

# OEM ITX-780G2 Motherboard

## User' s Manual V1.0

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Service hot line (USA): 800-664-8917 1-650-871-3930

Email: [info@OEMproduction.com](mailto:info@OEMproduction.com)

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# Chapter I

## About the Product

### 1.1 Gratitude

Thank you for purchasing ITX-780G2 Motherboard made by OEM. Mini 780G2 Motherboard supports Socket AM2+ processor, DDRII533/667/800 standard memory, 5 serial SATA2 hard disk interfaces and 6 USB2.0 interfaces and provides six sound channels.

### 1.2 Accessories

Your ITX-780G2 Motherboard consists of the following accessories. If any of them is missing, please contact your local distributor as soon as possible.

1. ITX-780G2 Motherboard	One piece
2. User's Manual V1.0 for ITX-780G2 Motherboard	One copy
3. Data cable for hard disk	One piece
4. Serial-interface hard disk cable	One set
5. Driver's disk	One piece
6. Warranty Card	One piece
7. I/O baffle	One piece

### 1.3 Picture of the motherboard



Figure 1.1 Picture of physical object of ITX-780G2 Motherboard

## 1.4 Features

### System processor

- 1) Supports AM2 CPU with Socket AM2+ specification;
- 2) Supports AMD processor of HT 3.1.

### System memory

- 1) Supports two 240-Pin DDR II memories;
- 2) 4GB of memory at maximum;
- 3) Supports DDRII800/667/533 memory mode.

#### **Note:**

Please use conforming memory.

### System BIOS

- 1) Supports PNP, APM and ATAPI;
- 2) Supports ACPI and DMI;
- 3) Automatic detection and supporting hard disk the LBA mode of which is over 160G;
- 4) Easy for end-users to upgrading the motherboard with BIOS.

### Interface of peripheral equipment

- 1) One quick IDE port, supporting DMA33/66/100/133 hard disk, CD-ROM, ZIP, LS120 and other drivers;
- 2) Five SATA interfaces, supporting 3Gb/s SATA2 hard disk interface;
- 3) Interface with co-axial/optic fiber audio output;
- 4) 1 DVI interface +1 VGA interface;
- 5) 1 HDMI interface;
- 6) 6 high-speed transmission ports (max. 480Mb/s) which support USB2.0, compatible with USB1.1;
- 7) One PS\_K keyboard connector;
- 8) One standard ATX power receptacle;
- 9) One CPU fan interface;
- 10) One interface for case panel, compatible with HDD LED and Speaker;
- 11) Integrated 1000M network interface card.

- 12) On-board HD-AUDIO sound card:
  - (1) Integrating HD-AUDIO sound-effect controller;
  - (2) Supports Director Sound and Sound Blaster;
  - (3) Supports NPN and APM 1.2;
  - (4) Supports Windows 7/XP/Vista driver;
  - (5) Supports Line-in, Line-out and Mic-in;
  - (6) Supports front audio ports.

#### **Power management**

- 1) Supports APM and ACPT;
- 2) Compatible with “Green PC”.

#### **Extended interface**

One PCI Express x16 graphics card interface.

## Chapter II

# Installing Hardware

### Warning

The motherboard consists of a great number of ICs and other components. These ICs are apt to be damaged by the static charge. Therefore, the user must make the following preparations before formal installation:

1. Turn off the power of the computer. It is preferable the power cord be unplugged.
2. Take care not to contact the metal wires and their joints on the motherboard when handling it.
3. It is preferable that the anti-static wrist strap be worn.
4. Before the ICs are installed, the components of the motherboard should be placed on the anti-static mat or bag.
5. When you remove the plug on the ATX power supply of the motherboard, make sure the switch of the power supply is in OFF state.

Installing the motherboard onto the computer case:

For most of the computer cases, the multiple fixing holes left on their bottoms can be used for securing the motherboard and no short circuit can occur therefrom. During your operation, take care not to allow the screws to contact any circuit or part on PCB. When circuits on the surface of the motherboard get close to the fixing holes, you can use the plastic sheet to separate the screws from the board surface so as to avoid damage or failure of the motherboard.

## 1. Layout of motherboard

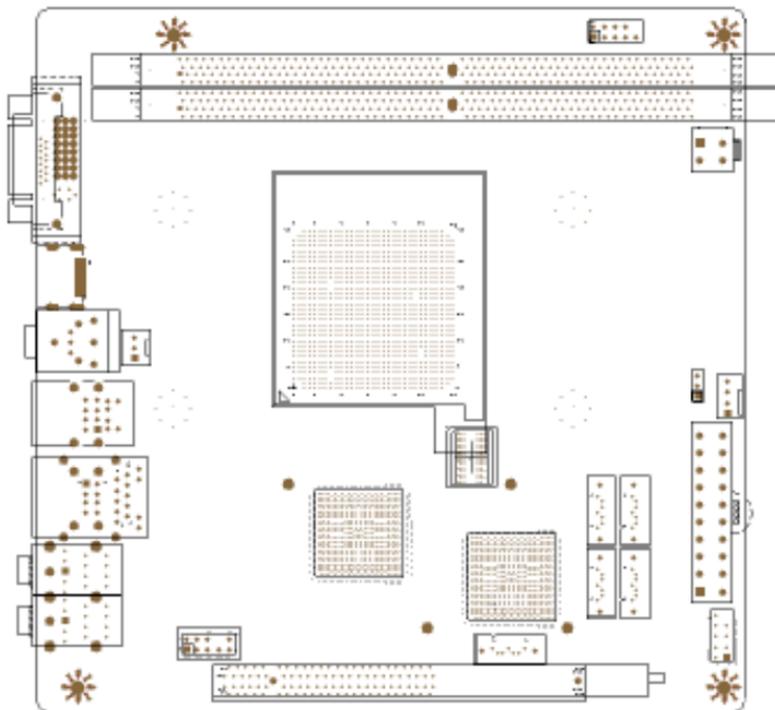


Figure 2.1

Note: The above figure is the picture of ITX-780G2 Motherboard.  
This picture is only used for reference and the physical object shall prevail.

## 2. Installing CPU

Please install the CPU (central processing unit) in accordance with the following procedures:

- 1) Find the processor receptacle Socket AM2/AM2+ on the motherboard;
- 2) Open the fixing bar beside the receptacle Socket AM2/AM2+ to the height of a 90-degree angle, as shown in the figure below;
- 3) Note that, at pin-hole area of the left and right sides of the bottom of Socket AM2/AM2+ (marked with “Socket AM2/AM2+”), one pin hole is missing. This is used for indicating the direction for the installation of CPU. There should be drawing indicating the direction, like a triangle, at the edge of the CPU you bought;
- 4) Align Socket AM2/AM2+ to the indicated direction on CPU, slowly insert CPU into Socket AM2/AM2+, and then put back the fixing bar;



Figure 2.2

### Note

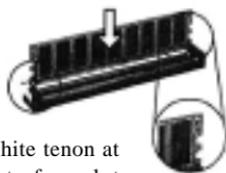
To install the CPU correctly, you should make sure the indicated direction on CPU matches that of Socket AM2/AM2+. Otherwise, the CPU might be damaged.

- 5) After the installation of CPU, you should install the CPU fan onto the CPU. To secure the fan, you should make the buckle of CPU fan engaged in the corresponding position at the two sides of Socket AM2/AM2+;
- 6) Once CPU and its securing parts are installed, you should then plug the power cord of the fan into the corresponding receptacle on the motherboard.

## 2.3 Installing memory card

Please install the memory card in accordance with the following procedures:

- 1) Remove the white tenon at the two ends of the interface slot for the memory card;
- 2) Align the golden finger of the memory card to the groove of the interface slot and pay attention the concave hole of golden finger should be aligned to the convex point of the slot;



Remove outward the white tenon at the two ends of the interface slot for module of the memory card.

Figure 2.3

- 3) Finally, insert the memory card into the interface slot gently. If no error occurs at the moment, insert the card forward in the slot till the white buckle is automatically engaged in the concave hole at the two sides of the memory card.

### Note

In order to avoid damages to the motherboard or the components, the user must make sure the power supply to the computer is turned off before the memory card or other system component is installed or removed. As the groove is set at the golden finger of the DDRII DIMM memory card, the memory card can only be inserted into the slot with one direction. During installation, the user only needs to align the golden finger and the dual-channel groove of the interface slot and insert it gently. To avoid damage, never apply excessive force in that process.

## 2.4 Installing extension interface card

### Installing graphics card

This motherboard provides one interface slot for PCIe x16 graphics card. When you install the PCIe graphics card, you should note that groove of the golden finger must be exactly engaged into the interface slot. In that process, it is preferable that you be in grounded state, and you should carefully take out the graphics card from the anti-static bag. Then align the graphics card to the PCIe interface slot and insert it. After that, tighten the screw on the metal baffle. See Figure 2.4.

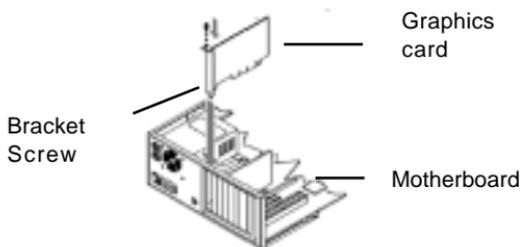


Figure 2.4

## 2.5 Setting motherboard's jump wire and inserts

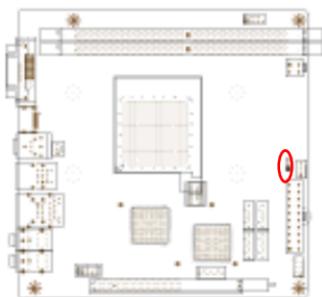
### Note

The user should note that all receptacles are marked with PIN1. The symbol “#” indicates the ex-factory default value of the motherboard.

#### 1) CPU\_FAN1/SYS\_FAN1

##### (CPU fan's receptacle / system fan's receptacle)

This receptacle can be used for connecting CPU/system fan. Its pins' function is defined below. The user shall make sure the fan is conforming. See Figure 2.5.

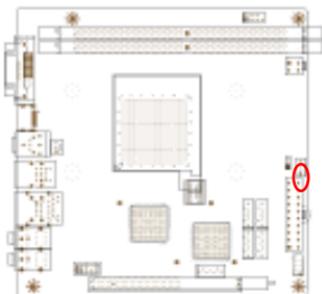


Pin	Definition
1	Ground
2	12v
3	Signal
4	Ctrl

Figure 2.5

#### 2) CLR\_CMOS(CMOS port)

The correct time, system hardware and other information are saved in the CMOS memory of the motherboard. The shutoff the computer's power supply won't cause the loss of this information, for the CMOS is powered by the battery on the motherboard. Its settings are seen in Figure 2.6:

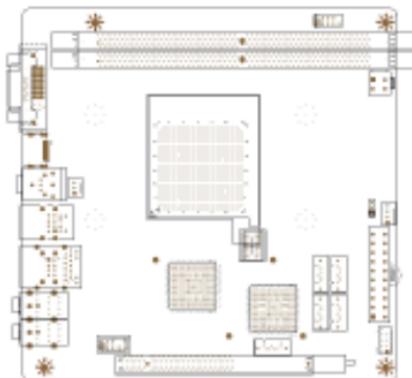


Pin	Definition
1-2#	Normal
2-3	Clear CMOS

Figure 2.6

### 3) F\_USB (frond-end USB port)

This motherboard provides the user extension USB ports. These ports support USB 2.0 devices. The definitions of the ports are described below:



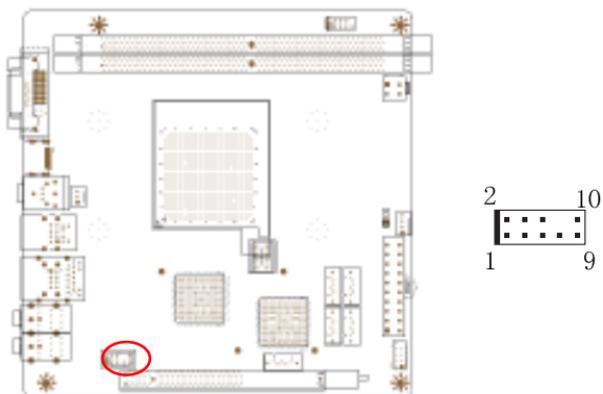
Pin	Definition	Pin	Definition
1	5V	2	5V
3	USB D0-	4	USB D1-
5	USB D0+	6	USB D1+
7	Ground	8	Ground
9	Empty	10	Not used

Figure 2.7

#### 4) F\_AU DI O(Port for front-end sound card)

These sound card ports allow you to connect to the wire harness of the sound card. After connection, you can easily control the audio output/microphone through the front panel of the host.

The definitions of the ports are shown in Figure 2.8:

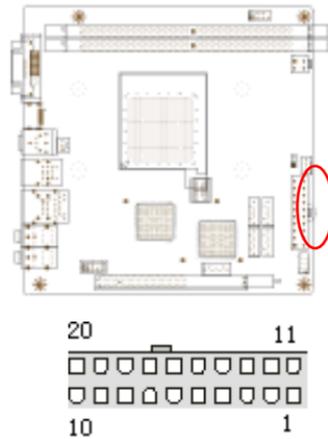


Pin	Definition	Pin	Definition
1	MIC	2	Ground
3	MIC-BIAS	4	5V(Not connected to wire)
5	Output of right channel	6	-
7	Ground	8	Empty
9	Output of left channel	10	-

Figure 2. 8

#### 5) A TX 24 P1(Power receptacle)

This receptacle is used for connecting the 24-pin outlet of the power supply. The definitions of the ports are described in Figure 2.9 below.

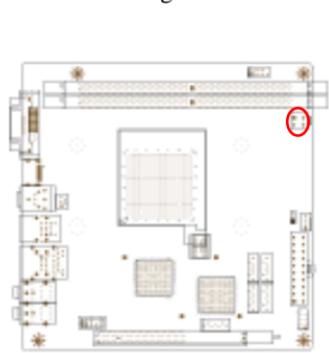


Pin	Definition	Pin	Definition
1	3.3V	11	3.3V
2	3.3V	12	-12V
3	Ground	13	Ground
4	5V	14	PS-ON
5	Ground	15	Ground
6	5V	16	Ground
7	Ground	17	Ground
8	PG	18	-5V
9	5VSB	19	5V
10	12V	20	5V

Figure 2.9

#### 6) ATX12V (Receptacle for 12 power supply)

In addition to 24-pin PWRATX1 power supply receptacle, this motherboard also provides a 12V power supply receptacle exclusively used for CPU. In order to make CPU receive stable voltage, we recommend you connect CPU to this outlet. The definitions of the ports are described in Figure 2.10 below.



Pin	Definition
1	Ground
2	Ground
3	12V
4	12V

Figure 2.10

**7) F\_PANEL(Front-end control panel). See Figure 2.11.**

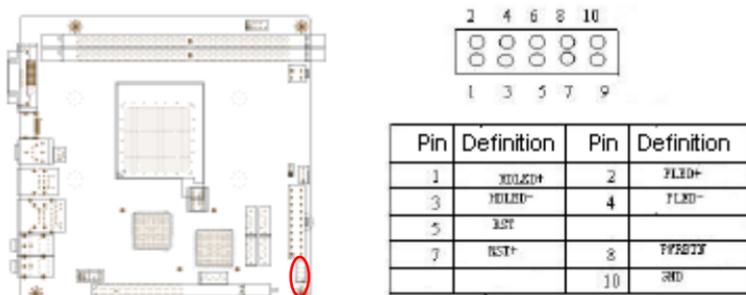


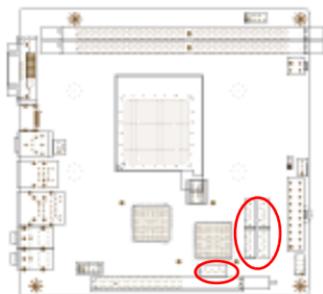
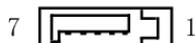
Figure 2.11

**Note**

In above figure, HD-LED+/HD-LED- should be connected to indicator of hard disk, PW-LED+/PW-LED- to indicator of power supply, PW+/PW- to power switch, RST+/RST- to Reset switch and SPK+/SPK- to speaker.

**8) SATA1/SATA2...SATA5 (Serial ATA2 wire-harness receptacle)**

Serial ATA receptacle can offer a transmission rate of 3GB/s. You can connect the Serial ATA devices to this receptacle. See Figure 2.12.



Pin	Definition
1	Ground
2	TXP
3	TXN
4	Ground
5	RXN
6	RXP
7	Ground

Figure 2.12

## 9) IDE 1 (Wire-harness receptacle for hard disk)

One IDE wire-harness receptacle is set on this motherboard. It can be connected to one IDE wire harness and each wire harness can be connected to two IDE devices. Insert the blue plug of the wire harness into the IDE1 receptacle on the mother board, and insert the other end into the IDE device. Normally, Pin 1 of the wire harness is marked with red color. Please insert into corresponding Pin 1 of this receptacle. See Figure 2.13.

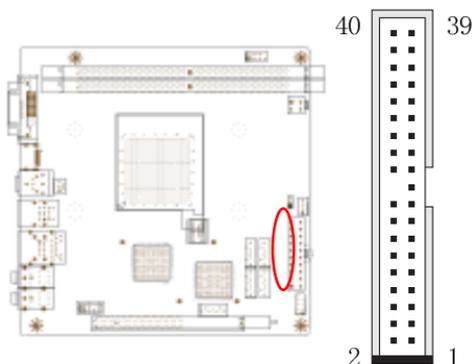


Figure 2.13

## 2.6 Rear interfaces of motherboard

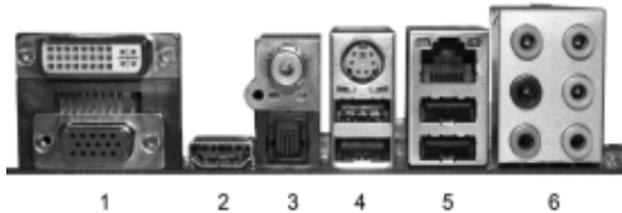


Figure 2.14

- 1) DVI & VGA interface.
- 2) HDMI interface.
- 3) SPDIF interface.
- 4) PS\_K keyboard interface and 2 USB interfaces.
- 5) RJ45 interface and 2 USB interfaces.
- 6) Line out, Line in and Mic in audio outputs.

## Chapter III BIOS Setup

### Note

The descriptions relating to BIOS in this Manual can only be used for reference as the BIOS version of the motherboard is upgraded continuously. OEM provides no guarantee that the contents in this Manual be consistent with the information you acquire.

BIOS is a basic I/O control program saved in the Flash Memory. Bridging the motherboard and the operating system, BIOS is used for managing the setup of the related parameters between them. When the computer is activated, the system is first controlled by the BIOS program. First, a self-detection called POST is performed to check all hard devices and confirm the parameters of the synchronous hardware. Once all detections are completed, BIOS will hand over the controlling to the operating system (OS). The correct setup of BIOS plays a key role in stably running the system and optimizing its performance.

The CMOS Setup will save the set parameters in the built-in CMOS SRAM on the motherboard. When the power is shut off, the lithium battery on the motherboard will supply power CMOS SRAM continuously. The BIOS setup program will allow you to configure the following items:

1. HD drive, floppy drive and peripheral devices;
2. Video display type and display items;
3. Password protection;
4. Power management characteristics.

#### A. State of BIOS Setup

When the computer is started up, BIOS will run the self-detection (Post) program. This program includes series of diagnosis fixed in BIOS. When this program is executed, the following information will appear if any error is found:

Press F1 to Run Setup

Press F 2 to Load default values and continue

To enter BIOS, you can press F1; to load the default values and enter the system, you can press F2. After the self-detection process is completed, you can press DEL to enter the BIOS interface if no error is found. If the indicative information disappears before you can act, you can shut off the computer and turn on it again, or you can press the key RESET on the machine case. To restart your computer, you can also simultaneously press <Ctrl>+<Alt>+<Delete>.

## B. Keys and functions

<b>Key</b>	<b>Function</b>
↑ (Up key)	Move to the previous item
↓ (Down key)	Move to the next item
← (Left key)	Move to the left item
→ (Right key)	Move to the right item
ESC	Exit the current interface
Page Up	Change the setup state, or add the values
Page Down	Change the setup state, or deduct the values
F1	Display the information of the current setup
F7	Load the set values of previous time
F8	Load the safest values
F9	Load the optimized values
F10	Save the set values and exit the CMOS SETUP state

## C. Auxiliary information

### Main interface

When the system enters the main interface of Setup, the major selected contents will be displayed at the lower part of the interface with the change of the options.

### Set interface

When you set the value for each column, you can view the preset value of the column and the values that can be set if you press F1, for example, the BIOS default values or CMOS Setup values. To exit the interface for auxiliary information, press [ESC].

## 3.1 Main menu

When the system enters the interface of CMOS Setup menu, you can see the main menu on the upper part of the screen, as shown in Figure 3.1. In this main menu, you can use the left and right direction keys to select the setup items. Once the item is selected, the lower part of the computer screen will show the details of setting.

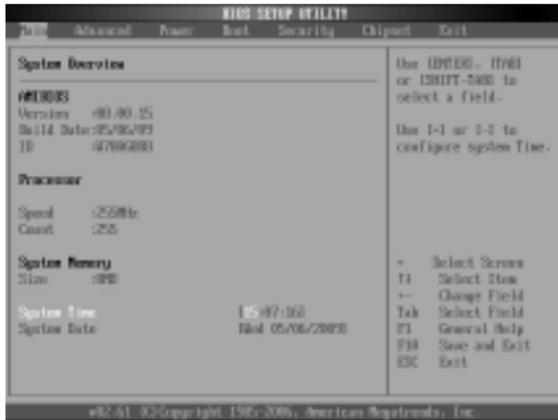


Figure 3.1

(The selections and their contents may be different from the actual selections, so they are only used for reference).

### 1. Main (standard CMOS setup)

This item is used for setting the date, time, specifications of hard disk and floppy disk and type of monitor.

### 2. Advanced (advanced BIOS setup)

This item is used for setting the advanced functions provided by BIOS, such as the virus alarm and priority order of disks for startup process.

### 3. Power (ACPI) (power management)

This item is used for setting ACPI advanced configuration and power management.

### 4. Boot (startup configuration characteristics)

### 5. Security (setting the administrator/user password)

### 6. Chipset (setting the performance of the chips)

This item is used for setting the voltage, frequency and other items of Northbridge, Southbridge, RX780, USB and other devices.

### 7. Exit (option of exit)

This item includes load optimal defaults/load failsafe defaults value/discard changes/ discard changes and exit.

## 3.2 Main (standard CMOS setup)

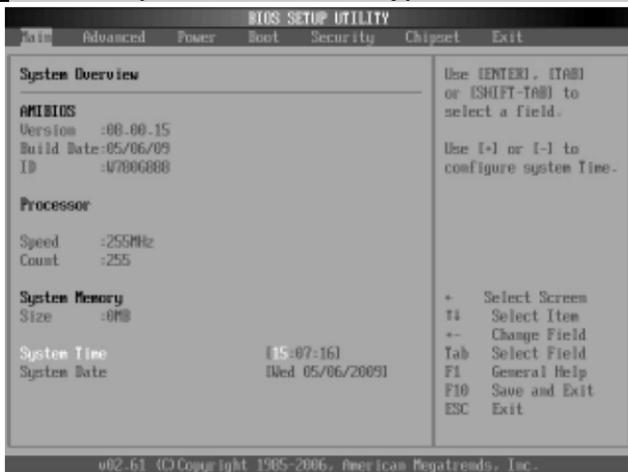


Figure 3.2

### 1) System time (hh:mm:ss)

To set the time for the computer, with the format of “hour/minute/second”.

### 2) System date (mm:dd:yy)

To set the date for the computer, with the format of “week, month/day/year”.

## 3.3 Advanced (Advanced BIOS setup)

### 3.3.1.CPU Configuration



Figure3.3

### GART Error Reporting [Disabled]

To enable or disable the function of GART Error Reporting. The options are [Disabled] and [Enabled].

### Microcode update [Enabled]

To enable or disable the function of microcode update. The options are [Disabled] and [Enabled].

### Secure Virtual Machine Mode

To enable or disable the function of Secure Virtual Machine Mode. The options are [Disabled] and [Enabled].

### Cool & Quiet

The Cool & Quiet technology is an innovative solution based on AMD processor system. Effectively lowering the power consumption and noise in the running system, this solution can provide needed functions and support high-level computing experiences. Thanks to the efforts made by AMD and other cooperative partners, CnQ has become the integrated characteristics of the system. The solution consists of the following parts: Processor supporting CnQ, mainboard, supportive BIOS, floppy drive and CPU cooler.

## 3.3.2. IDE Configuration



Figure 3.4

### Hard disk write protect

This item is used for turning on or off the function of “write protect”. This function can only be activated when the device is accessed via BIOS.

### 3.3.3. IO Chipset Configure

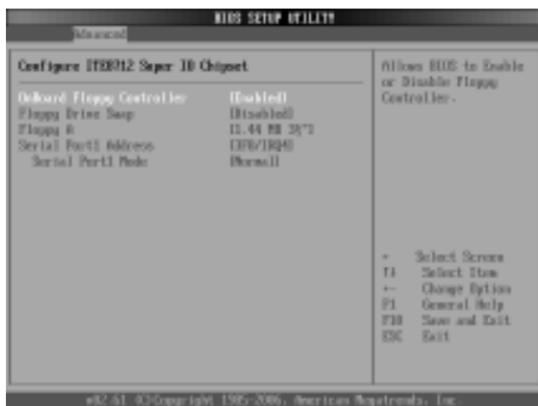


Figure 3.5

#### OnBoard Floppy Controller

To set whether the built-in floppy controller is enabled. The default value is “Enable”.

#### Floppy Drive Swap

This item is used for exchanging the letter “A:” and “B:” of the two floppy drives. In other words, for the two floppy drives, “A:” can be changed to “B:” through this item, vice versa.

#### Floppy A (setting the floppy type)

The values to be set include:

None: Floppy drive not installed, please set as this item;

360K, 5.25in, capacity 360K;

1.2M, 5.25in, capacity 1.2MB;

720K, 3.5in, capacity 720K;

1.44M, 5.25in, capacity 1.44MB;

The default value of item is: 2.88M, 3.5in, capacity 2.88MB.

#### Serial Port 1 Address

To set the built-in serial port 1 (COM1 port). The options are: Disabled, 3F8/ IRQ4, 2F8/ IRQ3, 3E8/ IRQ4, 2E8/ IRQ3 and Auto. The default value is “3F8/IRQ4”.

#### Serial Port 1 Mode

If this mode is set as Normal 1, it will be used for the mouse and modem. If IR device is available (IrDA), it is recommended this item be set as IrDA ADKIR.

### 3.3.4. PC Health Configuration

BIOS SETUP UTILITY	
Advanced	
<b>PC Health Configuration</b>	
H/W Health Function	[Enabled]
CPU Fan Speed Control	[Full On mode]
Current CPU Temp	:30°C/86°F
CPU FAN Speed	:3110 RPM
CPU Core	:1.216 V
+12.00	:12.992 V
+1.200	:1.290 V
-12.00	:-11.393 V
+3.300	:3.264 V
VDDT	:3.040 V
Enables Hardware Health Monitoring Device.	
+ Select Screen	
↑ Select Item	
← Change Option	
F1 General Help	
F10 Save and Exit	
ESC Exit	
e82.61 ©Copyright 1985-2006, American Megatrends, Inc.	

Figure 3.6

#### H/W Health Function

Through this item, you can view the state of the system hardware. You can view the speed of the CPU fan, temperature of CPU and other values. CPU alarm and auto shutoff at set temperature are available in some new COMS of motherboard. Normally, the temperature is set as 80°C.

#### CPU Fan Speed Control

To set the CPU fan's mode. Options include Manual Mode and thermal Cruise Mode.

### 3.4 Power (power management)

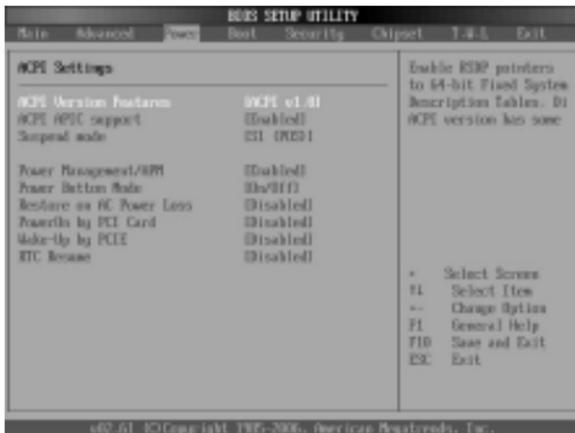


Figure 3.7

#### ACPI Version Features

To set the power type the system can support.

#### ACPI APIC support

This item allows you decide whether acpi apic form to rsdt indication list. Options are [disabled] and [enabled].

#### Power Management/APM

This item is used for enabling or disabling the APM (advanced power management) function. The default value is “Enabled”. When [enabled] is selected, BIOS can set the system as power-saving mode in accordance with the later setup even if no operating system provides any support.

#### Power Button Mode

The defaulted value ON/OFF indicates that the system will turn ATX switch into a common shutoff button if the ATX switch is in the pressed-down state for less than four seconds. If Suspend is selected, it means the system will enter the sleeping mode if the ATX switch is in the pressed-down state for less than four seconds. Whatever option is selected, the system will be shut off if the ATX switch is in the pressed-down state for over four seconds.

#### Restore on AC Power Loss

This item is used for setting what state the system should be in when the AC power is restored after power interruption. The options and their definitions are as follows:

Option	Definition
Power Off	To allow the system to be in shutoff state
Power On	To allow the system to be started automatically.
Last State	To allow the system to keep the pre-power off state.

### Power-On by PCI Card

To start the PCI device.

### Wake-Up by PCIE

To wake up PCIE.

### RTC Resume

If [Enabled] is selected, you can start the system through real-time clock.

## 3.5 Boot setup



Figure 3.8

### Quick Boot

If this item is set as Enabled, the system can be started within five seconds and some detection items will be ignored. The options are [Disabled] and [Enabled].

### Quiet Boot

Start the system quietly.

### Add-On ROM Display Mode [Force BIOS]

This item allows you to set the display mode of the device's firmware program. The options are [Force BIOS] and [Keep Current].

### **Bootup Num-Lock**

(To set the state of Num Lock). Options are OFF and ON. In other words, this item can be used for setting the state of Num Lock for the time the system has been started. It can be set on the basis of the needs of the user and poses no influence on the performance of the computer.

### **PS2 Mouse Support**

To set whether the system can support PS2 mouse. The options are [Auto] and [Disable]. The default value is Auto.

### **Wait for F1 if any Error**

(The system waits the user to press F1 if any error occurs from the computer). The options are Disable and Enable. Normally, it is set as Enable. Then if the computer has any error, a line of English words will appear on the screen, reminding the user of pressing F1 to enter CMOS for setup. If it is set as Disable, that line of English words won't appear. However, if the words "wait..." appear during the start up process and you press Del, the system can also enter CMOS for setup.

### **Hit "Del" Message Display**

(Information is displayed when the computer is started, suggesting the user can press "Del" to enter the state for CMOS setup). The options are [Disable] and [Enable]. Normally, [Enable] is selected. After [Enable] is selected, the information on how to enter the state for CMOS setup will be displayed at the time the computer is started. If [Disable] is selected, such information won't be displayed. However, if you press "Del" when the character "Wait....." appears at the time the computer is started, the system can also enter the state for CMOS setup.

### **Interrupt 19 Capture [Disable]**

If you use some PCI extension cards with built-in firmware program (like SCSI extension card) and you want to start the system through Interrupt 19, you can set this item as [Enabled]. The options are [Disabled] and [Enabled].

### **Boot Device Priority**

To enable the priority order for setup.

### **Hard Disk Drives**

To enable the order setup for hard disk.

### **Removable Drives**

To enable the order setup for removable memory devices.

### **CD/DVD Drives**

To enable the order setup for CD/DVD memory devices.

## 3.6 Security Setup

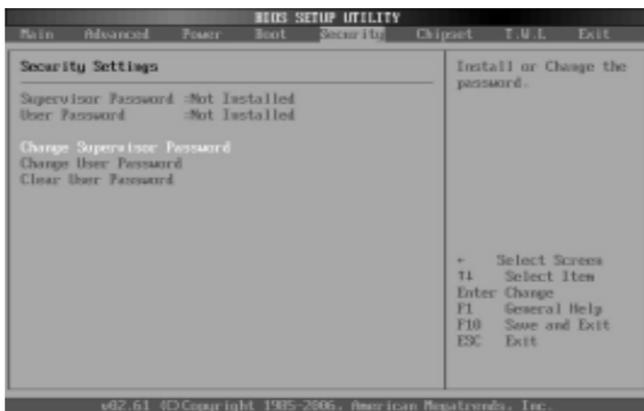


Figure 3.9

If this function is selected, the following information will appear:

Enter New Password hhhhhh

Then, enter the password with not more than eight characters and press <Enter>. BIOS will require entering the password again. Once you enter it again, BIOS will save the set password.

Once the password item is enabled, you will be required to enter the password each time before the system goes to the set program of BIOS. The user can set this item through the Security Option in advanced BIOS properties. If the item Security Option is set as System, the password will be required to be entered before the system guides and goes to the set program of BIOS. If set as Setup, the password will be required to be entered only before the system goes to the set program of BIOS.

To delete the password, press <Enter> in the popped-up window that requires to enter the password. Then, information for confirmation will appear on the screen to allow you decide whether the password is disabled. Once the password is disabled, you won't have to enter the password and can enter the setup program directly when the system is restarted.

### Boot Sector Virus Protection

This item is used for setting the alarm function in the case of virus attack in IDE disk sector. If this item is set as Enable and some program wants to write information in the sector, BIOS will display alarm information on the screen and buzz.

## 3.7 Chipset setup



Figure 3.10

### NorthBridge Configuration

To set the north bridge chip.

### SouthBridge Configuration

To set the south bridge chip.

### RX780 Configuration

### USB Configuration

To set the USB devices.

### 3.7.1. USB Configuration

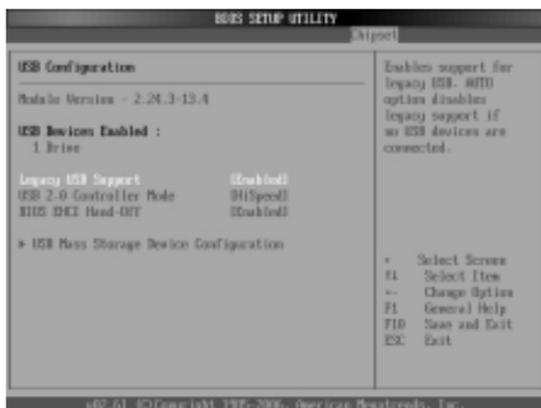


Figure 3.11

## **Legacy USB Support**

This item is used for enabling or disabling the supports for USB devices. If the default value [Auto] is selected, the system will automatically check whether USB device is available in its startup process. If USB device is available, USB controller will be activated. If not, it won't be activated. If you set this item as [Disabled], the USB controller inside the system will be in OFF state, regardless of whether USB device is available. The options are [Disabled], [Enabled] and [Auto].

## **USB2.0 Controller Mode**

This item is used for setting the transmission rate for USB2.0 devices. The modes include HiSpeed (480Mbps) and Full Speed (12Mbps). The setup options are [HiSpeed] and [FullSpeed].

## 3.8 Exit



Figure 3.13

### Exit Options

The exit options include load optimal defaults/load failsafe defaults value/discard changes/discard changes and exit.

### Load failsafe defaults /optimal defaults

These two items can allow the user to restore all BIOS options to the failsafe defaults and optimal defaults. The optimal defaults are set to optimize the performance of the motherboard. The failsafe defaults are conservative values for the system.

If you enter OK and press Enter, all set values will be saved to CMOS SRAM and the system will exit from the BIOS setup program. If you don't want to save, you can press Cancel or Esc to return to the main menu.

### Discard changes and exit

If you enter OK and press Enter, the system will exit from the BIOS setup program. If press Cancel, return to the main menu.

### Discard changes

If you enter OK and press Enter, the system will discard the changes. If press Cancel or Esc, return to the main menu.

# Chapter IV

## Installing Software

### 4.1 Installing driver for motherboard

After you complete the installation of the operating system, you should then install the driver for the motherboard. Take 780G2 as an example here. To do that, put the driver disk into the CD-ROM. The interface as shown in Figure 4.1. will appear.

Figure 4.1

Figure 4.2

### 4.1.1 Installing driver for main chip

After you click “Install” behind the “AMD Main Chip” in the interface of Figure 4.2, a dialog box as shown in Figure 4.3 will be popped up. Then you can click Next and wait till the driver is installed completely.

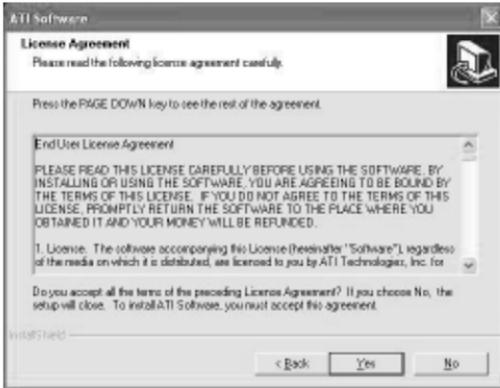


Figure 4.3

### 4.1.2 Installing driver for sound card

After you click “Install” behind the “Realtek High Definition Audio Driver” in the interface of Figure 4.2, a dialog box as shown in Figure 4.4 will be popped up. Then you can click Next and wait till the driver is installed completely.



Figure 4.4

### 4.1.3 Installing driver for on-board network interface card

After you click “Install” behind the “Realtek 10/100/1000 Network Interface Card Driver” in the interface of Figure 4.2, a dialog box as shown in Figure 4.5 will be popped up. Then you can click Next and wait till the driver is installed completely.



Figure 4.5

### 4.1.4 Installing HDMI driver

To install the HDMI driver, you can click “Install” behind “HDMI high definition multimedia interface” in the interface of Figure 4.2, a dialog box as shown in Figure 4.5 will be popped up. Then you can click Next and wait till the driver is installed completely.

## 4.2 HD-AUDIO sound card setup

In the system of Windows XP SP2:

1. The control panel of the sound card will appear after the driver is installed, as shown in Figure 4.6.



Figure 4.6

2. After the initial installation of the driver, the default of mic is in mute state. You need to turn it on manually, as shown in Figure 4.7 and 4.8.



Figure 4.7



Figure 4.8

In the system of Windows Vista:

1. After the driver for the sound card is stalled, you can click the Audio Manager at the lower right corner. The initial interface will be popped up, as shown in Figure 4.9 and 4.10.



Figure 4.9



Figure 4.10

2. Click the right upper part of the control interface—Advanced Setup for Device, the interface shown in Figure 4.11 will be popped up. Then select “separate all input jacks as independent input devices”.



Figure 4.11

3. Click OK, the control interface will turn to one shown in Figure 4.12.

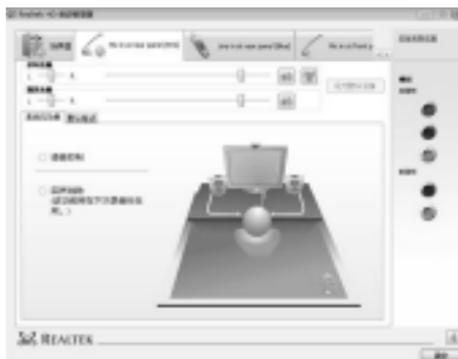


Figure 4.12

4. If a mic is used, please select the corresponding front or rear mode and set the device as default. In the above interface, you can adjust the volume for recording and the playing volume for the mic.
5. If you need to set the output of multi-channel, you should right click the mouse at the corresponding output interface. A dialog box will be popped up, as shown in Figure 4.13.



Figure 4.13

6. Select Redistribution of Connectors. Then an interface will be popped up, as shown in Figure 4.14. After that, set the corresponding output.



Figure 4.14

# Chapter V Appendix

## A.Setup of on-board video memory

1. Enter the setup interface for BIOS and click the highlighted “Chipset Configuration”, as shown in Figure 5.1.

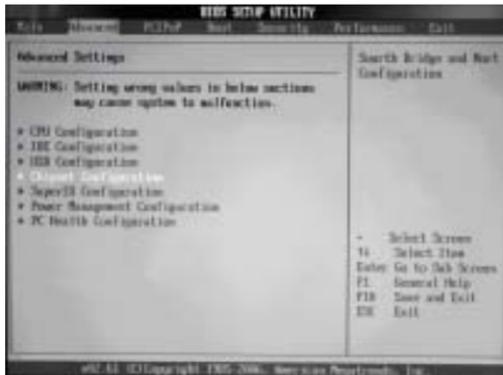


Figure 5.1

2. Enter the options of Chipset Configuration and select NorthBridge Configuration. The highlighted part is shown in Figure 5.2.

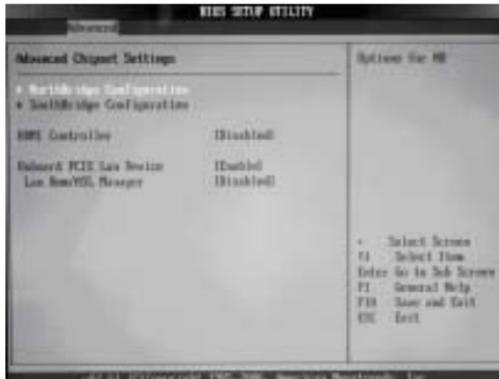


Figure 5.2

3. After entering the interface shown in Figure 5.3, click Internal Graphics Configuration.



Figure 5.3

4. After entering the interface shown in Figure 5.4, you can use the direction keys on the keyboard to set the on-board video memory.

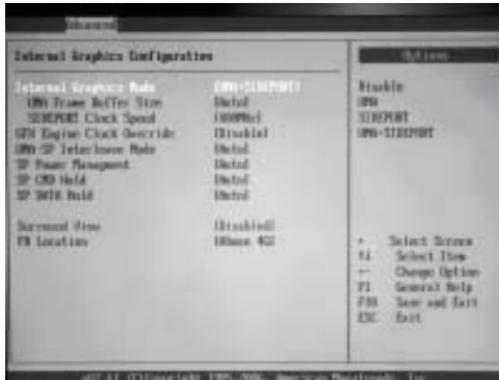


Figure 5.4

5. Click Internal Graphic Mode, the interface as shown in Figure 5.5 will be popped up. If you select the Disabled mode, the output of integrated graphics card of mother board will be shut off. In this mode, the output of external graphics card should be used. If you select the UMA mode, only the output of the chip on the integrated graphics card of motherboard will be used. In this mode, the on-board video memory doesn't function, and the display chip uses the public video memory in the system memory. If you select the SIDEPORT mode, only the on-board video memory will be used for running. In this mode, the display chip doesn't use the public video memory in the system memory. If you select the UMA+SIDEPORT mode, it will not only support the on-board video memory, but also support the display chip to use the public video memory in the system memory, as shown in Figure 5.5.

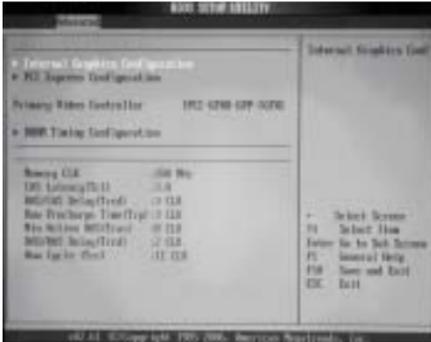


Figure 5.5

6. Click UMAFrame Buffer Size, you can set the size of shared video memory provided by the system memory, as shown in Figure 5.6.

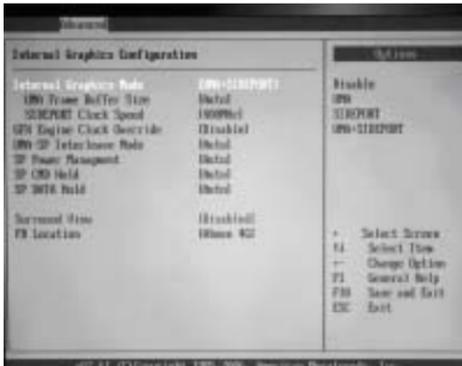


Figure 5.6