Mini-ITX Motherboard

MINIX
MINI-ITX MOTHERBOARD

MINIX™ 890GX/880G-USB3

User's Manual

Website: http://www.jwele.com

Rev: 1.00, Aug 2010

Disclaimer

The intellectual property of this manual belongs to our company. The ownership of all of the products, including accessories and software etc. belong to our company. No one is permitted to copy, change, or translate without our written permission.
We compiled this manual based on our careful attitude, but we can not guarantee the accuracy of the contents. This manual is purely technical documentation, without any hint or other meanings, and we won't commit users' misunderstanding of the typesetting error.
Our products are in continuous improvement and updating, Therefore, we retain the right that we won't give notice to the users in future.

Copyright

All of the trademark in this manual belong to their own registered company.
All of the products name is only for identification, its title belongs to its manufacturer or brand owner.

Table of Contents

Chapter 1 Introduction 4
1.1 Package Checklist 4
1.2 Specifications 5
1.3 Mainboard Layout 6
1.4 Connecting Rear Panel I/O Devices 7
Chapter 2 Hardware Setup 8
2.1 Choosing a Computer Chassis 8
2.2 Installing Mainboard 8
2.3 Installing CPU and CPU Cooler 9
2.4 Installation of Memory Modules 10
2.5 Connecting Peripheral Devices 11
2.5.1 Serial ATA Connectors 11
2.5.2 PCIE slot 11
2.5.3 MINIPCIE slot 11
2.5.4 Guide for installing the antennas of the Wifi-Bluetooth moudle(optional) 12
Chapter 3 Jumpers & Headers Setup 14
Chapter 4 BIOS Setup Utility 19
4.1 About BIOS Setup 19
4.2 To Run BIOS Setup 19
4.3 About CMOS 19
4.4 The POST (Power On Self Test) 19
4.5 BIOS Setup — CMOS Setup Utility 20
4.5.1 CMOS Setup Utility 20
4.5.2 Control Keys 21
4.5.3 Main Menu 22
4.5.4 Advanced Setting 25
4.5.5 Boot Setting 31
4.5.6 Security Setting 33
4.5.7 Power Setting 35
4.5.8 PC&Health 35
4.5.9 Exit Setting 40
Chapter 5 Driver Installation 44

Chapter 1 Introduction

1.1 Package Checklist

Thank you for choosing our product.
Please check the following packing and accessories, if there is any broken or part missing, please contact with your franchiser.

- Rear I/O Panel X 1
- User's Manual X 1
- Driver/Utility DVD X 1
- Serial ATA Signal Cable X 2
- Serial ATA Power Cable X 2
- Antenna Kit X 2 (optional)

The items listed above are for reference only, and are subject to change without notice.

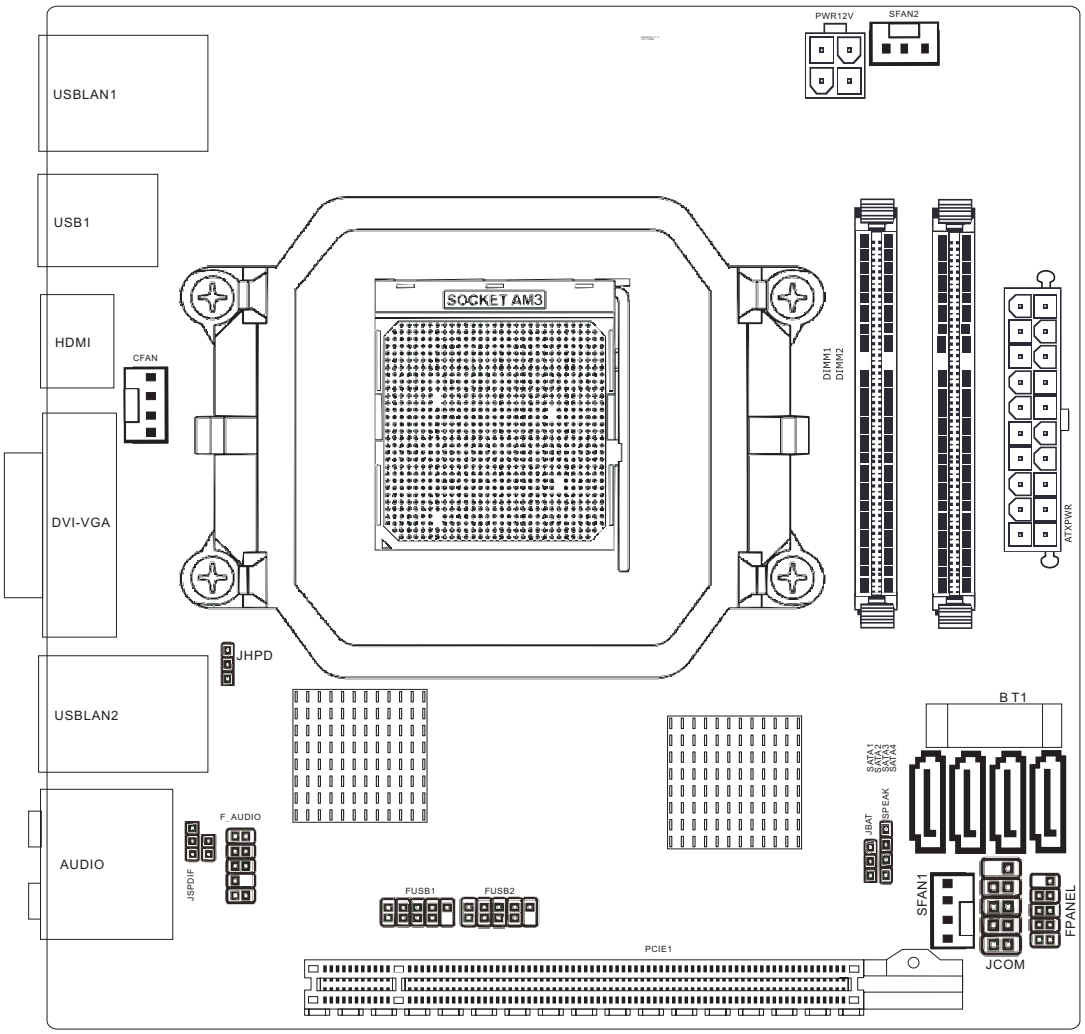
Note: The mainboard is only authorized for use with enclosure tested, so the mainboard must be installed in the enclosure to use, and the enclosure is a metal enclosure, with a proper grounding terminal, with the use of shielded cables for the SATA or other data cable. For external cables information: the VGA, DVI, HDMI must be shielded and with one core, and the core shall locate by the end of the enclosure, and the keyboard cable must be shielded too.

Statement: "FCC Compliance requirements with Part 15.102: This CPU board complies with FCC requirements of Part 15 Subpart B when used with the specific processor supplied with the CPU board and identified (above or below). Other processors are NOT allowed to be used with this CPU board."

1.2 Specifications

CPU	- Support AMD(R) Socket AM3 processors - AMD 4200+ 2.8GHz
Main Chipset/ Integrated Graphics	- - Radeon HD 4290 - - Radeon HD 4250
Main Memory	- Support 2GB memory - Support for DDR2 866 memory modules
BIOS	- AMI BIOS, supports Plug&Play - Supports Advanced Power Management ACPI,STR - CPU temperature, Fan speed, System Voltage monitoring
Rear Panel I/O	- 2 x USB3.0 ports - 1 x HDMI port - 1 x VGA port - 1 x DVI port - - 2 x RJ45 ports - 4 x USB 2.0 ports - 3 x Audio ports (MIC In/ Rear Speaker Out / Center-Subwoofer Speaker Out)
Internal I/O Connectors	- 1 x 20-pin ATX main power connector - 1 x 4-pin ATX 12V power connector - 4 x SATA 6Gb/s connectors - 2 x System fan headers - 1 x CPU FAN header - 1 x Front panel header - 1 x Front panel audio header - 1 x SPDIF_OUT header - 1 x SPDIF_IN header(Optional) - 1 x COM header - 1 x SPEAK header - 2 x USB 2.0 headers for additional 4 USB 2.0 ports (by cables)
Sound	- Onboard 2-channel HD Audio Codec - Front Panel Jumper, provides stereo MIC port on front panel
Onboard LAN	- Onboard 10/100/1000Mbps compatible LAN (Optional)
Expansion Slots	- 1 x PCIE slot - 1 x MINIPCIE slot
Form Factor	Mini ITX (170mm*170mm)

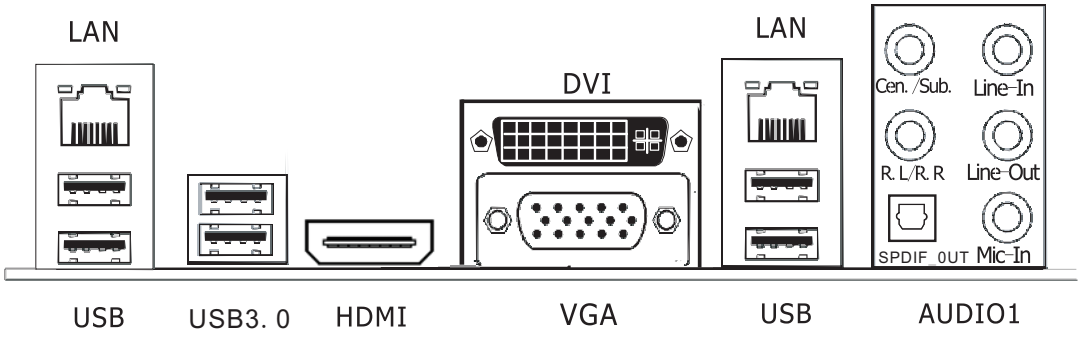
1.3 Mainboard Layout



(This picture is only for reference)

1.4 Connecting Rear Panel I/O Devices

The rear I/O part of these mainboard provides the following I/O ports:



(This picture is only for reference)

- USB3.0: Connects to USB3.0 devices.
- HDMI:Connects to multimedia devices of HDMI protocol.
- VGA: Connects to a monitor's VGA input.
- DVI: Connects to monitor input.
- SPDIF OUT: Connects to digital audio device.
- USB: The USB ports are used to connect USB 2.0/1.1 devices such as scanner, speakers, keyboard, mouse, hub, digital camera, joystick, etc.
- LAN: The LAN port allows the motherboard to connect to a local area network by means of a network hub.
- AUDIO(Rear Panel Audio):

  Cen./Sub. (Center / Subwoofer): Connects to the center and subwoofer channel in the 7.1 channel audio system.

  R.L./R.R. (Rear Left / Rear Right): Connects to the rear left and rear right channel in the 7.1 channel audio system.

  Line-in (Light Blue): This jack is used to connect to the line out from any external audio sources such as MP3 player, CD player, AM/FM radio tuner, etc.

  ine-out (Front Left/Right Jack, Lime): This jack is used to connect to the front left and right channel speakers of the audio system.

  Mic-in (Pink): This jack is used to connect an external microphone.

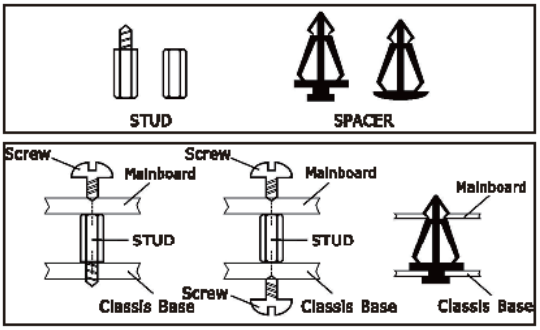
Chapter 2 Hardware Setup

2.1 Choosing a Computer Chassis

- Choose a chassis big enough to install this mainboard.
- As some features for this mainboard are implemented by cabling connectors on the mainboard to indicators and switches or buttons on the chassis, make sure your chassis supports all the features required.
- If there is possibility of adopting some more hard drives, make sure your chassis has sufficient power and space for them.
- Most chassis have alternatives for I/O shield located at the rear panel. Make sure the I/O shield of the chassis matches the I/O port configuration of this mainboard. You can find an I/O shield specifically designed for this mainboard in its package.

2.2 Installing Mainboard

Most computer chassis have a base with many mounting holes to allow the mainboard to be securely attached, and at the same time, prevent the system from short circuits. There are two ways to attach the mainboard to the chassis base: (1)with studs, or (2) with spacers.



Basically, the best way to attach the board is with studs. Only if you are unable to do this should you attach the board with spacers. Line up the holes on the board with the mounting holes on the chassis. If the holes line up and there are screw holes, you can attach the board with studs. If the holes line up and there are only slots, you can only attach with spacers. Take the tip of the spacers and insert them into the slots. After doing this to all the slots, you can slide the board into position aligned with slots. After the board has been positioned, check to make sure everything is OK before putting the chassis back on.

To install this mainboard:

1. Locate all the screw holes on the mainboard and the chassis base.
2. Place all the studs or spacers needed on the chassis base and have them tightened.
3. Face the mainboard's I/O ports toward the chassis's rear panel.
4. Line up all the mainboard's screw holes with those studs or spacers on the chassis.
5. Install the mainboard with screws and have them tightened.

2.3 Installation of the CPU and CPU Cooler

Before installing the CPU, please comply with the following conditions:

1. Please make sure that the mainboard supports the CPU.
2. Please take note of the one indented corner of the CPU. If you install the CPU in the wrong direction, the CPU will not insert properly. If this occurs, please change the insert direction of the CPU.
3. Please add an even layer of heat sink paste between the CPU and CPU cooler.
4. Please make sure the CPU cooler is installed on the CPU prior to system use, otherwise overheating and permanent damage of the CPU may occur.
5. Please set the CPU host frequency in accordance with the processor specifications. It is not recommended that the system bus frequency be set beyond hardware specifications since it does not meet the required standards for the peripherals. If you wish to set the frequency beyond the proper specifications, please do so according to your hardware specifications including the CPU, graphics card, memory, hard drive, etc.

2.3.1 Installation of the CPU

1. Unlock the socket by pressing the lever sideways, then lift it up to a 90°.

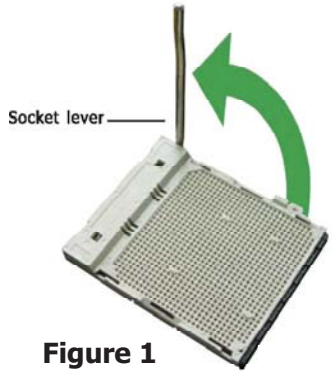


Figure 1

2. Position the CPU above the socket such that the CPU corner with the gold triangle matches the socket corner with a small triangle.
3. Carefully insert the CPU into the socket until it fits place.

Figure 2

4. When the CPU is in place, push down the socket lever to secure the CPU.
   The lever clicks on the side tab to indicate that it is locked.

Figure 3

2.3.2 Installation of the CPU Cooler

For proper installation, please kindly refer to the instruction manuals of your CPU Cooler.

We suggest there should be active cooling to the chipset area in order to let the motherboard function properly, completely enclosed system environment without adequate air flow will result in chipset overheat, which is not recommended.

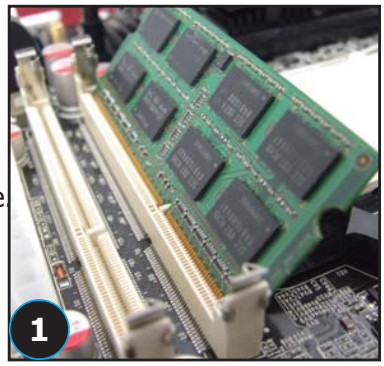
2.4 Installation of Memory Modules

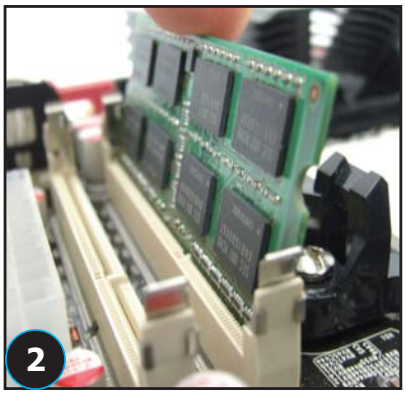
This mainboard provides two 204-pin DDRIII (Double Data Rate) SODIMM slots and supports Dual Channel Memory Technology. For dual channel configuration, you always need to install two identical (the same brand, speed, size and chip-type) memory modules in the DDRIII DIMM slots to activate Dual Channel Memory Technology. Otherwise, it will operate at single channel mode.

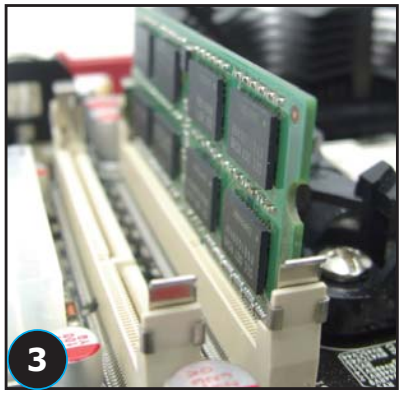
To install system memory:

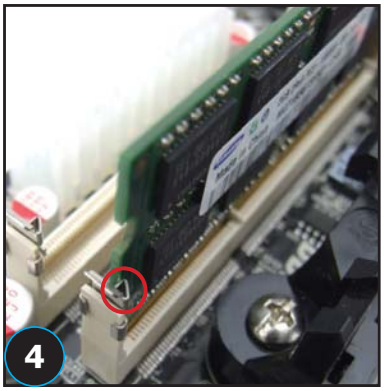
1. Power off the computer and unplug the AC power cord before installing or removing memory modules.
2. Locate the DIMM slot on the board.
3. Insert the SODIMM module at a 45 degree angle.
4. Push the SODIMM module back towards theboard until the clips lock the module in place.
5. To remove the DIMM modules, push the two ejector tabs on the slot outward simultaneously, and then pull out the DIMM module.

Static electricity can damage the electronic components of the computer or optional boards. Before starting these procedures, ensure that you are discharged of static electricity by touching a grounded metal object briefly.





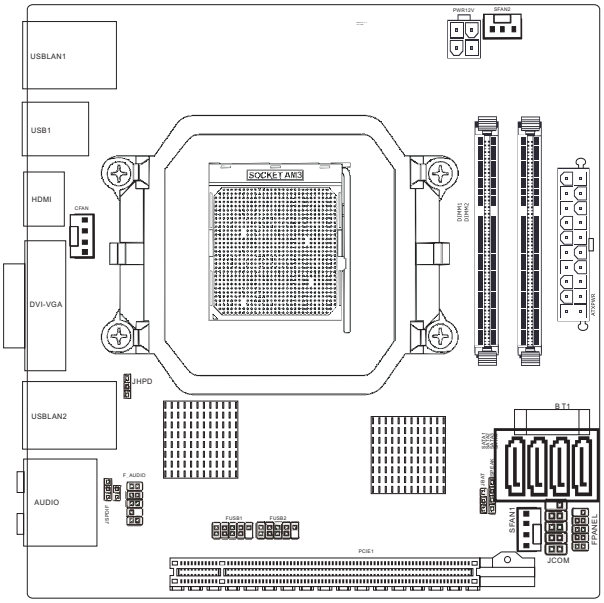




2.5 Connecting Peripheral Devices

2.5.1 Serial ATA Connectors

Each SATA connector serves as one single channel to connect one SATA device by SATA cable.



2.5.2 PCIE slot

Install PCIE card into slot "PCIE1" .

2.5.3 MINIPCIE slot

Install Wireless,3G,Bluetooth card into slot "MINIPCIE1" .
This slot at the motherboard's reverse side.

2.5.4 Guide for installing the antennas of the Wifi-Bluetooth module(optional)

1.) Locate the Wifi-Bluetooth combo mini card at the bottom side of the motherboard. Identify the 2 connectors for the antennas, please note that ANT1 is assigned for Wifi and ANT2 is assigned for Bluetooth, you MUST connect both connectors to the antennas in order to enjoy full function of the card.

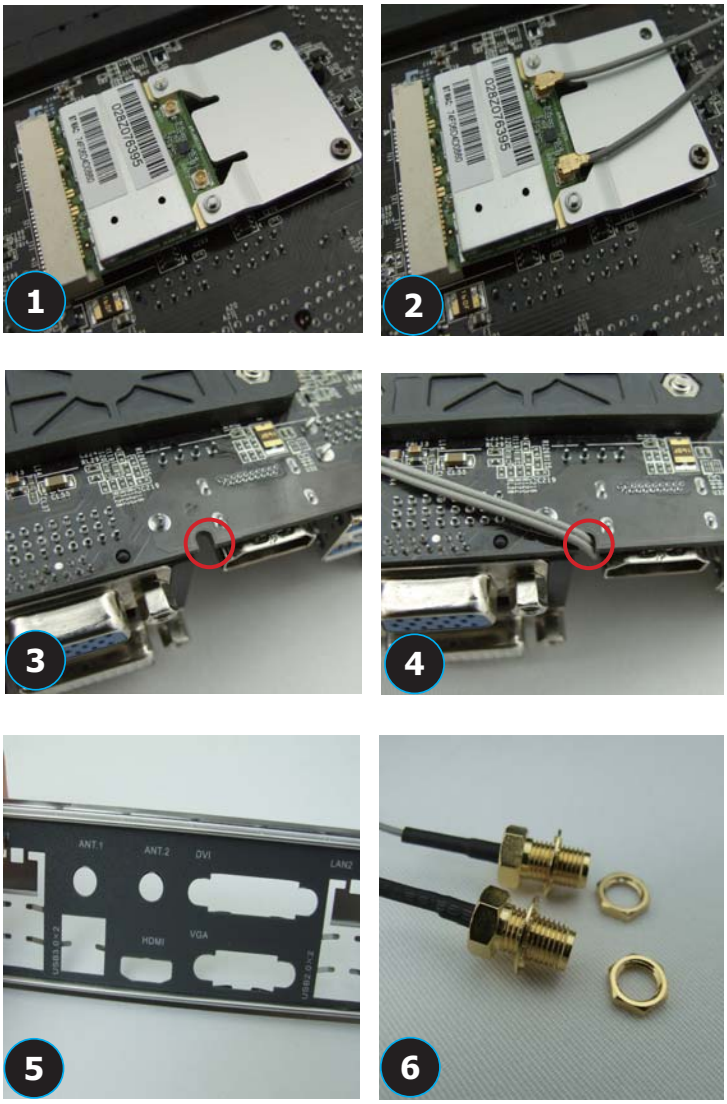
2.) Gently plug in the wires of antennas onto both connectors of the Wifi-Bluetooth combo mini card, you will hear a "click" sound when they are installed and locked properly.

3.) Identify the notch on the edge of the PCB at the side of the rear I/O panel; this notch is designed to let the antennas to go through to the top side of the motherboard.

4.) Route both antennas through the notch as illustrated in the picture.

5.) Identify the mounting holes on the I/O shield for the 2 antennas, ANT.1 for Wifi antenna and ANT.2 for Bluetooth antenna.

6.) Unscrew the nuts off the bolts of both antennas, while keeping the rings of both antennas adhered.

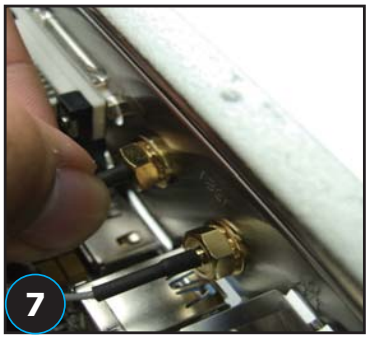


7.) After you have installed the motherboard and the I/O shield into the computer case, you could start mounting the antennas onto the I/O shield, keep the ring of both antennas within the side of the computer case and let the studs to go through the I/O shield to outside of the computer case.

8.) Now screw both nuts back to the bolts of the antennas clock-wisely until they are tight enough to hold the antennas in position.

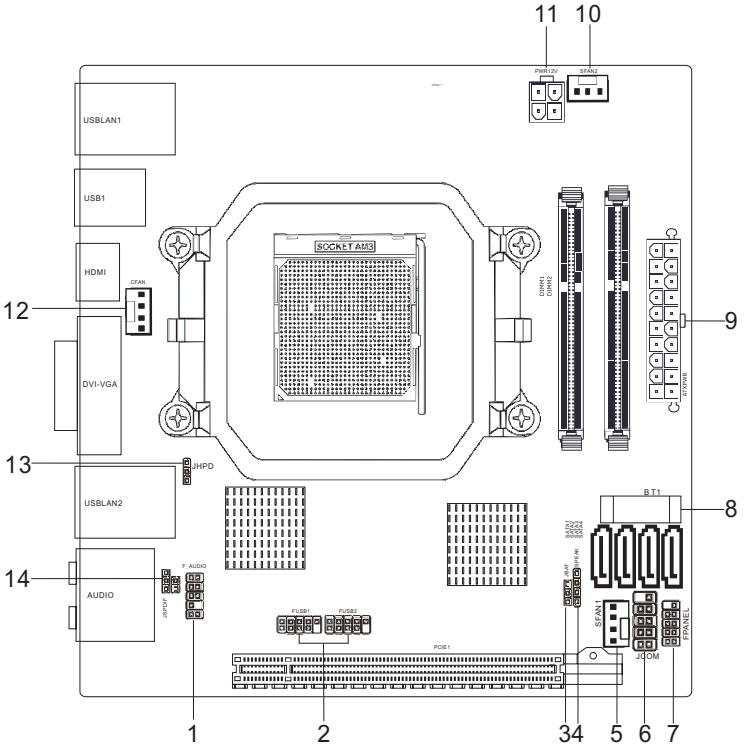
9.) Screw both antennas onto the studs clock-wisely until they are tight enough to hold themselves in position.

10.) Adjust the angle of the antennas, and now you have finished the antenna installation.



Chapter 3 Jumpers & Headers Setup

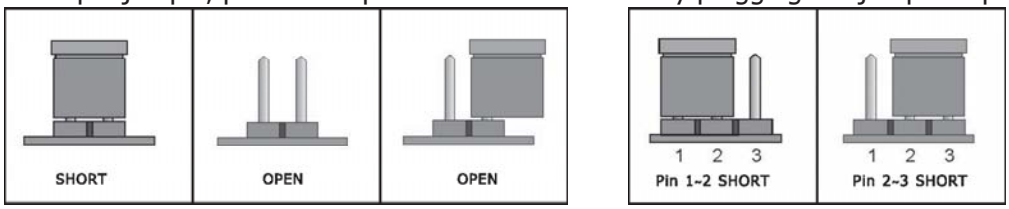
Quick Components Guide



NO.	Layout	Page NO.	No.	Layout	Page NO.
1	F_AUDIO	13	8	BT1	15
2	FUSB1/FUSB2	13	9	ATXPWR	15
3	JBAT	14	10	SFAN2	14
4	SPEAK	14	11	PWR12V	15
5	SFAN1	14	12	CFAN	16
6	JCOM	15	13	JHPD	16
7	FPANEL	14	14	JSPDIF	16

Checking Jumper Settings

- For a 2-pin jumper, plug the jumper cap on both pins will make it CLOSE (SHORT). Remove the jumper cap, or plug it on either pin (reserved for future use) will leave it at OPEN position.
- For 3-pin jumper, pin 1~2 or pin 2~3 can be shorted by plugging the jumper cap in.

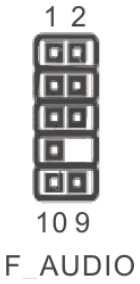


How to identify the PIN1 jumpers?

Please check the mainboard carefully, the PIN1 is marked by "1" or white thick line.

1-F_AUDIO(Front Panel Audio Connection Header)

Pin No.	Header	HD Audio Definition	AC97 Audio Definition
1	PORT1L	Microphone_Left	Microphone
2	AGND	Ground	Ground
3	PORT1R	Microphone_Right	MIC Power
4	PRESENCE#	-ACZ_DET	N/A
5	PORT2R	Line2_Right	Line out (R)
6	SENSE1_RETURN	AuD_R_Return	N/A
7	SENSE_SEND	FAUDIO_JD	N/A
8	No Pin	N/A	N/A
9	PORT2L	Line2_Left	Line Out(L)
10	SENSE2_RETURN	AuD_L_Return	N/A



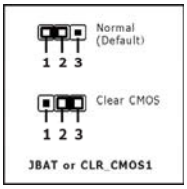
2-FUSB1/FUSB2(Additional USB Port Headers)

Pin No.	Definition	Pin No.	Definition
1	VCC	2	VCC
3	Data 0-	4	Data 1-
5	Data 0+	6	Data 1+
7	Ground	8	Ground
		10	NC

3-JBAT(CMOS Memory Clearing Header)

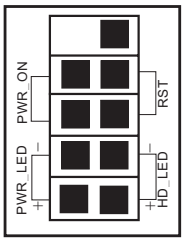
The time to clear the CMOS memory occurs when (a) the CMOS data becomes corrupted, (b) you forgot the supervisor or user password preset in the BIOS menu, (c) you are unable to boot-up the system because the CPU ratio/clock was incorrectly set in the BIOS menu, or (d) whenever there is modification on the CPU or memory modules.

This header uses a jumper cap to clear the CMOS memory and have it reconfigured to the default values stored in BIOS.



- Pins 1 and 2 shorted (Default): Normal operation.
- Pins 2 and 3 shorted: Clear CMOS memory.

4/7-SPEAK/FPANEL(Speaker Headers & Front Panel Switches)



HD_LED (Red): Hard Driver LED connector
This connector connects to the case-mounted HD LED cable, and the LED will light when the hard drive(s) is/are being accessed.

RST (Blue): Reset Switch
This connector connects to the case-mounted reset switch which allows you to reboot without having to power-off the system and thus prolonging the life of the power supply or system.

SPEAK:

Pin No.	Definition
1	SPK +
2	NC
3	NC
4	SPK -

PWR_ON (Black): Power Switch
Depending on the setting in the BIOS setup, this switch serves two functions which will allow you to power-on/off the system or to enter the suspend mode.

PWR_LED (Green): Power/Standby LED
When the system's power is on, this LED will light. When the system is in the S1 (POS - Power on Suspend) or S3 (STR - Suspend to RAM, optional) state, it will blink every second.

SPEAKER (Yellow or Black): Speaker Connector
This 4-pin connector connects to the case-mounted speaker.

5/10-SFAN1/SFAN2(Fan Power Connectors Header)

SFAN1：System fan connectors

Pin No.	Definition
1	GND
2	+12V
3	RPM
4	Control

SFAN2：System fan connectors

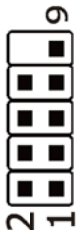
Pin No.	Definition
1	GND
2	+12V
3	RPM

⚠ These fan connectors are not jumpers. DO NOT place jumper caps on these connectors.

6-JCOM1(Serial Port Header)

This JCOM1 header supports a serial port module.

Pin No.	Definition	Pin No.	Definition
1	DCD	2	RXD
3	TXD	4	DTR
5	GND	6	DSR
7	RTS	8	CTS
9	RI		



8- BT1(Battery)

Install the motherboard battery.

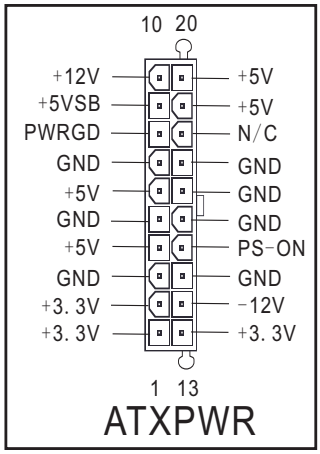
9/11- ATX Power Input Connectors

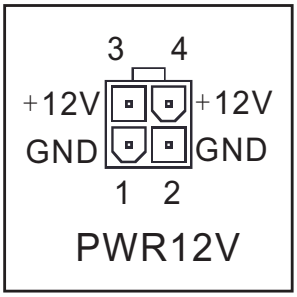
ATXPWR (ATX Power) connector

We recommend to use our motherboard with a power supply that complies with the ATX12V Power Supply Design Guide Version 1.1. Every ATX12V power supply unit has a standard 24-pin ATX main power connector that must be plugged into this connector. If you would like to use an old power supply with only a 20-pin ATX main power connector, then please plug the 20-pin ATX main power connector along with pin 1 and pin 13.

PWR12V (+12V Power) connector

Your power supply unit may come with a 4-pin or 8-pin +12V power connector. The +12V power enables the delivery of more +12VDC current to the CPU's Voltage Regulator Module (VRM). If available, please use the 8-pin power; otherwise please connect the 4-pin power to this connector.





12-CFAN(CPU Fan Power Connectors Header)

CFAN：CPU fan connectors

Pin No.	Definition
1	GND
2	+12V
3	RPM
4	Control

⚠ These fan connectors are not jumpers. DO NOT place jumper caps on these connectors.

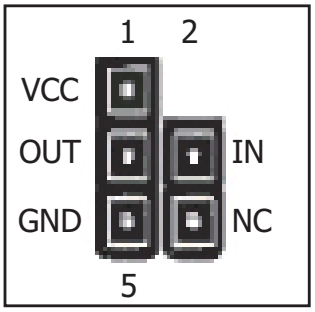
13-JHPD

While the JHPD jumper are shorted at pin 1-2, the motherboard will automatically detect any DVI or HDMI display device; if the DVI or HDMI device cannot be detected, please short these jumpers to pin 2-3 to enable force DVI/ HDMI device detection.

Pin No.	Definition
Pin1-2	Auto
Pin2-3	HDMI/DVI EN

14-S/PDIF Output Connection Header

S/PDIF (Sony/Philips Digital Interface) is a standard audio transfer file format. It is usually found on digital audio equipment such as a DAT (Digital Audio Tape) machine or audio processing device. It allows the transfer of audio from one file to another without the conversion to and from an analog format, which could degrade the signal quality.



Chapter 4 BIOS Setup Utility

BIOS stands for Basic Input and Output System. It was once called ROM BIOS when it was stored in a Read-Only Memory (ROM) chip. Now manufacturers would like to store BIOS in EEPROM which means Electrically Erasable Programmable Memory. BIOS used in this series of mainboard is stored in EEPROM, and is the first program to run when you turn on your computer.

BIOS performs the following functions:
1. Initializing and testing hardware in your computer (a process called "POST", for Power On Self Test).
2. Loading and running your operating system.
3. Helping your operating system and application programs manage your PC hardware by means of a set of routines called BIOS Run-Time Service.

4.1 About BIOS Setup

BIOS Setup is an interactive BIOS program that you need to run when:
1. Changing the hardware of your system. (For example: installing a new Hard Disk etc.)
2. Modifying the behavior of your computer. (For example: changing the system time or date, or turning special features on or off etc.)
3. Enhancing your computer's behavior. (For example: speeding up performance by turning on shadowing or cache)

4.2 To Run BIOS Setup

First access BIOS setup menu by pressing <F1> key after "POST" is complete (before OS is loaded). After the first BIOS be setupped(or loaded default values) and save, the <DEL> key will be pressed if you will enter BIOS setup menu.

4.3 About CMOS

CMOS is the memory maintained by a battery. CMOS is used to store the BIOS settings you have selected in BIOS Setup. CMOS also maintains the internal clock. Every time you turn on your computer, the BIOS Looks into CMOS for the settings you have selected and configures your computer accordingly. If the battery runs out of power, the CMOS data will be lost and POST will issue a "CMOS invalid" or "CMOS checksum invalid" message. If this happens, you have to replace the battery and check and configure the BIOS Setup for the new start.

4.4 The POST (Power On Self Test)

POST is an acronym for Power On Self Test. This program will test all things the BIOS does

before the operating system is started. Each of POST routines is assigned a POST code, a unique number which is sent to I/O port 080h before the routine is executed.

4.5 BIOS Setup — CMOS Setup Utility

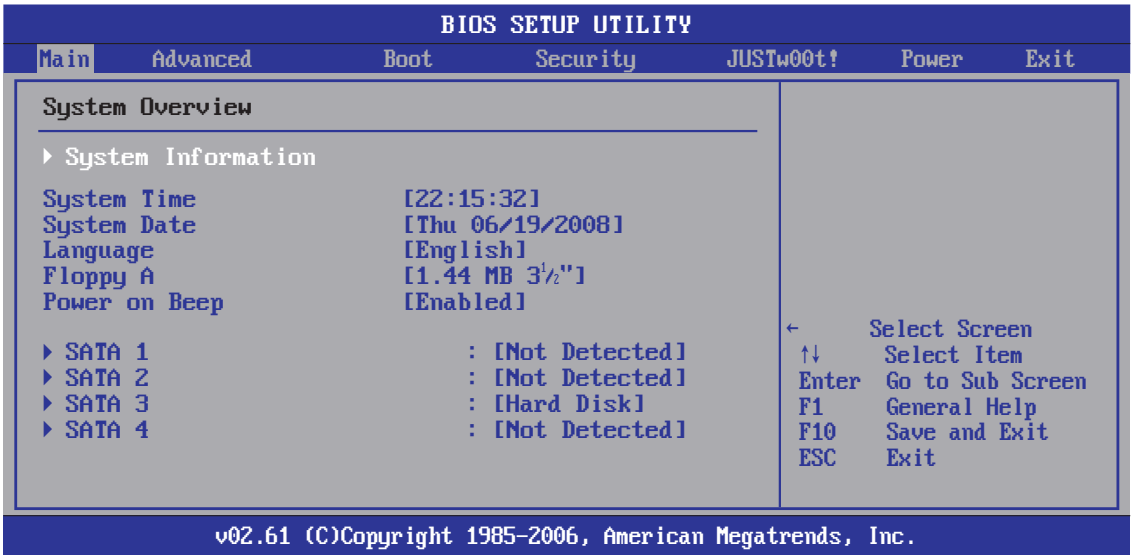
- *In order to increase system stability and performance, our engineering staff is constantly improving the BIOS menu. The BIOS setup screens and descriptions illustrated in this manual are for your reference only, and may not completely match with what you see on your screen.*
- *Do not change the BIOS parameters unless you fully understand its function.*

4.5.1 CMOS Setup Utility

After powering up the system, the BIOS message appears on the screen,when the first time or when CMOS setting wrong, there is following message appears on the screen , but if the first first BIOS be setuped(or loaded default values) and save, the <DEL> key will be pressed if you will enter BIOS setup menu.

```
Press F1 to Run SETUP
```

If this message disappears before you respond, restart the system by pressing <Ctrl> + <Alt>+ <Del> keys, or by pressing the reset button on computer chassis. Only when these two methods should be fail that you restart the system by powering it off and then back on.
After pressing <F1> or <Del> key, the main menu appears.



The menu bar on top of the screen has the following main items:

Main	For changing the basic system configuration.
Advanced	For changing the advanced system settings.
Boot	For changing the system boot configuration.
Security	For changing the system security setttings.
Power	For changing the advanced power management(APM) configuration.
Exit	For selecting the exit options and loading default settings.

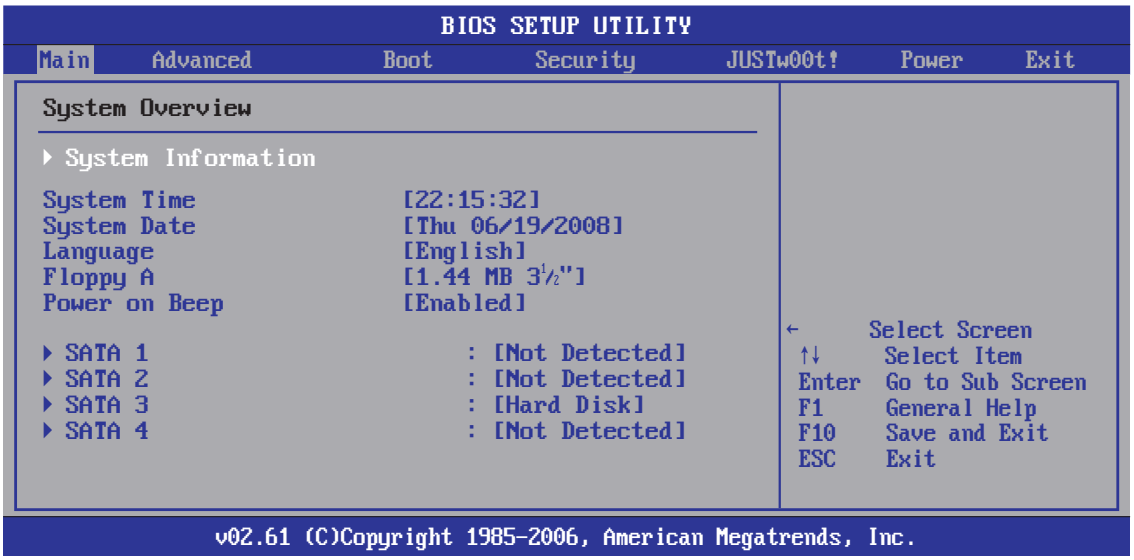
4.5.2 Control Keys

Press F1 to pop up a small help window that describes the appropriate keys to use and the possible selections for the highlighted item.

Please check the following table for the function description of each control key.

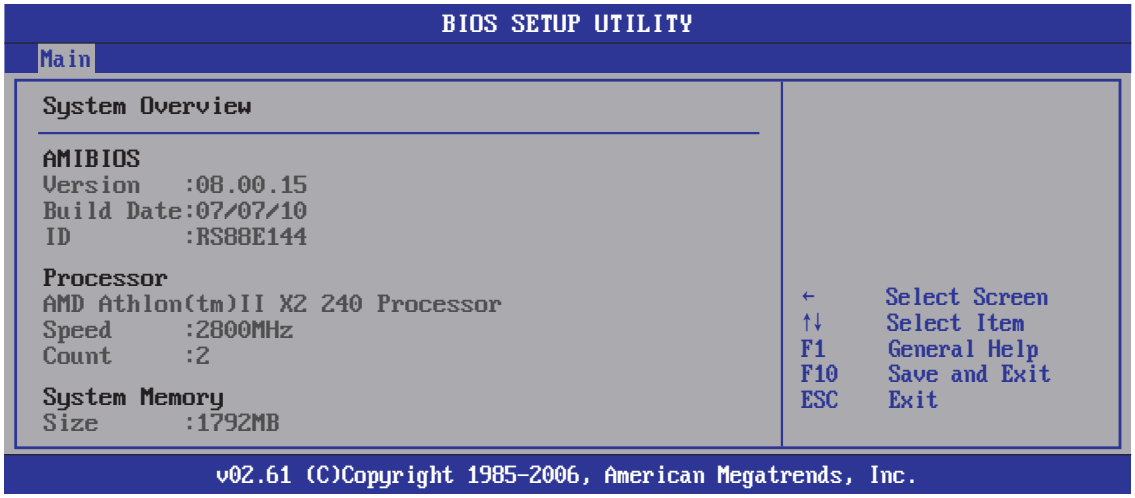
Control Key(s)	Function Description
← / →	Move cursor left or right to select Screens
↑ / ↓	Move cursor up or down to select items
+/ –	To Change option for the selected items
<Enter>	To bring up the selected screen
<ESC>	Main Menu - Quit and not save changes into CMOS Status Page Setup Menu and Option Page Setup Menu - Exit current page and return to Main Menu
<F1>	General help
<F2/F3>	Change Colors
<F7>	Discard Changes
<F8>	Load Failsafe Defaults
<F9>	Load Optimal Defaults
<F10>	Save configuration changes and exit setup

4.5.3 Main Menu



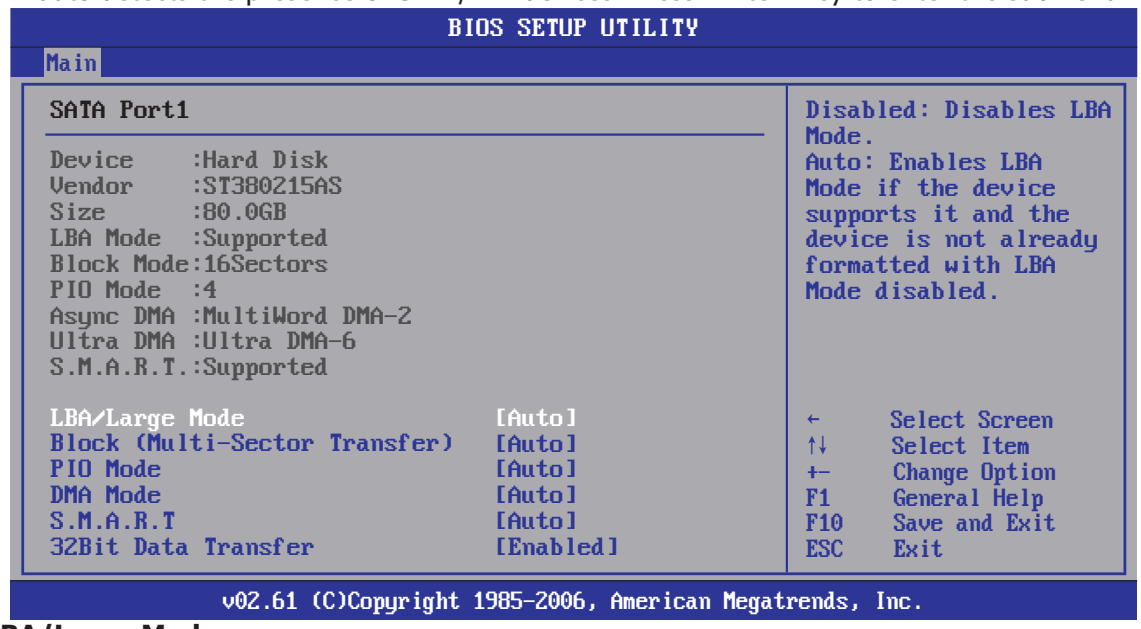
- **System Information**

Please Enter this submenu, this will be display BIOS verison, build date, ID number, also will display CPU type, Speed, count, and Memory Size and so on.



- **System time**
  This item sets the time you specify(usually the current time)in the format of [Hour],[Minute]and [Second].
- **System date**
  This item sets the date you specify(usually the current date in the format of [Month],[Date],and [Year].
- **Language**
  Allows you to selects the current default language used by the BIOS.

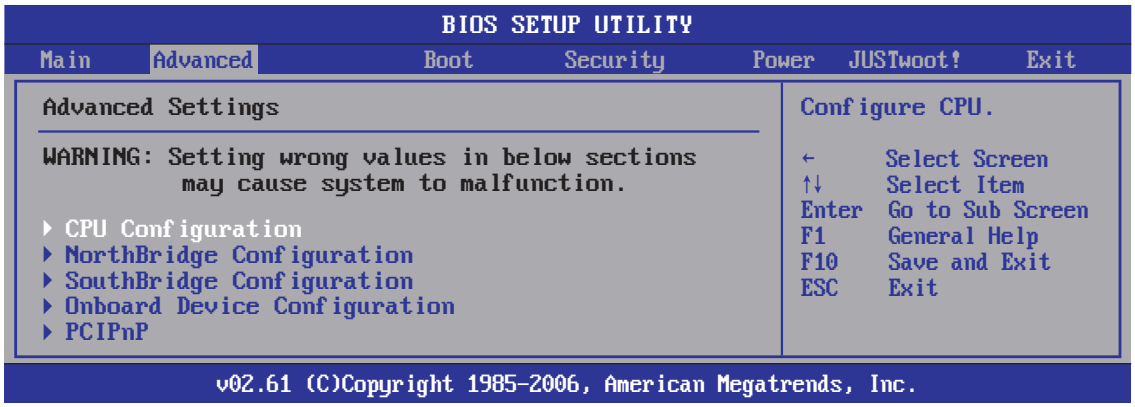
▸ **SATA Port 1/2/3/4**
This item sets the status of auto detection of SATA/IDE devices while enterting setup, and BIOS will auto detects the presence of SATA/IDE devices. Press "Enter" Key to enter the submenu.



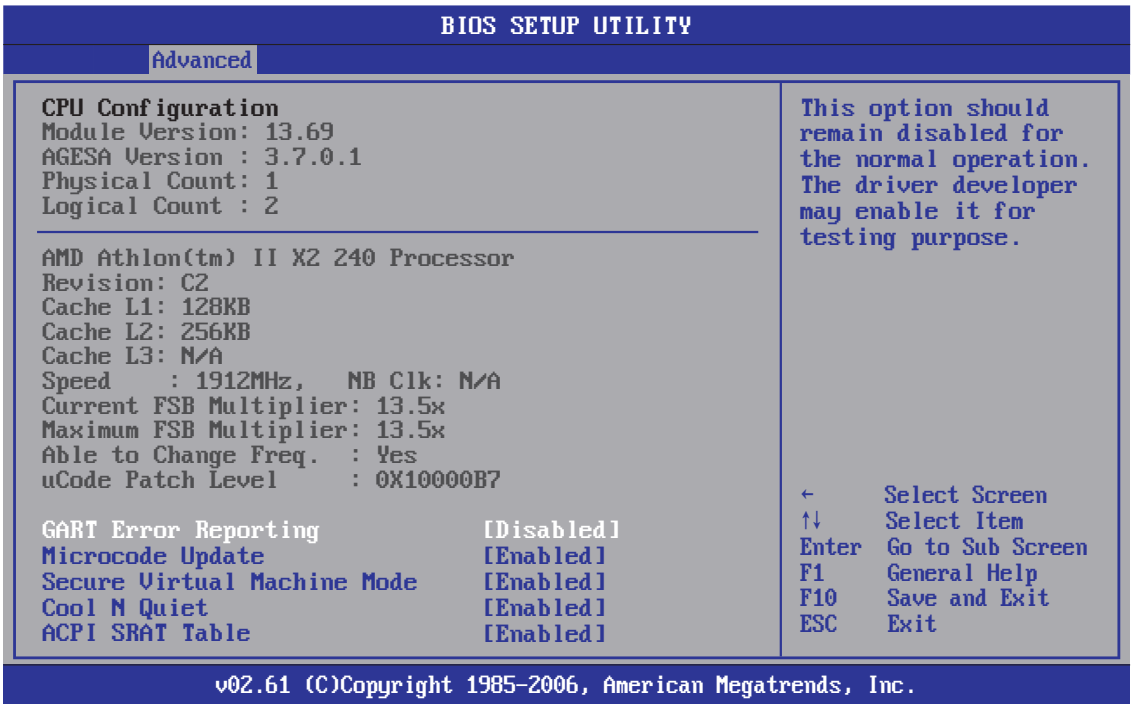
- **LBA/Large Mode**
  Enables or disables the LBA mode. Setting to [Auto] enables the LBA mode if the device supports this mode, and if the device was not previously formatted with LBA mode disabled.
- **Block (Multi-Sector Transfer)**
  Enables or disables data multi-sectors transfers. When set to [Auto] , the data transfer from and to the device occurs multiple sectors at a time if the device supports multi-sector transfer frature. When set to [Disabled] , the data transfer from and to the device occurs one sector at a time.

- **PIO Mode**
  Allows you to select the data transfer mode.
- **DMA Mode**
  Selects the DMA mode.
- **S.M.A.R.T**
  Set the Smart Monitoring, Analysis, and Reporting Technology.
- **32Bit Data Transfer**
  Enables or disables 32-bit data transfer.
  - **Back to Main Setup Menu**
- **Power On Beep**
  Options: Disabled,Enabled.

4.5.4 Advanced Setting



This submenu including these configurations, such as CPU, Northbridge, Southbridge, Onboard Device, only CPU Configuration submenu dispay diallog box as follwoing.

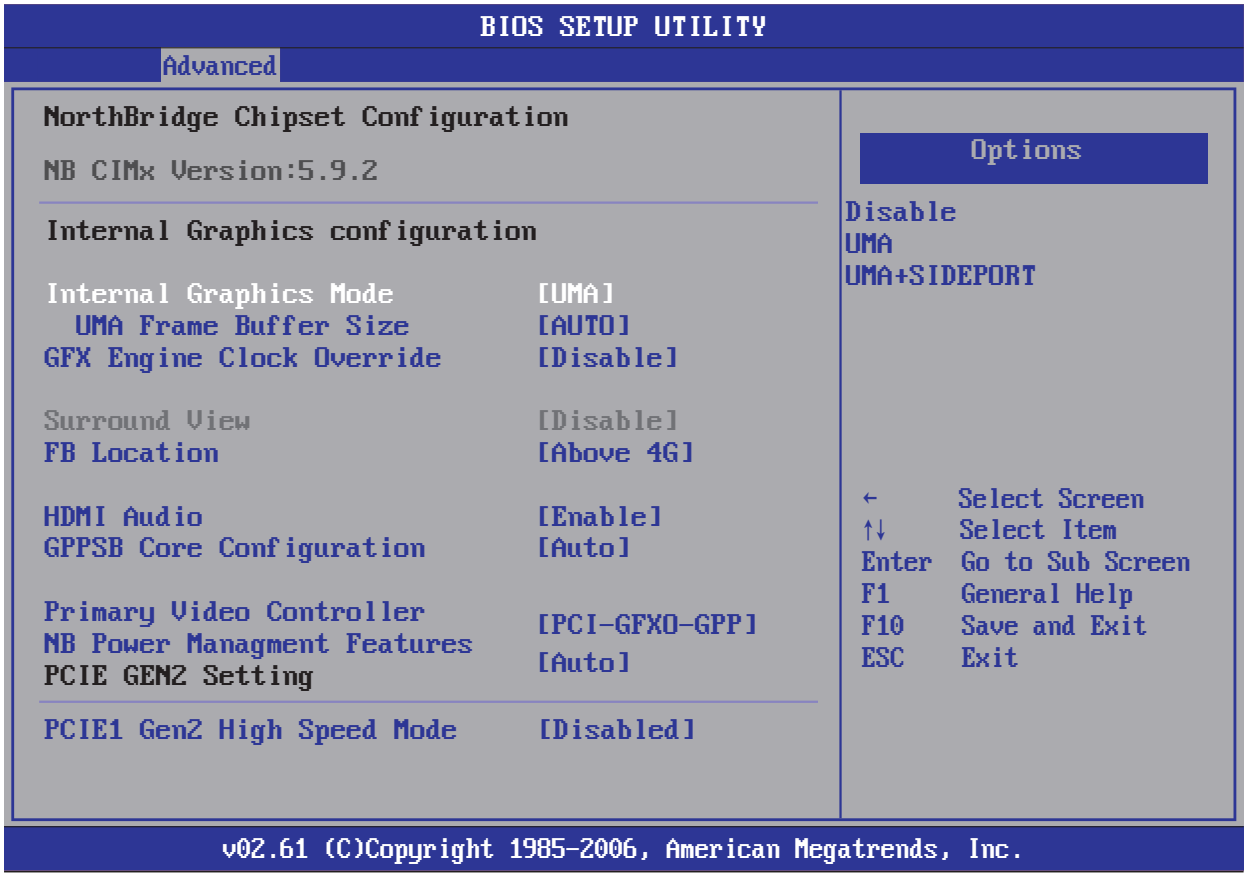


This is CPU related parameter and CPU setting.

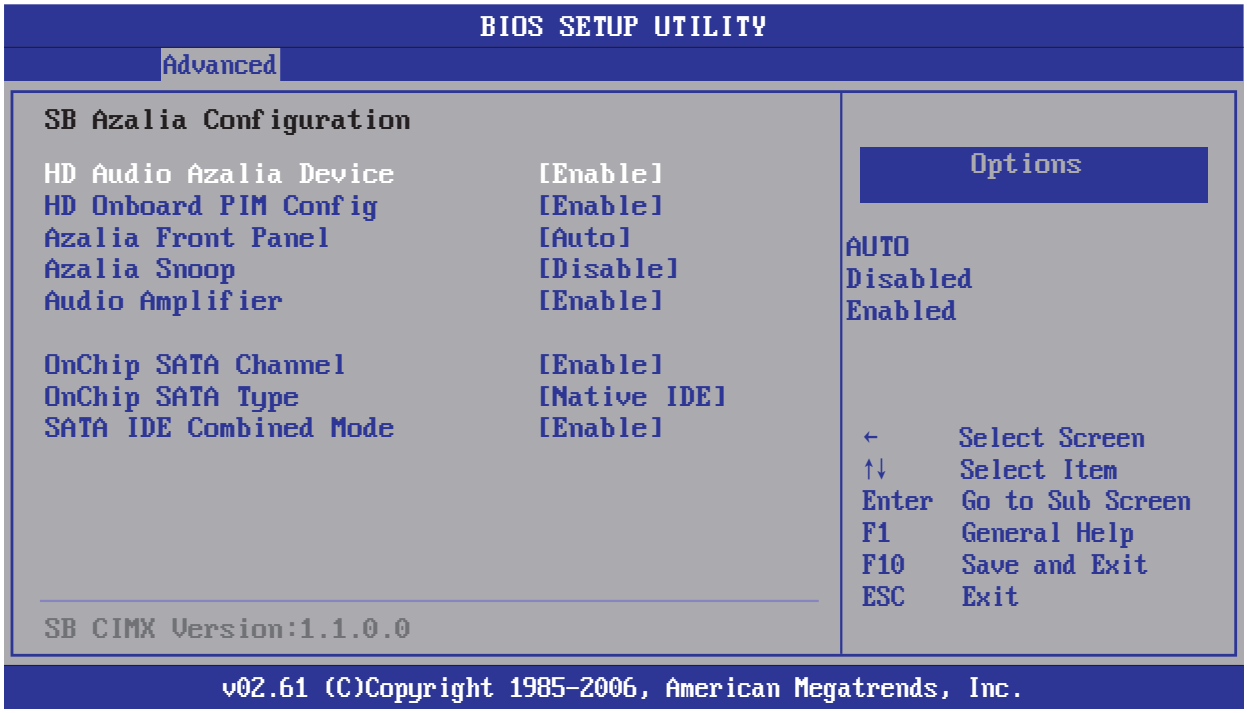
- **CPU Configuration**
  Click <Enter> key to enter its submenu, it will be display configureted CPU information, including Module Version, Manufacturer , CPU type, Frequency, FSB Speed, Cache L1 , Cache L2 and so on.

- **Cool N Quiet**
  Enabled :Lets the AMD Cool N Quiet driver dynamically adjust the CPU clock and VIA to reduce heat output from your computer and its power consumption(Default).
  Disabled: Disables this function.

- **North Bridge Configuration**
  Click <Enter> key to enter its submenu, it will be display north bridge chipset configuration.

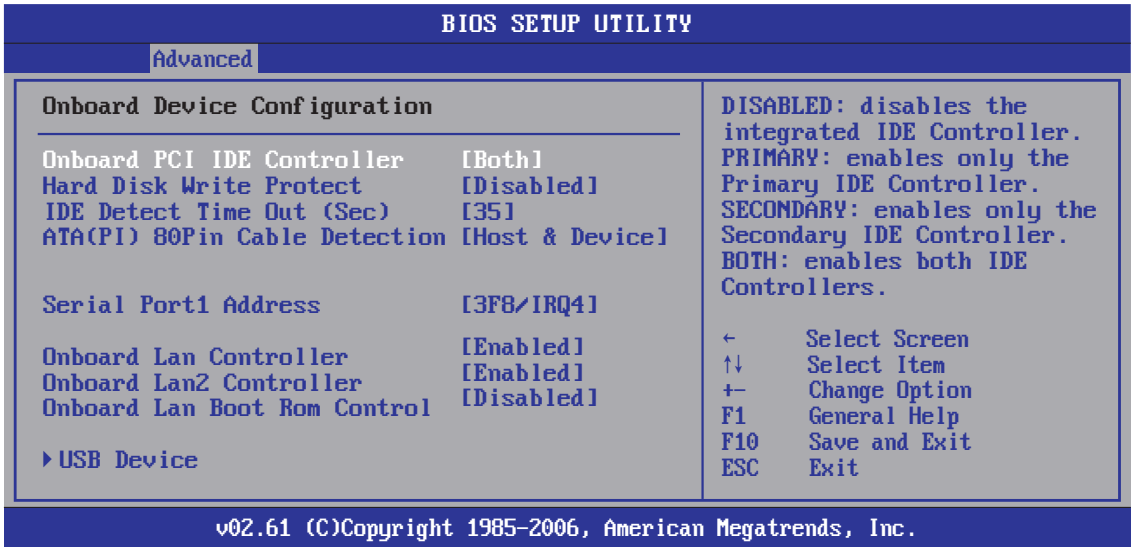


- **South Bridge Configuration**
  Click <Enter> key to enter its submenu, it will be dispay south bridge chipset configuration, this item sets USB functions, audio controller, PCIE ports selection.



- **HD Audio Azalia Device**
  Sets the HD Audio has Enabled or Disabled state.
- **HD Onboard PIN Config**
  Enabled : Display the option for Azalia Front Panel in BIOS.
  Disabled: Disabled the option for Azalia Front Panel in BIOS.
- **Azalia Front Panel**
  Sets the sound function for front panel Enabled or Disabled.

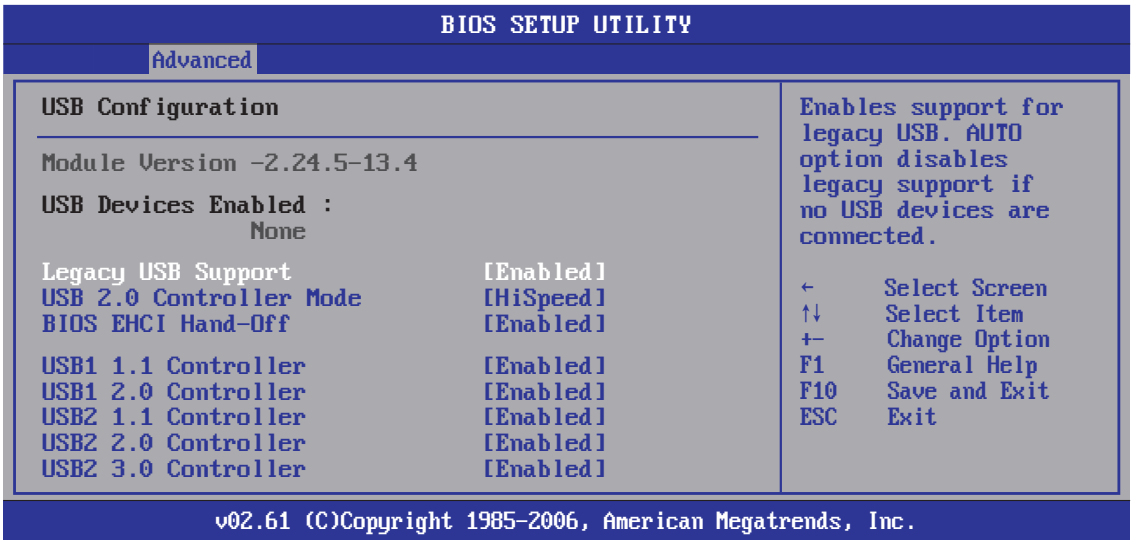
- **Onboard Device Configuration**
  Click <Enter> key to enter its submenu.



- **Onboard PCI IDE Controller**
  This option allows you to Select PCI IDE training mode
- **Hard disk write protect**
  Disable/enable device write protection.this will be effictive only if device is accessed through BIOS
- **IDE Detect Time Out**
  Select the time out value for detecting ATA/ATAPI device(s)
- **ATA(PI) 80Pin Cable Detection**
  Select the mechanism for detecting 88pin ATA(PI) Cable.
- **Onboard Floppy Controller**
  Allows BIOS to Enable or Disable FLOPPY Controller
- **Serial Port1 Address**
  Allows BIOS to Select Serial Port1 base Addresses.

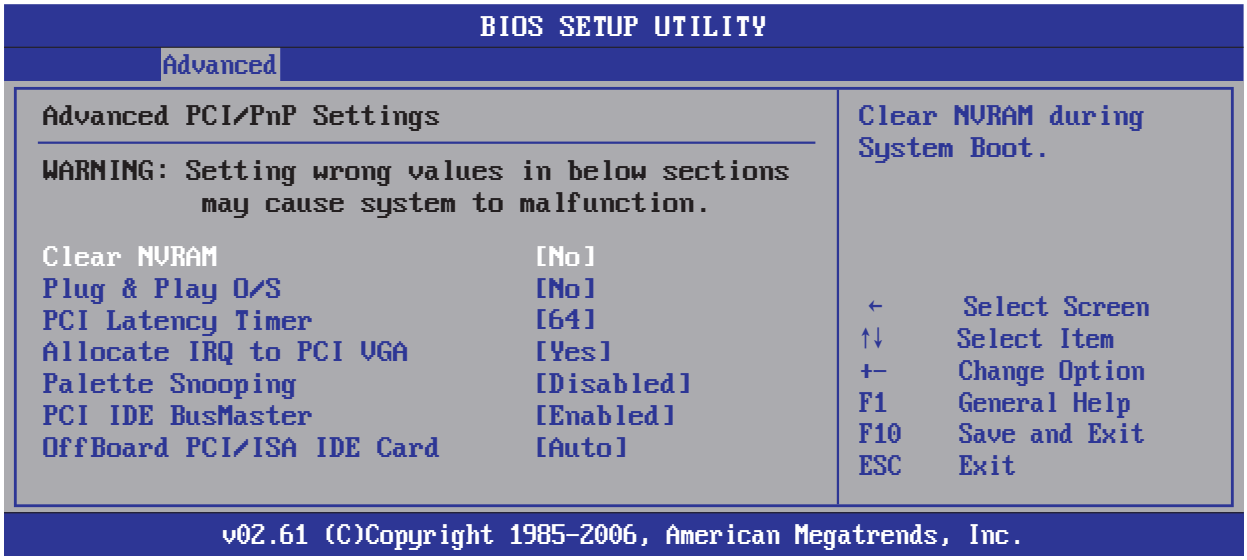
- **Onboard Lan Controller**
  Enable:turn on the lan1 Disabled:shut the lan1
- **Onboard Lan2 Controller**
  Enable:turn on the lan2 Disabled:shut the lan2
- **Onboard Lan Boot ROM Control**
  Available options:Disabled, Enabled

▸ **USB Configuration**
Click <Enter> key to enter its submenu.



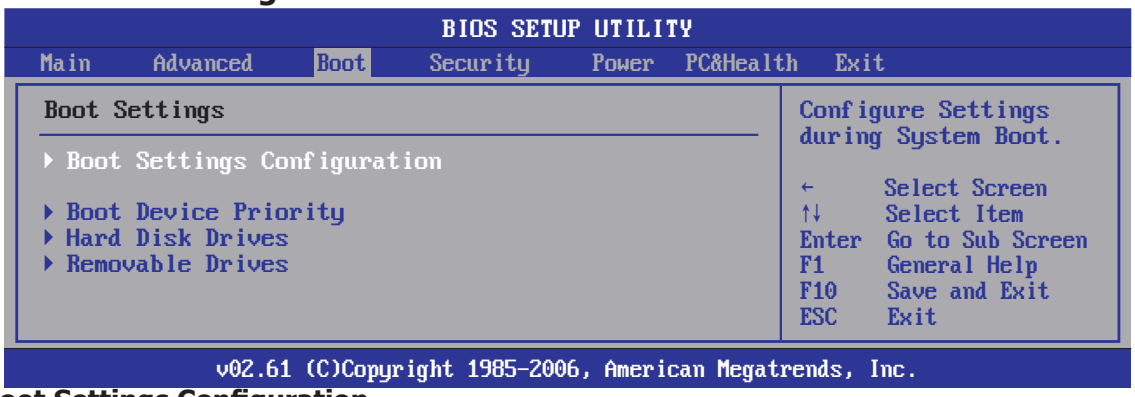
- **Legacy USB Support**
  Enabled or Disabled Legacy USB option, and Auto option disables legacy support if no USB devices are connected.
- **USB 2.0 Controller Mode**
  Allow you to selects the HiSpeed(480Mbps) or FullSpeed(12Mbps).
- **BIOS EHCI Hand-Off**
  This is a workaround for OSes without EHCI hand-off support. The EHCI ownership change should claim by EHCI driver.
  - **Back to Advanced Setup Menu**

‣ PCIPnP Setting



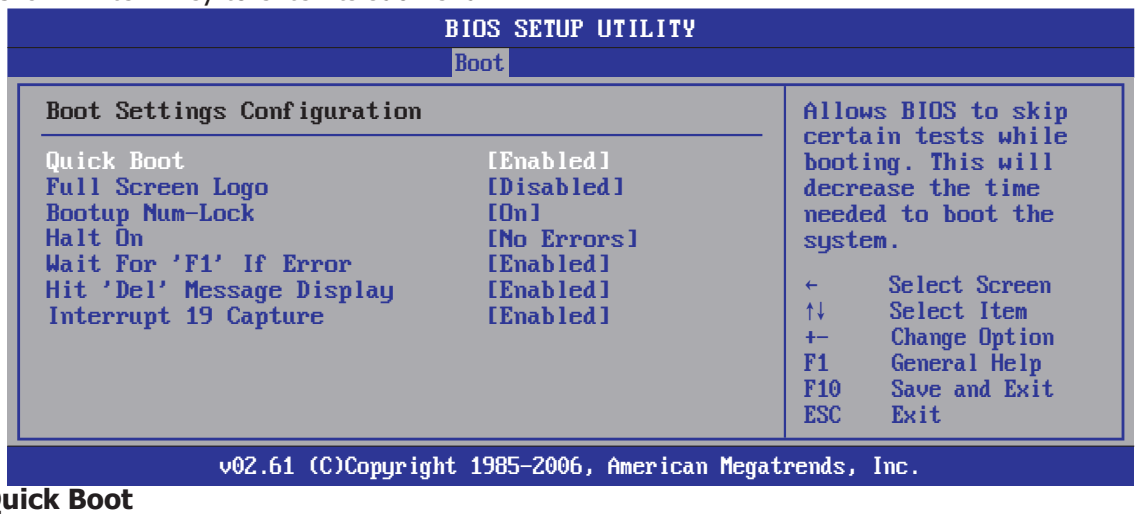
- **Clear NVRAM**
  This item for clearing NVRAM during system boot.
- **Plug & Play O/S**
  This item lets the BIOS configure all the devices in the system or lets the operating system configure plug and play (PnP) devices not required for boot if your system has a Plug and Play operating system.
- **PCI Latency Timer**
  This item sets value in units of PCI clocks for PCI device latency timer register.
- **Allocate IRQ to PCI VGA**
  This item assigns IRQ to PCI VGA card if card requests IRQ or doesn't assign IRQ to PCI VGA card even if card requests an IRQ.
- **Palette Snooping**
  This item informs the PCI devices that an ISA graphics device is installed in the system so the card will function correctly.
- **PCI IDE BusMaster**
  This item uses PCI busmastering for BIOS reading / writing to IDE derives.
- **OffBoard PCI/ISA IDE Card**
  This item works for most PCI IDE cards, some PCI IDE cards may require this to be set to the PCI slot number that is holding the card.

4.5.5 Boot Setting



- **Boot Settings Configuration**

  Click <Enter> key to enter its submenu.



- **Quick Boot**

  This item allows you to speed up Power On Self Test (POST) after you power on the computer. If this is set to [Enabled], BIOS will shorten or skip some check items during POST.

- **Full screen Logo**

  This allows you to enable or disable the full screen logo display feature.

- **Bootup Num-Lock**

  Allows you to select the power-on state for the NumLock.

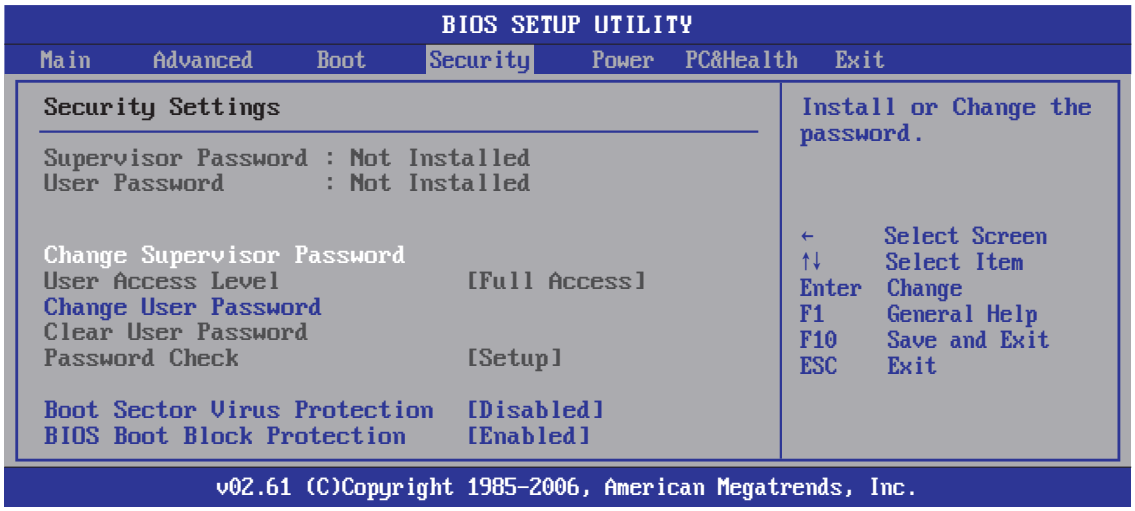
- **Halt On**
  Options:All Errors,No Errors,All But Keyboard.
- **Wait For 'F1' If Error**
  When set to Enabled,the system waits for the F1 key t be pressed when error occurs.
- **Hit 'Del' Message Display**
  When set to Enabled,the system displays the message "Press DEL to run Setup" durning POST.
- **Interrupt 19 Capture**
  When set to Enabled, this function allows the option ROMs to trap Interrupt 19.
- **Back to Boot Setup Menu**

▸ **Boot Device Priority**
Click <Enter> key to enter submenu, it will be display specifies the boot sequence from the available devices.

▸ **Hard Disk Drives**
Click <Enter> key to enter submenu, it will be display specifies the boot device priority sequence from available hard disk drives.

▸ **Removable Drives**
Click <Enter> key to enter submenu, it will be display specifies the boot device priority sequence from available removable drives.

4.5.6 Security Setting

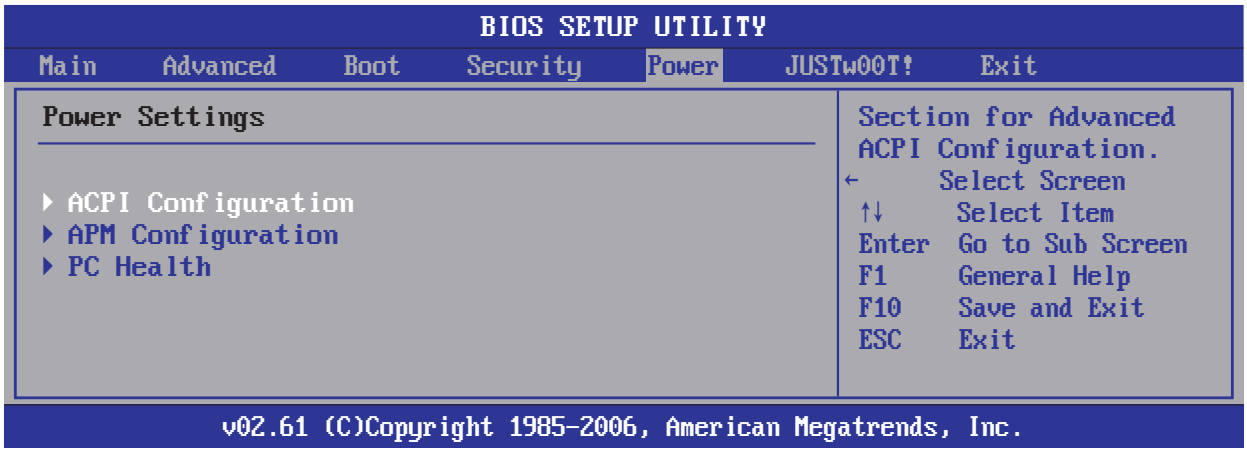


This item allows you to Chage Supervisor/User Password, Type the password, up to eight characters, and press <Enter>. The password typed now will clear any previously entered password from CMOS memory. You will be asked toconfirm the password. Type the password again and press <Enter>.

⚠ *Note: Don't forget your password. If you forget the password, you will have to open the computer case and clear all information in the CMOS before you can start up the system. But by doing this, you will have to reset all previously set options.*

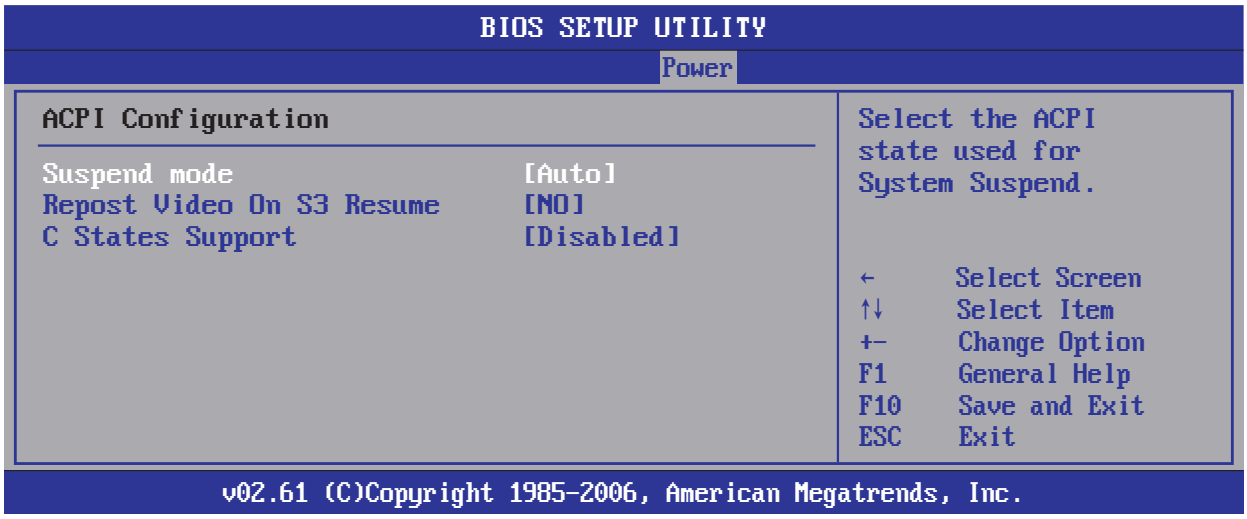
- **Boot Sector Virus Protection**
  Enabled/Disable Boot Sector Virus Protection
- **BIOS Boot Block Protection**
  Options:Enabled,Disabled.

4.5.7 Power Setting



ACPI Configuration

Click <Enter> key to enter its submenu.

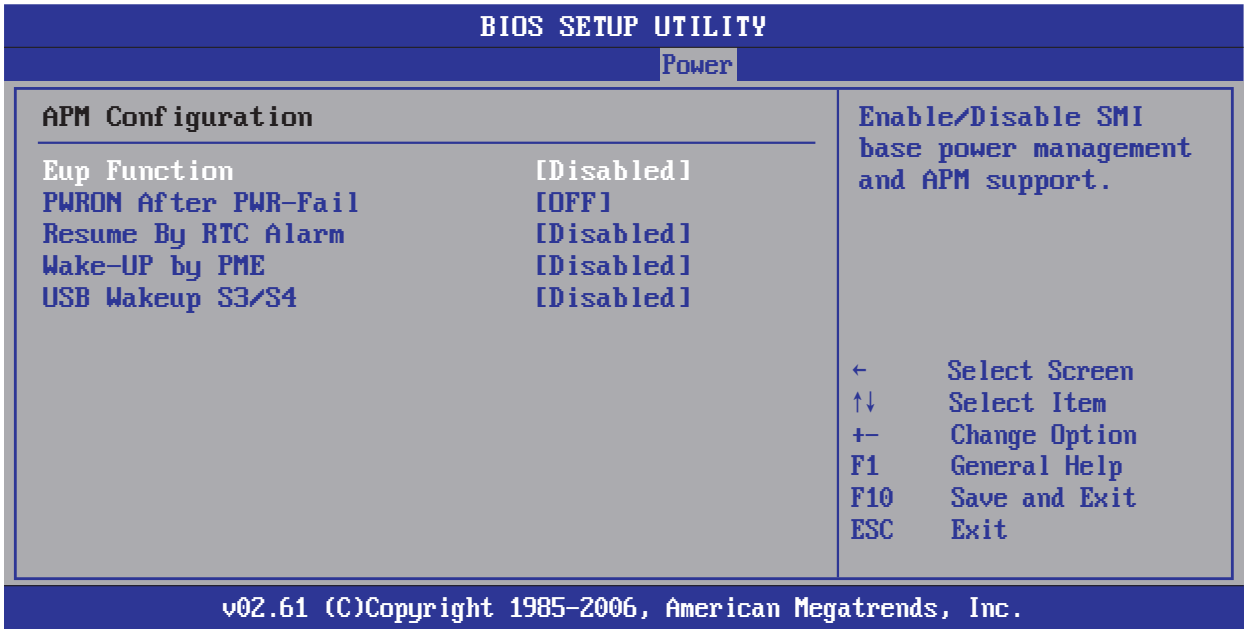


- **Suspend Mode**

  Allows you to select the Advanced Configuration and Power Interface (ACPI) state to be used for system suspend.

- **Repost Video on S3 Resume**
  Determines whether to invoke VGA BIOS post on S3/STR resume.
  - Press <**Esc**> key to return to "**Power**" menu.

▸ **APM Configuration**
Click <Enter> key to enter its submenu, APM Configuration Template Manager allows you to manage Power Managerment default or custom configuration templates.



- **Eup Function**
  EUP Function,Super IO Power saving function.
- **PWRON After PWR-Fail**
  This item selects the system action after an AC power failure.
  [Off]: When power returns after an AC power failure, the system's power remains off. You must press the Power button to power-on the system.
  [On]: When power returns after an AC power failure, the system's power will be powered on automatically.

[Former-Sts]: When power returns after an AC power failure, the system will return to the state where you left off before power failure occurred. If the system's power is off when AC power failure occurs, it will remain off when power returns. If the system's power is on when AC power failure occurs, the system will power-on when power returns.

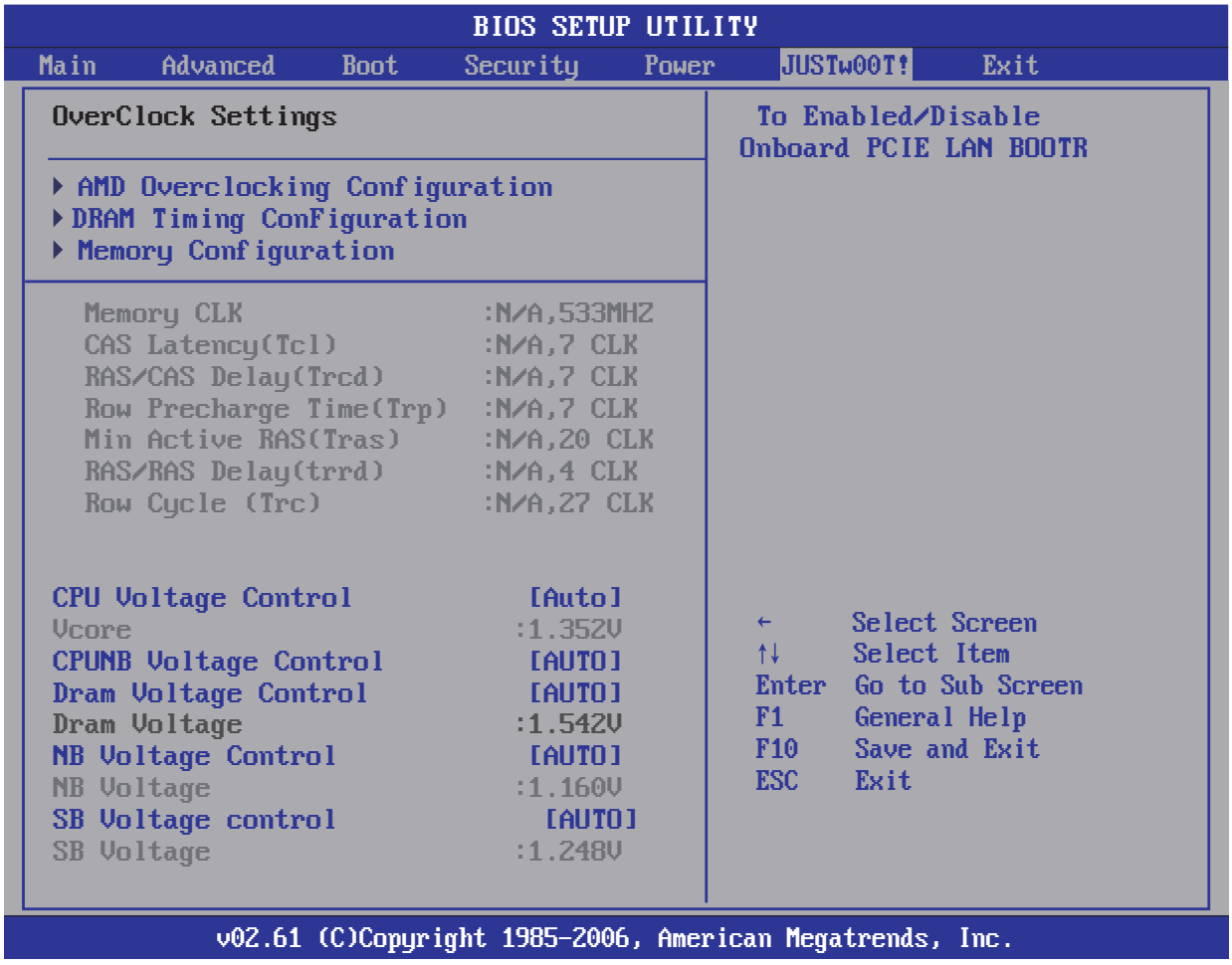
- **Resume By RTC Alarm**
  Allows you to enable or disable RTC to generate a wake event. When this item is set to Enabled,the items RTC Alarm Date,RTC Alarm Hour,RTC Alarm Minute,and RTC Alarm Second appear with set values.
- **Wake-Up by PME**
  Options:Disable,Enabled.
- **USB wakeup S3/S4.**
  USB wakeup S3/S4 function.Options:Disable,Enabled.

▸ **PC Health**

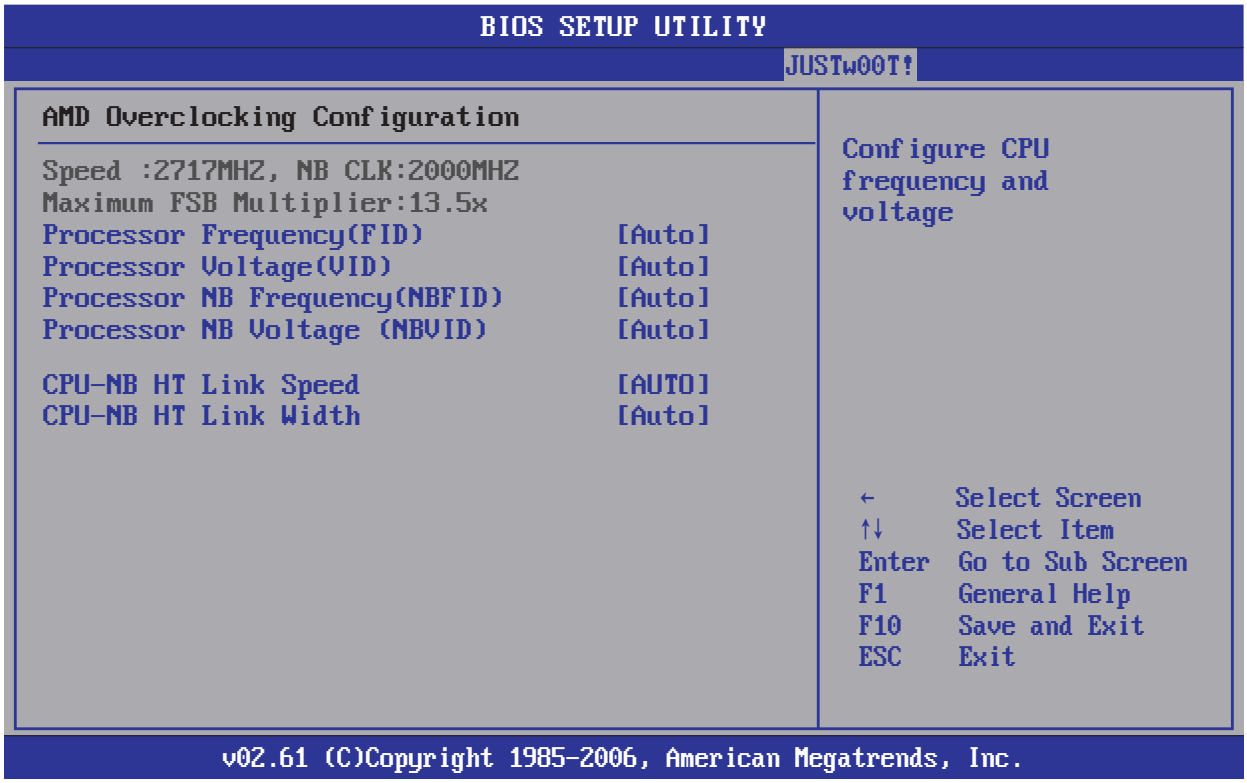
Click <Enter> key to enter its submenu, it will be display hardware health configuration, including System temperature, CPU temperature, FAN speed and all kinds of voltages.

- **FAN1 Mode Setting**
  Available options: Manual Mode byRPM，Auto Fan by RPM，Auto Fan by DutyCycle,Manual Mode by DutyCycle.
- **Manual RPM Setting**
  Set FAN at fixed speed ,min=0 MAX=10000.

4.5.8 JUSTwoot! Setting



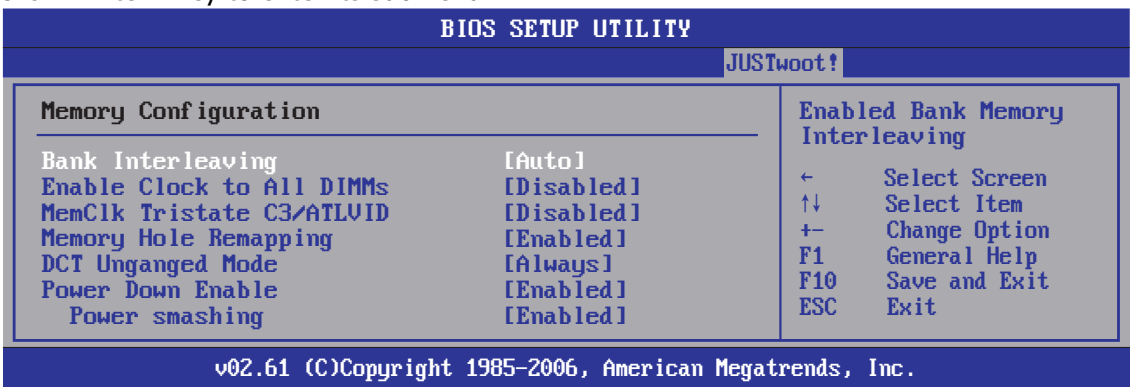
- **AMD Overclocking Configuration**
  This item allows you to set processor frequency, processor voltage, CPU-NB HT link speed, ncHT incoming link width, ncHT outgoing link width, memory configuration and CPU/HT reference clock.
  The option of CPU/HT Reference Clock allows you overclock CPU clock, the Min is 200MHz, the Max is 400, keyin "+"/"-" to select clock.



- **CPU-NB HT Link Speed**
  The HyperTransport link will run at this speed if it is slower than or equal to the system clock and the board is capable.
- **CPU-NB HT Link Width**
  The HyperTransport link will run at this width.

Memory Configuration

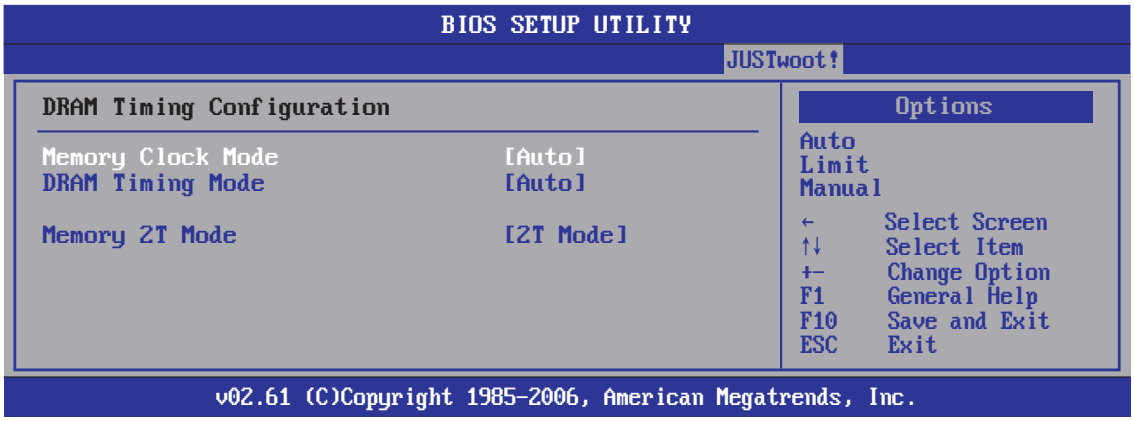
Click <Enter> key to enter its submenu.



- **Bank Interleaving**
  Sets the bank interleaving feature.
- **Enable Clock to All DIMMs**
  This item is to enable or disable the unused clocks to DIMMs even the memory slots are not populated.
- **MemClk Tristate C3/ATLVID**
  Enables or disables the MemClk Tri-Stating during C3 and Alt VID.
- **Memory Hole Remapping**
  Enables or disables the memory remapping around the memory hole.
- **DCT Unganged Mode**
  This item allows the selection of the unganged DRAM mode (64-bit width).
- **Power Down Enable**
  This item is to enable or disable the DDR power down mode.
- **Page Smashing**
  S/w Control of page Smashing Mechanism.

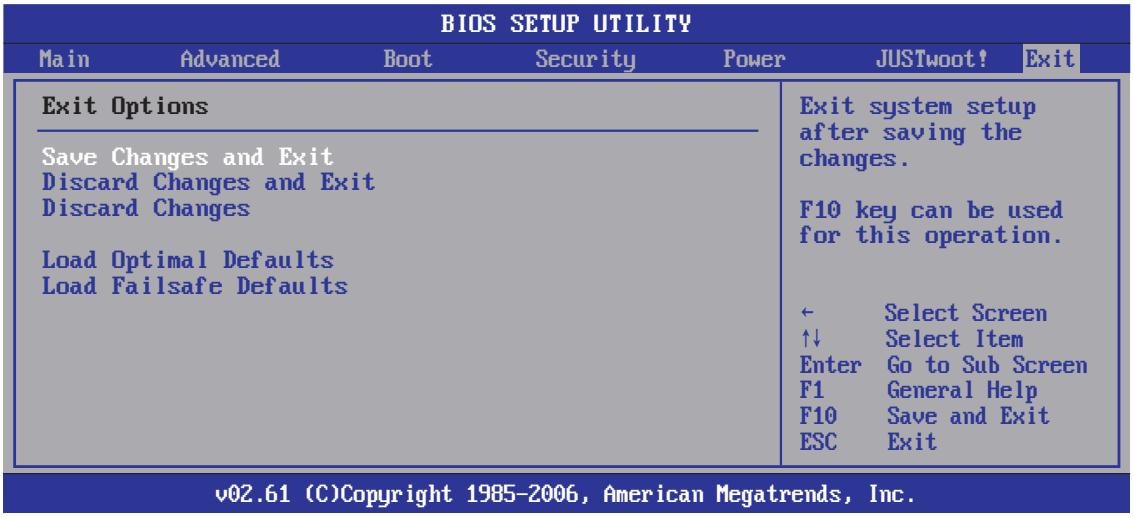
DRAM Timing Configuration

This submenu allows you to set Memory Clock Mode and DRAM Time Mode.

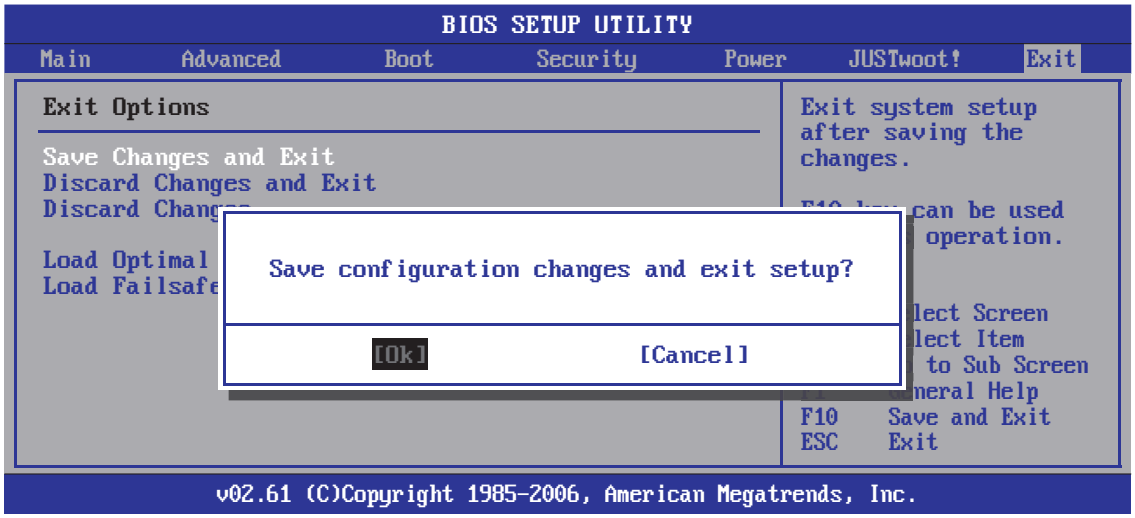


- **Memory Clock Mode**
  This item is to select the memory clock mode.
- **DRAM Timing Mode**
  This item is to select the DRAM Timing mode.
- **Back to JUSTw00T! Setup Menu**

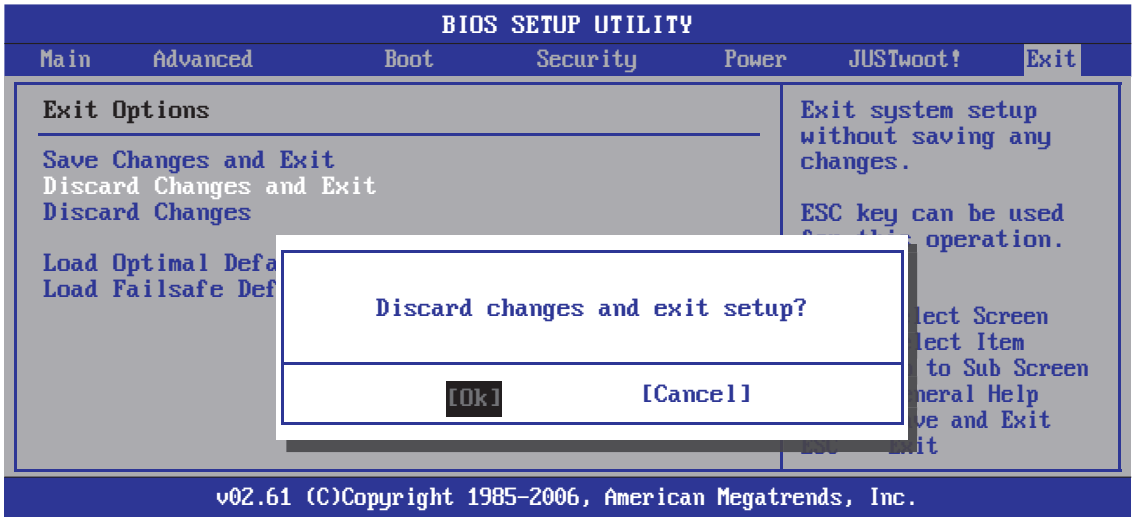
4.5.9 Exit Setting



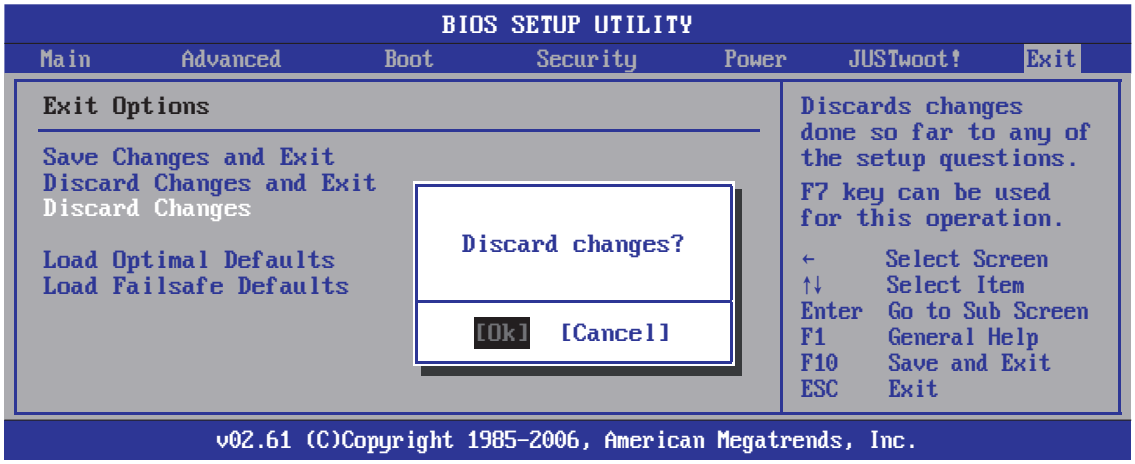
Highlight this item and select <Ok>,then press <Enter> to save the changes that you have made in the Setup Utility and exit the Setup Utility. Or press <Cancel> to return to the main menu.



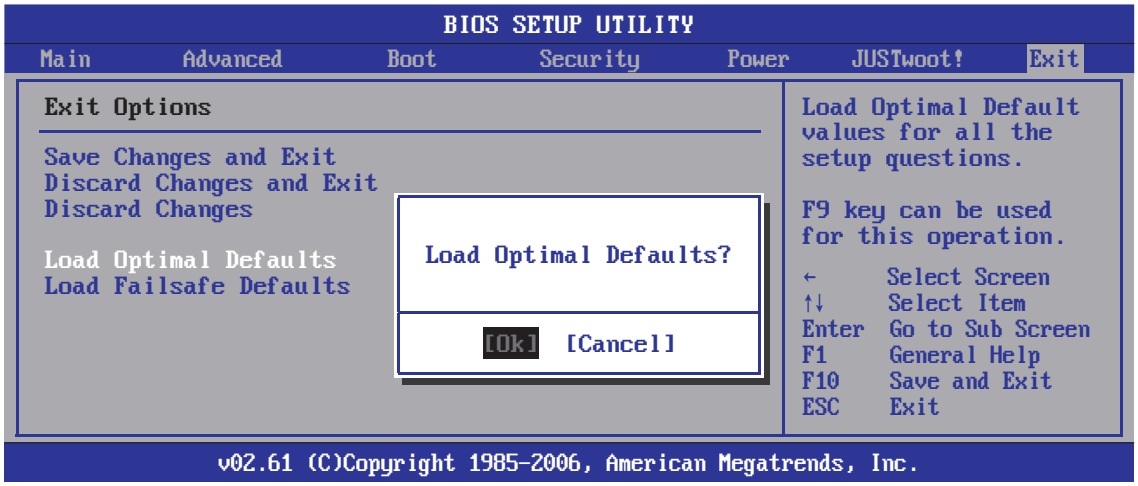
Highlight this item and select <Ok>,then press <Enter> to discard any changes that you have made in the Setup Utility and exit the Setup Utility. Or press <Cancel> to return to the main menu.



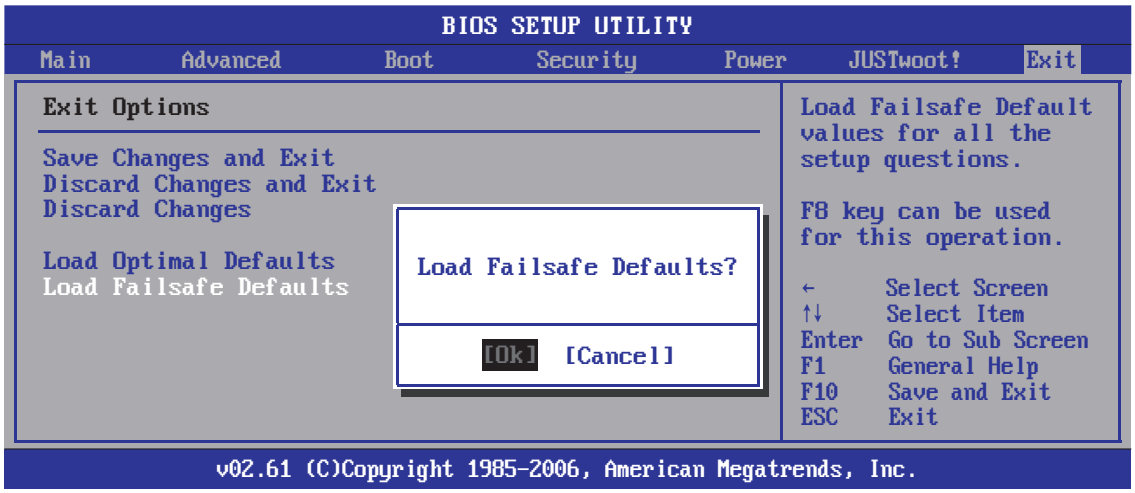
Sleect <Ok>and press <Enter> to discard changes and exit, or press <Cancel> to return to the main menu.



This option opens a dialog box that let you install optimized defaults for all appropriate items in the Setup Utility. Select <OK> and then <Enter> to install the defaults. select <Cancel> and then <Enter> to not install the defaults. The optimized defaults place demand on the system that may be greater than the performance level of the components, such as the CPU and the memory. You can cause fatal errors or instability if you install the optimized defaults when your hardware does not support them. If you only want to install setup defaults for a specific option, select and display that option, and then press <F9>.



This option opens a dialog box that lets you install fail-safe defaults for all appropriate items in the Setup Utility: Select <Ok> and the <Enter> to install the defaults. Select <Canel> and then <Enter> to not install the defaults. The fail-safe defaults place no great demand on the system and are generally stable. If your system is not functioning correctly, try installing the fail-safe defaults as a first step in getting your system working properly again.If you only want to install fail-safe defaults for a specific option, select and display that option, and then press <F8>.



Chapter 5 Driver Installation

Check your package and there is Driver CD included. This CD consists of all drivers you need. In addition, this CD also include an auto detect software which can tell you which hardware is installed, and which drivers needed so that your system can function properly.
Insert CD into your CD-ROM drive and the menu should appear as below. If the menu does not appear, double-click My Computer / double-click CD-ROM drive or click Start / click Run / type X:\ Setup.EXE (assuming X is your CD-ROM drive).

(This picture is only for reference)

From the Main MENU you may make 4 selections:
1. +Mainboard Driver Installation Utility: Click to enter the driver installation menu.
2. +Useful Software Utility: Click to enter the utilities installation menu.
3. >Browse CD: Click to browse the contents of this "Driver & Utility CD".
4. Exit: Click to exit this installation menu.

When you choose **Mainboard Driver installation Utility**, the drivers menu should appear as below:

(This picture is only for reference)

From the Drivers MENU you may make 3 selections:

1. **AMD Chipset Installtion Utility**
2. **Onboard LAN Driver**
3. **Audio Driver**

FCC Notice

This device complies with Part 15 of the FCC Rules. Operation is
subject to the following two conditions:
(1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE 1: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
-Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
-Consult the dealer or an experienced radio/TV technician for help.

NOTE 2: Any changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

NOTE 3: The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user's authority to operate the equipment.