



X533

# User Manual

Version 1.0

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# Chapter 1 Introduction

Thank you for purchasing ASRock X533 motherboard, a reliable motherboard produced under ASRock's consistently stringent quality control. It delivers excellent performance with robust design conforming to ASRock's commitment to quality and endurance.

Chapter 1 and 2 of this manual contain introduction of the motherboard and step-by-step installation guide for new DIY system builders. Chapter 3 and 4 contain basic BIOS setup and Support CD information.



Because the motherboard specifications and the BIOS software might be updated, the content of this manual will be subject to change without notice. In case any modifications of this manual occur, the updated version will be available on ASRock website without further notice.

ASRock website <http://www.asrock.com>

## 1.1 Package Contents

ASRock X533 motherboard (ATX form factor: 12.0" x 9.6", 30.5 x 24.4 cm)

ASRock X533 Quick Setup Guide

ASRock X533 Support CD

1 Cable for IDE devices (1 x ATA 66/100/133)

1 Cable for floppy drive (1 x ribbon cable)

1 ASRock I/O shield

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## 1.2 Specifications

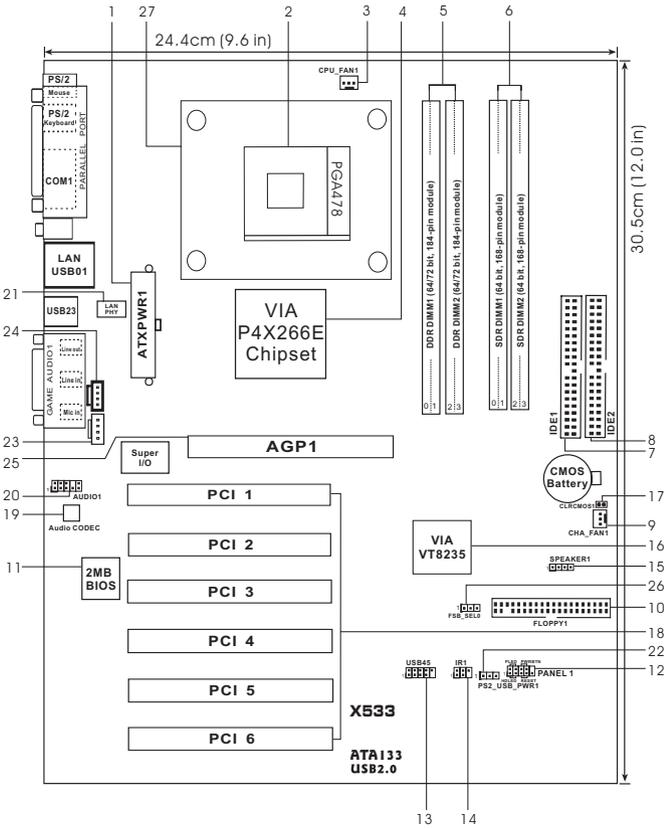
<b>Platform:</b>	ATX form factor (12.0" x 9.6", 30.5 x 24.4 cm)
<b>CPU:</b>	Socket 478 for Intel® Pentium® 4 / Celeron® processor
<b>Chipsets:</b>	North Bridge: VIA P4X266E, FSB@533 MHz ( <b>NOTE 1</b> ); South Bridge: VIA VT8235
<b>Clock Generator:</b>	100 MHz - 200MHz
<b>Memory:</b>	2 slots for DDR: DDR1 and DDR2 (PC1600 / PC2100), Max. 2GB; 2 slots for SDR: SDR1 and SDR2 (PC100 / PC133), Max. 2GB
<b>IDE:</b>	IDE1: ATA 133 / Ultra DMA Mode 6; IDE2: ATA 133 / Ultra DMA Mode 6; Can connect up to 4 IDE devices
<b>Floppy Port:</b>	Supports 1 floppy disk drive
<b>Audio:</b>	2 channels AC'97 Audio
<b>LAN:</b>	Speed: 802.3u (10/100 Ethernet), supports Wake-On-LAN
<b>Hardware Monitor:</b>	CPU temperature sensing (ASRock U-COP); Chassis temperature sensing; CPU overheat shutdown to protect CPU life (ASRock U-COP)( <b>NOTE 2</b> ); Voltage monitoring: +12V, +5V, +3V, Vcore; CPU fan tachometer; Chassis fan tachometer
<b>PCI slots:</b>	6 slots with PCI Specification 2.2
<b>AGP slot:</b>	1 universal AGP slot, supports 3.3V/1.5V, 4X/2X/1X AGP card
<b>USB 2.0:</b>	4 default USB 2.0 ports and a set of header for 2 additional USB 2.0 ports upgrade ( <b>NOTE 3</b> )
<b>ASRock I/O™:</b>	PS/2: 1 keyboard port / 1 mouse port; 1 RJ 45 port; 4 rear default USB 2.0 ports; 1 serial port: COM1; 1 parallel port: ECP/EPP support; Audio Jack: Line Out/ Line In/ Microphone + Game port
<b>BIOS:</b>	AMI BIOS; Supports "Plug and Play"; ACPI 1.1 compliance wake up events; Supports jumperfree; SMBIOS 2.3.1 support; CPU frequency stepless control (only for advanced users' reference, <b>NOTE 4</b> )
<b>OS:</b>	Microsoft® Windows® 98SE / ME / 2000 / XP compliant

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## NOTE

1. If the installed CPU runs with the front side bus frequency at 533 MHz on X533 motherboard, it will NOT support DDR 200 (PC1600), and SDR (PC100).
2. While CPU overheat is detected, the system will automatically shutdown. Please check if the CPU fan on the motherboard functions properly before you resume the system. To improve heat dissipation, remember to spray thermal grease between the CPU and the heatsink when you install the PC system.
3. Power Management for USB 2.0 works fine under Microsoft® Windows® XP. It may not work properly under Microsoft® Windows® 98/ME/2000. Please refer to Microsoft® official document at <http://www.microsoft.com/HWDEV/BUS/usb/USB2support.asp>
4. Although X533 offers stepless control, it is not recommended to perform over clocking. When the CPU frequency of X533 is set to perform over clocking, other clocks, such as PCI clock, AGP clock, and Memory clock will also be overclocked proportionally. Frequencies other than the recommended CPU bus frequencies may cause the instability of the system or damage the CPU and the motherboard.

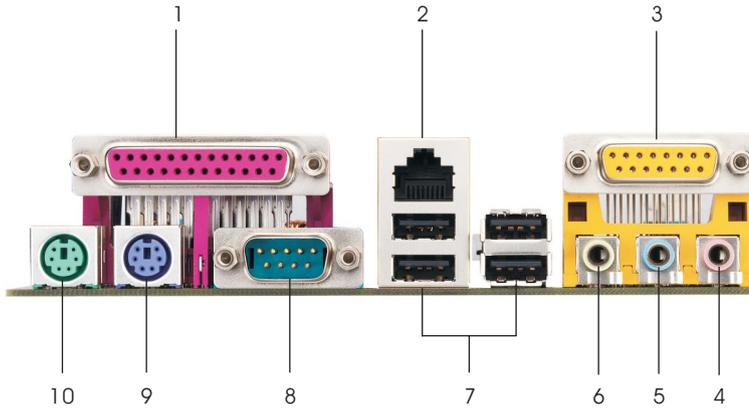
## 1.3 Motherboard Layout



- |    |                                           |    |                                        |
|----|-------------------------------------------|----|----------------------------------------|
| 1  | ATX power connector (ATXPWR1)             | 14 | Infrared module connector (IR1)        |
| 2  | CPU socket                                | 15 | Speaker connector (SPEAKER 1)          |
| 3  | CPU fan connector (CPU_FAN1)              | 16 | South Bridge controller                |
| 4  | North Bridge controller                   | 17 | Clear CMOS (CLR_CMOS1: solder points)  |
| 5  | 184-pin DDR DIMM slots (DDR1- 2, blue)    | 18 | PCI slots (PCI1- 6)                    |
| 6  | 168-pin SDRAM DIMM slots (SDR1- 2, black) | 19 | AUDIO CODEC                            |
| 7  | Primary IDE connector (IDE1, blue)        | 20 | Front panel audio connector (AUDIO1)   |
| 8  | Secondary IDE connector (IDE2, black)     | 21 | LAN PHY                                |
| 9  | Chassis fan connector (CHA_FAN1)          | 22 | PS2_USB_PWR1 jumper                    |
| 10 | Floppy connector (FLOPPY1)                | 23 | Internal audio connector: AUX1 (white) |
| 11 | Flash Memory                              | 24 | Internal audio connector: CD1 (black)  |
| 12 | System panel connector (PANEL1)           | 25 | AGP slot (AGP1)                        |
| 13 | USB header (USB45, blue)                  | 26 | FSB Select jumper (FSB_SEL0)           |
|    |                                           | 27 | CPU heatsink retention module          |

---

## 1.4 ASRock I/O™



- |   |                      |    |                             |
|---|----------------------|----|-----------------------------|
| 1 | Parallel port        | 6  | Line Out (Lime)             |
| 2 | RJ-45 port           | 7  | USB 2.0 ports               |
| 3 | Game port            | 8  | Serial port: COM1           |
| 4 | Microphone (Pink)    | 9  | PS/2 keyboard port (Purple) |
| 5 | Line In (Light Blue) | 10 | PS/2 mouse port (Green)     |

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## Chapter 2 Installation

X533 is an ATX form factor (12.0" x 9.6", 30.5 x 24.4 cm) motherboard. Before you install the motherboard, study the configuration of your chassis to ensure that the motherboard fits into it.



Make sure to unplug the power cord before installing or removing the motherboard. Failure to do so may cause physical injuries to you and damages to motherboard components.

### 2.1 Screw Holes

Place screws into the holes indicated by circles to secure the motherboard to the chassis.



Do not over-tighten the screws! Doing so may damage the motherboard.

### 2.2 Pre-installation Precautions

1. Make sure to unplug the power cord before installing or removing the motherboard. Failure to do so may cause physical injuries to you and damages to motherboard components. Unplug the power cord from the wall socket before touching any component.
2. To avoid damaging the motherboard components due to static electricity, NEVER place your motherboard directly on the carpet or the like. Also remember to use a grounded wrist strap or touch a safety grounded object before you handle components.
3. Hold components by the edges and do not touch the ICs.
4. Whenever you remove any component, place it on a grounded antistatic pad or in the bag that comes with the component.

---

## 2.3 CPU Installation

- Step 1. Unlock the socket by lifting the lever up to a 90° angle.
- Step 2. Position the CPU directly above the socket such that its marked corner matches the base of the socket lever.
- Step 3. Carefully insert the CPU into the socket until it fits in place.



The CPU fits only in one correct orientation. DO NOT force the CPU into the socket to avoid bending of the pins.

- Step 4. When the CPU is in place, press it firmly on the socket while you push down the socket lever to secure the CPU. The lever clicks on the side tab to indicate that it is locked.



Step 1



Step 2, 3



Step 4

## 2.4 Installation of CPU Fan and Heatsink

Intel® Pentium 4® and Celeron® CPU requires larger heatsink and cooling fan. Thermal grease between the CPU and the heatsink is also needed to improve heat transfer. Make sure that the CPU and the heatsink are securely fastened and in good contact with each other. For proper installation, please kindly refer to the instruction manuals of vendors of CPU fan and heatsink.

---

## 2.5 Installation of Memory Modules (DIMM)

SDRAM (Synchronous DRAM) DIMM (Dual In-line Memory Module) has 168 pins and DDR (Double Data Rate) SDRAM DIMM has 184 pins.



Please make sure to disconnect power supply before adding or removing DIMMs or the system components.



168-pin RAM



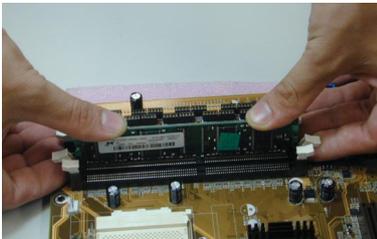
184-pin RAM

The 168-pin SDRAM DIMM slot (black) and 184-pin DDR DIMM slot (blue) can be easily distinguished by the fool-proof design.



Please do not use both 168-pin SDRAM DIMM and 184-pin DDR DIMM at the same time. To optimize the compatibility, it is not recommended to use two different models of the DIMMs at the same time.

- Step 1. Unlock a DIMM slot by pressing the retaining clips outward.
- Step 2. Align a DIMM on the slot such that the notch on the DIMM matches the break on the slot.
- Step 3. Firmly insert the DIMM into the slot until the retaining clip snap back in place and the DIMM is properly seated.



---

## 2.6 Expansion Slots (PCI and AGP Slots)

There are 6 PCI slots and 1 AGP slot on X533 motherboard.

**PCI slots:** PCI slots are used to install expansion cards that have the 32-bit PCI interface.

**AGP slot:** The AGP slot is used to install a graphics card.

The ASRock AGP slot has a special locking mechanism which can securely fasten the graphics card inserted.

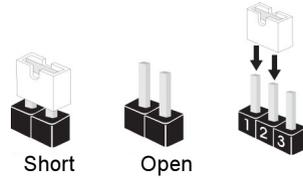
### Installing an expansion card

- Step 1. Before installing the expansion card, read the documentation of the expansion card and make necessary hardware settings for the card.
- Step 2. Remove the system unit cover (if your motherboard is already installed in a chassis).
- Step 3. Remove the bracket facing the slot that you intend to use. Keep the screw for later use.
- Step 4. Align the card connector with the slot and press firmly until the card is completely seated on the slot.
- Step 5. Fasten the card to the chassis with screws.
- Step 6. Replace the system cover.

---

## 2.7 Jumpers Setup

The illustration shows how jumpers are setup. When the jumper cap is placed on pins, the jumper is “Short”. If no jumper cap is placed on pins, the jumper is “Open”. The illustration shows a 3-pin jumper whose pin1 and pin2 are “Short” when jumper cap is placed on these 2 pins.



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### Jumper Setting

FSB\_SELO

(see p.7 item 26)



Note: The setting of the CPU front side bus frequency of this motherboard is by means of the adjustment of jumper-setting. Please follow the figures above to set the CPU front side bus frequency.

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PS2\_USB\_PWR1

(see p.7 item 22)



Short pin2, pin3 to enable +5VSB (standby) for PS/2 or USB wake up events.

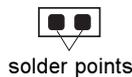
Note: To select +5VSB, it requires 2 Amp and higher standby current provided by power supply.

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### Clear CMOS

CLRCMOS1

(see p.7 item 17)



Note: These solder points allow you to clear the data in CMOS. The data in CMOS includes system setup information such as system password, date, time, and system setup parameters. To clear and reset the system parameters to default setup, please turn off the computer and unplug the power cord, then short the solder points for 3 seconds by using metal material, e.g., a paper clip. Please remember to remove the paper clip after clearing the CMOS.

## 2.8 Connectors



Connectors are NOT jumpers. DO NOT place jumper caps over these connectors.

Connector	Figure	Description
FDD connector (33-pin FLOPPY1) (see p.7 item 10)		

Note: Match the red marking on the floppy ribbon cable with Pin1.

Primary IDE connector (Blue) (39-pin IDE1) (see p.7 item 7)	Secondary IDE connector (Black) (39-pin IDE2) (see p.7 item 8)
-------------------------------------------------------------------	----------------------------------------------------------------------

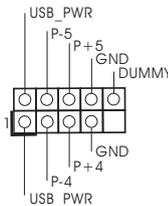


connect the blue end  connect the black end to the IDE devices

80-Pin ATA 100/133 cable

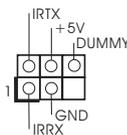
Note: To optimize compatibility and performance, please connect your hard disk drive to the primary IDE connector (IDE1, blue) and CD-ROM to the secondary IDE connector (IDE2, black).

USB 2.0 header  
(9-pin USB45)  
(see p.7 item 13)



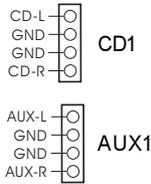
ASRock I/O™ provides you 4 default USB 2.0 ports on the rear panel. If the rear USB ports are not sufficient, this USB 2.0 header is available for 2 additional USB 2.0 ports.

Infrared module connector  
(5-pin IR1)  
(see p.7 item 14)



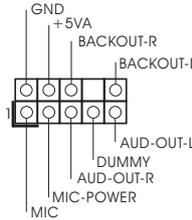
This connector supports an optional wireless transmitting and receiving infrared module.

Internal audio connectors  
 (4-pin CD1, 4-pin AUX1)  
 (CD1: see p.7 item 24)  
 (AUX1: see p.7 item 23)



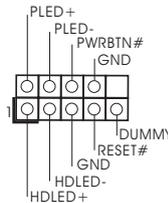
These connectors allow you to receive stereo audio input from sound sources such as a CD-ROM, DVD-ROM, TV tuner card, or MPEG card.

Front panel audio connector  
 (9-pin AUDIO1)  
 (see p.7 item 20)



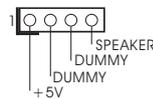
This is an interface for front panel audio cable that allows convenient connection and control of audio devices.

System panel connector  
 (9-pin PANEL1)  
 (see p.7 item 12)



This connector accommodates several system front panel functions.

External speaker connector  
 (4-pin SPEAKER 1)  
 (see p.7 item 15)



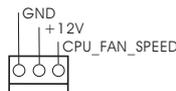
This connector allows you to attach to an external speaker.

Chassis fan connector  
 (3-pin CHA\_FAN1)  
 (see p.7 item 9)



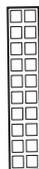
Connect the fan cable to the connector matching the black wire to the ground pin.

CPU fan connector  
 (3-pin CPU\_FAN1)  
 (see p.7 item 3)



Connect the fan cable to the connector matching the black wire to the ground pin.

ATX power connector  
 (20-pin ATXPWR1)  
 (see p.7 item 1)



Connect an ATX power supply to the connector.

---

# Chapter 3 BIOS Setup

## 3.1 BIOS Setup Utility

This section explains how to configure your system using the BIOS Setup Utility. The Flash Memory on the motherboard stores the BIOS Setup Utility. When you start up the computer, there is a chance for you to run the BIOS Setup. Press <F2> during the Power-On-Self-Test (POST) to enter the BIOS Setup Utility, otherwise, POST continues with its test routines.

If you wish to enter the BIOS Setup after POST, restart the system by pressing <Ctl> + <Alt> + <Delete>, or by pressing the reset button on the system chassis. You can also restart by turning the system off and then back on.



Because the BIOS software is constantly being updated, the following BIOS setup screens and descriptions are for reference purpose only, and may not exactly match what you see on your screen.

## 3.2 BIOS Setup Utility Main Menu

When you enter the BIOS Setup utility, the following screen appears:

AMIBIOS SETUP UTILITY - VERSION 3.31a			
X533 BIOS P1.0			
Standard CMOS Setup Advanced CMOS Setup Advanced Chipset Setup Power Management Setup PCI / Plug and Play Setup Peripheral Setup Hardware Monitor Setup Change Supervisor Password Change User Password Auto Configuration with Optimal Settings Save Settings and Exit Exit Without Saving			
<b>F1: Help</b> <b>Esc: Exit</b>	<b>F1</b> : Select Item -- : Select Menu	<b>+/-</b> : Change Values Enter: Select   ▶Sub-Menu	<b>F9</b> : Setup Defaults <b>F10</b> : Save & Exit
Set Time, Date, Hard Disk Type...			

The main menu of the Setup Utility displays a list of the options that are available. The highlighted item is currently selected. Use ↑ ↓ arrow keys to move the highlight bar to select items, then press <Enter> to make configuration for a specific item.

---

### 3.3 Legend Bar

At the bottom of all the Setup Screen is a legend bar. The following table lists the keys in the legend bar with their corresponding functions:

Navigation Key(s)	Function Description
<F1>	Displays the General Help Screen
<ESC>	Jumps to the Exit menu or returns to the upper menu from the current menu
↑ / ↓	Moves cursor up or down between fields
← / →	Selects menu to the left or right
+ / -	Increases or decreases values
<Enter>	Brings up a selected menu for a highlighted field
<F9>	Loads all values to the Setup Defaults
<F10>	Saves changes and exits Setup

### 3.4 Standard CMOS Setup

This menu lists out the basic information about your system.

Standard CMOS Setup		[ Setup Help ]
System Date	Feb 10 2003 Mon	Month: Jan - Dec
System Time	20:07:40	Day: 01 - 31
		Year: 1980 - 2099
▶ Floppy Drives		
▶ IDE Devices		
BIOS Version	X533 BIOS P1.00	
Processor Type	Pentium (R) 4 Family CPU	
Processor Speed	2400 MHz	
Cache Size	512 KB	
Microcode Update	F24 / 0F	
Total Memory	512 MB	
DDR1	512 MB / 266 MHz	
DDR2	None	
SDR1	None	
SDR2	None	
F1:Help	F10:Select Item	+/-:Change Values
Esc:Previous Menu	Enter:Select	F9:Setup Defaults
		F10:Save & Exit

#### System Date [Month/Day/Year]

Set the system date that you specify. Valid values for month, day, and year are Month: [Jan to Dec], Day: [1 to 31], Year: [1980 to 2099]. Use ↑ ↓ keys to move between the Month, Day and Year fields.

#### System Time [Hour:Minute:Second]

Set the system to the time that you specify. Use ↑ ↓ keys to move between the Hour, Minute and Second fields.

#### Floppy Drives

Use this to set the type of floppy drives installed.

---

## IDE Devices

Use this to configure IDE devices.

There are two IDE channels (Primary and Secondary) available in your system, and each channel can be installed with one or two devices (Master and Slave).

Use these items to configure each device on the IDE channel.

Highlight "Primary IDE Master" then press <Enter> to display the submenu:

AMIBIOS SETUP UTILITY - VERSION 3.31a	
Primary IDE Master:	[ Setup Help ]
Type <b>Auto</b>	Select how to set the parameters of drive,
Cylinders	Or
Heads	Select [AUTO] to set all HDD parameters automatically.
Write Precompensation	
Sectors	
Maximum Capacity	
LBA Mode	Off
Block Mode	Off
Fast Programmed I/O Modes	Auto
32 Bit Transfer Mode	Off
Ultra DMA Mode	Auto
F1:Help	F9:Setup Defaults
Esc:Previous Menu	F10:Save & Exit
↑:Select Item	
+/-:Change Values	
Enter:Select	▶Sub-Menu

## TYPE

It allows user to select the type of the IDE Drive. Below are the configuration options. After making your selections on this sub-menu, press <ESC> key to return to the upper menu, in which the hard disk drive field will display the size for the hard disk drive that you configured.

**[USER]:** It allows user to manually enter the number of cylinders, heads, and sectors per track for the drive.



Before attempting to configure a hard disk drive, make sure you have the correct configuration information supplied by the drive manufacturer. Incorrect settings may cause the system to fail to recognize the installed hard disk.

**[Auto]:** Select [Auto] to automatically detect hard disk drive. If auto-detection is successful, the BIOS Setup automatically fills in the correct values for the remaining fields on this sub-menu. If the auto-detection fails, it may be due to that the hard disk is too old or too new. If the hard disk was already formatted on an older system, the BIOS Setup may detect incorrect parameters. In these cases, select [User] to manually enter the IDE hard disk drive parameters.



After entering the hard disk information into BIOS, use a disk utility, such as FDISK, to partition and format new IDE hard disk drives. This is necessary so that you can write or read data from the hard disk. Make sure to set the partition of the Primary IDE hard disk drives to active.

**[CD/DVD]:** This is used for IDE CD/DVD drives.

**[ARMD]:** This is used for IDE ARMD (ATAPI Removable Media Device), such as MO.

### **Cylinders**

This is used to configure the number of cylinders. Refer to the drive documentation to determine the correct value.

### **Heads**

This is used to configure the number of read/write heads. Refer to the drive documentation to determine the correct values.

### **Write Pre-compensation**

Enter Write Pre-compensation sector. Refer to the drive documentation to determine the correct value.

### **Sectors**

This is used to configure the number of sectors per track. Refer to the drive documentation to determine the correct value.

### **Maximum Capacity**

This field shows the drive's maximum capacity as calculated by the BIOS based on the drive information you entered.

### **LBA Mode**

This allows user to select the LBA mode for a hard disk > 512 MB under DOS and Windows; for Netware and UNIX user, select [Off] to disable the LBA mode.

### **Block Mode**

Set the block mode to [On] will enhance hard disk performance by reading or writing more data during each transfer.

### **Fast Programmed I/O Modes**

This allows user to set the PIO mode to enhance hard disk performance by optimizing the hard disk timing.

### **32 Bit Transfer Mode**

It allows user to enable 32-bit access to maximize the IDE hard disk data transfer rate.

### **Ultra DMA Mode**

Ultra DMA capability allows improved transfer speeds and data integrity for compatible IDE devices. Set to [Disabled] to suppress Ultra DMA capability.

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### 3.5 Advanced CMOS Setup

AMIBIOS SETUP UTILITY - VERSION 3.31a		
Advanced CMOS Setup		[ Setup Help ]
Quick Boot Mode	Enabled	<Enter> to enable or disable the quick boot mode.
Boot Up Num-Lock	On	
Boot To OS/2	No	
Password Check	Setup	
Boot From Network	Disabled	
▶ Boot Device Priority		
F1:Help Esc:Previous Menu	↑↓:Select Item	+/-:Change Values Enter:Select ▶Sub-Menu
		F9:Setup Defaults F10:Save & Exit

#### Quick Boot

This mode speeds up the boot-up routine by skipping memory retestings.

#### Boot Up Num-Lock

This automatically activates the Numeric Lock function after boot up.

#### Boot to OS/2

This enables boot up to OS/2 operating system.

#### Password Check

Select the check point for "Password Check". Configuration options: [Setup], [Always]. If [Setup] option is selected, the "Password Check" is performed before BIOS setup. If [Always] option is selected, the "Password Check" is performed before both boot-up and BIOS setup.

#### Boot From Network

Use this to enable or disable "boot from network" feature.

#### Boot Device Priority

Use this to select the priority and order of the devices that your system searches for an operating system at start-up time.

### 3.6 Advanced Chipset Setup

AMIBIOS SETUP UTILITY - VERSION 3.31a	
Advanced Chipset Setup	[ Setup Help ]
<b>Spread Spectrum</b>	<b>Disabled</b>
CPU Host Frequency	Auto
Actual Frequency	133MHz
CPU Ratio Selection	Locked
SDRAM Frequency	266MHz
AGP Mode	4x
AGP Aperture Size	64MB
CPU Read DRAM Fast Ready	Disabled
Read Around Write	Disabled
CPU R/W DRAM 0WS	Disabled
PCI Delay Transaction	Disabled
USB Controller	Enabled
USB Device Legacy Support	Disabled

<Enter> to enable or  
disable the feature of  
spread spectrum.

F1:Help	F4:Select Item	+/-:Change Values	F9:Setup Defaults
Esc:Previous Menu	Enter:Select	▶Sub-Menu	F10:Save & Exit

#### Spread Spectrum

This field should always be “Disabled” for better system stability.

#### CPU Host Frequency

This allows you to set the front side bus frequency for the installed processor.

##### [Auto]

The motherboard detects the jumper setup and sets the CPU host frequency automatically.

##### [Manual]

This allows user to set CPU host frequency manually. However, this is not recommended unless user thoroughly knows the feature. Wrong setup may cause problems during operation.

#### CPU Ratio Selection

This shows current CPU host frequency of the installed motherboard.

#### SDRAM Frequency

If [Auto] is selected, the motherboard will detect the memory module(s) inserted and assigns appropriate frequency automatically. You may also select [200MHz] or [266MHz] as the operating frequency for DDR, or you may select [100MHz] or [133MHz] as the operating frequency for SDR.

#### AGP Mode

The default is 4X. You can also choose 1X or 2X for older version of VGA cards.

#### AGP Aperture Size

It refers to a section of the PCI memory address range used for graphics memory. We recommend that you leave this field at the default value unless your AGP card requires other sizes.

---

**CPU Read DRAM Fast Ready**

The default is [Disabled]. Leave on the default value for better system stability.

**Read Around Write**

The default is [Disabled]. Leave on the default value for better system stability.

**CPU R/W DRAM OWS**

The default is [Disabled]. Leave on the default value for better system stability.

**PCI Delay Transaction**

Enable PCI Delay Transaction feature will free the PCI Bus when the CPU is accessing 8-bit ISA cards. Disable this feature when using ISA cards that are not PCI 2.1 compliant.

**USB Controller**

Use this to enable or disable the use of USB devices.

**USB Device Legacy Support**

Use this to enable or disable support to emulate legacy I/O devices such as mouse, keyboard,... etc.

### 3.7 Power Management Setup

AMIBIOS SETUP UTILITY - VERSION 3.31a		
Standard CMOS Setup		[ Setup Help ]
Suspend To RAM <S3>	Disabled	Set the power state after an unexpected AC / Power loss.
Repost Video on S3 Resume	Disabled	
<b>Restore on AC / Power Loss</b>	<b>Power Off</b>	
Ring-In Power On	Disabled	
PCI Devices Power On	Disabled	
PS / 2 keyboard Power On	Disabled	
RTC Alarm Power On	Disabled	
RTC Alarm Date	Every Day	
RTC Alarm Hour	00	
RTC Alarm Minute	00	
RTC Alarm Second	00	

F1: Help	F4: Select Item	+/-: Change Values	F9: Setup Defaults
Esc: Previous Menu		Enter: Select	F10: Save & Exit
		▶: Sub-Menu	

#### Suspend to RAM (S3)

This field allows you to select whether to auto-detect or disable the ACPI Suspend-to-RAM feature. Select [Auto] will enable this feature if the system supports it.

#### Repost Video on S3 Resume

This feature allows you to repost video on S3 resume. It is recommended to enable this feature under Microsoft® Windows® 98 / ME.

#### Restore on AC/Power Loss

This allows you to set the power state after an unexpected AC power loss. If [Power Off] is selected, the AC power remains off when the power recovers. If [Power On] is selected, the AC power resumes and the system starts to boot up when the power recovers.

#### Ring-In Power On

Use this to enable or disable Ring-in signals to turn on the system from the power-soft-off mode.

#### PCI Devices Power On

Use this to enable or disable PCI devices to turn on the system from the power-soft-off mode.

#### PS/2 Keyboard Power On

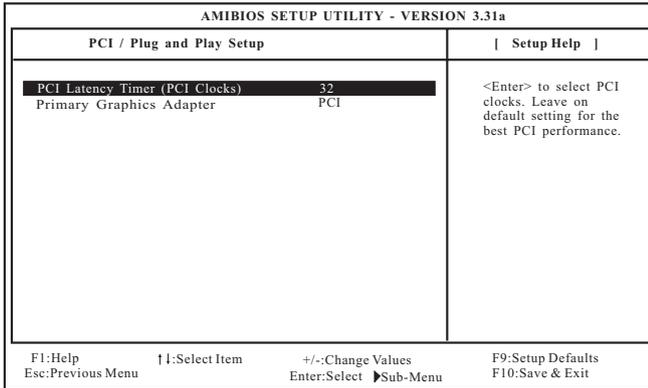
Select [Any Key] to enable PS/2 keyboard to turn on the system from the power-soft-off mode. Or you may select [Disabled] to disable this feature.

#### RTC Alarm Power On

Use this to enable or disable RTC (Real Time Clock) to power on the system. If [Enable] is selected, you must fill the RTC Alarm Date / Hour / Minute / Second sub-fields with the actual wake up time you desire.

---

## 3.8 PCI / Plug and Play Setup



### PCI Latency Timer (PCI Clocks)

The default is 32. We recommend you to keep the default value unless your PCI expansion cards' specifications require other settings.

### Primary Graphics Adapter

Select AGP or PCI as the primary graphics adapter.

## 3.9 Peripheral Setup

AMIBIOS SETUP UTILITY - VERSION 3.31a	
Peripheral Setup	[ Setup Help ]
OnBoard FDC	Auto
OnBoard Serial Port	Auto
OnBoard Infrared Port	Disabled
OnBoard Parallel Port	Auto
Parallel Port Mode	ECP + EPPI
EPP Version	1.9
Parallel Port IRQ	Auto
Parallel Port DMA Channel	Auto
OnBoard Midi Port	Disabled
Midi IRQ Select	5
OnBoard Game Port	200h
OnBoard IDE	Both
OnBoard LAN	Enabled
OnBoard AC'97 Audio	Auto

<Enter> to enable or  
disable the floppy  
drive controller.

F1:Help	↑:Select Item	+/-:Change Values	F9:Setup Defaults
Esc:Previous Menu		Enter:Select	F10:Save & Exit
		▶:Sub-Menu	

### OnBoard FDC

Use this to enable or disable floppy drive controller.

### OnBoard Serial Port

Use this to set addresses for the onboard serial ports or disable serial ports.

Configuration options: [Auto], [Disabled], [3F8 / IRQ4 / COM1], [2F8 / IRQ3 / COM2], [3E8 / IRQ4 / COM3], [2E8 / IRQ3 / COM4].

### OnBoard Infrared Port

This allows you to enable or disable the onboard infrared port feature.

Select [Auto] will enable this feature if the infrared module is installed.

### OnBoard Parallel Port

Select Parallel Port address or disable Parallel Port.

Configuration options: [Auto], [Disabled], [378], [278].

### Parallel Port Mode

Set the operation mode of the parallel port.

### OnBoard Midi Port

Select address for Midi Port or disable Midi Port.

Configuration options: [Disabled], [330], [300], [290], [292].

### Midi IRQ Select

Use this to select Midi IRQ. Configuration options: [5], [10], [11].

### OnBoard Game Port

Select address for Game Port or disable Game Port.

Configuration options: [Disabled], [200h], [208h].

---

**OnBoard IDE**

Select [Primary] or [Secondary] to enable either the primary IDE channel or the secondary IDE channel. Or you may select [Both] to enable both IDE channels. If it is set to [Disabled], it will disable the both.

Configuration options: [Disabled], [Primary], [Secondary], [Both].

**OnBoard LAN**

Enable or disable onboard LAN feature.

**OnBoard AC'97 Audio**

Select [Auto] or [Disabled] for the onboard AC'97 audio feature.

---

### 3.10 Hardware Monitor Setup

You may select “Hardware Monitor Setup” to check the status of the hardware on your system. It allows you to monitor the parameters for CPU temperature, Motherboard temperature, CPU fan speed, and critical voltage.

AMIBIOS SETUP UTILITY - VERSION 3.31a	
Hardware Monitor Setup	[ Setup Help ]
CPU Temperature	35°C
M / B Temperature	27°C
CPU FAN Speed	3110 RPM
Chassis Fan Speed	0 RPM
Vcore	1.72V
+ 3.30V	3.31V
+ 5.00V	4.97V
+ 12.00V	12.16V

F1:Help      ↑:Select Item      +/-:Change Values      F9:Setup Defaults  
Esc:Previous Menu      Enter>Select      ▶Sub-Menu      F10:Save & Exit

### 3.11 Change Supervisor Password / Change User Password

These two options allow you to specify the supervisor / user password. Valid password can be a 1 to 6 alphanumeric characters combination.

### 3.12 Auto Configuration with Optimal Settings

When you select this option, it will pop up a dialog box that lets you install optimized defaults for all appropriate items in the BIOS Setup Utility. Press <Enter> to install the default values. The optimized default setting place demands on the system that may be greater than the performance level of the components, such as the CPU and the memory. It may cause fatal errors or instability if you install the optimized defaults when your hardware does not support them.

### 3.13 Save Settings and Exit

Select this item and press <Enter> to save the changes that you have made and exit the BIOS Setup Utility.

### 3.14 Exit Without Saving

Select this item and press <Enter> to exit the BIOS Setup Utility without saving any changes.

---

# Chapter 4 Software Support

## 4.1 Install Operating System

This motherboard supports various Microsoft® Windows® operating systems: 98 SE/ ME/ 2000/ XP. Because motherboard settings and hardware options vary, use the setup procedures in this chapter for general reference only. Refer to your OS documentation for more information.

## 4.2 Support CD Information

The Support CD that came with the motherboard contains necessary drivers and useful utilities that enhance the motherboard features.

### 4.2.1 Running The Support CD

To begin using the support CD, insert the CD into your CD-ROM drive. The CD automatically displays the Main Menu if "AUTORUN" is enabled in your computer. If the Main Menu did not appear automatically, locate and double click on the file ASSETUP.EXE from the BIN folder in the Support CD to display the menus.

### 4.2.2 Drivers Menu

The Drivers Menu shows the available devices drivers if the system detects installed devices. Install the necessary drivers to activate the devices.

### 4.2.3 Utilities Menu

The Utilities Menu shows the applications software that the motherboard supports. Click on a specific item then follow the installation wizard to install it.

### 4.2.4 ASRock PC-DIY Live Demo Program

ASRock presents you a multimedia PC-DIY live demo, which shows you how to install your own PC system step by step. You can find the file through the following path:

..\MPEGAV\AVSEQ01.DAT

To see this demo program, you can run Microsoft® Media Player® to play the file.

### 4.2.5 Contact Information

If you need to contact ASRock or want to know more about ASRock, welcome to visit ASRock's website at <http://www.asrock.com>; or you may contact your dealer for further information.