



The Soul Of Computer Technology

SL-75DRV/75DRV-X

USER MANUAL v1.4

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NOTICE

This Users Guide & Technical Reference is to help system manufacturers and end-users set up and install the mainboard.

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ITEM LIST CHECKUP

- Mainboard
- Support CD
- User's Manual
- Bundled Bonus Pack CD
- Bundled Bonus Pack Manual
- Temperature Sensor Cable
- ATA66/100 IDE Cable
- RS232 Cable
- FDD Cable

CHAPTER 1

INTRODUCTION

- This chapter briefly introduces the characteristics of the mainboards. It includes the information regarding the chipset, CPU types, built-in functions and layout. Users will have more ideas about mainboards after reading this chapter.

This chapter contains the following topics :

1-1 MAINBOARD SPECIFICATION

1-2 MAINBOARD LAYOUT

1-3 CHIPSET DIAGRAM

1-1 MAINBOARD SPECIFICATION

1-1.1 PROCESSOR

- Supporting AMD Athlon Thunderbird processor up to 1.5GHz or above.
- Supporting AMD Athlon Duron processor up to 1.2GHz or above.
- Supporting 200MHz & 266MHz FSB bus.
- Supporting Processor VID(voltage ID) and FID(Frequency ID) auto detection.
- Supporting Athlon 4 Processors.

1-1.2 CHIPSET

- North Bridge VIA VT8366 KT-266 AMD ATHLON™ NORTH BRIDGE.
- South Bridge VIA VT8233 VLINK CLIENT HIGHLY INTEGRATED SOUTH BRIDGE.
- LPC I/O ITE 8705.

1-1.3 AWARD BIOS V6.0 SUPPORTING

- Plug & Play V1.0.
- Flash Memory for easy upgrade.
- Year 2000 compliant.
- BIOS writing protection.
- SmartDOC Anti-Burn shield.

1-1.4 SOUND CONTROLLER

- SoundBlaster Pro Hardware and Direct Sound Ready AC97 Digital Audio Controller with Codec onboard.

1-1.5 POWER MANAGEMENT

- ACPI 1.0 compliant (Advanced Configuration and Power Interface).
- APM V1.2 compliant (legacy power management).
- Supporting ACPI suspend STR mode (Suspend To DRAM) and POS mode (Power On Suspend).
- System event monitoring with two event classes.
- Supporting PS/2 Keyboard & Mouse power on.
- Supporting Wake On LAN (WOL) & Wake On Modem.
- Supporting real time clock (RTC) with date alarm, month alarm, and century field.
- USB boot-up Function.

1-1.6 FULL FEATURED ACCELERATED GRAPHICS PORTS (AGP) CONTROLLER

- AGP v2.0 compliant.
- Supports Side Band Addressing(SBA) mode (non-multiplexed address / data).
- Supporting 66MHz 1x, 2x, and 4x modes for AD and SBA signaling.

1-1.7 MULTI-I/O FUNCTION

- Two UltraDMA-33/66/100 Master Mode PCI EIDE ports.
- Two UARTs for complete Serial Ports.
- One dedicated IR connector:
 - At third serial port dedicated to IR function either through the two complete serial ports or the third dedicated port Infrared-IrDA (HPSIR) and ASK(Amplitude Shift Keyed) IR.
- Multi-mode parallel connector supporting:
 - Standard mode, ECP and EPP.
- Floppy Disk connector supporting:
 - One FDDs with drive swap function.
- Universal Serial Bus connector supporting:
 - USB v1.1 and Intel Universal HCI v1.1 compatible.
 - 2 built-in USB connectors, in addition to one internal USB header which requires a USB cable to support 2 more optional USB ports.
- PS/2 keyboard connector.
- PS/2 Mouse connector.

1-1.8 EXPANSION SLOTS

- Five PCI bus Master slots.
- One CNR slot.
- One AGP PRO 4x mode slot.
- Three 184-pin DIMM slots.
- One SCR (Smart Card Reader) slot.

1-1.9 ADVANCED HIGH PERFORMANCE SDR/DDR DRAM CONTROLLER

- Supporting memory size up to 3GB.
- Supporting 184-pin DDR SDRAM type only.
- Supporting PC1600 and PC2100 DDR SDRAM.

1-1.10 FORM FACTOR

- ATX form factor, 4- layer PCB.
- Mainboard size 22.0cm x 30.5cm.

1-1.11 HARDWARE MONITOR

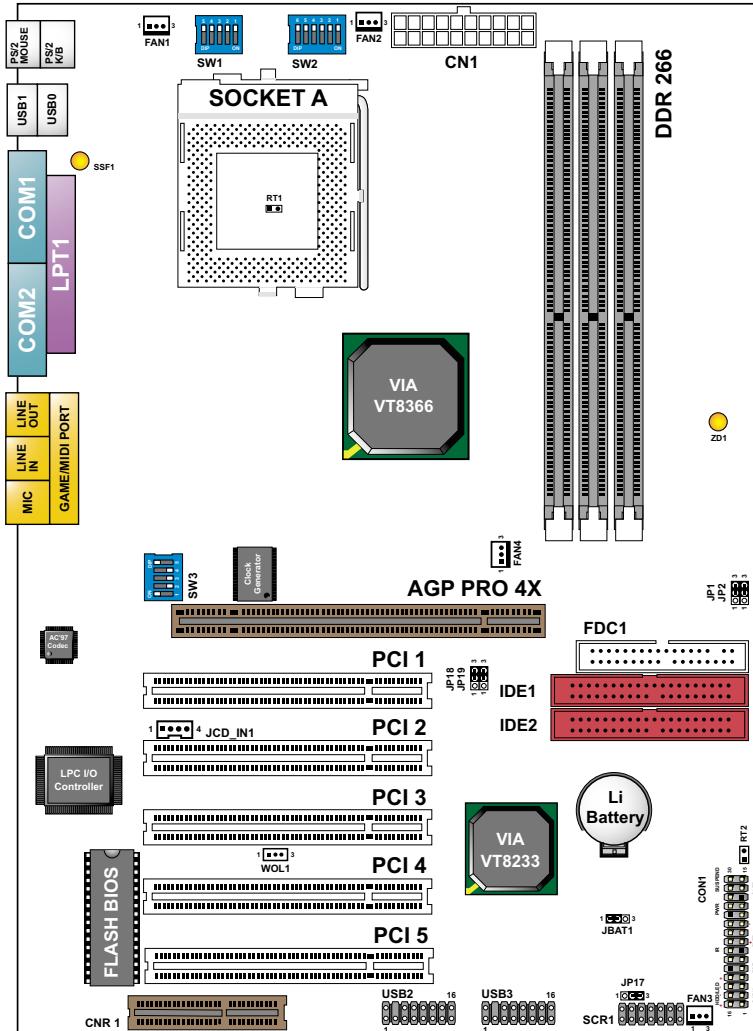
- Programmable control, status to provide, monitoring and alarm for flexible desktop management (software include).
- 5 positive voltage statuses monitoring.
- 2 temperatures statuses monitoring.
- 2 Fan-speeds statuses monitoring.

1-1.12 OTHERS

- Supporting VD-Tech II function (For 75DRV-X only).

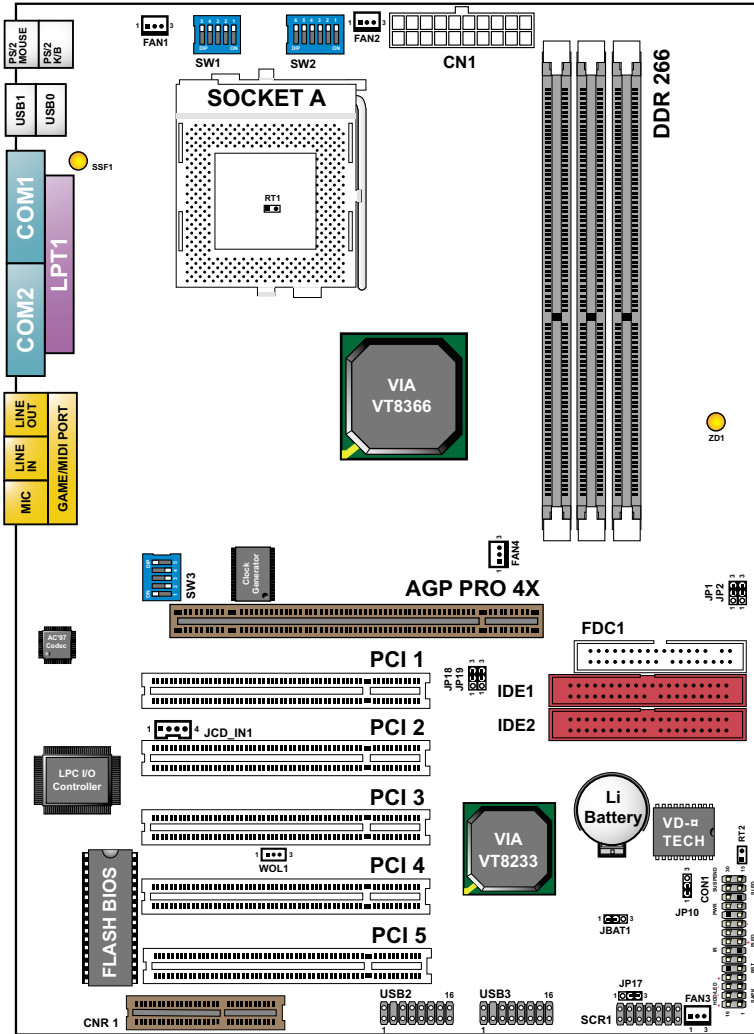
1-2 MAINBOARD LAYOUT

1-2.1 Mainboard Layout --- 75DRV



Using non-compliant memory with higher bus clock (over clocking) may severely compromise the integrity of system.

1-2.2 Mainboard Layout --- 75DRV-X



Using non-compliant memory with higher bus clock (over clocking) may severely compromise the integrity of system.

1-3 CHIPSET DIAGRAM--- 75DRV/75DRV-X

- The VT8366 and VT8233 chipset is a high performance, cost-effective and energy efficient system controller for the implementation of AGP / PCI / ISA desktop personal computer system based on 64-bit Socket-A (AMD Athlon) processors.

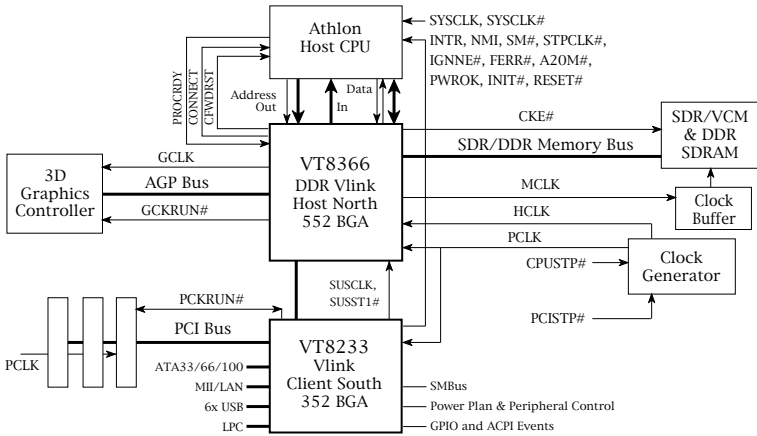


Diagram of Apollo Pro266 System Block Using the VT8233 V-Link South Bridge

MEMO

CHAPTER 2

HARDWARE SETUP

ATTENTION !!!

1. Please refer to your processor installation or other documentation attached to your CPU for detailed installing instruction.
2. Installing a heat sink and cooling fan is necessary for proper heat dissipation from your CPU. Incorrect installation may result in overheating and damage of your CPU.
3. Before changing the setting of CPU Vcore from BIOS program, user **SHOULD** make sure of correct specification both of CPU CLOCK and RATIO. Incorrect setting may cause damage to your CPU.

This chapter contains the following topics :

2-1 CPU INSTALLATION

2-2 MEMORY INSTALLATION

2-3 AGP PRO INSTALLATION

2-4 HDD/FDD INSTALLATION

2-5 SWITCH SETTING FOR CPU FREQUENCY AND VOLTAGE

2-6 JUMPER SETTING FOR DEVICES ON BOARD

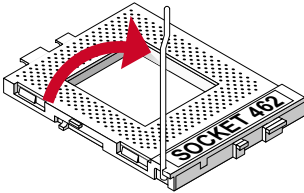
2-7 CONNECTORS CONFIGURATION

2-8 VOICE DIAGNOSTIC FUNCTION FOR 75DRV-X ONLY

2-1 CPU INSTALLATION

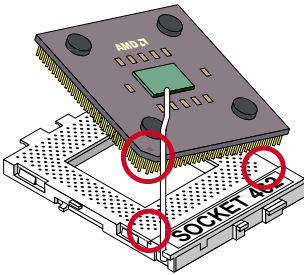
WARNING !!!

- Make sure that +5V DCV and +3.3 DCV capabilities of your power supply are suitable for the processor.
- Any attempt to operate the AMD Athlon or Duron processor without a suitable cooling Fan will damage processor and other component.



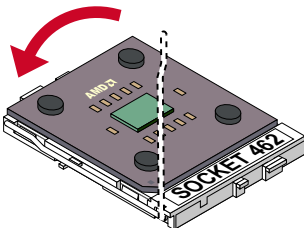
1

Pull out the lever from the socket, and then raise the lever up to a 90-degree angle.



2

Take notice of the red circles as shown below. While inserting the CPU into the socket, you can find out there is a definite pin orientation for CPU and socket.



3

Make sure that the CPU is placed into the socket tightly. Then lower down the level to complete the CPU installation.

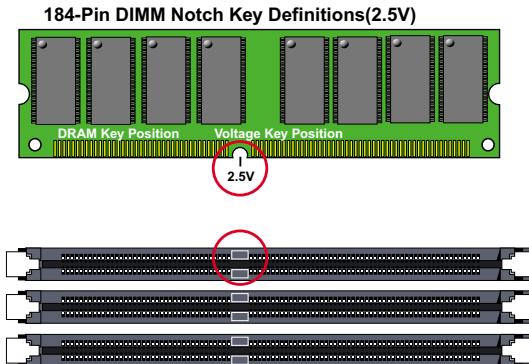
2-2 MEMORY INSTALLATION

WARNING!!!

- Make sure to unplug your power supply before adding or removing memory modules or other system components. Failure to do so may cause severe damage to both your mainboard and expansion cards.
- Be careful when inserting or removing DIMM. Forcing a DIMM in or out of a socket improperly may damage the memory module or the socket. Some DIMMs which contain EDO or FTP DRAM are incompliant with the mainboard. The M/B supports 2.5V true SDRAM DIMMs only.

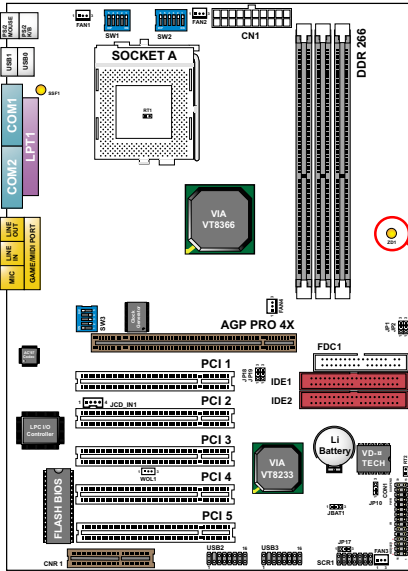
Installing DIMM

- Make sure you have the correct memory module type for your mainboard.
- Insert the module(s) as shown below, DIMMs have 184-pins and one notch that will be matched by the onboard DIMM socket. Memory modules are installed by inserting them straight into the slot until they “click” in the right place. They only fit in one direction, so do not force them in by a wrong direction.



Removing DIMM

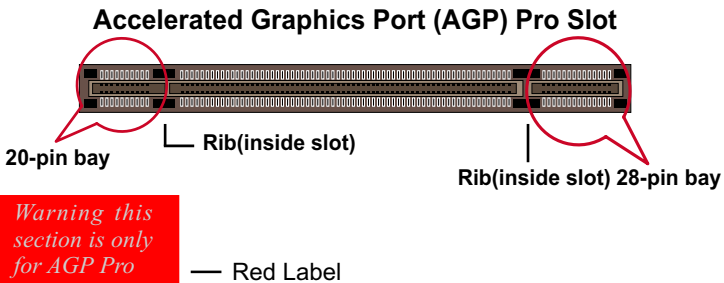
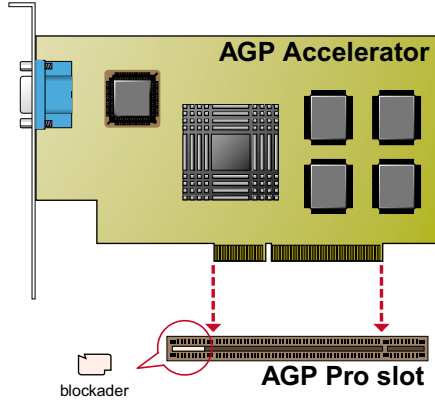
- Press down the holding clips on both sides of a DIMM socket and the module will be released from it.



NOTICE : When LED "ZDI" is on, meaning that 2.5V is operating and flowing into DIMM slots, please do not add or remove memory modules .

2-3 ACCELERATED GRAPHICS PORT(AGP) PRO INSTALLATION

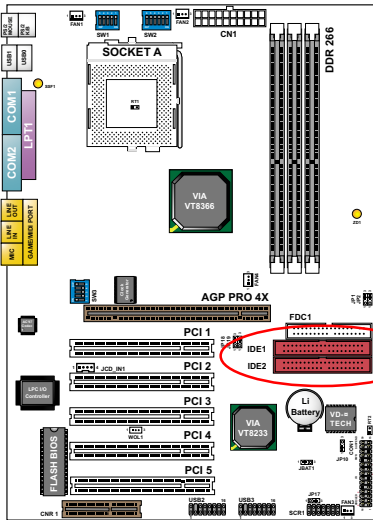
- The AGP Pro connector is an extension of the existing AGP connector and it is compatible with existing AGP cards.



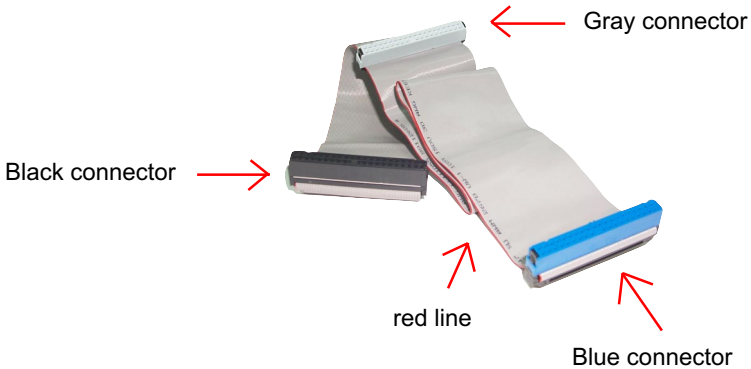
CAUTION!!
 The AGP Pro slot comes with a warning label over the 20-pin bay. Do not remove this label and the safety tab underneath if you use an AGP card without a retention notch. Without the labels, AGP cards may be placed into the wrong place, which certainly will damage your card, slot, and mainboard. Remove the label ONLY if you will be using an AGP Pro card.

2-4 HDD/FDD INSTALLATION

- To install HDD (Hard Disk Drive), you may connect the cable's blue connector to the mainboard's primary (IDE1) or secondary (IDE2) connector, and then connect the gray connector to your slave device and the black connector to your master device. If you install two hard disks, you must configure the second drive to Slave mode by setting its jumper accordingly. Please refer to your hard disk documentation for the jumper settings.

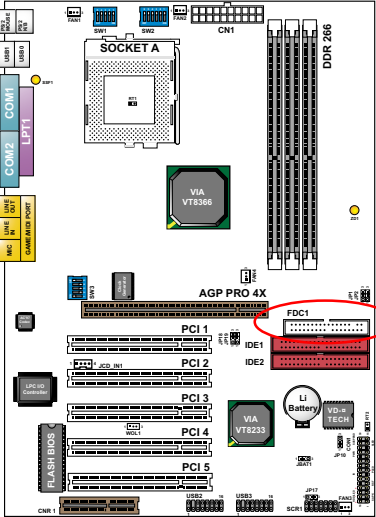


Hard Disk Drive Connector:
Orient the red line on the IDE
ribbon cable to Pin1.

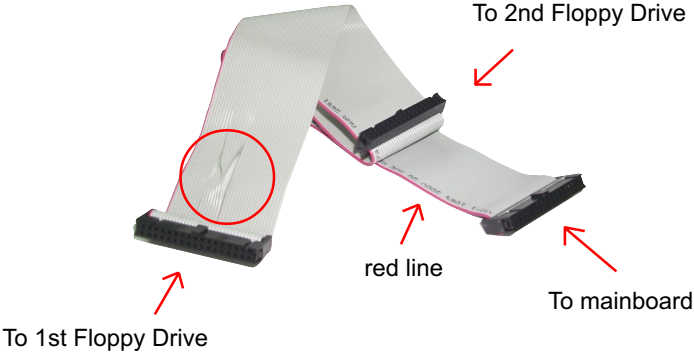


IDE Cable

- To install FDD (Floppy Disk Drive), you may connect the single end to the board , and connect two plugs on the other end to the floppy drives.



Floppy Disk Drive Connector:
Orient the red line on the floppy ribbon cable to Pin 1.

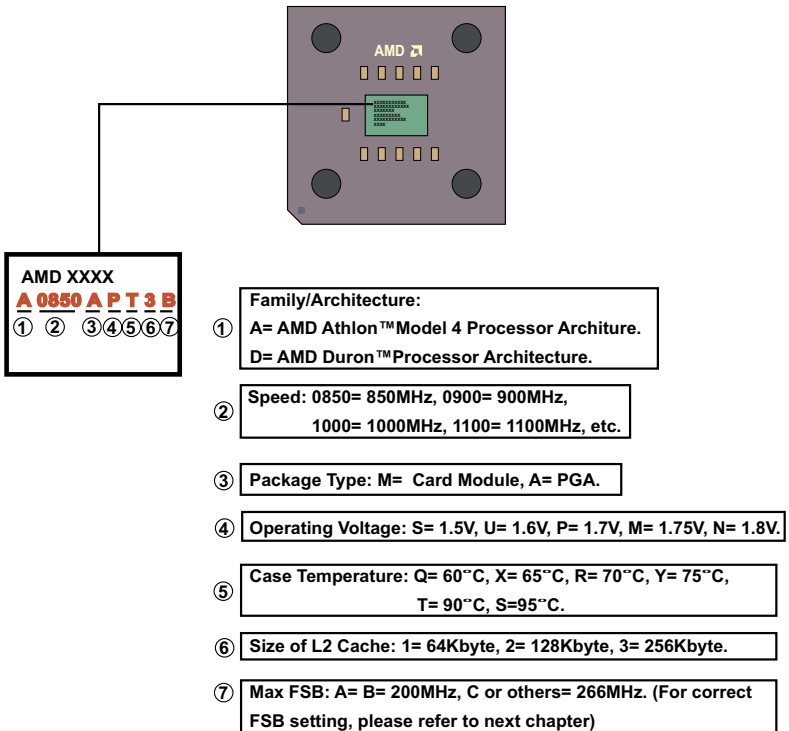


FDD Cable

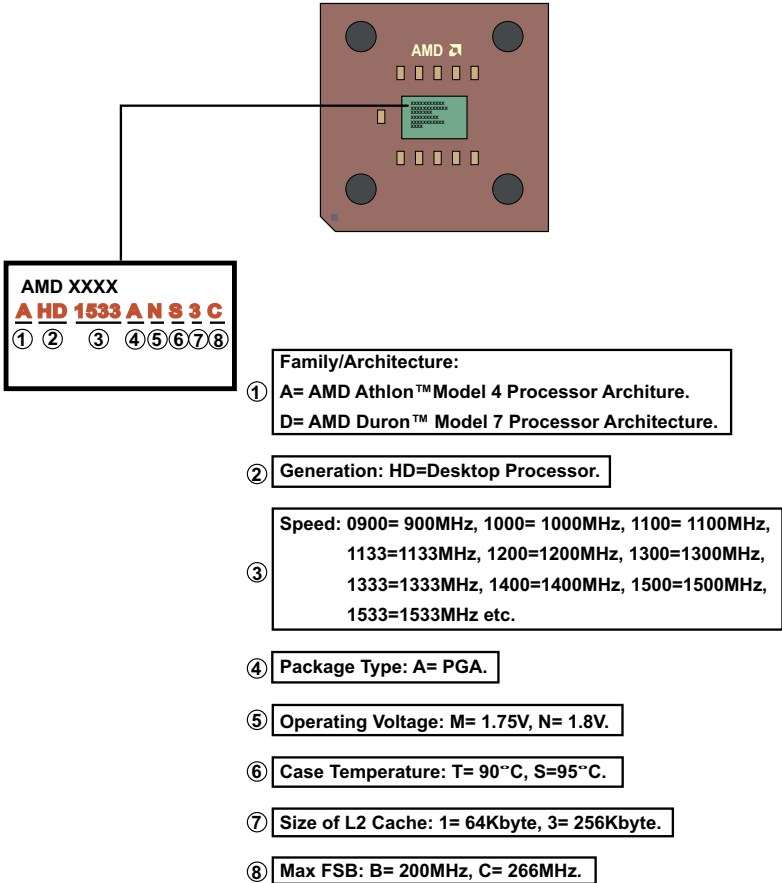
2-5 SWITCH SETTING FOR CPU FREQUENCY AND VOLTAGE

2-5.1 Information On AMD Socket 462 Processor (Model4, 5 Products)

- On the AMD Socket 462 Processor, you can find a codified identification marking which is to provide useful information about the CPU. The marking is interpreted as below.

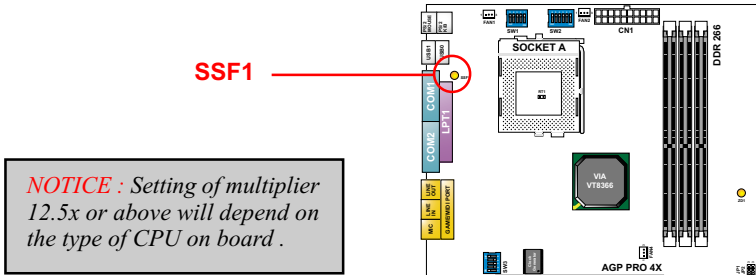


2-5.2 Information On AMD Socket 462 Processor (Model 6, 7 Products)



2-5.3 Frequency Ratio Select (By SW1 DIP1-DIP5)

- The AMD Athlon and Duron processors provides four Frequency ID signals (FID) for the system controller to indicate the SYSTCLK multiplier at which the processor core operates. Normally, multiplier (or bus ratio) is detected automatically. Therefore, if the processor does not support the function, then "Bus Ratio" can not be selected.
- When DIP5 of SW1 is on, LED "SSF1" will be on, and light is on, it means that Bus Ratio Select Function is enabled. So as long as your CPU supports Bus Ratio Select function, then Bus Ratio can be selected by users.



NOTICE : Setting of multiplier 12.5x or above will depend on the type of CPU on board .

SW1 DIP1 ~ DIP4 SETTING				SW1 DIP5
5.5x		6.0x		Bus ratio detected by FID (Auto)
6.5x		7.0x		
7.5x		8.0x		
8.5x		9.0x		Bus ratio selected by SW1 DIP 1-4
9.5x		10.0x		
10.5x (Default)		11.0x		
11.5x		12.0x		SW1 DIP 5 allows you to enable or disable the "Frequency Ratio Select" function.
* 12.5x or 13.0x		14.0x		






* Setting of will depend on the type of CPU on board Multiplier 12.5x or above.

2-5.4 Processor Core Voltage Select (By SW2 DIP1-DIP6)

- DIP1-DIP6 SW2 allow you to adjust processor core **voltage** manually. **We recommend to leave SW2 DIP1 at default**, the default means the correct processor core voltage is generated according to VID of CPU.

SW2 DIP2 ~ DIP6 SETTING						SW2 DIP1
0.0v (Default)		1.100v		1.125v		<p>Auto (Default)</p>
1.150v		1.175v		1.200v		
1.225v		1.250v		1.275v		
1.300v		1.325v		1.350v		
1.375v		1.400v		1.425v		
1.450v		1.475v		1.500v		
1.525v		1.550v		1.575v		
1.600v		1.625v		1.650v		
1.675v		1.700v		1.725v		
1.750v		1.775v		1.800v		
1.825v		1.850v		<p>By DIP 2-6</p>		
						<p>SW2 DIP 1 allows you to enable or disable "Processor Core Voltage Select" function.</p>

2-5.5 CPU External Frequency Setting (By SW3)

SW3	CPU EXTERNAL CLOCK	PCI CLOCK	FSB CLOCK
	100MHz (Default)	33.3MHz	200MHz
	120MHz	30.0MHz	240MHz
	133.3MHz	33.3MHz	266MHz
	140MHz	35.0MHz	280MHz
	150MHz	37.5MHz	300MHz

IMPORTANT:

- Do figure out the correct processor type by processor's OPN (Ordering Part Numbers). Correct CPU external frequency is key to ensure reliability of your system.
- Incorrect CPU external frequency or overclocking might cause unstable performance, so we strongly recommend to leave "SW1" at default setting or legal operation.

2-6 JUMPER SETTING FOR DEVICES ON BOARD

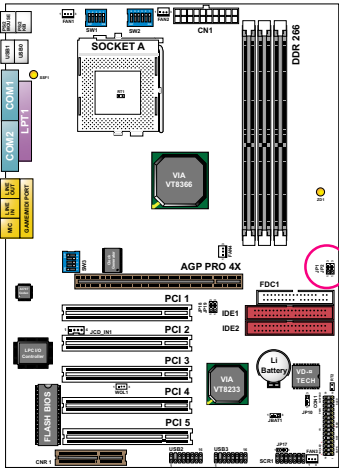
- The following diagrams show the location for jumper blocks on the mainboard.

CAUTION !!

- *Do not remove the jumper when power is on. Always make sure the power is off before changing any jumpers. Otherwise, mainboard could be damaged.*
- *All jumper pins covered with black marks are closed pins.*

2-6.1 JP1/JP2 Memory Module Voltage Select

This function allows you to select the voltage supplied to the DRAM. The default voltage (2.5V) should be used unless processor overclocking requires a higher voltage.

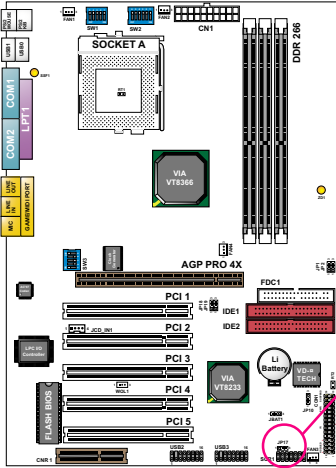


Memory Module Voltage Select:

2.5V (default)	JP1	JP2	1	3	1	3
2.6V	JP1	JP2	1	3	3	1
2.7V	JP1	JP2	3	1	1	3

NOTE: *Using a higher voltage may boost the overclocking performance but this may result in the shortening of your computer components's life. It is strongly recommended that you leave the voltage setting default.*

2-6.2 JP17 Power Lost Resume

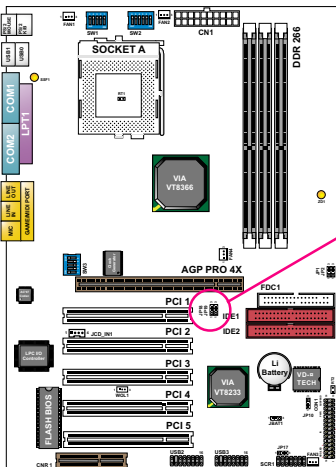


Power Lost Resume:

Normal (default)	JP17	
Enabled	JP17	

NOTE: This jumper allows user to use the switch of ATX power supply to control ON/OFF switch directly instead of using the power switch on the mainboard.

2-6.3 JP18/19 AGP Voltage Select

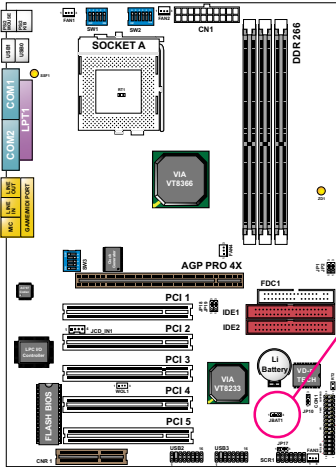


AGP Voltage Select:

1.5V (default)	JP18	JP19		
1.6V	JP18	JP19		
1.7V	JP18	JP19		

2-6.4 JBAT1 For Clear CMOS Data

A battery must be used to retain the mainboard configuration in CMOS RAM.



JBAT1 For Clear CMOS Data:

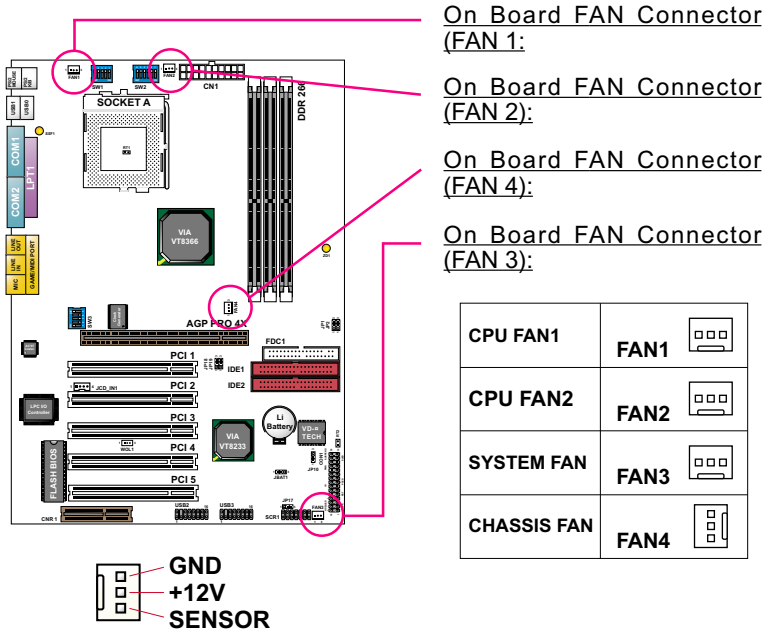
Clear CMOS Data	JBAT1	<input type="checkbox"/> 1 <input checked="" type="checkbox"/> 3
Retain Data (default)	JBAT1	<input checked="" type="checkbox"/> 1 <input type="checkbox"/> 3

NOTE: You can clear CMOS by 2-3 pin closed when the system is POWER OFF. Then, return to 1-2 pin closed position (default). You may damage the mainboard if clearing the CMOS with POWER ON. Unplugging the power cord from power supply before clearing CMOS will be a safest bet for user.

2-7 CONNECTORS CONFIGURATIONS

- This section lists out all connectors configurations for users' reference.

2-7.1 On Board FAN Connector (FAN1, FAN2, FAN3, FAN4)



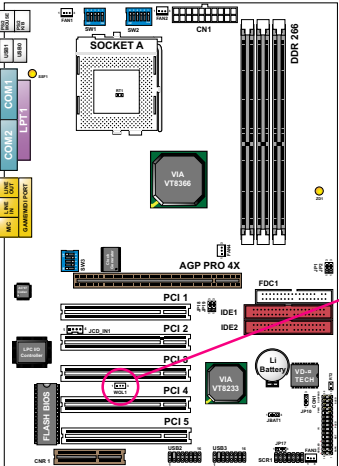
These fan connectors support CPU/System chassis cooling fan with +12V. When connecting wire to FAN connectors, users should pay attention that the red wire is for the positive current and should be connected to pin +12V, and the black wire is Ground and should be connected to pin GND. If your motherboard has Hardware Monitor chipset on-board, you must use a specially designed fan with speed sensor to take advantage of this function.

For fans with speed sensors, each rotation of the fan blades will send out 2 electric pulses, by which System Hardware Monitor will work out the fan rotation speed by counting the pulses.

NOTE 1: Always consult vendor for proper CPU cooling fan.

NOTE 2: CPU FAN is supported by Hardware Monitor, with a warning will be given out to high CPU temperature.

2-7.2 WOL1 Wake On LAN

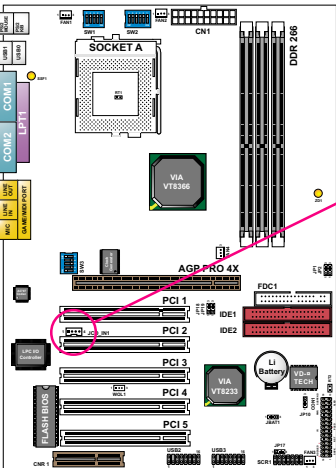


Wake On LAN:

Connect the Wake On LAN signal from LAN card to WOL1	 WOL1
--	---

This connector connects to a LAN card with a Wake On LAN output. The connector powers up the system when it receives a wake-up packet or signal through the LAN card. This feature requires that Wake On LAN feature is enabled in the BIOS setting called **“Power Management Setup”** and that your system must be on ATX power supply with at least **720mA / +5V standby** power.

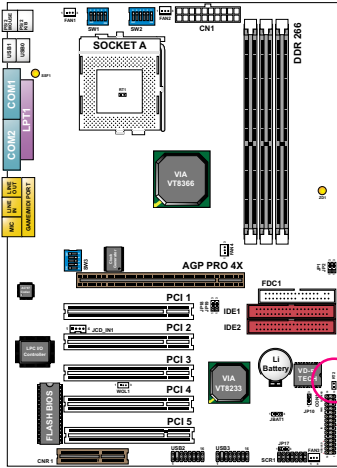
2-7.3 CD-ROM Audio Connector (JCD_IN1)



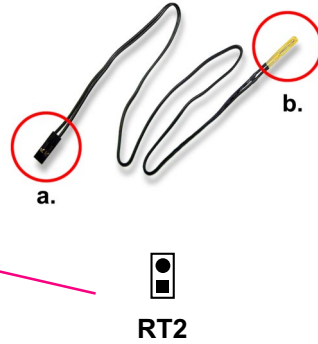
CD-ROM Audio Connector:

PIN NO.	JCD_IN1
PIN 1	GND
PIN 2	Left Channel
PIN 3	GND
PIN 4	Right Channel

2-7.4 Thermal Sensor Connector (RT2)



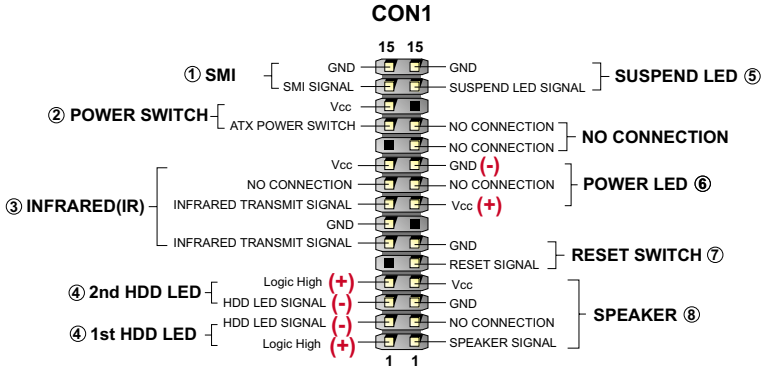
Thermal Sensor Connector (RT2):



We provide a thermal cable in the mainboard package. This thermal cable is to monitor device which will generates a lot of heat, such as HDD, Graphics card etc. Please connect one end of the thermal cable (A) to mainboard RT2 header, and tape another end of thermal cable (B) on to the device which you want to monitor. After you have finished the thermal cable installation, you will **see the detected temperature in BIOS setup or Hardware monitor utility.**

2-7.5 Complex Header CON1

- This complex Header consists of 9 connectors providing various supports:



1. SMI Connector (System Management Interrupt):

CONNECTION: This 2-pin connector is connected to the case-mounted Suspend Switch or to the “Turbo Switch”.

FUNCTION: Manually placing the system into a Suspend mode or “Green” mode.

2. Power Switch Connector:

CONNECTION: Connected to a momentary button or switch.

FUNCTION: Manually switching the system between “On” and “Soft Off”. Pressing the momentary button for more than 4 seconds will also turn the system off.

3. IR Connector (Infrared Connector):

CONNECTION: Connected to Connector IR on board.

FUNCTION: Supporting wireless transmitting and receiving module on board.

4. 1st HDD LED Connector / J2 2nd HDD LED Connector:

CONNECTION: Connected to HDD LED.

FUNCTION: To supply power to HDD LED.

5. Suspend LED Connector:

CONNECTION: Connected to Suspend indicator.

FUNCTION: To supply power to “Suspend indicator”.

6. Power LED Connector:

CONNECTION: Connected to System Power LED.

FUNCTION: To supply power to “System Power LED”.

7. Reset Switch Connector:

CONNECTION: Connected to the case-mounted “Reset Switch”.

FUNCTION: To supply power to “Reset Switch” and support system reboot function.

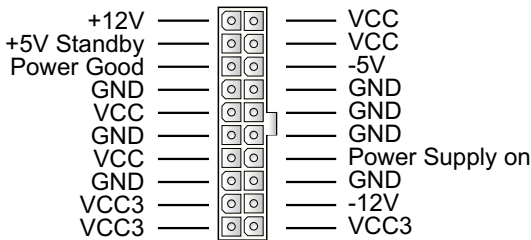
8. Speaker Connector:

CONNECTION: Connected to the case-mounted Speaker.

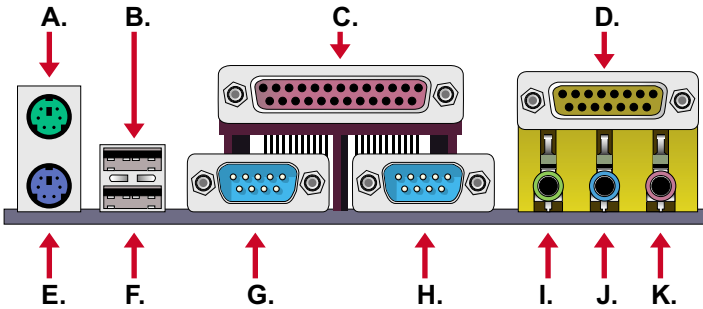
FUNCTION: To supply power to the case-mounted Speaker.

2-7.6 ATX Power Supply Connector

- This connector connects to an ATX power supply. The plug from the power supply should only be inserted to ATX Power connector in a specific orientation. Find the proper orientation and push it down firmly to make sure that all pins are aligned.
- Your power supply should support at least 10mA on the 5V standby voltage. It may cause difficulty to turn on the system power if the power supply does not support the load.
- **For Wake On LAN function, the power supply should support at least 720mA current.**



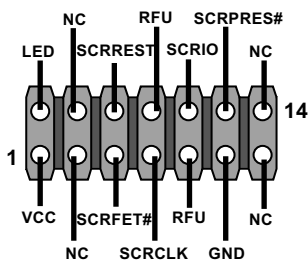
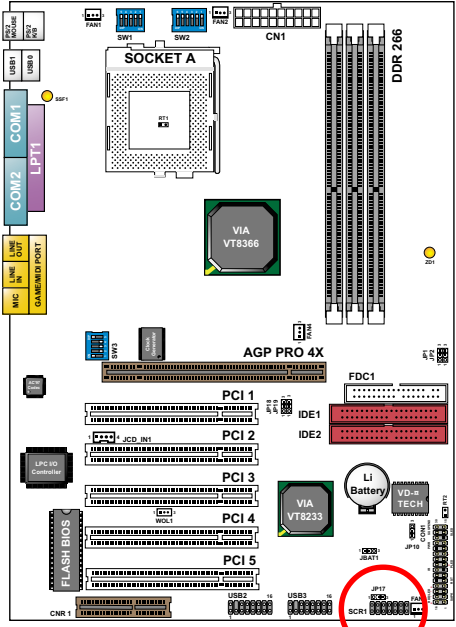
2-7.7 Chassis Panel Connector



- A : PS/2 MOUSE PORT
- B : USB 0 PORT
- C : LPT1 PORT
- D : GAME/MIDI PORT
- E : PS/2 KEYBOARD PORT
- F : USB 1 PORT
- G : COM 1 PORT
- H : COM 2 PORT
- I : LINE OUT / SPEAKER OUT PORT
- J : LINE IN
- K : MICROPHONE

2-7.8 Smart Card Reader Connector (SCR1)

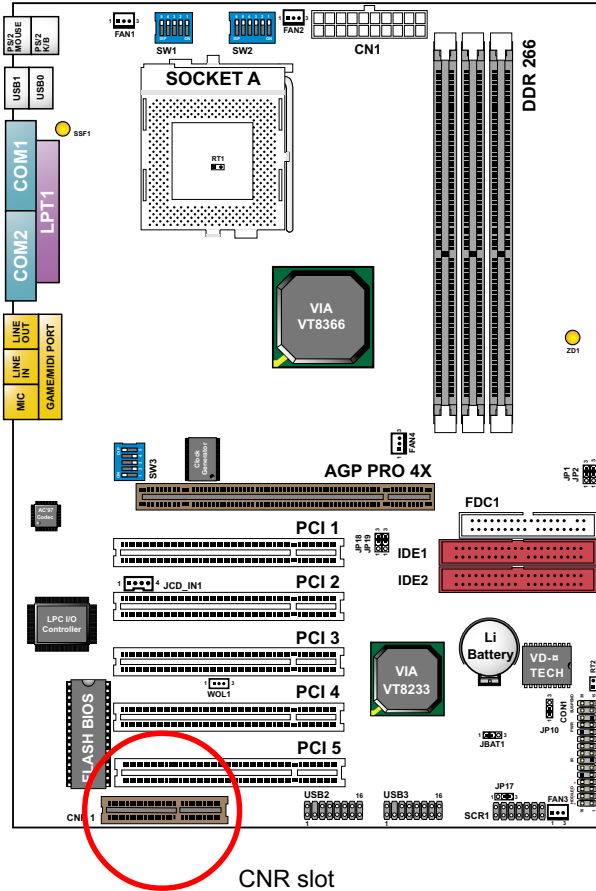
- The connector “SCR1” allows you to use Smart Card Reader. It is compliant with Personal Computer Smart Card (PC/SC) working group standard and smart card (ISO 7816) protocols.



SCR1 pin assignment

2-7.9 Communication And Networking Riser Slot (CNR)

- This connector allows you to use network, modem or audio riser cards.

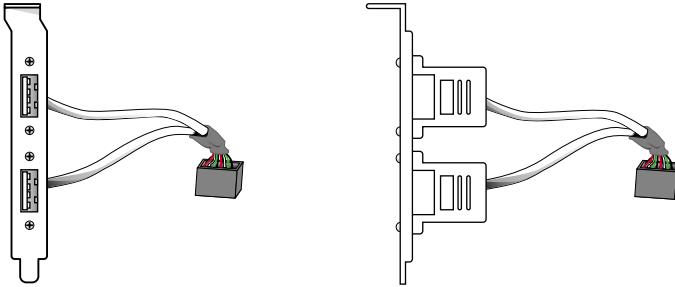


Note:

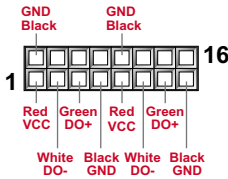
1. If modem CNR is installed, the modem CNR must be set as primary.
2. Only one LAN CNR can be supported.
3. The audio CNR must be set as secondary, if on-chip AC 97 is enabled.
4. CNR devices are not provided with this mainboard.

2-7.10 USB Header (USB2/USB3 Header)

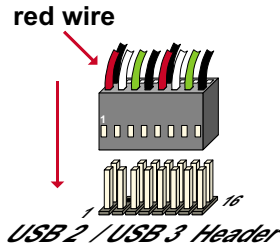
- This header is for connecting the additional USB cable to provides you additional two USB ports. User can order the additional USB cable from your mainboard dealer and vender.



Additional USB Cable (Optional)



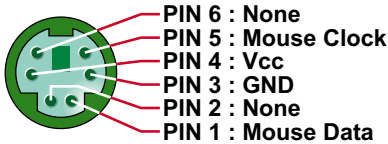
USB 2 / USB3 Header



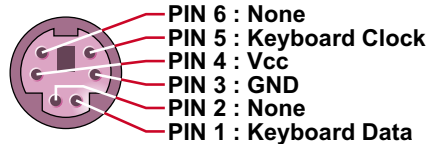
USB 2 / USB 3 Header

- When plugging the USB cable into USB2/USB3 HEADER, users must make sure the red wire is connected to the first pin.

2-7.11 PS/2 Mouse And PS/2 Keyboard



PS/2 MOUSE



PS/2 KEYBOARD

2-8 VOICE DIAGNOSTIC FUNCTION FOR 75DRV-X ONLY

- A Voice Diagnostic Function is incorporated in “Advanced BIOS Features” of the “Award BIOS Setup” as “VD-Tech II Function”. With this function enabled in “Advanced BIOS Features”, it will voice out the problems or conflicts whenever user configures the components or boots up the PC system.
- The voice can be in chinese or English, depending on the setting of Jumper JP10. Change the setting of JP10 will change the language of the voice.

English Voice Content

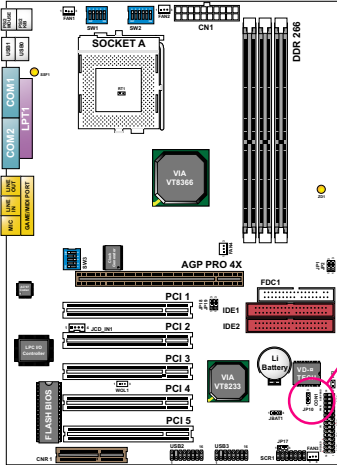
1. The Processor might be damaged or not installed properly.
2. The memory module might be damaged or not installed properly.
3. The VGA card might be damaged or not installed properly.
4. The IDE cable might be damaged or not installed properly.
5. Please clear CMOS setting.
6. System available.

國語語音內容





1. 中央處理器可能損壞或未插好。
2. 記憶體模組可能損壞或未插好。
3. 顯示卡可能損壞或未插好。
4. IDE排線可能損壞或未插好。
5. 請清除CMOS設定。
6. 系統開機成功。

2-8.1 JP10 VD-Tech II Language Select

With “VD-Tech II Function” enabled in “Advanced BIOS Features” of Award BIOS Setup, you can choose either Chinese or English as the language of the VD-Tech II Function.



Voice Diagnostic Language Select:

English (default)	  JP10
Chinese	  JP10

MEMO

CHAPTER 3

SOFTWARE SETUP

ABOUT SUPPORT CD

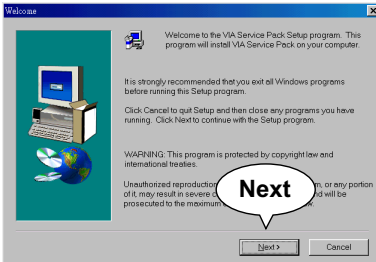
- In Support CD, it contains most informations for user's requirement, such as Acrobat Reader, BIOS, User's full version Manual, Driver, Hardware Monitor (if mainboard supports this function), Patch, and Utilities etc. User can browse the CD and get further details in regard of our mainboard. Of course, welcome to vendor's website for the newest release.

This chapter contains the following topics :

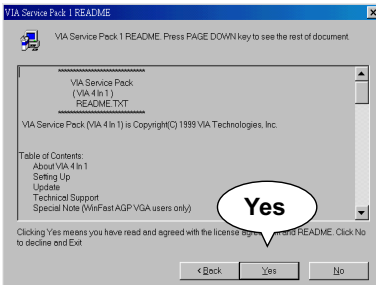
- 3-1 VIA CHIPSET DRIVER INSTALLATION
(4-IN-1 DRIVER)**
- 3-2 HARDWARE MONITOR INSTALLATION**
- 3-3 AC'97 AUDIO CODEC INSTALLATION**

3-1 VIA CHIPSET DRIVER INSTALLATION (4-IN-1 DRIVER)

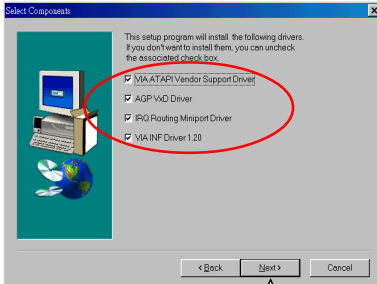
- 1 • Please put the Support CD provided in your mainboard package into the CD-ROM drive.
- 2 • When a welcome window appears on the screen, users should choose “Install Driver”.
- 3 • Click on the “VIA Chipset Driver(2)”.
- 4 • Click on the “4-in-1 driver”.
- 5 • Click on the “Install via 4-in-1 driver” to continue.



- 6 • When the welcome screen appears, press “Next” button to continue.



- 7 • “VIA Service Pack README” screen will appear, please click the “Yes” button to continue.



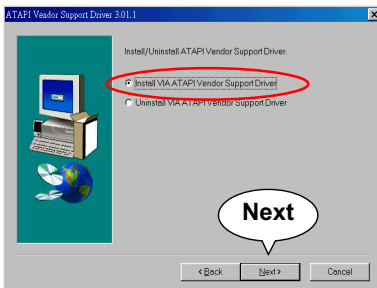
Next

8

• Press select the checkbox as below:

- Bus Master PCI IDE Driver
- AGP VxD Driver
- VIA Chipset Function's Registry
- IRQ Routing Miniport Driver

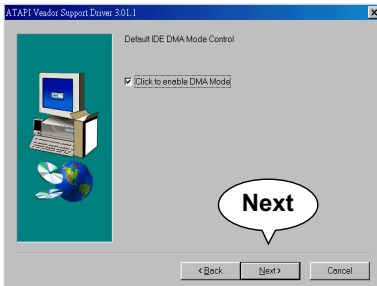
Note: For user who are upgrading VIA Drivers, we recommend to install the 4-in-1 as it will automatically detect and update the necessary drivers.



Next

9

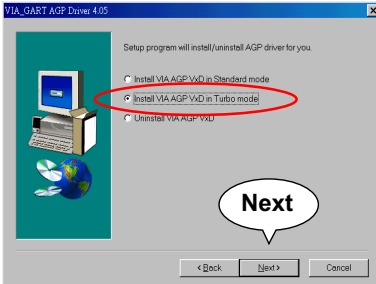
• Select “Install VIA ATAPI Vendor Support Driver” checkbox, then click the “Next” button to continue.



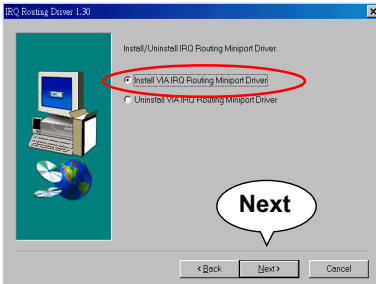
Next

10

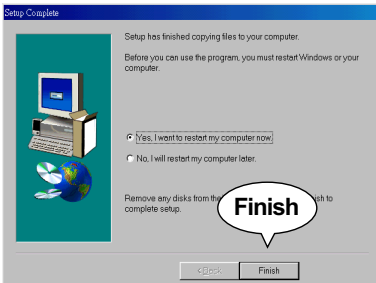
• Click on “Click to enable DMA Mode” checkbox to enable DMA function, then click the “Next” button to continue.



- 11**
- Select “Install VIA AGP VxD” in turbo mode and press **Next** button to continue.



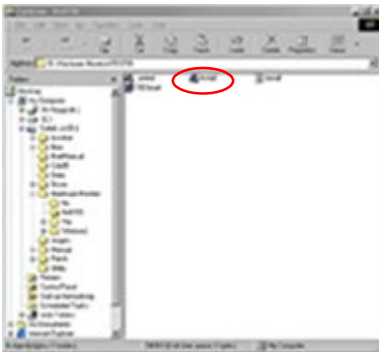
- 12**
- Select “Install VIA IRQ Routing Miniport Driver” checkbox, then click the “Next” button to continue.



- 13**
- After all these setup procedures have finished, please restart your computer by clicking on “Finish”.

3-2 HARDWARE MONITOR INSTALLATION

- 1 • Please put the Support CD provided in your mainboard package into the CD-ROM drive.
- 2 • When a welcome window appears on the screen, users should choose “**Install Driver**”.
- 3 • Click on the “**VIA Chipset Driver(2)**”.
- 4 • Click on the “**Hardware Monitor Utility**”.
- 5 • Click on the “**Explore CD**” or user can install it through directory CD-ROM \hardware monitor utility\ITE\install.exe.



- 6 • When “**Exploring-ITE 8705**” window appears, please click on the file “**Install**”.



- 7 • After which Follow the instruction on screen to complete the installation.



8 • Click on the “OK” button.



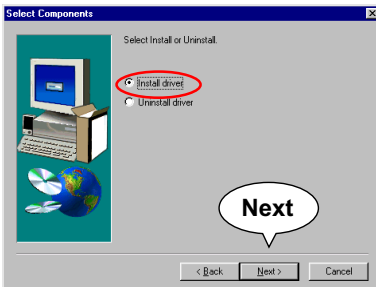
9 • The following screen shows the ITE SMARTGUARDIAM, which shows the information about system temperatures, voltages and Fan speed. You can also change some Value settings for your system to optimize its performance.

3-3 AC'97 AUDIO CODEC DRIVER INSTALLATION

- 1 • Please put the Support CD provided in your mainboard package into the CD-ROM drive.
- 2 • When a welcome window appears on the screen, users should choose “Install Driver”.
- 3 • Click on the “VIA Chipset Driver(2)”.
4 • Click on the “AC'97 driver”.



- 5 • Press “Next” button to continue.



- 6 • When asking you install or remove the audio driver, please select “Install” and press “Next” button to continue.



- 7 • After all the setup process is finished, please restart your computer by clicking on “Finish”.



CHAPTER 4

BIOS SETUP

THE BIOS

- BIOS stands for Basic Input and Output System. It is sometimes called ROM BIOS because it is stored in a Read-Only Memory(ROM) chip on the mainboard. BIOS is the first program to run when you turn on your computer.
- BIOS performs the following functions:
 1. Initializing and testing hardware in your computer (a process called "POST", for Power On Self Test).
 2. Loading and running your operating system.
 3. Helping your operating system and application programs to manage your PC hardware by means of a set of routines called BIOS Run-Time Service.

This chapter contains the following topics :

- 4-1 WHAT IS BIOS SETUP**
- 4-2 HOW TO RUN BIOS SETUP**
- 4-3 WHAT IS CMOS**
- 4-4 WHAT IS POST**
- 4-5 BIOS UPGRADE**
- 4-6 BIOS SETUP**

4-1 WHAT IS BIOS SETUP

- BIOS setup is an interactive BIOS program that you need to run when:
 1. Changing the hardware of your system. (For example: installing a new Hard Disk etc.)
 2. Modifying the behavior of your computer. (For example: changing the system time or date, or turning special features on or off etc.)
 3. Enhancing your computer's behavior. (For example: speeding up performance by turning on shadowing or cache)

4-2 HOW TO RUN BIOS SETUP

- To access BIOS setup menu, press < DEL > key after "POST", and before the OS is loaded. The BIOS usually display the following message:

Press DEL to enter SETUP

4-3 WHAT IS CMOS

- CMOS is the memory maintained by a battery. The BIOS uses CMOS to store the settings you have selected in SETUP. The CMOS also maintains the internal clock. Every time you turn on your computer, the BIOS Looks into CMOS for the settings you have selected and configures your computer accordingly. If the battery is out of power, the CMOS data will be lost and POST will issue a "CMOS invalid" or "CMOS checksum invalid" message. If this happens, you have to replace the battery and do some proper settings in SETUP.

4-4 WHAT IS POST

- POST is an acronym for Power On Self Test. POST will test all things the BIOS does before the operating system is started. Each of POST routines is assigned a POST code, a unique number which is sent to I/O port 080h before the routine is executed.

4-5 BIOS UPGRADE

- System BIOS is incorporated into a Flash memory component of the mainboard. Flash BIOS allows user to upgrade BIOS without the need to replace an EPROM component.

- The upgrade utility can be loaded on a floppy diskette and used to provides the capability to save, verify, and update the system BIOS. The upgrade utility can be run from a hard disk drive or a network drive.

4-5.1 BEFORE UPGRADING BIOS

- It is highly recommended that you save a copy of the original mainboard BIOS along with a Flash EPROM Programming utility (AWDFLASH.EXE) to a bootable floppy disk in case you need to reinstall the BIOS later.

4-5.2 UPGRADE PROCESS

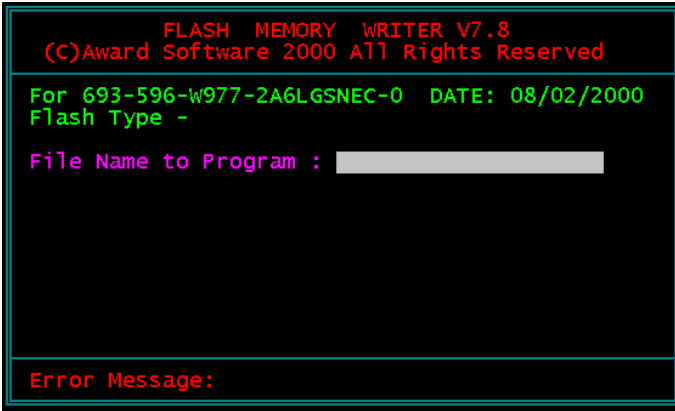
Note: Normally, to upgrade BIOS is unnecessary if the system is working fine without any problem. Users should not upgrade the BIOS unless you experience incompatible problems or need to create new features. However, please read all information in this section before upgrading.

“AWDFLASH.EXE” is a Flash EPROM Programming utility that updates the BIOS by uploading a new BIOS file to the programmable flash ROM on the mainboard, This program only works in **DOS environment only, the utility can not be executed in win95/98, ME, NT or WINDOWS 2000 environment.**

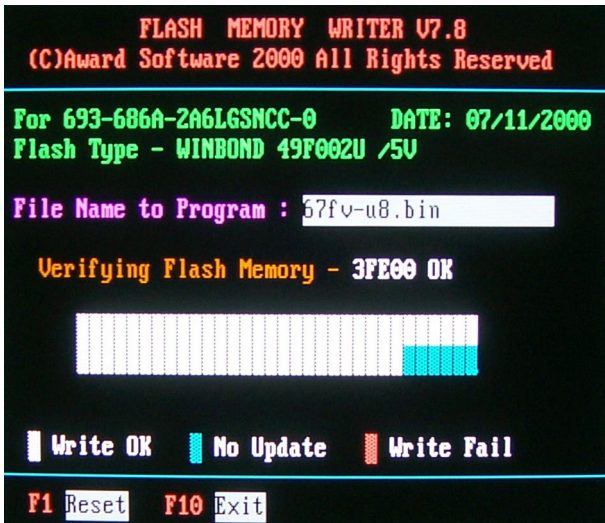
Upgrading the system BIOS

- Step 1. Please visit the board maker’s website, download latest BIOS file and award flash utility “AWDFLASH.EXE”. The BIOS file format will be *.bin, of which “*” stands for the specific file name.
- Step 2. Create a bootable diskette. Then copy the BIOS file and award flash utility “AWDFLASH.EXE” into the diskette.
- Step 3. Insert the diskette into drive A, reboot your system and boot form the diskette.

- Step 4. Type **awdflash *.bin /sn/py/cc** and then press <Enter> to run BIOS upgrade program. (*.bin depends on your mainboard model and version code. Instead of typing "*", you should type specific file name for your specific mainboard).
- Step 5. Please press <F1> or <F10> to exit or reset your system, **Warning !** If the message **"Write Fail"** appears while Award "FLASH MEMORY WRITER" is verifying Flash memory, just repeat the process. Please DO NOT reset or turn off the system. If the award memory flash utility is not able to update the BIOS successfully, your system may not be able to boot up.
- Step 6. You will need a message "CMOS checksum error-Default loaded" during booting the system. Press to run CMOS setup utility, then reload "LOAD SETUP DEFAULTS" or "**Load Optimized Defaults**" and save this change.



Award Flash Memory Writer Start Screen



Award Flash Memory Writer Complete Screen

The parameters of AWDFLASH.EXE

/sn: No original BIOS backup

/py: Program flash memory

/cc: Clear CMOS data (and update data automatically) after programming

NOTE: Users can type *AWDFLASH /?* to get further details about the parameters. Incorrect usage of the parameter will damage the BIOS information, so we strongly recommend user to leave parameters alone unless you fully understand their function.

4-6 BIOS SETUP --- CMOS SETUP UTILITY

4-6.1 CMOS SETUP UTILITY

• This mainboard comes with the AWARD BIOS from AWARD Software Inc. Enter the CMOS Setup Utility Main Menu by:

1. Turn on or reboot your system. After a series of diagnostic checks, the following message will appear:

PRESS TO ENTER SETUP

2. Press the key and the main program screen will appear as follows.

CMOS Setup Utility - Copyright (C) 1984 - 2001 Award Software

▶ Standard CMOS Features	▶ Frequeny/Voltage Control
▶ Advanced BIOS Features	Load Optimized Defaults
▶ Advanced Chipset Features	Set Supervisor Password
▶ Integrated Peripherals	Set User Password
▶ Power Management Setup	SAVE & EXIT SETUP
▶ PnP/PCI Configurations	EXIT WITHOUT SAVING
▶ SmartDoc Anti-Burn shield	
Esc : Quit	↑↓→← : Select Item
F10 : Save & Exit Setup	
Time, Date, Hard Disk Type...	

3. Use the arrow keys on your keyboard to select an option, and press <Enter>. Modify the system parameters to reflect the options installed in your system.
4. You may return to the Main Menu anytime by pressing <ESC>.
5. In the Main Menu, "SAVE AND EXIT SETUP" saves your changes and reboots the system, and "EXIT WITHOUT SAVING" ignores your changes and exits the program.

4-6.2 STANDARD CMOS SETUP

- Standard CMOS Setup records some basic system hardware configuration and sets the system clock and error handling. You only need to modify the configuration values of this option if you want to change your system hardware configuration or when the data stored in the CMOS memory gets lost or damaged.

Run the STANDARD CMOS SETUP as follows:

1. Choose “STANDARD CMOS SETUP” from the Main Menu and a screen with a list of options will appear:

CMOS Setup Utility - Copyright (C) 1984-2001 Award Software
Standard CMOS Features

Date (mm:dd:yy)	Mon, January 15 2001	Item Help
Time (hh:mm:ss)	9 : 52 : 15	Menu Level ▶
▶ IDE Primary Master	None	
▶ IDE Primary Slave	CREATIVEDVD1240E	
▶ IDE Secondary Master	IBM-DTLA-307045	
▶ IDE Secondary Slave	None	
Drive A	1.44M, 3.5 in	
Drive B	None	
Video	EGA/VGA	
Halt On	All,But Keyboard	
Base Memory	640K	
Extended Memory	31744K	
Total Memory	32768K	

↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5:Previous Values F6:Fail-Safe Defaults F7:Optimized Defaults

2. Use one of the arrow keys to move between options and modify the selected options by using PgUp / PgDn / + / - keys.

Date (mm:dd:yy) The BIOS determines the day of the week from the other date information. This field is for information only.

Press the left or right arrow key to move to the desired field (date, month, year). Press the PgUp or PgDn key to increment the setting, or type the desired value into the field.

Time (hh:mm:ss) The time format is based on the 24-hour military-time clock. For example, 1 p.m. is 13:00:00. Press the left or right arrow key to move to desired field. Press the PgUp or PgDn key to increment the setting, or type the desired value into the field.

Primary / Secondary Master / Slave This field records the specifications for all non-SCSI hard disk drives installed in your system. Refer to the respective documentation on how to install the drives.

CMOS Setup Utility - Copyright (C) 1984-2001 Award Software
IDE Primary Master

IDE HDD Auto-Detection	Press Enter	Item Help
IDE Primary Master Access Mode	Auto Auto	Menu Level▶▶
Capacity	13022 MB	
Cylinder	25232	
Head	16	
Precomp	0	
Landing Zone	25231	
Sector	63	

↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5:Previous Values F6:Fail-Safe Defaults F7:Optimized Defaults

Drive A / Drive B Select this field to the type(s) of floppy disk drive(s) installed in your system. The choices are:
360KB, 5.25in;
1.2MB, 5.25in;
720KB, 3.5in;
1.44MB, 3.5in;
2.88MB, 3.5in;
None.

Video Select the type of primary video subsystem in your computer. The BIOS usually detects the correct video type automatically. The BIOS supports a secondary video subsystem, but you do not select it in setup.

Halt On During the power-on self-test (POST), the computer stops if the BIOS detects a hardware error. You can tell the BIOS to ignore certain errors during POST and continue the boot-up process.

Base Memory Typically 640KB. Also called conventional memory. The DOS operating system and conventional applications use this area.

Extended Memory Above the 1MB boundary. Early IBM personal computers could not use memory above 1MB, but current PCs and their software can use extended memory.

Total Memory This option shows system memory capacity.

3. Press <ESC> to return to the Main Menu when you finish setting up all items.

4-6.3 ADVANCED BIOS FEATURES

- ADVANCED BIOS FEATURES improves your system performance or sets up system features according to your preference.

Run the ADVANCED BIOS FEATURES as follows:

1. Choose “ADVANCED BIOS FEATURES” from the Main Menu and a screen with a list of options will appear:

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Advanced BIOS Features

		Item Help
VD-Tech II	Enabled	Menu Level ▶
Virus Warning	Disabled	
CPU Internal Cache	Enabled	
External Cache	Enabled	
CPU L2 Cache ECC Checking	Enabled	
Quick Power On Self Test	Enabled	
First Boot Device	CDROM	
Second Boot Device	HDD-0	
Third Boot Device	LS120	
Boot Other Device	Enabled	
Swap Floppy Drive	Disabled	
Boot Up Floppy Seek	Disabled	
Boot Up NumLock Status	On	
Gate A20 Option	Fast	
× Typematic Rate Setting	Disabled	
× Typematic Rate (Chars/Sec)	6	
Typematic Delay (Msec)	250	
Security Option	Setup	
OS Select For DRAM > 64MB	Non-OS2	
Video BIOS Shadow	Enabled	

↑ ↓ → ← : Move Enter : Select +/- /PU/PD : Value F10 : Save ESC : Exit F1 : General Help
F5 : Previous Values F6 : Fail-Safe Defaults F7 : Optimized Defaults

2. Use one of the arrow keys to move between options and modify the selected options by using PgUp / PgDn / + / - keys. An explanation of the <F> keys follows:

<F1>: "Help" gives options available for each item.

<F5>: Get the previous values. These values are the values with which the user starts the current session.

<F6>: Load all options with the BIOS default values.

<F7>: Load all options with the Setup default values.

VD-Tech II This item allows users to enable or disable Voice Diagnostic function.

Virus Warning When enabled, you receive a warning message if a program (specifically, a virus) attempts to write to the boot sector or the partition table of the hard disk drive.

You should then run an antivirus program. Keep in mind that this feature protects only the boot sector, not the entire hard drive.

NOTE: *Many disk diagnostic programs that access the boot sector table can trigger the virus warning message. If you plan to run such a program, we recommend that you disable the virus warning.*

CPU Internal Cache/ External Cache Cache memory is additional memory that is much faster than conventional DRAM (system memory). CPUs from 486-type up contain internal cache memory, and most, but not all, modern PCs have additional (external) cache memory. When the CPU requests data, the system transfers the requested data from the main DRAM into cache memory, for faster access by the CPU.

- CPU L2 Cache ECC Checking** When you select *Enabled*, it will speed up memory checking when the external cache contains ECC SRAMs.
The choices: Enabled; Disabled.
- Quick Power On Self Test** Select Enabled to reduce the amount of time required to run the power-on self-test (POST). A quick POST skips certain steps. We recommend that you normally enable quick POST.
- First/Second/Third/Other Boot Device** The BIOS attempts to load the operating system from the devices in the sequence selected in these items.
The choices: Floppy; LS/ZIP; HDD; SCSI; CDROM; Disabled.
- Swap Floppy Drive** When enabled, floppy drives A and B will be exchanging without any physical connection and modification on the cables.
- Boot Up Floppy Seek** When enabled, the BIOS tests (seeks) floppy drives to determine whether they have 40 or 80 tracks. Only 360-KB floppy drives have 40 tracks; drives with 270KB, 1.2MB, and 1.44MB capacity all have 80 tracks. Because very few modern PCs have 40-track floppy drives, we recommend that you set this field to a disabled to save time.
- Boot Up NumLock Status** Toggle between On or Off to control the state of the NumLock key when the system boots. If On, the numeric keypad is in numeric mode. If off, the numeric keypad is in cursor control mode.
- Gate A20 Option** Gate A20 refers to the way the system addresses memory above 1 MB (extended memory). When set to *Fast*, the system chipset controls Gate A20. When set to *Normal*, a pin in the keyboard controller controls Gate A20. Setting Gate A20 to Fast improves system speed, particularly with OS/2 and Windows.

Typematic Rate Setting When *Disabled*, the following two items (Typematic Rate and Typematic Delay) are irrelevant. Keystroke repeats at a rate determined by the keyboard controller in your system.

When *Enabled*, you can select a typematic rate and typematic delay.

Typematic Rate (Chars / Sec) When the typematic rate setting is enabled, you can select a typematic rate (the rate at which character repeats when you hold down a key) of 6, 8, 10, 12, 15, 20, 24, or 30 characters per second.

Typematic Delay (Msec) Choices: 250; 500; 750; 1000. This option sets the time interval for displaying the first and the second characters. If enabled, the time interval is optional.

Security Option If you have set a password, select whether the password is required every time the System boots, or only when you enter setup.
The choices: system; setup.

OS Select For DRAM > 64MB Select OS2 only if you are running OS/2 operating system with greater than 64MB of RAM on your system.

Video BIOS Shadow Performance will be improved by copying Video BIOS to Shadow RAM.

3. Press <ESC> to return to the Main Menu when you finish setting up all items.

4-6.4 ADVANCED CHIPSET FEATURES

- ADVANCED CHIPSET FEATURES is used to modify the values of chipset buffers. These buffers control the system options.

Run the ADVANCED CHIPSET FEATURES as follows:

1. Choose “ADVANCED CHIPSET FEATURES” from the Main Menu and a list of option will appear:
2. Use one of the arrow keys to move between options and modify the selected options by using PgUp / PgDn / + / - keys. An explanation of the <F> keys follows:

<F1>: “Help” gives options available for each item.

<F5>: Get the previous values. These values are the values with which the user starts the current session.

<F6>: Load all options with the BIOS default values.

<F7>: Load all options with the Setup default values.

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Advanced Chipset Features

▶ DRAM Colck/Drive Control	Press Enter	Item Help
▶ AGP & P2P Bridge Control	Press Enter	Menu Level ▶
▶ CPU & PCI Bus Control	Press Enter	
Memory Hole	Disabled	
System BIOS Cacheable	Disabled	
Video RAM Cacheable	Disabled	

↑ ↓ → ← : Move Enter: Select +/-/PU/PD: Value F10: Save ESC: Exit F1: General Help
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults

DRAM CLOCK/DRIVE CONTROL

CMOS Setup Utility - Copyright (C) 1984-2001 Award Software
 DRAM Clock/Drive Control

Current FSB Frequency	100MHz	Item Help
DRAM Clock	100MHz	Menu Level ▶
DRAM Timing	By SPD	
×SDRAM Cycle Length	2.5	
×Bank Interleave	Disabled	
DRAM Command Rate	1T Command	

↑ ↓ → ←: Move Enter: Select +/-/PU/PD: Value F10: Save ESC: Exit F1: General Help
 F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults

* **Current FSB Frequency** This item allows you to control the FSB Frequency.

* **DRAM Clock** The value represents the performance parameters of the installed memory chips (DRAM). Do not change the value from the factory setting unless you install new memory that has a different performance rating.

* **DRAM Timing** When this item Enabled, DRAM Timing is set by SPD.
 SPD (Serial Presence Detect) is located on the memory modules, BIOS reads information coded in SPD during system boot up.

* **SDRAM Cycle Length** Select CAS latency time in HCLKs of 2 or 3. The system designer already set the values. Do not change the default value unless you change specifications of the installed DRAM or the installed CPU.

* **Bank Interleave** The choices: Disabled; 2 Bank; 4 Bank.

* **DRAM Command Rate** The choices: Disabled; 2 Bank; 4 Bank.

AGP & P2P BRIDGE CONTROL

CMOS Setup Utility - Copyright (C) 1984-2001 Award Software
AGP & P2P Bridge Control

AGP Aperture Size	64M	Item Help
AGP Mode	4X	Menu Level ▶
AGP Driving Control	Auto	
× AGP Driving Value	DA	
AGP Fast Write	Disabled	
AGP Master 1 WS Write	Disabled	
AGP Master 1 WS Read	Disabled	

↑ ↓ → ← : Move Enter: Select +/-/PU/PD: Value F10: Save ESC: Exit F1: General Help
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults

* **AGP Aperture Size** Series of options are available: 4, 8, 16, 32, 64, 128 or 256 MB. Memory mapped and graphics data structures can reside in a Graphics Aperture. This area is like a linear buffer. BIOS will automatically report the starting address of this buffer to the O.S. The default setting is 64MB.

* **AGP Mode** This item allows you to select AGP Mode.
The choice: 1x, 2x, 4x.

* **AGP Driving Control** This item allows you to adjust the AGP driving force. Choose Manual to key in a AGP Driving Value in the next selection. This field is recommended to set in Auto for avoiding any error in your system.
The choice: Manual, Auto.

* **AGP Driving Value** This item allows you to adjust the AGP driving force.
The choice: Min=0000 ~ Max=00FF.

* **AGP Fast Write** This item will enable the AGP model into fast write mode. If your graphics card does not support this function, please do not enable this function.

* **AGP Master 1 write** Leave this field at default.

* **AGP Master 1 read** Leave this field at default.

CPU & PCI BUS CONTROL

CMOS Setup Utility - Copyright (C) 1984-2001 Award Software
CPU & PCI Bus Control

PCI1 Master 0 WS Writer	Enabled	Item Help
PCI2 Master 0 WS Write	Enabled	Menu Level ▶
PCI1 Post Write	Enabled	
PCI2 Post Write	Enabled	
PCI Delay Transaction	Disabled	

↑ ↓ → ← : Move Enter: Select +/-/PU/PD: Value F10: Save ESC: Exit F1: General Help
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults

* **PCI1 Master 0 Write** When Enabled, writes to the PCI bus are executed with zero wait states.
The choice: Enabled, Disabled.

* **PCI2 Master 0 Write** Leave this field at default.

- * **PCI1 Post Write** Leave this field at default.
 - * **PCI2 Post Write** Leave this field at default.
 - * **PCI Delay Transaction** Leave this field at default.
-

Memory Hole In order to improve performance, certain space in memory is reserved for ISA cards. This memory must be mapped into the memory space below 16MB. The choices: 15M-16M; Disabled.

System BIOS Cacheable Selecting Enabled allows caching of the system BIOS ROM at F0000h-FFFFFh, resulting in better system performance.

Video RAM Cacheable Selecting Enabled allows caching of the video memory (RAM) at A0000h-AFFFFh, resulting in better video performance. However, check your AGP manual to find out if any compatibility problem exists.

3. Press <ESC> to return to the Main Menu when you finish setting up all items.

4-6.5 INTEGRATED PERIPHERALS

- INTEGRATED PERIPHERALS option allows you to get some information inside your system when it is working.

Run the INTEGRATED PERIPHERALS as follows:

1. Choose "INTEGRATED PERIPHERALS" from the Main Menu and a list of options will appear:

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Integrated Peripherals

▶ VIA OnChip IDE Device	Press Enter	Item Help
▶ VIA OnChip PCI Device	Press Enter	Menu Level ▶
▶ VIA SuperIO Device	Press Enter	
Init Display First	PCI Slot	
OnChip USB Controller	All Enabled	
USB keyboard Support	Disabled	
IDE HDD Block Mode	Enabled	

↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5:Previous Values F6:Fail-Safe Defaults F7:Optimized Defaults

2. Use one of the arrow keys to move between options and modify the selected options by using PgUp / PgDn / + / - keys. An explanation of the <F> keys follows:

<F1>: "Help" gives options available for each item.

<F5>: Get the previous values. These values are the values with which the user starts the current session.

<F6>: Load all options with the BIOS default values.

<F7>: Load all options with the Setup default values.

VIA ONCHIP IDE DEVICE

CMOS Setup Utility - Copyright (C) 1984-2001 Award Software
 VIA OnChip IDE Device

OnChip IDE Channel0	Enabled	Item Help
OnChip IDE Channel1	Enabled	Menu Level ▶
IDE Prefetch Mode	Enabled	
Primary Master PIO	Auto	
Primary Slave PIO	Auto	
Secondary Master PIO	Auto	
Secondary Slave PIO	Auto	
Primary Master UDMA	Auto	
Primary Slave UDMA	Auto	
Secondary Master UDMA	Auto	
Secondary Slave UDMA	Auto	

↑ ↓ → ←: 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 IDE channel** The chipset contains a PCI IDE interface with support from two IDE channels. Select Enabled to activate the first and/or the second IDE interface. Select Disabled to inactivate an interface if you install a primary and/or second add-on IDE interface.
 The choices: Enabled; Disabled.

* **IDE Prefetch Mode** The on-board IDE drive supports IDE perfecting for faster drive accesses. If the IDE device doesn't support perfecting, set this field to Disabled.
 The choices: Enabled; Disabled.

* **Primary Master / Slave PIO** Choose Auto or Mode 0~4. The BIOS will detect the HDD mode type automatically when you choose Auto. You need to set to a lower mode than Auto when your hard disk becomes unstable.
 The choices: Auto; Mode 0; Mode 1; Mode 2; Mode 3; Mode 4.

* **Primary** Ultra DMA33/66/100 implementation is possible only
Master / Slave UDMA if your IDE hard drive supports it, if the operating
Secondary environment includes a DMA drive, and if your sys-
Master / Slave UDMA tem software both support Ultra DMA33/66/100.
 Select "Auto" to enable BIOS support.
 The choices: Auto; Disabled.

VIA ONCHIP PCI DEVICE

CMOS Setup Utility - Copyright (C) 1984-2001 Award Software
 VIA OnChip PCI Device

VIA-3058 AC'97 Audio	Disabled	Item Help
VIA-3068 MC97 Modem	Auto	Menu Level ▶

↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
 F5:Previous Values F6:Fail-Safe Defaults F7:Optimized Defaults

* **VIA-3058 AC'97 Audio** Select "Disabled" to use the on-chip audio capability of
 your system. Most of the field do not appear when this
 field is "Disabled", for user who wants to use add-on sound
 card, this tiled must be disabled.

* **VIA-3068 MC97 Modem** This option allows you to decide to enable/disable
 the Onchip Modem.
 The choices: Auto; Disabled.

VIA SUPERIO DEVICE

CMOS Setup Utility - Copyright (C) 1984-2001 Award Software
VIA SuperIO Device

Onboard FDC Controller	Enabled	Item Help
Onboard Serial Port 1	3F8/IRQ4	Menu Level ▶
Onboard Serial Port 2	2F8/IRQ3	
UART Mode Select	Normal	
×UR2 Duplex Mode	Half	
Onboard Parallel Port	378/IRQ7	
Parallel Port Mode	SPP	
×ECP Mode Use DMA	3	
Game Port Address	Disabled	
Midi Port Address	Disabled	
×Midi Port IRQ	10	

↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5:Previous Values F6:Fail-Safe Defaults F7:Optimized Defaults

- * **Onboard FDC Controller** Select Enabled if your system has a floppy drive controller (FDC) installing in the system board and you want to use it. If you install add-in FDC or the system has no floppy drive, select Disabled in this field.
The choices: Enabled; Disabled.
- * **Onboard Serial Port 1 / Port 2** Select a logical COM port name and matching address for the first and second serial ports. Select an address and corresponding interrupt for the first and second serial ports.
- * **UART Mode Select** The second serial port on your system may offer a variety of infrared port modes. Click here for a description of various modes. (Click your browser's Back button, or your right mouse button, to return to this page.)
The choices: Standard; HPSIR; ASKIR

- * UR2 Duplex Mode** This item allows you to select the IR half / full duplex function.
The choices: Half; Full.
 - * Onboard Parallel Port** This item allows you to determine onboard parallel port controller I/O address setting.
The choices: 378H/IRQ7; 278H/IRQ5; 3BC/IRQ7;
Disabled.
 - * Parallel Mode** Select an operating mode for the on-board parallel (printer) port. Select Normal, Compatible, or SPP unless you are certain your hardware and software both support one of the other available modes.
 - * ECP Mode Use DMA** Select a DMA channel for the port.
 - * Game Port Address** This item allows you to select the onboard game port I/O address.
 - * Midi Port Address** This item allows you to select the onboard Midi port I/O address.
 - * Midi Port IRQ** This item allows you to select the Midi port IRQ.
-

- Init Display First** Initialize the AGP video display before initializing any other display device on the system. Thus the AGP display becomes the primary display.
- OnChip USB Controller** Select Enabled if your system contains a Universal Serial Bus (USB) controller and you have USB peripherals.

USB Keyboard Support Select Enabled if your system contains a Universal Serial Bus (USB) controller and you have a USB keyboard.

IDE HDD Block Mode Block mode is also called block transfer, multiple commands, or multiple sector read/write. If your IDE hard drive supports block mode (most new drives do), select Enabled for automatic detection of the optimal number of block read/write per sector the drive can support.
The choices: Enabled; Disabled.

3. Press <ESC> to return to the Main Menu when you finish setting up all items.

4-6.6 POWER MANAGEMENT SETUP

- POWER MANAGEMENT SETUP allows you to set the system's power saving functions.

Run the POWER MANAGEMENT SETUP as follows:

1. Choose "POWER MANAGEMENT SETUP" from the Main Menu and a list of options will appear:

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Power Management Setup

ACPI Function	Enabled	Item Help
ACPI Suspend Type	S1(POS)	Menu Level ▶
Power Management Option	User Define	
HDD Power Down	Disabled	
Suspend Mode	Disabled	
Video Off Option	Suspend->Off	
Video Off Method	V/H SYNC+Blank	
MODEM Use IRQ	3	
Soft-Off by PWRBTN	Instant-Off	
State After Power Failure	Auto	
▶IRQ/Event Activity Detect	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

2. Use one of the arrow keys to move between options and modify the selected options by using PgUp / PgDn / + / - keys. An explanation of the <F> keys follows:

<F1>: "Help" gives options available for each item.

<F5>: Get the previous values. These values are the values with which the user starts the current session.

<F6>: Load all options with the BIOS default values.

<F7>: Load all options with the Setup default values.

ACPI Function Select Enabled only if your computer's operating system supports the Advanced Configuration and Power Interface (ACPI) specification. Currently, Windows NT 5.0 support ACPI.

ACPI Suspend Type This item allows you to select the ACPI suspend type. You can select S3(STR) for suspending to DRAM or S1(POS) for power on suspend under Windows 98 ACPI mode.
The choice: S1(POS), S3(STR).

Power Management Option This option allows you to select the type (or degree) of power saving for Doze, Standby, and Suspend modes.
This table describes each power management mode:

Max Saving	Maximum power savings. Only Available for SL CPUs. Inactivity period is 1 minute in each mode.
User Define	Set each mode individually. Select time-out period in the section for each mode stated below.
Min Saving	Minimum power savings. Inactivity period is 1 hour in each mode (except the hard drive).

HDD Power Down When enabled and after the set time of system inactivity, the hard disk drive will be powered down while all other devices remain active.

Suspend Mode After the selected period of system inactivity, the chipset enters a hardware suspend mode, stopping the CPU clock and possibly causing other system devices to enter power management modes.

Video Off Option When enabled, this feature allows the VGA adapter to operate in a power saving mode.

Always On	Monitor will remain on during power saving modes.
Suspend -->Off	Monitor blanked when the systems enters the Suspend mode.
All Modes -->Off	Monitor blanked when the system enters either Suspend or Standby modes.

Video Off Method This determines the manner by which the monitor is blanked.

V/H SYNC + Blank	This selection will cause the system to turn off the vertical and horizontal synchronization ports and write blanks to the video buffer.
Blank Screen	This option only writes blanks to the video buffer.
DPMS Supports	Select this option if you monitor supports the Display Power Management Signaling (DPMS) standard of the Video Electronics Standards to select video power management values.

MODEM Use IRQ Name the interrupt request (IRQ) line assigned to the modem (if any) on your system. Activity of the selected IRQ always awakens the system.
The choices: 3; 4; 5; 7; 9; 10; 11; NA.

Soft-Off by PWRBTN When Enabled, turning the system off by pressing the on/off button places the system in a very low-power-usage state.

State After Power Failure This field lets you determine the state that your PC returns to after a power failure.
The choices: On; Off; Auto.

IRQ/EVENT ACTIVITY DETECT

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 IRQ/Event Activity Detect

USB Resume from S3	Disabled	Item Help Menu Level ▶
VGA	OFF	
LPT & COM	LPT/COM	
HDD & FDD	ON	
PCI Master	OFF	
PowerOn by PCI Card	Disabled	
Wake Up On LAN/Ring	Disabled	
RTC Alarm Resume	Disabled	
× Date (of Month)	0	
× Resume (hh:mm:ss)	0 0 0	
▶ IRQs Activity Monitoring	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

* **USB Resume from S3** This item will enable you to wake-up the system by use keyboard when you shut down the computer in S3 mode.
 The choices: Enabled, Disabled.

* **VGA** When Enabled, you can set the VGA awakens the system.

* **LPT & COM** When LPT & COM is ON, any activity from one of the listed system peripheral devices or IRQs wakes up the system.

* **HDD & FDD** When HDD & FDD is ON, any activity from one of the listed system peripheral devices wakes up the system.

* **PCI Master** When PCI Master is ON, any activity from one of the listed system peripheral devices wakes up the system.

- * **PowerOn by PCI Card** This item allows system wake up by PCI Device.

- * **Wake Up On LAN/ Ring** An input signal on the serial Ring Indicator (RI) line (in other words, an incoming call on the modem) awakens the system from a soft off state.
The choices: Enabled; Disabled.

- * **RTC Alarm Resume** When Enabled, you can set the data and time at which the RTC (Real Time Clock) alarm awakens the system from suspend mode.
The choices: Disabled (default); Enabled.

- * **Date (of Month)** Set a certain date when RTC Alarm Resume option is Enabled to awaken the system. This option is concurrent with Resume Time option.

- * **Resume Time (hh:mm:ss)** Set a certain time when RTC Alarm Resume option is Enabled to awaken the system. This option is concurrent with Date option.

* IRQ ACTIVITY MONITORING

CMOS Setup Utility - Copyright (C) 1984-2001 Award Software
IRQ Activity Monitoring

Primary INTR	ON	Item Help
IRQ-3 (COM2)	Enabled	Menu Level ▶
IRQ-4 (COM1)	Enabled	
IRQ-5 (LPT2)	Enabled	
IRQ-6 (Floppy Disk)	Enabled	
IRQ-7 (LPT1)	Enabled	
IRQ-8 (RTC Alarm)	Disabled	
IRQ-9 (IRQ2 Redir)	Disabled	
IRQ-10 (Reserved)	Disabled	
IRQ-11 (Reserved)	Disabled	
IRQ-12 (PS/2 Mouse)	Enabled	
IRQ 13 (Coprocessor)	Enabled	
IRQ 14 (Hard Disk)	Enabled	
IRQ 15 (Reserved)	Disabled	

↑↓ → ←: Move Enter: Select +/-/PU/PD: Value F10: Save ESC: Exit F1: General Help
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults

IRQ Activity Monitoring The following is a list of IRQ's (Interrupt Requests), which can be exempted much as the COM ports and LPT ports above can. When an I/O device wants to gain the attention of the operating system, it signals this by causing an IRQ to occur. When the operating system is ready to respond to the request, it interrupts itself and performs the service. When set On, activity will neither prevent the system from going into a power management mode nor awaken it.

3. Press <ESC> to return to the Main Menu when you finish setting up all items.

4-6.7 PNP / PCI CONFIGURATION

- PNP/PCI CONFIGURATION allows you to modify the system's power saving functions.

Run the PNP/PCI CONFIGURATION as follows:

1. Choose "PNP/PCI CONFIGURATION" from the Main Menu and a screen with a list of options will appear:

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PnP/PCI Configurations

PNP OS Installed	No	Item Help
Reset Configuration Data	Disabled	Menu Level ▶
Resources Controlled By × IRQ Resources	Auto(ESCD) Press Enter	
PCI/VGA Palette Snoop	Disabled	
Assign IRQ For VGA	Enabled	
Assign IRQ For USB	Enabled	
PCI SLOT1/5 IRQ Assigned	Auto	
PCI SLOT2 IRQ Assigned	Auto	
PCI SLOT3 IRQ Assigned	Auto	
PCI SLOT4 IRQ Assigned	Auto	

↑↓←→:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5:Previous Values F6:Fail-Safe Defaults F7:Optimized Defaults

2. Use one of the arrow keys to move between options and modify the selected options by using PgUp / PgDn / + / - keys. An explanation of the <F> keys follows:

<F1>: "Help" gives options available for each item.

<F5>: Get the previous values. These values are the values with which the user starts the current session.

<F6>: Load all options with the BIOS default values.

<F7>: Load all options with the Setup default values.

PNP OS Installed Select Yes if the system operating environment is Plug-and-Play aware (e.g., Windows95).

NOTE: BIOS will automatically disable all PnP resources except the boot device card when you select Yes on Non-PnP operating system.

Reset Configuration Data Normally, you leave this Disabled. Select Enabled to reset Extended System Configuration Data (ESCD), when you exit Setup if you have installed a new add-on and the system reconfiguration has caused such a serious conflict that the operating system cannot boot.

Resource Controlled By The Plug and Play AwardBIOS can automatically configure all the boot and Plug and Play-compatible devices. If you select *Auto*, all the interrupt request (IRQ) and DMA assignment fields disappear, as the BIOS automatically assigns them.

PCI/VGA Palette Snoop This option allows the BIOS to preview VGA status, and to modify the information delivered from the feature Connector of the VGA card to MPEG card. This option can solve the display inversion to black after you have used MPEG card.

Assign IRQ for VGA Select *Enabled* if you system has a VGA controller and you have one or more VGA devices connected. If you are not using your system's VGA controller, select *Disabled* to free the IRQ resource.

Assign IRQ for USB Select *Enabled* if you system has a USB controller and you have one or more USB devices connected. If you are not using your system's USB controller, select *Disabled* to free the IRQ resource.

PCI SLOT1/5, 2, 3, 4 IRQ Assigned These options allow you to assign an IRQ for each PCI SLOT and this is a useful function when you want to clear the IRQ conflict for a specific device. The options are available : Auto; 3; 4; 7; 9; 10; 11.

IRQ RESOURCES Press Enter. Please refer to the list below:

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IRQ Resources

IRQ-3 assigned to	PCI/ISA PnP	Item Help
IRQ-4 assigned to	PCI/ISA PnP	Menu Level ▶
IRQ-5 assigned to	PCI/ISA PnP	
IRQ-7 assigned to	PCI/ISA PnP	
IRQ-9 assigned to	PCI/ISA PnP	
IRQ-10 assigned to	PCI/ISA PnP	
IRQ-11 assigned to	PCI/ISA PnP	
IRQ-12 assigned to	PCI/ISA PnP	
IRQ-14 assigned to	PCI/ISA PnP	
IRQ-15 assigned to	PCI/ISA PnP	

↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5:Previous Values F6:Fail-Safe Defaults F7:Optimized Defaults

3. Press <ESC> to return to the Main Menu when you finish setting up all items.

4-6.8 SMARTDOC ANTI-BURN SHIELD

- This section helps you to get more information about your system including CPU temperature, FAN speed and voltage. It is recommended that you contact with your mainboard supplier to get proper values about the setting of the CPU temperature.

Run the “SMARTDOC ANTI-BURN SHIELD” as follows:

1. Choose “SMARTDOC ANTI-BURN SHIELD” from the Main Menu and a screen with a list of options will appear:

CMOS Setup Utility - Copyright (C) 1984-2001 Award Software
SmartDOC Anti-Burn shield

Shutdown Temperature	60 °C/140 °F	Item Help
CPU Vcore	0	Menu Level ▶
DDR DIMM	1	
3.3V	2	
+5V	3	
+12V	4	
-12V	5	
-5V	6	
5VSB	7	
Voltage Battery		
Temperature 1		
Temperature 2		
Fan 1 Speed		
Fan 2 Speed		

↑ ↓ ← → : Move Enter: Select +/- /PU/PD: Value F10: Save ESC: Exit F1: General Help
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults

2. Use one of the arrow keys to move between options and modify the selected options by using PgUp / PgDn / + / - keys.

<F1>: “Help” gives options available for each item.

<F5>: Get the previous values. These values are the values with which the user starts the current session.

<F6>: Load all options with the BIOS default values.

<F7>: Load all options with the Setup default values.

Shutdown Temperature This feature prevents your CPU from damage by over heat. If the CPU's temperature is higher than "CPU warning temperature" that you select in this field, the BIOS will shut down your system within 3 seconds.

CPU Vcore Shows CPU core actual voltage value.

DDR DIMM Shows DDR DIMM actual voltage value.

Temperature 1/2/3 This field displays the current CPU temperature, if your computer contains a monitoring system.

FAN 1/2 Speed These fields display the current speed of up to three CPU fans, if your computer contains a monitoring system.

3. Press <ESC> to return to the Main Menu when you finish setting up all items.

4-6.9 FREQUENCY/VOLTAGE CONTROL

Run the "FREQUENCY/VOLTAGE CONTROL" as following:

1. Choose "FREQUENCY/VOLTAGE CONTROL" from the Main Menu and a screen with a list of options will appear:

CMOS Setup Utility - Copyright (C) 1984-2001 Award Software
Frequency/Voltage Control

Red Storm Overclocking	Press Enter	Item Help
CPU Vcore Select	Default	Menu Level ▶
Auto Detect DIMM/PCI CIK	Enabled	
Spread Spectrum	Disabled	
CPU Skew Adjust	Disabled	
CHIP Skew Adjust	Disabled	
PCI Skew Adjust	Disabled	
AGP Skew Adjust	Disabled	
Use CPU Linear Freq	Use Linear	
CPU Clock	100	

↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5:Previous Values F6:Fail-Safe Defaults F7:Optimized Defaults

2. Use one of the arrow keys to move between options and modify the selected options by using PgUp / PgDn / + / - keys.

<F1>: "Help" gives options available for each item.

<F5>: Get the previous values. These values are the values with which the user starts the current session.

<F6>: Load all options with the BIOS default values.

<F7>: Load all options with the Setup default values.

Redstorm Overclocking Tech Please press <Enter> to start *RED STORM OVERCLOCKING TECH*, this option helps user an easy way to overclocking, it will increase CPU external clock automatically, when CPU external clock increasing to unacceptable value, BIOS will restart your system, then running at acceptable CPU external clock.

CPU Vcore Select This item allows users to adjust the CPU Vcore voltage. The instant damage of CPU is due to the wrong Vcore voltage setting, so we highly recommend that user should leave this item to Default setting unless you fully understand it.

Auto Detect DIMM/PCI CLK This item allows you to enable/disable detect DIMM/PCI Clock.
The choice: Enabled, Disabled.

Spread Spectrum This item allows you to enable/disable the spread spectrum modulate.
The choice: Enabled, Disabled.

CPU Skew Adjust Leave this field at default.

CHIP Skew Adjust Leave this field at default.

PCI Skew Adjust Leave this field at default.

AGP Skew Adjust Leave this field at default.

Use CPU Linear Freq If users would like to adjust CPU clock, this items must be "Linear".
The choices: Default; Linear.

CPU Clock These items allows users to adjust CPU frequency.

3. Press <ESC> to return to the Main Menu when you finish setting up all items.

4-6.10 LOAD OPTIMIZED DEFAULTS

- When you press <Enter> on this item, you will get a confirmation dialog box with a message similar to:

```
" Load Optimized Defaults (Y / N) ? N "
```

Pressing "Y" loads the BIOS default values that are factor settings for optimal performance of system operations.

4-6.11 SET SUPERVISOR / USER PASSWORD

- These two options allow you to set your system passwords. Normally, the supervisor has a higher priority to change the CMOS setup option than the users. The way to set up the passwords for both Supervisor and Users are as follows:

1. Choose "Change Password" in the Main Menu and press <Enter>. Then following message appears:

```
"Enter Password : "
```

2. The first time you run this option, enter your password up to 8 characters and press <Enter>. (The screen does not display the entered characters.)
3. After you enter the password, the following message appears prompting you to confirm the password:

```
"Confirm Password : "
```

4. Enter the same password "exactly" the same as you have just typed to confirm the password and press <Enter>.
5. Move the cursor to Save & Exit Setup to save the password.
6. If you need to delete the password entered before, choose the Supervisor Password and press <Enter>. It will delete the password that you have entered before.

7. Move the cursor to Save & Exit Setup to save the option you have just configured; otherwise the old password will still be there the next time you turn your system on.
8. Press <Enter> to exit to the Main Menu.

NOTE: *If you forget or lose the password, the only way to access the system is to clear the CMOS RAM. All setup informations will be lost and you need to run the BIOS setup program again.*

4-6.12 SAVE & EXIT SETUP

- SAVE & EXIT SETUP allows you to save all modifications you have specified into the CMOS memory. Highlight this option on the Main Menu and the following message appears:

"SAVE to CMOS and EXIT (Y/N) ? Y "

"Y" is for "Yes", and "N" is for "No".

Press <Enter> key to save the configuration changes.

4-6.13 EXIT WITHOUT SAVING

- EXIT WITHOUT SAVING option allows you to exit the Setup Utility without saving the modifications that you have specified. Highlight this option on the Main Menu and the following message appears:

"Quit Without Saving (Y/N) ? N "

"Y" is for "Yes", and "N" is for "No".

You may change the prompt to "Y" and press <Enter> key to leave this option .



APPENDICES

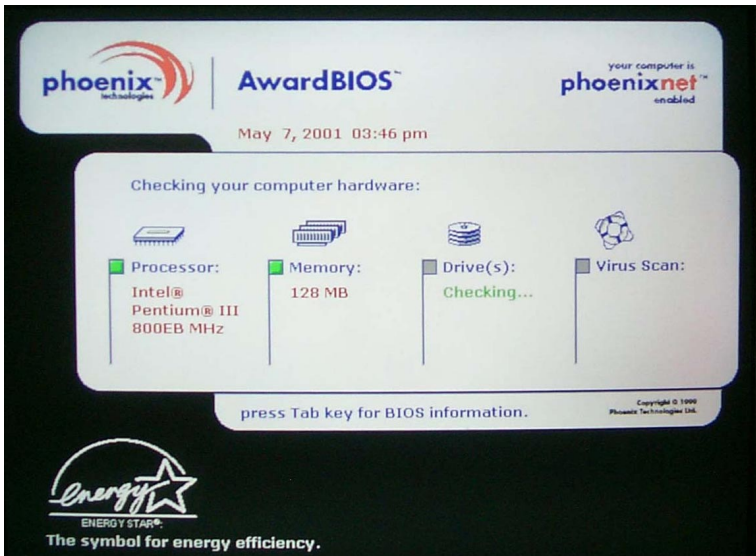
APPENDIX-1 TECHNICAL TERMS
**APPENDIX-2 IDENTIFYING BIOS VERSION/
BIOS PART NUMBER**
**APPENDIX-3 IDENTIFYING MAINBOARD
MODEL NUMBER**

APPENDIX-1 TECHNICAL TERMS

Technical Terms Introduction	
Tech Term	Meaning
AGP	Accelerated Graphic Port
AMR	Audio Modem Riser
ACR	Advanced Communication Riser
CPU	Central Processing Unit
CMOS	Complementary Metal Oxide Semiconductor
CRIMM	Continuity RIMM
CNR	Communication and Networking Riser
DMA	Direct Memory Access
DMI	Desktop Management Interface
DIMM	Dual Inline Memory Module
DRAM	Dynamic Random Access Memory
DDR	Double Data Rate
ECP	Extended Capabilities Port
ESCD	Extended System Configuration Data
ECC	Error Check and Correct
EPP	Enhanced Parallel Port
FDD	Floppy Disk Device
IDE	Integrated Dual Channel Enhanced
IRQ	Interrupt ReQuest
I/O	Input/Output
LAN	Local Area Network
LBA	Logical Block Addressing
LED	Local Emitting Diode
MHz	Megahertz
PNP	Plug & Play
USB	Universal Serial Bus
VCM	Virtual Channel Memory

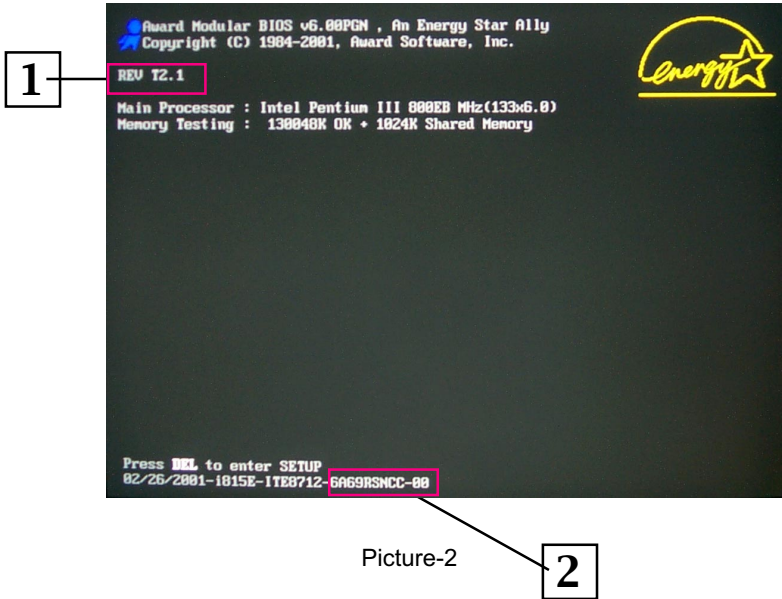
APPENDIX-2 IDENTIFYING BIOS VERSION AND BIOS PART NUMBER

- When you boot up your computer, you may see a screen which shows your computer is phoenixnet™ enabled. Please see Picture-1 below for an illustration.
- When the screen shows up press “Tab” key for BIOS information.



Picture-1

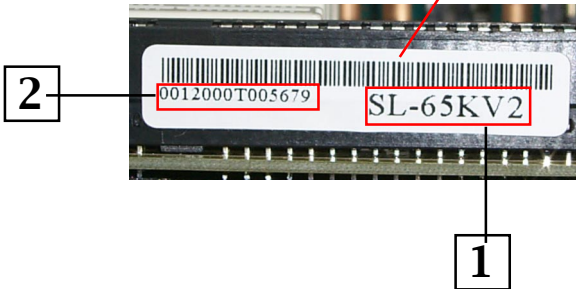
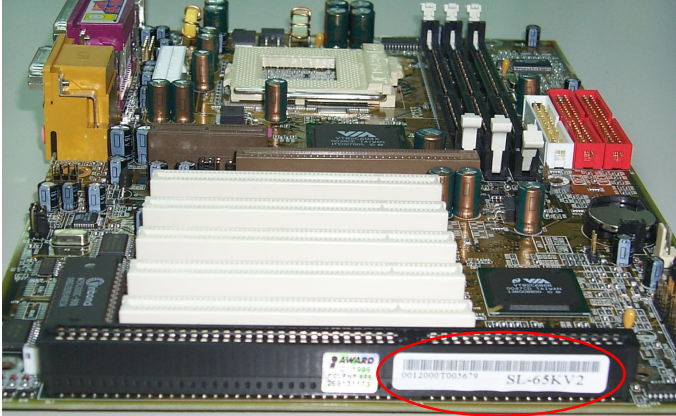
- See Picture-2 below for BIOS version and BIOS part number identification.



1. BIOS VERSION
example: REV T2.1
2. BIOS ID STRING
example: 6A69RSNCC

APPENDIX-3 IDENTIFYING MAINBOARD MODEL NUMBER

- Usually the mainboard model number is labeled on the side of ISA side of slot or PCI slot. Please see the picture below as an illustration:



1. MAINBOARD MODEL NUMBER
example: SL-65KV2
2. MAINBOARD SERIAL NUMBER
example: 0012000T005679

