

Intel D525

Motherboard

User's Manual

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1. Hardware installation

Warning

The motherboard consists of a great number of ICs and other components. These ICs might be damaged by the static charge. Therefore, the user must make the following preparations before 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 operator wear the anti-static wrist strap when handling the IC components.
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 preventing short circuit. 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) Installing Intel CPU

1.1 Find CPU Socket on the mother board, as shown in Fig 1

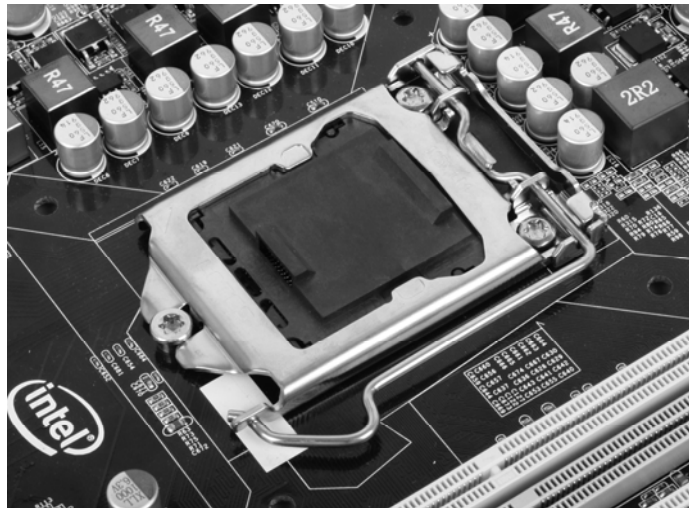


Fig 1

1.2. Pull up the lever at the side of socket to about 160 degrees angle, and then pull up the CPU metal shell to about 110 degrees with the socket (i.e. fully open), as shown in Fig .2

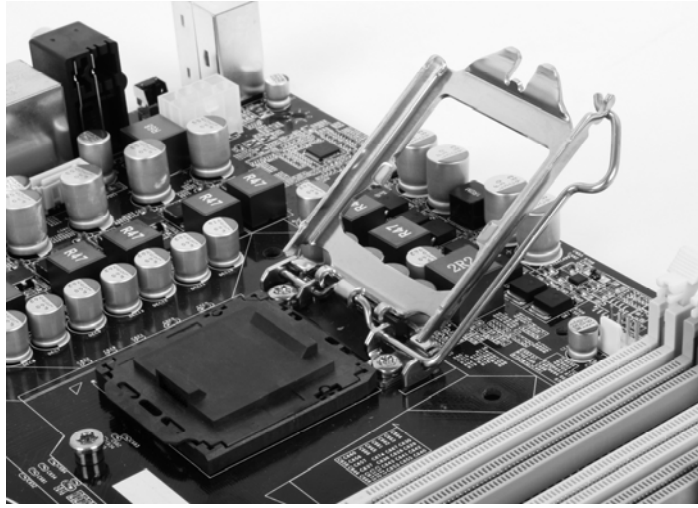


Fig 2

1.3 Uncover the contact pin protect cover, as shown in Fig.3

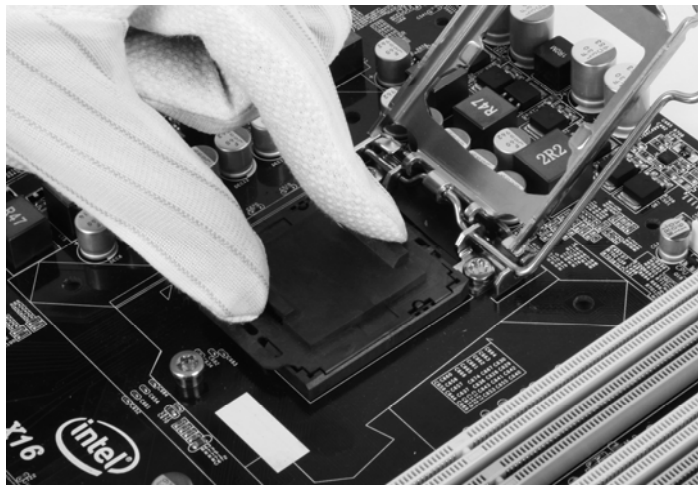


Fig 3

1.4 Input the CPU carefully; make sure the contact pins in socket and contact lands on CPU are matched. Close the cover, as shown in Fig 4

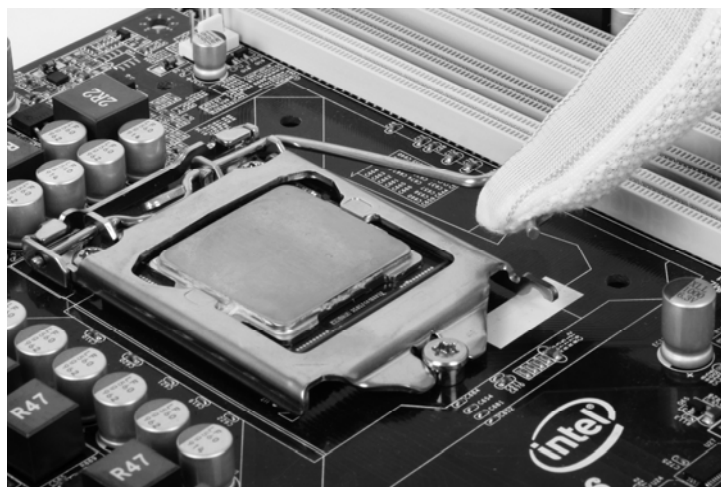


Fig 4

1.5 Then you need to lock down the socket lever while gently press the metal shell with your fingers. When lock process has been complete, you will hear a crisp sound.

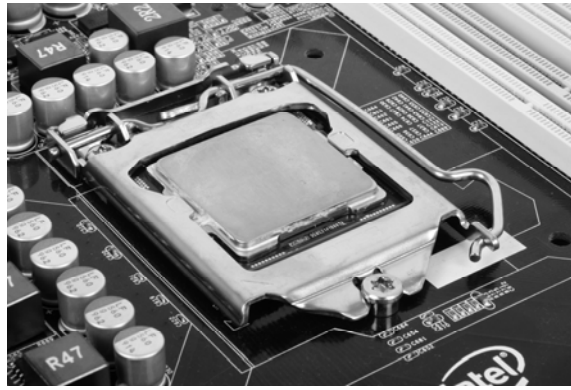


Fig 5

1.6 Installing AMD CPU

Input the CPU carefully; make sure the contact pins in socket and contact lands on CPU are matched. Close the cover, as shown in Fig

Then you need to lock down the socket lever while gently press the metal shell with your fingers. When lock process has been complete, you will hear a crisp sound.



Fig 6

1.7 Installing CPU FAN

Only with the desired cooling effect, CPU can play the ultimate performance. CPU has been specially designed cooling fan to keep the best cooling effect, as shown in Figure 7, is one of the samples.



Fig 7

1.8 NOTE: If you've bought a bulk Intel processor, be sure to use the FAN which certified by Intel.

1. Put the cooling fan at the top of the processor, and align the four fan holders to the holes on motherboard.
2. Press in the holders to motherboard in proper order, to ensure fan is close contact with the CPU.

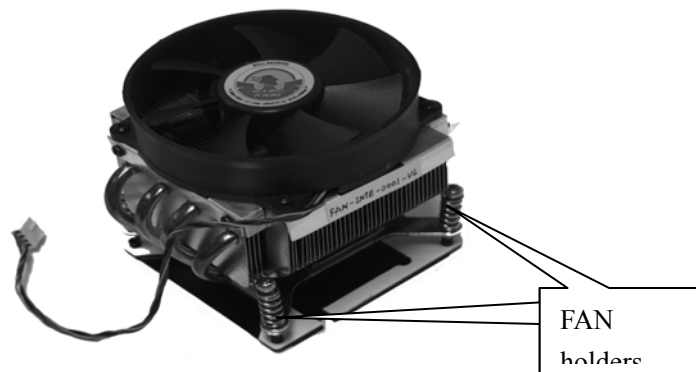


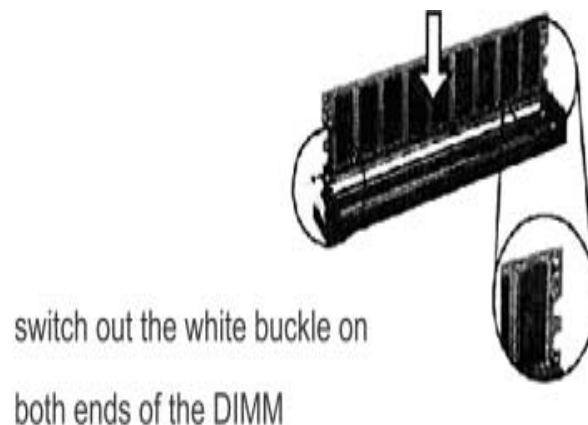
Fig 8

Finally, plug the CPU fan power cable into the socket on the motherboard.

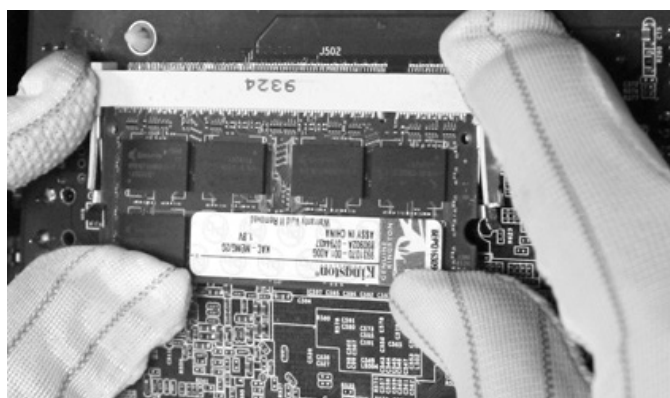
2) Installing Memory

Please install the memory in accordance with the following procedures:

- 2.1 Remove the white buckle at the two ends of the interface slot for the memory;
- 2.2 Align the golden finger of the memory 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.



DIMM



SO-DIMM

Fig 9

Finally, insert the memory 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.

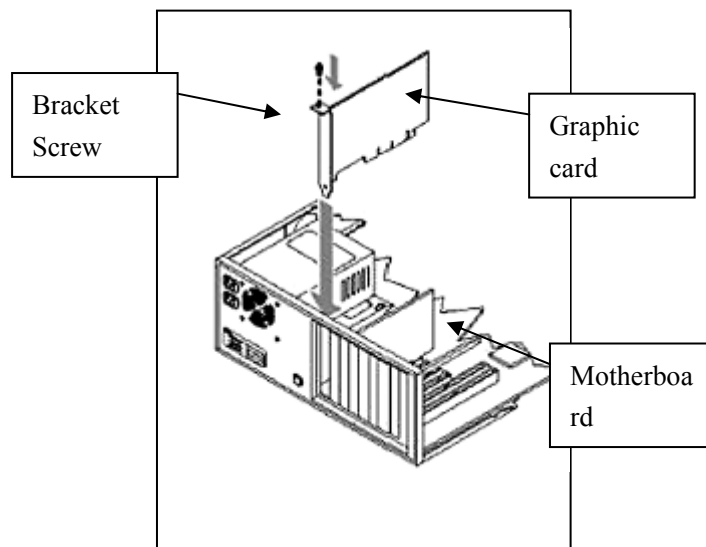
Note

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 or other component is installed or removed. As the groove is set at the golden finger of the DDR DIMM, the memory 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.

3) Install expansion slot card

3.1 Install graphic card

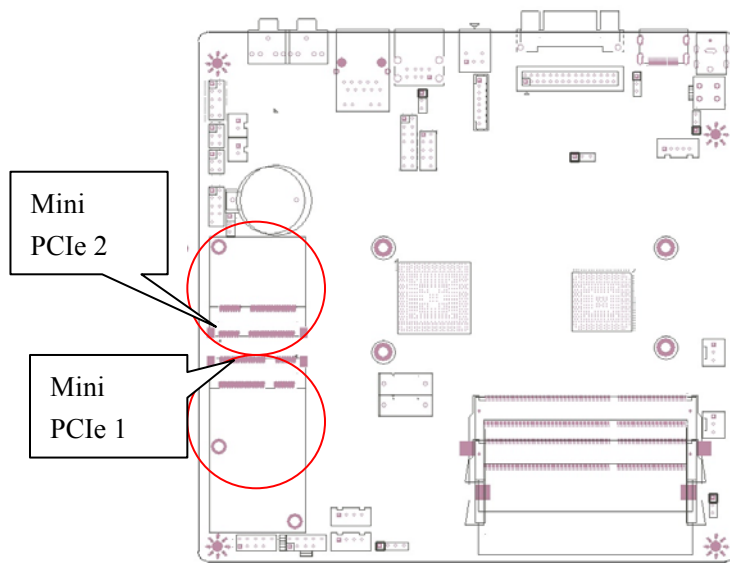
This motherboard provides one interface slot for PCIE 16x AGP. When you install the PCIE graphic card, you should note that groove of the golden finger must be exactly engaged into the interface slot. In that process, it is preferable that you are in grounded state, and you should carefully take out the graphic card from the anti-static bag. Then align the graphic card to the PCIE slot and insert it. After that, tighten the screw on the metal baffle.



3.2 Installing extended devices

At the top side of motherboard are two Mini PCI-E extended slots.

- A. Mini PCI-E 1 supports PCI-E, USB, SATA, mSATA (support type will be different by the model)
- B. Mini PCI-E 2 supports PCI-E 1X signal, can use mini PCI-E WiFi module etc.



NOTE: Different model's Mini PCI-E slot may locate in not same place and support different type device, please reference in quick installation guide or ask your distributor.

4) Layout of motherboard

Please reference in quick installation guide.

2. BIOS Function

1. Supports PNP, APM and ATAPI;
2. Supports ACPI and DMI;
3. Automatic detection and supporting hard disk whose LBA mode is over 160G;
4. End-users can easily upgrade the motherboard with BIOS.

3. BIOS Setting

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.

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). As BIOS serves as the only channel that connects the hardware and software, whether your computer can run stably and work in optimized state will hinge on how to properly set the parameters in BIOS. Therefore, 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 provide continuously power for CMOS SRAM. 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. Function Keys definitions

Key	Function
↑ (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 settings and exit the CMOS SETUP

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].

1. Main menu

When the system enters the CMOS Setup menu, you can see the main menu on the upper part of the screen, as shown in Figure 4.1. 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.

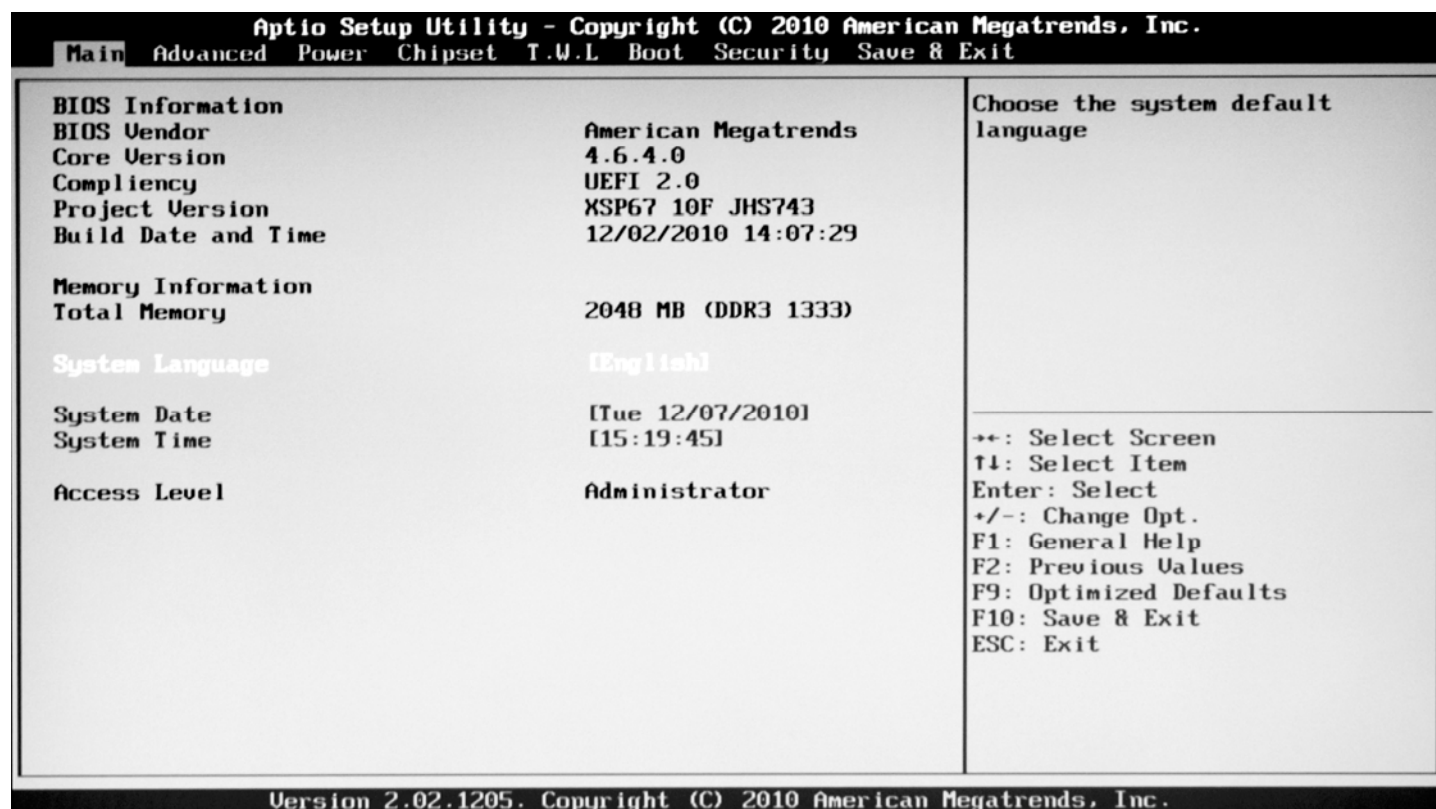


Fig 4.1

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

1. Main (standard CMOS setup)

This item is used for setting the date, time, and system language.

2. Advanced (advanced BIOS setup)

This item is used for setting the advanced functions provided by BIOS, such as specifications of PCIe facilities, CPU, HDD, etc.

3. Power (power management)

This item is used for setting ACPI advanced configuration and power management, such as sleep mode (S1, S3); wake up method (By USB, PS/2).

4. Chipset (setting the performance of the chips)

5. T.W.L (System performance configuration)

6. Boot (startup configuration characteristics)

7. Security (setting the administrator/user password)

8. Save & Exit (option of exit)

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

2) Main (Standard CMOS setting)

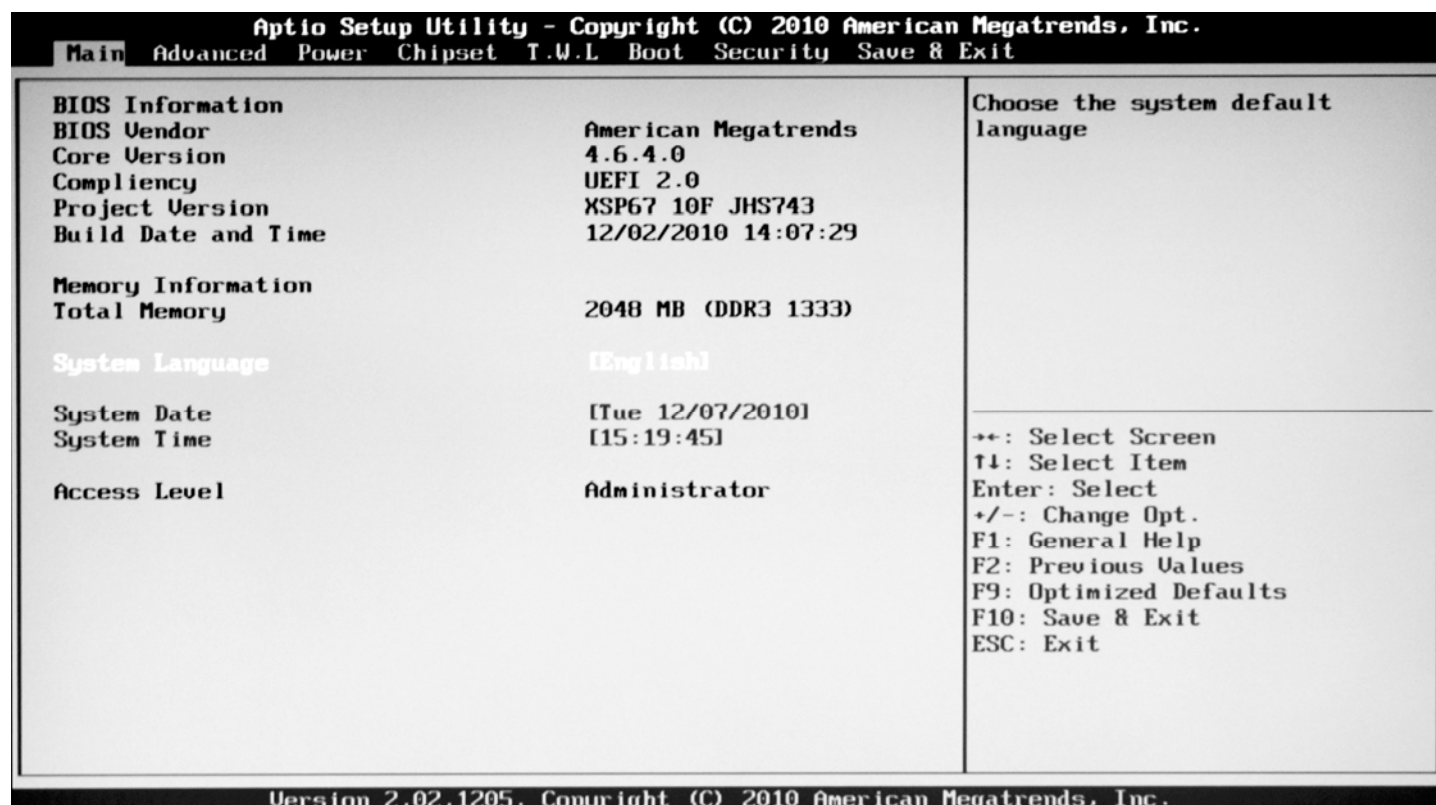


Fig 4.2

1) System Language

2) System time (hh:mm:ss)

Use this item to set the time for the computer, with the format as “hour/minute/second”.

3) System date (mm:dd:yy)

Use this item to set the date for the computer, with the format as “week, month/day/year”.

3. Advanced (Advanced BIOS setup)

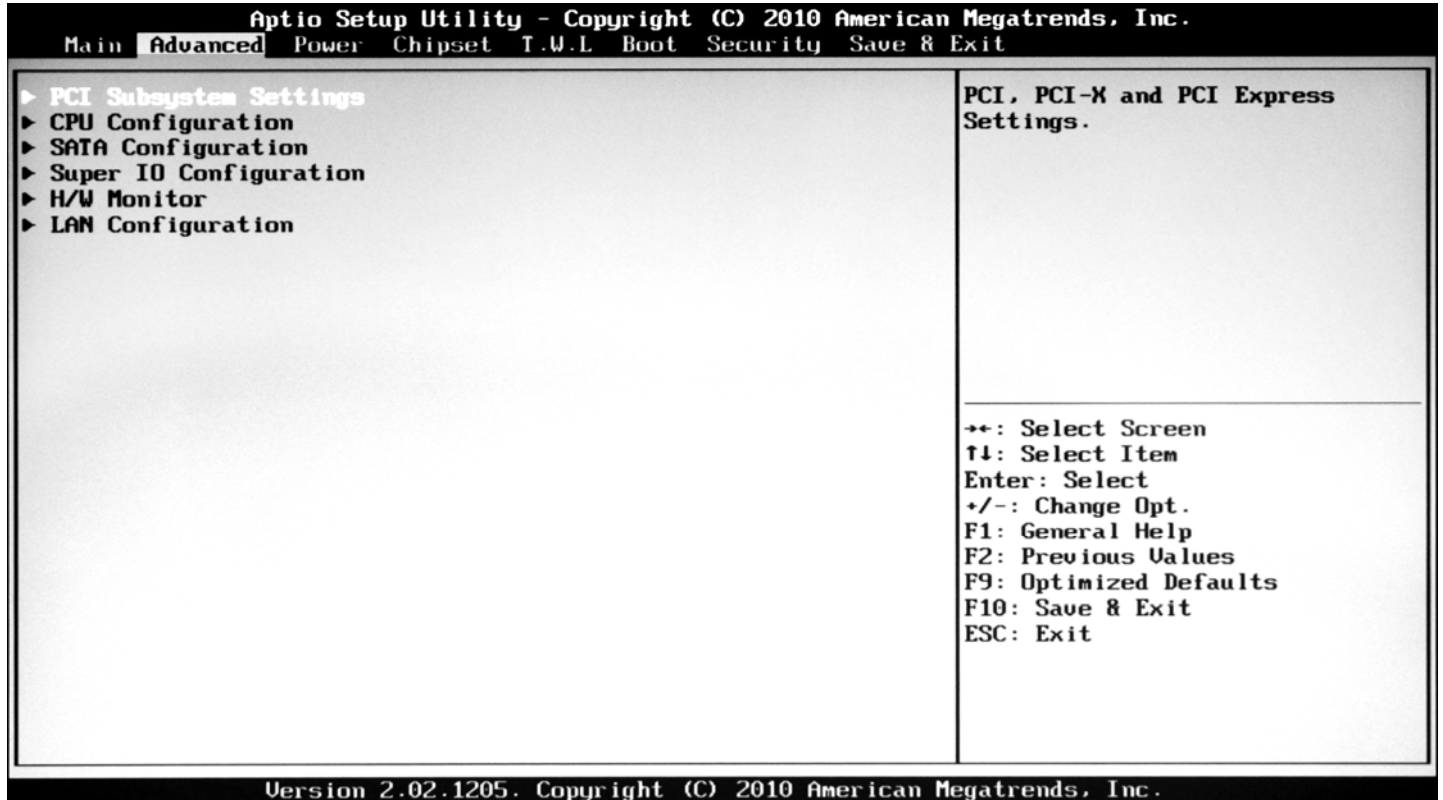


Fig 4.3

3.1 CPU Configuration

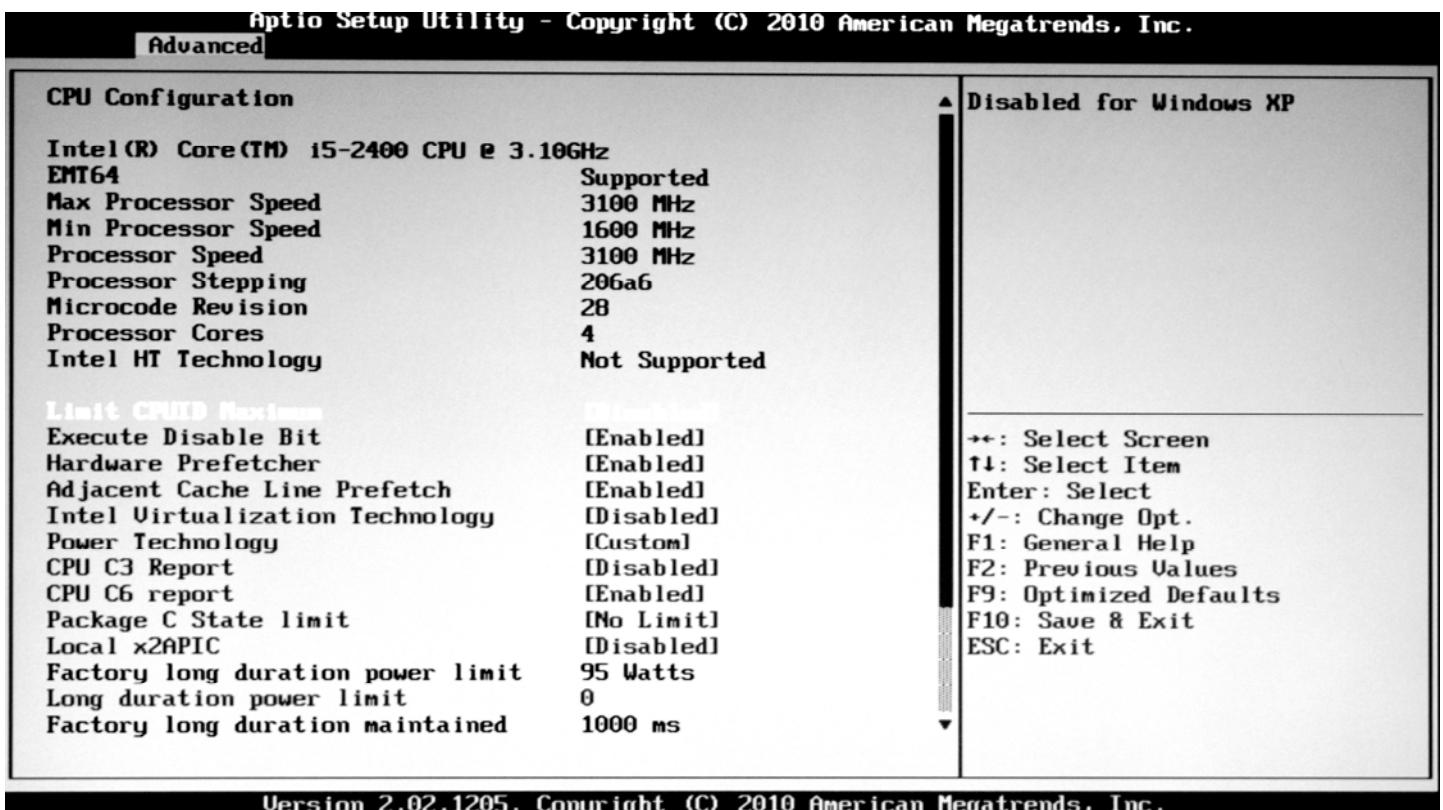


Fig 4.4

1) Limit CPUID Maximum

This item is for Prescott CPU only, or some OS that can't support this function.

2) Hardware Prefetcher

Intel hardware prefetch function: [Disabled][Enabled]

3) Adjacent Cache Line Prefech

High speed adjacent cache prefetch function: [Disabled][Enabled]

4) Intel Virtualization Technology

5) CPU C3 Report

6) CPU C6 Report

7) Package C State Limit

Energy conservation mode setting.

8) Local x2APIC

9) Factory long duration power limit

This item shows CPU's power consumption, and can adjust CPU frequency multiplication.

3.2 SATA Configuration

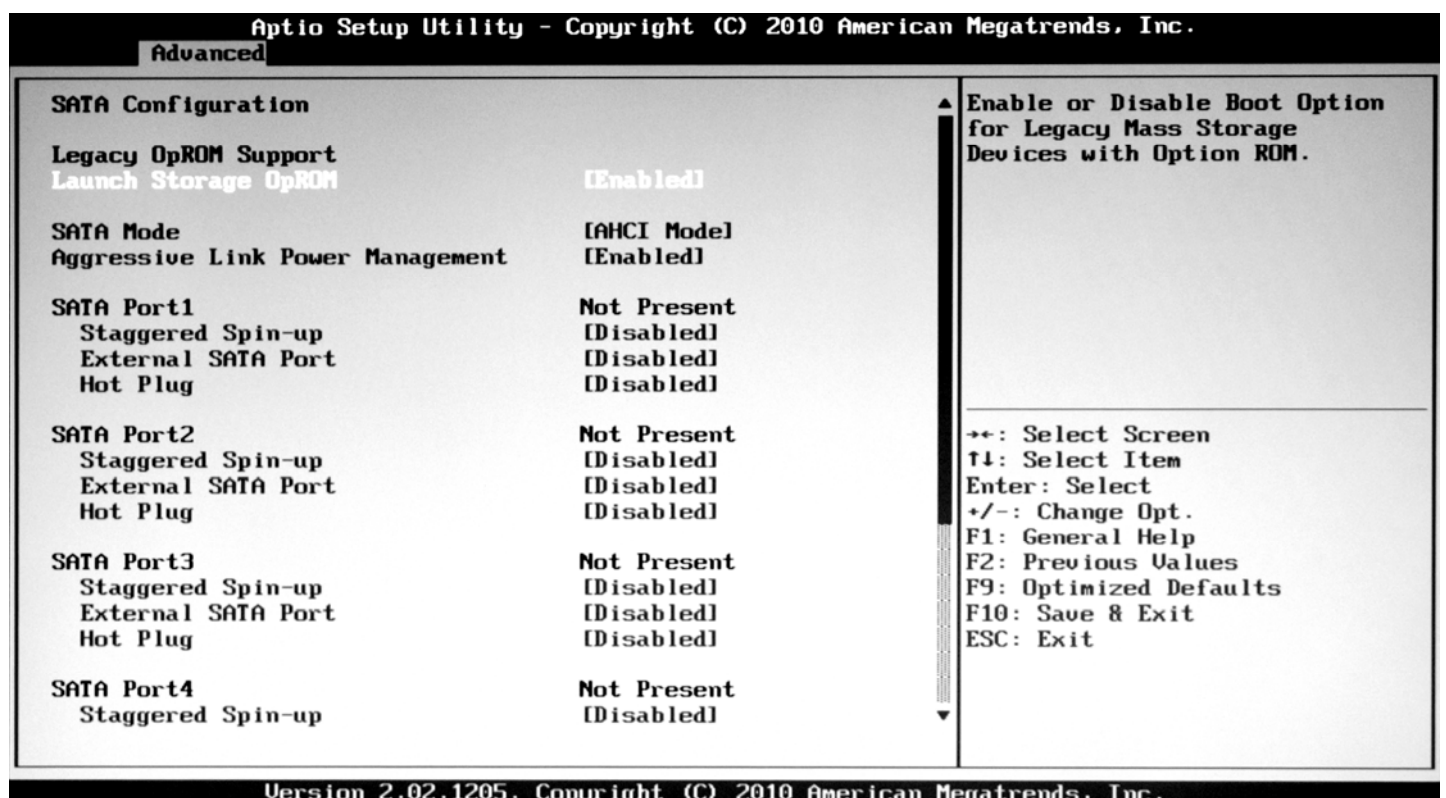


Fig.4.5

1) Launch Storage OpROM

2) SATA Mode

This item is use to choose SATA support type.

For MI-H61, it's [IDE]

For MI-H67, it has [IDE] or [AHCI].

According to Intel chipset's limitation, Windows XP does not support AHCI mode, AHCI mode could only be use in built-in operating system like Windows Vista or Windows 7.

3) Aggressive Link Power Management

Options:[Disabled][Enabled]

You could do further SATA configuration via enable this item.

1.3 IO Chipset Configuration

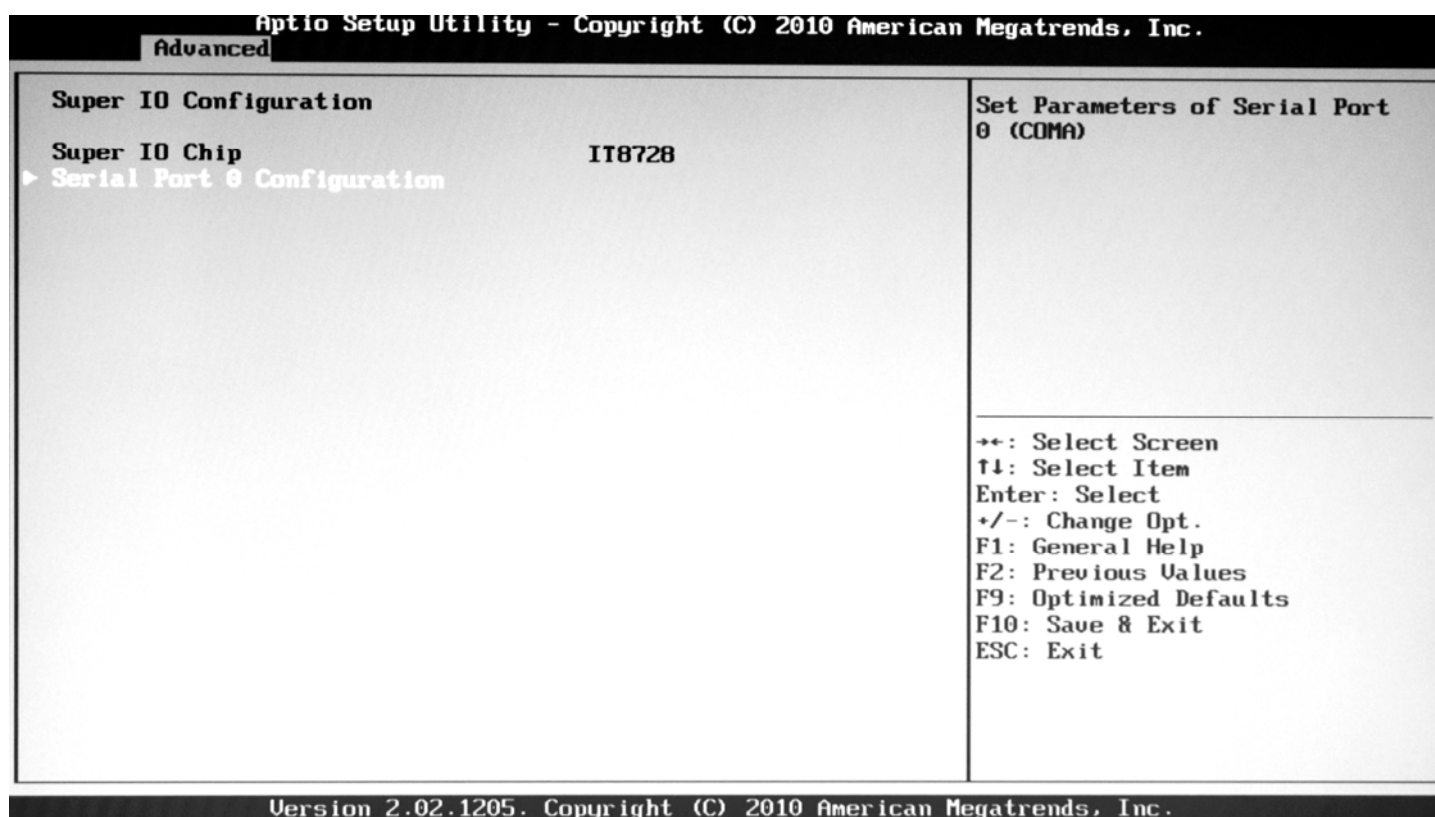


Fig. 4.6

1) Super IC chip

This item is use to show all the I/Os of the MB.

2) Serial Port 0 configuration

3.4.PC Health

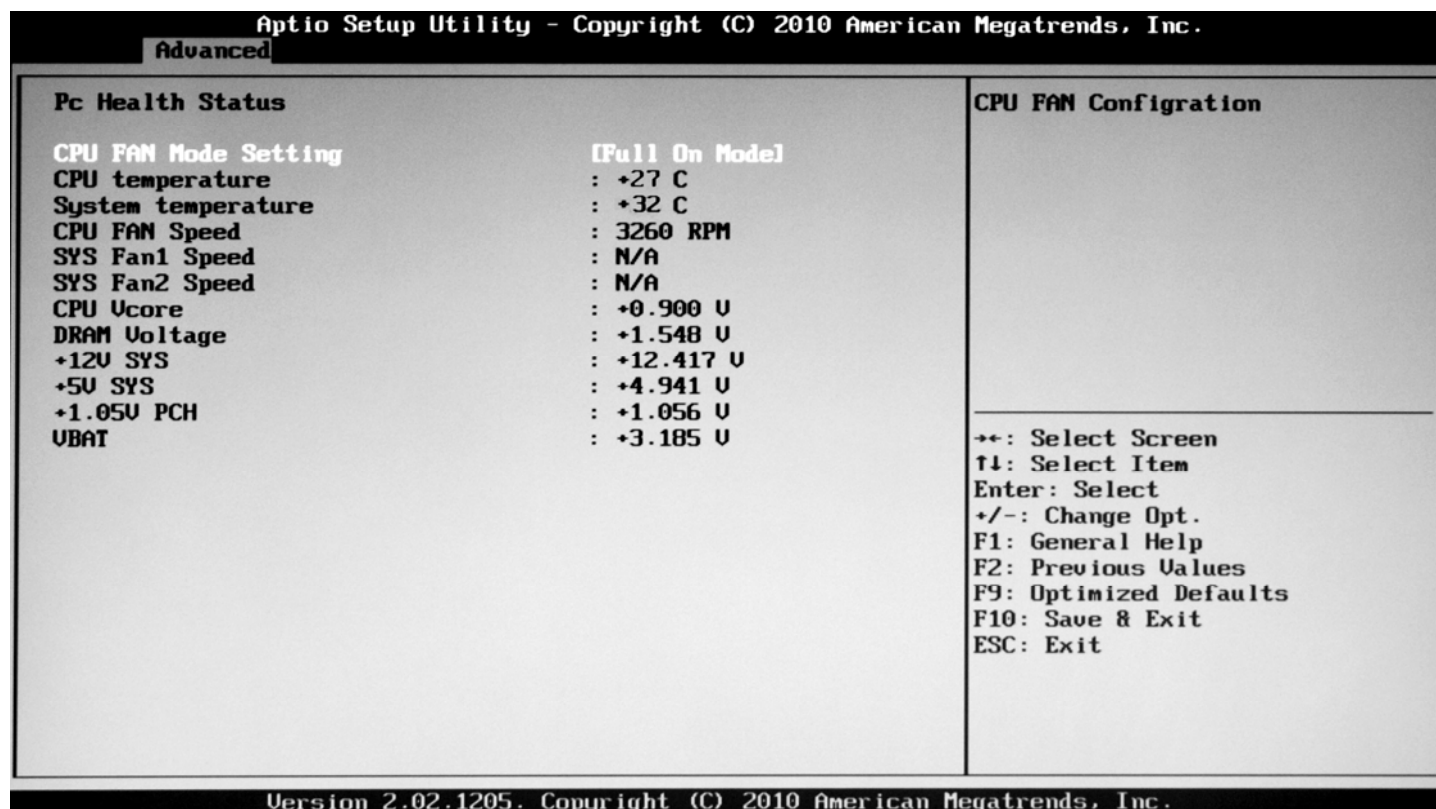


Fig. 4.7

1) 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.

2) CPU Fan Speed Control

To set the CPU fan's mode. Options: [Auto][Full On Mode][PWM On Mode]

3.5 LAN Configuration

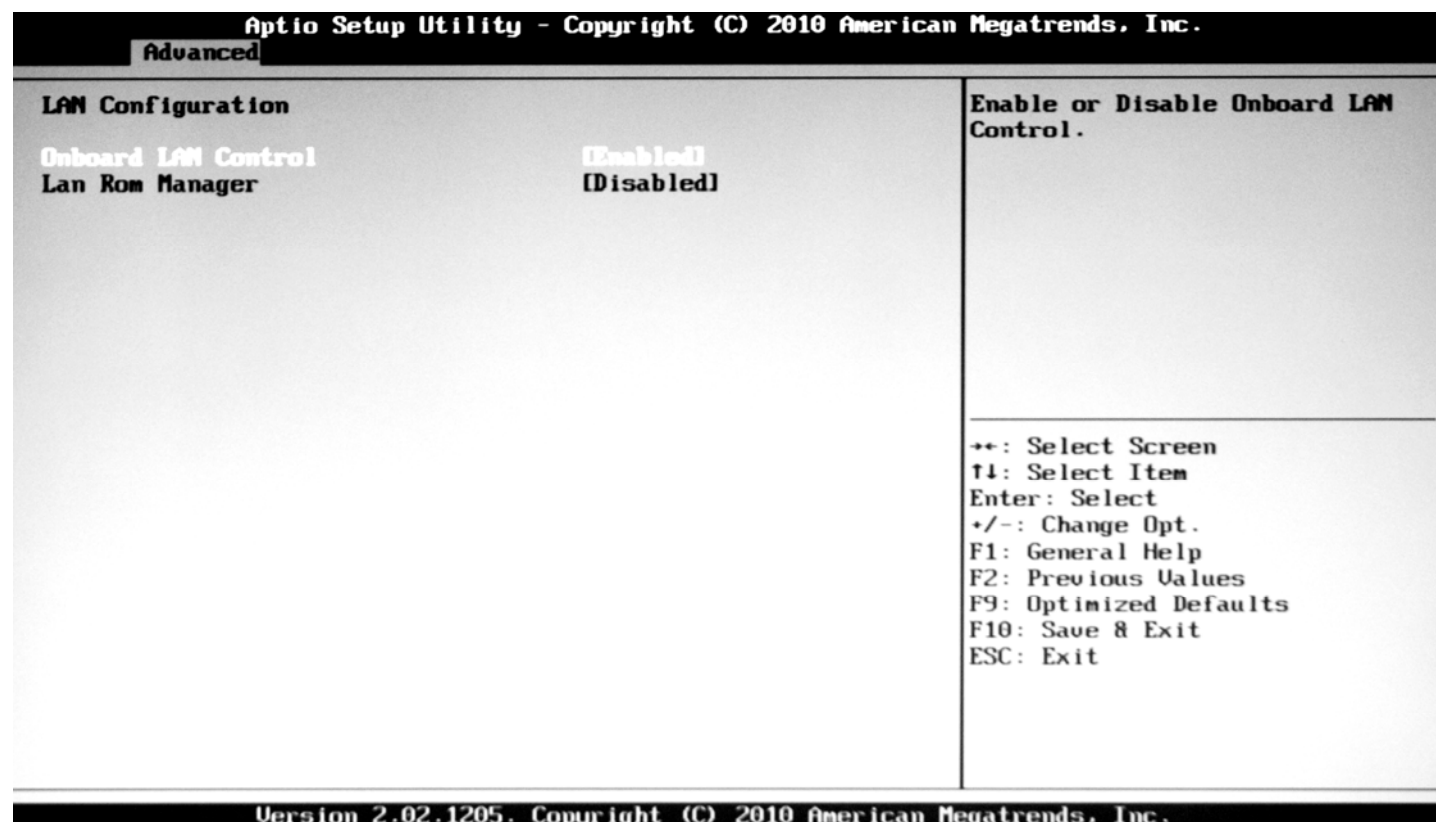


Fig 4.8

- 1) Onboard LAN control
- 2) LAN ROM Manager

4. Power

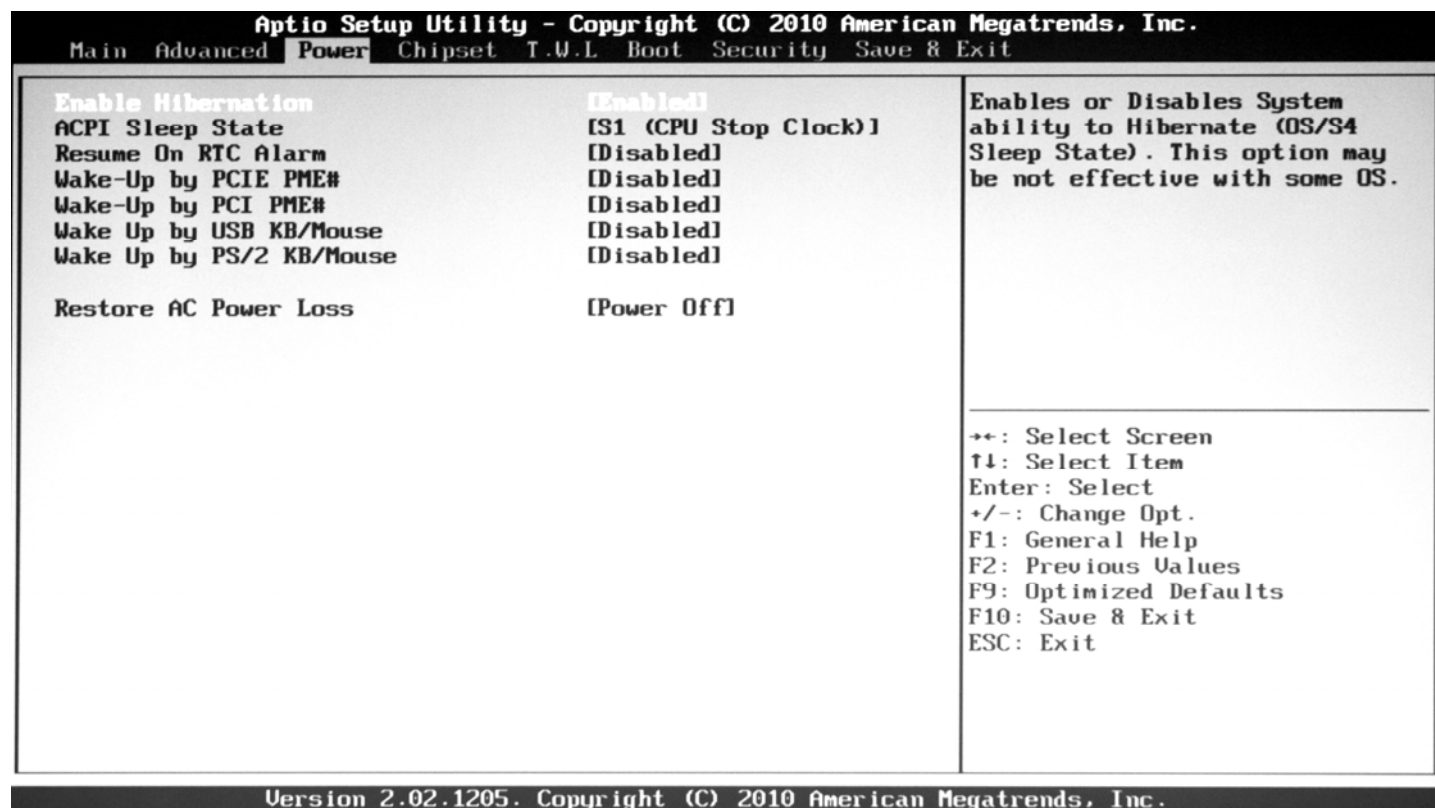


Fig. 4.9

1) Enable Hibernation

2) ACPI Sleep State

This item is use to set sleep mode. Options:[S1][S3]

3) Resume In RTC Alarm

Use this item to set RTC awaking time and methods.

4) Restore 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.

5. Chipset

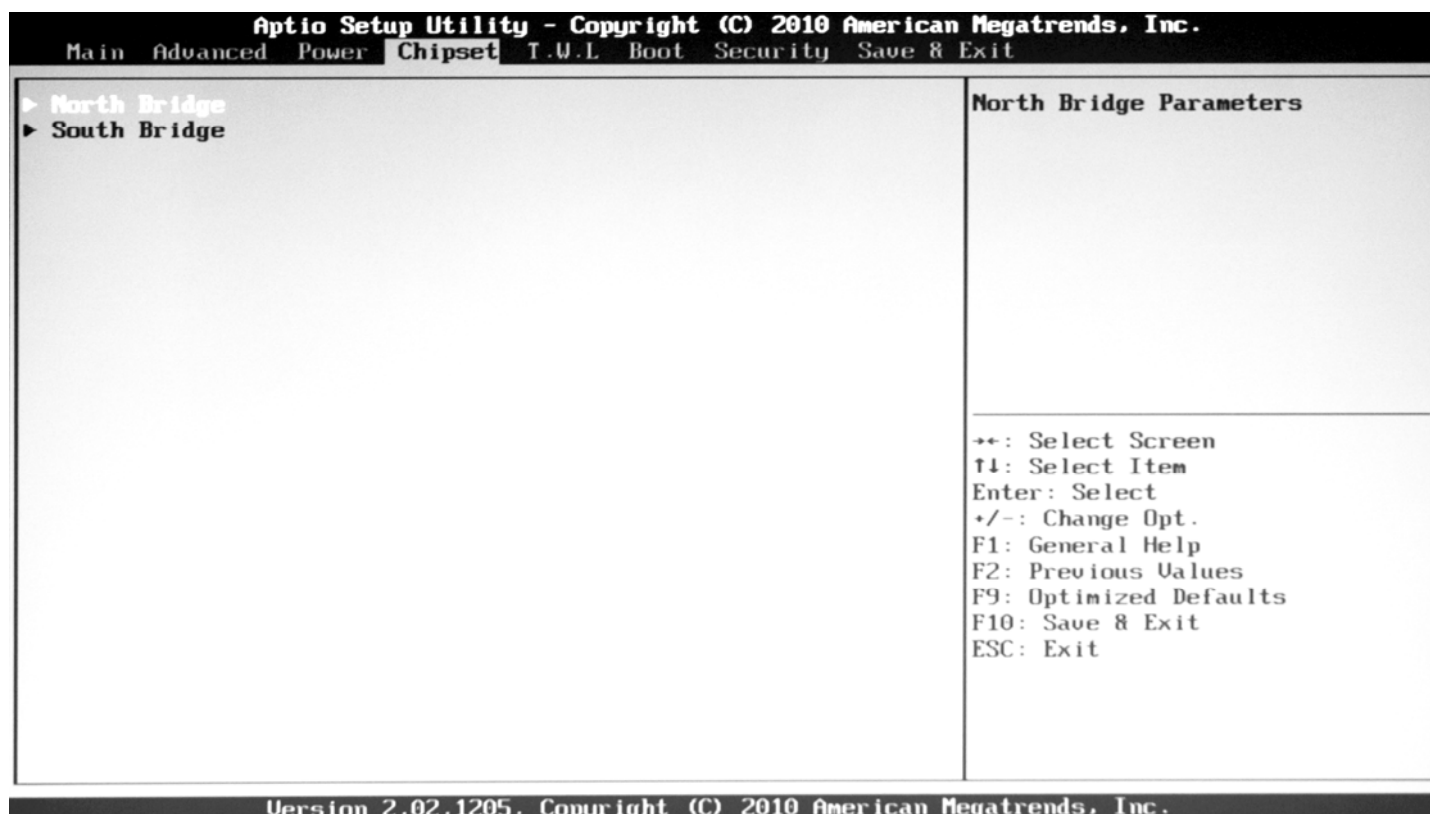


Fig 4.10

This item includes “North bridge” and “South bridge” configuration.

5.1 North Bridge configuration

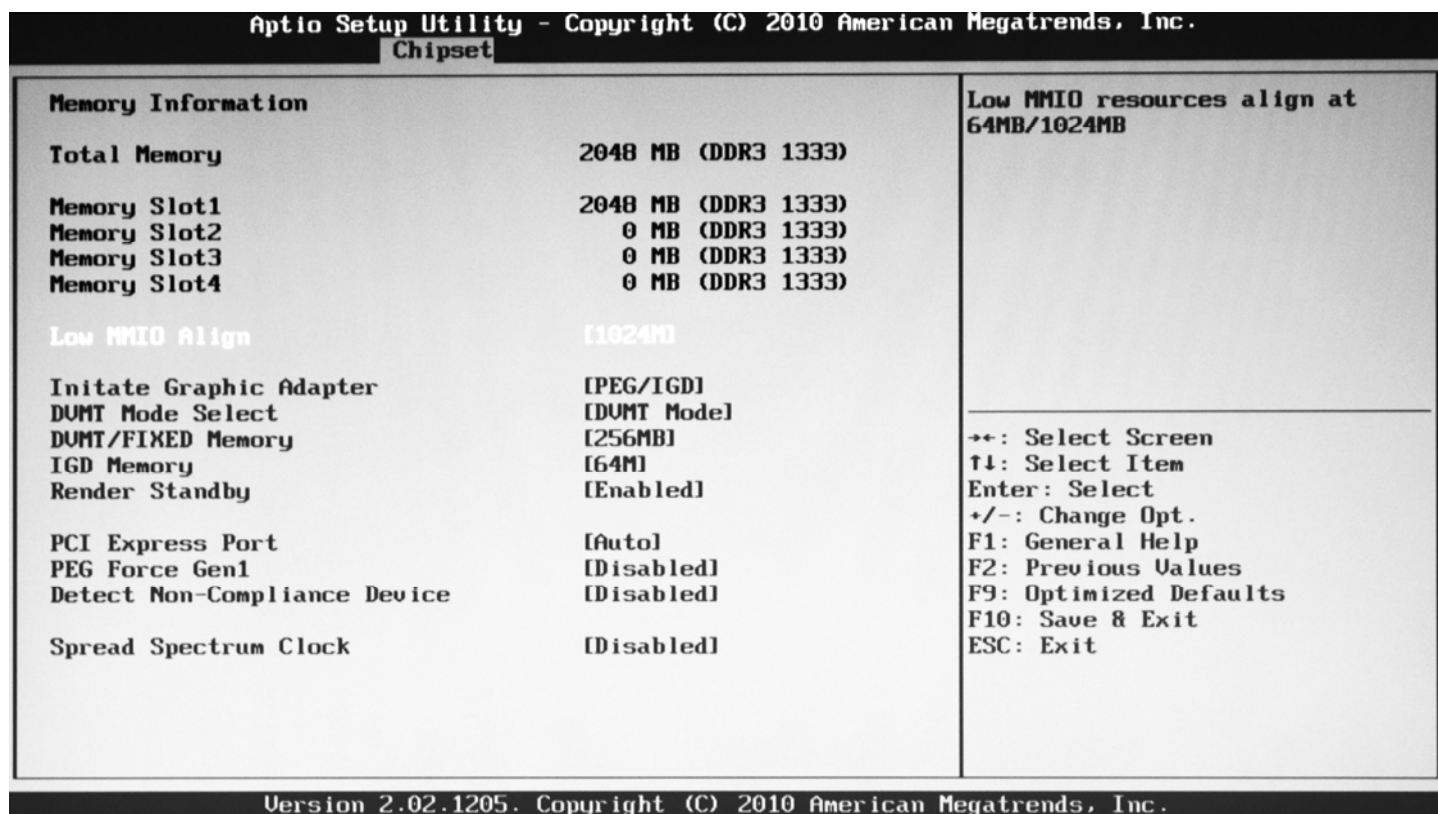


Fig 4.11

1) Total Memory

This item is use to set memory frequency.

2) Initiate Graphic Adapter

This item is use to set display controller. Default [PEG/IGD].

5.2 South Bridge configuration

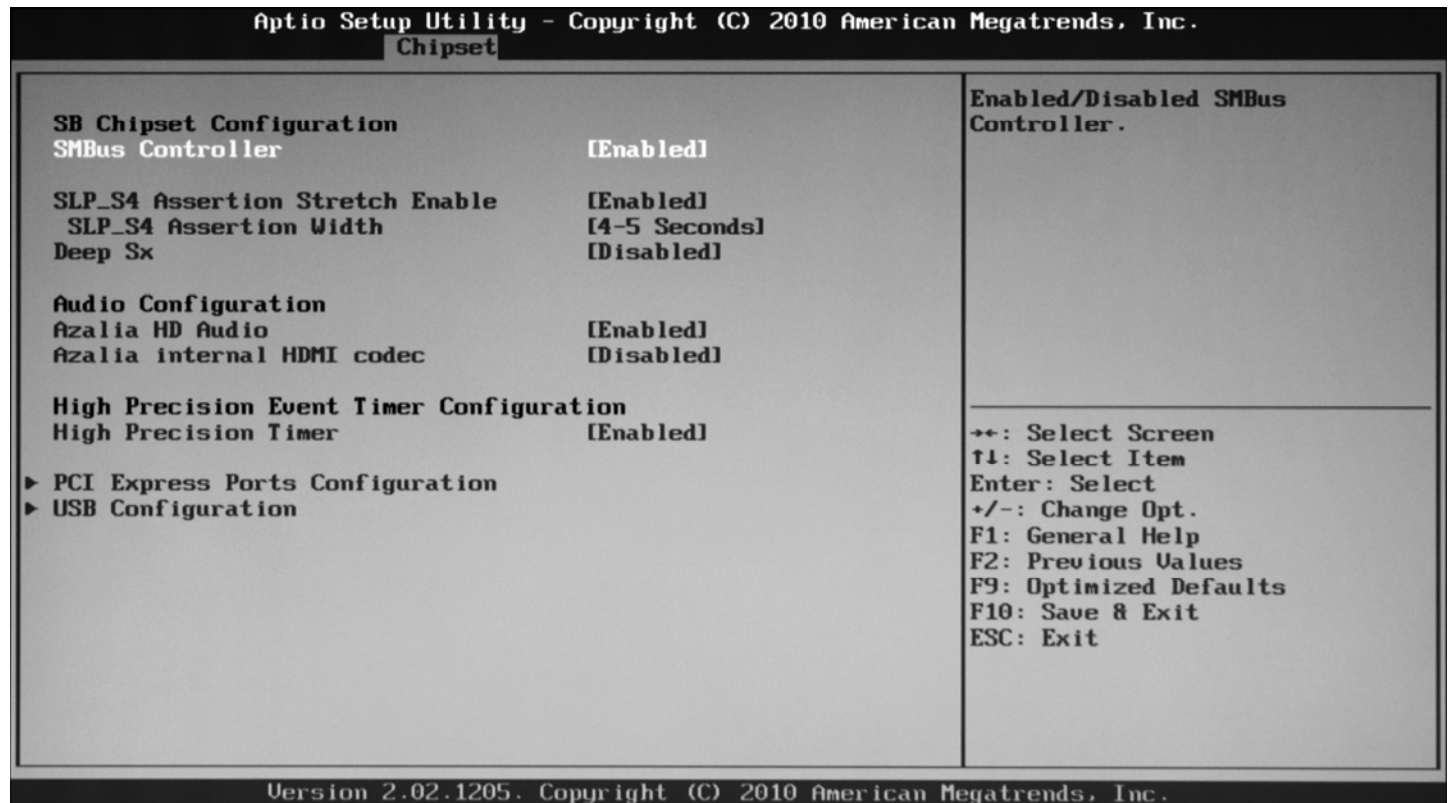


Fig 4.12

1) Azalia HD Audio

2) Azalia Internal HDMI codec

Do enable this item when HDMI output is using.

6. T.W.L

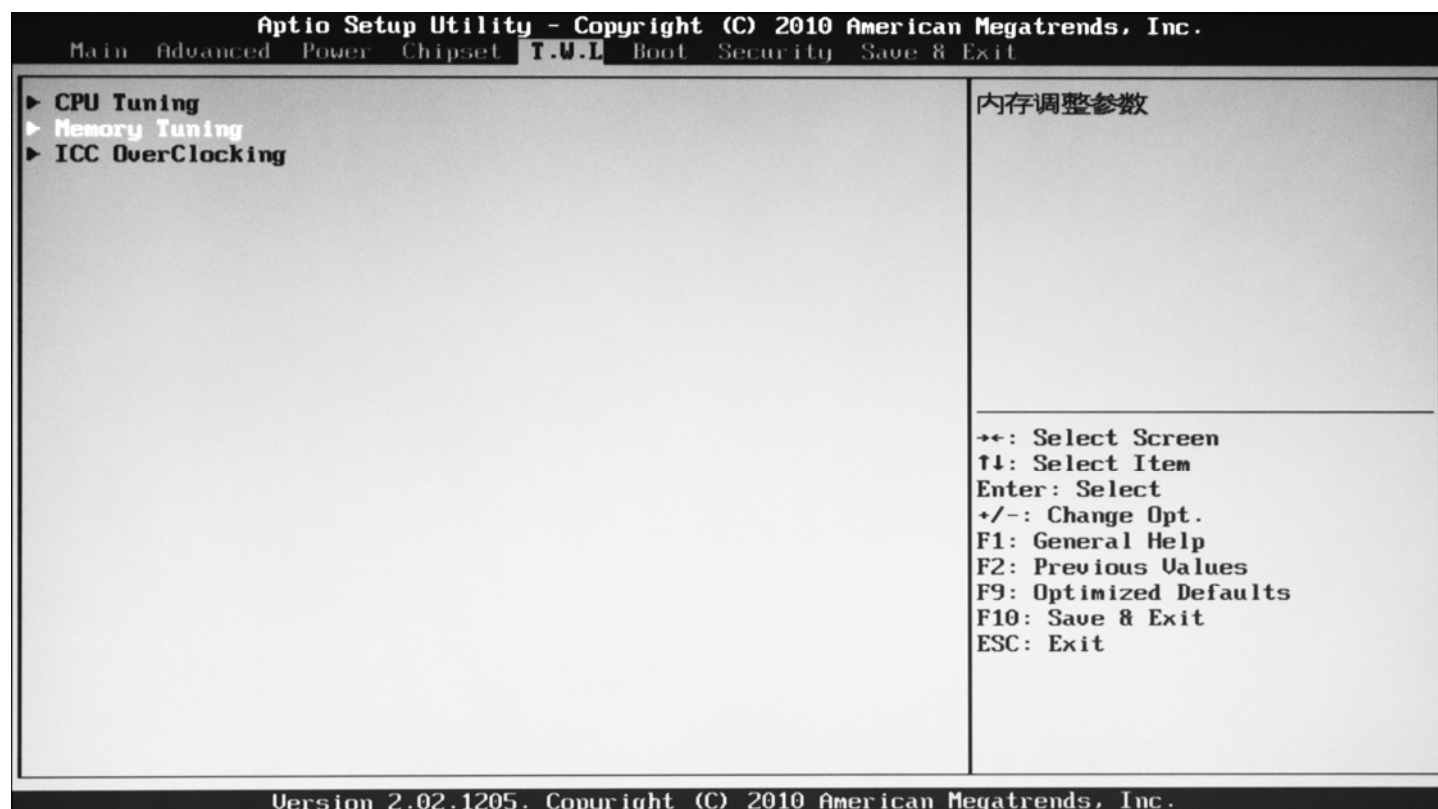


Fig 4.13

- 1) CPU Tuning
- 2) Memory Tuning
- 3) ICC OverClocking

This is an over clocking item, use to set CPU clock speed.

7. Boot

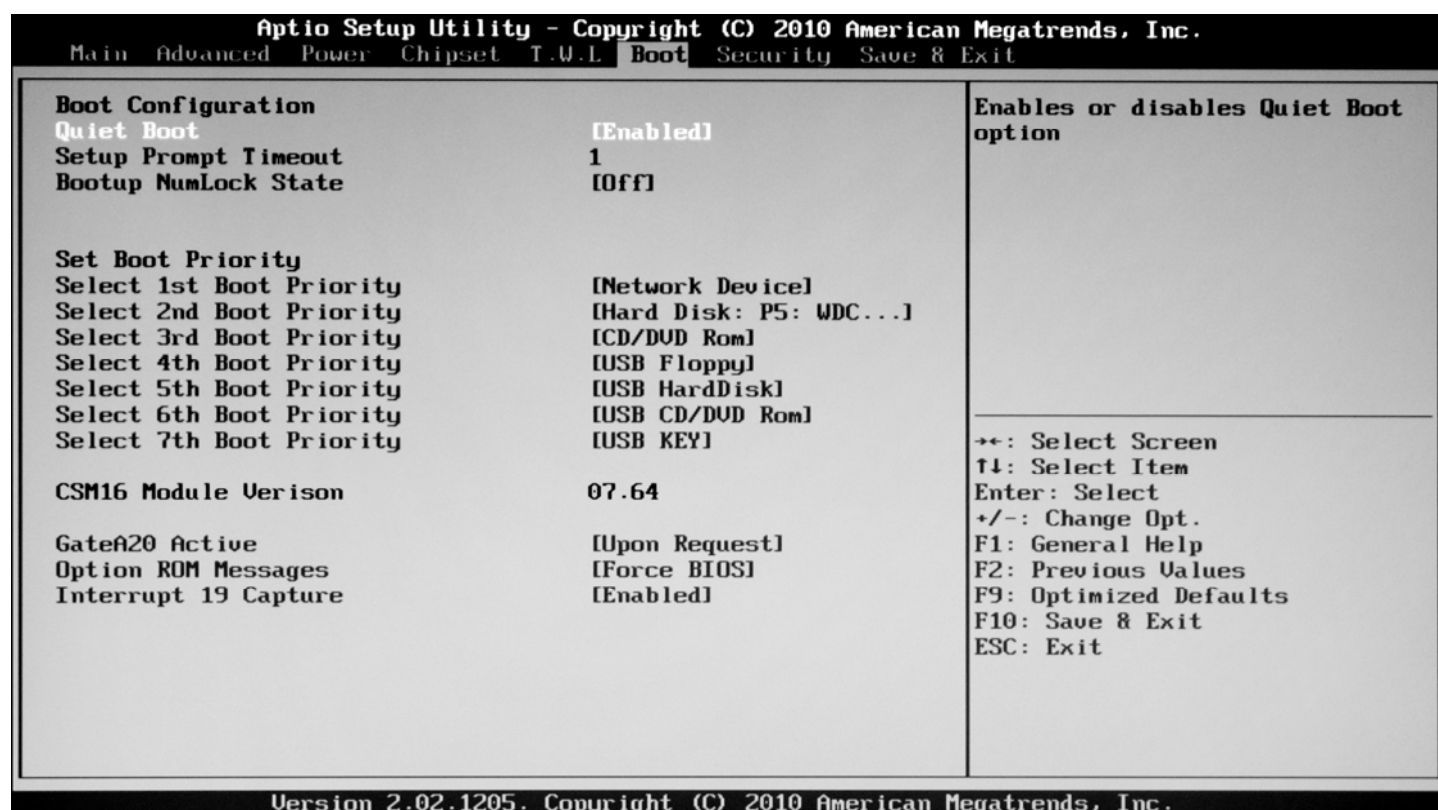


Fig 4.14

1) 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].

2) Setup Prompt Timeout

This item is use to set wait time of entering the OS.

3) Bootup NumLock State

(To set the state of Num Lock after start-up). 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 doesn't affect the performance of the computer.

4) Set Boot Priority

To set the booting priority.

5) Interrupt 19 Capture

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].
Options: [Disabled] [Enabled].

8. Security Setup

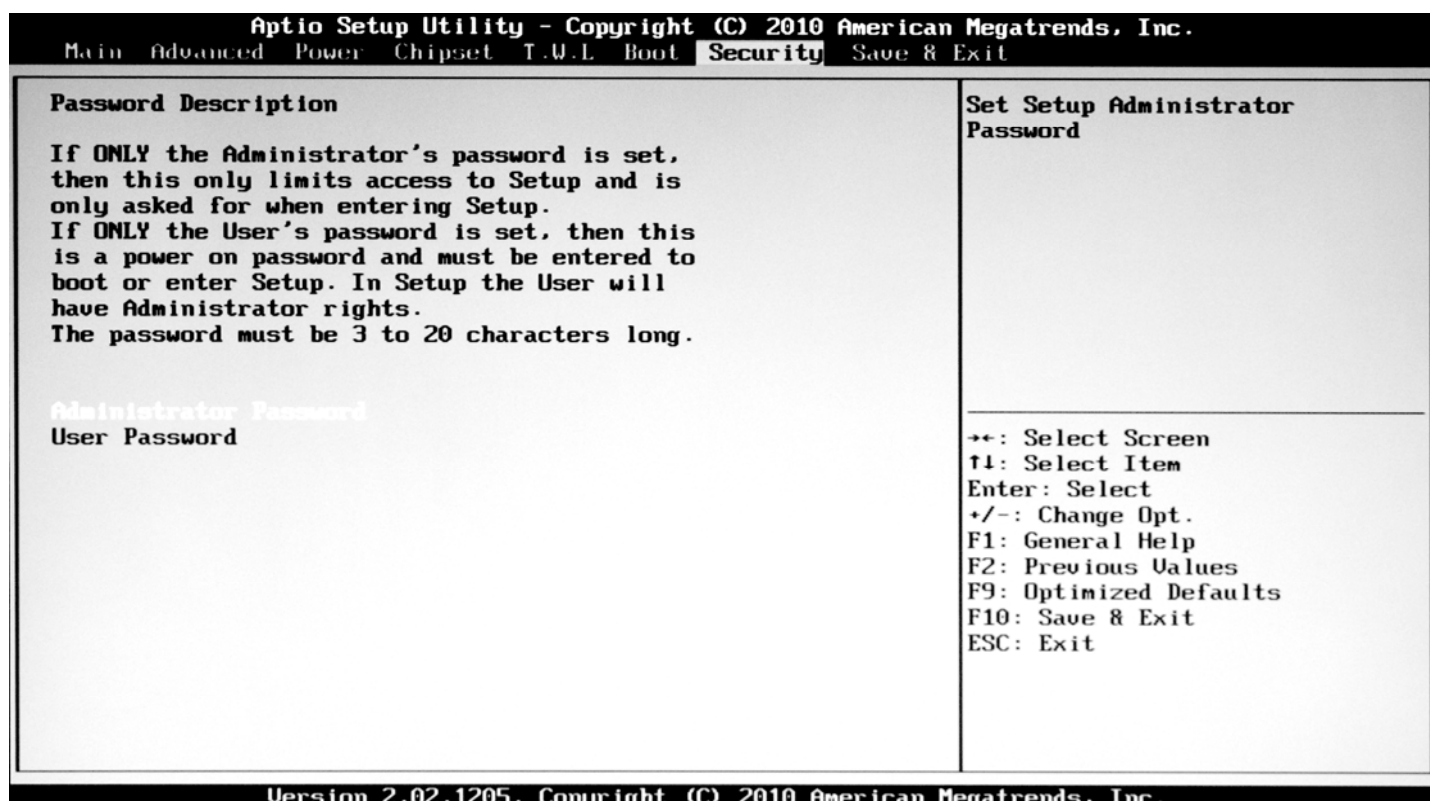


Fig 4.15

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.

9. Save & Exit

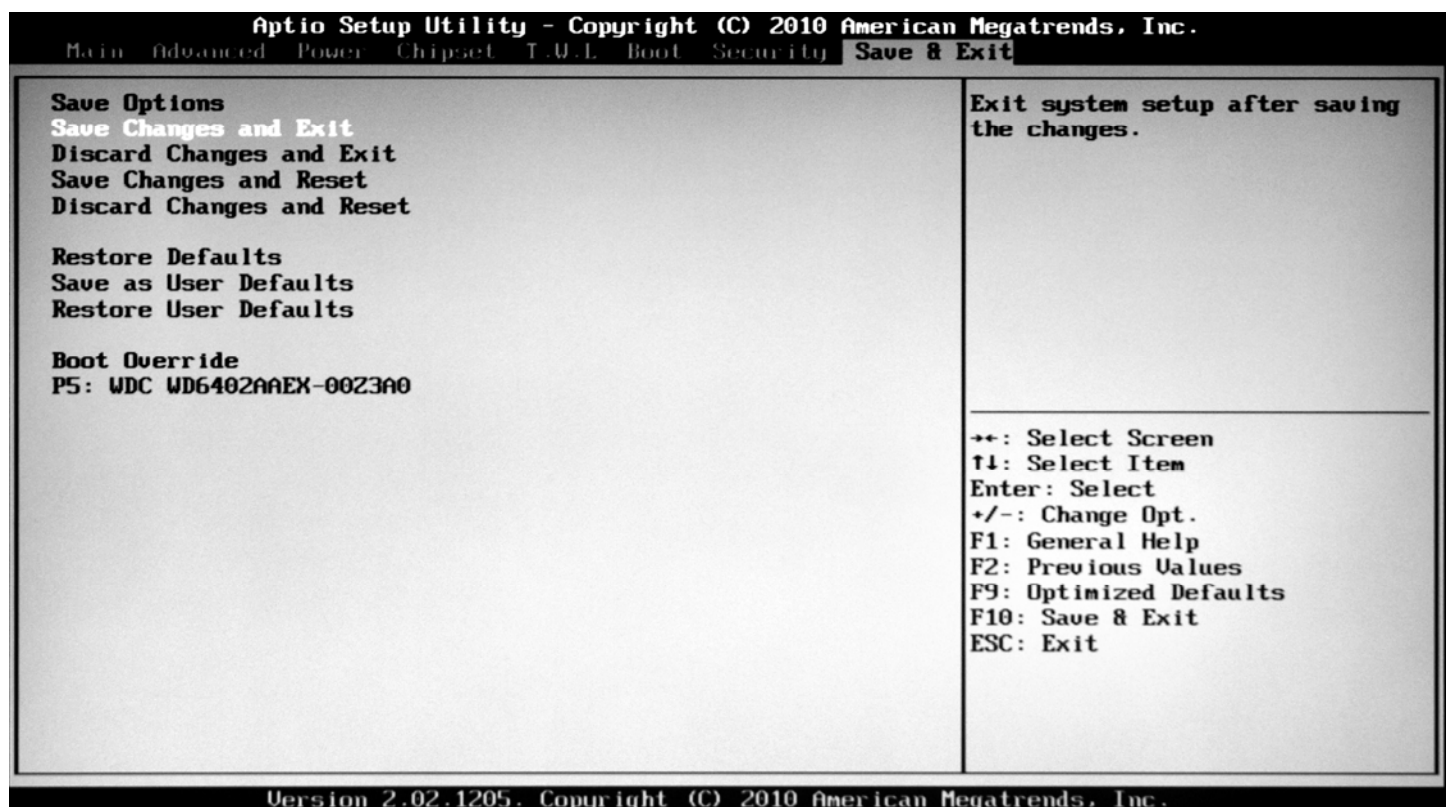


Fig4.16

1) Save Changes and Exit

Discard changes and exit

Save changes and exit
Discard changes and reset

2) Restore defaults

Save as user defaults
Restore as user defaults

4. Software installation

1. Install driver for motherboard

After you complete the installation of the operating system, you should then install the driver for the motherboard. To this end, put the disk into the CD-ROM. The interface as shown in Fig. 1 will appear.



Fig.1

In Fig 1, click "Driver ", another UI appears as shown in Fig 2.



Fig.2

4.1. Installing driver for Chipset

After you click “Install” behind the “Intel Chipset driver” in the interface of Fig. 2, a dialog box as shown in Fig. 3 will pop up. Then you can click Next and wait till the driver is installed completely.

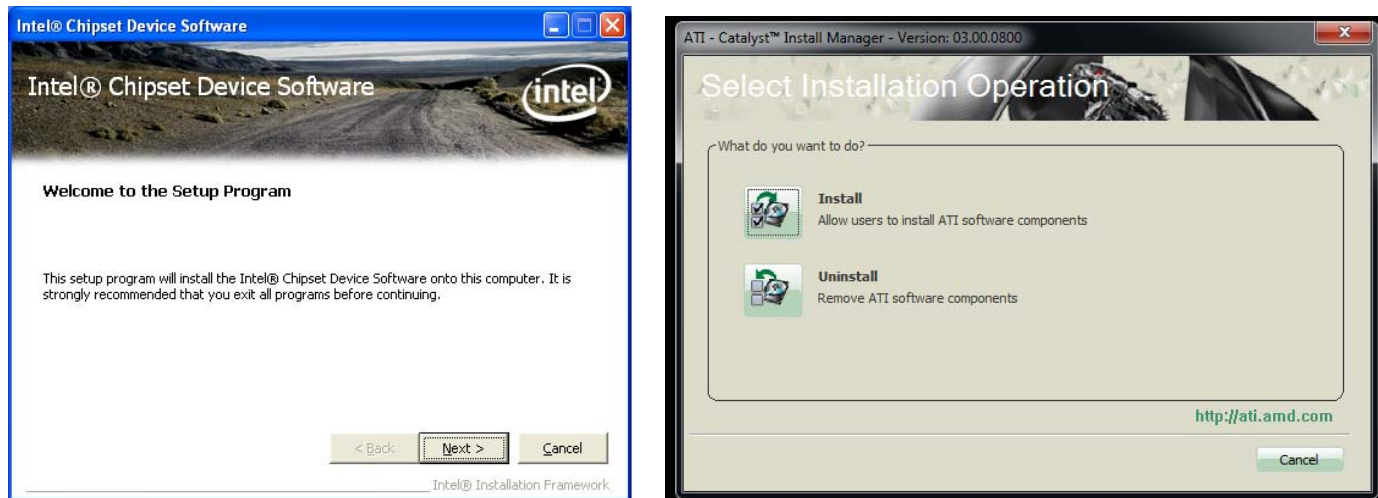


Fig. 3

4.2 Install Sound card driver

After you click “Install” behind the “Realtek HD audio driver” in the interface of Fig 2, a dialog box as shown in Fig. 4 will pop up. Then you can click “Next” and wait till the driver is installed completely.

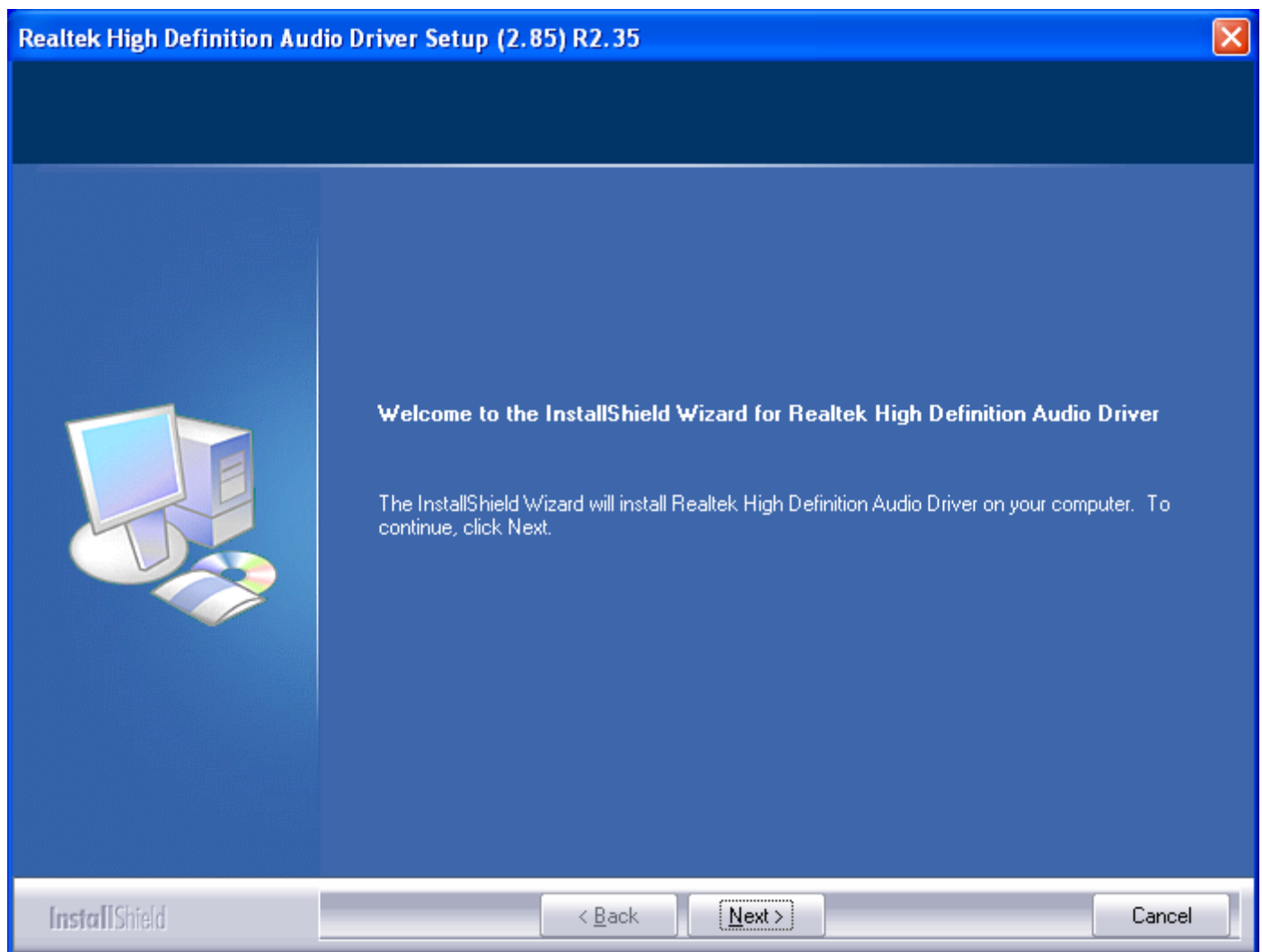


Fig. 4

4.3 Installing driver for on-board LAN chip

After you click “Install” behind the “Realtek 10/100/1000 LAN Driver” in the interface of Fig. 2, a dialog box as shown in Fig. 5 will pop up. Then you can click “Next” and wait till the driver is installed completely.

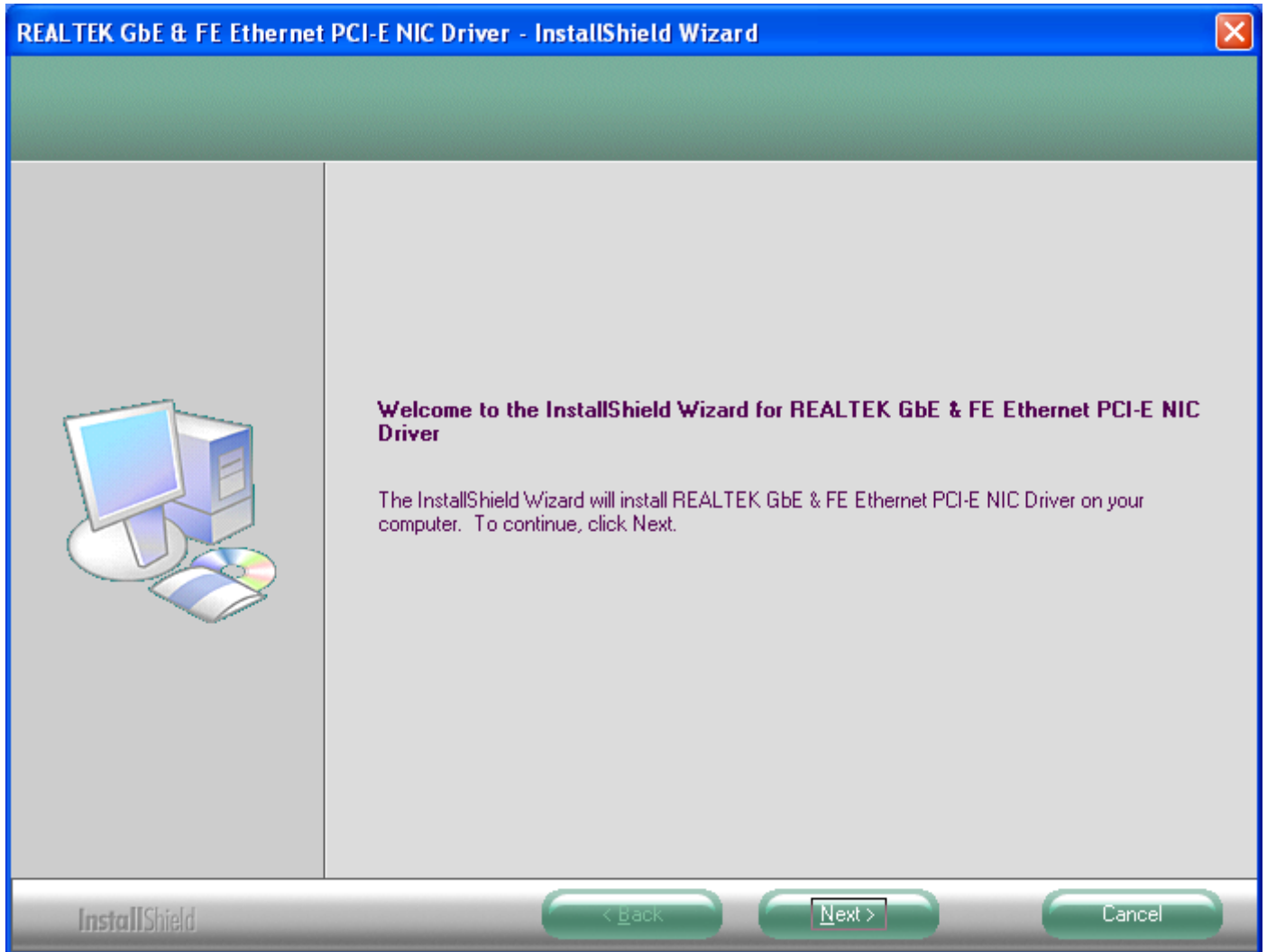


Fig.5

4.4 Installing driver for graphic card

To install the driver for graphic card, you can click “Install” behind “XXX VGA Driver” in the interface of Fig. 2, complete the installation by following the indications in the popped-up dialog boxes, and then restart the computer.



Fig 6

2. HD-AUDIO sound card setup

For Windows XP SP3:

1. The control panel of the audio adapter will appear after the driver is installed, as shown in Fig.7.



Fig 7

2. After the initial installation of the driver, the default state of microphone is mute. You need to turn it on

manually, as shown in Fig. 8 and 9.



Fig. 8



Fig. 9

For Windows Vista:

1. After the driver for the audio adapter is stalled, you can click the Audio Manager at the lower right corner. The initial interface will pop up, as shown in Fig. 10 and 11.

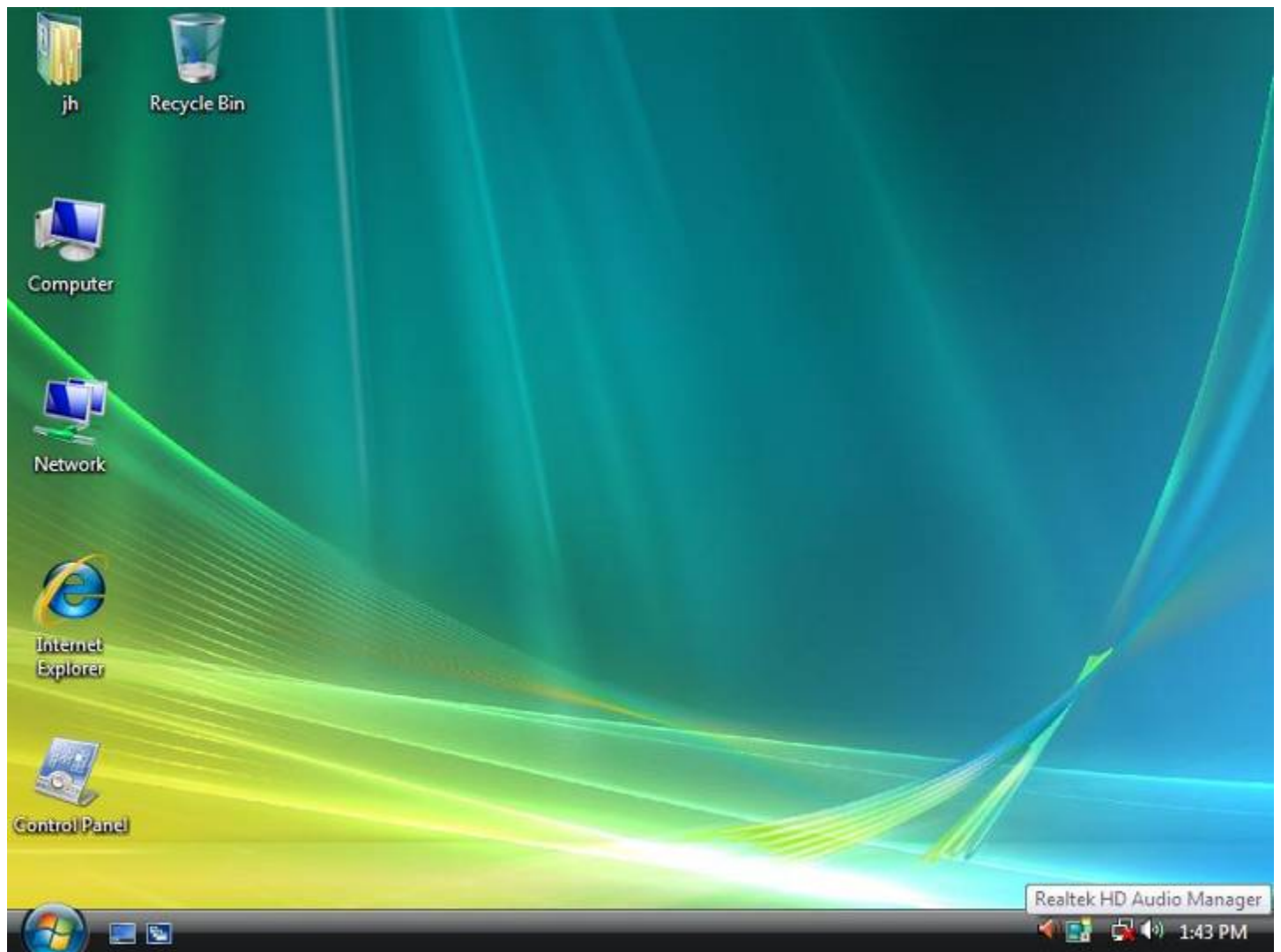


Fig. 10

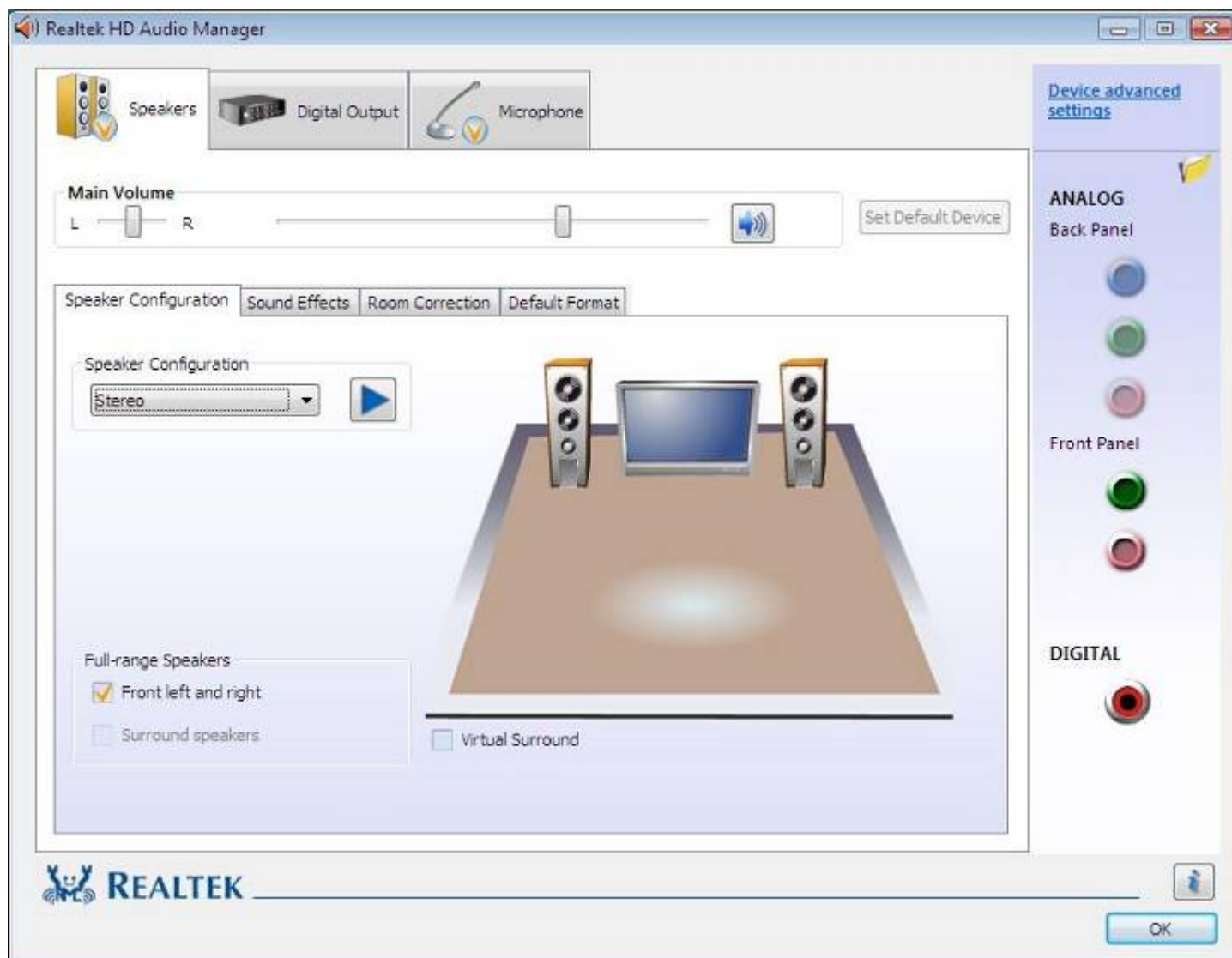
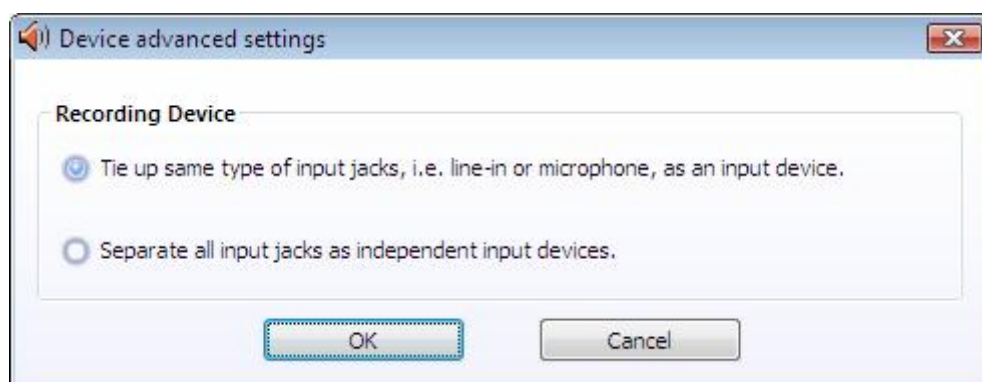


Fig 11

2. Click the right upper part of the control interface—Advanced Setup for Device, the interface shown in Fig. 12 will pop up. Then select “separate all input jacks as independent input devices”.



3. Click OK, and the controlling interface will turn to one shown in Fig.13.

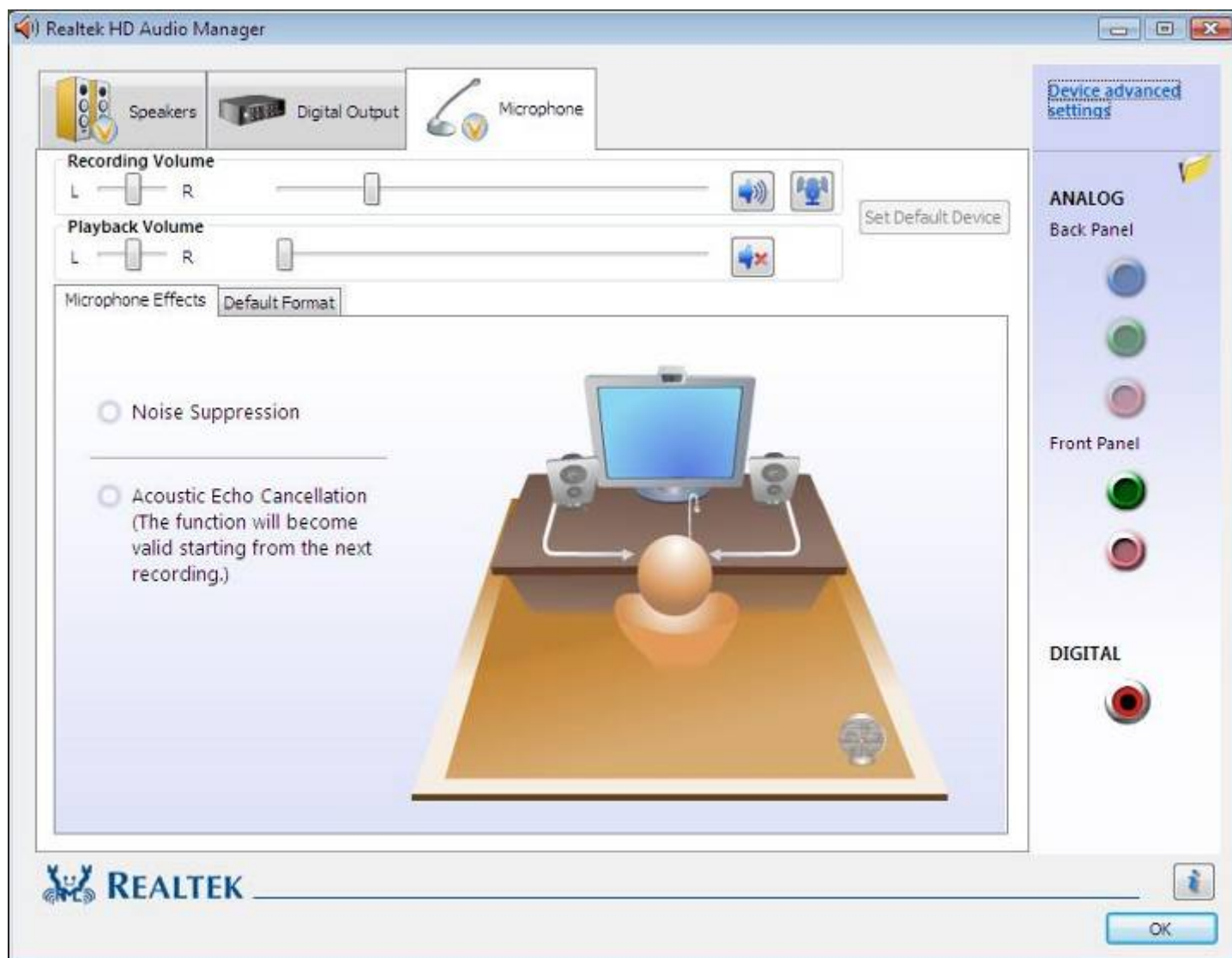


Fig. 13

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 pop up, as shown in Fig. 14.

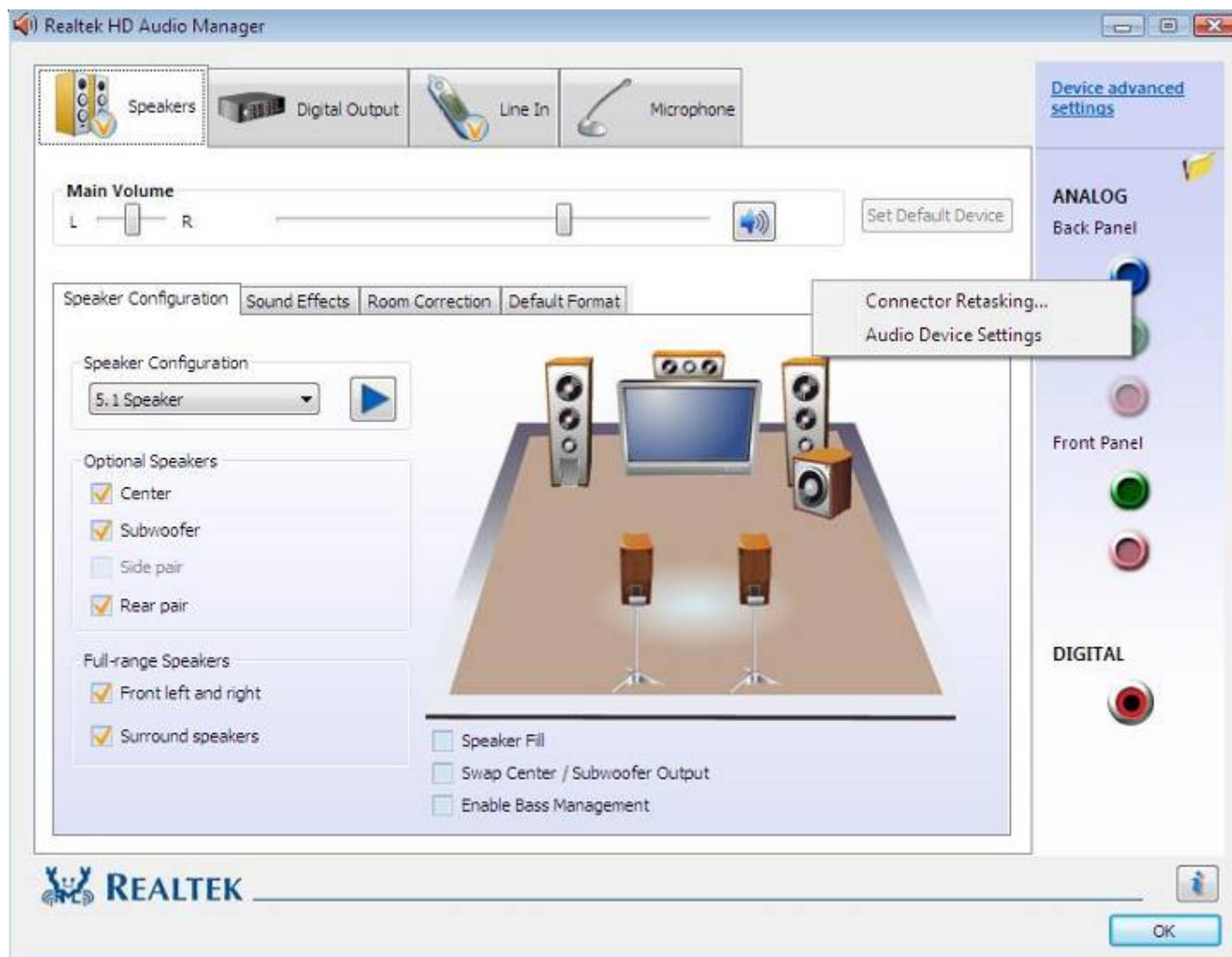


Fig 14

6. Select Redistribution of Connectors. Then an interface will pop up, as shown in Fig. 15. After that, set the corresponding output.

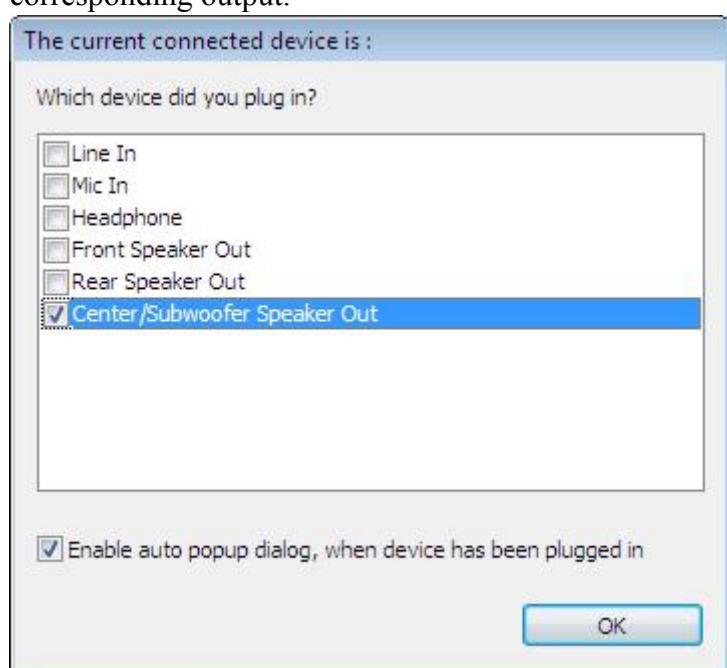


Fig 15

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment

NOTE: 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.

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This device and its antenna must not be co-located or operating in conjunction with any other antenna or transmitter.

“To comply with FCC RF exposure compliance requirements. The antennas used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.”

