
XPC User Guide

For the : SA76R4

Shuttle®

XPC Installation Guide

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Laser compliance statement

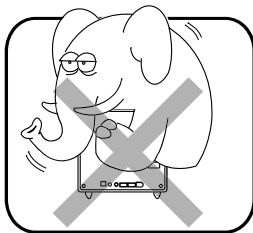
The optical disc drive in this server is a laser product. The drive's classification label is located on the drive.

CLASS 1 LASER PRODUCT

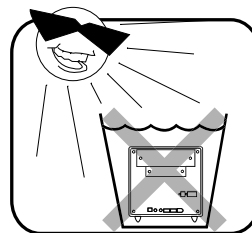
CAUTION : INVISIBLE LASER RADIATION WHEN OPEN.
AVOID EXPOSURE TO BEAM.

Installation Notices

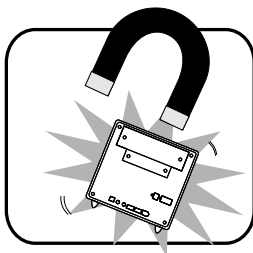
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Do not expose this device to high levels of direct sunlight, high-humidity or wet conditions.



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.

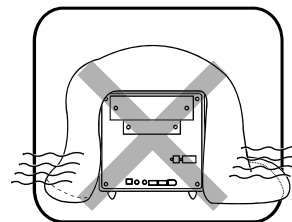


TABLE OF CONTENTS

Driver and Software Installation.....	1
Mainboard Driver DVD	1
User Manuals	2
Appendix.....	3
Starting BIOS	3
Enter the BIOS	3
Main Setup	5
Advanced	6
CPU Configuration	7
IDE Configuration.....	9
USB Configuration	11
Onboard Device Configuration.....	13
Power Management Configuration.....	15
Hardware Health Configuration.....	17
Frequency Voltage Configuration.....	18
Boot	20
Boot Settings Configuration	20
Boot Device Priority.....	22
Security	23
Exit	24

Driver and Software Installation

■ Motherboard Driver DVD



The DVD contents attached in SA76R4 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.

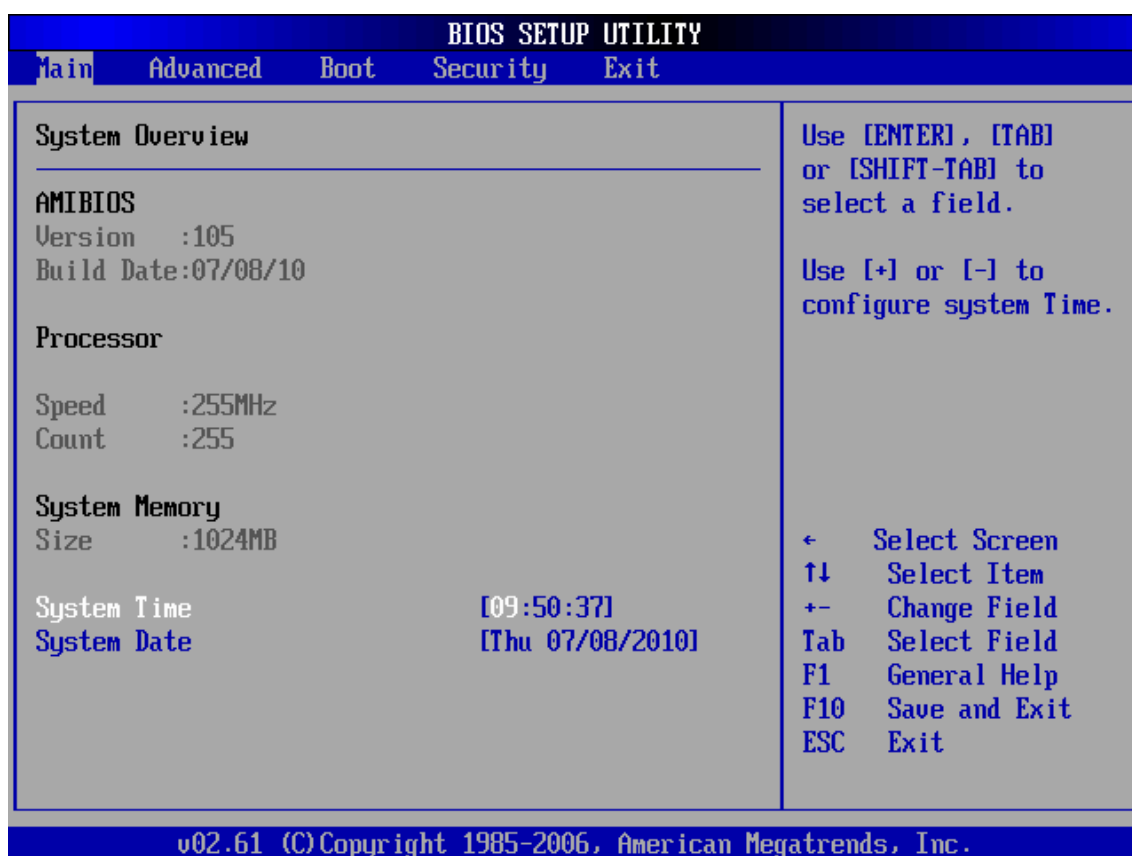


The <F8> key on your keyboard is the Fail-Safe key. It is not displayed on the BIOS key legend by default. To set the Fail-Safe settings of the BIOS, press the <F8> key on your keyboard. It is located on the upper row of a standard 101 keyboard. The Fail-Safe settings allow the motherboard to boot up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



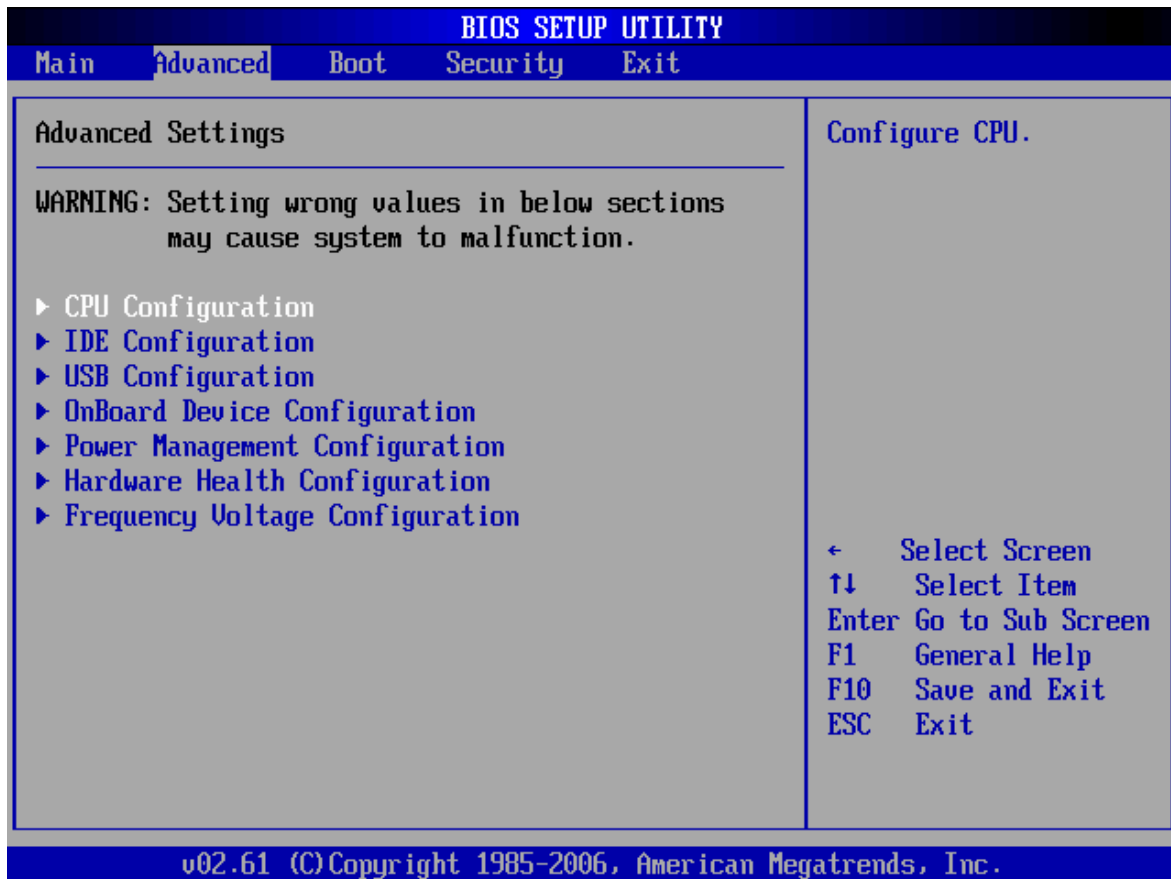
The time is in 24-hour format. For example, 5:30 A.M. appears as 05:30:00, and 5:30 P.M. as 17:30:00.

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.

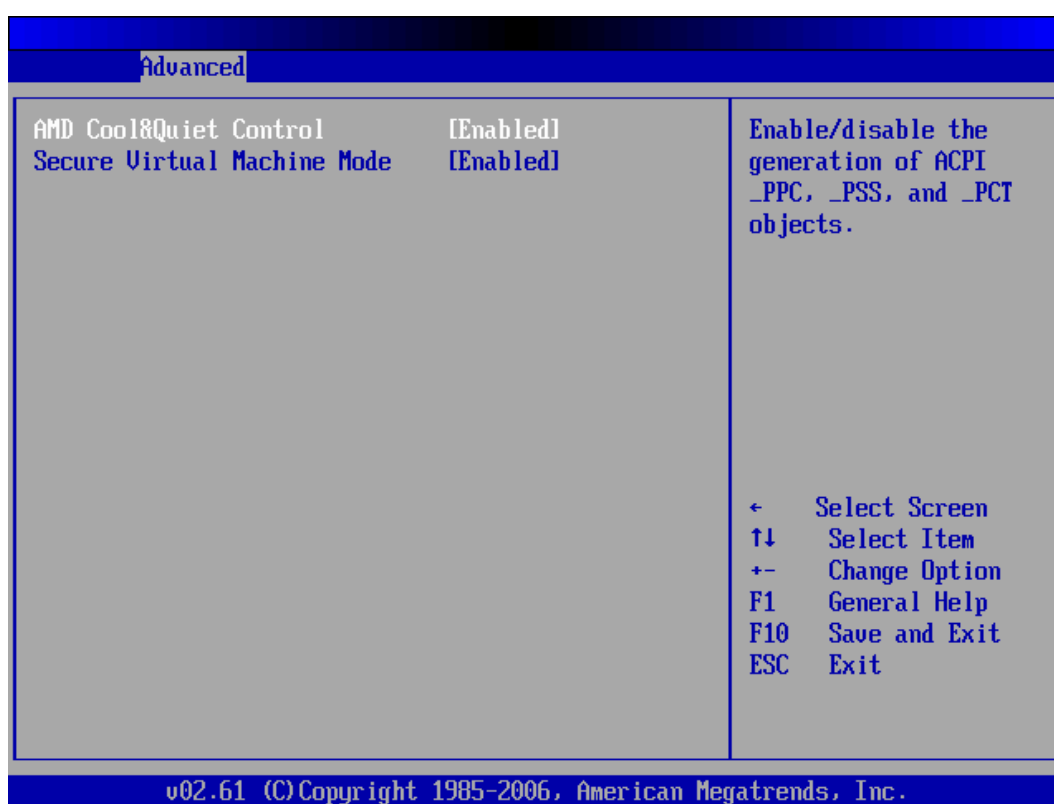


CPU Configuration

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.



AMD Cool&Quiet Control

This item allows you to enable or disable the AMD Cool&Quiet control. Processor can switch between multiple frequency and voltage points to enable power savings.

- The choice: Enabled or Disabled.

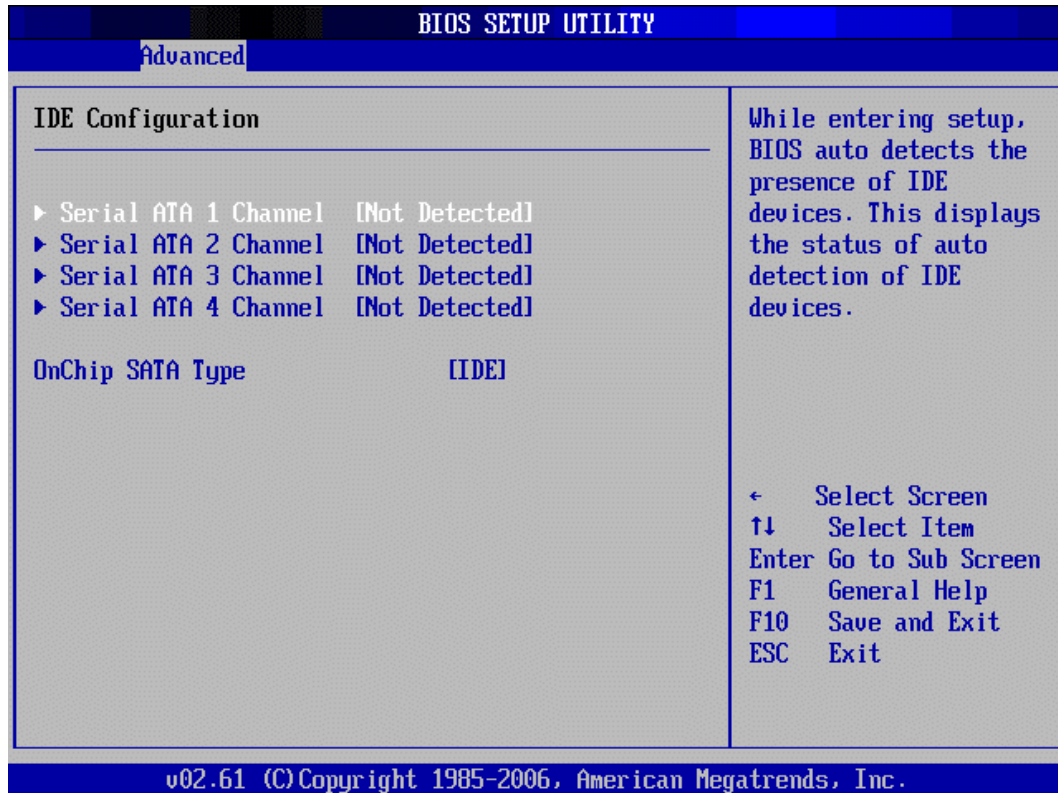
Secure Virtual Machine Mode

When enabled, a VMM can utilize the additional hardware capabilities.

- 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.



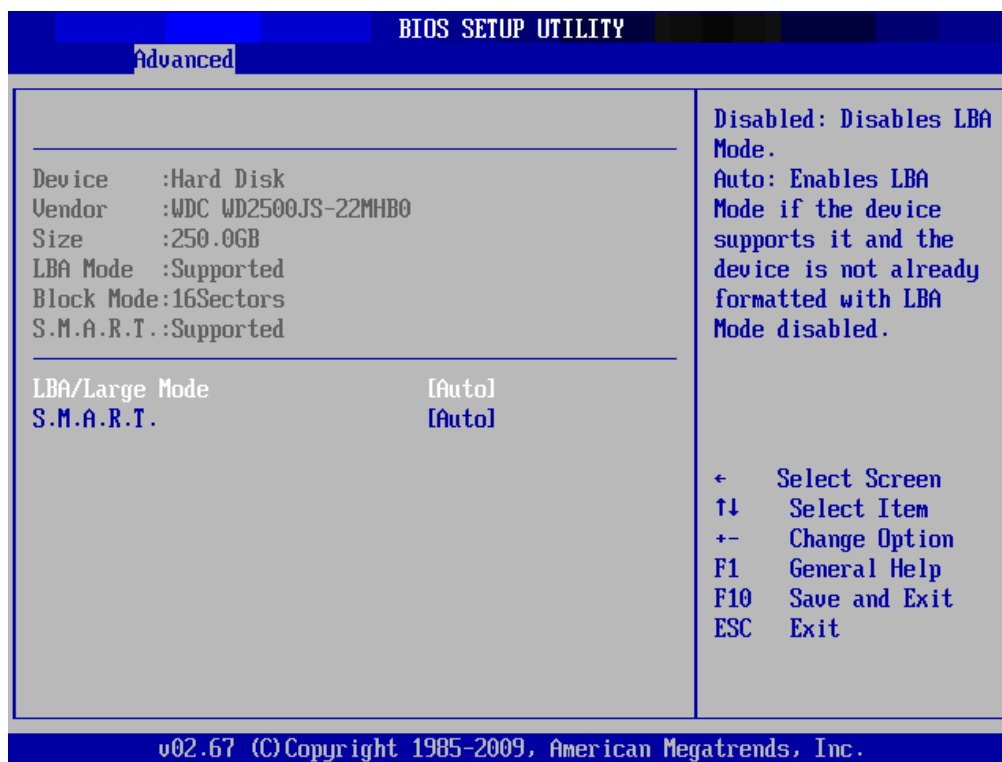
OnChip SATA Type

This item allows you to set the SATA Mode.

- The choice: IDE, AHCI, RAID.

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

The screen is shown below.



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.

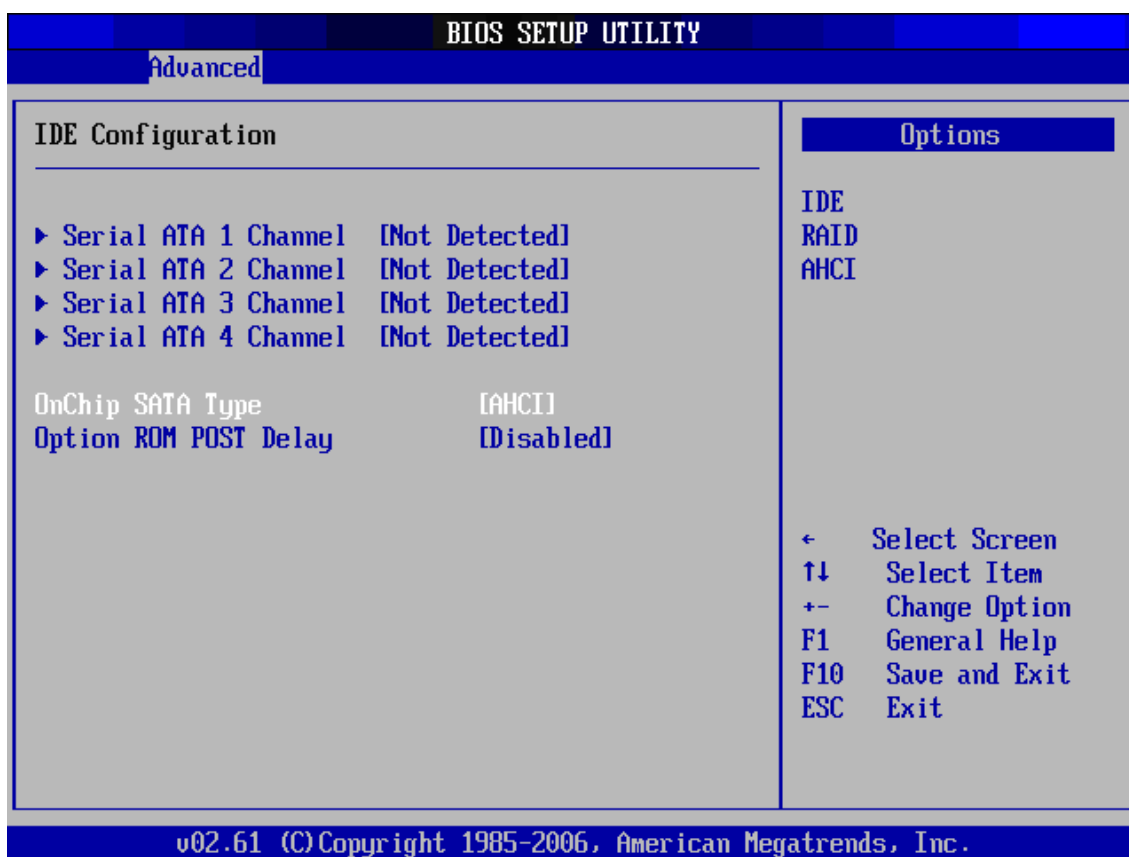
S.M.A.R.T.

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

➤ The choice: Auto,Enabled,Disabled.



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



OnChip SATA Type

This item allows you to set the SATA Mode.

- The choice: IDE, AHCI, RAID.

Option ROM POST Delay

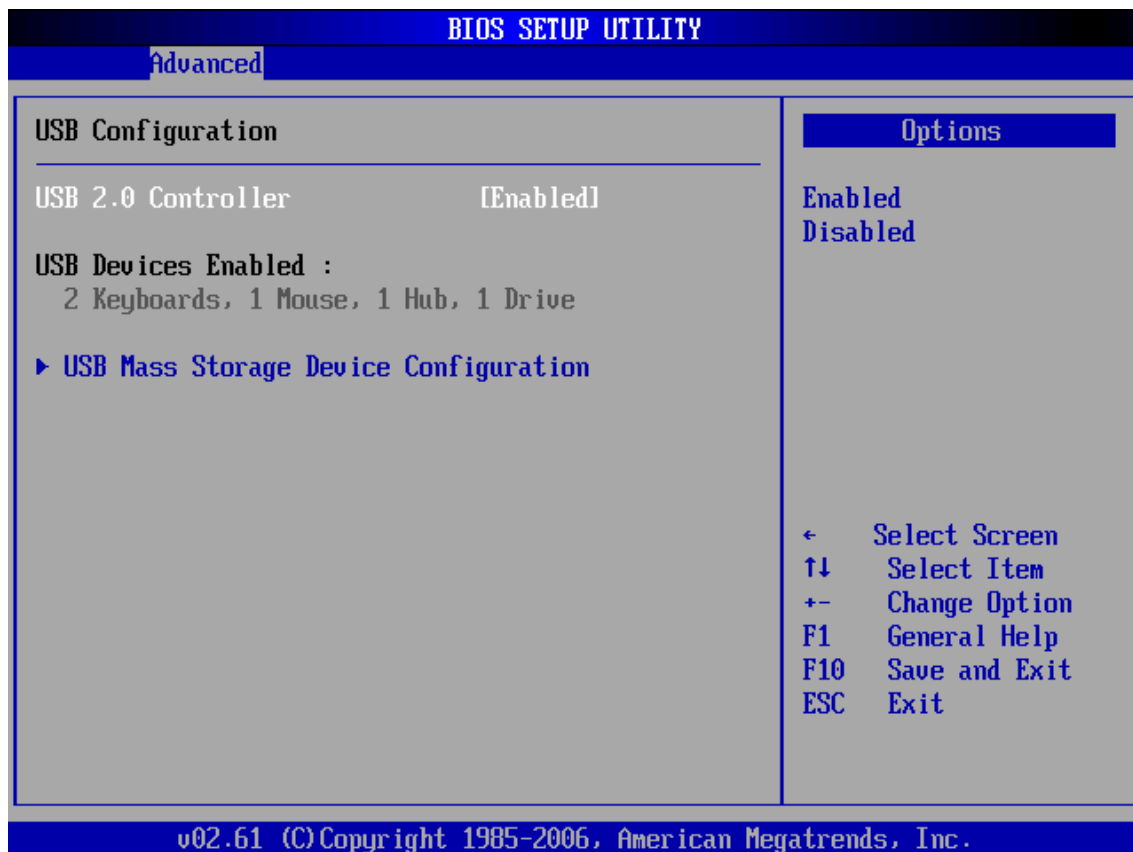
This item allows you to Option ROM POST Delay.

- The choice: Enabled, 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 2.0 Controller

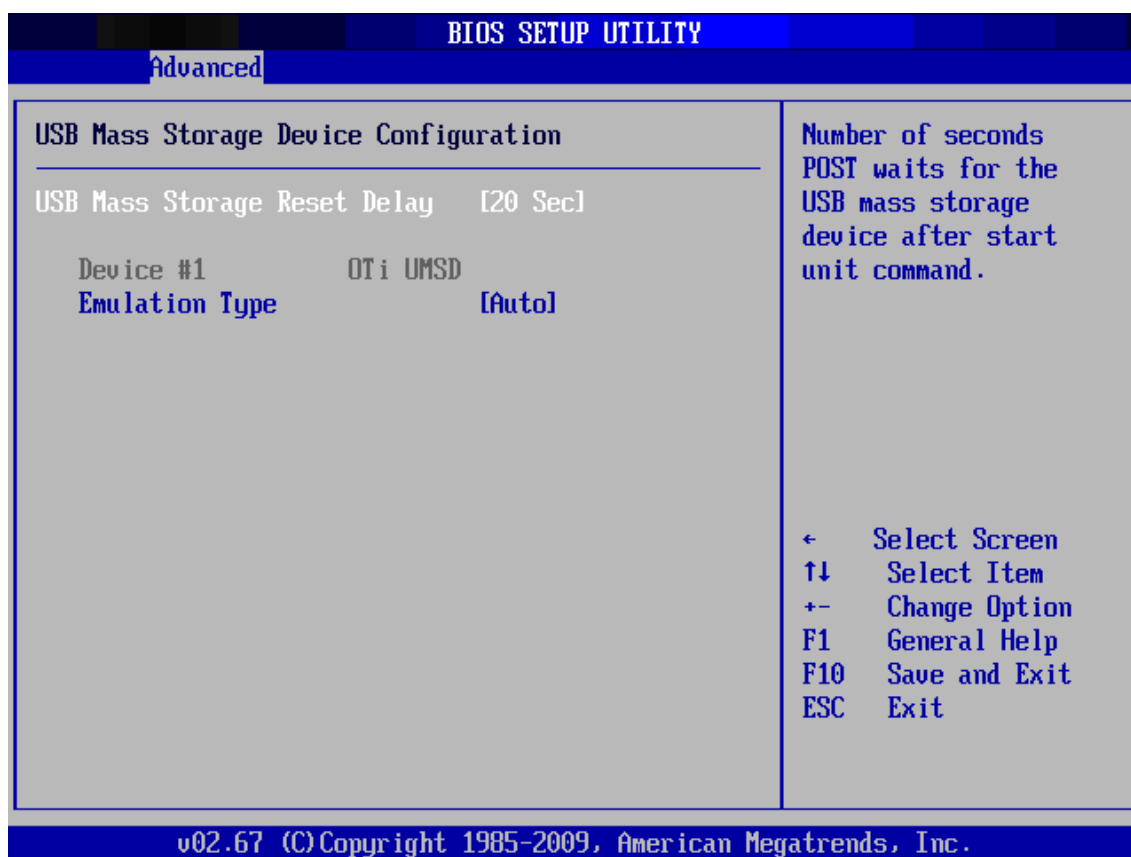
Set this value to allow the system to enable or disable the onboard USB 2.0 Controller.

- 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.



Device #1

Read only.

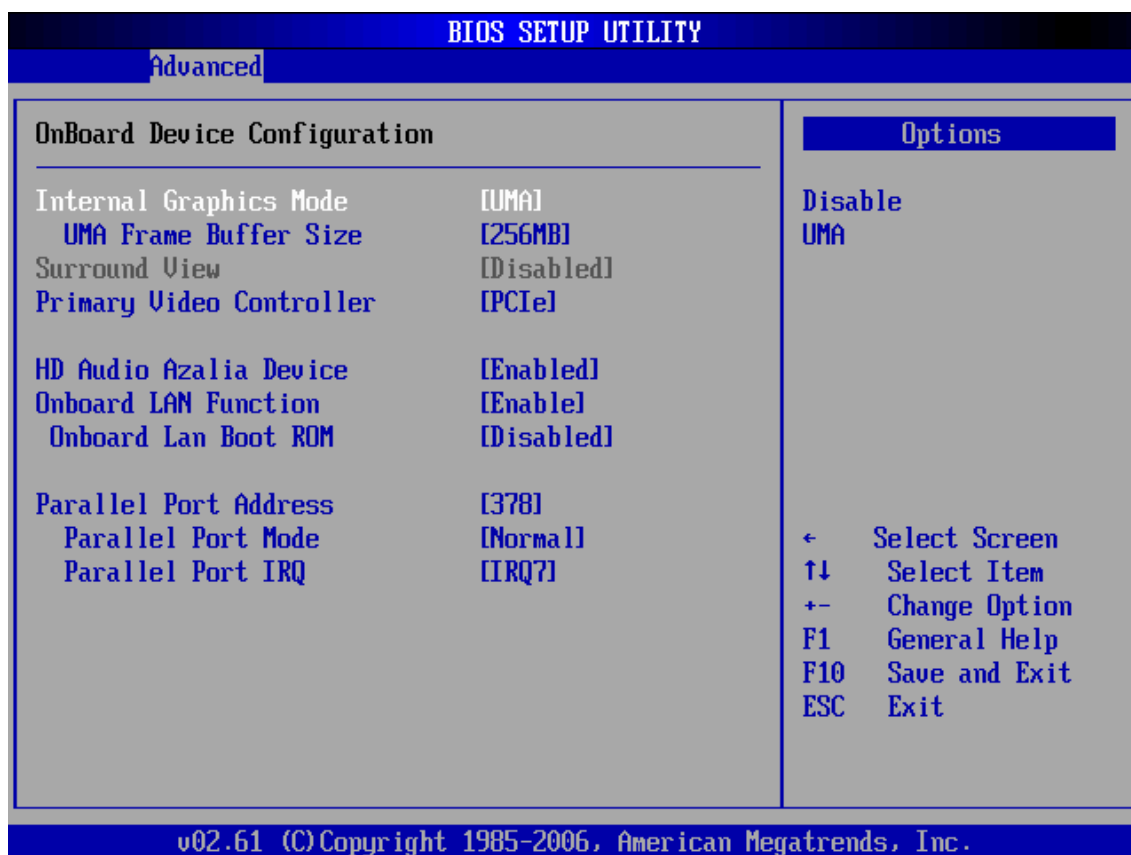
Emulation Type

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.



Internal Graphics Mode

This item allows you to set the Internal Graphics Mode.

- The choice: Disabled or UMA.

UMA Frame Buffer Size

This item allows you to set the onboard graphics memory.

- The choice: 32MB, 64MB, 128MB, 256MB, 512MB.

Surround View

This item allows you to enable or disable the Surround View function.

- The choice: Enabled, Disabled.

Primary Video Controller

This item allows you to set the primary video controller.

- The choice: PCIe, PCI, Onboard VGA.

High Definition Audio Azalia Device

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.

Parallel Port Address

Allows BIOS to select Parallel Port Base Addresses.

- The choice: 378, 278, 3BC

Parallel Port Mode

Allow BIOS to select Parallel Port mode.

- The choice: Normal, EPP, ECP, EPP+ECP

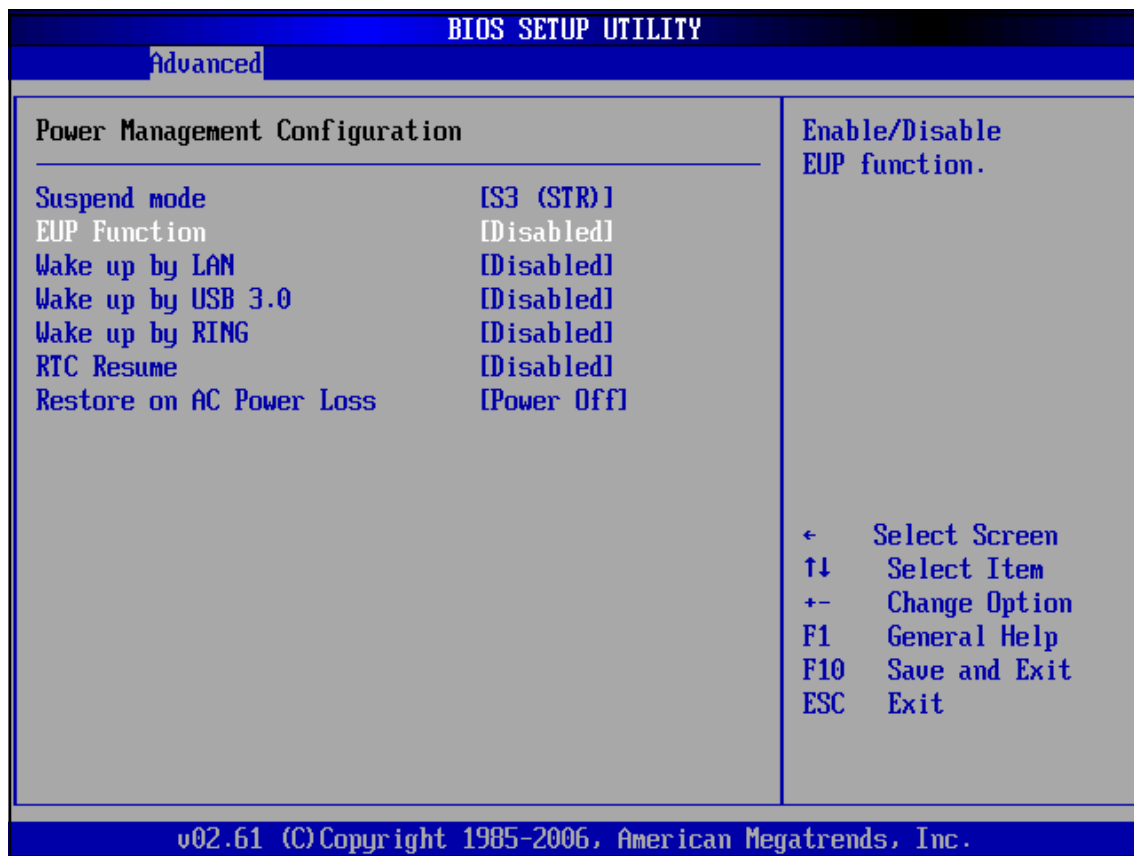
Parallel Port IRQ

Allow BIOS to select Parallel Port IRQ.

- The choice: IRQ5, IRQ7

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).

EUP Function

Enable/Disable EUP function.

- The choice: Enable, Disable

Wake up by LAN

This item allows you to Wake up by LAN.

- The choice: Enabled, Disabled.

Wake up by USB3.0

This item allows you to Wake up by USB3.0.

- The choice: Enabled, Disabled.

Wake up by RING

This item allows you to Wake up by RING.

- The choice: Enable, Disable

RTC Resume

This item allows you to RTC Resume.

- The choice: Enabled, Disabled.

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 Speed Control

Here you can set the CPU fan Speed Control

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

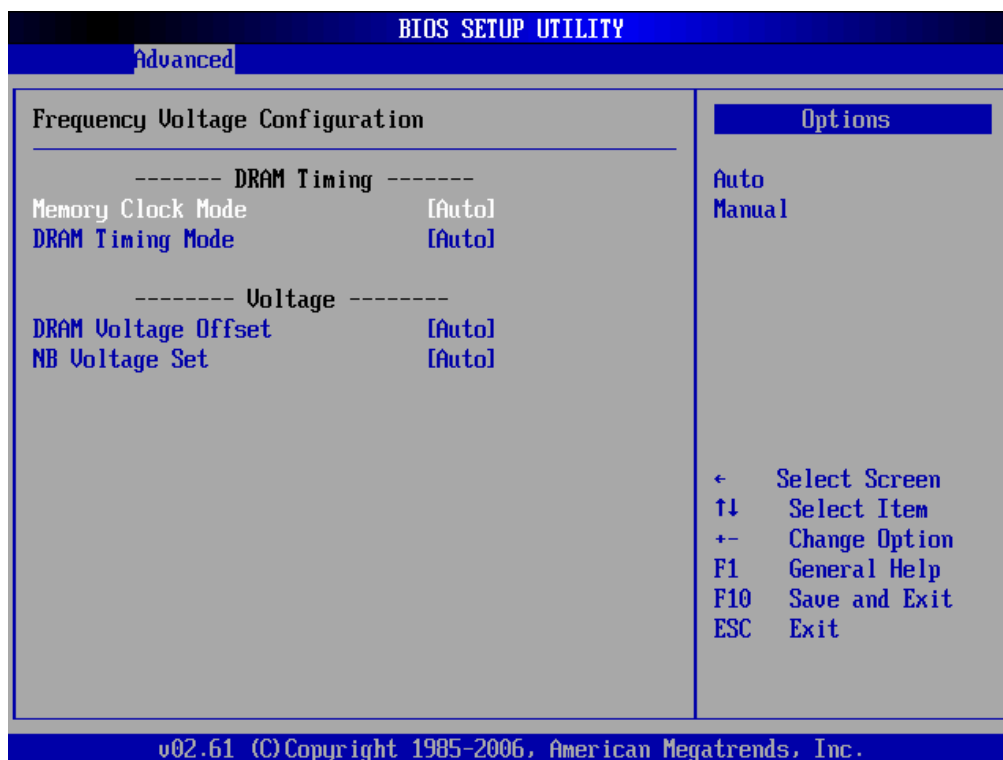
System Fan Speed Control

Here you can set the System Fan 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 DRAM Timing ----

Memory Clock Mode

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

- The choice: Auto or Manual.

DRAM Timing Mode

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

- The choice: Auto or Manual.

DRAM tCL

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

- The choice: 3 ~ 6.

DRAM tRAS

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

- The choice: 5 ~ 18.

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 ~ 6.

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 ~ 6.

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

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

DIMM Voltage Offset

This item allows you to set DIMM Voltage Offset.

- The choice: +25mV~+600mV or Auto.

NB Voltage Set

This item allows you to set NB Voltage Set.

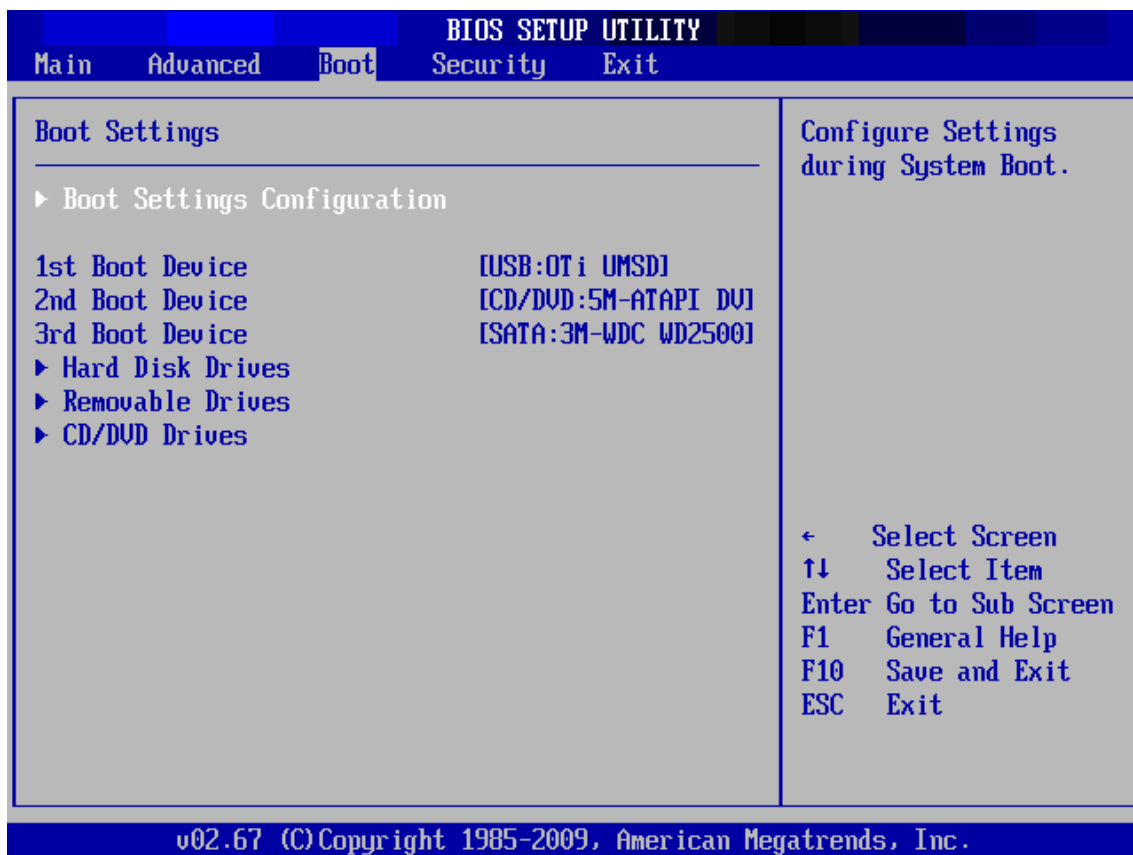
- The choice: 1.2V, 1.3V, 1.4V or Auto.

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.

Boottup 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.

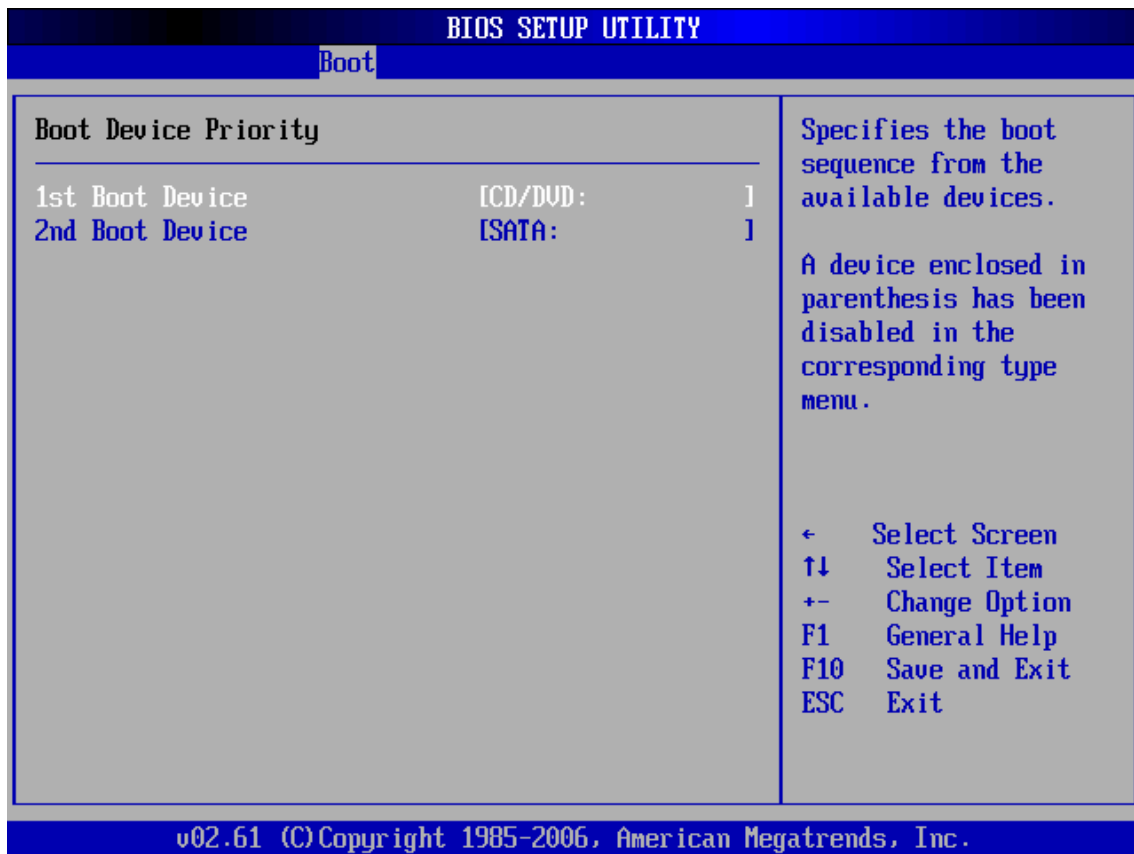
Hit 'DEL' Message Display

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.

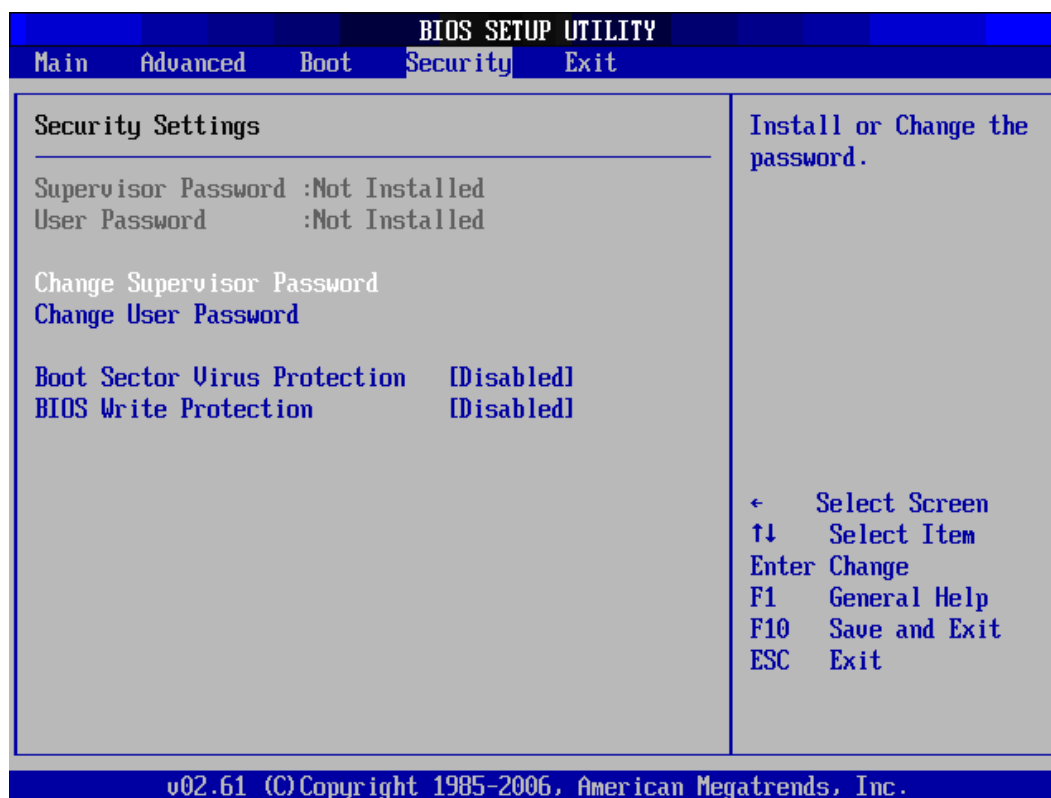


When you select a boot category from the boot menu, a list of devices in that category appears. For example, if the system has three hard disk drives connected, then the list will show all three hard disk drives attached.

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].

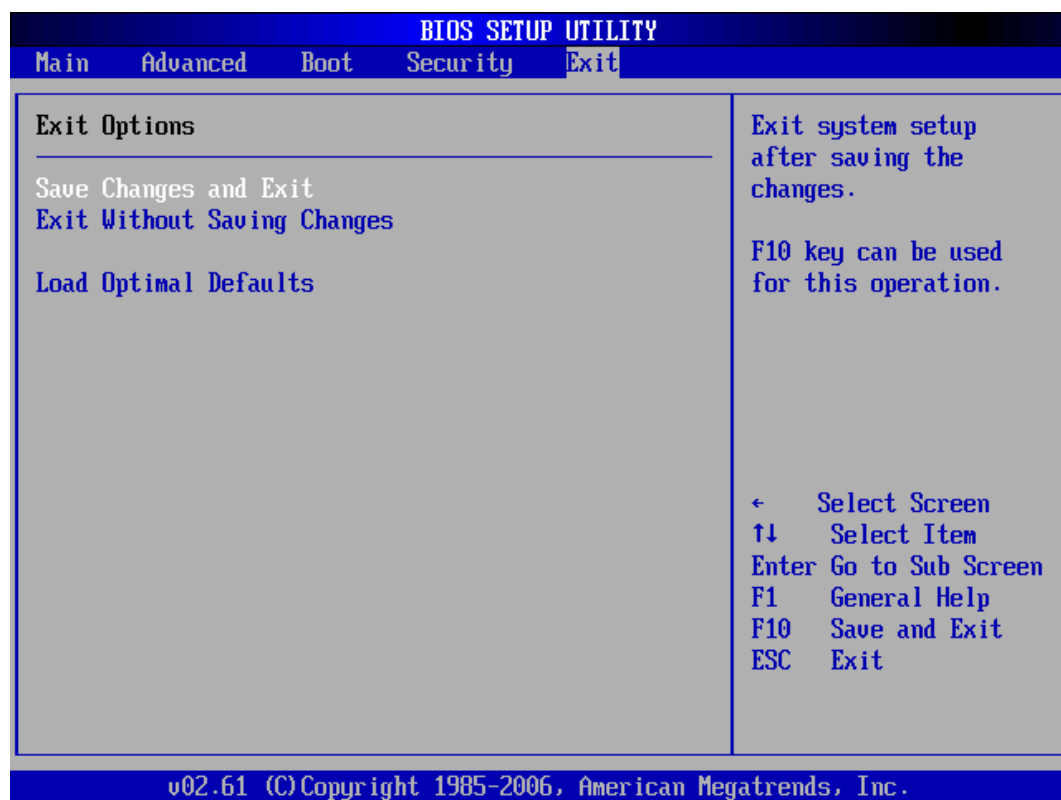
- The choice: Enabled or Disabled.

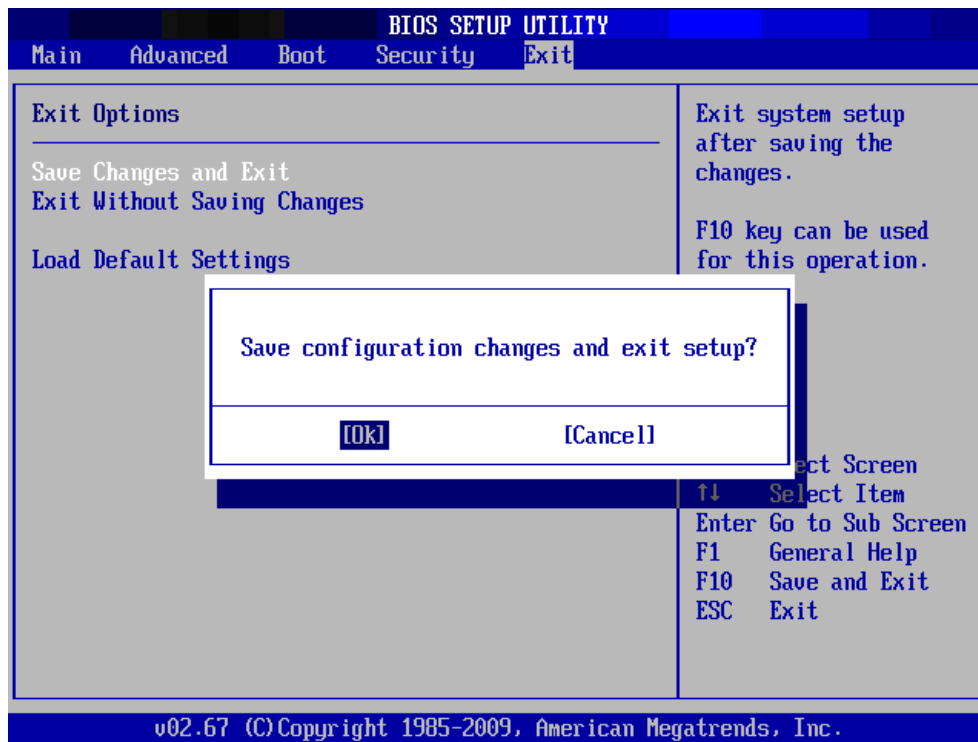
Exit

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.