



MINIX™ 7025-UC3

User's Manual

Rev: 1.0, December 2010

Website: <http://www.jwele.com>

Mini-ITX Motherboard

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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 CD X 1
- Serial ATA Signal Cable X 2
- Serial ATA Power Cable X 2

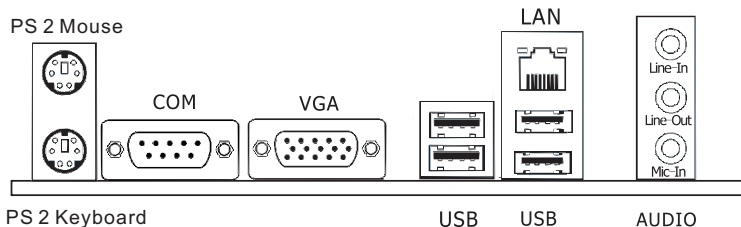
The items listed above are for reference only, and are subject to change without notice.

1.2 Specifications

CPU	<ul style="list-style-type: none"> - Support AMD(R) Socket AM3 processors - AMD Phenom™ II x4/ Phenom™ II x3/ Phenom™ II x2/ Athlon™ II x4/ Athlon™ II x3/Athlon™ II x2/ Sempron™ 1xx processors
Main Chipset	- Integrated GeForce® 7025 & nForce® 630a MCP
Main Memory	<ul style="list-style-type: none"> - Support 2x1.5V DDR3 DIMM socket supporting up to 8GB of system memory - Support for DDR3 1066/1333/1600(OC)MHz memory modules
BIOS	<ul style="list-style-type: none"> - AMI BIOS, supports Plug&Play - Supports Advanced Power Management ACPI,STR - CPU temperature, Fan speed, System Voltage monitoring
Rear Panel I/O	<ul style="list-style-type: none"> - 1 x PS/2 Keyboard port - 1 x PS/2 Mouse port - 1 x VGA port - 1 x COM port - 1 x RJ45 port - 4 x USB 2.0 ports - 3 x Audio jacks (Line In / Line Out / MIC In)
Internal I/O Connectors	<ul style="list-style-type: none"> - 1 x 20-pin ATX main power connector - 1 x 4-pin ATX 12V power connector - 4 x SATA 3Gb/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 SPEAK header - 2 x USB 2.0 headers for additional 4 USB 2.0 ports (by cables)
Sound	<ul style="list-style-type: none"> - Onboard 6-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
Form Factor	Mini ITX (170mm*170mm)

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)

- PS/2 Mouse: Connects to a PS/2 mouse.
- PS/2 Keyboard: Connects to a PS/2 keyboard.
- VGA: Connects to a monitor's VGA input.
- COM: Connect to external modem, mouse or other devices that support this communication protocol.
- 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):
 - 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.
 - Line-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

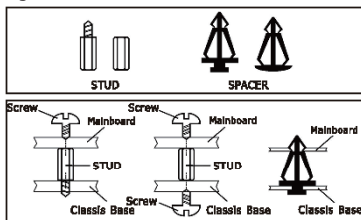
- Choose a chassis big enough to install this mainboard.
- As some features for this mainboard are implemented by cabling connectors on the mainboard to indicators and switches or buttons on the chassis, make sure your chassis supports all the features required.
- If there is possibility of adopting 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°.
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.

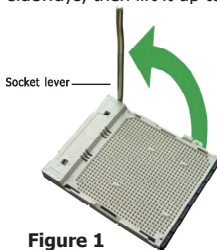


Figure 1

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

Figure 2



2.3.2 Installation of the CPU Cooler

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

2.4 Installation of Memory Modules

This mainboard provides two 1.5v DDR3 DIMM slots, which supports dual channel memory technology. To activate the dual channel configuration, you need to install two identical (same brand, speed, size and chip-type) memory modules into these DIMM slots. Otherwise the memory will only operate at single channel mode.

For dual channel DDR3 installation:

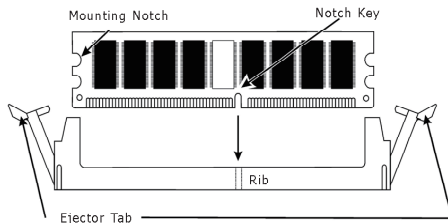
Populate two DDR3 DIMM modules of the same type and size into slots [DIMM1] + [DIMM2].



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.

To install system memory:

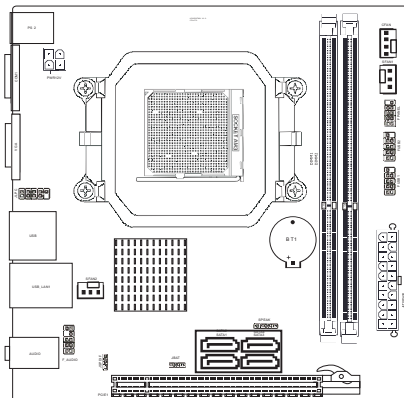
1. Power off the computer and unplug the AC power cord before installing or removing memory modules.
2. Locate the DIMM slot on the board.
3. Hold two edges of the DIMM module carefully, keep away from touching its connectors.
4. Align the notch key on the module with the rib on the slot.
5. Firmly press the module into the slots until the ejector tabs at both sides of the slot automatically snap into the mounting notch. Do not force the DIMM module in with extra force as the DIMM module only fits in one direction.
6. To remove the DIMM modules, push the two ejector tabs on the slot outward simultaneously, and then pull out the DIMM module.



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.

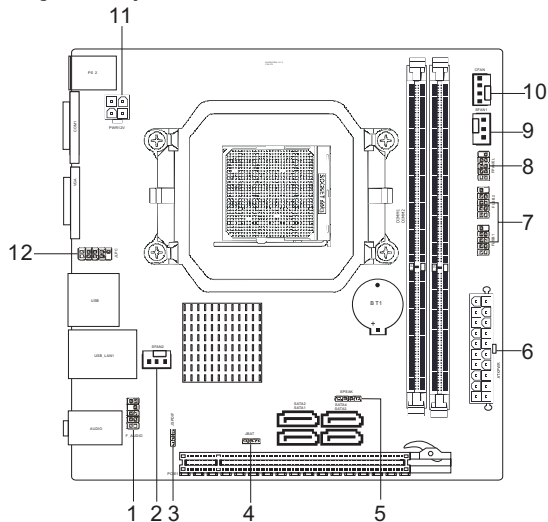


2.5.2 PCIE slot

Install PCIE card into slot "PCIE1".

Chapter 3 Jumpers & Headers Setup

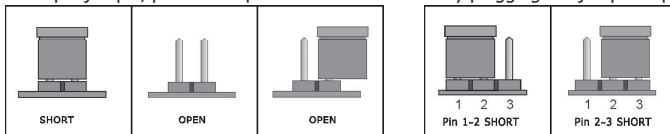
Quick Components Guide



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

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



2/9-SFAN1/SFAN2(Fan Power Connectors Header)

SFAN1: 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.

3-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.

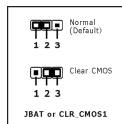


4-JBAT(CMOS Memory Clearing Header)

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.



5/8-SPEAK/FPANEL(Speaker Headers & Front Panel Switches)

HD_LED (Red): Hard Drive 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.

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.



SPEAK:

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

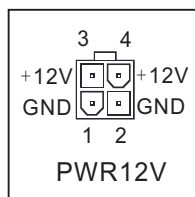
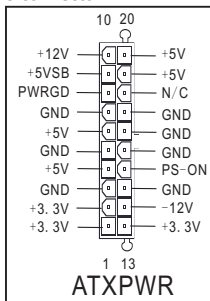
6/11- ATX Power Input Connectors

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). Please connect the 4-pin power to this connector.



7-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



10-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.

12-JLPC

This set of headers are reserved for internal debug purpose.

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 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 BIOS be setup(ed or loaded default values) and save, the 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> + 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 key, the main menu appears.

BIOS SETUP UTILITY	
Main	Advanced Boot Security Power JUSTWoot! Exit
▶ System Information	
System Time	[20:50:32]
System Date	[Tue 09/03/2009]
Power On Beep	[Enabled]
▶ SATA Port 1	: [ST380215AS]
▶ SATA Port 2	: [Not Detected]
▶ SATA Port 3	: [Not Detected]
▶ SATA Port 4	: [Not Detected]
▶ CPU TDP Verify	[Disabled]
← Select Screen ↑↓ Select Item Enter Go to Sub Screen F1 General Help F10 Save and Exit ESC Exit	
v02.61 (C)Copyright 1985-2006, American Megatrends, Inc.	

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 settings.
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

BIOS SETUP UTILITY	
Main	Advanced Boot Security Power JUST400t! Exit
▶ System Information	
System Time	[20:50:32]
System Date	[Tue 09/03/2009]
Power On Beep	[Enabled]
▶ SATA Port 1	: [ST380215AS]
▶ SATA Port 2	: [Not Detected]
▶ SATA Port 3	: [Not Detected]
▶ SATA Port 4	: [Not Detected]
▶ CPU TDP Verify	[Disabled]
← Select Screen ↑↓ Select Item Enter Go to Sub Screen F1 General Help F10 Save and Exit ESC Exit	
v02.61 (C)Copyright 1985-2006, American Megatrends, Inc.	

▶ System Information

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

BIOS SETUP UTILITY	
Main	
System Overview	
AMIBIOS Version :08.00.15 Build Date:07/19/10 ID :C61130F0	
Processor AMD Athlon(tm)II X2 240 Processor Speed :2800MHz Count :2	
System Memory Size :2008MB	
← Select Screen ↑↓ Select Item F1 General Help F10 Save and Exit ESC Exit	
v02.61 (C)Copyright 1985-2006, American Megatrends, Inc.	

- **System time**

This item sets the time you specify(usually the current time)in the format of [Hour],[Minute]and [Second].

- **System date**

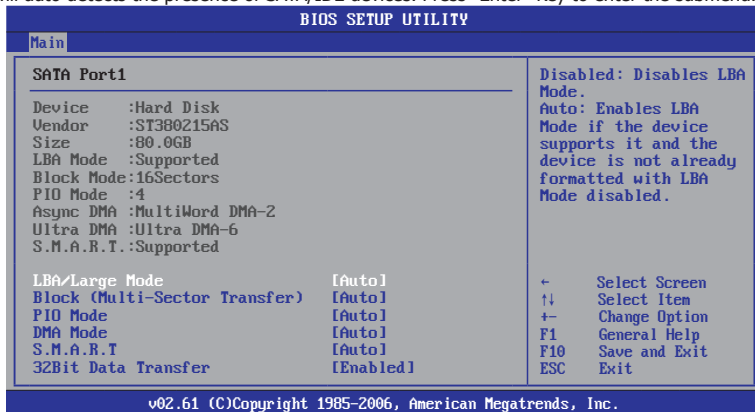
This item sets the date you specify(usually the current date in the format of [Month],[Date],and [Year].

- **Power on Beep**

A beep on post.Options: Disabled,Enabled.

- **SATA Port 1/2/3/4**

This item sets the status of auto detection of SATA/IDE devices while entering setup, and BIOS will auto detects the presence of SATA/IDE devices. Press "Enter" Key to enter the submenu.



- **LBA/Large Mode**

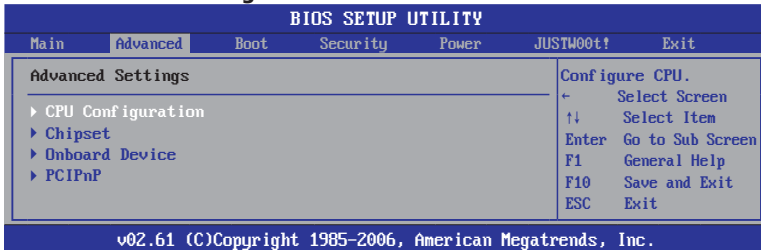
Enables or disables the LBA mode. Setting to [Auto] enables the LBA mode if the device supports this mode, and if the device was not previously formatted with LBA mode disabled.

- **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**
- **CPU TDP Verify**
Options: Disabled,Enabled.

4.5.4 Advanced Setting



This submenu including these configurations, such as CPU, Northbridge, Southbridge, Onboard Device, only CPU Configuration submenu display dialog box as following.

▶ **CPU Configuration**

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

BIOS SETUP UTILITY	
Advanced	
CPU Configuration Module Version: 14.16 AGESA Version: 3.7.0.0 Physical Count : 1 Logical Count : 2 <hr/> AMD Athlon(tm) II X2 240 Processor Revision: C2 Cache L1: 384KB Cache L2: 1536KB Speed : 2727MHz, NB Clk: 1800MHz Able to Change Freq. : Yes uCode Patch Level : 0x1000083 <hr/> GART Error Reporting [Disabled] Microcode Update [Enabled] Secure Virtual Machine Mode [Enabled] Cool 'N 'Quiet [Enabled] ACPI SRAT Table [Enabled]	This option should remain disabled for the normal operation. The driver developer may enable it for testing purpose. + Select Screen ↑↓ Select Item ← Change Option F1 General Help F10 Save and Exit ESC Exit
v02.61 (C)Copyright 1985-2006, American Megatrends, Inc.	

- **GART Error Reporting**

This option should remain disabled for the normal operation. The Driver developer may enable it for testing purpose.

- **Microcode Update.**

Options: Disabled, Enabled.

- **Secure Virtual Machine Mode**

Enable/Disable Secure Virtual Machine Mode(SVM).

- **Cool'n'Quiet**

Enable/disable the generation of ACPI_PPC, _PSS, and _PCI objects.

- **ACPI SRAT Table**

Enable or Disable the building of ACPI SRAT Table.

- **Turbo Core**

Disable/Enable Turbo core function of 6 cores cpu. Options: Disabled, Enabled.

- **Back to Advanced Setup Menu**

► **Chipset Configuration**

Click <Enter> key to enter its submenu, it will be display chipset configuration.

BIOS SETUP UTILITY	
Advanced	
Advanced Chipset Setting WARNING: Setting wrong values in below sections may cause system to malfunction. NUMM ROM Version: 4.082.10 Primary Graphics Adapter [PCI Express->PCI] OnChip and PCIe VGA selection [Disable Onchip] iGPU Frame Buffer Detect [Auto] OnChip VGA Frame Buffer Size [32MB]	
IDE Configuration Serial-ATA 0 [Enable] Hard Disk Write Protect [Disable] IDE Detect Time Out(Sec) [35] ATA(P1) 80Pin Cable Detection [Host]	
RAID Setup nVidia RAID Function [Disabled]	
<div style="float: right;"> Options PCI Express->PCI-> IGP->PCI->PCI Express </div> <div style="clear: both;"></div> <div style="float: right;"> ← Select Screen ↑↓ Select Item Enter Go to Sub Screen F1 General Help F10 Save and Exit ESC Exit </div> <div style="clear: both;"></div>	
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• **Primary Graphics Adapter**

Options:PCI Express ->PCI->IGP,IGP->PCI->PCI Express

• **OnChip and PCIe VGA selection**

Select OnChip or PCIe VGA to display

• **iGPU Frame Buffer Detect**

iGPU Frame Buffer Size Auto Detect

- **OnChip VGA Frame Buffer Size**

iGPU Frame Buffer size.

- **Onboard IDE Controller**

Allows BIOS to Enable or Disable IDE Controller

- **Serial-ATA 0**

Options:Enabled,Disabled.

- **Hard disk write protect**

Disable/enable device write protection.this will be effective 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.

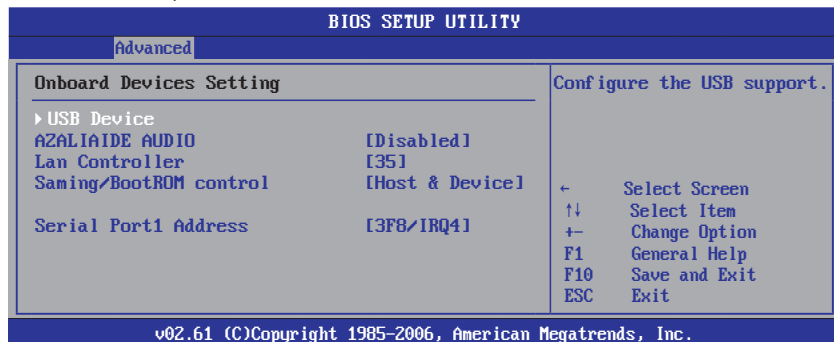
- **nVidia RAID Function**

Options:Enabled,Disabled.

- **Back to Advanced Setup Menu**

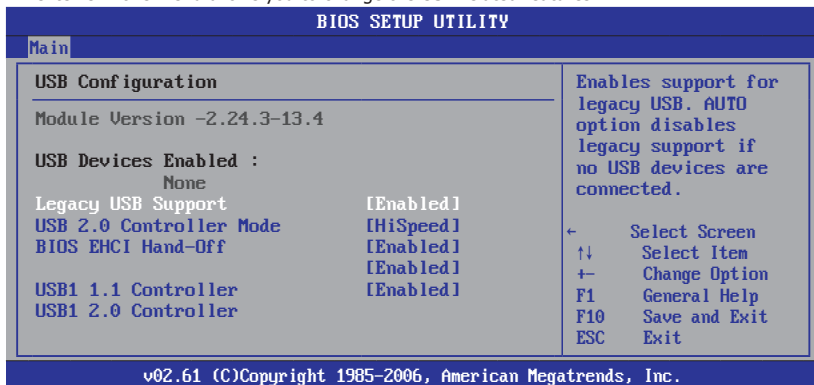
- ▶ **Onboard Device**

Click <Enter> key to enter its submenu.



► USB Device

The items in this menu allows you to change the USB-related features.



• 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.

- Press <Esc> key to return to "Onboard Device Configuration" menu.

• AZALIA AUDIO

Options:Auto,Disabled

• Lan Controller

Options:Auto,Disabled

• Saming/BootRom Control

MAC LAN rom boot Set

• Serial Port1 Address

Allows BIOS to Select Serial Port1 base Addresses.

► **PCIPnP**

Click <Enter> key to enter its submenu.

BIOS SETUP UTILITY	
Advanced	
Advanced PCI/PnP Settings	
WARNING: Setting wrong values in below sections may cause system to malfunction.	
Clear NURAM	[No]
Plug & Play O/S	[No]
PCI Latency Timer	[64]
Allocate IRQ to PCI VGA	[Yes]
Palette Snooping	[Disabled]
PCI IDE BusMaster	[Enabled]
OffBoard PCI/ISA IDE Card	[Auto]
IRQ3	[Available]
IRQ4	[Available]
IRQ5	[Available]
IRQ7	[Available]
IRQ9	[Available]
IRQ10	[Available]
IRQ11	[Available]
IRQ14	[Available]
IRQ15	[Available]
DMA Channel 0	[Available]
DMA Channel 1	[Available]
DMA Channel 3	[Available]
DMA Channel 5	[Available]
DMA Channel 6	[Available]
DMA Channel 7	[Available]
Reserved Memory Size	[Disabled]
Clear NURAM during System Boot.	
←	Select Screen
↑↓	Select Item
←→	Change Option
F1	General Help
F10	Save and Exit
ESC	Exit

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- **Clear NVRAM**

This item for clearing NVRAM during system boot.

Optional: Yes, No

- **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.

Optional: Yes, No

- **PCI Latency Timer**

This item sets value in units of PCI clocks for PCI device latency timer register.

Optional: 32, 64, 96, 128, 160, 192, 224, 248

- **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.

Optional: Yes, No

- **Palette Snooping**

This item informs the PCI devices that an ISA graphics device is installed in the system so the card will function correctly.

Optional: Disabled, Enabled

- **PCI IDE BusMaster**

This item uses PCI busmastering for BIOS reading / writing to IDE drives.

Optional: Disabled, Enabled

- **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.

Optional: Auto, PCI Slot1~6

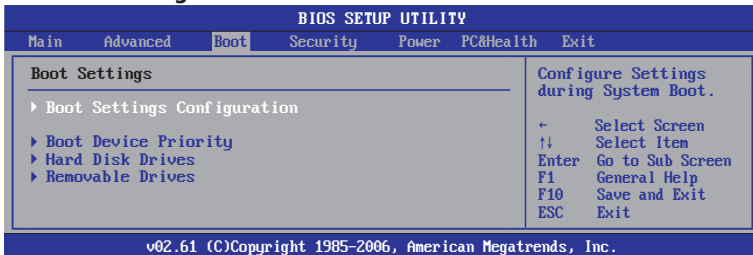
- **Reserved Memory Size**

Size of memory block to reserve for legacy ISA devices.

- **Engineer mode**

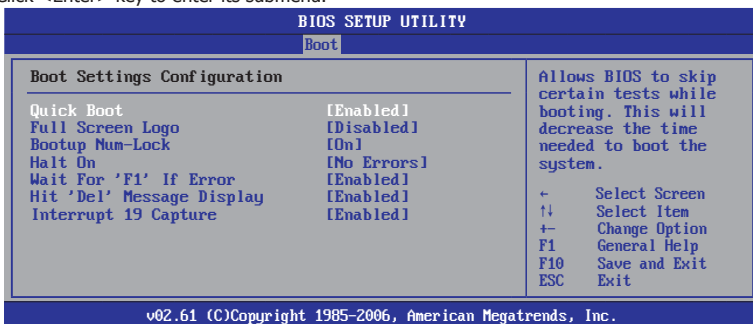
Engineer mode control.

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 to be pressed when error occurs.

- **Hit 'Del' Message Display**

When set to Enabled, the system displays the message "Press DEL to run Setup" during 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

BIOS SETUP UTILITY						
Main	Advanced	Boot	Security	Power	PC&Health	Exit
Security Settings Supervisor Password : Not Installed User Password : Not Installed Change Supervisor Password User Access Level [Full Access] Change User Password Clear User Password Password Check [Setup] Boot Sector Virus Protection [Disabled] Flash Write Protection [Enabled]			Install or Change the password. ← Select Screen ↑↓ Select Item Enter Change F1 General Help F10 Save and Exit ESC Exit			
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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 to confirm 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
- **Flash Write Protection**
Options: Enabled, Disabled.

4.5.7 Power Setting

BIOS SETUP UTILITY						
Main	Advanced	Boot	Security	Power	JUSTW00T!	Exit
Power Settings				Section for Advanced ACPI Configuration.		
▶ ACPI Configuration ▶ APM Configuration ▶ PC Health				← Select Screen ↑↓ Select Item Enter Go to Sub Screen F1 General Help F10 Save and Exit ESC Exit		
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▶ ACPI Configuration

Click <Enter> key to enter its submenu.

BIOS SETUP UTILITY	
Power	
ACPI Configuration	
ACPI Aware O/S Suspend mode ACPI Version Features ACPI APCI support	[Yes] [S1 (POS)] [ACPI V1.0] [Enabled]
Select the ACPI state used for System Suspend.	
← Select Screen ↑↓ Select Item ← Change Option F1 General Help F10 Save and Exit ESC Exit	
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- **ACPI Aware O/S**

Enable/Disable ACPI support for Operating system

- **Suspend Mode**

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

- **ACPI Version Features**

Enable RSDP pointers to 64-bit Fixed system Description tables

- **ACPI APCI support**

Include ACPI APCI table Pointer to RADT pointer list.

- 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 Management default or custom configuration templates.

BIOS SETUP UTILITY	
Power	
APM Configuration	
EuP Function	[Disabled]
Power Button Mode	[On/Off]
APM Resume Event Configuration	
Resume On PME#	[Disabled]
Resume On PCIE Wake#	[Disabled]
Resume On USB	[Disabled]
Resume By RTC Alarm	[Disabled]
Resume By PS2 Mouse	[Disabled]
Resume By PS2 Keyboard	[Disabled]
Restore on AC Power Loss	[Power Off]
EuP Function, Super IO power SAVING function. Disabled Enabled	
← Select Screen ↑↓ Select Item +− Change Option F1 General Help F10 Save and Exit ESC Exit	

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► 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.

BIOS SETUP UTILITY		
		Power
PC Health		Fan configuration mode setting
H/W Health Function	[Enabled]	
System Temperature	:23°C/73°F	
CPU Temperature	:29°C/84°F	
CPUFAN Speed		
SYSFAN1 Speed		
CPU Voltage	:1.384 V	← Select Screen
CPU HT Voltage	:1.193 V	↑↓ Select Item
Dram Voltage	:1.542 V	+← Change Option
+5V Voltage	:4.992 V	F1 General Help
+12V Voltage	:12.104 V	F10 Save and Exit
UCC	:3.248 V	ESC Exit
VBAT	:2.960 V	
CPUFAN Mode Setting	[Manual Mode]	
Manual Duty Cycle Setting	[100]	

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• CPUFAN Mode Setting

Available options: Manual Mode, Thermal Cruise Mode, Speed Cruise Mode

• Manual Duty Cycle Setting

Set Fan at fixed Duty-Cycle Min=0 Max=100 Please input Dec number;

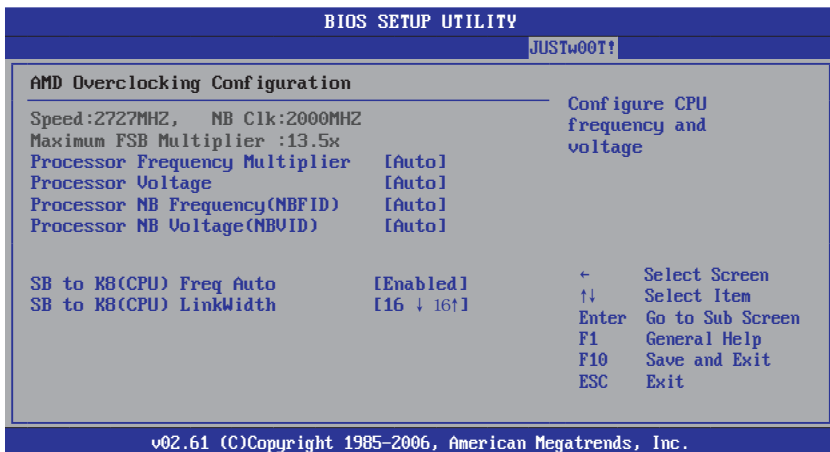
4.5.8 JUSTw00t! Setting(OverClock Settings)

BIOS SETUP UTILITY						
Main	Advanced	Boot	Security	Power	JUSTw00t!	Exit
OverClock Settings				ConFigur CPU frequency and voltage		
▶ AMD Overclocking Configuration ▶ DRAM Timing Configuration ▶ Memory Configuration Memory 2T Mode [2T Model]						
Memory CLK :N/A,667MHZ CAS Latency(Tcl) :N/A,9 CLK RAS/CAS Delay(Trcd) :N/A,9 CLK Row Precharge Time(Trp) :N/A,9 CLK Min Active RAS(Tras) :N/A,24 CLK RAS/RAS Delay(trrd) :N/A,4 CLK Row Cycle (Trc) :N/A,33 CLK Write Recover Time(Twr) :N/A,6 CLK						
CPU/LTD Spread Spectrum [200.0] PCIE Spread Spectrum [Enabled] SATA Spread Spectrum [Enabled]				← Select Screen ↑↓ Select Item Enter Go to Sub Screen F1 General Help F10 Save and Exit ESC Exit		
GPU Over control [Auto] CPU Frequency,MHZ [200.0] MCP PCI-Express Frequency,MHZ [100]						
CPU Voltage Control [Auto] CPU Voltage :1.264v K10 CPUNB Voltage Control [Auto] DRAM Voltage Control [Auto] DRAM Voltage :1.936 v Chipset Voltage Control [Auto] Chip Voltage :1.272v						

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► AMD Overclocking Configuration

Click <Enter> key to enter its submenu.



• Processor Frequency Multiplier

options: Auto, X4.0 800 MHz, X4.5 900MHz, X5.0 1000MHz, X5.5 1100MHz, X6.0 1200MHz, X6.5 1300MHz, X7.0 1400MHz, X7.5 1500MHz

• Processor Voltage

Options: Auto, 1.425V, 1.412V, 1.400V, 1.387V, 1.375V, 1.362V, 1.350V, 1.337V

• Processor NB Frequency (NBFID)

Options: Auto, X4 800MHz, X5 1000MHz, X6 1200MHz, X7 1400MHz, X8 1600MHz, X9 1800MHz, X10 2000MHz, X11 2200MHz.

• Processor NB Voltage(NBVID)

Options: Auto, 1.425V, 1.412V, 1.400V, 1.387V, 1.375V, 1.362V, 1.350V, 1.337V

• SB to K8(CPU) Freq Auto

SB to K8(CPU) frequency selection by CPU capability.

• SB to K8(CPU) LinkWidth

SB to K8(CPU) LinkWidth selection

- Press <Esc> key to return to "JUSTw00T!" menu.

► **DRAM Timing Configuration**

BIOS SETUP UTILITY	
JUSTw00T!	
DRAM Timing Configuration	
Memory Clock Mode	[Auto]
DRAM Timing Mode	[Auto]
Memory 2T Mode	[2T Mode]
Options	
Auto	
Limit	
Manual	
←	Select Screen
↑↓	Select Item
+←	Change Option
F1	General Help
F10	Save and Exit
ESC	Exit

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• **Memory Clock Mode**

This item is to select the memory clock mode.

• **DRAM Timing Mode**

This item is to select the DRAM Timing mode.

• **Memory 2T Mode**

Options:Auto, 1T Mode,2T Mode.

- Press <Esc> key to return to "JUSTw00T!" menu.

► Memory Configuration

Click <Enter> key to enter its submenu.

BIOS SETUP UTILITY		
		JUSTW00T!
Memory Configuration		Enable Bank Memory Interleaving
Bank Interleaving	[Auto]	
Channel Interleaving	[Auto]	
Enable Clock to All DIMMs	[Disabled]	
MemClk Tristate C3/ATLVID	[Disabled]	
Memory Hole Remapping	[Enabled]	
DCT Unganged Mode	[Always]	
Power Down Enable	[Enabled]	
Page Smashing	[Disabled]	
		+ Select Screen
		↑↓ Select Item
		+− Change Option
		F1 General Help
		F10 Save and Exit
		ESC Exit
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• Bank Interleaving

Sets the bank interleaving feature.

• Channel Interleaving

Enable Channel Memory Interleaving.

• 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).

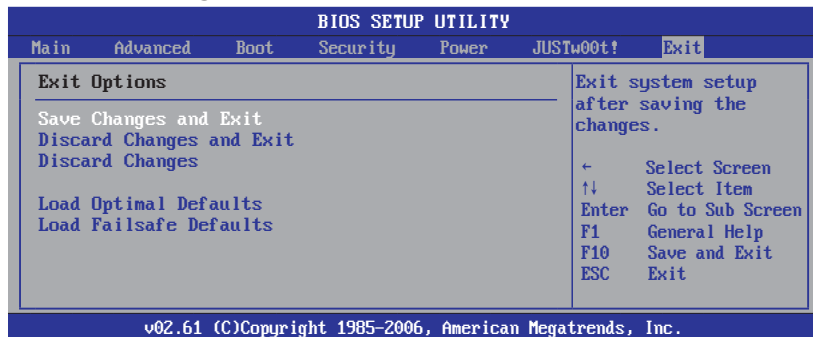
• Power Down Enable

This item is to enable or disable the DDR power down mode.

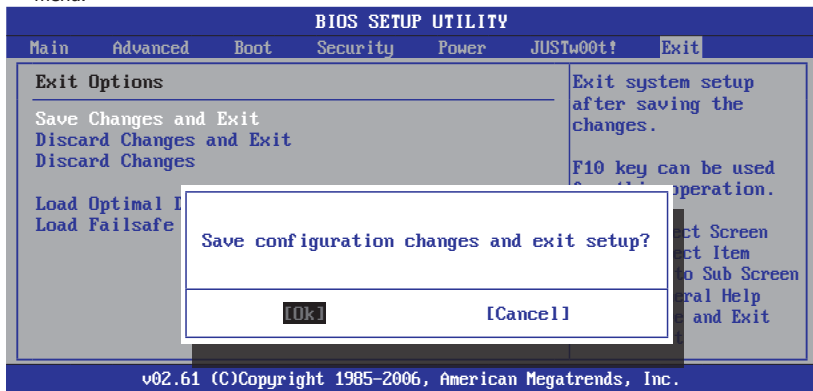
• Page Smashing

S/W Control of Page Smashing Mechanism.

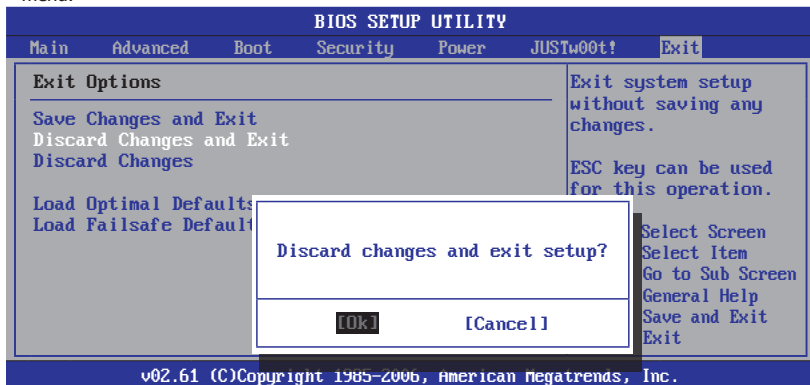
4.5.9 Exit Setting



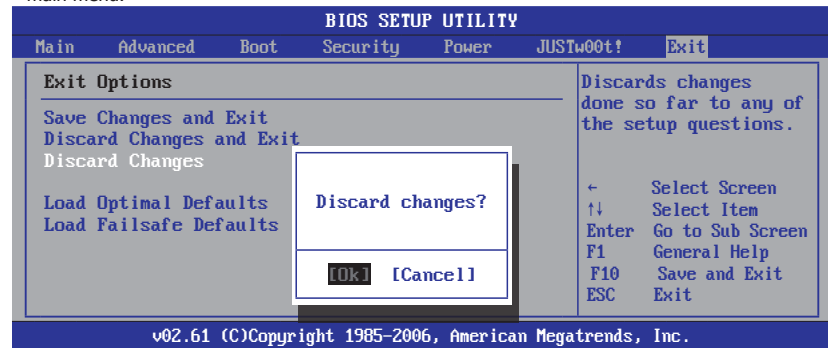
Highlight this item and select <Ok>, then press <Enter> to save the changes that you have made in the Setup Utility and exit the Setup Utility. Or press <Cancel> to return to the main menu.



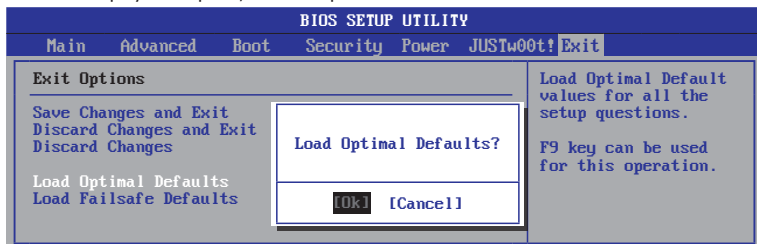
Highlight this item and select <Ok>, then press <Enter> to discard any changes that you have made in the Setup Utility and exit the Setup Utility. Or press <Cancel> to return to the main menu.



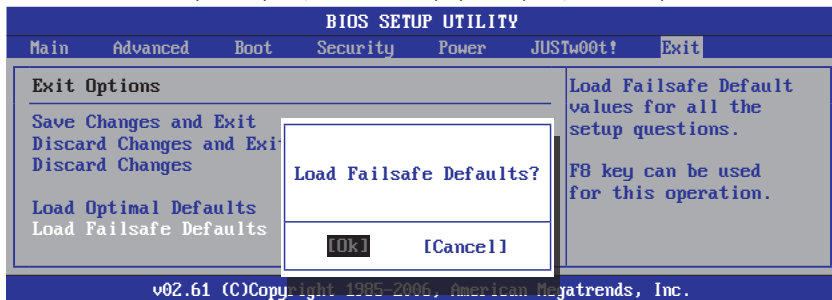
Select <Ok> and press <Enter> to discard changes and exit, or press <Cancel> to return to the main menu.



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 <Cancel> 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 4 selections:

1. nForce Chipset Installation Utility
2. Nvidia VGA Graphics Driver
3. Onboard LAN Driver
4. Realtek HD Audio Driver
5. Exit: Click to exit this installation menu.