

MNNM1PI
Intel® mini-ITX Motherboard

USER'S MANUAL

Intel® mini-ITX Motherboard
Rev. 1001



* The WEEE marking on the product indicates this product must not be disposed of with user's other household waste and must be handed over to a designated collection point for the recycling of waste electrical and electronic equipment!!



* The WEEE marking applies only in European Union's member states.

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Product Manual Classification

In order to assist in the use of this product, Gigabyte has categorized the user manual in the following:

- For detailed product information and specifications, please carefully read the "Product User Manual".
- For detailed information related to Gigabyte's unique features, please go to "Technology Guide" section on Gigabyte's website to read or download the information you need.

For more product details, please click onto Gigabyte's website at www.gigabyte.com.tw

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Item Checklist

- The MNNM1PI motherboard
- I/O Shield Kit
- CD for motherboard driver & utility
- Power cable x 1
- B4P/S4P Cable x 1
- Optional Power Adapter x 1

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

Chapter 1 Introduction

1-1 Considerations Prior to Installation

Preparing Your Computer

The motherboard contains numerous delicate electronic circuits and components which can become damaged as a result of electrostatic discharge (ESD). Thus, prior to installation, please follow the instructions below:

1. Please turn off the computer and unplug its power cord.
2. When handling the motherboard, avoid touching any metal leads or connectors.
3. It is best to wear an electrostatic discharge (ESD) cuff when handling electronic components (CPU, RAM).
4. Prior to installing the electronic components, please have these items on top of an antistatic pad or within a electrostatic shielding container.
5. Please verify that the power supply is switched off before unplugging the power supply connector from the motherboard.

Installation Notices

1. Prior to installation, please do not remove the stickers on the motherboard. These stickers are required for warranty validation.
2. Prior to the installation of the motherboard or any hardware, please first carefully read the information in the provided manual.
3. Before using the product, please verify that all cables and power connectors are connected.
4. To prevent damage to the motherboard, please do not allow screws to come in contact with the motherboard circuit or its components.
5. Please make sure there are no leftover screws or metal components placed on the motherboard or within the computer casing.
6. Please do not place the computer system on an uneven surface.
7. Turning on the computer power during the installation process can lead to damage to system components as well as physical harm to the user.
8. If you are uncertain about any installation steps or have a problem related to the use of the product, please consult a certified computer technician.

Instances of Non-Warranty

1. Damage due to natural disaster, accident or human cause.
2. Damage as a result of violating the conditions recommended in the user manual.
3. Damage due to improper installation.
4. Damage due to use of uncertified components.
5. Damage due to use exceeding the permitted parameters.
6. Product determined to be an unofficial Gigabyte product.

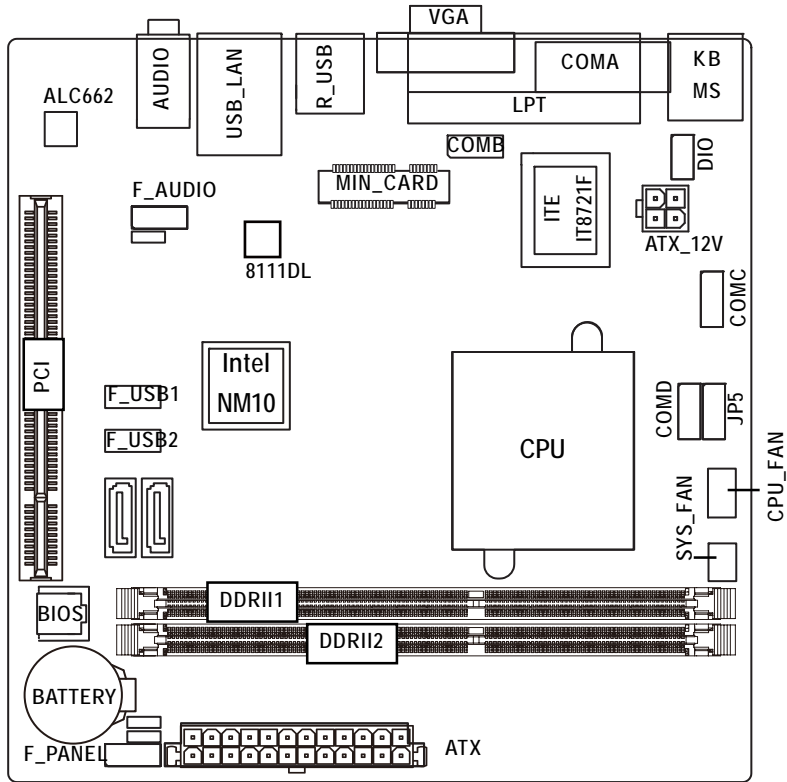
1.2 Features Summary

Form Factor	<ul style="list-style-type: none"> • 170mm x 170mm Mini ITX form factor, 8 layers PCB.
CPU	<ul style="list-style-type: none"> • Supports single Intel® D410 processor • Supports DMI x4
Chipset	<ul style="list-style-type: none"> • Intel® NM10
Memory	<ul style="list-style-type: none"> • 2 x DDR2 DIMM socket • Supports up to 4GB 800 memory • Supports 1.8V DDR2 DIMMs
I/O Control	<ul style="list-style-type: none"> • ITE IT8721F Super I/O
Expansion Slots	<ul style="list-style-type: none"> • Supports 1 PCI slot 32-Bit/33MHz • Supports 1 mini card slot (PCI-E x1/ USB 2.0)
SATA Controller	<ul style="list-style-type: none"> • Intel® NM 10
On-Board Graphic	<ul style="list-style-type: none"> • Build in Intel® GMA 3150 • Shared system memory up to 384MB
On-Board Sound	<ul style="list-style-type: none"> • Realtek® ALC662 chipset • Supports HD 6 channel
Internal Connector	<ul style="list-style-type: none"> • 1 x 24-pin ATX power connector • 1 x 4-pin ATX power connector • 2 x SATA connectors • 3 x Serial connectors (COM) • 1 x front audio connector • 2 x USB 2.0 connectors for additional 4 ports by cable • 1 x front panel connector • 1 x DIO panel connector • 1 x System fan cable connector • 1 x CPU fan cable connector
Rear Panel I/O	<ul style="list-style-type: none"> • P/S 2 Keyboard and Mouse connectors • 1 x Parallel port • 1 x VGA port • 1 x COM port • 4 x USB 2.0 ports • 1 x LAN RJ45 port • 1 HD Audio jacks (Line-out / MIC-in / Line-in) can configure 6 channel output by utility
Hardware Monitor	<ul style="list-style-type: none"> • Enhanced features with CPU Vcore, +12V, VCC3 (3.3V) , CPU Temperature, and System Temperature values viewing • CPU/System Fan Revolution Detect

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	<ul style="list-style-type: none">• CPU shutdown when overheat
On-Board LAN	<ul style="list-style-type: none">• Realtek 8111DL GbE LAN controller• Supports WOL, PXE
BIOS	<ul style="list-style-type: none">• AMI BIOS on 8Mb SPI Flash ROM
Additional Features	<ul style="list-style-type: none">• External Modem wake up• Supports S1, S3, S4, S5 under Windows Operating System• Wake on LAN (WOL)• Supports 4-pin Fan controller

1.3 Motherboard Components



Chapter 2 Hardware Installation Process

2-1: Installing Memory Module



Before installing the memory modules, please comply with the following conditions:

1. Please make sure that the memory is supported by the motherboard. It is recommended to use the memory with similar capacity, specifications and brand.
2. Before installing or removing memory modules, please make sure that the computer power is switched off to prevent hardware damage.
3. Memory modules have a foolproof insertion design. A memory module can be installed in only one direction. If you are unable to insert the module, please switch the direction.

The motherboard supports DDR2 memory module, whereby BIOS will automatically detect memory capacity and specifications. The memory module only can be inserted in one direction.

Installation Steps:

1. Insert the DIMM memory module vertically into the DIMM slot, and push it down.
2. Close the plastic clip at both edges of the DIMM slots to lock the DIMM module.

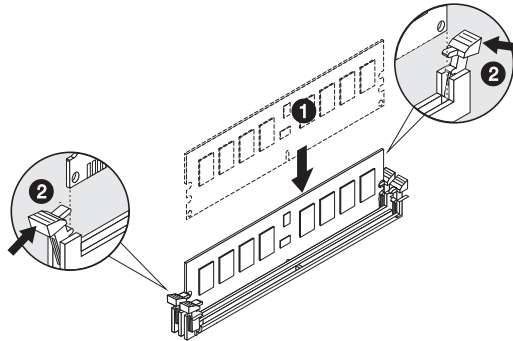
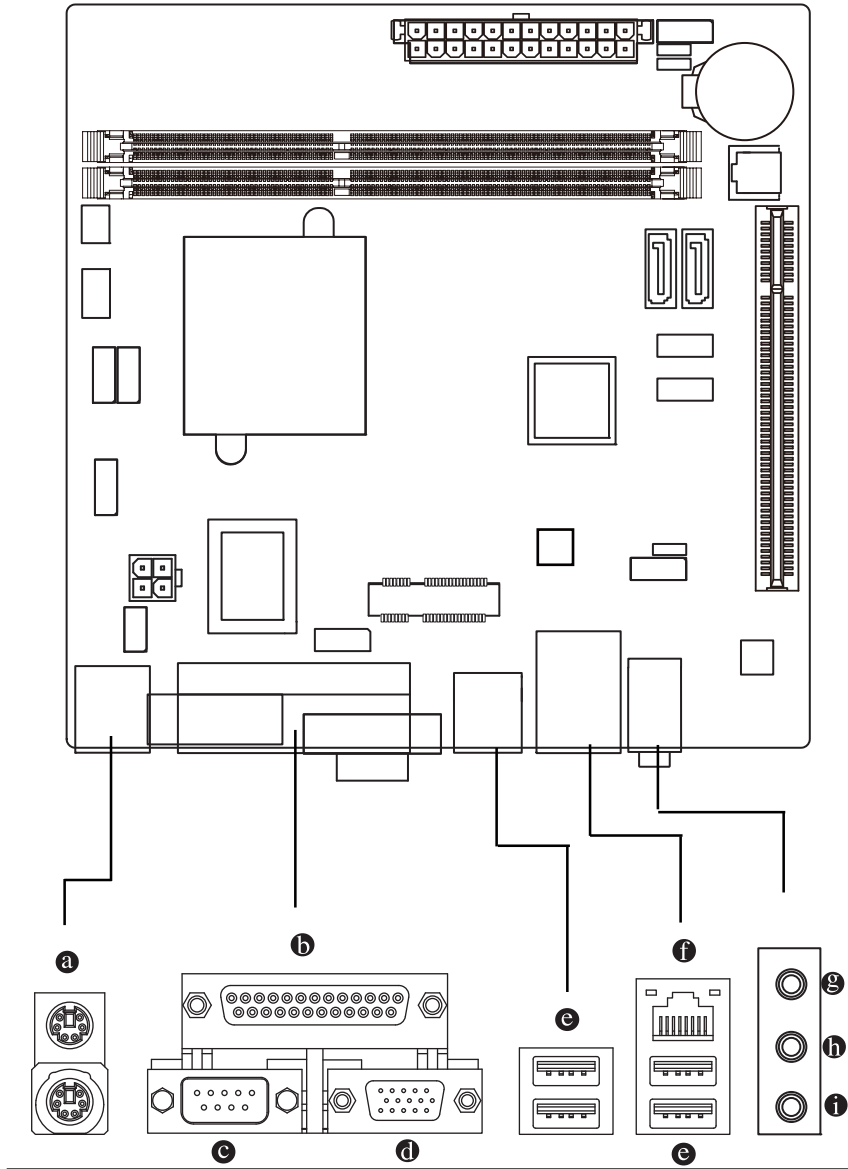


Table 1. Supported DIMM Module Type

Size	Organization	RAM Chips/DIMM
256MB	8MB x 8 x 4 bks	8
	16MB x 16 x 4bks	16
512MB	16MB x 8 x 4bks	8
	32MB x 16 x 4bks	16
1GB	32MB x 8 x 4bks	8
	64MB x 16 x 4bks	16
2GB	32MB x 8 x 4bks	8
	64MB x 16 x 4bks	16

2-2: Connect ribbon cables, cabinet wires, and power supply

2-2-1 : I/O Back Panel Introduction



Ⓐ PS/2 Keyboard and PS/2 Mouse Connector

To install a PS/2 port keyboard and mouse, plug the mouse to the upper port (green) and the keyboard to the lower port (purple).

Ⓑ / Ⓒ / Ⓓ Parallel Port/ COM Port/ VGA Port

This connector supports 1 standard COM port and 1 Parallel port. Device like printer can be connected to Parallel port ; mouse and modem etc can be connected to Serial port.

Ⓔ USB

Before you connect your device(s) into USB connector(s), please make sure your device(s) such as USB keyboard, mouse, scanner, zip, speaker...etc. have a standard USB interface. Also make sure your OS supports USB controller. If your OS does not support USB controller, please contact OS vendor for possible patch or driver updated. For more information please contact your OS or device(s) vendors.

Ⓕ LAN Port

The LAN port provides Internet connection of Gigabit Ethernet with data transfer speeds of 10/100/1000Mbps.

Ⓖ Line In

The default Line In jack. Devices like CD-ROM, walkman etc. can be connected to Line In jack.

Ⓖ Line Out (Front Speaker Out)

The default Line Out (Front Speaker Out) jack. Stereo speakers, earphone or front surround speakers can be connected to Line Out (Front Speaker Out) jack.

Ⓖ MIC In

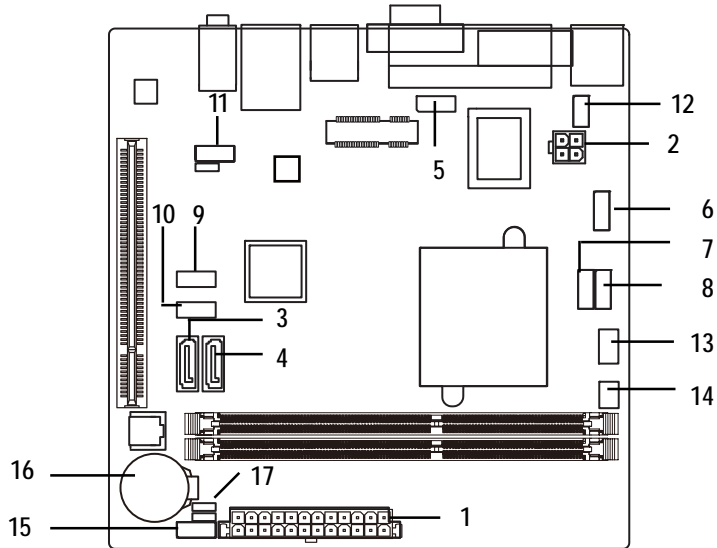
The default MIC In jack. Microphone must be connected to MIC In jack.

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LAN LED Description



Name	Color	Condition	Description
LED1	Green	ON	LAN Link / no Access
	Green	BLINK	LAN Access
	-	OFF	Idle
LED2	-	OFF	10Mbps connection
	-	OFF	Port identification with 10 Mbps connection
	Green	ON	100Mbps connection
	Green	BLINK	Port identification with 100Mbps connection
	Yellow	ON	1Gbps connection
	Yellow	BLINK	Port identification with 1Gbps connection

2-3: Connectors Introduction & Jumper Setting



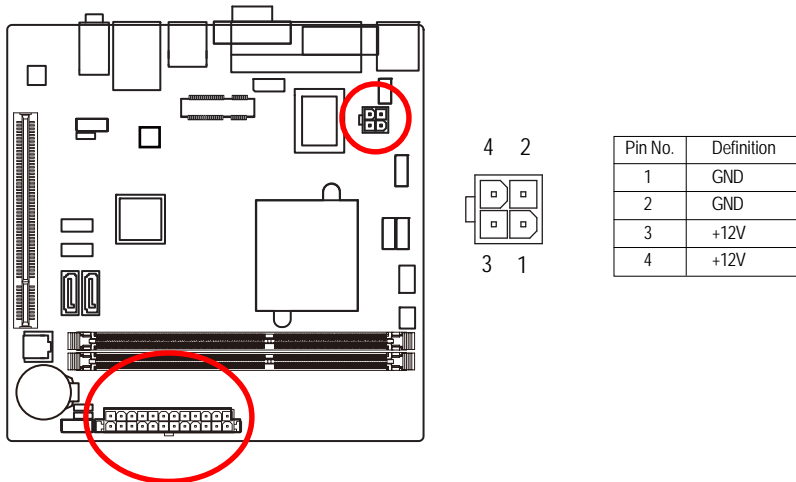
- | | |
|-----------------------------------|--|
| 1. ATX | 9. F_USB1 (Front USB cable connector) |
| 2. ATX_12V | 10. F_USB2 (Front USB cable connector) |
| 3. SATAII1 (SATA cable connector) | 11. F_AUDIO |
| 4. SATAII2 (SATA cable connector) | 12. DIO (Digital I/O connector) |
| 5. COMB | 13. CPU_FAN |
| 6. COMC | 14. SYS_FAN |
| 7. COMD | 15. F_PANEL |
| 8. JP5 (COM Power Source jumper) | 16. BATTERY |
| | 17. CLR_CMOS |

1/2/3) ATX1/ATX_12V (24-pin/4-pin ATX power connectors)

With the use of the power connector, the power supply can supply enough stable power to all the components on the motherboard. Before connecting the power connector, please make sure that all components and devices are properly installed. Align the power connector with its proper location on the motherboard and connect tightly.

The ATX_12V power connector mainly supplies power to the CPU. If the ATX_12V power connector is not connected, the system will not start.

Caution! Please use a power supply that is able to support the system voltage requirements. It is recommended that a power supply that can withstand high power consumption be used (350W or greater). If a power supply is used that does not provide the required power, the result can lead to an unstable system or a system that is unable to start. If you use a power supply that provides a 24-pin ATX power connector, please remove the small cover on the power connector on the motherboard before plugging in the power cord; otherwise, please do not remove it.



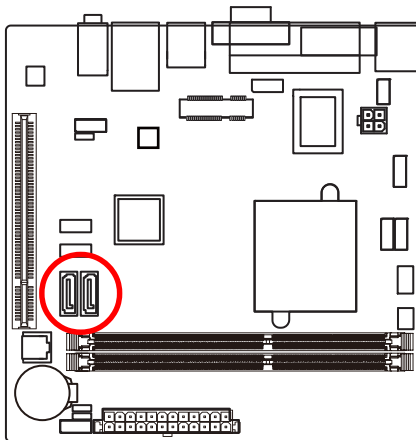
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Pin No.	Definition	Pin No.	Definition
1	3.3V	13	3.3V
2	3.3V	14	-12V
3	GND	15	GND
4	+5V	16	PS_ON(soft On/Off)
5	GND	17	GND
6	+5V	18	GND
7	GND	19	GND
8	Power Good	20	-5V
9	5V SB(stand by +5V)	21	+5V
10	+12V	22	+5V
11	+12V(Only for 24-pin ATX)	23	+5V (Only for 24-pin ATX)
12	3.3V(Only for 24-pin ATX)	24	GND(Only for 24-pin ATX)

3/ 4) SATAII 1/2 (Serial ATA cable connectors)

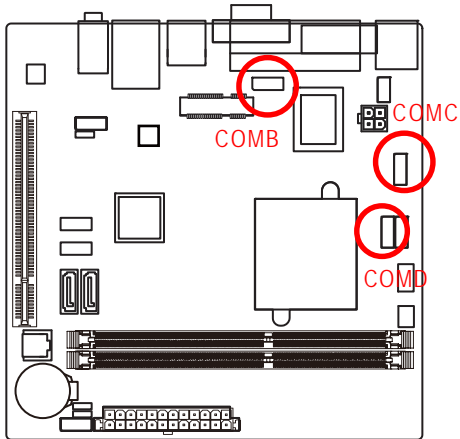
SATA 3Gb/s can provide up to 300MB/s transfer rate. Please refer to the BIOS setting for the SATA 3Gb/s and install the proper driver in order to work properly.



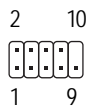
Pin No.	Definition
1	GND
2	TXP
3	TXN
4	GND
5	RXN
6	RXP
7	GND

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5/6/7) COMB/COMC/COMD (Serial cable connectors)

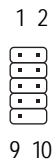


COMB



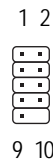
Pin No.	Definition
1	NDCDB-
2	NRXDB
3	NTXDB-
4	NDTRB-
5	GND
6	NDSRB-
7	NRTSB-
8	NCTSB-
9	NRIB-
10	NC

COMC



Pin No.	Definition
1	NDCD3-
2	NRXD3
3	NTXD3-
4	NDTR3-
5	GND
6	NDSR3-
7	NRTS3-
8	NCTS3-
9	NR13_C-
10	NC

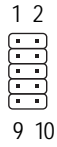
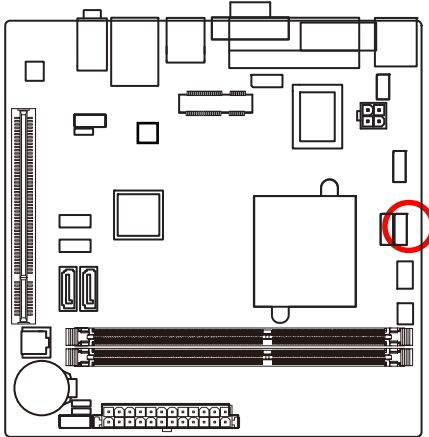
COMD



Pin No.	Definition
1	NDCD4-
2	NRXD4
3	NTXD4-
4	NDTR4-
5	GND
6	NDSR4-
7	NRTS4-
8	NCTS4-
9	NR14_C-
10	NC

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8) JP5 (Power COM selection jumper)



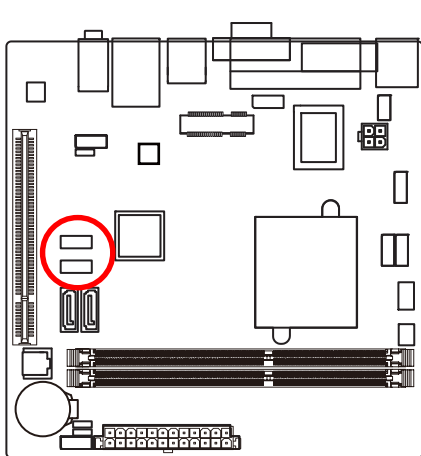
Pin No.	Definition
1	IO_12V
2	IO_12V
3	COM_NRIC
4	COM_NRID
5	IO_VCC
6	IO_VCC
7	COM_NRIC
8	COM_NRID
9	NRIC-
10	NRID-

	RI Default	+5V	+5V	+12V
COM_C PIN 9	Close 7_9 pin	Close 5_7 pin	Close 3_5 pin	Close 1_3 pin
COM_D PIN 9	Close 8_10pin	Close 6_8 pin	Close 4_6 pin	Close 2_4 pin

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9/10) F_USB1/F_USB2 (Front USB cable connectors)

Be careful with the polarity of the front USB connector. Check the pin assignment carefully while you connect the front USB cable, incorrect connection between the cable and connector will make the device unable to work or even damage it. For optional front USB cable, please contact your local dealer.



F_USB1

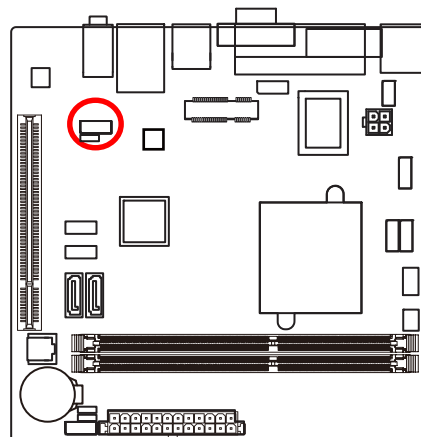
Pin No.	Definition
1	Power
2	Power
3	FUSBP4-
4	FUSBP5-
5	FUSBP4+
6	FUSBP5+
7	GND
8	GND
9	No Pin
10	NC

F_USB2

Pin No.	Definition
1	Power
2	Power
3	FUSBP6-
4	FUSBP7-
5	FUSBP6+
6	FUSBP7+
7	GND
8	GND
9	No Pin
10	NC

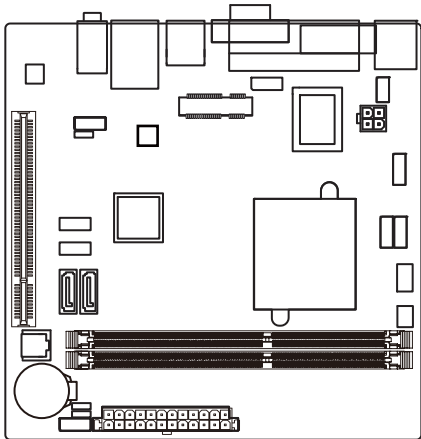
11) F_AUDIO1 (Front AUDIO connector)

If you want to use Front Audio connector, you must remove 5-6, 9-10 Jumper. In order to utilize the front audio header, your chassis must have front audio connector. Also please make sure the pin assignment on the cable is the same as the pin assignment on the MB header. To find out if the chassis you are buying support front audio connector, please contact your dealer.



Pin No.	Definition
1	MIC_L
2	GND
3	MIC_R
4	-ACZ_DEC
5	Line_R
6	GND
7	Faudio_JD
8	No Pin
9	Line_L
10	GND

12) DIO (Digital I/O connector)

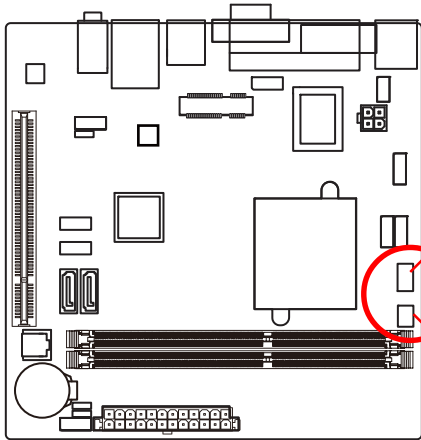


Pin No.	Definition
1	VCC3
2	VCC3
3	VCC3
4	VCC3
5	ATX_3VSB
6	ATX_3VSB
7	ATX_3VSB
8	GND

13/14) CPU_FAN/SYS_FAN (CPU fan/System fan cable connectors)

The cooler fan power connector supplies a +12V power voltage via a 3-pin/4-pin(CPU_FAN) power connector and possesses a foolproof connection design. Most coolers are designed with color-coded power connector wires. A red power connector wire indicates a positive connection and requires a +12V power voltage. The black connector wire is the ground wire (GND).

Remember to connect the CPU/system fan cable to the CPU_FAN/SYS_FAN connector to prevent CPU damage or system hanging caused by overheating.

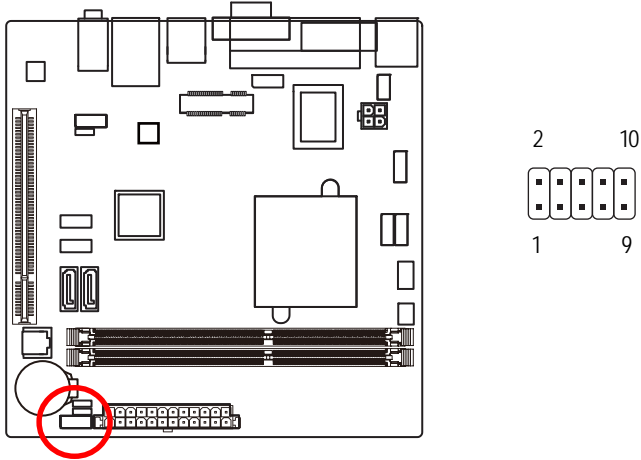


Pin No.	Definition
1	GND
2	12V
3	Sense
4	Control

CPU_FAN
SYS_FAN

15) F_Panel (2X5 Pins Front Panel connector)

Please connect the power LED, PC speaker, reset switch and power switch of your chassis front panel to the F_PANEL connector according to the pin assignment above.



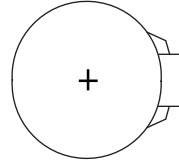
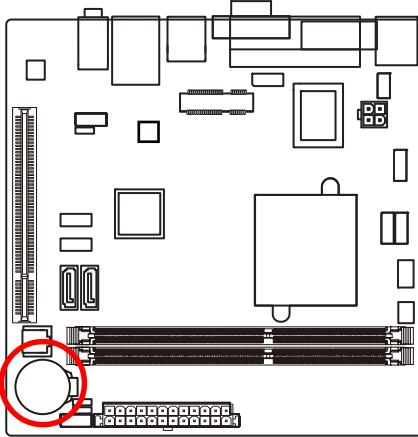
Pin No.	Signal Name	Description
1.	HD+	Hard Disk LED Signal anode (+)
2.	MSG+	Message LED Signal anode (+)
3.	HD-	Hard Disk LED Signal cathode(-)
4.	MSG-	Message LED Signal cathode(-)
5.	RES-	Reset Button anode (+)
6.	PW+	Power Button Signal cathode(-)
7.	RES+	Reset Button cathode(-)
8.	PW-	Power Button Signal anode (+)
9.	ACT-	LAN active LED Signal cathode(-)
10.	ACT+	LAN active LED Signal anode (+)

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16) BATTERY

If you want to erase CMOS...

1. Turn OFF the computer and unplug the power cord.
2. Remove the battery, wait for 30 second.
3. Re-install the battery.
4. Plug the power cord and turn ON the computer.

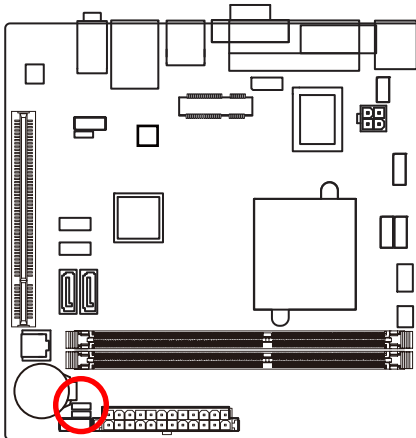




CAUTION

- ❖ Danger of explosion if battery is incorrectly replaced.
- ❖ Replace only with the same or equivalent type recommended by the manufacturer.
- ❖ Dispose of used batteries according to the manufacturer's instructions.

17) CLR_CMOS (Clear CMOS jumper)

You may clear the CMOS data to its default values by this jumper.



- 1  1-2 close: Normal operation (Default setting)
- 1  2-3 close: Clear CMOS

Chapter 3 BIOS Setup

BIOS (Basic Input and Output System) includes a CMOS SETUP utility which allows user to configure required settings or to activate certain system features.

The CMOS SETUP saves the configuration in the CMOS SRAM of the motherboard.

When the power is turned off, the battery on the motherboard supplies the necessary power to the CMOS SRAM.

ENTERING SETUP

When the power is turned on, press the button during the BIOS POST (Power-On Self Test) will take you to the CMOS SETUP screen. You can enter the BIOS setup screen by pressing "Ctrl + F1".

CONTROL KEYS

<↑>	Move to previous item
<↓>	Move to next item
<←>	Move to the item in the left hand
<→>	Move to the item in the right hand
<Esc>	Main Menu - Quit and not save changes into CMOS Status Page Setup Menu and Option Page Setup Menu - Exit current page and return to Main Menu
<+/PgUp>	Increase the numeric value or make changes
<-/PgDn>	Decrease the numeric value or make changes
<F1>	General help, only for Status Page Setup Menu and Option Page Setup Menu
<F2>	Change color
<F3>	Change color
<F4>	Reserved
<F6>	Reserved
<F7>	Discard Changes
<F8>	Reserved
<F9>	Load the Optimized Defaults
<F10>	Save all the CMOS changes

GETTINGHELP

Main Menu

The on-line description of the highlighted setup function is displayed at the bottom of the screen.

Status Page Setup Menu / Option Page Setup Menu

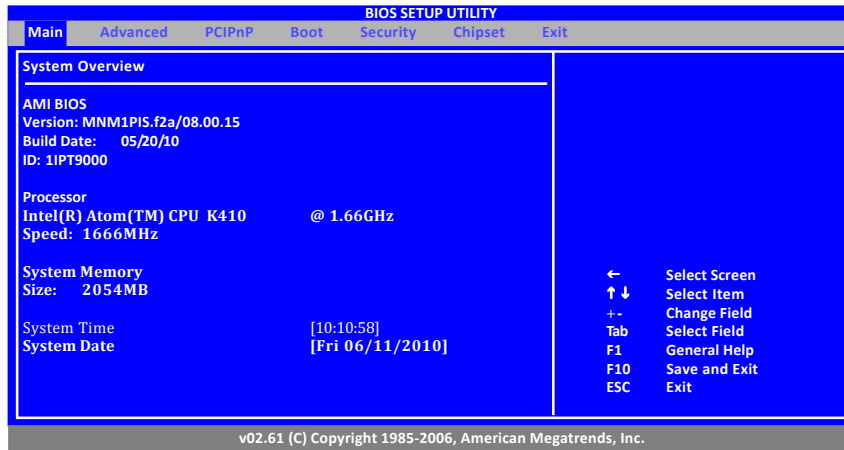
Press F1 to pop up a small help window that describes the appropriate keys to use and the possible selections for the highlighted item. To exit the Help Window press <Esc>.

Select the **Load Setup Defaults** item in the BIOS Exit Setup menu when somehow the system is not stable as usual. This action makes the system reset to the default settings for stability.

- **Main**
This setup page includes all the items in standard compatible BIOS.
- **Advanced**
This setup page includes all the items of Phoenix BIOS special enhanced features.
(ex: Auto detect fan and temperature status, automatically configure hard disk parameters.)
- **PCI/PnP**
Use this menu to for advanced PCI/PnP settings.
- **Boot**
This setup page include all the items of first boot function features.
- **Security**
Change, set, or disable password. It allows you to limit access the system and setup.
- **Chipset**
Northbridge and Southbridge additional features configuration.
- **Exit**
There are five options in this selection: Exit Saving Changes, Exit Discarding Changes, Load Optimal Defaults, Load Failsafe Defaults, and Discard Changes.

Main

Once you enter AMI BIOS Setup Utility, the Main Menu will appear on the screen. Use arrow keys to select among the items and press <Enter> to accept or enter the sub-menu.



☞ BIOS Information

- ▶▶Version: displays the BIOS version.
- ▶▶Build Date: displays the BIOS established date.
- ▶▶ID: displays the BIOS ID information.

☞ Processor Information

- ▶▶CPU Type: displays the installed CPU type.
- ▶▶Speed: displays the installed CPU speed.

☞ Memory Information

- ▶▶Size: The BIOS determines how much available memory is present during the POST.

☞ System Time

The time is calculated based on the 24-hour military time clock. Set the System Time (HH:MM:SS)

☞ System Date

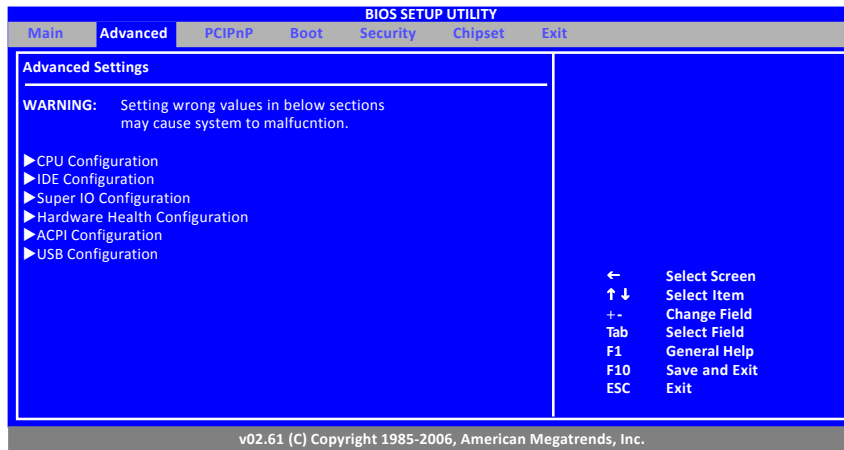
Set the System Date. Note that the "Day" automatically changed after you set the date.

Advanced

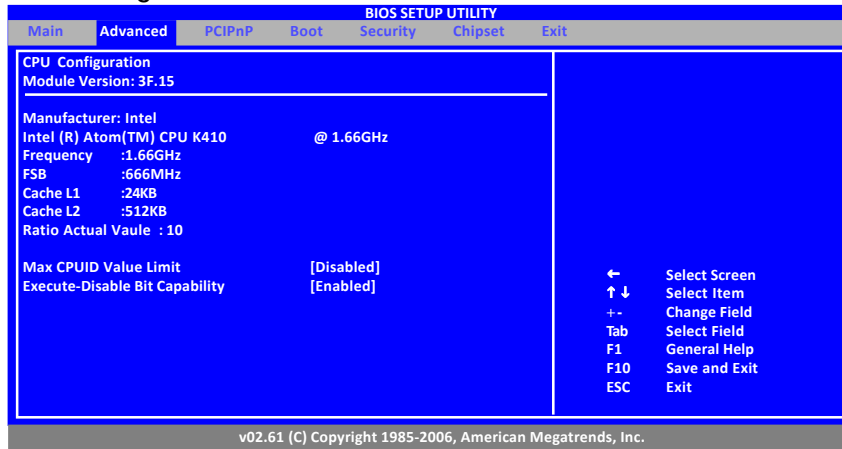
About This Section: Advanced

With this section, allowing user to configure your system for advanced operation.

The advanced menu includes sub-menu of CPU Configuration, IDE Configuration, Floppy Configuration, Super IO Configuration, Hardware Health Configuration, ACPI Configuration, MPS Configuration, and USB Configuration.



CPU Configuration



🔗 CPU Information

This category includes all the information of CPU manufacturer, type, Frequency, FSB, L1/L2 Cache, Ratio Status, and Ratio actual value

Please note that setup menu options will be variable depends on the type of CPU.

🔗 Max CPUID Value Limit

When the computer is booted up, the operating system executes the CPUID instruction to identify the processor and its capabilities. Before it can do so, it must first query the processor to find out the highest input value CPUID recognizes. This determines the kind of basic information CPUID can provide the operating system.

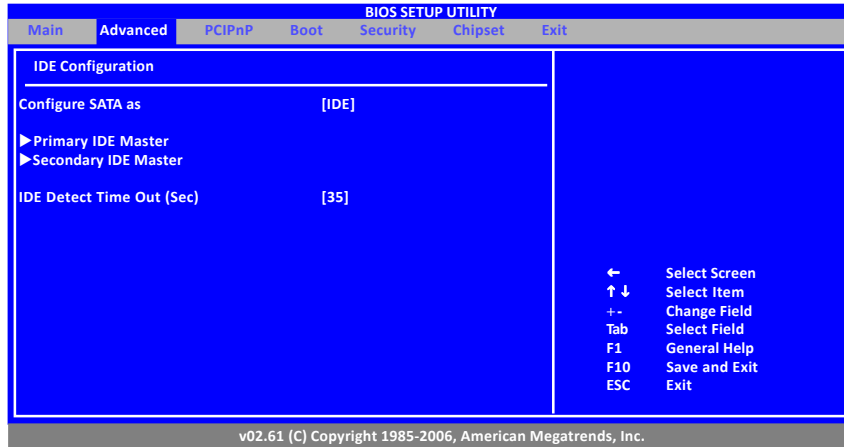
The maximum CPUID input value determines the values that the operating system can write to the CPUID's EAX register to obtain information about the processor.

- ▶▶ Enabled Enable Max CPUID Value Limit.
- ▶▶ Disabled Disable Max CPUID Value Limit. (Default setting)

🔗 Execute-Disable Bit Capability

- ▶▶ Enabled Enable Execute Disable Bit Capability. (Default setting)
- ▶▶ Disabled Disable Execute-Disable Bit function.

IDE Configuration



☞ Configure SATA as

- ▶▶ **AHCI** When set to AHCI, the SATA controller enables its AHCI functionality. However, its RAID functions will be disabled and you won't be able to access the RAID setup utility at boot time.
- ▶▶ **IDE** When set to IDE, the SATA controller disables its RAID and AHCI functions and runs in the IDE emulation mode. You won't have access to the RAID setup utility. (Default setting)
- ▶▶ **Disabled** Disable the device.

☞ Primary IDE Master, Slave

The category identifies Serial ATA and IDE types of hard disk that are installed in the computer. System will automatically detect HDD type.

Note that the specifications of your drive must match with the drive table. The hard disk will not work properly if you enter improper information for this category.

Hard drive information should be labeled on the outside device casing. Enter the appropriate option based on this information.

▶▶ TYPE

Not Installed: No device is installed.

Auto: Set parameters automatically. (Default setting)

CD-ROM: Use for ATAPI CD-ROM drives or double click [Auto] to set all HDD parameters automatically.

ARMD: Use ARMD drive is installed here.

▶▶ **LBA/Large Mode**

Configure the device type in the specific IDE channel support LBA Mode.

Disabled: Disable LBA/Large Mode.

Auto: Auto configuration. (Default setting)

▶▶ **Block (Multi-Sector Transfer)**

Configure the information of Multi-Sector Transfer Mode.

Disabled: The data transfer from and to the device occurs one sector at a time.

Auto: The data transfer from and to the device occurs multiple sectors at a time if the device supports it. (Default setting)

▶▶ **PIO Mode**

This feature allows you to set the PIO (Programmed Input/Output) mode for the two IDE devices (Master and Slave drives) attached to that particular IDE channel.

Disabled: Disable PIO Mode.

Auto: Auto configuration. (Default setting)

▶▶ **DMA Mode**

Configure the DMA mode of the device in the specific IDE channel.

Auto: Auto configuration. (Default setting)

▶▶ **S.M.A.R.T Mode**

This option enables/disables support for the hard disk's S.M.A.R.T. capability.

The S.M.A.R.T. (Self Monitoring Analysis And Reporting) technology is supported by all current hard disks and it allows the early prediction and warning of impending hard disk disasters.

Enabled: Enable S.M.A.R.T Mode.

Disabled: Disable S.M.A.R.T Mode.

Auto: Auto configuration. (Default setting)

▶▶ **32Bit Data Transfer**

Configure the 32Bit Data Transfer rate.

Enabled: Enable 32Bit Data Transfer rate.

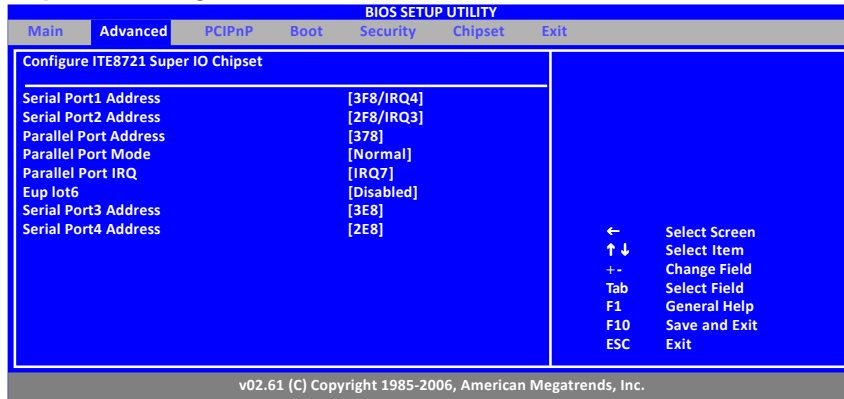
Disabled: 32Bit Data Transfer rate.

Auto: Auto configuration. (Default setting)

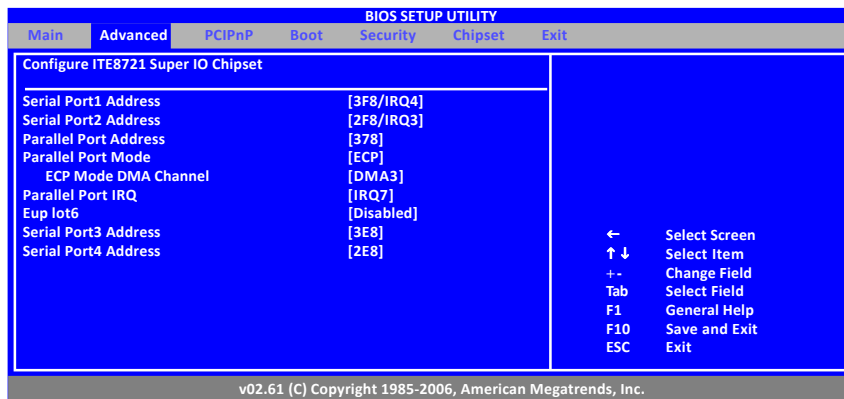
☞ **IDE Detect Time Out (Sec)**

▶▶ Configure the IDE star unit command timeout. Desfault setting is 35 seconds.

Super IO Configuration



When Parallel Port Mode is set to ECP



Serial Port 1/2 Address

- ▶▶ 3F8/IRQ4 Enable serial port1 and set IO address to 3F8/IRQ4.
(Default setting for Serial Port1)
- ▶▶ 2F8/IRQ3 Enable serial port1 and set IO address to 2F8/IRQ3.
(Default setting for Serial Port2)
- ▶▶ 3E8/IRQ4 Enable serial port1 and set IO address to 3E8/IRQ4.
- ▶▶ 2E8/IRQ3 Enable serial port1 and set IO address to 2E8/IRQ3.
- ▶▶ Disabled Disable Serial Port 1/2.

☞ **Parallel Port Address**

- ▶▶378 Enable parallel port and set IO address to 378. (Default setting)
- ▶▶278 Enable parallel port and set IO address to 278.
- ▶▶3BC Enable parallel port and set IO address to 3BC.
- ▶▶Disabled Disable parallel port.

☞ **Parallel Port Mode**

This function allows you to select the the onboard parallel port transfer mode.

- ▶▶Normal Normal operation.(Default setting)
- ▶▶EPP Enhanced Parallel Port
- ▶▶ECP Extended Capabilities Port.
- ▶▶ECP+EPP Both Enhanced Parallel Port and Extended Capabilities Port.

☞ **ECP ModeDMA Channel**

This option is only available if the setting for the Parallel Port Mode option is ECP and EPP+ECP. This option sets the DMA channel used by parallel port.

- ▶▶Options DMA0, DMA1, DMA3. Default setting is DMA3.

NOTE!! This item will pop up when **Parallel Port Mode** is set to **ECP and EPP+ECP**.

☞ **Parallel Port IRQ**

- ▶▶IRQ7 Set IO address to IRQ7. (Default setting)
- ▶▶IRQ5 Set IO address to IRQ5.

☞ **Eup Lot6**

EuP Lot 6 is a standard for reduced power consumption in idle mode.

- ▶▶Disabled Disable Eup Lot6 function.(Default setting)
- ▶▶Enabled Enable Eup Lot6 function.

☞ **Serial Port 3/4 Address**

- ▶▶2F8 Enable serial port1 and set IO address to 2F8.
- ▶▶2E8 Enable serial port1 and set IO address to 2E8.
(Default setting for Serial Port 3)
- ▶▶2E0 Enable serial port1 and set IO address to 2E0.
(Default setting for Serial Port 4)

▶▶ Disabled Disable Serial Port 3/4.

🔑 **Serial Port 3/4 IRQ**

▶▶ IRQ3 Set IO address to IRQ3.

▶▶ IRQ4 Set IO address to IRQ4.

▶▶ IRQ9 Set IO address to IRQ9.

▶▶ IRQ10 Set IO address to IRQ10. (Default setting for Serial Port 3)

▶▶ IRQ11 Set IO address to IRQ11. (Default setting for Serial Port 4)

Hardware Health Configuration Default Screen

BIOS SETUP UTILITY						
Main	Advanced	PCIPnP	Boot	Security	Chipset	Exit
Hardware Health Configuration						
CPU FAN Stop Warning	[Enabled]					
System FAN Stop Warning	[Disabled]					
Hardware Health Function	[Enabled]					
CPU FAN Mode Setting	[Full On mode]					
System Temperature	: 33°C/91°F					
CPU Temperature	: 46°C/114°F					
CPU FAN Speed	: 4166 RPM					
System FAN Speed	: N/A					
+3.30V	: 1.520 V					
Vcore	: 3.344 V					
+12.0V	: 12.288 V					
						← Select Screen ↑↓ Select Item +- Change Field Tab Select Field F1 General Help F10 Save and Exit ESC Exit
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When CPU FAN Mode Setting is set to Automatic mode

BIOS SETUP UTILITY						
Main	Advanced	PCIPnP	Boot	Security	Chipset	Exit
Hardware Health Configuration						
CPU FAN Stop Warning	[Enabled]					
System FAN Stop Warning	[Disabled]					
Hardware Health Function	[Enabled]					
CPU FAN Mode Setting	[Automatic mode]					
CPU FAN Temp. Limit of OFF	[000]					
CPU FAN Temp. Limit of Start	[020]					
CPU FAN Start PWM	[070]					
Slope PWM of CPU FAN	[0.5 PWM]					
System Temperature	: 33°C/91°F					
CPU Temperature	: 46°C/114°F					
CPU FAN Speed	: 4166 RPM					
System FAN Speed	: N/A					
+3.30V	: 1.520 V					
Vcore	: 3.344 V					
+12.0V	: 12.288 V					
						← Select Screen ↑↓ Select Item +- Change Field Tab Select Field F1 General Help F10 Save and Exit ESC Exit
v02.61 (C) Copyright 1985-2006, American Megatrends, Inc.						

When CPU FAN Mode Setting is set to PWM Manually mode

BIOS SETUP UTILITY						
Main	Advanced	PCIPnP	Boot	Security	Chipset	Exit
Hardware Health Configuration						
CPU FAN Stop Warning	[Enabled]					
System FAN Stop Warning	[Disabled]					
Hardware Health Function	[Enabled]					
CPU FAN Mode Setting	[PWM Manually mode]					
CPU FAN PWM Control	[255]					
<hr/>						
System Temperature	: 33°C/91°F					
CPU Temperature	: 46°C/114°F					
<hr/>						
CPU FAN Speed	: 4166 RPM					
System FAN Speed	: N/A					
+3.30V	: 1.520 V					
Vcore	: 3.344 V					
+12.0V	: 12.288 V					
						← Select Screen ↑ ↓ Select Item +- Change Field Tab Select Field F1 General Help F10 Save and Exit ESC Exit
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☞ **CPU Fan Stop Warning**

- ▶▶ Enabled Enable CPU Fan Stop Warning Function. (Default setting)
- ▶▶ Disabled Disable CPU Fan Stop Warning Function.

☞ **System Fan Stop Warning**

- ▶▶ Enabled Enable System Fan Stop Warning Function.
- ▶▶ Disabled Disable System Fan Stop Warning Function. (Default setting)

☞ **Hardware Health Function**

- ▶▶ Enabled Enable Hardware Health Function. (Default setting)
- ▶▶ Disabled Disable Hardware Health Function.

☞ **CPU FAN Mode Setting**☞ **Automatic Mode**

- ▶▶ CPU FAN Temp. Limit of OFF FAN will stop when temperature is lower than the "OFF" limit. User can define the limit value. Minimum temperature is 0°C Maximum temperature is 127°C.
- ▶▶ CPU FAN Temp. Limit of Start FAN spins in a start PWM value when temperature exceeds a start limit. User can define the limit value.

- ▶▶ CPU FAN Start PWM
FAN start PWM value. User can define the limit value.
Minimum PWM value is 0
Maximum PWM value is 255.
- ▶▶ Slope PWM of CPU FAN
The PWM value is subject to the temperature inputs by inear changing.

☞ **PWM Manually Mode**

- ▶▶ CPU FAN PWM Control
PWM Duty Cycle control.
Minimum PWM value is 0
Maximum PWM value is 255.

☞ **CPU Temperature/System Temperature**

- ▶▶ Display the current CPU temperature, and system temperature.

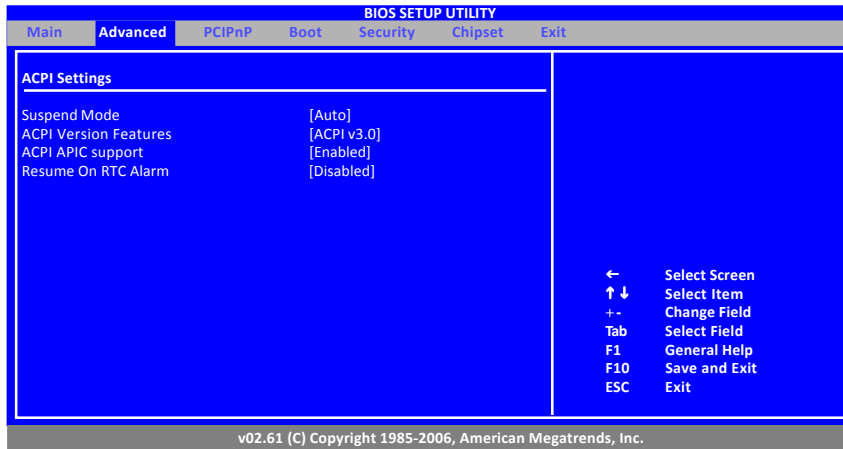
☞ **CPU FAN Speed/System FAN Speed**

- ▶▶ Display the current CPU, system, and power fan speed.

☞ **Voltage Monitor: +3.30V/Vcore/+12.0V**

- ▶▶ Detect system's voltage status automatically.

ACPI Configuration



☞ Suspend Mode

- ▶▶ S1 (POS) Enables the system to enter the ACPI S1 (Power on Suspend) sleep state. In S1 sleep state, the system appears suspended and stays in a low power mode. The system can be resumed at any time.
- ▶▶ S3 (STR) Enables the system to enter the ACPI S3 (Suspend to RAM) sleep state. In S3 sleep state, the system appears to be off and consumes less power than in the S1 state. When signaled by a wake-up device or event, the system resumes to its working state exactly where it was left off.
- ▶▶ Auto Auto configuration. (default setting)

☞ ACPI Version Features

- ▶▶ Configure ACPI version features. Options available: ACPI v1.0, ACPI v2.0, and ACPI v3.0. Default setting is ACPI v3.0.

☞ ACPI APIC Support

- ▶▶ Enabled Enable ACPI APIC support. (Default setting)
- ▶▶ Disabled Disable ACPI APIC support.

☞ **Resume On RTC Alarm**

You can set "Resume by Alarm" item to enabled and key in Data/time to power on system.

- ▶▶Disabled Disable this function. (Default setting)
- ▶▶Enabled Enable alarm function to POWER ON system.

If RTC Alarm Lead To Power On is Enabled.

Date (of Month) Alarm : Everyday, 1~31

Time (hh: mm: ss) Alarm : (0~23) : (0~59) : (0~59)

USB Configuration

BIOS SETUP UTILITY	
Main	Advanced
USB Configuration	
Module Version	2.24.3-13.4
USB Device Enabled:	
1 Drive	
Legacy USB Support	[Enabled]
USB Keyboard Legacy Support	[Enabled]
USB Mouse Legacy Support	[Enabled]
USB Storage Device Support	[Enabled]
▶ USB Mass Storage Device Configuration	
← Select Screen ↑↓ Select Item +- Change Field Tab Select Field F1 General Help F10 Save and Exit ESC Exit	
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BIOS SETUP UTILITY	
Main	Advanced
USB Mass Storage Device Configuration	
USB Mass Storage Reset Delay	[20 Sec]
Device#1	silicon-power
Emulation Type	[Auto]
← Select Screen ↑↓ Select Item +- Change Field Tab Select Field F1 General Help F10 Save and Exit ESC Exit	
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☞ **Legacy USB Support**

- ▶▶Auto Auto detection.
- ▶▶Enabled Enable Legacy USB device. (Default setting)
- ▶▶Disabled Keep USB devices available only for EFI applications.

☞ **USB Keyboard Legacy Support**

- ▶▶Enabled Enable USB Keyboard Legacy Support. (Default setting)
- ▶▶Disabled Disable USB Keyboard Legacy Support.

☞ **USB Mouse Legacy Support**

- ▶▶Enabled Enable USB Mouse Legacy Support. (Default setting)
- ▶▶Disabled Disable USB Mouse Legacy Support.

☞ **USB Storage Device Support**

- ▶▶Enabled Enable USB Storage DeviceSupport. (Default setting)
- ▶▶Disabled Disable USB Storage Device Support.

☞ **USB Mass Storage Device Configuration**

NOTE!! This item will pops up when **USB Mass Storage Device** is populated.

☞ **USB Mass Storage Reset Delay**

Numbers of seconds POST waits for the USB mass storage device after start unit command.

- ▶▶Options 10 Seconds, 20 Seconds, 30 Seconds, 40 Seconds.
Default setting is 20 Seconds.

NOTE!! This item will pops up when **USB Mass Storage Device** is populated.

☞ **Device#**

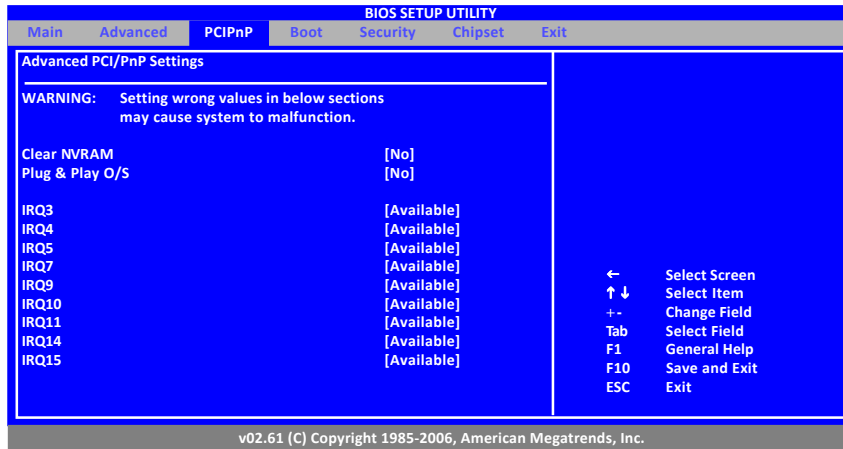
Displays the manufacturer information of the inserted USB mass storage device.

☞ **Emulation Type**

If this item set to Auto, USB devices less than 538MB will be emulated as Floppy and remaining as hard drive, Forced FDD option can be used to force a HDD formatted drive to boot as FDD. (Ex. ZIP drive)

- ▶▶Options Auto, Floppy, Forced FDD, Hard Disk, CDROM.
Default setting is Auto.

PCI/PnP



☞ Clear NVRAM

- ▶▶ Yes Clear NVRAM during system boot.
- ▶▶ No Normal operation. (Default setting)

☞ Plug & Play O/S

- ▶▶ Yes Let the operating system configure Plug and Play (PnP) devices not required for boot if your system has a Plug and Play system.
- ▶▶ No Let the BIOS configure all the devices in the system. (Default setting)

☞ IRQ3/IRQ4/IRQ5/IRQ7/IRQ9/IRQ10/IRQ11/IRQ14/IRQ15

- ▶▶ Available Specified IRQ is available to be used by PCI/PnP. (Default setting)
- ▶▶ Reserved Specified IRQ is reserved for use by Legacy ISA devices.

Boot

BIOS SETUP UTILITY						
Main	Advanced	PCIPnP	Boot	Security	Chipset	Exit
Boot Settings						
<ul style="list-style-type: none"> ▶ Boot Settings Configuration ▶ Boot Device Priority 						
			<ul style="list-style-type: none"> ← Select Screen ↑↓ Select Item + - Change Field Tab Select Field F1 General Help F10 Save and Exit ESC Exit 			

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BIOS SETUP UTILITY						
Main	Advanced	PCIPnP	Boot	Security	Chipset	Exit
Boot Settings Configuration						
<ul style="list-style-type: none"> Quick Boot [Enabled] Bootup Num-Lock [On] Wait for 'F1' If Error [Enabled] Hit 'DEL' Message Display [Enabled] 						
			<ul style="list-style-type: none"> ← Select Screen ↑↓ Select Item + - Change Field Tab Select Field F1 General Help F10 Save and Exit ESC Exit 			

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BIOS SETUP UTILITY						
Main	Advanced	PCIPnP	Boot	Security	Chipset	Exit
Boot Device Priority						
<ul style="list-style-type: none"> 1st Boot Priority [Removable Dev.] 2nd Boot Priority [CD/DVD] 3rd Boot Priority [Hard Drive] 						
			<ul style="list-style-type: none"> ← Select Screen ↑↓ Select Item + - Change Field Tab Select Field F1 General Help F10 Save and Exit ESC Exit 			

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Quick Boot

- ▶▶ Enabled Allow BIOS to skip certain tests while booting. (Default setting)
- ▶▶ Disabled Normal operation during system boot.

BootupNumLock

This option allows user to select power-on state for NumLock.

- ▶▶ On Enable NumLock. (Default setting)
- ▶▶ Off Disable this function.

Wait for 'F1' If Error

- ▶▶ Enabled Enable Wait for 'F1' If Error. (Default setting)
- ▶▶ Disabled Disable this function.

Hit 'DEL' Message Display

- ▶▶ Enabled Enable Hit 'DEL' Message Display. (Default setting)
- ▶▶ Disabled Disable this function.

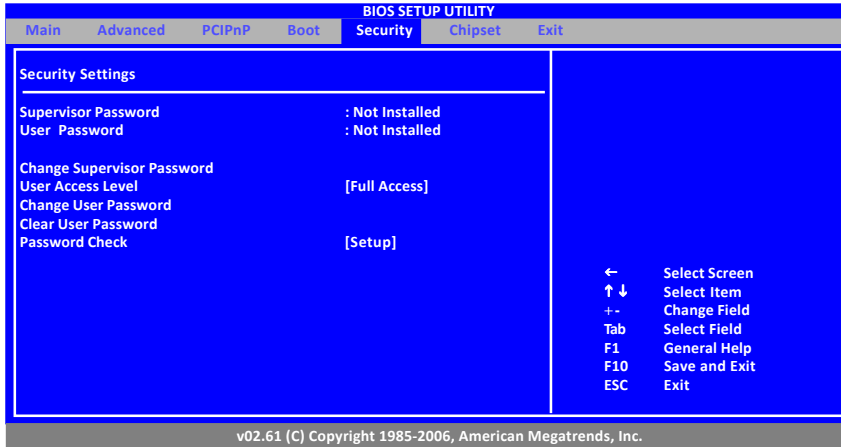
Boot Device Priority

This field determines which type of device the system attempt to boot from after BIOS Post completed. Specifies the boot sequence from the available devices. If the first device is not a bootable device, the system will seek for next available device.

Security

About This Section: Security

In this section, user can set either supervisor or user passwords, or both for different level of password securities. In addition, user also can set the virus protection for boot sector.



☞ Set Supervisor Password

You can install and change this options for the setup menus. Type the password up to 6 characters in length and press <Enter>. The password typed now will clear any previously entered password from the CMOS memory. You will be asked to confirm the entered password. Type the password again and press <Enter>. You may also press <Esc> to abort the selection and not enter a specified password or press <Enter> key to disable this option.

☞ Set User Password

You can only enter but do not have the right to change the options of the setup menus. When you select this function, the following message will appear at the center of the screen to assist you in creating a password.

Type the password up to 6 characters in length and press <Enter>. The password typed now will clear any previously entered password from the CMOS memory. You will be asked to confirm the entered password. Type the password again and press <Enter>. You may also press <Esc> to abort the selection and not enter a specified password.

☞ User Access Level

User Access Privilege configuration.

- ▶▶ Full Access Fully authorization for User accessing the setup utility.. (Default setting)
- ▶▶ No Access Prevents User access to the setup utility.
- ▶▶ Limited Allows only limited fields to be changed such as Date and Time.
- ▶▶ View Only Allows access to the setup utility but the fields can not be changed.

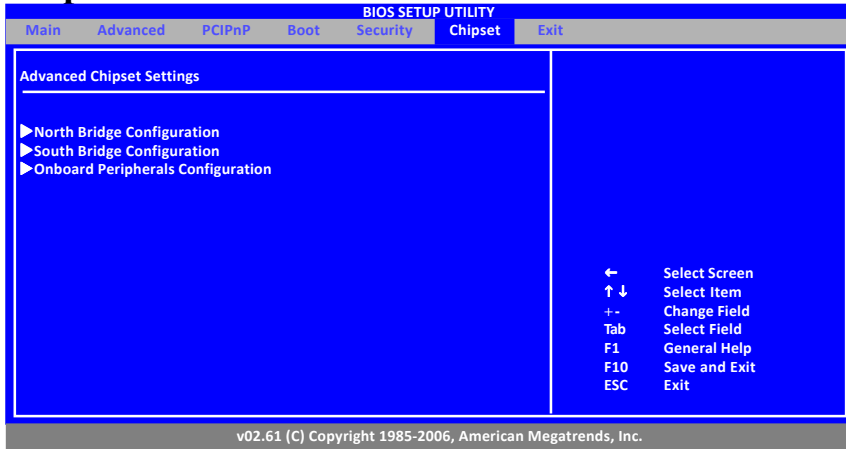
NOTE!! This item will pops up when **Suervisor Password** is set.

🔑 Password Check

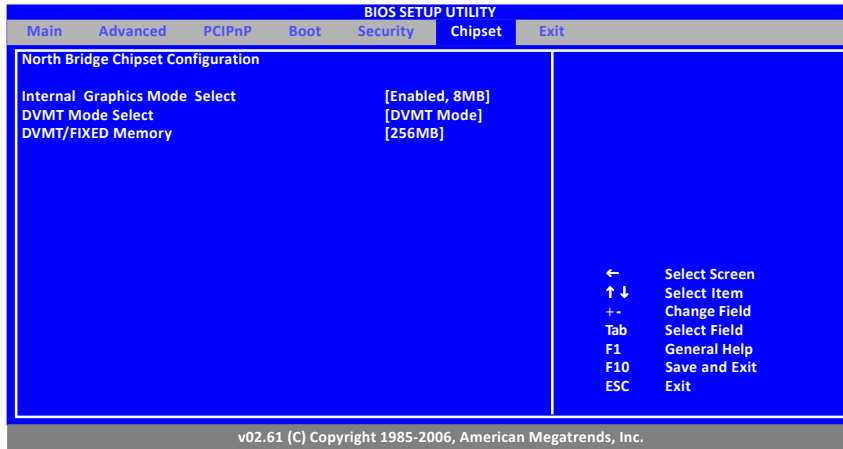
- ▶▶ Setup Check the password while invoking setup. (Default setting)
- ▶▶ Always Check the password while invoking setup as well as on each boot.

NOTE!! This item will pops up when **Suervisor Password** is set.

Chipset



North Bridge Configuration



☞ Internal Graphics Mode Select

Select the amount of system memory used by the internal graphic device.

Option available: Enable 1MB, Enable 4MB, and Enabled 8MB.

Default setting is Enable, 8MB.

☞ DVMT Mode Select

DVMT Mode Selection.

Option available: Fixed Mode, and DVMT Mode.

Default setting is DVMT Mode.

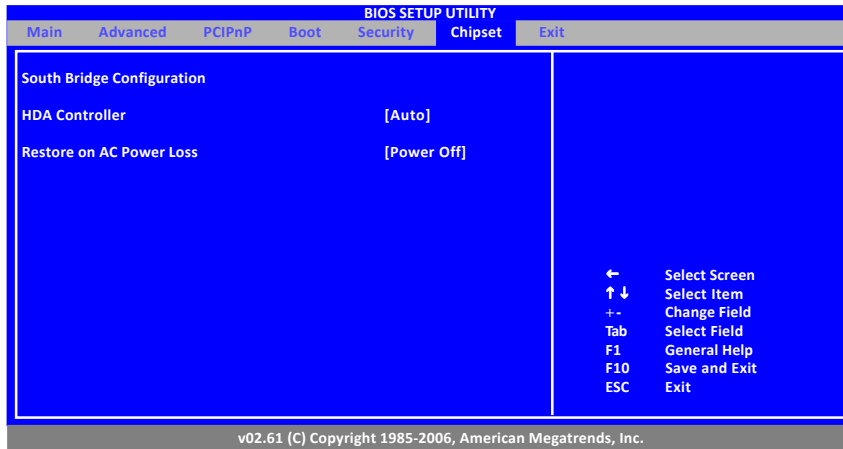
☞ DVMT Fixed Memory

Select DVMT Pre-Allocated (Fixed) Graphics Memory size used by the Internal graphics device.

Option available: 128MB, 256MB, and Maximum DVMT .

Default setting is 256MB.

South Bridge Configuration



☞ HDA Controller

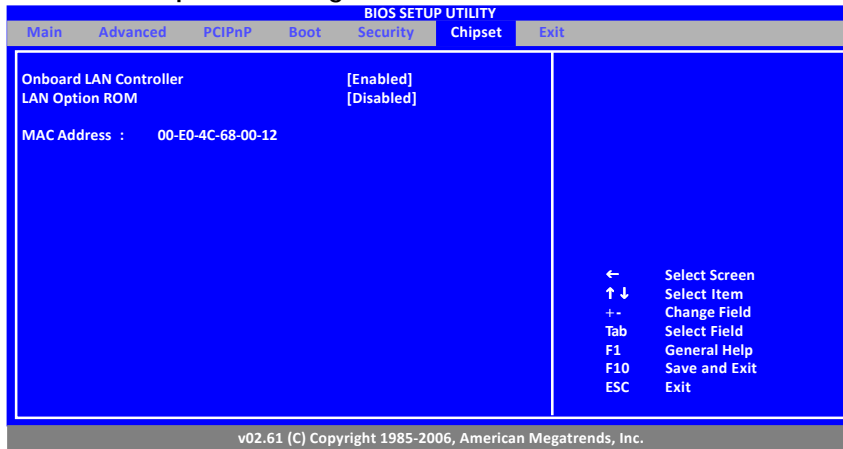
- ▶▶ Auto Enable onboard HDA device. (Default setting)
- ▶▶ Disabled Disable onboard HDA device.

☞ Restore on AC Power Loss

This option provides user to set the mode of operation if an AC / power loss occurs.

- ▶▶ Power On System power state when AC cord is re-plugged.
- ▶▶ Power Off Do not power on system when AC power is back. (Default setting)
- ▶▶ Last State Set system to the last state when AC power is removed.

Onboard Peripheral Configuration



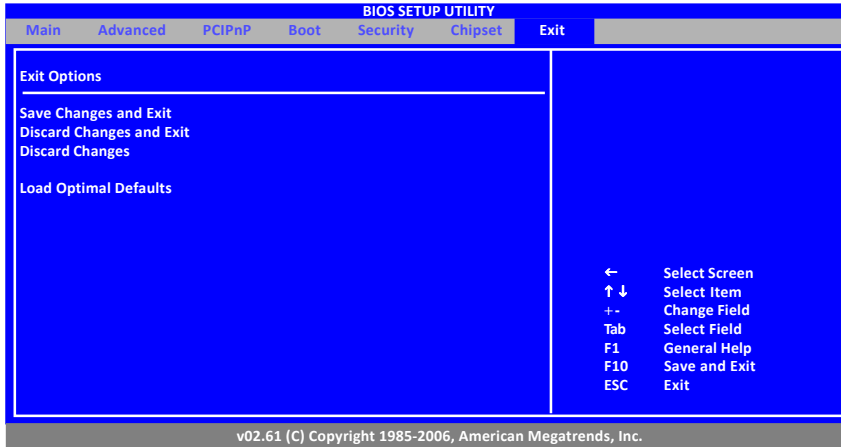
☞ Onboard LAN Controller

- ▶▶ Enabled Enable onboard LAN device. (Default setting)
- ▶▶ Disabled Disable onboard LAN device.

☞ LAN Option ROM

- ▶▶ Enabled Enable LAN Option ROM.
- ▶▶ Disabled Disable LAN Option ROM. (Default setting)

Exit



☞ About This Section: Exit

Once you have changed all of the set values in the BIOS setup, you should save your changes and exit BIOS setup program. Select “Exit” from the menu bar, to display the following sub-menu.

☞ Save Changes and Exit

This option allows user to exit system setup with saving the changes.

Press <Enter> on this item to ask for the following confirmation message:

Pressing ‘Y’ to store all the present setting values the user made in this time into CMOS.

Therefore, when you boot up your computer next time, the BIOS will re-configure your system according data in CMOS.

☞ Discard Changes and Exit

This option allows user to exit system setup without changing any previous settings values in CMOS. The previous selection remain in effect.

This will exit the Setup Utility and restart your computer when selecting this option.

☞ Discard Changes

Select this item and press Enter to discard any changes you have made without leaving the setup utility.

☞ Load Optimal Default

Press Enter a dialog box asked if you want to restore optimal settings for all the items in the Setup utility. Press the Y key to indicate Yes, and then press Enter to restore the optimal settings.