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# Motherboard

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# User's Manual

MI-ION2

Version 001



FCC ID:YIKMION2

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

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# Gratitude

Thank you for choosing Giada motherboard.

Giada MI-ION2 is based on Intel® Atom™ Processor and NM10 chipset, with Next Generation NVIDIA® ION™ GPU.

It supports DDR2 667/800 Dual-channel memory, on-board HD-AUDIO sound card and gigabit LAN. Support HDMI display output.

Any question about the product, please send e-mail to our support center.

Headquarter:

Sales@giadatech.com

support@giadatech.com

USA office: support@giadapc.com

# I. About the product

## 1. Picture of the motherboard



**NOTE:** This is Giada real product photo show for your reference only, Product appearance depends on goods.

## II. Hardware installation

### 2. Features

#### 2.1 Processor

- On-board Intel® Atom™ Processor D525;
- 2. On-board Next Generation NVIDIA® ION™ GPU, 512MB VRAM.

#### 2.2 Memory

- Supports 200-Pin DDR2 800/667/533MHz memories \* 2;
- 4GB at maximum; (2GB/per slot).

#### 2.3 BIOS

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

#### 2.4 Interfaces for peripherals

- Two SATA2 HDD port;
- One HDMI digital interface;
- One DVI interface;
- Six high-speed transmission ports (max. 480Mb/s) which support USB2.0 and are compatible with USB1.1;
- One RJ45 network interface (PCIe Gigabit Ethernet);
- On-board HD-AUDIO audio adapter;
- Interfaces on panels can be compatible with HDD LED, Speaker, etc;
- One CMOS contact pin;
- One system FAN socket.

#### 2.5 Power management

- Support APM and ACPI;
- Compatible with energy star "Green PC".

#### 2.6 Expansion slot

- Two MINI-PCIe slot.

### Warning

The motherboard consists of a great number of ICs and other components.

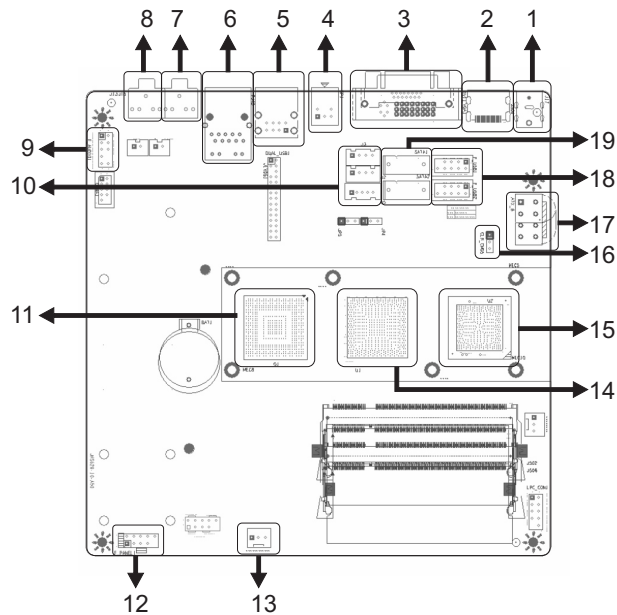
These ICs might be damaged by the static charge. Therefore, the user must make the following preparations before installation:

- Turn off the power of the computer. It is preferable the power cord be unplugged.
- Take care not to contact the metal wires and their joints on the motherboard when handling it.
- It is preferable that the operator wear the anti-static wrist strap when handling the IC components.
- Before the ICs are installed, the components of the motherboard should be placed on the anti-static mat or bag.
- 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. Layout of motherboard

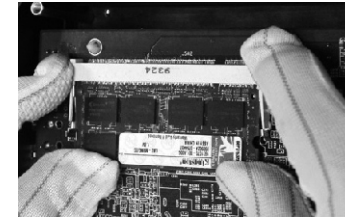


- |                      |                               |
|----------------------|-------------------------------|
| 1. DC-IN.            | 11.Next Generation NVIDIA ION |
| 2. HDMI port         | 12.Front panel                |
| 3. DVI port(MI-ION2) | 13.CPU-FAN                    |
| 4. S/PDIF-out        | 14.Intel Atom D525            |
| 5. USB2.0 port       | 15.Intel NM10                 |
| 6. RJ45 NIC          | 16.CLR-CMOS                   |
| 7. Audio-out         | 17.ATX Power                  |
| 8. MIC-in            | 18.Front USB                  |
| 9.Front audio        | 19.SATA II Cnnector           |
| 10.SATA Power        |                               |

## 2. Installing memory

Please install the memory in accordance with the following procedures:

- 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.



- 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.

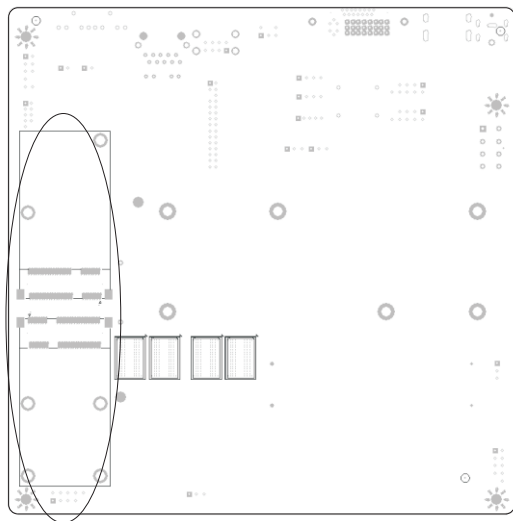
### Note

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

#### Installing Mini-PCIE extended devices

At the rear panel of motherboard is two Mini-PCIE extended slots, to which the user can connected WIFI module and Bluetooth module etc.



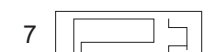
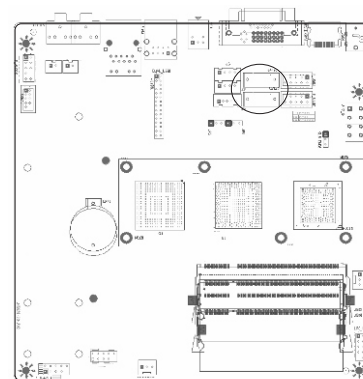
### 4. Motherboard jumper setting

#### Note:

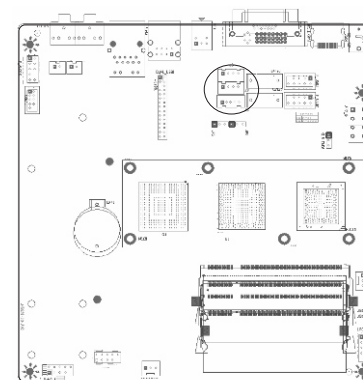
The user should notice that all sockets are marked with PIN1.  
The mark “#” indicates the ex-factory default values.

### 4.1. SATA1/SATA2 (Serial ATA flat-cable sockets)

Serial ATA sockets can reach a transmission speed of 300MB/s, and you can connect your Serial ATA device to this socket.



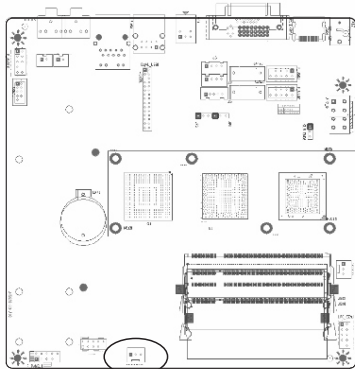
PIN	Definition
1	GND
2	TXP
3	TXN
4	GND
5	RXN
6	RXP
7	GND



PIN	Definition
1	+5V
2	GND
3	GND
4	+12V

### 4.2. CPU\_FAN1 (CPU FAN socket)

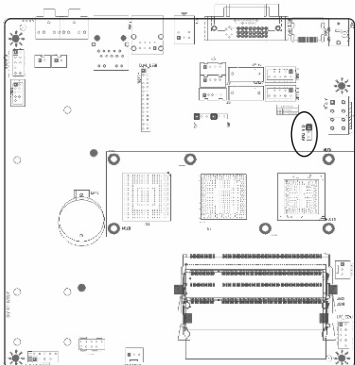
This receptacle can be used for connecting CPU/system fan. Its pins are defined below. The user shall make sure the fan is conforming.



PIN	Definition
1	GND
2	12V
3	SIGNAL

### 4.3. CLR\_CMOS(CMOS pin)

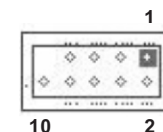
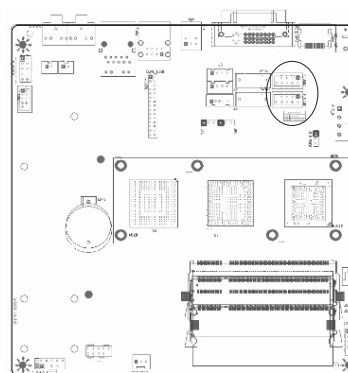
The correct time, system hardware and other information are saved in the CMOS memory of the motherboard. The interruption the computer's power won't cause the loss of this information, for the CMOS is powered by the battery on the motherboard. The port is defined as follows:



PIN	Definition
1-2#	Normal
2-3	CLR_CMOS

### 4.4. F\_USB1/ F\_USB2 (frond-end USB pin)

In case the USB ports on the rear panel of the machine case are not enough, the user can use the two sets of extension USB pins provided by this motherboard. These ports support USB 2.0 devices. The definitions of the ports are described below:

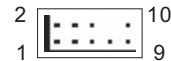
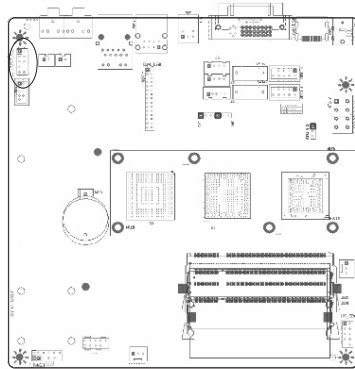


PIN	Definition	PIN	Definition
1	5V	2	5V
3	USB D0-	4	USB D1-
5	USB D0+	6	USB D1+
7	GND	8	GND
9	NULL	10	NULL

#### 4.5. F\_AUDIO(Pins for front-end audio adapter)

These audio adapter ports allow you to connect to the wire harness of the audio adapter. After connection, you can easily control the audio output/microphone through the front panel of the host (Note: Don't connect the wire to Pin 4).

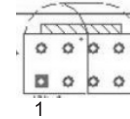
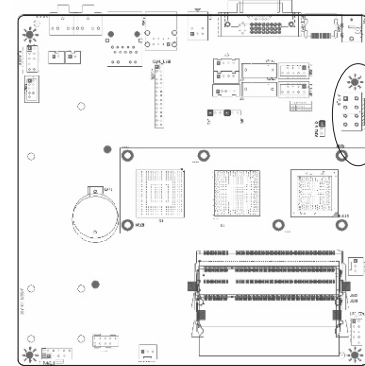
The definitions of the ports are described below:



PIN	Definition	PIN	Definition
1	MIC	2	GND
3	MIC-BIAS	4	5V
5	OUT-R	6	-
7	GND	8	NULL
9	OUT-L	10	-

#### 4.6. ATX 12V (12V Power receptacle)

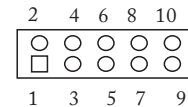
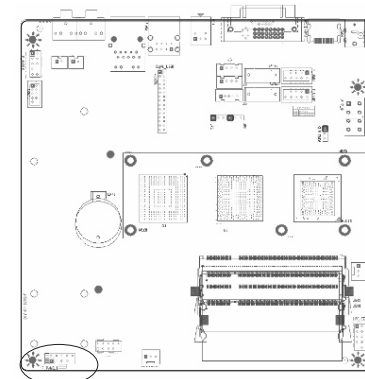
Besides standard 24-pin PWRATX1 power receptacle, this board has a special 12V power receptacle for CPU. For better and more stable processor power supply, we suggest keeping the connection on this socket. The definitions of the pins are described below (when power supply with 20-pin outlet is used, please make sure the numbers are matched correctly):



PIN	Definition
1	GND
2	GND
3	GND
4	GND
5	12V
6	12V
7	12V
8	12V

#### 4.7. F\_PANEL (Front-end control panel)

This socket is used to connect the flat cables on the front-end panel.

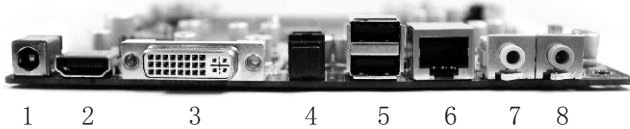




## III. BIOS Setting

PIN	Definition	PIN	Definition
1	HDLED+	2	PLED+
3	HDLED-	4	GND
5	RST+	6	NC
7	GND	8	PWBT
9	NULL	10	GND

### 5. Rear panel interface



1. DC-IN.
2. HDMI port
3. DVI port
4. S/PDIF-out
5. USB2.0 port
6. RJ45 NIC
7. Audio-out
8. MIC-in

#### NOTE:

Please use the standard DC power adapter. We are not responsible for problems caused by use other DC power adapter.

#### 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. Giada 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). 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 F2 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.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 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.

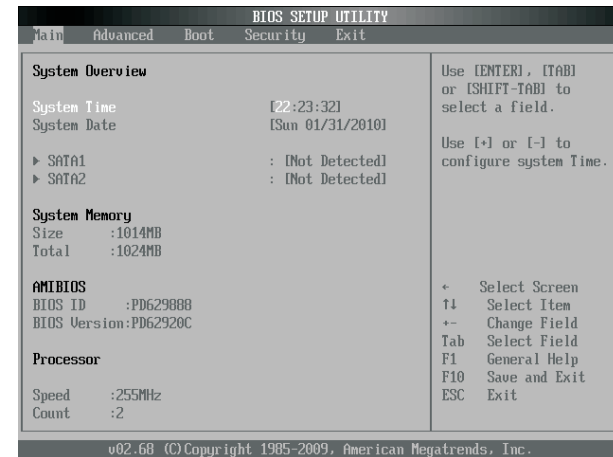


Fig 3.1

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

- **Main (standard CMOS setup)**

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

- **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.

- **Boot (startup configuration characteristics)**
- **Security (setting the administrator/user password)**
- **Exit (option of exit)**  
This item includes load optimal defaults/load failsafe defaults value/discard changes/ discard changes and exit.

## 2. Main (standard CMOS setup)

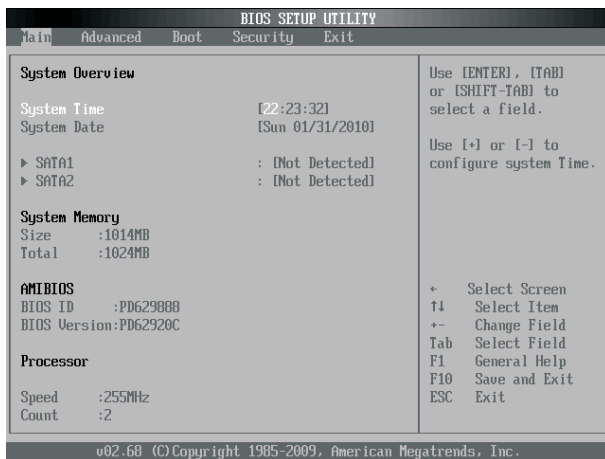


Fig 3.2

- **System time (hh:mm:ss)**  
Use this item to set the time for the computer, with the format as "hour/minute/second".
- **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)

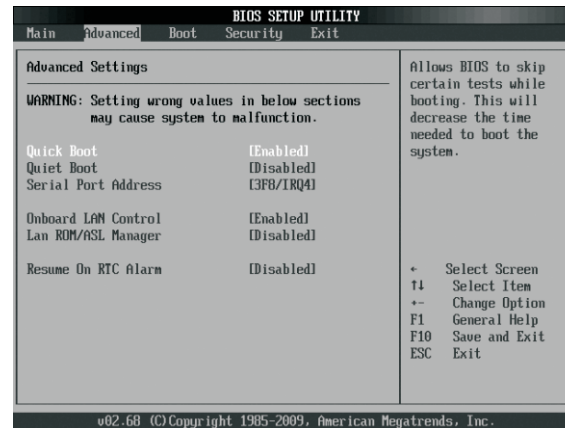


Fig 3.3

## 4. Boot Configuration

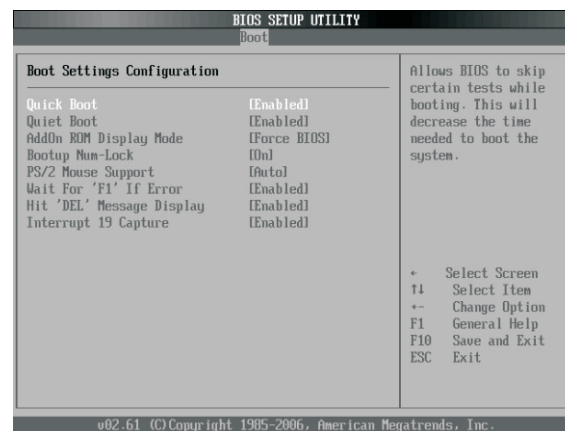


Fig 3.4

**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**

To 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 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.

**PS2 Mouse Support**

Set to support PS2 mouse. The available 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 [Disabled]

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 set the booting priority.

**Hard Disk Drives**

To set the booting priority of hard disk devices.

**Removable Drives**

To set the booting priority of removable devices.

**CD/DVD Drives**

To set the booting priority of CD/DVD-ROM devices.

**5. Security Setup**



Fig 3.5

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 to enter 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.

## 6. Exit

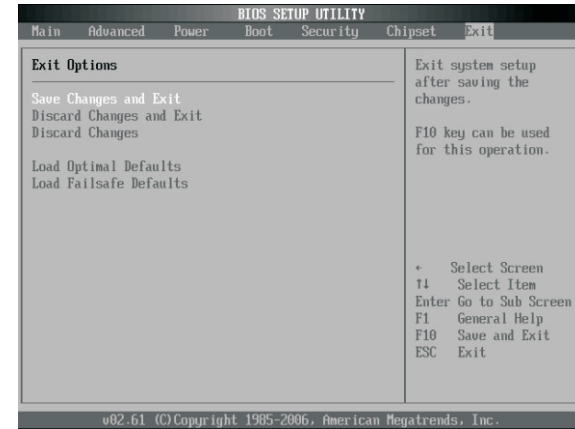


Fig 3.6

### 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 or ESC, 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.

## IV. Software installation

**NOTE:** Pictures below just showing the driver install steps, please see the real product for detailed information.

### 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. 4.1 will appear.



Fig. 4.1

In Fig 4.1, click "Driver", another UI appears as shown in Fig 4.2.



Fig. 4.2

### 1.1. Installing driver for Chipset

After you click “Install” behind the “Intel Chipset driver” in the interface of Fig. 4.2, a dialog box as shown in Fig. 4.3 will pop up. Then you can click Next and wait till the driver is installed completely.



Fig. 4.3

### 1.2 Install Sound card driver

After you click “Install” behind the “Realtek HD audio driver” in the interface of Fig. 4.2, a dialog box as shown in Fig. 4.4 will pop up. Then you can click “Next” and wait till the driver is installed completely.

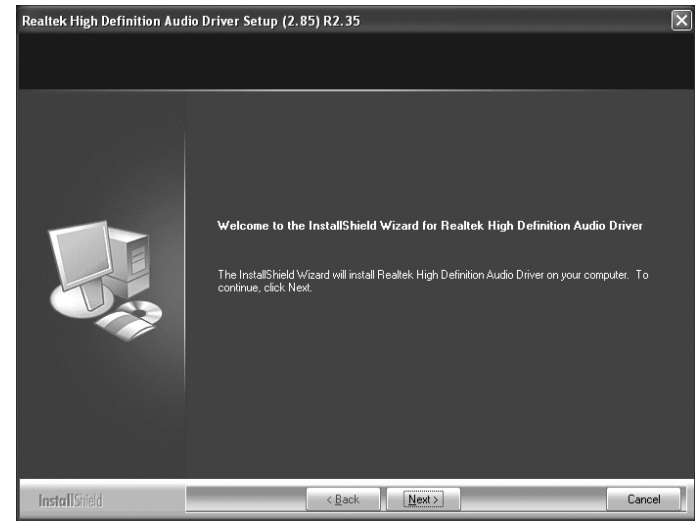


Fig. 4.4

### 1.3 Installing driver for on-board LAN chip

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

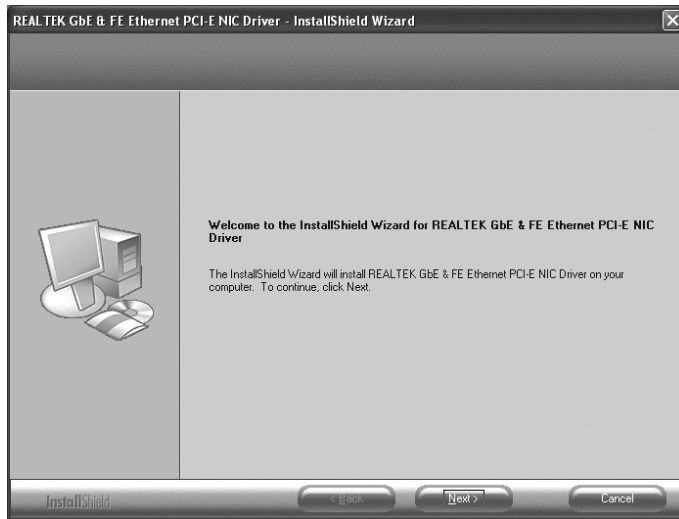


Fig. 4.5

### 1.4 Installing driver for graphic card

To install the driver for graphic card, you can click “Install” behind “XXX DVI Driver” in the interface of Fig. 4.2, complete the installation by following the indications in the popped-up dialog boxes, and then restart the computer.

## 2. HD-AUDIO sound card setup

- For Windows XP SP2:

The control panel of the audio adapter will appear after the driver is installed, as shown in Fig. 4.6.



Fig. 4.6



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. 4.7 and 4.8.



Fig. 4.7



Fig. 4.8

- **For Windows Vista:**

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. 4.9 and 4.10.

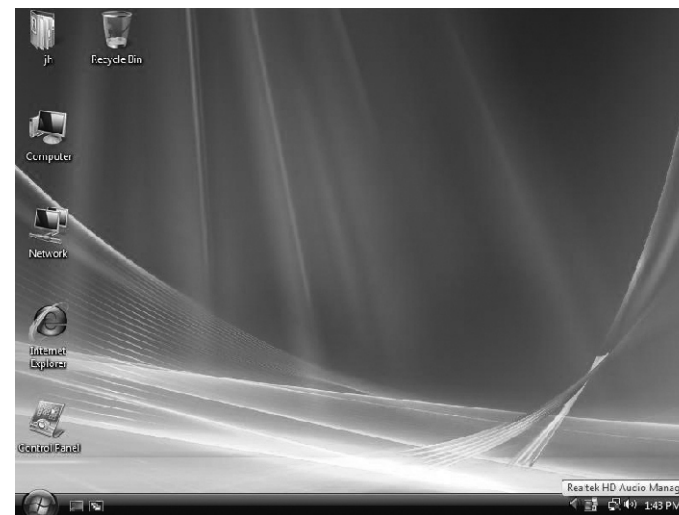


Fig. 4.9



Fig. 4.10

Click the right upper part of the control interface—Advanced Setup for Device, the interface shown in Fig. 4.12 will pop up. Then select “separate all input jacks as independent input devices”.



Fig. 4.11

Click OK, and the controlling interface will turn to one shown in Fig. 4.12.

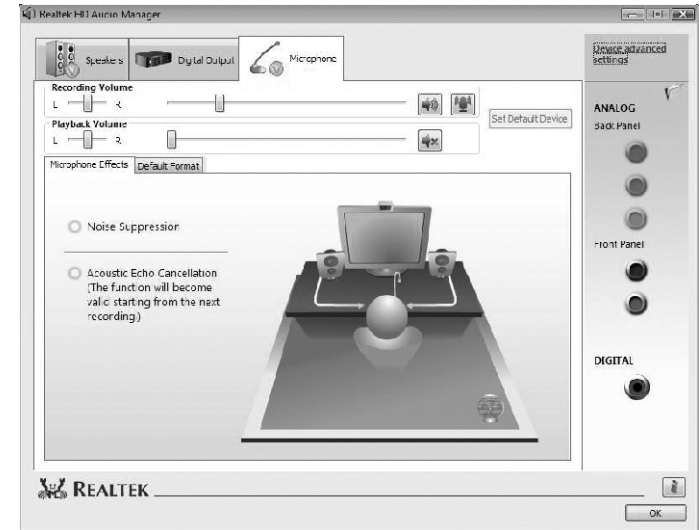


Fig. 4.12

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.

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. 4.13.

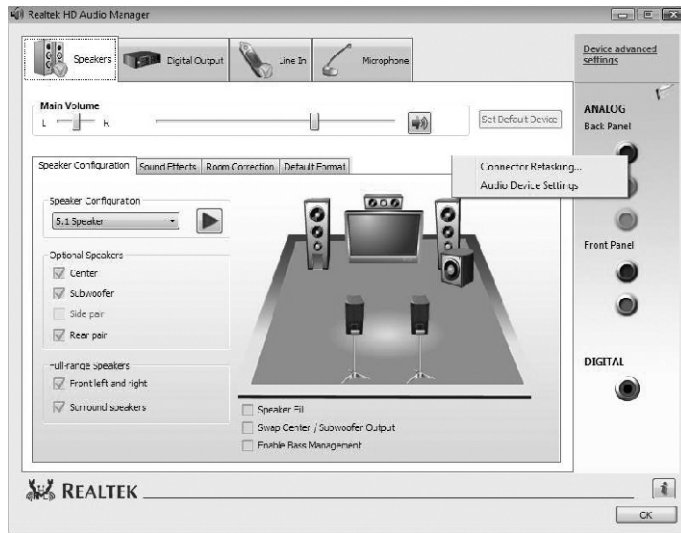


Fig. 4.13

Select Redistribution of Connectors. Then an interface will pop up, as shown in Fig. 4.14. After that, set the corresponding output.



Fig. 4.14

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.”