select any of the items in the left frame of the screen, such as CPU Configuration, to go to the sub menu for that item.


You can display an Advanced BIOS Setup option by highlighting it using the <Arrow> keys. All Advanced BIOS Setup options are described in this section.

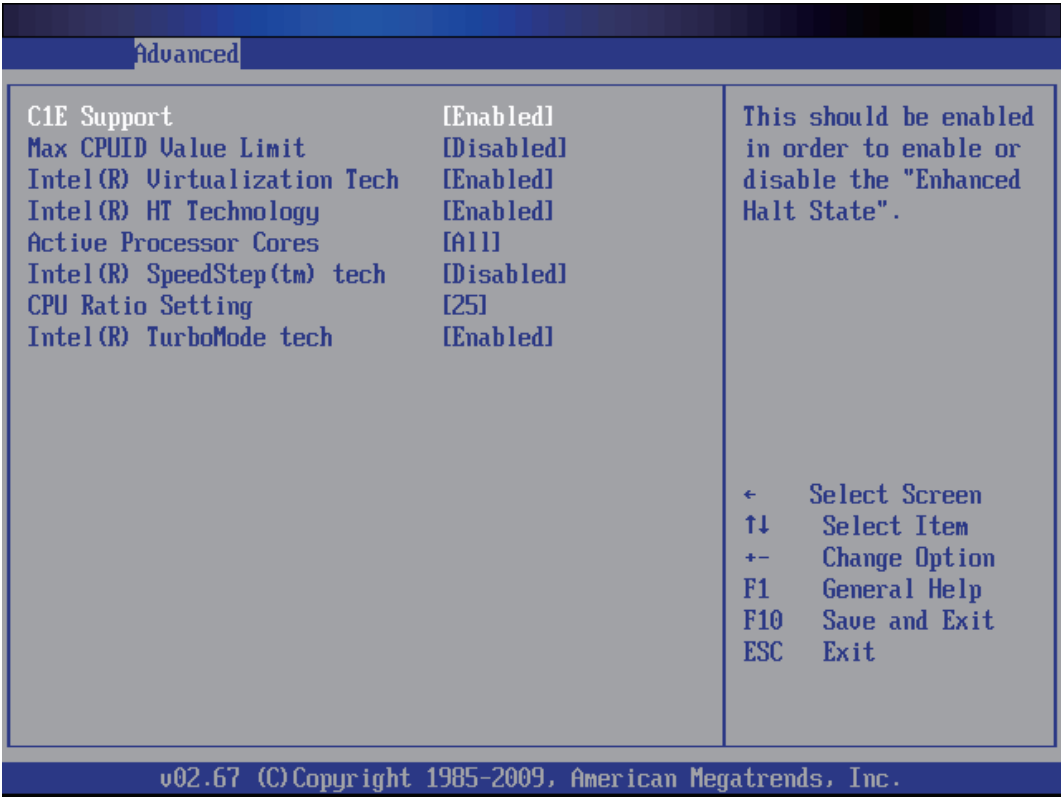
The Advanced BIOS Setup screen is shown below. The sub menus are described on the following pages.



**CPU Configuration**

You can use this screen to select options for the CPU Configuration Settings. Use the up and down <Arrow> keys to select an item. Use the <Plus> and <Minus> keys to change the value of the selected option. A description of the selected item appears on the right side of the screen. The settings are described on the following pages. An example of the CPU Configuration screen is shown below.

 The CPU Configuration setup screen varies depending on the installed processor.



**C1E Support**

When enabled, the processor could be switched into "Enhanced Halt State".  
➤ The choice: Enabled or Disabled.

**Max CPUID Value Limit**

This item allows you to enable or disable the Max CPUID Value Limit. For Prescott CPU only, some OSes (ex. NT4.0) cannot handle the function with disable. This should be enabled in order to boot legacy OSes that cannot support CPUs with extended CPUID functions.

Set Limit CPUID MaxVal to 3, Should Be "Disabled" for WinXp.

➤ The choice: Enabled or Disabled.



Some older O.S.'s (Win98, WinMe..) cannot handle a CPUID MaxVal greater than 3. Please choose "Enabled" if you use one of those O.S. If your O.S. is WinXP or Win2000, we suggest you "Disabled" the item.

**Intel(R) Virtualization Tech**

When enabled, a VMM can utilize the additional hardware capabilities provided by Vanderpool Technology.

➤ The choice: Enabled or Disabled.



CPU support, item appear.

**Intel (R) HT Technology**

This item allows you to enable or disable the Intel(R) Hyper-Threading Technology.

➤ The choice: Enabled or Disabled.

**Active Processor**

This item allows you to determine how many cores to be enabled.

➤ The choice: All, 1 and 2.

**Intel(R) SpeedStep(tm) tech**

This item allows you to enable or disable the Intel(R) SpeedStep(tm) tech. Processor can switch between multiple frequency and voltage points to enable power savings.

➤ The choice: Enabled or Disabled.

**CPU Ratio Setting**

This item allows the user to adjust CPU Clock Ratio.

➤ The choice: 12X~60X.

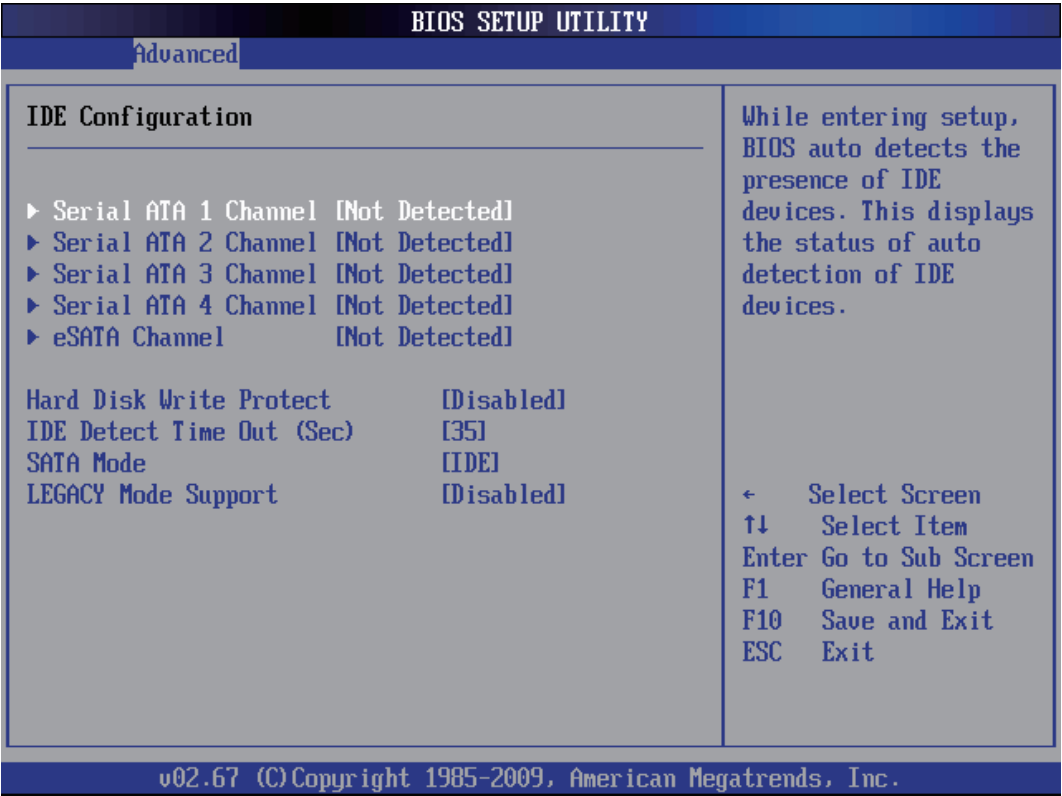
**Intel(R) TurboMode**

This item allows you to enable or disable the Intel(R) TurboMode. Processor can switch between multiple frequency when needed.

➤ The choice: Enabled or Disabled.

## IDE Configuration

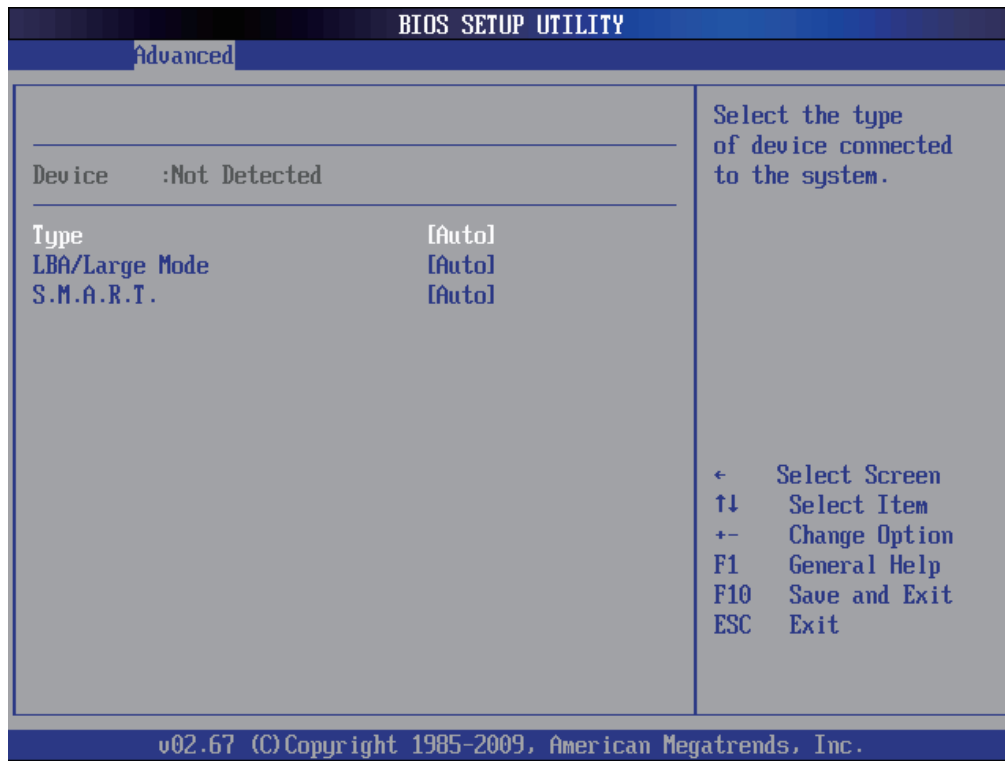
You can use this screen to select options for the IDE Configuration Settings. Use the up and down <Arrow> keys to select an item. Use the <Plus> and <Minus> keys to change the value of the selected option. A description of the selected item appears on the right side of the screen. The settings are described on the following pages. An example of the IDE Configuration screen is shown below.



\*\*\*\*\*

Press <Enter> to access the sub menu for the IDE drives.

The screen is shown below.



### **Type**

This option sets the type of device that the AMIBIOS attempts to boot from after the Power-On Self-Test (POST) has completed.

➤ The choice: Not Installed,Auto,DVD,ARMD.

### **LBA/Large Mode**

LBA (Logical Block Addressing) is a method of addressing data on a disk drive. In LBA mode, the maximum drive capacity is 137 GB.

➤ The choice: Disabled,Auto.



For drive capacities over 137 GB, your AMIBIOS must be equipped with 48-bit LBA mode addressing. If not, contact your motherboard manufacturer or install an ATA/133 IDE controller card that supports 48-bit LBA mode.

**S.M.A.R.T.**

Self-Monitoring Analysis and Reporting Technology (SMART) feature can help predict impending drive failures.

➤ The choice: Auto, Enabled, Disabled.

\*\*\*\*\*

**Hard Disk Write Protect**

Set this option to protect the hard disk drive from being overwritten.  
The Optimal and Fail-Safe default setting is Disabled.

Disabled: Set this value to allow the hard disk drive to be used normally. Read, write, and erase functions can be performed to the hard disk drive. This is the default setting.

Enabled: Set this value to prevent the hard disk drive from being erased.

➤ The choice: Enabled, Disabled.

**IDE Detect Time Out (Sec)**

Set this option to stop the AMIBIOS from searching for IDE devices within the specified number of seconds. Basically, this allows you to fine-tune the settings to allow for faster boot times. Adjust this setting until a suitable timing that can detect all IDE disk drives attached is found.

The Optimal and Fail-Safe default setting is 35.

➤ The choice: 0, 5, 10, 15, 20, 25, 30, 35.



Different IDE disk drives take longer for the BIOS to locate than others do.

**SATA Mode**

This item allows you to set the SATA Mode.

➤ The choice: IDE or AHCI.

**LEGACY Mode Support**

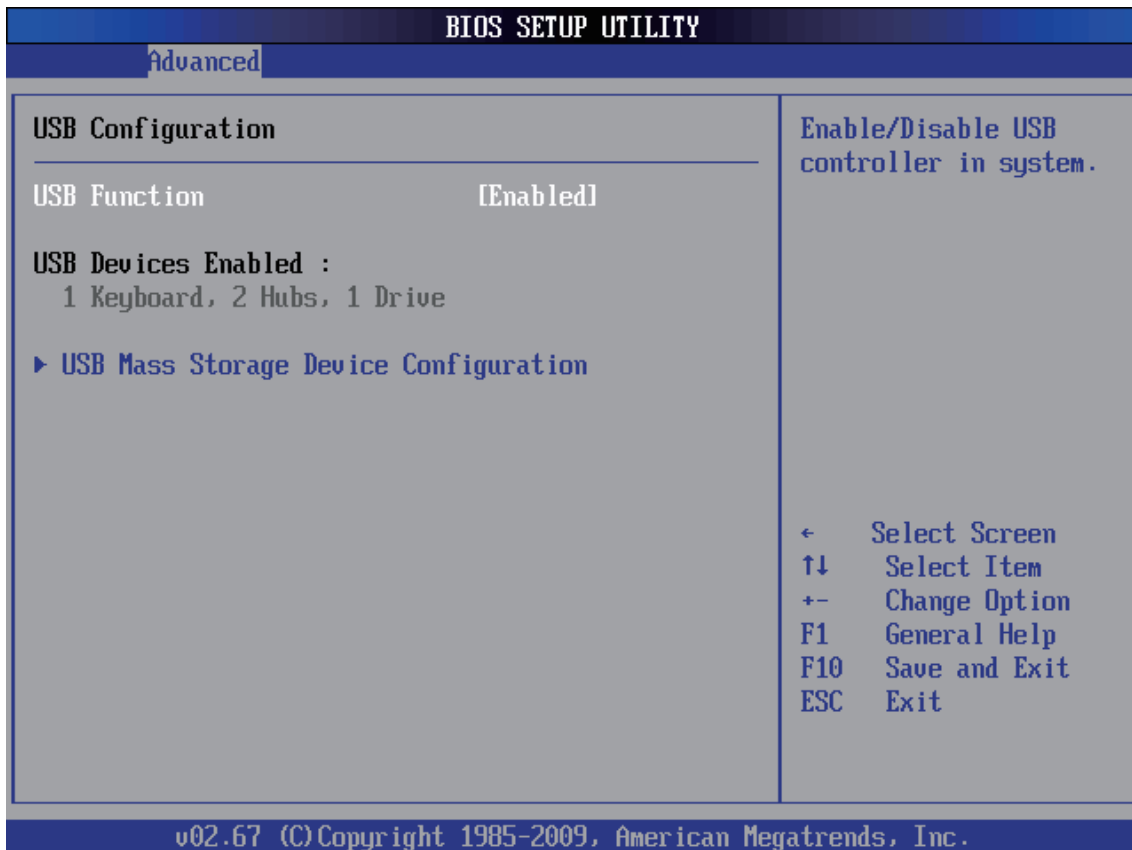
Certain OS is not supported under Native mode.

➤ The choice: Enabled or Disabled.

## **USB Configuration**

You can use this screen to select options for the USB Configuration. Use the up and down <Arrow> keys to select an item. Use the <Plus> and <Minus> keys to change the value of the selected option. The settings are described on the following pages.

The screen is shown below.



### **USB Function**

Set this value to allow the system to enable or disable the onboard USB ports.

➤ The choice: Enabled, Disabled.

### **USB Mass Storage Reset Delay**

It enables you to set the number of seconds the POST waits for the USB mass storage device after the start unit command is sent.

➤ The choice: 10 Sec, 20 Sec, 30 Sec, 40 Sec.



---

### **USB Mass Storage Reset Delay**

It enables you to set the number of seconds the POST waits for the USB mass storage device after the start unit command is sent.

➤ The choice: 10 Sec, 20 Sec, 30 Sec, 40 Sec.

### **Device #1**

Read only.

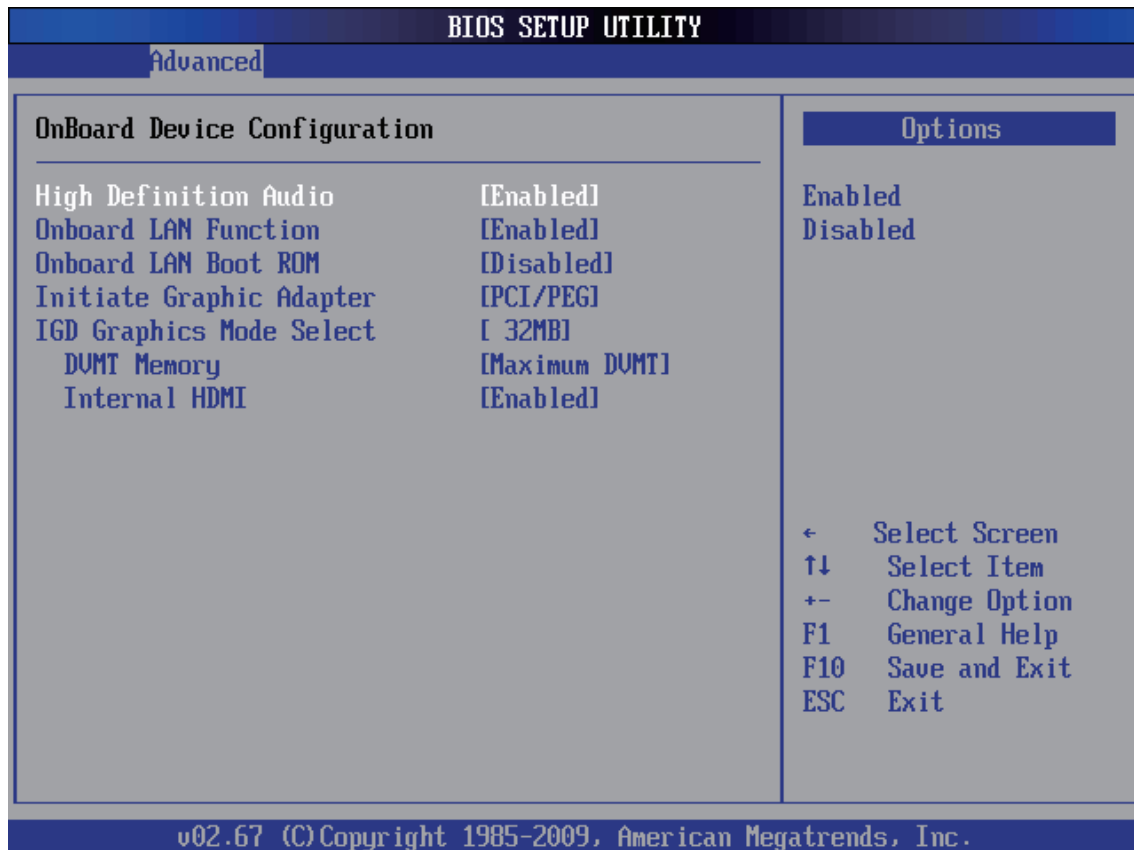
### **Emulation Type**

If Auto, USB devices less than 530 MB will be emulated as Floppy and remaining as hard drive. Forced FDD option can be used to force a HDD formatted drive to boot as FDD (Ex. ZIP drive)..

➤ The choice: Auto, Floppy, Forced, FDD, Hard Disk, DVDROM.

## **Onboard Device Configuration**

You can use this screen to select options for the Onboard Device Configuration. Use the up and down <Arrow> keys to select an item. Use the <Plus> and <Minus> keys to change the value of the selected option. The settings are described on the following pages. The screen is shown below.



### **High Definition Audio**

This item allows you to enable or disable the HD Audio.

- The choice: Enabled, Disabled.

### **Onboard LAN Function**

This item allows you to enable or disable the onboard LAN Function.

- The choice: Enabled, Disabled.

### **Onboard LAN Boot ROM**

This item allows you to enable or disable the Onboard LAN Boot ROM.

- The choice: Enabled, Disabled.

---

### **Initiate Graphic Adapter**

This item allows you to set the Initiate Graphic Adapter.

- The choice: PCI , PCIEx.

### **IGD Graphics Mode Select**

This item allows you to set the IGD Graphics Mode Select.

- The choice: 32MB ,64MB ,128MB.

### **DVMT Memory**

This item allows you to set the DVMT Memory.

- The choice:128MB , 256MB , Maximum DVMT.

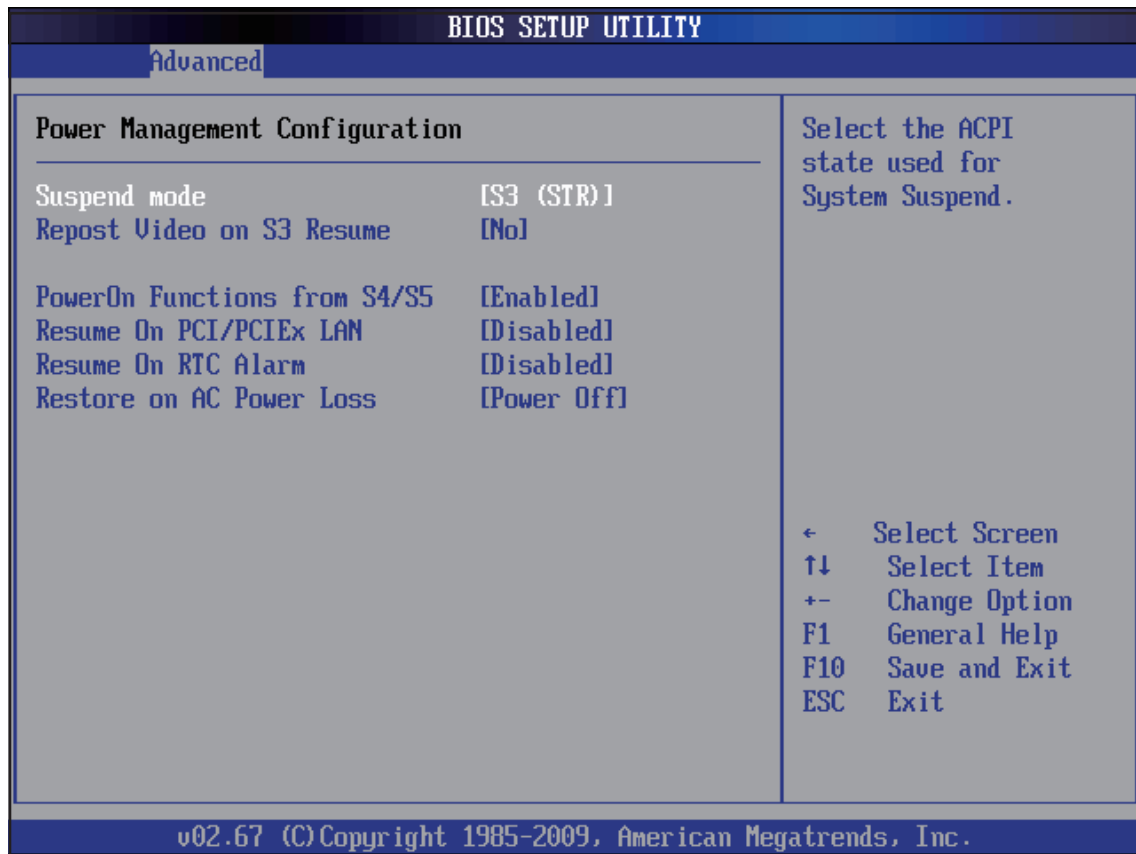
### **Internal HDMI**

This item allows you to enable or disable the HDMI audio function.

- The choice: Enabled or Disabled.

## **Power Management Configuration**

You can use this screen to select options for the Power Management Configuration. Use the up and down <Arrow> keys to select an item. Use the <Plus> and <Minus> keys to change the value of the selected option. The settings are described on the following pages. The screen is shown below.



### **Suspend mode**

Select the ACPI state used for System Suspend.

- The choice: S1 (POS), S3 (STR).

### **Repost Video on S3 Resume**

Determines whether to invoke VGA BIOS POST on S3/STR resume.

- The choice: Yes, No.

---

### **PowerOn Functions From S4/S5**

This item allows you to enable/disable the Power On Function From S4/S5 .

- The choice: Enabled, Disabled.

### **Resume On PCI/PCIEx LAN**

This item allows you to enable/disable PCI/PCIEx LAN to generate .

- The choice: Enabled, Disabled.

### **Resume On RTC Alarm**

This item allows you to set Resume On RTC Alarm.

- The choice: Enabled, Disabled.

### **RTC Alarm Pate (Days)**

This item Selects the alarm Pate (day of the month).

- Key in: "+" or "-" to select.

### **System Time**

Time (hh:mm:ss)Alarm.

This item Selects the alarm time.

- [hh]: Key in a DEC number: Min=0 ,Max=23.
- [mm/ss]: Key in a DEC number: Min=0 ,Max=59.

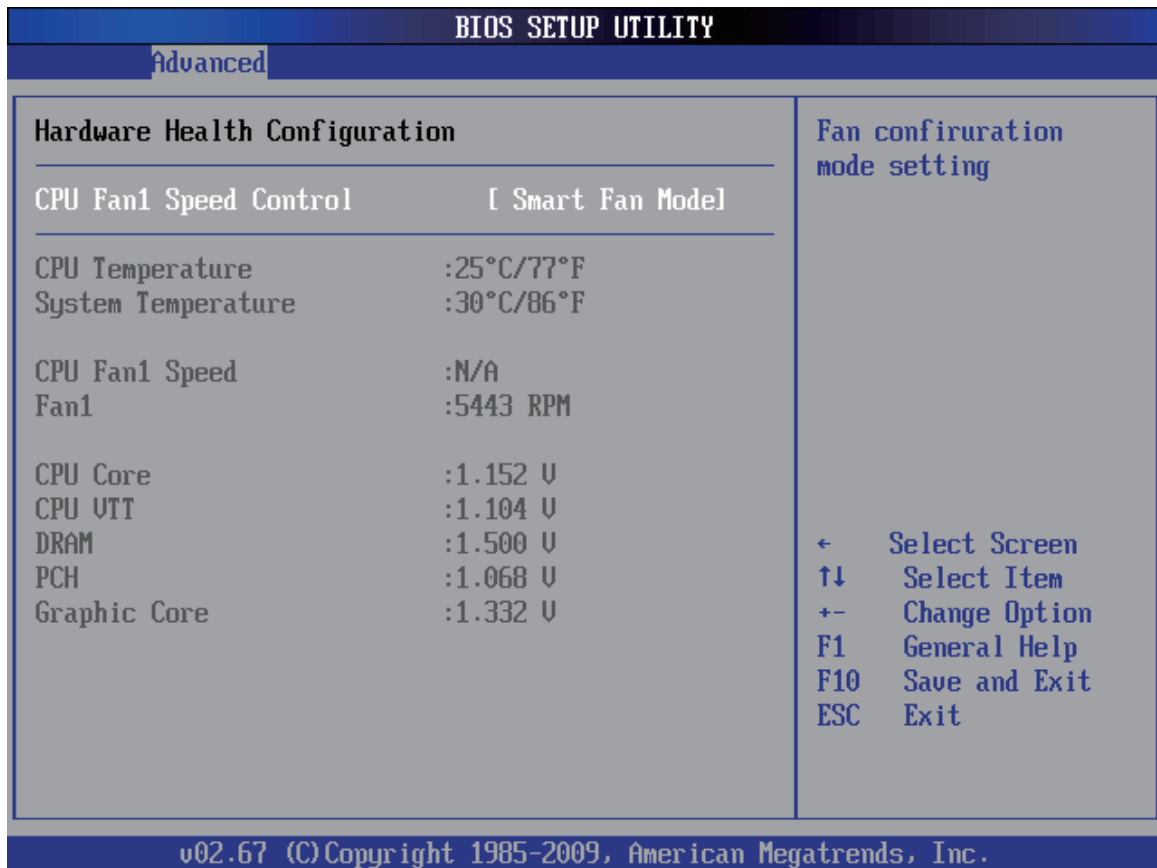
### **Restore on AC Power Loss**

This item allows you to set Restore on AC Power Loss.

- The choice: Power Off , Power On.

## **Hardware Health Configuration**

You can use this screen to select options for the Hardware Health Configuration. Use the up and down <Arrow> keys to select an item. Use the <Plus> and <Minus> keys to change the value of the selected option. The settings are described on the following pages. The screen is shown below.



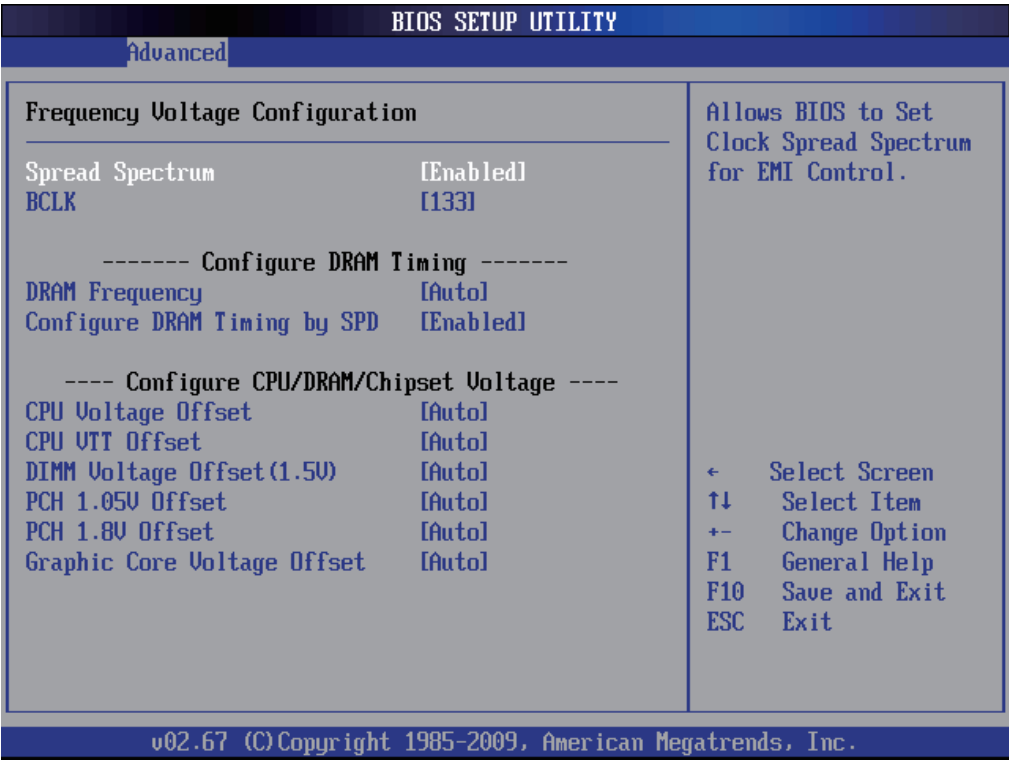
### **CPU Fan 1 Speed Control**

Here you can set the CPU Fan 1 Speed.

- The choice: Smart Fan Mode, Ultra-Low Speed, Low Speed, Mid Speed, or Full Speed.

**Frequency Voltage Configuration**

You can use this screen to select options for the Frequency Voltage Configuration. Use the up and down <Arrow> keys to select an item. Use the <Plus> and <Minus> keys to change the value of the selected option. The settings are described on the following pages. The screen is shown below.



**---- Configure ICS ICS9LPRS365 Clock Generator ----**

**Spread Spectrum**

This item allows to set Clock Spread Spectrum for EMI Control.

- The choice: Disabled or Enabled.

**BCLK**

This item allows the user to adjust Base Clock.

Min: 100      Max: 250

- Key in a DEC number: (Between Min and Max.)

---

## ---- Configure DRAM Timing ----

### **DRAM Frequency**

This item allows to set DRAM Frequency. If [Auto] is selected, the motherboard will detect the memory module(s) inserted and assigns appropriate frequency automatically.

- The choice: Auto, 667MHz, 800MHz.

### **Configure DRAM Timing by SPD**

Select [Enabled] will configure the following items by the contents in the SPD (Serial Presence Detect) device.

- The choice: Disabled or Enabled.

### **DRAM tCL**

When synchronous DRAM is installed, the number of clock cycles of CAS latency depends on the DRAM timing

- The choice: 3 ~ 10.

### **DRAM tRAS**

The precharge time is the number of cycles it takes for DRAM to accumulate its charge before refresh.

- The choice: 9 ~ 24.

### **DRAM tRP**

If an insufficient number of cycles is allowed for the RAS to accumulate its charge before DRAM refresh, the refresh may be-incompleted, and the DRAM may fail to retain data. Fast gives faster performance; and Slow gives more stable performance. This field is applied only when synchronous DRAM is installed in the system.

- The choice: 3 ~ 10.

### **DRAM tRCD**

This field lets you insert a timing delay between the CAS and RAS strobe signals, and you can use it when DRAM is written to, read from, or refreshed. Faster performance is gained in high speed, more stable performance, in low speed. This field is applied only when synchronous DRAM is installed in the system.

- The choice: 3 ~ 10.



**DRAM tWR**

This item allows you to set Write Recovery Time.

- The choice: 3 ~ 15

**DRAM tRFC**

This item allows you to set Refresh Cycle Time.

- The choice: 3 ~ 15

**DRAM tWTR**

This item allows you to set Write to Read Delay.

- The choice: 2 ~ 15.

**DRAM tRRD**

This item allows you to set Row Active Delay.

- The choice: 2 ~ 15.

**DRAM tRTP**

This item allows you to set Read to Precharge Delay.

- The choice: 2 ~ 15.

**DRAM tFAW**

This item allows you to set Four Activate Window Delay Time.

- The choice: 15 ~ 63.

**---- Configure CPU/DRAM/Chipset Voltage ----**

Over voltage may destroy the devices like CPU, DRAM or Chipset!!

**CPU Voltage Offset**

This item allows you to set CPU Voltage Offset.

- The choice: +50mV~+300mV or Auto.

**CPU VTT Offset**

This item allows you to set CPU VTT Offset.

- The choice: +50mV~+300mV or Auto.

**DIMM Voltage Offset**

This item allows you to set DIMM Voltage Offset.

- The choice: +50mV~+300mV or Auto.

---

**PCH 1.05V Offset**

This item allows you to set PCH 1.05V Offset.

- The choice: +50mV~+300mV or Auto.

**PCH 1.8V Offset**

This item allows you to set PCH 1.8V Offset.

- The choice: +50mV~+300mV or Auto.

**Graphic Core Voltage Offset**

This item allows you to set Graphic Core Voltage Offset.

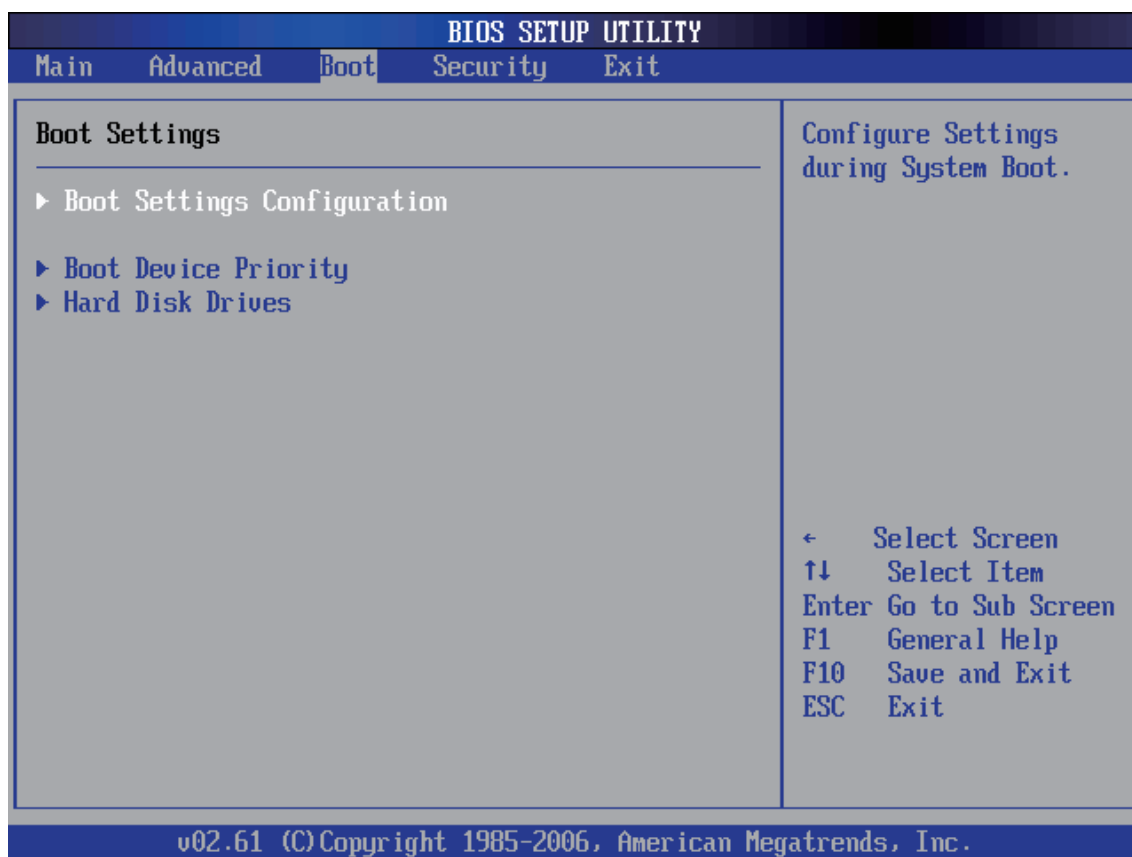
- The choice: +50mV~+300mV or Auto.

## **Boot**

Select the Boot tab from the BIOS setup screen to enter the Boot BIOS Setup screen. You can select any of the items in the left frame of the screen, such as Boot Settings Configuration, to go to the sub menu for that item.

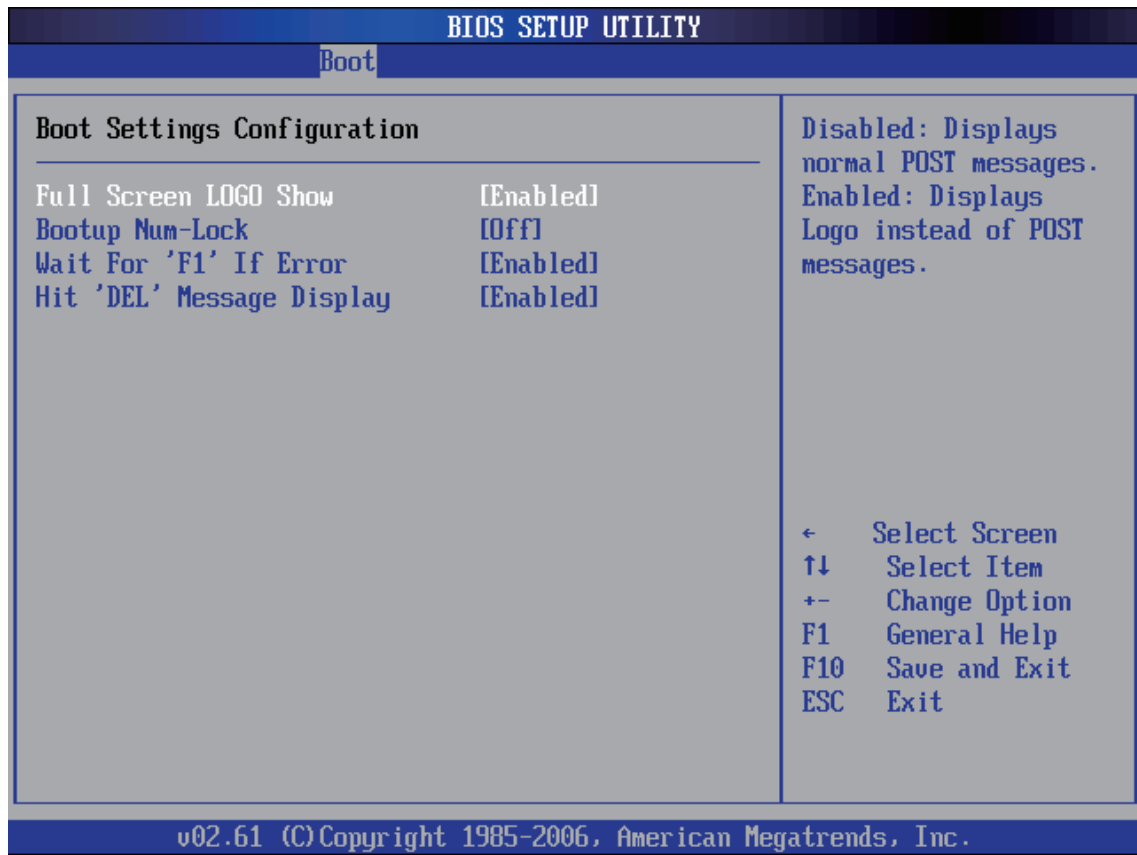
You can display an Boot BIOS Setup option by highlighting it using the <Arrow> keys. All Boot BIOS Setup options are described in this section.

The Boot BIOS Setup screen is shown below. The sub menus are described on the following pages.



### **Boot Settings Configuration**

You can use this screen to select options for the Boot Settings Configuration. Use the up and down <Arrow> keys to select an item. Use the <Plus> and <Minus> keys to change the value of the selected option. The settings are described on the following pages. The screen is shown below.



### **Full Screen LOGO Show**

This item allows you to enable/disable the Full Screen LOGO Show.

Disabled: Displays normal POST messages.

Enabled: Displays Logo instead of POST messages.

➤ The choice: Enabled, Disabled.

### **Bootup Nnum-Lock**

Select Power-on state for Nnumlock.

➤ The choice: On or Off.

### **Wait For 'F1' If Error**

This item allows you to enable or disable the Wait For 'F1' If Error.

➤ The choice: Enabled, Disabled.

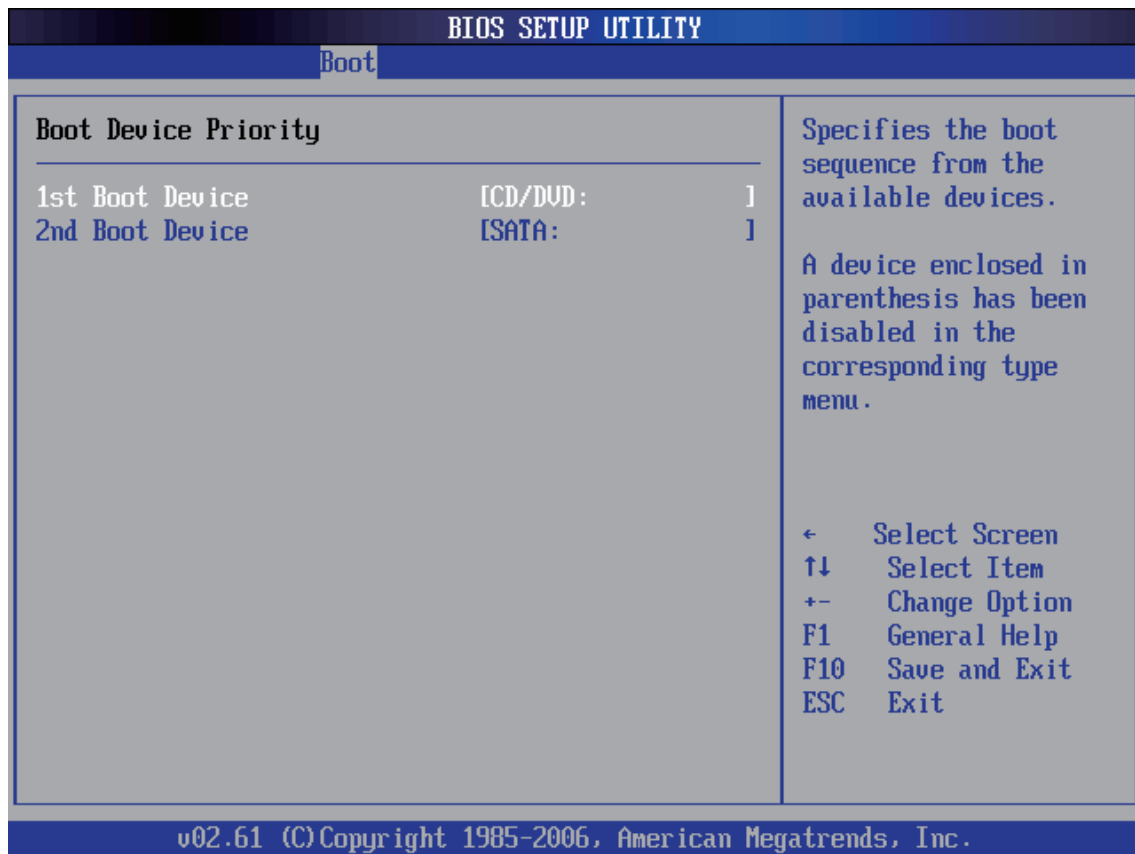
### **Hit 'DEL' Message Display**

This item allows you to enable or disable the Hit 'DEL' Message Display.

➤ The choice: Enabled, Disabled.

## Boot Device Priority

Use this screen to specify the order in which the system checks for the device to boot from. To access this screen, select Boot Device Priority on the Boot Setup screen and press <Enter>. The following screen displays:



To change the boot order, select a boot category type such as Hard disk drives, Removable Drives, or DVD Drives from the boot menu.

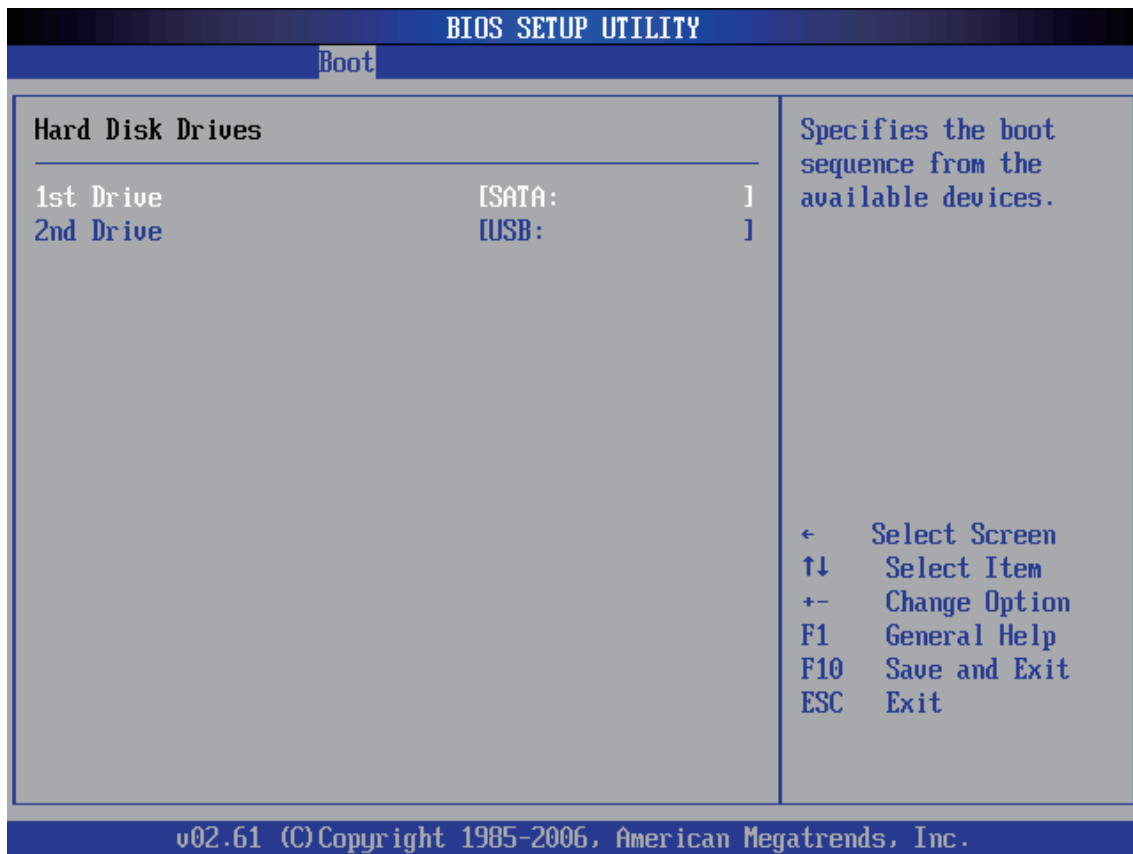
For example, if the 1st boot device is set to Hard disk drives, then BIOS will try to boot to hard disk drives first.



When you select a boot category from the boot menu, a list of devices in that category appears. For example, if the system has three hard disk drives connected, then the list will show all three hard disk drives attached.

### Hard Disk Drives /Removable Drives / DVD Drives

Use this screen to view the Hard Disk Drives in the system. To access this screen, select Hard disk drives on the Boot Setup screen and press <Enter>. The following screen displays examples of hard disk drives:

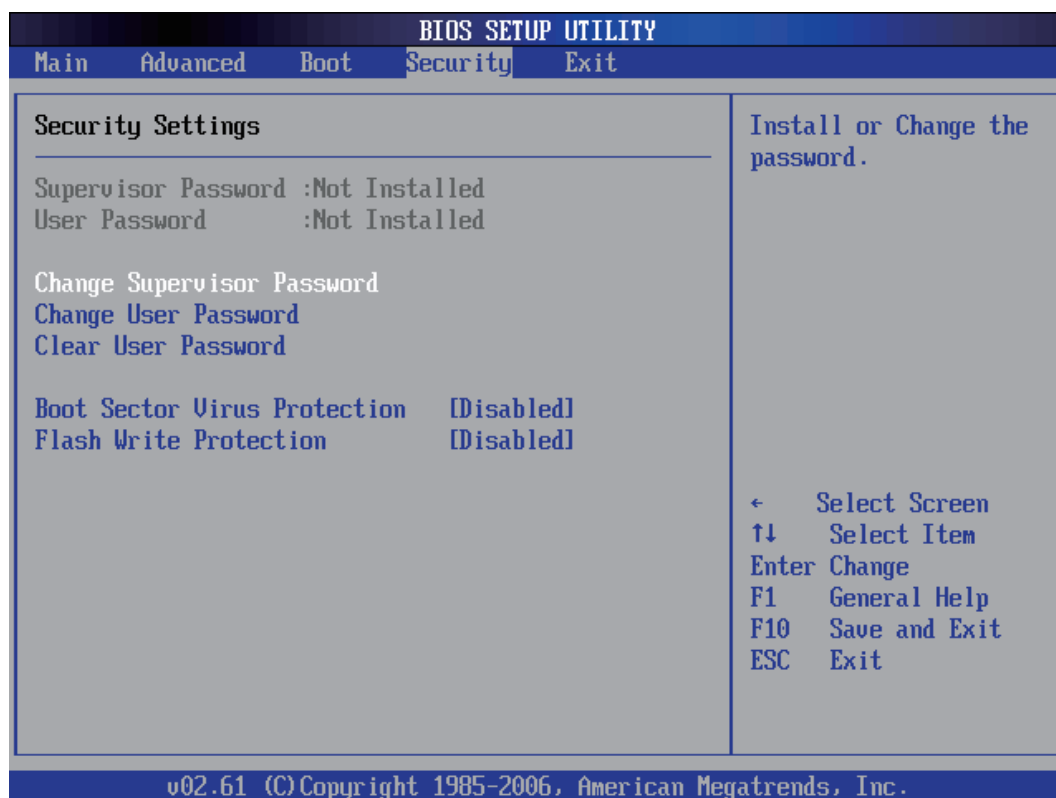


Specifies the boot sequence from the available devices.

## Security

Select the Security tab from the BIOS setup screen to enter the Security BIOS Setup screen. You can display an Security BIOS Setup option by highlighting it using the <Arrow> keys. All Security BIOS Setup options are described in this section.

The Security Setup screen is shown below. The sub menus are documented on the following pages.



### **Supervisor Password**

Indicates whether a supervisor password has been set. If the password has been installed, Installed displays. If not, Not Installed displays.

### **User Password**

Indicates whether a user password has been set. If the password has been installed, Installed displays. If not, Not Installed displays.

### **Change Supervisor Password**

Select Change Supervisor Password from the Security Setup menu and press <Enter>.

Enter New Password:

appears. Type the password and press <Enter>. The screen does not display the characters entered. Retype the password as prompted and press <Enter>. If the password confirmation is incorrect, an error message appears. The password is stored in NVRAM after BIOS completes.

### **Change User Password**

Select Change User Password from the Security Setup menu and press <Enter>.

Enter New Password:

appears. Type the password and press <Enter>. The screen does not display the characters entered. Retype the password as prompted and press <Enter>. If the password confirmation is incorrect, an error message appears. The password is stored in NVRAM after BIOS completes.

### **Clear User Password**

Select Clear User Password from the Security Setup menu and press <Enter>.

Clear New Password

[Ok] [Cancel]

appears. Type the password and press <Enter>. The screen does not display the characters entered. Retype the password as prompted and press <Enter>. If the password confirmation is incorrect, an error message appears. The password is stored in NVRAM after BIOS completes.

### **Boot Sector Virus Protection**

This option is near the bottom of the Security Setup screen. The Optimal and Fail-Safe default setting is Disabled.

[Disabled] Set this value to prevent the Boot Sector Virus Protection.  
This is the default setting.

[Enabled] Select Enabled to enable boot sector protection. Bios displays a warning when any program (or virus) issues a Disk Format command or attempts to write to the boot sector of the hard disk drive. If enabled, the following appears when a write is attempted to the boot sector. You may have to type N several times to prevent the boot sector write.

Boot Sector Write!

Possible VIRUS: Continue (Y/N)? \_



The following appears after any attempt to format any cylinder, head, or sector of any hard disk drive via the BIOS INT 13 Hard disk drive Service:

Format!!!

Possible VIRUS: Continue (Y/N)? \_

- The choice: Enabled or Disabled.

### **Flash Write Protection**

Choose [Enabled] to avoid virus destroy BIOS. If you want to flash BIOS, you must set it [Disabled].

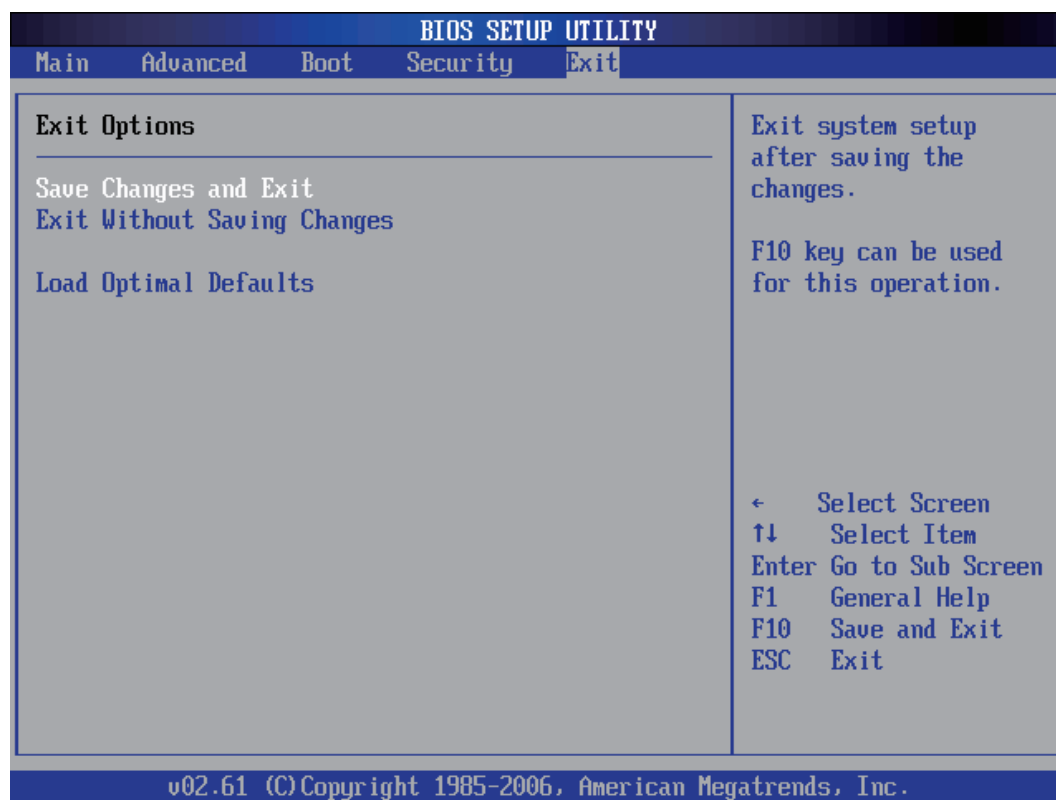
- The choice: Enabled or Disabled.

## **Exit**

Select the Exit tab from the BIOS setup screen to enter the Exit BIOS Setup screen.

You can display an Exit BIOS Setup option by highlighting it using the <Arrow> keys. All Exit BIOS Setup options are described in this section.

The Exit BIOS Setup screen is shown below.



---

### **Save Changes and Exit**

When you have completed the system configuration changes, select this option to leave BIOS Setup and reboot the computer so the new system configuration parameters can take effect.

Select "Save Changes and Exit" from the Exit menu and press <Enter>.

Save Configuration Changes and Exit Now?

[Ok] [Cancel]

appears in the window. Select Ok to save changes and exit.

### **Exit without Saving Changes**

Select "Exit without Saving Changes" from the Exit menu and press <Enter>.

Select Ok to discard changes and Exit.

### **Load Optimal Defaults**

BIOS automatically sets all BIOS Setup options to a complete set of default settings when you Select this option. The Optimal settings are designed for maximum system performance, but may not work best for all computer applications. In particular, do not use the Optimal BIOS Setup options if your computer is experiencing system configuration problems.

Select Load Optimal Defaults from the Exit menu and press <Enter>.

Select Ok to load optimal defaults.