P4M800-775

Copyright

Trademark

Disclaimer

FCC Compliance Statement

This equipment has been tested and found to comply with the limits of a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense. However, there is no guarantee that interference will not occur in a particular installation.

CE Mark

The device is in accordance with 89/336 ECC-ENC Directive.

Ver: EG101

P4M800-775

VIA® P4M800 & VT8237R
Support Socket 775
Intel® Pentium® 4 Prescott Processor

User Manual

To enable the Hyper-Threading (HT) Technology, your computer system is required to have the following components:

- **CPU:** An Intel® Pentium® 4 Processor with HT Technology
- **Chipset:** An Intel® Chipset that supports HT Technology
- **BIOS:** A BIOS that supports HT Technology must be enabled
- **OS:** An operating system that supports HT Technology

For more information on Hyper-Threading Technology, go to:
http://www.intel.com/info/hyperthreading

Dimensions (ATX form-factor):
  ➢ 244mm x 202mm (W x L)

Operating System:
  ➢ Windows® 98/ ME/ 2000/ XP
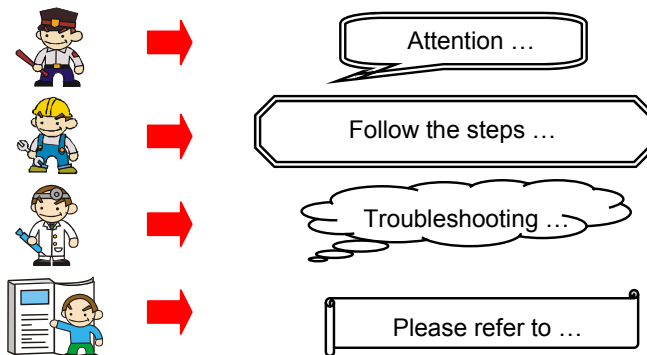
Things You Should Know

- 🖋 The images and pictures in this manual are for reference only and may vary depending on hardware models, third party components and software versions.
- 🖋 Power off your system when configuring switches and pins.
- 🖋 This mainboard contains very delicate IC chips. Always use a grounded wrist strap when working with the system.
- 🖋 Do not touch any IC chip, lead, connector or other components.
- 🖋 Unplug the AC power when you install or remove any device on the mainboard.

Packing List

- ◆ P4M800-775 mainboard
- ◆ FDD Cable
- ◆ HDD Cable
- ◆ I/O Bracket (for ATX case)
- ◆ USB 2.0 Cable (Optional)
- ◆ SATA Cable (Optional)
- ◆ SPDIF Out Cable (Optional)
- ◆ Mainboard Uer Manual CD
- ◆ Mainboard Setup Driver CD
- ◆ Mainboard Quick Installation Guide (Optional)

Symbols

The following list explains the convention for symbols that will be used throughout this manual:

Attention …

Follow the steps …

Troubleshooting …

Please refer to …

Table of Contents

Chapter 1. Getting Started

Introduction

Congratulations on the choosing P4M800-775 Mainboard. It is based on the VIA® P4M800 Northbridge chipset and the VT8237R Southbridge chipset; the mainboard comprises integrated the VIA® UniChrome™ 2D/3D graphics optimized. It also supports the Intel® Pentium® 4 Prescott Processors with FSB (Front Side Bus) 533/800 MHz.

The P4M800-775 provides two 184-pin DIMM (Dual In-Line Memory Modules) sockets which support to insert DDR400 (PC3200)/ DDR333 (PC2700)/ DDR266 (PC2100)/ DDR200 (PC1600) SDRAMs, and support a total memory capacity of 2 GB.

The mainboard provides one 4x/ 8x AGP slot, three PCI slots, and one CNR (Communication Network Riser) slot (optional). In addition, one 360Kb/ 720Kb/ 1.2Mb/ 1.44Mb/ 2.88Mb floppy disk drive connector, and two IDE connectors that support PIO mode 5, Bus Master, and Ultra DMA 33/66/100/133 for hard disk drives are provided on this mainboard. The onboard Serial ATA function, two SATA connectors are able to support SATA RAID 0/1 mode **(see Appendix II)** and with transfer rate up to 150 Mbps.

There is a maximum of eight USB2.0/ 1.1 ports that can be set up on this mainboard.

The onboard AC' 97 sound codec supports high quality performance 6-channel audio play (Super 5.1 Channel Audio Effect) **(See Appendix I)**. The mainboard also supports the Sony/Philips Digital Interfaces (SPDIF) function (optional).

The P4M800-775 comes with an onboard 10/100 Mbps Ethernet LAN chip. There is a LAN port on the back panel that you can directly plug an internet cable into.

All the information (including hardware installation and software installation) in this manual are for reference only. The contents in this manual may be updated without notice. The company will not assume any mistake that user caused.

Specification

CPU:
- Support Socket 775 Pentium® 4 Prescott processor
- Support Hyper-Threading Technology
- Support FSB (Front Side Bus) 533/ 800 MHz

Chipset:
- Northbridge Chipset – VIA® P4M800
- Southbridge Chipset – VIA® VT8237R
- I/O Controller – ITE® IT8705AF
- AC' 97 Aduio Codec – Realtek® ALC655
- LAN Controller – Realtek® RTL 8100C

Memory:
- Provide two 184-pin DIMM sockets
- Support DDR400 (PC3200)/ DDR333 (PC2700)/ DDR266 (PC2100)/ DDR200 (PC1600) SDRAM
- Support 64 MB /128 MB /512 MB/1 GB, and a total memory capacity of 2GB

Slots:
- Provide one 4x/ 8x AGP slot
- Provide three PCI slot
- Provide one CNR slot (Optional)

Onboard IDE:
- Support a maximum of four IDE devices can be set up
- Support PIO, Bus Master, and Ultra DMA 33/ 66/100/133 function

Onboard Serial ATA :
- Provide two SATA connectors with SATA 1.0 specification
- Support a transfer rate of SATA 150 Mbps and SATA RAID 0/1 mode
- One SATA connector can only support one SATA HDD

Onboard AC' 97 Sound Codec:

➢ High performance Codec with high S/N ratio (>90 db)

➢ Compliant with AC' 97 2.3 specification

➢ Support 6-channel playback capability (Super 5.1 Channel Audio Effect)

➢ Support 3D stereo enhancement

➢ Support Sony/ Philips Digital Interfaces (S/PDIF) function (Optional)

Onboard LAN Chip:

➢ 10/100 Mbps Ethernet LAN supported

I/O facilities:

➢ One multi-mode Parallel Port capable of supporting the following specifications:

    1. Standard & Bi-direction Parallel Port

    2. Enhanced Parallel Port (EPP)

    3. Extended Capabilities Port (ECP)

➢ Support one serial port

➢ Support one VGA port

➢ Support PS/2 mouse and PS/2 keyboard

➢ Support 360 KB/720 KB/1.2 MB/1.44 MB/2.88 MB floppy disk drive

Universal Serial Bus:

➢ Support the maximal eight USB 2.0 ports for USB compliant interface devices

BIOS:

➢ Phoenix-Award™ BIOS

➢ Support APM1.2

➢ Support ACPI2.0 power management

Green Function:

➢ Support Phoenix-Award™ BIOS power management function

➢ System Waked from sleeping mode of power saving by touching any keyboard or mouse

Hardware Monitor Function:

➢ Monitor CPU/ Chassis Fan Speed

➢ Monitor CPU and system temperature

➢ Monitor system voltages

Watch Dog Timer:

➢ This function is for detecting the system when it is unable to handle over-clocking configurations during the POST stage. Once the problem is detected, the system will reset the configurations and reboot the system within five seconds.

Configuration
Layout of P4M800-775
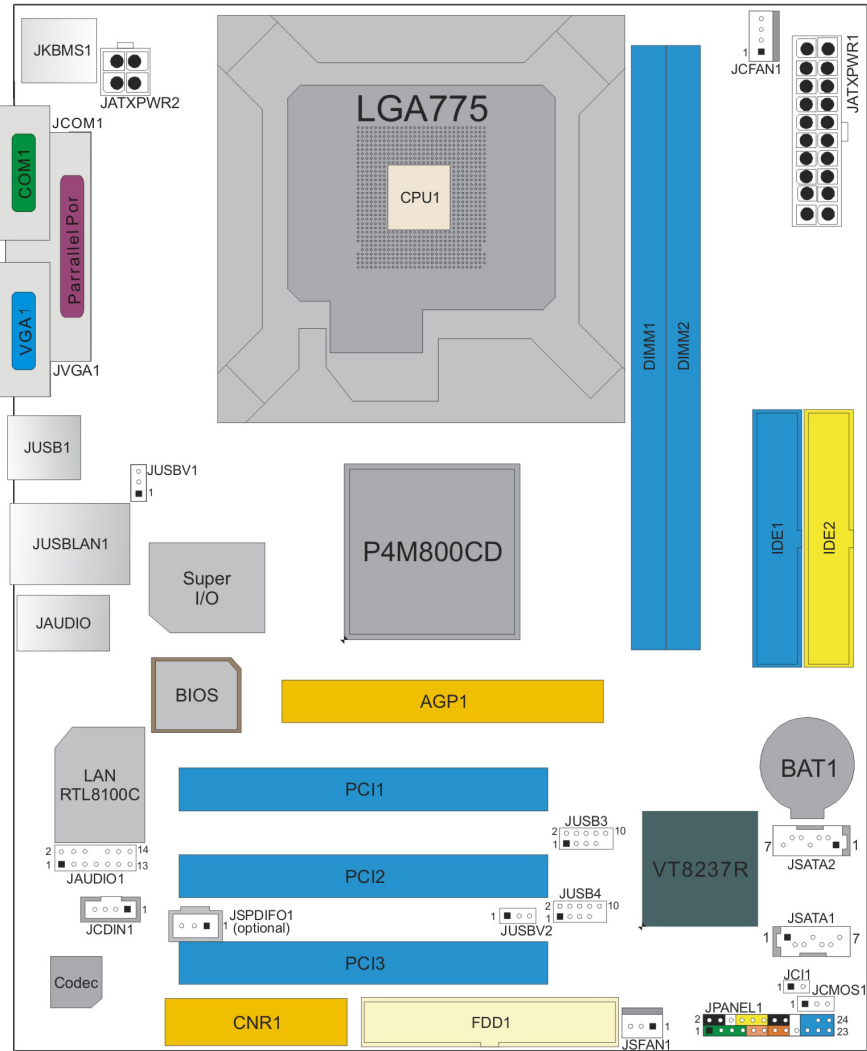
Hardware Installation

This section will assist you in quickly installing your system hardware. Wear a wrist ground strap before handling components. Electrostatic discharge may damage the system's components.

CPU Processor Installation

This mainboard supports Intel® Pentium® 4 processors using a Socket 775. Before building your system, we suggest you to visit the Intel website and review the processor installation procedures. http://www.intel.com

CPU Socket 775 Configuration Steps:

1. Locate the CPU socket 775 on your mainboard and nudge the lever away from the socket as shown. Then lift the lever to a 140-degree angle (A). Next, lift up the iron cover (B).
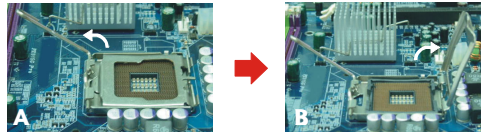
2. There are two distinctive marks located near the corners of the socket on the same side as the lever as shown (C). Match these marks with the marks on the CPU and carefully lower the CPU down onto the socket (D).
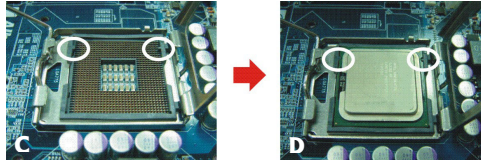
3. Replace the iron cover and then lower the lever until it snaps back into position (E). This will lock down the CPU (F).
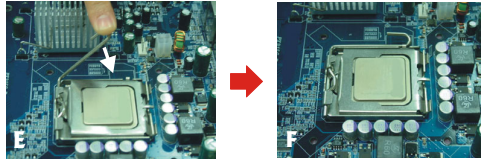
4. Smear thermal grease on the top of the CPU. Lower the CPU fan onto the CPU/CPU socket and secure it using the attachments or screws provided on the fan. Finally, attach the fan power cord to the **JCFAN1** header.
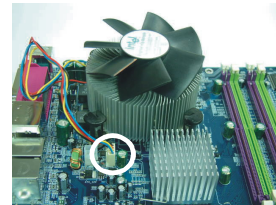
Attention: DO NOT touch the CPU pins due to they are sensitive and easily to be damaged. Also, make sure that you have completed all installation steps before power-on the system. Finally, double-check that the heatsink is properly installed and make sure that the CPU fan power cord is securely attached (cooling problems may cause overheating and lead to damage the CPU and other sensitive components).

FAN Headers: JCFAN1, JSFAN1

Two power headers for cooling fans are available on the P4M800-775. The cooling fans are playing important roles in maintaining CPU and ambient temperatures in your system. Please attach the fan power cords to these two headers.

CPU Fan Header: JCFAN1

Pin	Assignment
1	Ground
2	Power (+12V)
3	FAN RPM rate sense
4	Smart Fan Control

System Fan Header: JSFAN1

Pin	Assignment
1	Ground
2	Power (+12V)
3	FAN RPM rate sense

Attention: We strongly recommend you that attach a cooling fan on top of the CPU and also attach the fan power cord onto the mainboard JCFAN1 header, to avoid your CPU damaged due to high temperatures.

In general, the fan power cord is designed and should be attached with a specific direction. The black wire of the fan power cord is Ground and should be attached onto the header pin-1.

Memory Installation: DIMM1/2

The P4M800-775 provides two 184-pin DIMM (Dual In-Line Memory Module) sockets which support to insert DDR400 (PC3200)/ DDR333 (PC2700)/ DDR266 (PC2100)/ DDR200 (PC1600) SDRAMs and support a total memory capacity of 2 GB.

DIMM1

DIMM2
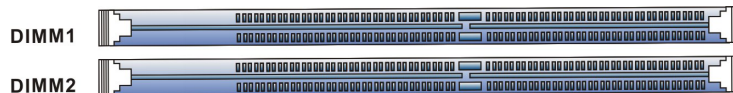
Memory Setup Steps:

The following instructions explain how to set memories onto the DIMM sockets for this mainboard.

1. Pull the white plastic tabs at both ends of the socket away.
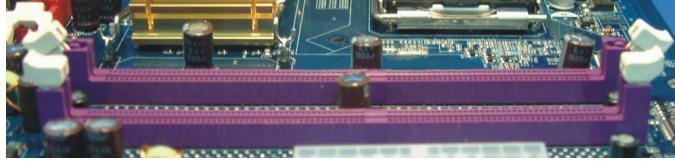
2. Align a memory on the socket such that the notch on the memory matches the break on the socket.
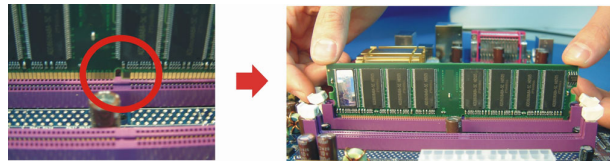
3. Lower the memory vertically into the socket and press firmly by using both thumbs until the memory snaps into place.
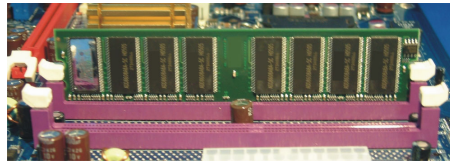
4. Repeat steps 1, 2 & 3 for the remaining memory and DIMM sockets setup.

> * The pictures shown above are for reference only. The actual installation may vary depending on models.

Back Panel Configuration

PS/2 Mouse

(Print Port)
Parallel Port

LAN
連接埠

Line In

Line Out

Mic In

PS/2 Keyboard

COM1
(Serial Port)

VGA

USB Ports

Audio Ports
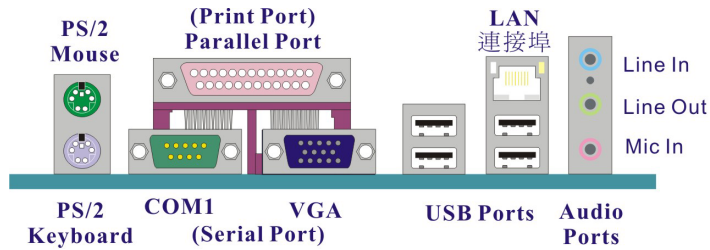
PS/2 Mouse & PS/2 Keyboard Ports: JKBMS1

This mainboard provides a standard PS/2 mouse port and a PS/2 keyboard port. The pin assignments are described below.

PS/2 Mouse

PS/2 Keyboard
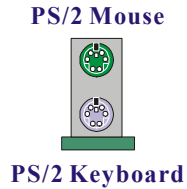
Pin	Assignment	Pin	Assignment
1	Data	4	+5 V (fused)
2	N/A	5	Clock
3	Ground	6	N/A

Serial and Parallel Interface Ports

The mainboard provides one serial port, one parallel port, and one VGA port on the back panel.

Parallel Interface Port: PARALLEL PORT

The parallel port on your system is used to attach a parallel printer or other devices with this interface supported.

Serial Interface Port: JCOM1

This mainboard provides a serial port COM1 on the back panel, and is used to attach mice, modems and other peripheral devices.

Serial Interface Port: JVGA1

This is a D-Sub 15-pin port and is used to attach your monitor cable for display.

(Print Port)
Parallel Port

COM1
(Serial Port)

VGA
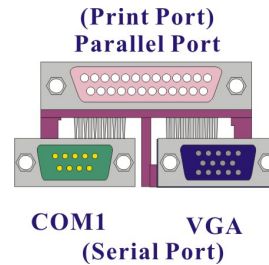
USB & LAN Ports: JUSBLAN1, JUSB1

There are four USB 2.0/ 1.1 ports on the back panel. These USB ports are used to attach with USB devices, such as keyboard, mice and other USB supported devices. There is also a 10/100 Mbps Ethernet LAN port available for you to attach an Internet cable.

LAN Port
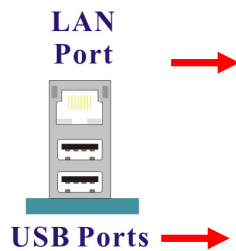
Pin	Assignment	Pin	Assignment
1	TX+ (TX+)	5	NC (TRD2-)
2	TX- (TX-)	6	RX- (RX-)
3	RX+ (RX+)	7	NC (TRD3+)
4	NC (TRD2+)	8	NC (TRD3-)

USB Ports

Pin	Assignment	Pin	Assignment
1/5	+5 V (fused)	3/7	USBP0+/P1+
2/6	USBP0-/P1-	4/8	Ground

Audio Ports: Sound

This mainboard provides three Audio Ports. The Mic-in, Line-in and Line-out are standard audio ports that provide basic audio function.

Line in

Line out

Mic in

Audio Ports

Line-In (Blue)

This port is used to attach an external audio device such as a CD player, tape player or other audio device that has an audio input connector. When the Super 5.1 Channel Audio Effect is enabled, your rear speakers will be enabled with this port.

Line-Out (Green)

It is a standard audio port and used to attach speaker or headset. When the Super 5.1 Channel Audio Effect is enabled, your front speakers will be enabled with this port. In addition, if you have enabled the Super 5.1 Channel Audio Effect but still are using the Standard 2-channel audio play, we strongly recommend you to use this port.

Mic-In (Pink)

This port is used to attach a microphone to input your voice. When the Super 5.1 Channel Audio Effect is enabled, your subwoofer/center equipments will be enabled.

.

> This mainboard supports Super 5.1 Channel Audio Effect which you can transfer the audio system from 2-channel to 6-channel. See **Appendix I** for more information.
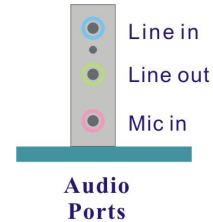
Connectors

Floppy Disk Drive Connector: FDD1

The mainboard provides a standard floppy disk drive connector (FDC) that supports to be attached maximal two 360Kb/ 720Kb/ 1.2Mb/ 1.44Mb/ 2.88Mb floppy disk drives by FDD ribbon cables.

Hard disk drive Connectors: IDE1/2, SATA1/2

The mainboard provides two IDE connectors with PIO Mode 0~5, BUS Master, Ultra DMA 66/100/ 133 specification. You can maximal attach four IDE devices, such as hard disk drive (HDD), CD-ROM, DVD-ROM, and so on by IDE ribbon cables. The onboard Serial ATA, two SATA connectors support SATA RAID 0/1 mode and with transfer rate of up to 150 Mbps.

Primary IDE Connector: IDE1
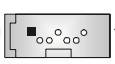
There are two maximal IDE devices can attach to one IDE connector. If you attach two IDE HDDs, you must use a ribbon cable which with two cable connectors. You also must configure one drive as the master and the other one as the slave.

Secondary IDE Connector: IDE2

The IDE2 connector can also be attached with two HDDs by IDE ribbon cable; however, you also must configure one as the Master and the other one as the Slave.

SATA Connector: SATA1/2

The two SATA connectors support a transfer rate of 150 Mbps and SATA RAID 0/1 mode. One SATA connector only can attach one SATA HDD of each time.

Pin	Assignment	Pin	Assignment
1	Ground	2	TX+
3	TX-	4	Ground
5	RX-	6	RX+
7	Ground		

This mainboard supports SATA RAID 0/1, refer **Appendix II** for more information.

Front Panel Headers: JPANEL1 、JAUDIO1

JPANEL1

Pin	Assignment	Function	Pin	Assignment	Function
1	+5V	Speaker (SPK)	2	Sleep control	Sleep Button (SLP)
3	N/A		4	Ground	
5	N/A		6		N/A
7	Speaker		8	Power LED (+)	Power LED (PWRLED)
9	HDD LED (+)	Hard Drive LED (HLED)	10	Power LED (+)	
11	HDD LED (-)		12	Power LED (-)	
13	Ground	Reset Button (RST)	14	Power button	Power-on Button (ON/OFF)
15	Reset control		16	Ground	
17		N/A	18		Key
19	N/A	IrDA (IR)	20	N/A	IrDA (IR)
21	+5V		22	Ground	
23	IRTX		24	IRRX	

Speaker Header (Green): SPK

A PC front panel speaker cord can attach onto this header. When you reboot the system, the speaker will sound a short "beep". If there is something wrong during the Power On Self-Test, the speaker otherwise will sound "irregular beep" to warn you.

Hard Drive LED Header (Orange): HLED

This header can be attached with a PC front panel LED cord. The LED will flicker during the hard disk drive (HDD) activity.

Reset Button Header (Red): RST

This header can be attached with a momentary SPST button cord. The button is normally left open. When the button closed, it will cause the mainboard to reset and run the POST (Power-On Self Test).

Sleep Button Header (Black): SLP

Attach the PC front panel SLP cord onto this header can make the system automatically entering into the power saving mode when it is in rest condition.

Power LED Header (Yellow): PWRLED

Attach the power LED cord onto this header, then the power LED will illuminate while the system is powered on.

Power-on Button Header (Black): ON/OFF

This header can be attached with a PC front panel power button cord. The power button cord must pull the power button pin to ground for at least 50 ms to signal the power supply to turn on or off (the time required is due to internal debounce circuitry on the system board). At least two seconds must pass before the power supply will recognize another on/off signal.

IrDA Header (Blue): IR

Attach the IrDA cord of the PC front case onto this header, then you can transfer the data through this function.

Headers & Jumpers

Case Open Warning Header: CASE OPEN

This header is used to warn the user when the computer case has been previously opened. To use this function, you have to enable the CASE OPEN warning function in the BIOS Setup Utility. When your computer case is opened, your system will show alert messages during the boot up. To use this function, your computer case must be equipped with a "case open" cable.

Pin	Assignment
1	Case open signal
2	Ground

JCI1

Front USB Headers: JUSB3/4

There are four USB 1.1/2.0 ports have provided on this mainboard, and it also provides two front USB headers which allowing you to set four additional USB ports on your PC

front panel. An optional USB bracket may be included within this product and you can attach more USB devices on it.

	Pin	Assignment	Pin	Assignment
2 □□□□□ 10 1 ■□□□ **JUSB3/JUSB4**	1	+5V (fused)	2	+5V (fused)
	3	USB-	4	USB-
	5	USB+	6	USB+
	7	Ground	8	Ground
	9	Key	10	N/A

Attention
If you are using a USB 2.0 device with Windows 2000/XP, you will need to install the USB 2.0 driver from the Microsoft® website. If you are using Service pack 1 (or later) for Windows® XP, and using Service pack4 (or later) for Windows® 2000,you will not have to install the driver.

USB Power Headers: JUSBV1/2

The USB power headers are including the JUSBV1 header and JUSBV2 header. These headers allow you to set your USB power at +5V or +5V standby voltage.

JUSBV1/JUSBV2	Assignment	Description
○ ○ 1 ■ **Pin 1-2 Close**	+5V	**JUSBV1:** +5V for JKBMS1, JUSB1and JUSBLAN1. **JUSBV2:** +5V for JUSB3 and JUSB4.
○ ○ 1 ■ **Pin 2-3 Close**	+5V Standby Voltage	**JUSBV1:** JKBMS1, JUSB1 and JUSBLAN1are powered with +5V standby voltage. **JUSBV2:** JUSB3 and JUSB4 are powered with +5V standby voltage.

Note: Close stands for putting a jumper cap onto two header pins.

Clear CMOS Jumper: JCMOS1

The "Clear CMOS" function is used when you cannot boot your system due to some CMOS problems, such as forget a password. Configuring the jumper caps on this header will allow you to reset the CMOS configurations.

JCMOS1	Assignment
1 ■ ○ ○ **Pin 1-2 Close**	Normal (Defult)
1 ■ ○ ○ **Pin 2-3 Close**	Clear CMOS Data

Note: Close stands for putting a jumper cap onto two header pins.

The following steps explain how to reset your CMOS configurations when you forgot a system password.

1. Turn off your system and disconnect the AC power cable.
2. Set JP1 header to OFF (2-3 Closed).
3. Wait several seconds.
4. Set JP1 header to ON (1-2 closed).
5. Connect the AC power cable and turn on your system.
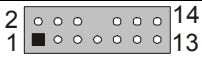6. Reset your new password.

Audio Configuration

CD-ROM Audio-In Connector: JCDIN1

This header is used to attach a CD-ROM / DVD audio cable.

Pin	Assignment
1	Left channel input
2	Ground
3	Ground
4	Right channel input

JCDIN1

Front Audio Connector: JAUDIO1

If there are front audio ports on your front case, please remove the jumpers on this header, and then you will have two sets of audio ports (one set is on the front case and the other one is on the back panel) to use. On the other hand, your audio ports on the back panel will fail to work if the jumper caps on this header are removed.

JAUDIO1

Pin	Assignment	Pin	Assignment
1	Mic in/center	2	Ground
3	Mic power/Bass	4	Audio power
5	Right line out/Speaker out right	6	Right line out/Speaker out right
7	Reserved	8	Key
9	Left line out/Speaker out left	10	Left line out/Speaker out left
11	Right line in/Rear speaker right	12	Right line in/Rear speaker right
13	Left line in/Rear speaker left	14	Left line in/Rear speaker left

S/PDIF Connector: JSPDIF01 (Optional)

S/PDIF is a recent audio transfer file format, which provides high quality audio using optical fiber and digital signals. This mainboard is capable to deliver audio output and receive audio input through the SPDIF header. One way you would use this header is by using an SPDIF bracket (optional) and attaching its cord onto this JSPDIF01 connector. The

RCA or Tos-Link connector will be on the bracket and convenient you to output or input data into the SPDIF devices.

	Pin	Assignment
JSPDIFO1	1	+5V
	2	SPDIF out
	3	Ground

Slots

AGP Slot: AGP1

The mainboard supports to install an extra graphics card with AGP interface or PCI interface, in order to improve your display efficiency and performance. The AGP slot comes with AGP 3.0 specification and supports 8x/ 4x graphics card installation.

PCI Slots: PCI1/2/3

This mainboard provides three standard 32-bit PCI slots. PCI stands for Peripheral Component Interconnect and is a bus standard for expansion cards, which has supplanted the older ISA bus standard.
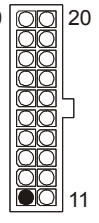
CNR Slot: CNR1 (optional)

The CNR stands for Communication Network Riser, which is an open Industry Standard Architecture and supports modem only.

Power Supply Attachments

ATX Power Connector: JATXPWR1, PATXPWR2

Attach power cords on these connectors and make sure they are set in secure before applying the power. Then the system is able to support several functions such as the instant power-on and so on.

	Pin	Assignment	Pin	Assignment
	1	+3.3V	11	+3.3V
	2	+3.3V	12	-12V
	3	Ground	13	Ground
	4	+5V	14	PS_ON
	5	Ground	15	Ground
	6	+5V	16	Ground
	7	Ground	17	Ground
	8	PW_ON	18	-5V
JATXPWR1	9	+5V standby voltage	19	+5V
	10	+12V	20	+5V

	Pin	Assignment	Pin	Assignment
2 ⊡ ● 1	1	+12V	3	Ground
4 ⊡ ⊡ 3 JATXPWR2	2	+12V	4	Ground

Attention

In general, power cords are designed and should be attached with a specific direction. The black wire of the power cord is Ground and should be attached onto the header location of Ground.

Chapter 2. BIOS Setup

Introduction

This section describes PHOENIX-AWARD™ BIOS Setup program which resides in the BIOS firmware. The Setup program allows users to modify the basic system configuration. The configuration information is then saved to CMOS RAM where the data is sustained by battery after power-down.

The BIOS provides critical low-level support for standard devices such as disk drives, serial ports and parallel ports. As well, the BIOS control the first stage of the boot process, loading and executing the operating system.

The PHOENIX-AWARD™ BIOS installed in your computer system's ROM is a custom version of an industry standard BIOS. This means that it supports the BIOS of Intel® based processors.

This version of the PHOENIX-AWARD™ BIOS includes additional features such as virus and password protection as well as special configurations for fine-tuning the system chipset. The defaults for the BIOS values contained in this document may vary slightly with the version installed in your system.

Key Function

In general, you can use the arrow keys to highlight options, press <Enter> to select, use the <PgUp> and <PgDn> keys to change entries, press <F1> for help and press <Esc> to quit. The following table provides more detail about how to navigate within the BIOS Setup program.

Keystroke	Function
Up arrow	Move to previous option
Down arrow	Move to next option
Left arrow	Move to the option on the left (menu bar)
Right arrow	Move to the option on the right (menu bar)
Esc	Main Menu: Quit without saving changes Submenus: Exit Current page to the next higher level menu
Move Enter	Move to the option you desire
PgUp key	Increase the numeric value or enter changes
PgDn key	Decrease the numeric value or enter changes
+ Key	Increase the numeric value or enter changes
- Key	Decrease the numeric value or enter changes
Esc key	Main Menu – Quit and do not save changes into CMOS Status Page Setup Menu and Option Page Setup Menu – Exit Current page and return to Main Menu
F1 key	General help on Setup navigation keys
F5 key	Load previous values from CMOS
F6 key	Load the defaults from BIOS default table

Menu Description

Standard CMOS Features
Include all the adjustable items in standard compatible BIOS.

Advanced BIOS Features
Include all the adjustable items of Award special enhanced features.

Advanced Chipset Features
Include all the adjustable items of chipset special features.

Integrated Peripherals
Include all onboard peripherals.

Power Management Setup
Include all the adjustable items of Green function features.

PnP/PCI Configurations
Include all configurations of PCI and PnP ISA resources.

PC Health Status
It is for monitoring the system status such as temperature, voltage, and fan speeds.

Frequency/Voltage Control
It is for setting the CPU clock and frequency ratio.

Load Optimized Defaults
It can load the preset system parameter values to set the system in its best performance configurations.

Set Supervisor Password
Set change or disable password. It allows you to limit access to the system and/or BIOS setup.
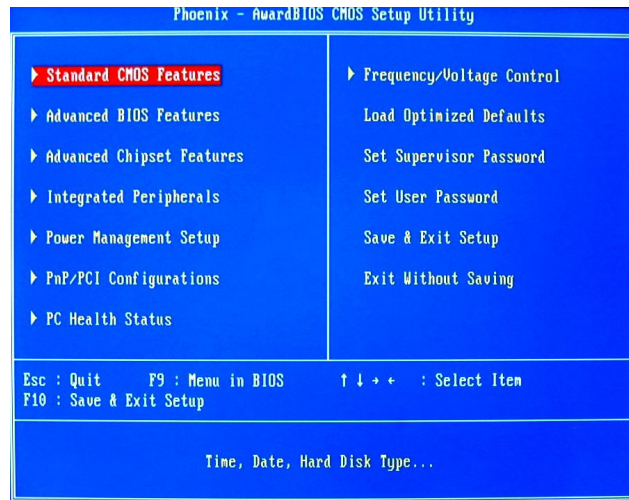
Set User Password
Set change or disable password. It allows you to limit access to the system.

Save & Exit Setup
Save CMOS value settings to CMOS and exit setup.

Exit Without Saving
Abandon all CMOS value changes and exit setup.

```
                 Phoenix - AwardBIOS CMOS Setup Utility

    ▶ Standard CMOS Features          ▶ Frequency/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

    ▶ PC Health Status


    Esc : Quit      F9 : Menu in BIOS      ↑ ↓ → ←   : Select Item
    F10 : Save & Exit Setup

                    Time, Date, Hard Disk Type...
```

Chapter 3: Troubleshooting

Problem 1:

No power to the system. Power light does not illuminate. Fan inside power supply does not turn on. Indicator lights on keyboard are not lit.

Causes:

1. Power cable is unplugged.

2. Defective power cable.

3. Power supply failure.

4. Faulty wall outlet; circuit breaker or fuse blown.

Solutions:

1. Make sure power cable is securely plugged in.

2. Replace cable.

3.Contact technical support.

4.Use different socket, repair outlet, reset circuit breaker or replace fuse.

Problem 2:

System inoperative. Keyboard lights are on, power indicator lights are lit, hard drive is active but system seems "hung"

Causes: Memory DIMM is partially dislodged from the slot on the mainboard.

Solutions:

1. Power Down

2. Using even pressure on both ends of the DIMM, press down firmly until the module snaps into place.

Problem 3:

System does not boot from the hard disk drive but can be booted from the CD-ROM drive.

Causes:

1. Connector between hard drive and system board unplugged.

2. Damaged hard disk or disk controller.

3. Hard disk directory or FAT is corrupted.

Solutions:

1. Check the cable running from the disk to the disk controller board. Make sure both ends are securely attached. Check the drive type in the standard CMOS setup.

2. Contact technical support.

3. Backing up the hard drive is extremely important. Make sure your periodically perform backups to avoid untimely disk crashes.

Problem 4:

System only boots from the CD-ROM. The hard disk can be read and applications can be used but booting from the hard disk is impossible.

Causes: Hard Disk boot sector has been corrupted.

Solutions: Back up data and applications files. Reformat the hard drive. Re-install applications and data using backup disks.

Problem 5:

Error message reading "SECTOR NOT FOUND" displays and the system does not allow certain data to be accessed.

Causes: There are many reasons for this such as virus intrusion or disk failure.

Solutions: Back up any salvageable data. Then performs low level format, partition, and then a high level format the hard drive. Re-install all saved data when completed.

Problem 6:

Screen message says "Invalid Configuration" or "CMOS Failure."

Causes: Incorrect information entered into the BIOS setup program.

Solutions: Review system's equipment. Reconfigure the system.

Problem 7:

The Screen is blank.

Causes: No power to monitor.

Solutions: Check the power connectors to the monitor and to the system.

Problem 8:

Blank screen.

Causes:

1. Memory problem.

2. Computer virus.

Solutions:

1. Reboot computer. Reinstall memory. Make sure that all memory modules are securely installed.

2. Use anti-virus programs to detect and clean viruses.

Problem 9:

Screen goes blank periodically.

Causes: Screen saver is enabled.

Solutions: Disable screen saver.

Problem 10:

Keyboard failure.

Causes: Keyboard is disconnected.

Solutions: Reconnect keyboard. Replace keyboard if you continue to experience problems.

Problem 11:

No color on screen.

Causes:

1. Faulty Monitor.

2. CMOS incorrectly set up.

Solutions:

1. If possible, connect monitor to another system. If no color appears, replace monitor.

2. Call technical support.

Problem 12:

The screen displays "C: drive failure."

Causes: Hard drive cable not connected properly.

Solutions: Check hard drive cable.

Problem 13:

Cannot boot the system after installing a second hard drive.

Causes:

1. Master/slave jumpers not set correctly.

2. Hard drives are not compatible / different manufacturers.

Solutions:

1. Set master/slave jumpers correctly.

2.Run SETUP program and select the correct drive types. Call drive manufacturers for possible compatibility problems with other drives.

Problem 14:

Missing operating system on hard drive.

Causes: CMOS setup has been changed.

Solutions: Run setup and select the correct drive type.

Problem 15:

Certain keys do not function.

Causes: Keys jammed or defective.
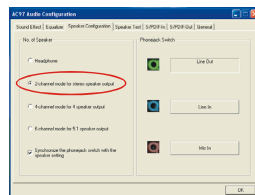
Solutions: Replace keyboard.
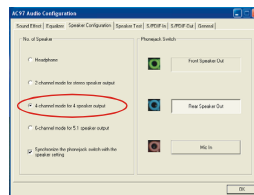
Appendix I: Super 5.1 Channel Audio Effect Setup

Channels Setup

1. After getting into the system, click the audio icon ⊙ from the Windows screen.
2. Click Speaker Configuration button, you can see the screen like the picture below.
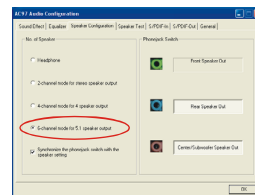3. You can choose 2, 4 or 6 channels by your speakers.

2 Channels   **4 Channels**   **6 Channels**

Super 5.1 Channel Audio Effect

This mainboard comes with an ALC655 Codec which supports high quality 5.1 Channel audio effects. With ALC655, you are able to use standard line-jacks for surround audio output without connecting to any auxiliary external modules. To use this function, you have to install the audio driver in the bonus Pack CD as well as an audio application supporting 5.1 Channel audio effects. See the audio Port Connectors in the Hardware Installation section for a description of the output connectors.
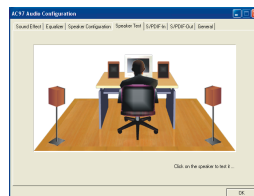
Speaker Test

Make sure the cable is firmly into the connector.
1. Click the audio icon ⊙ from the Windows screen.
2. Click Speaker Test button, you can see the screen like the pictures below.
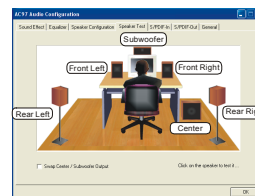3. Select the speaker which you want to test by clicking on it.

2 Channels   **4 Channels**   **6 Channels**

Appendix II: SATA RAID 0/1 Setup

Introduction to RAID
(Redundant Array of Independent Disks)

RAID technology is a sophisticated disk management system that manages multiple disk drives, enhancing I/O performance and providing redundancy in order to prevent the loss of data in case any of the individual disks fail. The SATA RAID facility on this board provides RAID 0 (striped), RAID 1 (mirrored) and RAID SPAN.

Disk Striping (RAID 0)

Striping is a performance-oriented, non-redundant disk storage technology. With RAID striping, multiple disks are used to form a larger virtual disk. Data is then striped or mapped across all the physical disks. In this way modern SATA and ATA bus mastering technology can be used to perform multiple I/O operations in parallel, enhancing performance. While Striping is discussed as a RAID Set type, it actually does not provide fault tolerance.

Disk Mirroring (RAID 1)

With Disk Mirroring there is a redundant disk that mirrors the main disk. Data that is written to the main disk is also written to the redundant disk. This redundancy provides fault tolerant protection from a single disk failure. If a read/write failure occurs on one drive, the system can still read and write data using the other drive.

RAID SPAN

RAID SPAN is not one of the standard RAID levels. It is however considered a JBOD (Just Bundle Of Disks) configuration which simply uses multiple disks to form a larger virtual disk without any other specialized disk management functionality.

RAID BIOS Configuration

Before the RAID BIOS configuration, make sure that you have set two SATA HDDs, and you have chosen the option of BIOS -> Integrated Peripherals -> VIA Onchip IDE Device -> SATA Mode -> RAID. When the system reboots up during the POST (Power-On Self Test), the user will be given an opportunity to enter the "VIA RAID BIOS Configuration" utility. Wait for the following prompt:

Press <Tab> Key into User Window

Then press the "Tab" key to enter the VIA RAID BIOS Configuration utility. The VIA RAID BIOS screen will display as shown below.
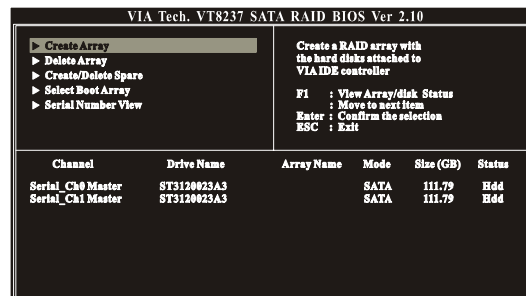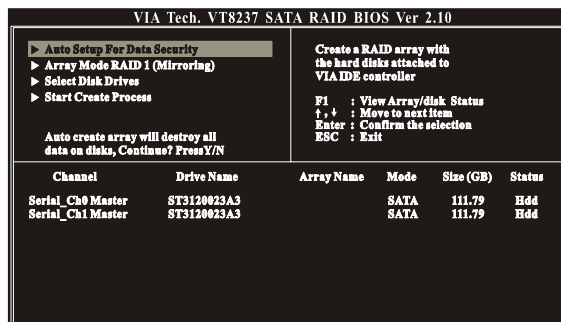
Create Array

1. The "Create Array" option will allow you to initialize a RAID array. Choose the "Create Array" on the main screen and press <Enter>. The screen below will display. According to your needs, select "RAID 0 for performance" (striping), "RAID 1 for data protection" (mirroring) or "RAID SPAN for capacity" (JBOD). Then press <Enter>.
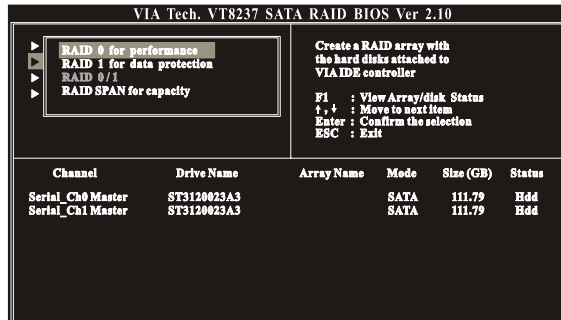
Attention
The "Channel" 、 "Drive Name" 、 "Mode" 、 "Size (GB)", located at the bottom portion of the screen above, reflect the devices that are currently installed on the SATA connectors. The example information above may therefore differ with the information that displays on your screen.

2. Next, choose the "Auto Setup for Data Security" option and press <Enter>. The screen will display a confirmation message as shown below. Press <Y> to continue with the creation of the new array.

Attention
For RAID 1 (Mirrored Arrays), you can manually select the "source device" instead of having the system determine it for you. After step 1, select the "Select Disk Drives" to manually select the "source device". Then choose the "Start Create Process" and press <Enter> to complete the RAID 1 array creation.

3. After the array has been successfully created, one of the screens will display as shown below according to the type of array you created.

RAID 1 mode

```
                  VIA  Tech.  VT8237  SATA  RAID  BIOS  Ver  2.10

   ▶ Auto Setup For Data Security         Create a RAID array with
   ▶ Array Mode RAID 1 (Mirroring)        the hard disks attached to
   ▶ Select Disk Drives                   VIA IDE controller
   ▶ Start Create Process
                                          F1    : View Array/disk  Status
                                          ↑ , ↓  : Move to next item
                                          Enter : Confirm the selection
                                          ESC   : Exit


      Channel           Drive Name       Array Name   Mode    Size (GB)   Status

   Serial_Ch0 Master    ST3120023A3      ARRAY 0      SATA     111.79     Source
   Serial_Ch1 Master    ST3120023A3      ARRAY 0      SATA     111.79     Mirror
```

RAID 0 mode

```
                  VIA  Tech.  VT8237  SATA  RAID  BIOS  Ver  2.10

   ▶ Auto Setup For Data Security         Create a RAID array with
   ▶ Array Mode RAID 0 (Striping)         the hard disks attached to
   ▶ Select Disk Drives                   VIA IDE controller
   ▶ Block Size 64K
   ▶ Start Create Process                 F1    : View Array/disk  Status
                                          ↑ , ↓  : Move to next item
                                          Enter : Confirm the selection
                                          ESC   : Exit


      Channel           Drive Name       Array Name   Mode    Size (GB)   Status

   Serial_Ch0 Master    ST3120023A3      ARRAY 0      SATA     111.79     Stripe 0
   Serial_Ch1 Master    ST3120023A3      ARRAY 0      SATA     111.79     Stripe 1
```

RAID SPAN mode

```
                  VIA  Tech.  VT8237  SATA  RAID  BIOS  Ver  2.10

   ▶ Auto Setup For Data Security         Create a RAID array with
   ▶ Array Mode SPAN (JBOD)               the hard disks attached to
   ▶ Select Disk Drives                   VIA IDE controller
   ▶ Start Create Process
   ▶ Expend Span (JBOD) Array             F1    : View Array/disk  Status
                                          ↑ , ↓  : Move to next item
                                          Enter : Confirm the selection
                                          ESC   : Exit


      Channel           Drive Name       Array Name   Mode    Size (GB)   Status

   Serial_Ch0 Master    ST3120023A3      ARRAY 0      SATA     111.79     Span 0
   Serial_Ch1 Master    ST3120023A3      ARRAY 0      SATA     111.79     Span 1
```

The RAID 0 screen (above) contains the option, "Block Size 64K". With this option you can manually select the block size for your array. However, we recommend that you to select the "64K" for optimal performance.

Delete Array

1. You can delete an existing array with the "Delete Array" option on the main screen. Choose the "Delete Array" option and press <Enter>. Then press the <Enter> key once again and the system will mark all the existing SATA devices with an asterisk (as shown below in the bottom section). (Note that the example information below may differ slightly depending on the RAID type you are configuring.)
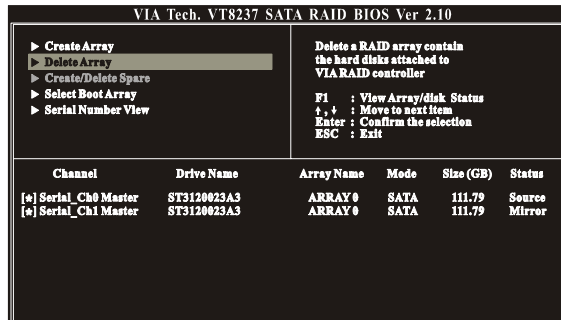
2. Press <Enter>. A warning/confirmation message will display (as shown below). Press <Y> to confirm.
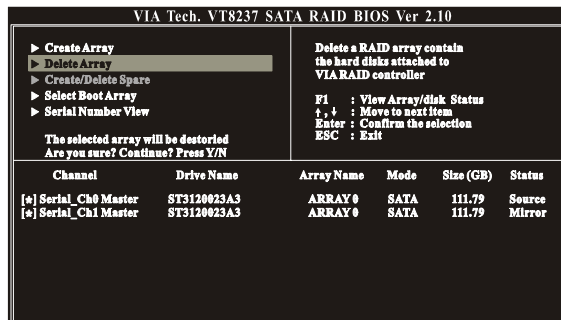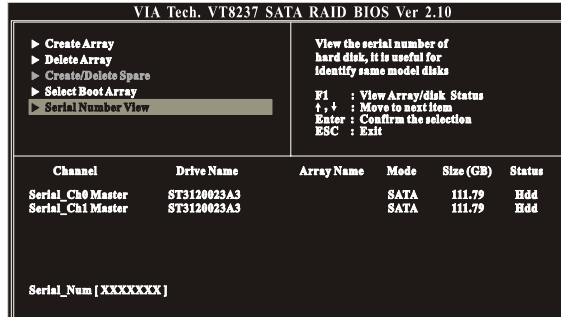

3. After the array is successfully deleted, the screen will display as shown below.
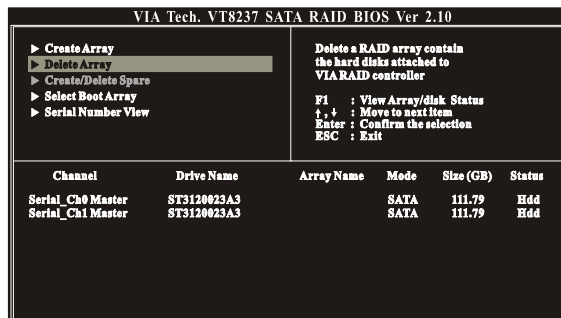
Serial Number View

You can choose the "Serial Number View" to view the serial number of the serial ATA device. The serial number is assigned to the device by the manufacturer.

VIA RAID Tool (VIA Raid Tool icon

The VIA RAID Tool allows the user to configure and monitor RAID arrays from the Windows environment. After booting your operating system, click the "VIA RAID Tool" icon from the Windows desktop. The Screen below will display. You can simply click on one of the toolbar buttons on the menu bar to execute their respective functions.
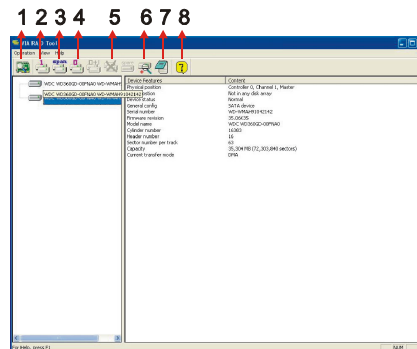
Toolbar Button 1: View the controller status.

Toolbar Button 2: Create a array with RAID 1.

Toolbar Button 3: Create a array with SPAN.

Toolbar Button 4: Create a array with RAID 0.

Toolbar Button 5: Delete the array that you created before.

Toolbar Button 6: View the devices status.

Toolbar Button 7: View the event log.

Toolbar Button 8: Help topics.