

# GA-7CN700ID

VIA C7 Processor Motherboard

## User's Manual

Rev. 100

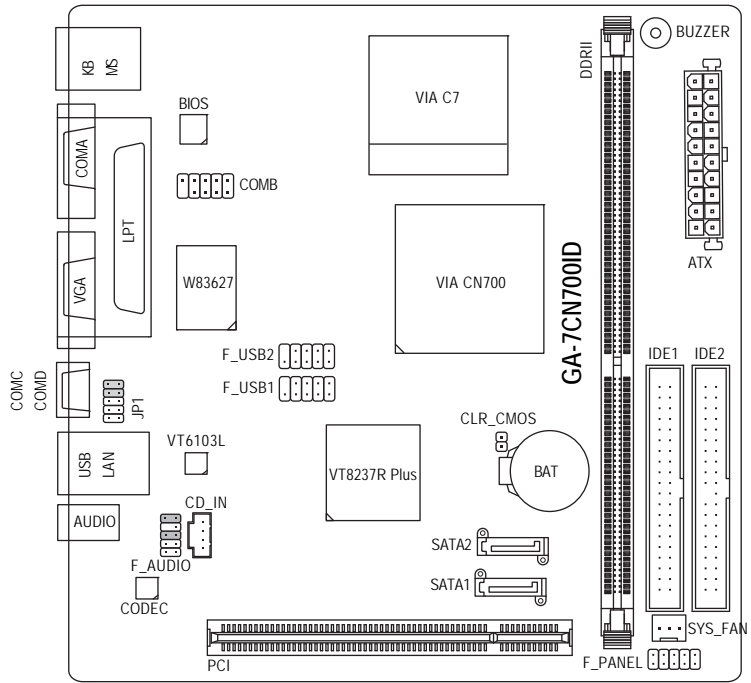
12ME-7CN700ID-1001R

- \* 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.

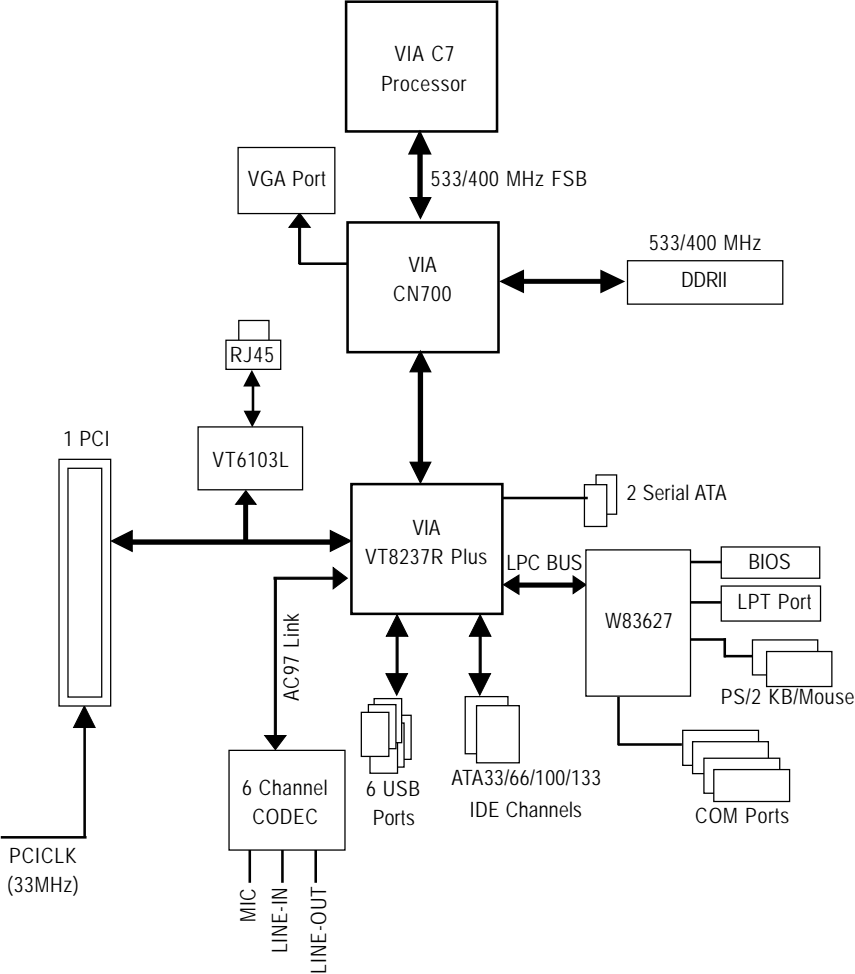
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# GA-7CN700ID Motherboard Layout



# Block Diagram



## Chapter 1 Hardware Installation

### 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 Feature Summary

CPU	♦ VIA C7 processor
Front Side Bus	♦ 533 / 400MHz
Chipset	♦ Northbridge: VIA CN700 ♦ Southbridge: VIA 8237R Plus
LAN	♦ Onboard VT6103L chip (10/100 Mbit)
Audio	♦ Onboard VT1616B CODEC ♦ Supports 2 / 4 / 6 channel audio ♦ Supports Line In ; Line Out ; MIC ♦ CD In connection
Storage	♦ VIA 8237R Plus - 2 IDE connectors (IDE1, IDE2) with UDMA 33/ATA 66/ATA 100/ATA 133 support, allowing connection of 4 IDE devices - 2 SATA connectors (SATA1/SATA2), allowing connection of 2 SATA devices - Supports data striping (RAID 0), mirroring (RAID 1) for Serial ATA
O.S Support	♦ Microsoft Windows 2000/XP
Memory	♦ 1 DDRII DIMM memory slots ♦ Supports 1.8V DDRII DIMMs
Expansion Slots	♦ 1 PCI slot
Internal Connectors	♦ 1 20-pin ATX power connector ♦ 2 IDE connectors ♦ 2 SATA connectors ♦ 1 system fan connector ♦ 1 front panel connector ♦ 1 front audio connector ♦ 1 CD In connector ♦ 2 USB 2.0/1.1 connectors for additional 4 USB 2.0/1.1 ports by cables ♦ 1 COMB connector
Rear Panel I/O	♦ 1 PS/2 keyboard port ♦ 1 PS/2 mouse port ♦ 1 parallel port ♦ 3 COM ports(COMA , COMC , COMD) ♦ 1 VGA port ♦ 2 USB 2.0/1.1 ports ♦ 1 RJ-45 port ♦ 3 audio jacks (Line In / Line Out / MIC In)
I/O Control	♦ W83627 chip
Hardware Monitor	♦ System voltage detection ♦ CPU / System temperature detection ♦ System fan speed detection
BIOS	♦ Use of licensed AWARD BIOS
Form Factor	♦ Mini-ITX form factor; 17.0cm x 17.0cm

### 1-3 Installation of Memory



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

1. Please make sure that the memory used is supported by the motherboard. It is recommended that memory of similar capacity, specifications and brand be used.
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 DDR II memory modules, whereby BIOS will automatically detect memory capacity and specifications. Memory modules are designed so that they can be inserted only in one direction. The memory capacity used can differ with each slot.

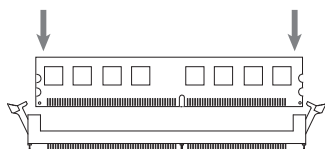
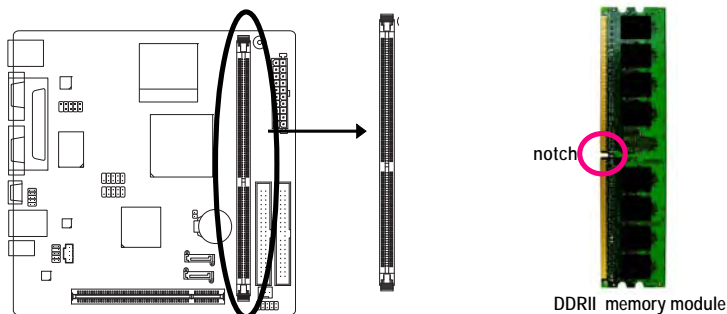


Fig.1  
The DIMM socket has a notch, so the DIMM memory module can only fit in one direction. Insert the DIMM memory module vertically into the DIMM socket. Then push it down.

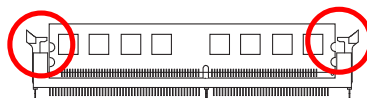
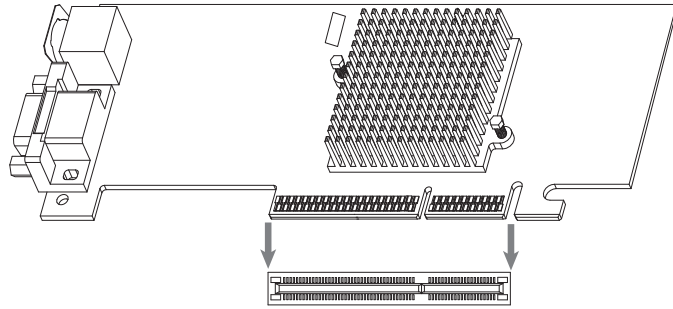


Fig.2  
Close the plastic clip at both edges of the DIMM sockets to lock the DIMM module.  
Reverse the installation steps when you wish to remove the DIMM module.

## 1-4 Installation of Expansion Cards

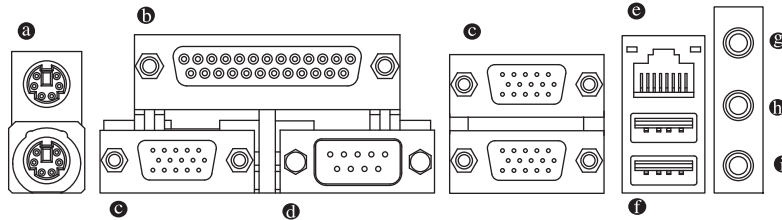
You can install your expansion card by following the steps outlined below:

1. Read the related expansion card's instruction document before installing the expansion card into the computer.
2. Remove your computer's chassis cover, screws and slot bracket from the computer.
3. Press the expansion card firmly into expansion slot in motherboard.
4. Be sure the metal contacts on the card are indeed seated in the slot.
5. Replace the screw to secure the slot bracket of the expansion card.
6. Replace your computer's chassis cover.
7. Power on the computer, if necessary, setup BIOS utility of expansion card from BIOS.
8. Install related driver from the operating system.



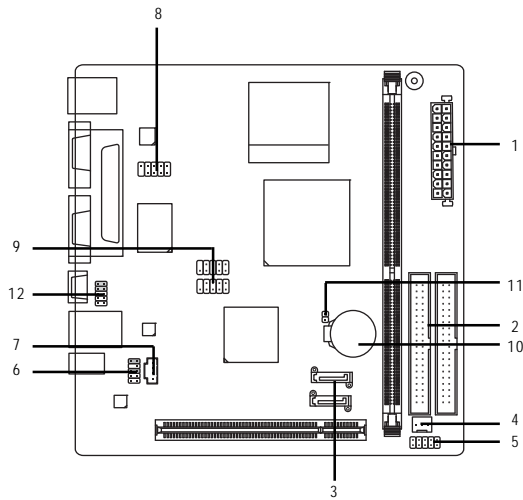


## 1-5 I/O Back Panel Introduction



- a 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).
- b Parallel Port**  
The parallel port allows connection of a printer, scanner and other peripheral devices.
- c Serial Port**  
Devices like mouses, modems, and etc. can be connected to Serial port.
- d VGA Port**  
Monitor can be connected to VGA port.
- e LAN Port**  
The provided Internet connection is fast Ethernet, providing data transfer speeds of 10/100Mbps.
- f USB port**  
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 upgrade. For more information please contact your OS or device(s) vendors.
- g Line In**  
Devices like CD-ROM, walkman etc. can be connected to Line In jack.
- h Line Out**  
Connect the stereo speakers, earphone or front surround channels to this connector.
- i MIC In**  
Microphone can be connected to MIC In jack.

## 1-6 Connectors Introduction



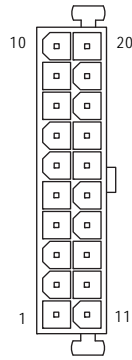
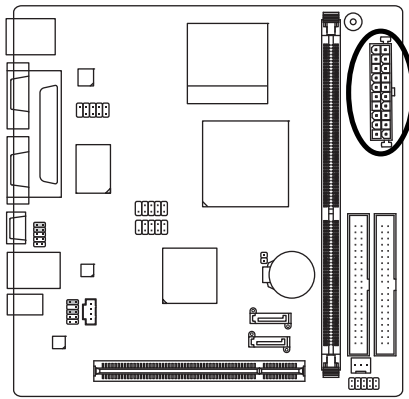
1) ATX	7) CD_IN
2) IDE1/ IDE2	8) COMB
3) SATA1 / SATA2	9) F_USB1 / F_USB2
4) SYS_FAN	10) BAT
5) F_PANEL	11) CLR_CMOS
6) F_AUDIO	12) JP1

### 1) Power Connector (2x10 pin ATX)

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 it tightly.

Caution!

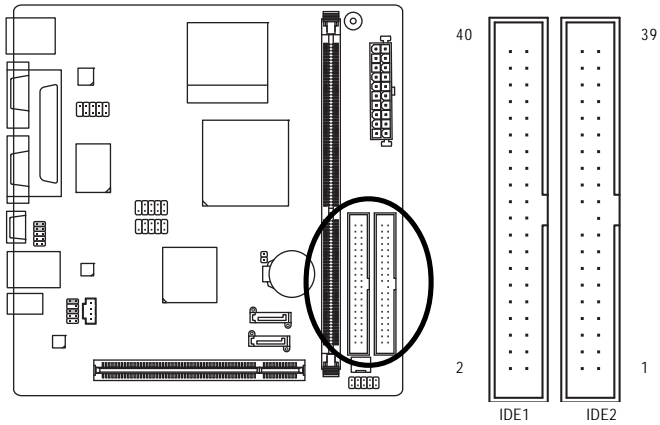
Please use a power supply that is able to handle the system voltage requirements. It is recommended that a power supply that can withstand high power consumption be used (300W or greater). If a power supply is used that does not provide the required power, the result can lead to an unstable system or a system that is unable to start.



Pin No.	Definition
1	3.3V
2	3.3V
3	GND
4	+5V
5	GND
6	+5V
7	GND
8	Power Good
9	5V SB (stand by +5V)
10	+12V
11	3.3V
12	-12V
13	GND
14	PS_ON(soft on/off)
15	GND
16	GND
17	GND
18	-5V
19	+5V
20	+5V

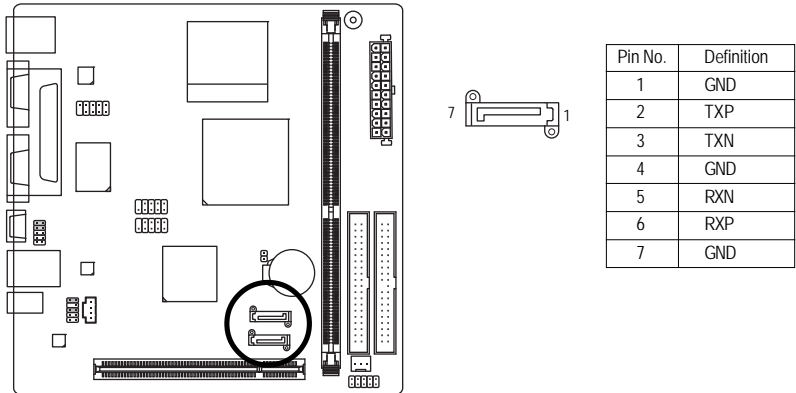
**2) IDE1 / IDE2 (IDE Connector)**

An IDE device connects to the computer via an IDE connector. One IDE connector can connect to one IDE cable, and the single IDE cable can then connect to two IDE devices (hard drive or optical drive). If you wish to connect two IDE devices, please set the jumper on one IDE device as Master and the other as Slave (for information on settings, please refer to the instructions located on the IDE device). Before attaching the IDE cable, please take note of the foolproof groove in the IDE connector.



**3) SATA1/SATA2 (Serial ATA Connector)**

Serial ATA can provide up to 150MB/s transfer rate. Please refer to the BIOS setting for the Serial ATA and install the proper driver in order to work properly.

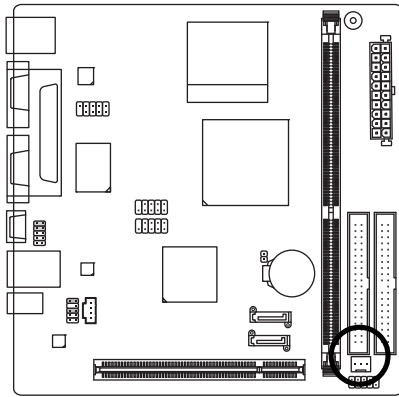


**4) SYS\_FAN (Cooler Fan Power Connector)**

The cooler fan power connector supplies a +12V power voltage via a 3-pin power connector and possesses a foolproof connection design.

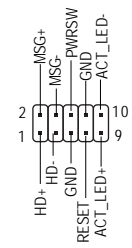
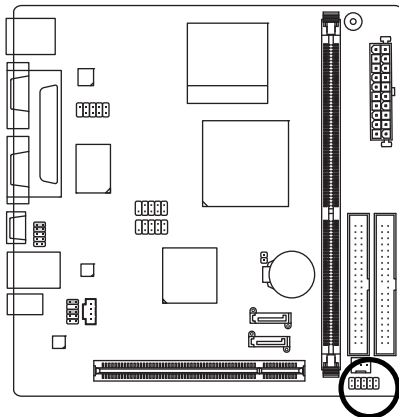
Most coolers are designed with color-coded power connector wires. A red power connector wire indicates a positive connection and requires a +12V power voltage. The black connector wire is the ground wire (GND).

Remember to connect the System fan cable to the SYS\_FAN connector to prevent system hanging caused by overheating.



Pin No.	Definition
1	GND
2	+12V
3	Sense

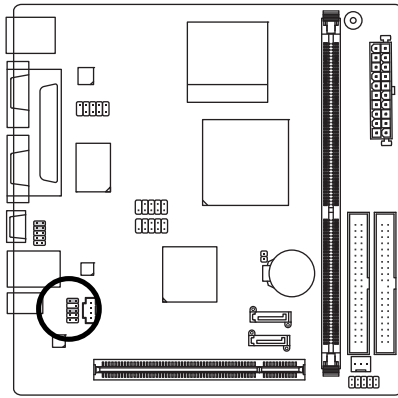
**5) F\_PANEL (Front Panel Connector)**



Pin No.	Definition	Pin No.	Definition
1	HD_LED+	2	MSGLED+
3	HD_LED-	4	MSGLED-
5	GND	6	PWRSW
7	RESET	8	GND
9	ACT_LED+	10	ACT_LED-

**6) F\_AUDIO (Front Audio Panel Connector)**

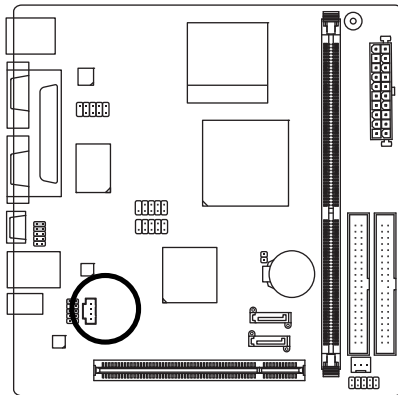
If you want to use Front Audio connector, you must remove 5-6, 9-10 Jumper. In order to utilize the front audio header, your chassis must have front audio connector. Also please make sure the pin assignments on the cable are the same as the pin assignments on the MB header. To find out if the chassis you are buying support front audio connector, please contact your dealer. Please note, you can have the alternative of using front audio connector or of using rear audio connector to play sound.



Pin No.	Definition
1	MIC
2	GND
3	MIC_BIAS
4	POWER
5	FrontAudio(R)
6	Rear Audio (R)/ Return R
7	NC
8	No Pin
9	FrontAudio (L)
10	Rear Audio (L)/ Return L

**7) CD\_IN (CD IN Connector)**

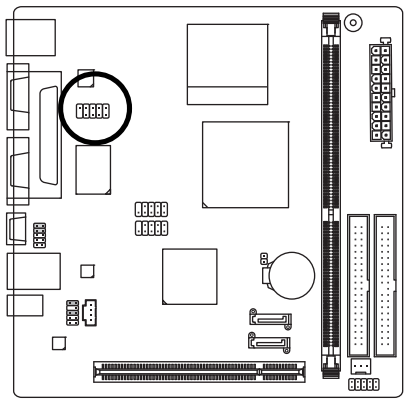
Connect CD-ROM or DVD-ROM audio out to the connector.



Pin No.	Definition
1	CD-L
2	GND
3	GND
4	CD-R

**8) COMB (COMB Connector)**

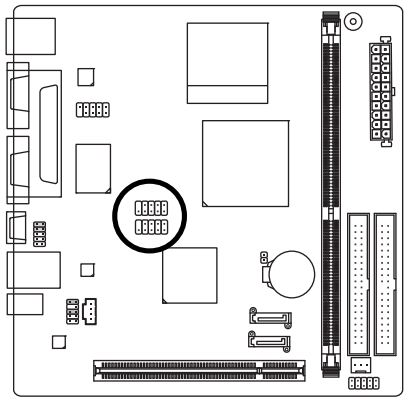
Be careful with the polarity of the COMB connector. Check the pin assignment carefully while you connect the COMB cable, incorrect connection between the cable and connector will make the device unable to work or even damage it. For optional COMB cable, please contact your local dealer.



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

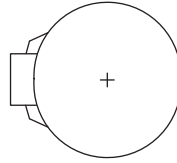
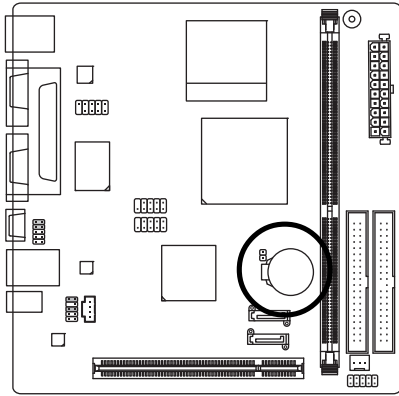
**9) F\_USB1 / F\_USB2 (Front USB Connector)**

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.



Pin No.	Definition
1	Power (5V)
2	Power (5V)
3	USB DX-
4	USB Dy-
5	USB DX+
6	USB Dy+
7	GND
8	GND
9	No Pin
10	NC

### 10) BAT (Battery)



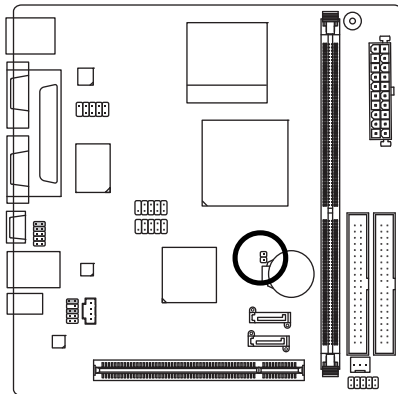
- ❖ Danger of explosion if battery is incorrectly replaced.
- ❖ Replace only with the same or equivalent type recommended by the manufacturer.
- ❖ Dispose of used batteries according to the manufacturer's instructions.



If you want to erase CMOS...

1. Turn off the computer and unplug the power cord.
2. Gently take out the battery and put it aside for about one minute. (Or you can use a metal object to connect the positive and negative pins in the battery holder to make them short for five seconds.)
3. Re-install the battery.
4. Plug the power cord in and turn on the computer.

### 11) CLR\_CMOS (Clear CMOS)

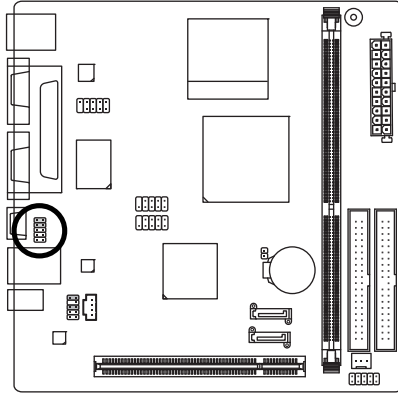
You may clear the CMOS data to its default values by this header. To clear CMOS, temporarily short the two pins. Default doesn't include the jumper to avoid improper use of this header.



-  Open: Normal
-  Short: Clear CMOS



## 12) Voltage Select



	RI ( Default )	+5V	+5V	+12V
COM_C PIN9	close 7-9 pin	close 5-7 pin	close 3-5 pin	close 1-3 pin
COM_D PIN9	close 8-10 pin	close 6-8 pin	close 4-6 pin	close 2-4 pin



## Chapter 2 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.

### CONTROL KEYS

< >< >> >> >	Move to select item
<Enter>	Select Item
<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
<Page Up>	Increase the numeric value or make changes
<Page Down>	Decrease the numeric value or make changes
<F1>	General help, only for Status Page Setup Menu and Option Page Setup Menu
<F2>	Item Help
<F5>	Restore the previous CMOS value from CMOS, only for Option Page Setup Menu
<F6>	Load the fail-safe default CMOS value from BIOS default table
<F7>	Load the Optimized Defaults
<F10>	Save all the CMOS changes, only for Main Menu

### Main Menu

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

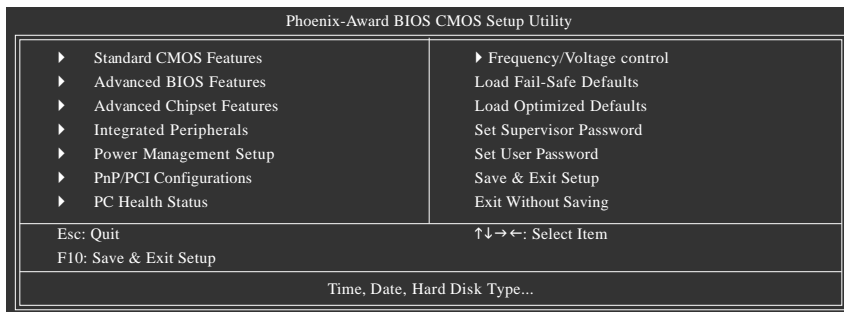
### Status Page Setup Menu / Option Page Setup Menu

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>.

Because BIOS flashing is potentially risky, please do it with caution and avoid inadequate operation that may result in system malfunction.

## The Main Menu (For example: BIOS Ver. : F2e)

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



Please Load Optimized Defaults in the BIOS when somehow the system works not stable as usual. This action makes the system reset to the default for stability.

- **Standard CMOS Features**  
This setup page includes all the items in standard compatible BIOS.
- **Advanced BIOS Features**  
This setup page includes all the items of Award special enhanced features.
- **Advanced Chipset Features**  
This setup page includes all the items of chipset special enhanced features.
- **Integrated Peripherals**  
This setup page includes all onboard peripherals.
- **Power Management Setup**  
This setup page includes all the items of Green function features.
- **PnP/PCI Configurations**  
This setup page includes all the configurations of PCI & PnP ISA resources.
- **PC Health Status**  
This setup page includes information about the CPU autodetected temperature, voltage, and fan, speed.
- **Frequency/Voltage Control**  
This setup page is to control CPU clock and frequency.
- **Load Fail-Safe Defaults**  
Fail-Safe Defaults refers to the value of the system parameters with which the system would be in safe configuration.
- **Load Optimized Defaults**  
Optimized Defaults refers to the value of the system parameters with which the system would be in best performance configuration.
- **Set Supervisor Password**  
Change, set, or disable password. It allows you to limit access to the system and Setup, or just to Setup.

- **Set User Password**

Change, set, or disable password. It allows you to limit access to the system.

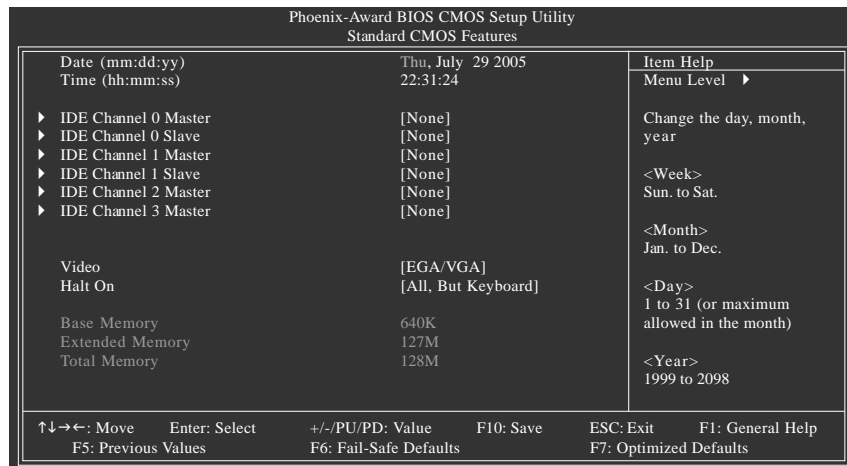
- **Save & Exit Setup**

Save CMOS value settings to CMOS and exit setup.

- **Exit Without Saving**

Abandon all CMOS value changes and exit setup.

## 2-1 Standard CMOS Features



### Date

The date format is <week>, <month>, <day>, <year>.

- Week      The weekday, from Sun. to Sat., is determined by the BIOS and displayed only.
- Month     The month, from Jan. to Dec.
- Day        The date, from 1 to 31 (or the maximum allowed in the month).
- Year        The year, from 1999 through 2098.

### Time

The times format in <hour> <minute> <second>. The time is calculated based on the 24-hour military-time clock. For example, 1 p.m. is 13:00:00.

### IDE Channel 0 Master, Slave, IDE Channel 1 Master, Slave

- IDE HDD Auto-Detection    Press "Enter" to select this option for automatic device detection.
- IDE Channel 0 You can use one of the three methods below:
  - Auto      Allows BIOS to automatically detect IDE devices during POST. (Default value)
  - None     Select this if no IDE devices are used and the system will skip the automatic detection step and allow for faster system start up.
  - Manual    User can manually input the correct settings
- Access Mode    Use this to set the access mode for the hard drive. The four options are: CHS/LBA/Large/Auto (Default:Auto)

### IDE Channel 2/3 Master

- IDE HDD Auto-Detection Press "Enter" to select this option for automatic device detection.
- Extended IDE Drive. You can use one of the two methods:
  - Auto      Allows BIOS to automatically detect IDE devices during POST(default)
  - None     Select this if no IDE devices are used and the system will skip the automatic detection step and allow for faster system start up.
- Access Mode    Use this to set the access mode for the hard drive. The two options are: Large/Auto(default:Auto)

Capacity Capacity of currently installed hard disk.  
 Hard drive information should be labeled on the outside drive casing.  
 Enter the appropriate option based on this information.

Cylinder	Number of cylinders
Head	Number of heads
Precomp	Write precomp
Landing Zone	Landing zone
Sector	Number of sectors

## Video

The category detects the type of adapter used for the primary system monitor that must match your video display card and monitor. Although secondary monitors are supported, you do not have to select the type in setup.

- ▶▶ EGA / VGA Enhanced Graphics Adapter/Video Graphics Array. For EGA, VGA, SVGA, or PGA monitor adapters. (Default value)
- ▶▶ CGA 40 Color Graphics Adapter, power up in 40 column mode.
- ▶▶ CGA 80 Color Graphics Adapter, power up in 80 column mode.
- ▶▶ MONO Monochrome adapter, includes high resolution monochrome adapters.

## Halt on

The category determines whether the computer will stop if an error is detected during power-up.

- No Errors The system boot will not stop for any error that may be detected and you will be prompted.
- All Errors Whenever the BIOS detects a non-fatal error the system will be stopped.
- All, But Keyboard The system boot will not stop for a keyboard error; it will stop for all other errors. (Default value)
- All, But Diskette The system boot will not stop for a disk error; it will stop for all other errors.
- All, But Disk/Key The system boot will not stop for a keyboard or disk error; it will stop for all other errors.

## Memory

The category is display-only and is determined by POST (Power On Self Test) of the BIOS.

### Base Memory

The POST of the BIOS will determine the amount of base (or conventional) memory installed in the system.

The value of the base memory is typically 512K for systems with 512K memory installed on the motherboard, or 640K for systems with 640K or more memory installed on the motherboard.

### Extended Memory

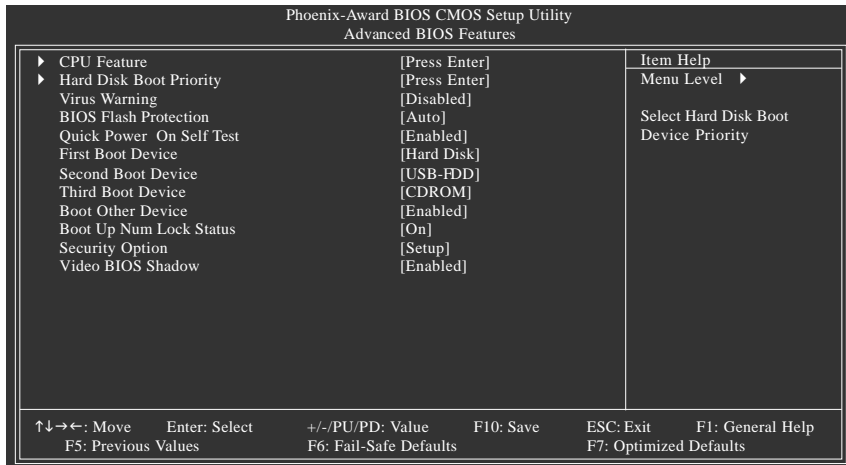
The BIOS determines how much extended memory is present during the POST.

This is the amount of memory located above 1 MB in the CPU's memory address map.

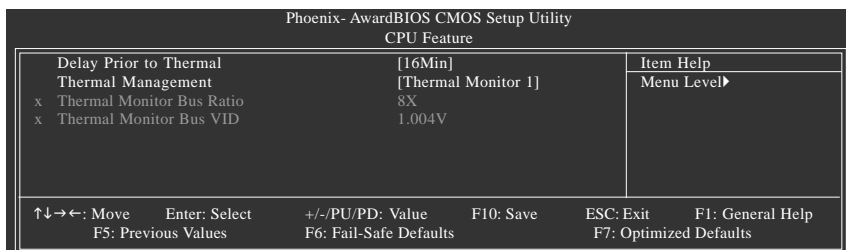
### Total Memory

This item displays the memory size that used.

## 2-2 Advanced BIOS Features



### ☞ CPU Feature



### ☞ Delay Prior to Thermal

- ▶▶ 4Min                      Set 4min for delay prior thermal.
- ▶▶ 8Min                      Set 8min for delay prior thermal.
- ▶▶ 16Min                     Set 16min for delay prior thermal.(Default value)
- ▶▶ 32Min                     Set 32min for delay prior thermal..

### ☞ Thermal Management

- ▶▶ Thermal Monitor 1            CPU auto control thermal when CPU superheat.(Default value)
- ▶▶ Thermal Monitor 2            By menu control CPU ratio and VID when CPU superheat.

### ☞ Hard Disk Boot Priority

Select boot sequence for onboard(or add-on cards) SCSI, RAID, etc.

Use <↑> or <↓> to select a device, then press<+> to move it up, or <-> to move it down the list.  
Press <ESC> to exit this menu.



### ☞ Virus Warning

If it is set to enable, the category will flash on the screen when there is any attempt to write to the boot sector or partition table of the hard disk drive. The system will halt and the warning message will appear in the mean time. You can run anti-virus program to locate the problem.

- ▶▶ Enabled      Activate automatically when the system boots up causing a warning message to appear when anything attempts to access the boot sector or hard disk partition table.
- ▶▶ Disabled     No warning message to appear when anything attempts to access the boot sector or hard disk partition table. (Default value)

### ☞ BIOS Flash Protection

This feature allows you determine the states that flash BIOS.

- ▶▶ Auto            BIOS enables flash write access automatically when updating BIOS data/DMI/ESCD. (Default Value)
- ▶▶ Enabled        During POST, DMI/ESCD would not be updated. But flash tools can update BIOS always.

### ☞ Quick Power On Self Test

If it is set to Enable, BIOS will shorten or skip some check items during POST.

- ▶▶ Enabled        Enabled quick POST.(Default Value)
- ▶▶ Disabled      Normal POST.

### First / Second / Third / Fourth Boot Device

- LS120      Select your boot device priority by LS120.
- Hard Disk    Select your boot device priority by Hard Disk.
- CDROM      Select your boot device priority by CDROM.
- ZIP100      Select your boot device priority by ZIP100.
- USB-FDD    Select your boot device priority by USB-FDD.
- USB-ZIP     Select your boot device priority by USB-ZIP.
- USB-CDROM Select your boot device priority by USB-CDROM.
- Legacy LAN    Select your boot device priority by Legacy LAN.
- Disabled     Select your boot device priority by Disabled.

### ☞ Boot Other Device

- ▶▶ Enabled        Enabled other device boot.(Default Value)
- ▶▶ Disabled      Disabled this function.

### ☞ Boot Up Num Lock Staus

- ▶▶ On              Keypad is number keys. (Default Value)
- ▶▶ Off             Keypad is arrow keys.

### ☞ Security Option

- ▶▶ System        The system can not boot and can not access to Setup page will be denied if the correct password is not entered at the prompt.
- ▶▶ Setup         The system will boot, but access to Setup will be denied if the correct password is not entered at the prompt.(Default value)

### 🔑 Video BIOS Shadow

It determines whether video BIOS is able to copy to RAM, however, it is optional from chipset design. Video Shadow will increase the video speed.

- ▶▶ Enabled      Video shadow is enabled .(Default Value)
- ▶▶ Disabled      Video shadow is disabled.

(Note) This item will show up when you install a processor which supports this function.





- ☞ **DRAM Command Rate**
  - ▶▶ 2T Command            Set DRAM Command rate to 2T. (Default value)
  - ▶▶ 1T Command            Set DRAM Command rate to 1T.
- ☞ **RDSAIT mode**
  - ▶▶ Auto                    Auto detect RDSAIT mode. (Default value)
  - ▶▶ Manual                 Set RDSAIT mode by manually.
- ☞ **RDSAIT selection**
  - ▶▶ Set RDSAIT to 03        (Default value:03)
- ☞ **VGA Share Memory**
  - ▶▶ Disabled                Disabled this function.
  - ▶▶ 16M                     Set VGA share memory to 16M.
  - ▶▶ 32M                     Set VGA share memory to 32M.
  - ▶▶ 64M                     Set VGA share memory to 64M.(Default value)
- ☞ **Direct Frame Buffer**
  - ▶▶ Disabled                Disabled direct fram buffer function.
  - ▶▶ Enabled                Enabled direct fram buffer function. (Default value)
- ☞ **PCI Delay transaction**
  - ▶▶ Disabled                Disabled PCI delay transaction.
  - ▶▶ Enabled                Enabled PCI delay transaction.(Default value)
- ☞ **System BIOS Cacheable**
  - ▶▶ Disabled                Disabled System BIOS Cacheable.
  - ▶▶ Enabled                Enabled System BIOS Cacheable.(Default value)
- ☞ **Init Display First**

Set the init display first to PCI slot. (default: PCI Slot)

## 2-4 Integrated Peripherals

Phoenix- AwardBIOS CMOS Setup Utility		
Integrated Peripherals		
▶ VIA OnChip IDE Device	[Press Enter]	Item Help
▶ VIA OnChip PCI Device	[Press Enter]	Menu Level▶
▶ SuperIO Device	[Press Enter]	
↑↓→←: Move    Enter: Select    +/-/PU/PD: Value    F10: Save    ESC: Exit    F1: General Help F5: Previous Values    F6: Fail-Safe Defaults    F7: Optimized Defaults		

### ☞ VIA OnChip IDE Device

Phoenix- AwardBIOS CMOS Setup Utility		
VIA OnChip IDE Device		
OnChip SATA	[Enabled]	Item Help
SATA Mode	[IDE]	Menu Level▶
IDE DMA transfer access	[Enabled]	
OnChip IDE Channel 0	[Enabled]	
OnChip IDE Channel 1	[Enabled]	
↑↓→←: Move    Enter: Select    +/-/PU/PD: Value    F10: Save    ESC: Exit    F1: General Help F5: Previous Values    F6: Fail-Safe Defaults    F7: Optimized Defaults		

### ☞ VIA OnChip PCI Device

Phoenix- AwardBIOS CMOS Setup Utility		
VIA OnChip PCI Device		
VIA-6102 MAC Address Input	[Press Enter]	Item Help
Onboard LAN Boot ROM	[Disabled]	Menu Level▶
OnChip USB Controller	[All Enabled]	
USB Emulation	[On]	
x USB Keyboard Support	[Enabled]	
x USB Mouse Support	[Enabled]	
↑↓→←: Move    Enter: Select    +/-/PU/PD: Value    F10: Save    ESC: Exit    F1: General Help F5: Previous Values    F6: Fail-Safe Defaults    F7: Optimized Defaults		

### ☞ SuperIO Device

Phoenix- AwardBIOS CMOS Setup Utility		
SuperIO Device		
Onboard FDC Controller	[Enabled]	Item Help
Onboard Serial Port1	[3F8/IRQ4]	Menu Level▶
Onboard Serial Port2	[2F8/IRQ3]	
Onboard Serial Port3	[3E8/IRQ4]	
Onboard Serial Port4	[2E8/IRQ3]	
Onboard Parallel Port	[378/IRQ7]	
Parallel Port Mode	[Standard]	
x ECP Mode Use DMA	3	
↑↓→←: Move    Enter: Select    +/-/PU/PD: Value    F10: Save    ESC: Exit    F1: General Help F5: Previous Values    F6: Fail-Safe Defaults    F7: Optimized Defaults		

### ☞ On-Chip SATA

- ▶▶ Enabled Enable onboard SATA port. (Default value)
- ▶▶ Disabled Disable onboard SATA port.

### ☞ SATA Mode

- ▶▶ IDE Select onboard Serial ATA function as IDE.(Default value)
- ▶▶ RAID Select onboard Serial ATA function as RAID..

### ☞ IDE DMA transfer access

- ▶▶ Enabled Enable IDE DMA transfer access. (Default value)
- ▶▶ Disabled Disable this function.

### ☞ On-Chip IDE Channel0

- ▶▶ Enabled Enable onboard 1st channel IDE port. (Default value)
- ▶▶ Disabled Disable onboard 1st channel IDE port.

### ☞ On-Chip IDE Channel1

- ▶▶ Enabled Enable onboard 2nd channel IDE port. (Default value)
- ▶▶ Disabled Disable onboard 2nd channel IDE port.

### ☞ VIA-6102 MAC Address Input

Please key in MAC Address.

### ☞ Onboard LAN Boot ROM

This function decide whether to invoke the boot ROM of the onboard LAN chip.

- ▶▶ Enabled Enable this function.
- ▶▶ Disabled Disable this function.(Default value)

### ☞ OnChip USB Controller

- ▶▶ All Enabled Set USB controller function used all USB port. (Default value)
- ▶▶ All Disabled Set USB controller function Disabled.
- ▶▶ 1&2 USB Port Set USB controller function used USB port 1&2.
- ▶▶ 2&3 USB Port Set USB controller function used USB port 2&3.
- ▶▶ 1&3 USB Port Set USB controller function used USB port 1&3.
- ▶▶ 1 USB Port Set USB controller function used USB port 1.
- ▶▶ 2 USB Port Set USB controller function used USB port 2.
- ▶▶ 3 USB Port Set USB controller function used USB port 3.

### ☞ USB Emulation

- ▶▶ ON Set on to USB emulation. (Default value)
- ▶▶ OFF Set off to USB emulation.
- ▶▶ KB / MS Set KB/MS USB emulation.

### ☞ Onboard FDC Controller

- ▶▶ Disabled Disable onboard FDC controller.
- ▶▶ Enabled Enable onboard FDC controller. (Default value)

### ☞ Onboard Serial Port 1

- ▶▶ Auto BIOS will automatically setup the Serial port 1 address.
- ▶▶ 3F8/IRQ4 Enable onboard Serial port 1 and address is 3F8/IRQ4. (Default value)
- ▶▶ 2F8/IRQ3 Enable onboard Serial port 1 and address is 2F8/IRQ3.
- ▶▶ 3E8/IRQ4 Enable onboard Serial port 1 and address is 3E8/IRQ4.
- ▶▶ 2E8/IRQ3 Enable onboard Serial port 1 and address is 2E8/IRQ3.
- ▶▶ 4F8/IRQ5 Enable onboard Serial port 1 and address is 4F8/IRQ5.
- ▶▶ 4E8/IRQ7 Enable onboard Serial port 1 and address is 4E8/IRQ7.
- ▶▶ Disabled Disable onboard Serial port 1.

### ☞ Onboard Serial Port 2

- ▶▶ Auto BIOS will automatically setup the Serial port 2 address.
- ▶▶ 3F8/IRQ4 Enable onboard Serial port 2 and address is 3F8/IRQ4.
- ▶▶ 2F8/IRQ3 Enable onboard Serial port 2 and address is 2F8/IRQ3.(Default value)
- ▶▶ 3E8/IRQ4 Enable onboard Serial port 2 and address is 3E8/IRQ4.
- ▶▶ 2E8/IRQ3 Enable onboard Serial port 2 and address is 2E8/IRQ3.
- ▶▶ 4F8/IRQ5 Enable onboard Serial port 2 and address is 4F8/IRQ5.
- ▶▶ 4E8/IRQ7 Enable onboard Serial port 2 and address is 4E8/IRQ7.
- ▶▶ Disabled Disable onboard Serial port 2.

### ☞ Onboard Serial Port 3

- ▶▶ Auto BIOS will automatically setup the Serial port 3 address.
- ▶▶ 3F8/IRQ4 Enable onboard Serial port 3 and address is 3F8/IRQ4.
- ▶▶ 2F8/IRQ3 Enable onboard Serial port 3 and address is 2F8/IRQ3.
- ▶▶ 3E8/IRQ4 Enable onboard Serial port 3 and address is 3E8/IRQ4.(Default value)
- ▶▶ 2E8/IRQ3 Enable onboard Serial port 3 and address is 2E8/IRQ3.
- ▶▶ 4F8/IRQ5 Enable onboard Serial port 3 and address is 4F8/IRQ5.
- ▶▶ 4E8/IRQ7 Enable onboard Serial port 3 and address is 4E8/IRQ7.
- ▶▶ Disabled Disable onboard Serial port 3.

### ☞ Onboard Serial Port 4

- ▶▶ Auto BIOS will automatically setup the Serial port 4 address.
- ▶▶ 3F8/IRQ4 Enable onboard Serial port 4 and address is 3F8/IRQ4.
- ▶▶ 2F8/IRQ3 Enable onboard Serial port 4 and address is 2F8/IRQ3.
- ▶▶ 3E8/IRQ4 Enable onboard Serial port 4 and address is 3E8/IRQ4.
- ▶▶ 2E8/IRQ3 Enable onboard Serial port 4 and address is 2E8/IRQ3.(Default value)
- ▶▶ 4F8/IRQ5 Enable onboard Serial port 4 and address is 4F8/IRQ5.
- ▶▶ 4E8/IRQ7 Enable onboard Serial port 4 and address is 4E8/IRQ7.
- ▶▶ Disabled Disable onboard Serial port 4.

### ☞ Onboard Parallel Port

- ▶▶ Disabled Disable onboard LPT port.
- ▶▶ 378/IRQ7 Enable onboard LPT port and address is 378/IRQ7. (Default value)
- ▶▶ 278/IRQ5 Enable onboard LPT port and address is 278/IRQ5.
- ▶▶ 3BC/IRQ7 Enable onboard LPT port and address is 3BC/IRQ7.



### ☞ Parallel Port Mode

- ▶▶ Standard Using Parallel port as Standard Parallel Port. (Default value)
- ▶▶ EPP1.9+SPP Using Parallel port as EPP1.9 and SPP mode.
- ▶▶ ECP Using Parallel port as Extended Capabilities Port.
- ▶▶ ECP+EPP1.9 Using Parallel port as ECP and EPP1.9 mode.
- ▶▶ Printer Using Parallel port as Printer port mode.
- ▶▶ EPP1.7+SSP Using Parallel port as EPP1.7 and SSP mode.
- ▶▶ ECP+EPP1.7 Using Parallel port as ECP and EPP1.7 mode.

### ☞ ECP Mode Use DMA

- ▶▶ 3 Set ECP Mode Use DMA to 3. (Default value)
- ▶▶ 1 Set ECP Mode Use DMA to 1.



- ☞ **ACPI function**
  - ▶▶ Disabled Disabled ACPI function.
  - ▶▶ Enabled Enabled ACPI function. (Default value)
- ☞ **ACPI Suspend Type**
  - ▶▶ S1(POS) Set ACPI suspend type to S1/POS(Power On Suspend). (Default value)
  - ▶▶ S3(STR) Set ACPI suspend type to S3/STR(Suspend To RAM).
- ☞ **Modem Use IRQ**
  - ▶▶ NA Set Modem use IRQ to NA.
  - ▶▶ 3 Set Modem use IRQ to 3.(Default value)
  - ▶▶ 4 Set Modem use IRQ to 4.
  - ▶▶ 5 Set Modem use IRQ to 5.
  - ▶▶ 7 Set Modem use IRQ to 7.
  - ▶▶ 9 Set Modem use IRQ to 9.
  - ▶▶ 10 Set Modem use IRQ to 10.
  - ▶▶ 11 Set Modem use IRQ to 11.
- ☞ **Soft-Off by Power button**
  - ▶▶ Instant-off Press power button then Power off instantly.
  - ▶▶ Delay 4 Sec Press power button 4 seconds to Power off. Enter suspend if button is pressed less than 4 seconds.(Default value)
- ☞ **AC Loss Auto Restart**
  - ▶▶ Off Disabled this function. (Default value)
  - ▶▶ On Set AC Loss auto restart.
  - ▶▶ Former-Sts Set AC Loss to former-Sts.
- ☞ **PS2KB Wakeup Select**
  - ▶▶ Hot Key Set Hot key to wakeup PS/2 Keyboard.
- ☞ **PS2KB Wakeup from S3/S4/S5**
  - ▶▶ Disabled Disabled this function.(Default value)
  - ▶▶ Ctrl+F1-Ctrl+F12 Set PS/2 keyboard wakeup from S3/S4/S5 to Ctrl+F1-Ctrl+F12.
  - ▶▶ Power Press power key to wake PS/2 keyboard from S3/S4/S5.
  - ▶▶ Wake Press Wake key to wake PS/2 keyboard from S3/S4/S5.
  - ▶▶ Any Key Press any key to wake PS/2 keyboard from S3/S4/S5.
- ☞ **PS2MS Wakeup from S3/S4/S5**
  - ▶▶ Disabled Disabled this function.(Default value)
  - ▶▶ Enabled Enabled PS2 mouse wakeup from S3/S4/S5.
- ☞ **USB Resume from S3**
  - ▶▶ Disabled Disabled this function.(Default value)
  - ▶▶ Enabled Enabled USB Resume from S3.
- ☞ **LPT&COM**
  - ▶▶ LPT/COM Monitor LPT/COM for Green event.(Default value)
  - ▶▶ NONE Disabled this function.
  - ▶▶ COM Monitor COM for Green event
  - ▶▶ LPT Monitor LPT for Green event

- ☞ **HDD&FDD**
  - ▶▶ ON Set HDD & FDD to On.(Default value)
  - ▶▶ OFF Set HDD & FDD to Off.

- ☞ **PCI Master**
  - ▶▶ ON Set PCI master to On.
  - ▶▶ OFF Set PCI master Off (Default value)

- ☞ **Power On by PCI Card**
  - ▶▶ Disabled Disable this function. (Default value)
  - ▶▶ Enabled Enable power on by PCI card.

- ☞ **Modem Ring Resume**
  - ▶▶ Disabled Disable this function. (Default value)
  - ▶▶ Enabled Enable modem ring resume.

### RTC Alarm Resume

You can enable **RTC Alarm Resume** and set date/time to turn on your system.

Disabled Disable this function. (Default value)

Enabled Enable **Resume by Alarm** function to turn on system.

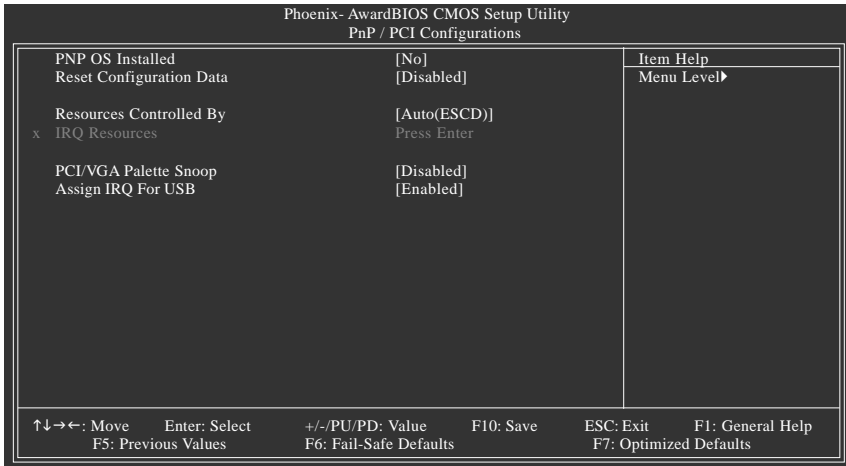
If **RTC Alarm Resume** is Enabled:

Day (of Month): Everyday, 1-31

Time (hh: mm: ss): (0-23) : (0-59) : (0-59)

- ☞ **Primary INTR**
  - ▶▶ OFF Disable this function.
  - ▶▶ ON Enable this function. (Default value)
- ☞ **IRQ (3,8,9, 10,11,15)**
  - ▶▶ Disabled Disable this function. (Default value)
  - ▶▶ Enabled Enable this function.
- ☞ **IRQ (4,5,6,7,12,13,14)**
  - ▶▶ Disabled Disable this function.
  - ▶▶ Enabled Enable this function.(Default value)

## 2-6 PnP/PCI Configurations



### ☞ PNP OS Installed

- ▶▶ No            Disabled this function. (Default value)
- ▶▶ Yes           Enabled this function.

### ☞ Reset Configuration Data

- ▶▶ Enabled        Clear PnP information in ESCD & update DMI data. (Default value)
- ▶▶ Disabled       Disabled this function.

### ☞ Resources Controlled By

- ▶▶ Auto(ESCD)    BIOS automatically use these PnP rescuers. (Default value)
- ▶▶ Manual        User can set the PnP resource (I/O Address, IRQ & DMAchannels) used by legacy ISA DEVICE.

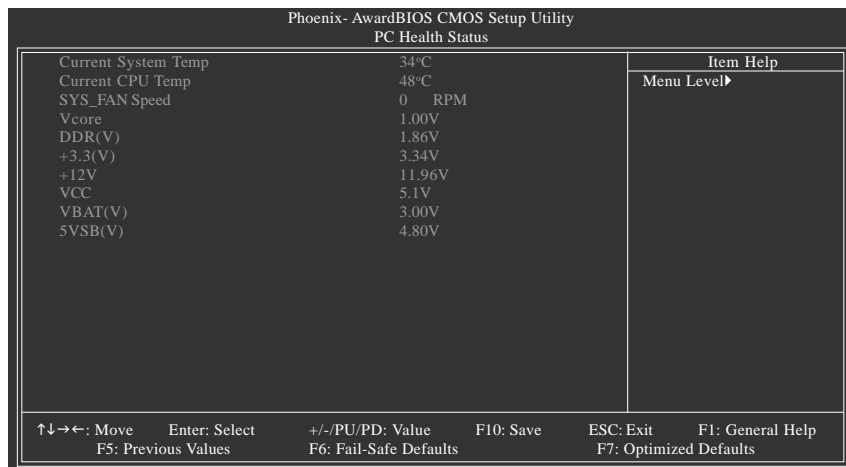
### ☞ PCI/VGA Palette Snoop

- ▶▶ Enabled        For having Video Card on ISA Bus and VGA Card on PCI Bus.
- ▶▶ Disabled       For VGA Card only.(Default value)

### ☞ Assign IRQ For USB

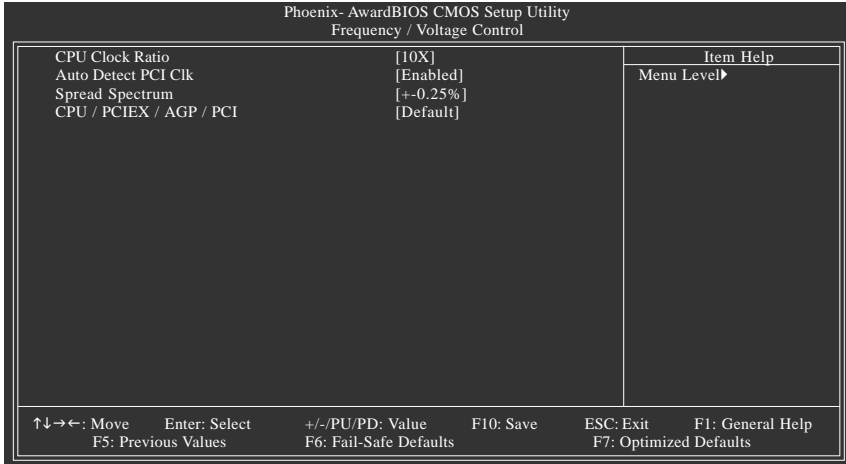
- ▶▶ Enabled        Assign IRQ for USB. (Default value)
- ▶▶ Disabled       No assign IRQ for USB.

## 2-7 PC Health Status



- ☞ **Current System / CPU Temperature**
  - ▶▶ Detect System / CPU temperature automatically.
- ☞ **Current SYS\_FAN Speed (RPM)**
  - ▶▶ Detect Sys\_Fan speed status automatically.
- ☞ **Current DDR Voltage(V) / Vcore / +3.3V / +12V / DDR(V) / VBAT(V) / 5VSB(V)**
  - ▶▶ Detect system's voltage status automatically.

## 2-8 Frequency/Voltage Control



Incorrect using these features may cause your system corrupted. For power users only.

### CPU Clock Ratio

This setup option will automatically assign by CPU detection.

The option will display "Locked" and read only if the CPU ratio is not changeable.

#### ☞ Auto Detect PCI Clk

- ▶▶ Disabled                      Disabled auto detect PCI clock.
- ▶▶ Enabled                        Enabled auto detect PCI clock.(Default value)

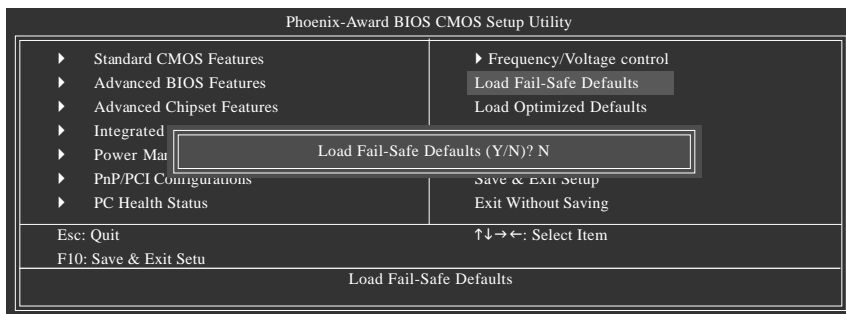
#### ☞ Spread Spectrum

- ▶▶ Disabled                        Disable CPU Spread Spectrum.
- ▶▶ -0.5%                            Set Spread Spectrum to -0.5%.
- ▶▶ -1.0%                            Set Spread Spectrum to -1.0%.
- ▶▶ +/-0.25%                        Set Spread Spectrum to +/-0.25%.(Default value)
- ▶▶ +/-0.5%                        Set Spread Spectrum to 0.25%.

#### ☞ CPU / PCIEX / AGP / PCI

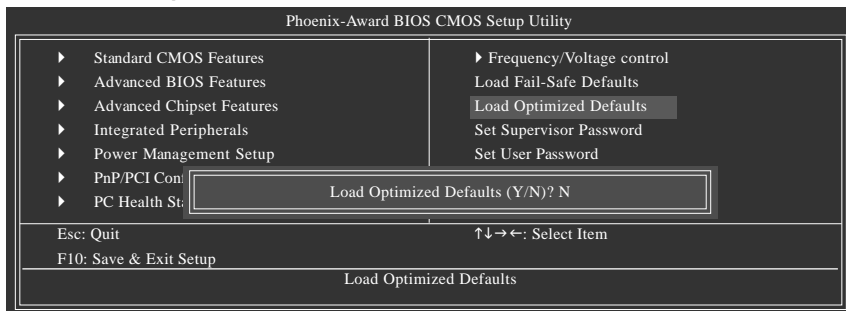
- ▶▶ Default                            Auto detect CPU / PCIEX / AGP / PCI .(Default value)
- ▶▶ 100/100/66/33 MHz              CPU 100MHz / PCIEX 100MHz / AGP 66MHz / PCI 33MHz.

## 2-9 Load Fail-Safe Defaults



Fail-Safe defaults contain the most appropriate values of the system parameters that allow minimum system performance.

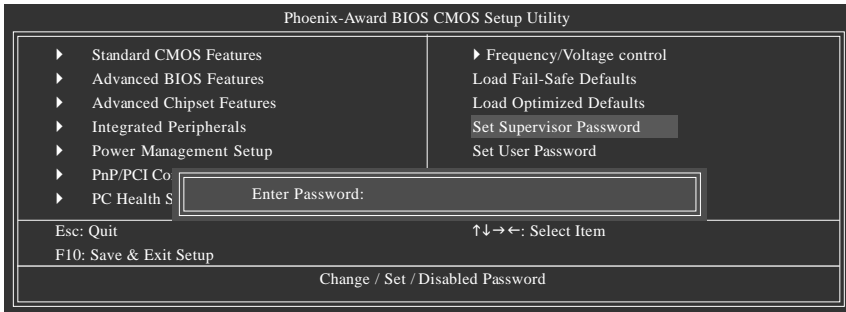
## 2-10 Load Optimized Defaults



Selecting this field loads the factory defaults for BIOS and Chipset Features which the system automatically detects.



## 2-11 Set Supervisor/User Password



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 eight characters, and press <Enter>. You will be asked to confirm the password. Type the password again and press <Enter>. You may also press <Esc> to abort the selection and not enter a password.

To disable password, just press <Enter> when you are prompted to enter password. A message "PASSWORD DISABLED" will appear to confirm the password being disabled. Once the password is disabled, the system will boot and you can enter Setup freely.

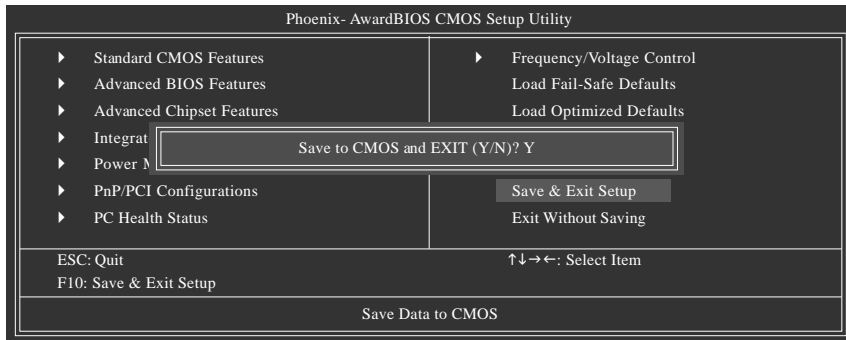
The BIOS Setup program allows you to specify two separate passwords:

SUPERVISOR PASSWORD and a USER PASSWORD. When disabled, anyone may access all BIOS Setup program function. When enabled, the Supervisor password is required for entering the BIOS Setup program and having full configuration fields, the User password is required to access only basic items.

If you select "System" at "Password Check" in Advance BIOS Features Menu, you will be prompted for the password every time the system is rebooted or any time you try to enter Setup Menu.

If you select "Setup" at "Password Check" in Advance BIOS Features Menu, you will be prompted only when you try to enter Setup.

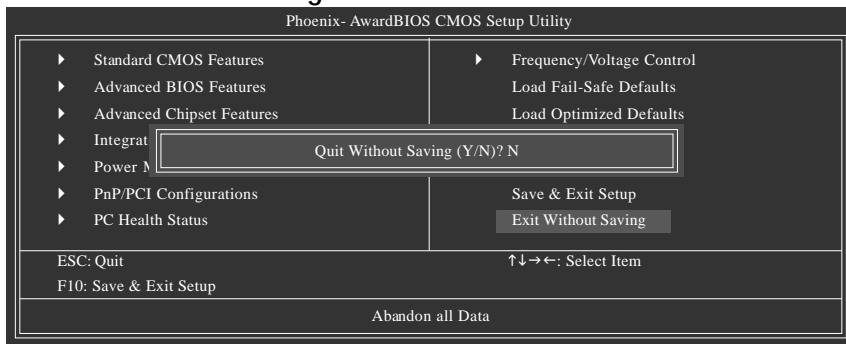
## 2-12 Save & Exit Setup



Type "Y" will quit the Setup Utility and save the user setup value to RTC CMOS.

Type "N" will return to Setup Utility.

## 2-13 Exit Without Saving



Type "Y" will quit the Setup Utility without saving to RTC CMOS.

Type "N" will return to Setup Utility.



