

### FCC Compliance Statement:

<p align="center"><b>DECLARATION OF CONFORMITY</b> <small>Per FCC Part 2 Section 2.1077(a)</small></p> <p align="center"><b>FCC</b></p> <p>Responsible Party Name: G.B.T. INC.</p> <p>Address: 18305 Valley Blvd., Suite#A LA Puente, CA 91744</p> <p>Phone/Fax No: (818) 854-9338/ (818) 854-9339</p> <p>hereby declares that the product</p> <p>Product Name: Mother Board</p> <p>Model Number: GA-6VT3MR</p> <p>Conforms to the following specifications:</p> <p>FCC Part 15, Subpart B, Section 15.107(a) and Section 15.109(a), Class B Digital Device</p> <p><b>Supplementary Information:</b></p> <p>This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including that may cause undesired operation.</p> <p>Representative Person's Name: <u>ERIC LU</u></p> <p>Signature: <u>Eric Lu</u></p> <p>Date: <u>Oct. 08, 2001</u></p>
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This equipment has been tested and found to comply with limits for 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 residential installations. 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. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television equipment reception, which can be

determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Move the equipment away from the receiver
- Plug the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/television technician for additional suggestions

You are cautioned that any change or modifications to the equipment not expressly approve by the party responsible for compliance could void Your authority to operate such equipment.

This device complies with Part 15 of the FCC Rules. Operation is subjected to the following two conditions 1) this device may not cause harmful interference and 2) this device must accept any interference received, including interference that may cause undesired operation.

## Declaration of Conformity

We, Manufacturer/Importer  
(full address)

**G.B.T. Technology Trading GmbH**  
**Ausschlagler Weg 41, 1F, 20537 Hamburg, Germany**

declare that the product  
( description of the apparatus, system, installation to which it refers)

**Mother Board**  
**GA-6VTMR**

is in conformity with  
(reference to the specification under which conformity is declared)  
in accordance with 89/336 EEC-EMC Directive

- |  |  |  |  |
|--|--|--|--|
| <input type="checkbox"/> <b>EN 55011</b>   | Limits and methods of measurement of radio disturbance characteristics of industrial, scientific and medical (ISM) high frequency equipment                | <input type="checkbox"/> <b>EN 61000-3-2*</b><br><input checked="" type="checkbox"/> <b>EN60555-2</b>          | Disturbances in supply systems caused by household appliances and similar electrical equipment "Harmonics"   |
| <input type="checkbox"/> <b>EN55013</b>  | Limits and methods of measurement of radio disturbance characteristics of broadcast receivers and associated equipment                                     | <input type="checkbox"/> <b>EN61000-3-3*</b><br><input checked="" type="checkbox"/> <b>EN60555-3</b>           | Disturbances in supply systems caused by household appliances and similar electrical equipment "Voltage fluctuations"                                  |
| <input type="checkbox"/> <b>EN 55014</b>   | Limits and methods of measurement of radio disturbance characteristics of household electrical appliances, portable tools and similar electrical apparatus | <input checked="" type="checkbox"/> <b>EN 50081-1</b><br><input checked="" type="checkbox"/> <b>EN 50082-1</b> | Generic emission standard Part 1: Residual, commercial and light industry<br>Generic immunity standard Part 1: Residual, commercial and light industry |
| <input type="checkbox"/> <b>EN 55015</b>   | Limits and methods of measurement of radio disturbance characteristics of fluorescent lamps and luminaries   | <input type="checkbox"/> <b>EN 55081-2</b>   | Generic emission standard Part 2: Industrial environment   |
| <input type="checkbox"/> <b>EN 55020</b>   | Immunity from radio interference of broadcast receivers and associated equipment   | <input type="checkbox"/> <b>EN 55082-2</b>   | Generic immunity standard Part 2: Industrial environment   |
| <input checked="" type="checkbox"/> <b>EN 55022</b>  | Limits and methods of measurement of radio disturbance characteristics of information technology equipment   | <input type="checkbox"/> <b>ENV 55104</b>  | Immunity requirements for household appliances tools and similar apparatus   |
| <input type="checkbox"/> <b>DIN VDE 0855</b><br><input type="checkbox"/> <b>part 10</b><br><input type="checkbox"/> <b>part 12</b> | Cabled distribution systems; Equipment for receiving and/or <b>distribution</b> from sound and television signals  | <input type="checkbox"/> <b>EN 50091- 2</b>  | EMC requirements for uninterruptible power systems (UPS)   |
| <input checked="" type="checkbox"/> <b>CE marking</b>  |  |  (EC conformity marking)     |  |

**The manufacturer also declares the conformity of above mentioned product with the actual required safety standards in accordance with LVD 73/23 EEC**

- |  |   |  |   |
|--|---|--|---|
| <input type="checkbox"/> <b>EN 60065</b> | Safety requirements for mains operated electronic and related apparatus for household and similar general use | <input type="checkbox"/> <b>EN 60950</b>   | Safety for information technology equipment including electrical business equipment |
| <input type="checkbox"/> <b>EN 60335</b> | Safety of household and similar electrical appliances   | <input type="checkbox"/> <b>EN 50091-1</b> | General and Safety requirements for uninterruptible power systems (UPS)             |

**Manufacturer/Importer**

(Stamp)

Date : Oct. 08, 2001

Signature : Rex Lin  
Name : Rex Lin

**6VTMR**  
**Socket 370 Processor Motherboard**

**USER'S MANUAL**

Socket 370 Processors Motherboard  
REV. 1.0 First Edition  
12ME-6VTMR-1001



## How This Manual Is Organized

This manual is divided into the following sections:

1) Revision History	Manual revision information
2) Item Checklist	Product item list
3) Features	Product information & specification
4) Installation Guide	Instructions on CPU & Memory installation
5) Performance & Block Diagram	Product performance & block diagram
6) Q-Flash BIOS Utility	Q-Flash BIOS utility introduction
7) Advanced Networking Services	Advanced Networking Services for Windows NT* 4 and Windows 2000 (Teaming)
8) BIOS Setup	Instructions on setting up the BIOS software
9) Technical Support /RMA sheet	Document equipment used for after sales service
10) Appendix	General reference



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## Revision History

Revision	Revision Note	Date
1.0	Initial release of the 6VTMR motherboard user's manual.	Oct. 2001

The author assumes no responsibility for any errors or omissions that may appear in this document nor does the author make a commitment to update the information contained herein. Third-party brands and names are the property of their respective owners.

Oct. 24, 2001 Taipei, Taiwan, R.O.C



## Item Checklist

- ☒ The 6VTMR motherboard
- ☒ Cable for IDE / floppy device
- ☒ Diskettes or CD (Driver CD) for motherboard driver & utility
- ☒ 6VTMR user's manual

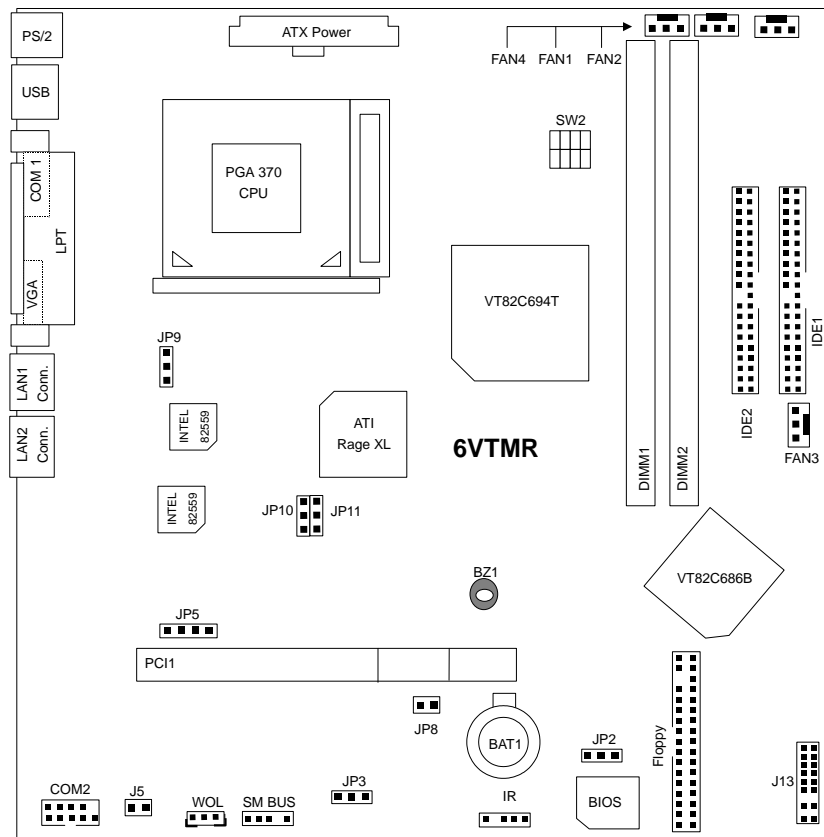
## Features Summary

Form Factor	<ul style="list-style-type: none"> <li>24.4 cm x 24.4 cm ATX size form factor, 6 layers PCB.</li> </ul>
CPU	<ul style="list-style-type: none"> <li>Socket 370 processor Supports all new Pentium III processors (FC-PGA &amp; FC-PGA2 package) Supports 100/133MHz system bus frequency Can't Support processor with Vcore above 1.8V</li> <li>L2 cache in CPU (Depend on CPU)</li> </ul>
Chipset	<ul style="list-style-type: none"> <li>VT82C694T (VIA Apollo Pro 133T)</li> <li>VT82C686B</li> </ul>
Clock Generator	<ul style="list-style-type: none"> <li>ICS 9248DF-39</li> <li>100/133 MHz system bus speeds (PCI 33MHz)</li> </ul>
Memory	<ul style="list-style-type: none"> <li>2 168-pin DIMM sockets</li> <li>Supports PC-100 / PC-133 SDRAM and VCM SDRAM</li> <li>Supports up to 2.0GB DRAM (Max)</li> <li>Supports only 3.3V SDRAM DIMM</li> <li>Supports 72bit ECC type DRAM integrity mode</li> <li>Supports registered or un-buffered DRAM</li> </ul>
I/O Control	<ul style="list-style-type: none"> <li>VT82C686B</li> </ul>
Slots	<ul style="list-style-type: none"> <li>1 PCI slot supports 33MHz &amp; PCI 2.2 compliant</li> </ul>
On-Board IDE	<ul style="list-style-type: none"> <li>IDE 1 and IDE 2 Supports PIO mode 3, 4, UDMA 33 / ATA 66/100 IDE &amp; ATAPI CD-ROM</li> <li>2 IDE bus master (UDMA 33/ATA 66/ATA100) IDE ports for up to 4 ATAPI devices</li> </ul>
On-Board Peripherals	<ul style="list-style-type: none"> <li>1 floppy port supports 2 FDD with 360K, 720K, 1.2M, 1.44M and 2.88M bytes</li> <li>1 parallel ports supports Normal/EPP/ECP mode</li> <li>2 serial ports (COM 1 &amp; COM 2)</li> <li>2 USB ports</li> <li>1 IrDA connector for Fast IrDA</li> </ul>
On-Board VGA	<ul style="list-style-type: none"> <li>Onboard ATI RAGE XL</li> </ul>
On-Board LAN	<ul style="list-style-type: none"> <li>Onboard INTEL 82559 Dual Ethernet</li> </ul>
Hardware Monitor	<ul style="list-style-type: none"> <li>CPU / Power / System fan revolution detect</li> <li>CPU / Power / System temperature detect</li> <li>System voltage detect</li> <li>CPU overheat shutdown detect</li> </ul>
PS/2 Connector	<ul style="list-style-type: none"> <li>PS/2<sup>®</sup> Keyboard interface and PS/2<sup>®</sup> Mouse interface</li> </ul>

To be continued...

BIOS	<ul style="list-style-type: none"><li>• Licensed Award BIOS, 2M bits flash ROM</li></ul>
Additional Features	<ul style="list-style-type: none"><li>• Support Wake-On-LAN (WOL)</li><li>• Support Internal / External Modem Ring On</li><li>• Includes 4 fan power connectors</li><li>• Poly fuse for keyboard over-current protection</li></ul>

## 6VTMR Motherboard Layout



## Installation Guide

### Getting Started

**WARNING!**

Computer motherboards and expansion cards contain very delicate Integrated Circuit (IC) chips. To protect them against damage from static electricity, you should follow some precautions whenever you work on your computer.

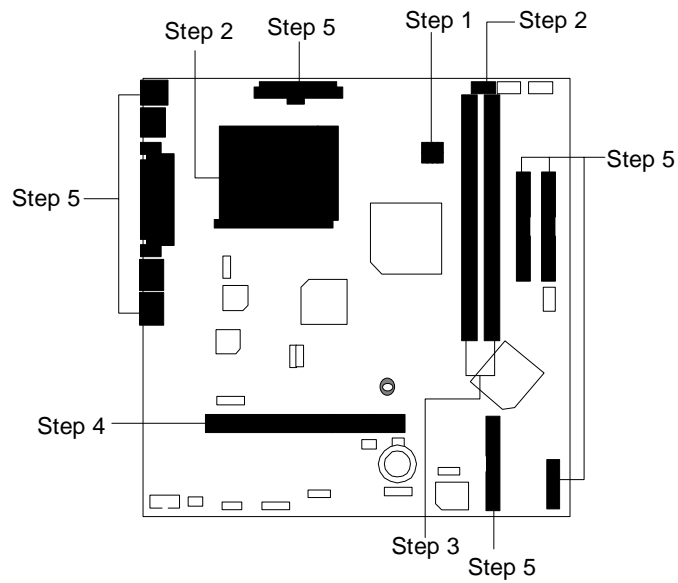
1. Unplug your computer when working on the inside.
2. Use a grounded wrist strap before handling computer components. If you do not have one, touch both of your hands to a safely grounded object or to a metal object, such as the power supply case.
3. Hold components by the edges and try not touch the IC chips, leads or connectors, or other components.
4. Place components on a grounded antistatic pad or on the bag that came with the components whenever the components are separated from the system.
5. Ensure that the ATX power supply is switched off before you plug in or remove the ATX power connector on the motherboard.

### Installing the motherboard to the chassis...

If the motherboard has mounting holes, but they don't line up with the holes on the base and there are no slots to attach the spacers, do not become alarmed you can still attach the spacers to the mounting holes. Just cut the bottom portion of the spacers (the spacer may be a little hard to cut off, so be careful of your hands). In this way you can still attach the motherboard to the base without worrying about short circuits. Sometimes you may need to use the plastic springs to isolate the screw from the motherboard PCB surface, because the circuit wire may be near by the hole. Be careful, don't let the screw contact any printed circuit write or parts on the PCB that are near the fixing hole, otherwise it may damage the board or cause board malfunctioning.

To set up your computer, you must complete the following steps:

- ▶ Step 1 - Set system jumpers
- ▶ Step 2- Install the Central Processing Unit (CPU)
- ▶ Step 3-Install memory modules
- ▶ Step 4-Install expansion cards
- ▶ Step 5-Connect ribbon cables, cabinet wires, and power supply
- ▶ Step 6-Set up BIOS software
- ▶ Step 7-Install supporting software tools



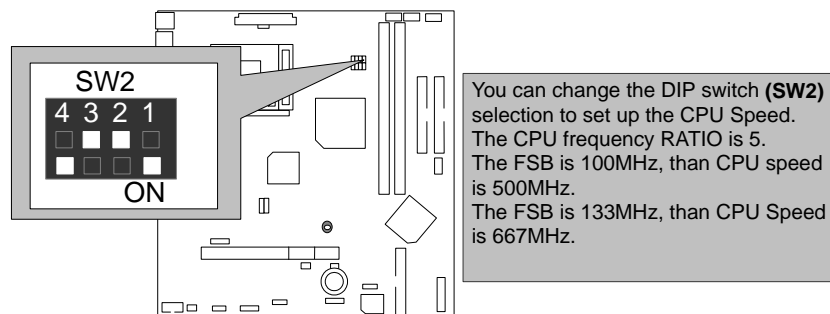
## CPU Speed Setup

The system bus speed is depended on CPU. (Supported 100,133MHz). The user can change the DIP switch (**SW1**) selection to set up the CPU speed for 500MHz – 1GHz processor.

**SW2 (RATIO):**

O : ON, X : OFF

FREQ. RATIO	DIP SWITCH			
	1	2	3	4
X3	O	X	O	O
X3.5	X	X	O	O
X4	O	O	X	O
X4.5	X	O	X	O
X5	O	X	X	O
X5.5	X	X	X	O
X6	O	O	O	X
X6.5	X	O	O	X
X7	O	X	O	X
X7.5	X	X	O	X
X8	O	O	X	X
X8.5	O	X	O	O
X9	X	X	O	O
X9.5	X	O	O	O
X10	X	O	X	X
X10.5	O	O	X	O
X11	O	X	X	X
X11.5	X	O	X	O
X12	O	X	X	O
X13	X	X	X	O
X14	O	O	O	X
X15	X	O	O	X
X16	O	X	O	X

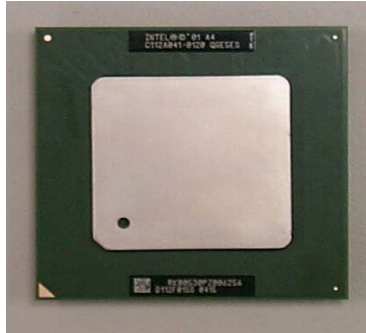


- \* Intel Processor all have locked Frequency Multiple, so you can not change the CPU Frequency Multiple.

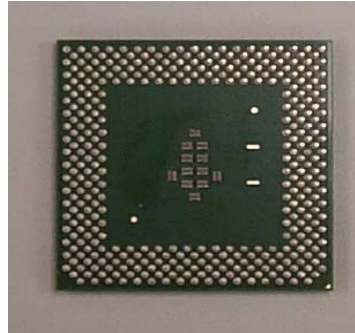
### CPU Installation

Please make sure the CPU type and speed is supported by your motherboard.

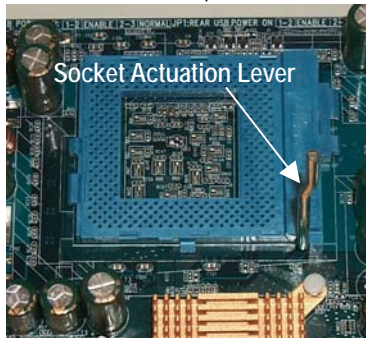
For example: The newest Pentium III processor (FC-PGA2 package).



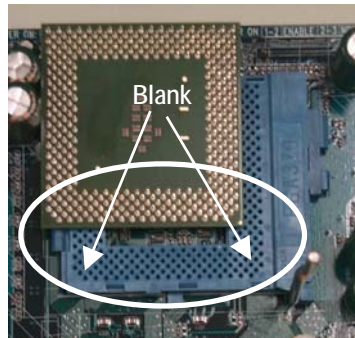
CPU Top View



CPU Bottom View



1. Pull the lever out and lift it up.



2. The notched corner should point toward the end of the lever. The CPU will only fit in the orientation as shown.



### CPU Heat Sink Installation:

Beware: Please check that the heat sink is in good contact with the CPU before you turn on your system. Poor contact will cause over heat with might cause damage to your processor!

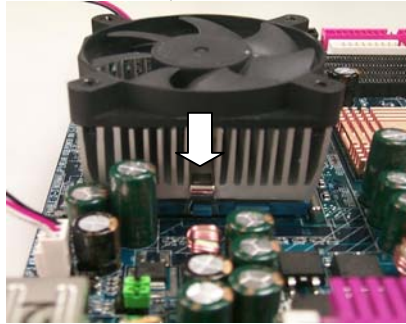


3.Align CPU and insert it

(Please refer to your heatsink installation manual for application of thermal grease to provide better heat conduction between your CPU and heatsink.)



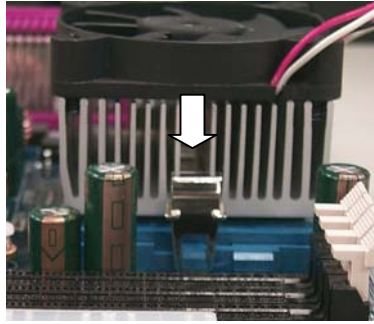
4.Use compliant fan approved by Intel.



5.Hook one end of the cooler bracket to the CPU socket.

6. Hook the other end of the cooler bracket to the CPU socket.

7. Make sure the CPU fan is plugged to the CPU fan connector, than install complete.



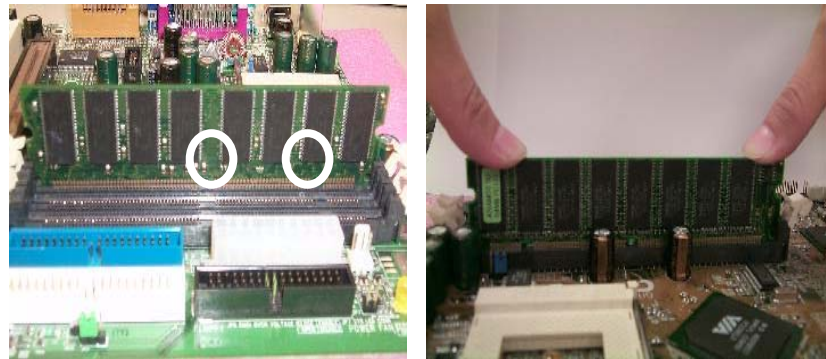
 (Please refer to the cooler's installation manual for detailed installation steps)

Memory Installation

The motherboard has 2 dual inline memory module (DIMM) sockets support 4 banks. The BIOS will automatically detects memory type and size. To install the memory module, just push it vertically into the DIMM Slot .The DIMM module can only fit in one direction due to the two notch. Memory size can vary between sockets.



SDRAM




- 1. The DIMM slot has two notch, so the DIMM memory module can only fit in one direction.
  - 2. Insert the DIMM memory module vertically into the DIMM slot. Then push it down.
  - 3. Close the plastic clip at both edges of the DIMM slots to lock the DIMM module.
- Reverse the installation steps when you wish to remove the DIMM module.

Install memory in any combination table:

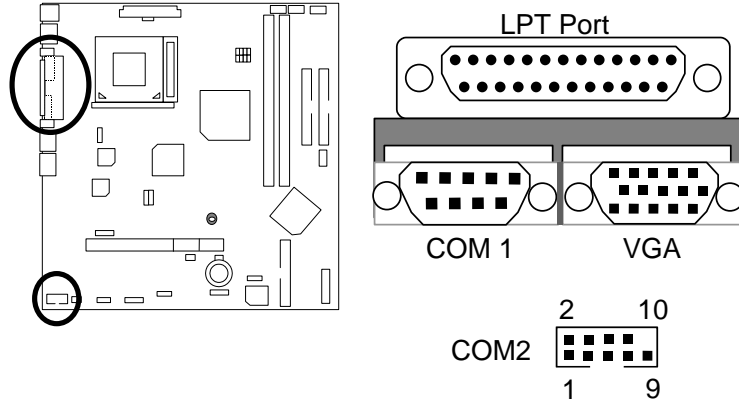
DIMM	168-pin SDRAM DIMM Modules	
DIMM 1	Supports 16 / 32 / 64 / 128 / 256 / 512 MB / 1GHz	X 1 pcs
DIMM 2	Supports 16 / 32 / 64 / 128 / 256 / 512 MB / 1GHz	X 1 pcs

★Total System Memory (Max 2GB)

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## Connectors

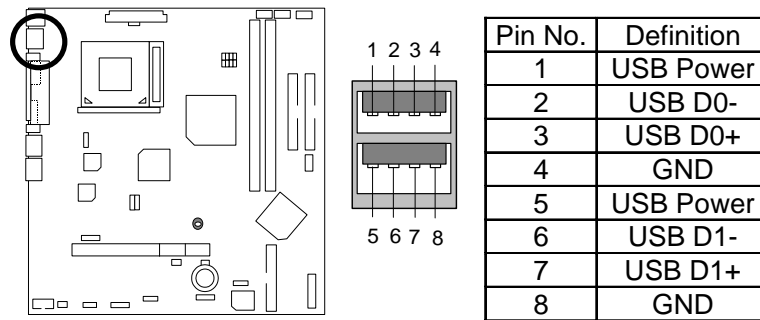
### COM 1 / VGA / LPT Port



**Please note:**

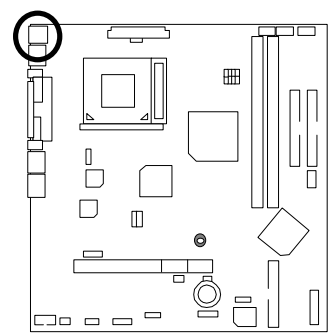
This mainboard supports 2 standard COM ports and 1 LPT port. Device like printer can be connected to LPT port, mouse and modem etc can be connected to COM ports.

### USB Connector

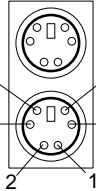


**Please note:** Before you connect your device(s) into USB connector(s), please make sure your device(s) such as USB keyboard, mouse, scanner, zip, speaker..etc. have a standard USB interface. Also make sure your OS (Win 95 w/ USB supperment, Win98, Windows 2000, Windows ME, Win NT w/ SP 6) supports USB controller. If your OS does not support USB controller, please contact OS vendor for possible patch or driver upgrade. For more information please contact your OS or device(s) vendors.


PS/2 Keyboard & PS/2 Mouse Connector



PS/2 Mouse



PS/2 Keyboard

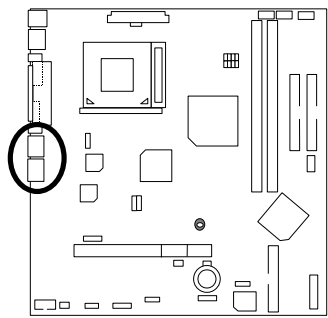


PS/2 Mouse / Keyboard	
Pin No.	Definition
1	Data
2	NC
3	GND
4	Power
5	Clock
6	NC

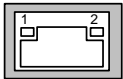


**Please note:**  
This mainboard supports standard PS/2 keyboard and PS/2 mouse interface connector.

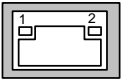
LAN1 & LAN2: LAN Connectors



LAN1



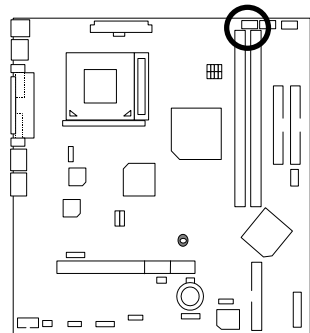
LAN2



(LAN Active LED)

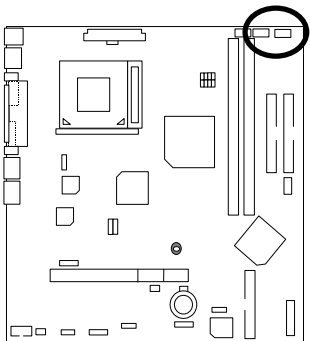
- 1 – Yellow LED  
(LAN Link+Active LED)
- 2 – Green LED  
(LAN Speed LED)

J6: Fan4



Pin No.	Definition
1	GND
2	Control
3	SENSE

J9&J10: Fan 2 & Fan 1



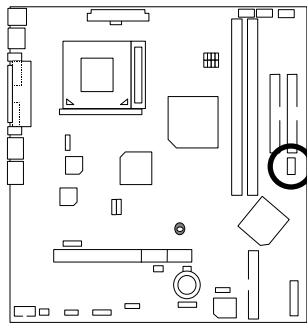
J10

J9



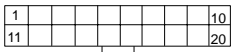
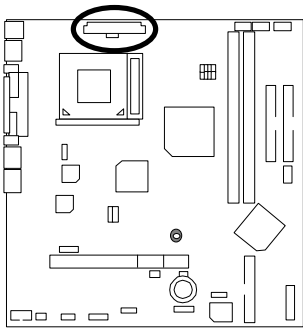
Pin No.	Definition
1	GND
2	Control
3	SENSE

J11: PWR Fan 3



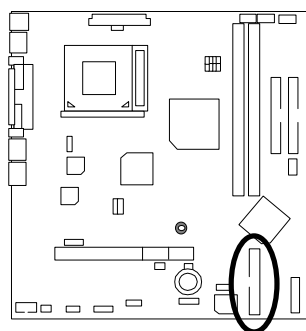
Pin No.	Definition
1	GND
2	Control
3	SENSE

ATX Power

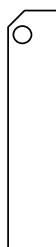


Pin No.	Definition
3,5,7,13, 15-17	GND
1,2,11	3.3V
4,6,19,20	VCC
10	+12V
12	-12V
18	-5V
8	Power Good
9	5V SB stand by+5V
14	PS-ON(Soft On/Off)

## Floppy Port

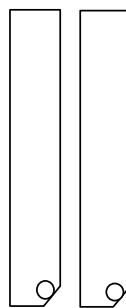
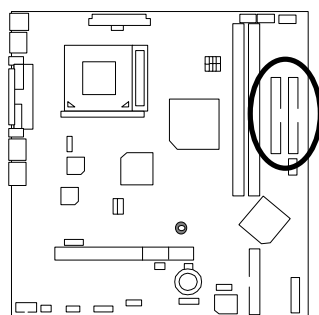


Red Line



FDD1

## IDE1 (Primary), IDE2 (Secondary)

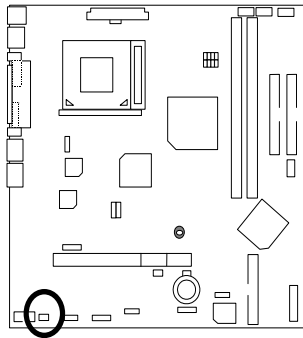


Red Line

IDE2 IDE1

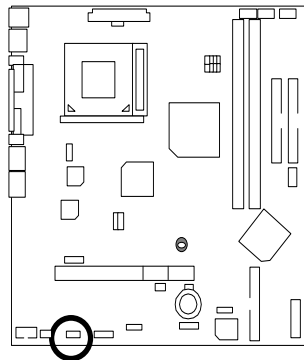


## WOM: Wake On Modem



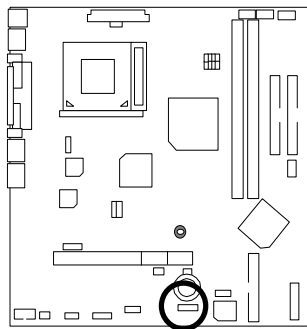
Pin No.	Definition
1	Signal
2	GND

## J4 WOL: Wake On LAN



Pin No.	Definition
1	+5V SB
2	GND
3	Signal

J1: IR Connector



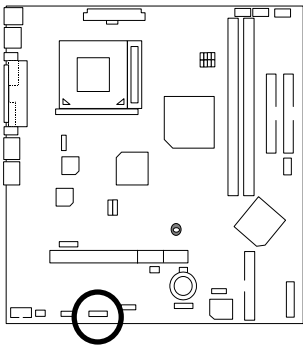
1

Pin No.	Definition
1	VCC (+5V)
2	NC
3	IR Data Input
4	GND
5	IR Data Output



**Please note:**  
Be careful with the polarity of the IR connector while you connect the IR. Please contact you nearest dealer for optional IR device.

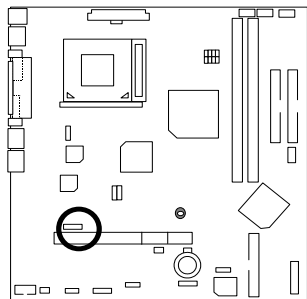
JP4: SM BUS Connector



1

Pin No.	Definition
1	+5V
2	SMB DATA
3	SMB CLK
4	NC
5	GND

JP5: SCSI IDE RAID ACCESS

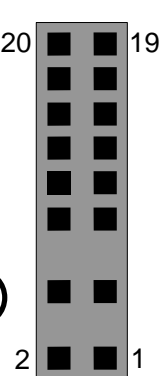
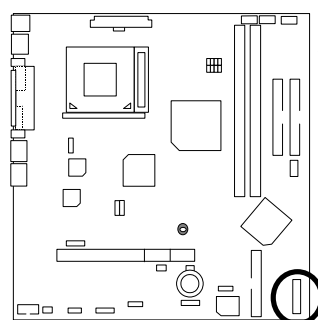


1

Pin No.	Definition
1	ACCESS1
2-3	COMMON
4	ACCESS2

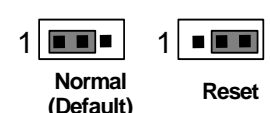
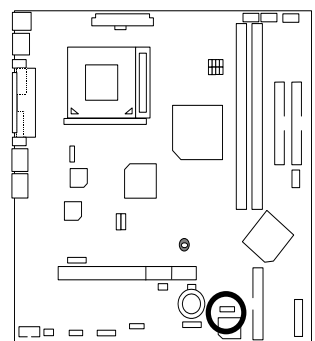
Panel And Jumper Definition

J13: Front Side



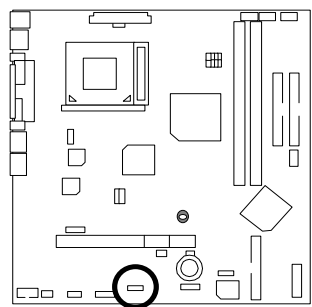
Pin No.	Definition
1	Reserved
2	Reserved
3	Reserved
4	Reserved
5-6	HD-LED
7-8	FAN-ERR
9-10	LAN1 LED (Link+Active)
11-12	LAN1 LED (Speed)
13-14	LAN2 LED (Link+Active)
15-16	LAN2 LED(Speed)
17-18	PWR-LED
19-20	PWR-BTN


JP2: RTC Battery Reset




Pin No.	Definition
1-2 Close	Normal (Default)
2-3 Close	Reset

JP3: USB device Wake up Selection

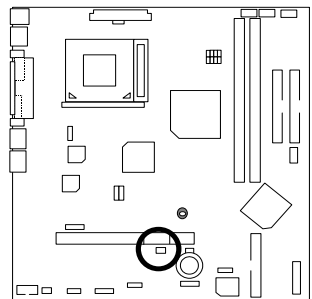



1   
Normal  
(Default)

1   
Enable

Pin No.	Definition
1-2 close	Normal (Default)
2-3 close	Enabled USB Device Wake up

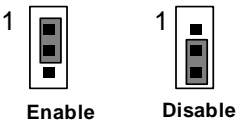
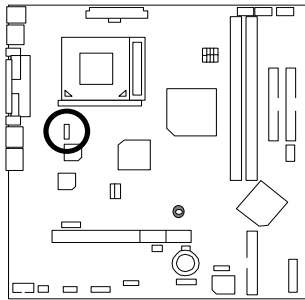
JP8 : Case Open



1 

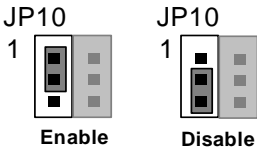
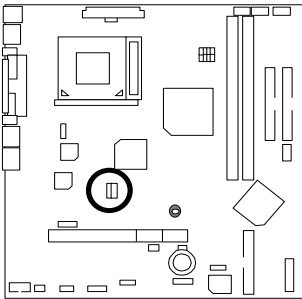
Pin No.	Definition
1	GND
2	Signal

JP9: LAN1 Control



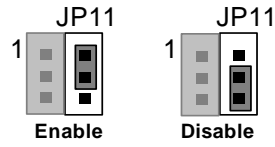
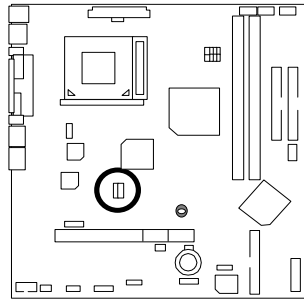
Pin No.	Definition
1-2 close	Enable
2-3 close	Disable

JP10: LAN2 Control



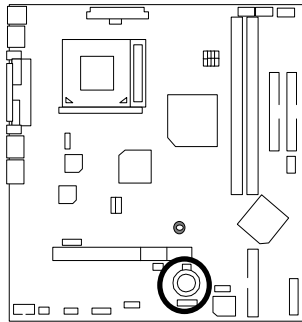
Pin No.	Definition
1-2 close	Enable
2-3 close	Disable

### JP11: ATI RAGE XL (Onboard VGA Selection)



Pin No.	Definition
1-2 close	Enable
2-3 close	Disable

### BAT1: Battery



#### CAUTION

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

## Performance List

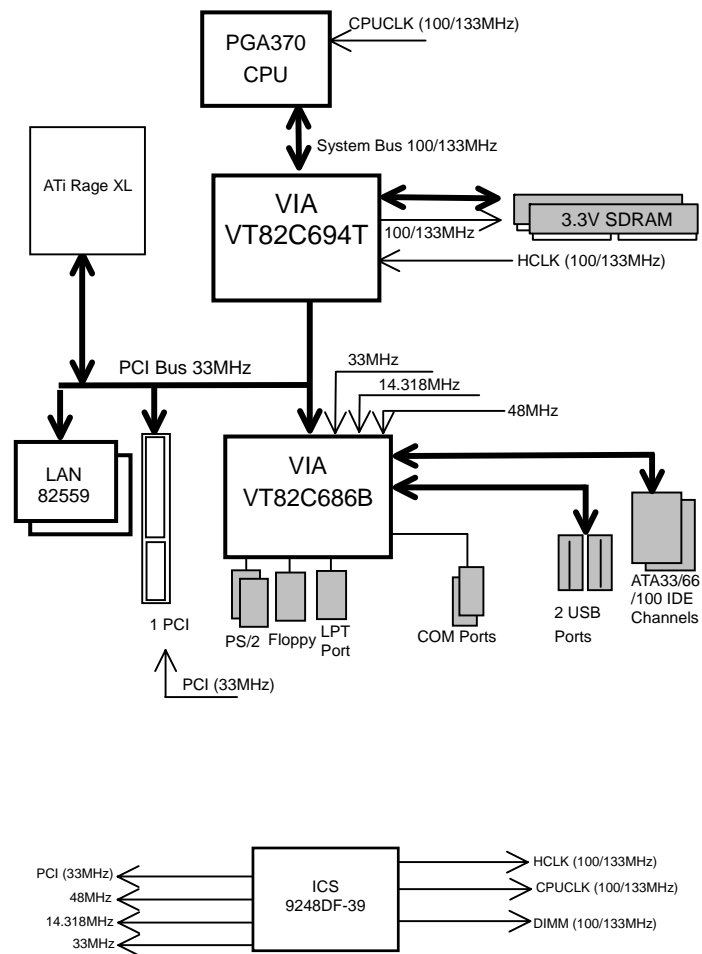
The following performance data list is the testing results of some popular benchmark testing programs.

These data are just referred by users, and there is no responsibility for different testing data values gotten by users. (The different Hardware & Software configuration will result in different benchmark testing results.)

- CPU Intel® Pentium III Processor 1260MHz (Taulatin)
- DRAM 128MB\*2 (KingMax PC-150)
- CACHE SIZE 512KB include in CPU
- DISPLAY Onboard ATI Rage XL
- STORAGE Onboard IDE (Quantum AS30000AT 30GBx2)
- O.S. Windows 2000 + SP2
- DRIVER Display Driver at 1024x768x16bitx75MHz (VUCD 1.81)

Processor	Intel® Pentium III Processor 1260MHz*2 1260MHz(133x9.5)		
WCPUID 3.0C Clock Frequency	Top Performance		BIOS Default
Internal MHz			
External MHz			
SiSoft Sandra 20001			
CPU/FPU Benchmark			
CPU Multi-Media Benchmark			
Drivers Benchmark			
Memory Benchmark			
Winstone 2001			
CC Winstone 2001			
Business Winstore 2001			



**Block Diagram**

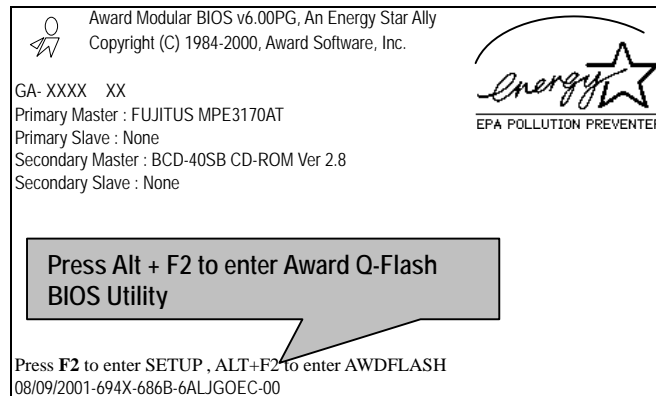
## Q-Flash BIOS Utility Introduction

### A. What's Q-Flash BIOS Utility?

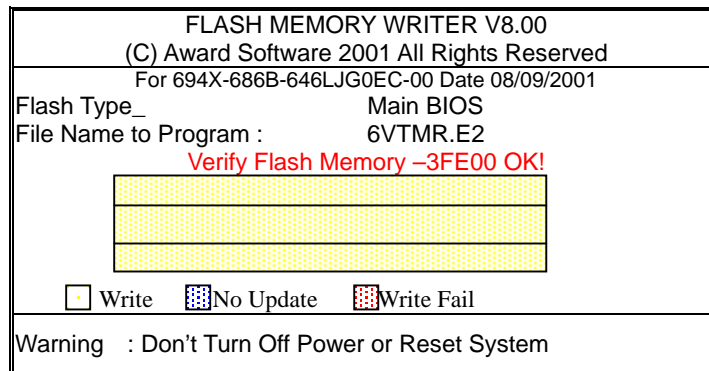
Q-Flash utility is a pre-O.S. BIOS flash utility enables users to update its BIOS within BIOS mode, no more fooling around any OS.

### B. How to use Q-Flash BIOS Utility?

#### a. Boot Screen



#### b. In the A:drive, insert the "BIOS" diskette, then Press Enter to Run.



Congratulation! You have completed the flashed and now can restart system.

Note: Don't Turn Off Power or Reset System (in flash BIOS)

## Advanced Networking Services for Windows NT\* 4 and Windows 2000 (Teaming)

● Please make sure the Intel LAN Adapter teaming driver Install complete.  
(☞ refer to page 64)

### 1. Intel LAN Adapter Teaming

Adapter Teaming Installation Notes for the PRO/100 S Server Adapter Under Windows NT 4.0 and Windows 2000.

**Note:** Teaming requires Intel® Server Adapters.

#### 1.1 Overview

The PRO/100 S adapter provides several options for increasing throughput and fault tolerance when running Windows NT 4.0 or Windows 2000 :

- **Adapter Fault Tolerance (AFT)** - provides automatic redundancy for your adapter. If the primary adapter fails, the secondary takes over.
- **Adaptive Load Balancing (ALB)** - creates a team of 2 - 8 adapters to increase transmission throughput. Also includes the AFT option. Works with any 100BASE-TX switch.
- **Fast EtherChannel\* (FEC)** - creates a team of 2 or 4 adapters to increase transmission and reception throughput. Also includes the AFT option. Requires a Cisco switch with FEC capability.

#### 1.2 Before You Get Started

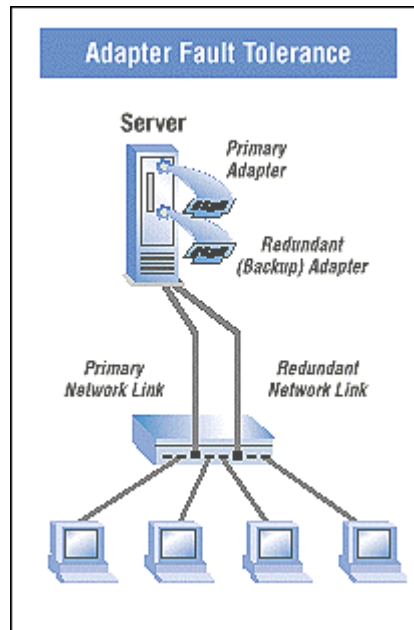
Before you can configure the PRO/100 S adapter for Adapter Teaming, you need to do the following:

- Install at least two PRO/100+ or PRO/100 S server adapters in a Windows NT 4.0 or Windows 2000 system. When installation is complete make sure you restart Windows.
- Note:** Windows NT 4.0 Service Pack 5 or later is required for implementing Adapter Teaming properly. Install Service Pack prior to configuring Adapter Teaming.
- If connecting to a hub, each adapter in a team must be connected to a port which is in the same collision domain. If connected to a switch, each adapter in a team must be connected to a port which is in the same network.

## 2. Adapter Fault Tolerance (AFT)

### 2.1 OverView

A method of safeguarding the network link to the server switch or network service using transparent backup links. Adapter Fault Tolerance (AFT) requires two adapters and an intelligent software agent that continuously monitors both links. If any component of one link fails, the redundant link takes over within seconds—typically, without users (connected via a hub or switch) even noticing the exchange.



### 2.2 Performance

To increase server availability, the server communicates with the LAN via a primary adapter. If the primary link fails, traffic is automatically re-routed to the secondary adapter with no interruption of service.

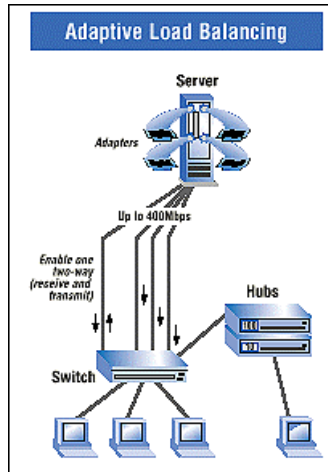
### 2.3 Manageability

Generates alert when an adapter fails. This allows any problems with links to be fixed promptly. These alerts are operating system-based for compatibility with management applications such as Intel® LANDesk® Server Manager which can detect the alert and trigger an action (email, page, call).

### 3. Adaptive Load Balancing (ALB)

#### 3.1 Overview

Also known as asymmetric port aggregation—is a method of ensuring consistent high server throughput and transparent backup connections by using multiple network interface cards and balancing the data transmissions across them. As many as four Intel® server adapters, connected to a switch, can be configured to work together as a "team" for an aggregate throughput of up to 400Mbps with Fast Ethernet adapters or 8Gbps with Gigabit Ethernet Adapters.



#### 3.2 Performance

In ALB, an intelligent adaptive agent, provided in the driver, dynamically manages the server adapter team and evenly distributes the load among them by constantly analyzing the traffic flow from the server. In addition, four Fast Ethernet server adapters teamed with a switch can be configured for up to 400 Mbps bandwidth, or 8Gbps with Gigabit Ethernet adapters.

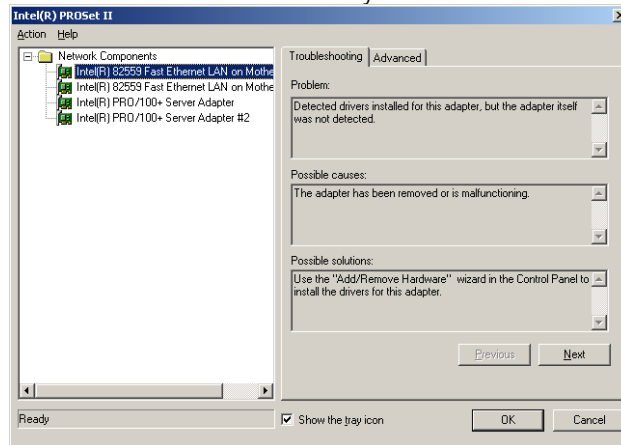
#### 3.3 Manageability

A single network address is assigned to the collection of adapters that constitute the ALB. Aggregation team so that you no longer have to spend time segmenting the network to reduce server bottlenecks.

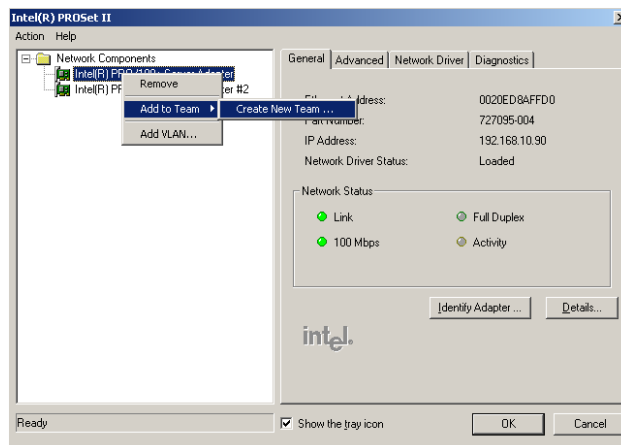
## 4. General Instructions

### 4.1 Perform Teaming In Windows NT4.0 Or Windows 2000

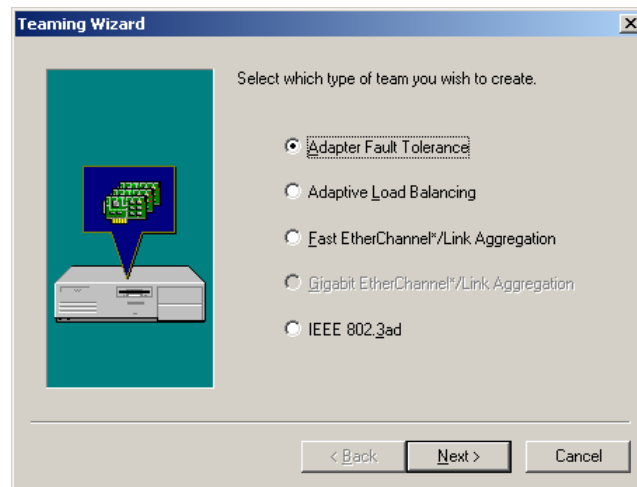
1. Setup Intel PROSet II. Then, double-click on the Intel (R) PROSet II icon in the Control Panel will launch the PROSet utility.



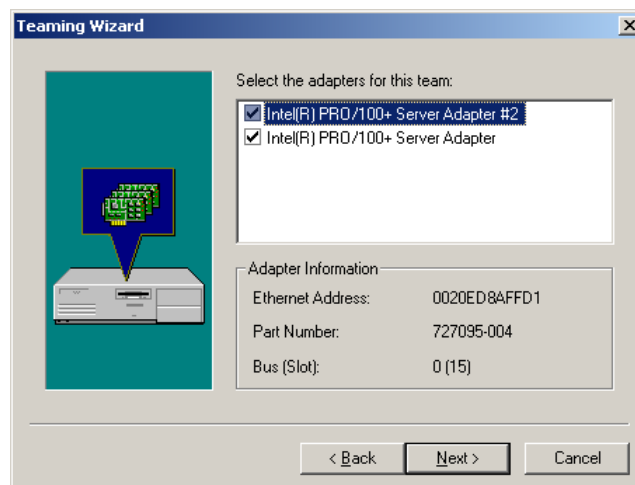
2. Create a new team .



3. At the Teaming Wizard dialog, select the type of team you want to create and click Next.



4. Add a check in the checkbox for each adapter you want as a part of the team and click Next.

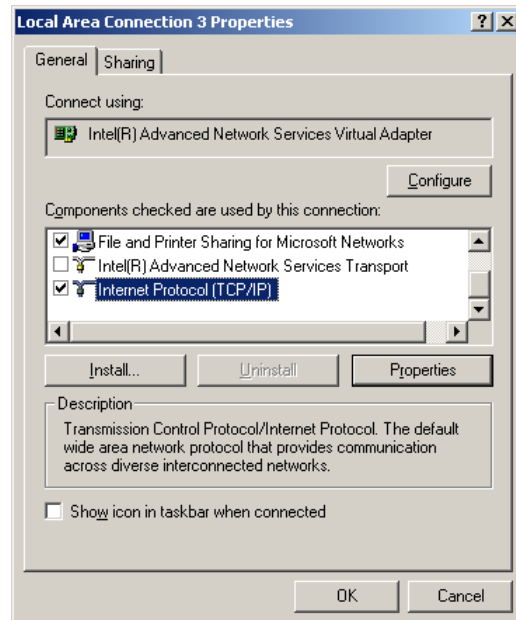





5. Click OK to close PROSet. II

You should notice a new listing in the Network control panel, which is the team you have created.

6. After the team created, a Intel® Advanced Network Services Virtual Adapter will appear on Network in the Control Panel. Assign a IP for this Virtual Adapter.



 Page Index for BIOS Setup	Page
Main	P.38
Advanced	P.40
Boot	P.50
Server	P.53
Security	P.54
Default	P.55
PC Health	P.56
Exit	P.58

## BIOS Setup

BIOS Setup is an overview of the BIOS Setup Program. The program that allows users to modify the basic system configuration. This type of information is stored in battery-backed CMOS RAM so that it retains the Setup information when the power is turned off.

### ENTERING SETUP

Power ON the computer and press <F2> immediately will allow you to enter Setup.

### CONTROL KEYS

<↑>	Move to previous item
<↓>	Move to next item
<←>	Move to the item in the left hand
<→>	Move to the item in the right hand
<Esc>	Main Menu - Quit and not save changes into CMOS Status Page Setup Menu and Option Page Setup Menu - Exit current page and return to Main Menu
<+/PgUp>	Increase the numeric value or make changes
<-/PgDn>	Decrease the numeric value or make changes
<F1>	General help, only for Status Page Setup Menu and Option Page Setup Menu
<F2>	Reserved
<F3>	Reserved
<F4>	Reserved
<F5>	Restore the previous CMOS values
<F6>	Load the file-safe default CMOS value from BIOS default table
<F7>	Load the Setup Defaults
<F8>	Reserved
<F9>	Reserved
<F10>	Save all the CMOS changes, only for Main Menu

### GETTING HELP

#### Main Menu

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

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

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

- **Main**

This setup page includes all the items in standard compatible BIOS.

- **Advanced**

This setup page includes all the items of AMI special enhanced features.

(ex: Auto detect fan and temperature status, automatically configure hard disk parameters.)

- **Boot**

This setup page includes all the items of first boot function features.

- **Server**

This setup page is auto detect fan and temperature status.

- **Security**

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

- **Default**

Load Fail-Safe Defaults option loads preset system parameter values to set the system in its most stable configurations.

Load Optimized Defaults option loads preset system parameter values to set the system in its highest performance configurations

- **Security**

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

- **PC Health**

This setup page is the System automatically detects Temperature, voltage, fan, and speed.

- **Exit**

Save CMOS value settings to CMOS and exit setup or abandon all CMOS value changes and exit setup.

**Main (For Example BIOS Version:6VTMR.F4)**

Once you enter AWARD BIOS CMOS Setup Utility, the Main Menu (Figure 1) will appear on the screen. The Main Menu allows you to select from eight setup functions and one exit choices. Use arrow keys to select among the items and press <Enter> to accept or enter the sub-screen.

CMOS Setup Utility-Copyright( C ) 1984-2001 Award Software							
Main	Advanced	Boot	Server	Security	Defaults	PC Health	Exit
Date (mm:dd:yy)				Wed , Aug 15 2001			
Time (hh:mm:ss)				2 : 31 : 24			
▶ IDE Primary Master ▶ IDE Primary Slave ▶ IDE Secondary Master ▶ IDE Secondary Slave				[FUJITSU MPE3170ATJ] [None] [BCD-40SB CD-ROM] [None]			
Drive A				[1.44M, 3.5 in.]			
Drive B				[None]			
▶ System Information							
↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5:Previous Values F6:Fail-Safe Defaults F7:Optimized Defaults							

Figure 1: Main

- Date**

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

day	The day, from Sun to Sat, determined by the BIOS and is display-only
month	The month, Jan. Through Dec.
date	The date, from 1 to 31 (or the maximum allowed in the month)
year	The year, from 1994 through 2079

- **Time**

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

- **IDE Primary Master, Slave / Secondary Master, Slave**

The category identifies the types of hard disk from drive C to F that has been installed in the computer. There are two types: auto type, and user definable type. User type is user-definable; Auto type which will automatically detect HDD type.

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

If you select User Type, related information will be asked to enter to the following items. Enter the information directly from the keyboard and press <Enter>. Such information should be provided in the documentation form your hard disk vendor or the system manufacturer.

CYLS.	Number of cylinders
HEADS	number of heads
PRECOMP	write precomp
LANDZONE	Landing zone
SECTORS	number of sectors

If a hard disk has not been installed select NONE and press <Enter>.

- **Drive A type / Drive B type**

The category identifies the types of floppy disk drive A or drive B that has been installed in the computer.

None	No floppy drive installed
360K, 5.25 in.	5.25 inch PC-type standard drive; 360K byte capacity.
1.2M, 5.25 in.	5.25 inch AT-type high-density drive; 1.2M byte capacity (3.5 inch when 3 Mode is Enabled).
720K, 3.5 in.	3.5 inch double-sided drive; 720K byte capacity
1.44M, 3.5 in.	3.5 inch double-sided drive; 1.44M byte capacity.
2.88M, 3.5 in.	3.5 inch double-sided drive; 2.88M byte capacity.

## Advanced

CMOS Setup Utility-Copyright( C ) 1984-2001 Award Software	
Main	Advanced
▶ Advanced BIOS Features ▶ Advanced Chipset Features ▶ Integrated Peripherals ▶ Power Management Setup	Item Help 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	

Figure 2: Advanced

### Advanced BIOS Features

CMOS Setup Utility-Copyright( C ) 1984-2001 Award Software	
Advanced	
Advanced BIOS Features	Item Help
Virus Warning [Disabled] CPU L1 Cache [Enabled] CPU L2 Cache [Enabled] CPU L2 Cache ECC Checking [Enabled] Processor Number Feature [Disabled] Quick Power On Self Test [Enabled] Typematic Rate Setting [Disabled] *Typematic Rate (Chars/Sec) 6 *Typematic Delay (Msec) 250 MPS Version Control For O.S. [1.4]	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	

Figure 2-1: Advanced BIOS Features

- **Virus Warning**

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

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

- **CPU L1 / L2 Cache**

These two categories speed up memory access. However, it depends on CPU / chipset design.

Enabled	Enable CPU cache <b>(Default Value)</b>
Disabled	Disable CPU cache

- **CPU L2 Cache ECC Checking**

Enabled	Enable CPU L2 Cache ECC Checking
Disabled	Disable CPU L2 Cache ECC Checking <b>(Default Value)</b>

- **Processor Number Feature**

This item will show up when you install the Pentium® !!!processor.

Enabled	Pentium® !!! Processor Number Feature. <b>(Default value)</b>
Disabled	Disabled this function.

- **Quick Power On Self Test**

This category speeds up Power On Self Test (POST) after you power on the computer. If it is set to Enable, BIOS will shorten or skip some check items during POST.

Enabled	Enable quick POST <b>(Default Value)</b>
Disabled	Normal POST

- **Typematic Rate Setting**

Enabled	Enable Keyboard Typematic rate setting.
Disabled	Disable Keyboard Typematic rate setting. <b>(Default Value)</b>



- **Typematic Rate (Chars / Sec.)**

6-30	Set the maximum Typematic rate from 6 chars. Per second to 30 characters. Per second. <b>(Default Value: 6)</b>
------	---

- **Typematic Delay (Msec.)**

250-1000	Set the time delay from first key to repeat the same key in to computer. <b>(Default Value: 250)</b>
----------	--

- **MPS Version Control For O.S.**

1.4	Set MPS version to 1.4.
1.1	Set MPS version to 1.1.

#### Advanced Chipset Features

CMOS Setup Utility-Copyright( C ) 1984-2001 Award Software		
Advanced		
Advanced Chipset Features		Item Help
DRAM Clock	[Host CLK]	Menu Level ▶
SDRAM Cycle Length	[3]	
OnChip USB	[Enabled]	
※USB Keyboard Support	[Disabled]	
※USB Mouse Support	[Disabled]	
Memory Parity/ECC Check	[Enabled]	
↑↓↔←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5:Previous Values F6:Fail-Safe Defaults F7:Optimized Defaults		

Figure 2-2: Advanced Chipset Feature

- **DRAM Clock**

Host CLK	Set DRAM CLK equal to Host CLK. <b>(Default Value)</b>
HCLK+33M	Set DRAM CLK to HCLK+33M.
HCLK-33M	Set DRAM CLK to HCLK-33M.

- **SDRAM CAS Length**

3	Set SDRAM CAS Length is 3SCLKS. <b>(Default Value)</b>
2	Set SDRAM CAS Length is 2SCLKS.

- Onchip USB

Enabled	Enabled onchip USB (Default Value)
Disabled	Disabled onchip USB

- USB Keyboard Support

Enabled	Enabled USB Keyboard Support
Disabled	Disabled USB Keyboard Support (Default Value)

- USB Mouse Support

Enabled	Enabled USB Mouse Support
Disabled	Disabled USB Mouse Support (Default Value)

- Memory Parity/ECC Check

Enabled	Enabled adds a parity check to the boot-up memory tests. Select Enabled only if the system DRAM contains parity. (Default Value)
Disabled	Disabled Memory Parity/ECC Check.

## Integrated Peripherals

CMOS Setup Utility-Copyright( C ) 1984-2001 Award Software		
Advanced		
Integrated Peripherals		Item Help
On-Chip IDE Channel 0	[Enabled]	Menu Level ▶
On-Chip IDE Channel 1	[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	[Disabled]	
Secondary Slave UDMA	[Auto]	
IDE HDD Block Mode	[Enabled]	
Onboard FDD Controller	[Enabled]	
Onboard Serial Port1	[Auto]	
Onboard Serial Port2	[Auto]	
Onboard Parallel Port	[378/IRQ7]	
Onboard Parallel Mode	[ECP/EPP]	
↑↓↔←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5:Previous Values F6:Fail-Safe Defaults F7:Optimized Defaults		

Figure 2-3: Integrated Peripherals

- On-Chip IDE Channel 0

Disabled	Disable onboard 1 <sup>st</sup> channel IDE port.
Enabled	Enable onboard 1 <sup>st</sup> channel IDE port. (Default Value)

- On-Chip IDE Channel 1

Disabled	Disable onboard 2 <sup>nd</sup> channel IDE port.
Enabled	Enable onboard 2 <sup>nd</sup> channel IDE port. (Default Value)

- Primary Master PIO (for onboard IDE 1st channel).

Auto	BIOS will automatically detect the IDE HDD Accessing mode. (Default Value)
Mode0~4	Manually set the IDE Accessing mode.

- Primary Slave PIO (for onboard IDE 1st channel).

Auto	BIOS will automatically detect the IDE HDD Accessing mode. (Default Value)
Mode0~4	Manually set the IDE Accessing mode.

- Secondary Master PIO (for onboard IDE 2nd channel).

Auto	BIOS will automatically detect the IDE HDD Accessing mode. (Default Value)
Mode0~4	Manually set the IDE Accessing mode.

- Secondary Slave PIO (for onboard IDE 2nd channel).

Auto	BIOS will automatically detect the IDE HDD Accessing mode. (Default Value)
Mode0~4	Manually set the IDE Accessing mode.

- Primary Master UDMA.

Auto	BIOS will automatically detect the IDE HDD Accessing mode. (Default Value)
Disabled	Disable UDMA function.

- **Primary Slave UDMA.**

Auto	BIOS will automatically detect the IDE HDD Accessing mode. (Default Value)
Disabled	Disable UDMA function.

- **Secondary Master UDMA.**

Auto	BIOS will automatically detect the IDE HDD Accessing mode.
Disabled	Disable UDMA function. (Default Value)

- **Secondary Slave UDMA.**

Auto	BIOS will automatically detect the IDE HDD Accessing mode. (Default Value)
Disabled	Disable UDMA function.

- **IDE HDD Block Mode**

Enabled	Enable IDE HDD Block Mode (Default Value)
Disabled	Disable IDE HDD Block Mode

- **Onboard FDD Controller**

Enabled	Enable onboard FDC port. (Default Value)
Disabled	Disable onboard FDC port.

- **Onboard Serial Port 1**

Auto	BIOS will automatically setup the port 1 address. (Default Value)
3F8/IRQ4	Enable onboard Serial port 1 and address is 3F8.
2F8/IRQ3	Enable onboard Serial port 1 and address is 2F8.
3E8/IRQ4	Enable onboard Serial port 1 and address is 3E8.
2E8/IRQ3	Enable onboard Serial port 1 and address is 2E8.
Disabled	Disable onboard Serial port 1.

- Onboard Serial Port 2

Auto	BIOS will automatically setup the port 2 address. <b>(Default Value)</b>
3F8/IRQ4	Enable onboard Serial port 2 and address is 3F8.
2F8/IRQ3	Enable onboard Serial port 2 and address is 2F8.
3E8/IRQ4	Enable onboard Serial port 2 and address is 3E8.
2E8/IRQ3	Enable onboard Serial port 2 and address is 2E8.
Disabled	Disable onboard Serial port 2.

- Onboard Parallel port

378/IRQ7	Enable onboard LPT port and address is 378/IRQ7. <b>(Default Value)</b>
278/IRQ5	Enable onboard LPT port and address is 278/IRQ5.
3BC/IRQ7	Enable onboard LPT port and address is 3BC/IRQ7.
Disabled	Disable onboard LPT port.

- Onboard Parallel Mode

Normal	Using Parallel port as Normal.
EPP	Using Parallel port as Enhanced Parallel Port.
ECP	Using Parallel port as Extended Capabilities Port.
ECP/EPP	Using Parallel port as ECP & EPP mode. <b>(Default Value)</b>

## Power Management Setup

CMOS Setup Utility-Copyright( C ) 1984-2001 Award Software	
<b>Advanced</b>	
<b>Power Management Setup</b>	Item Help Menu Level ▶
▶ Power Management PM Control by APM [Yes] Soft-Off by PWRBTN [Instant-Off] State After Power Failure [Auto] ▶ Wakeup Events	
↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5:Previous Values F6:Fail-Safe Defaults F7:Optimized Defaults	

Figure 2-4: Power Management Setup

CMOS Setup Utility-Copyright( C ) 1984-2001 Award Software		
Advanced		
Power Management		Item Help
Power Management	[User Define]	Menu Level ▶
HDD Power Down	[Disabled]	
Doze Mode	[Disabled]	
Suspend Mode	[Disabled]	

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

Figure 2-4-1: Power Management

CMOS Setup Utility-Copyright( C ) 1984-2001 Award Software		
Advanced		
Wake Up Events		Item Help
Power On by PCI Card	[Enabled]	Menu Level ▶
Wake Up On Ring	[Disabled]	
RTC Alarm Resume	[Disabled]	
※Date (of Month)	:0	
※Resume Time (hh:mm:ss)	:0:0:0	

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

Figure 2-4-2: Wake Up Events

- **Power Management**

User Define	For configuring our own power management features. (Default Value)
Min Saving	Enable Green function.
Man Saving	Disable Green function.

- **HDD Power Down**

Disabled	Disabled HDD Power Down mode function. (Default Value)
1-15 mins.	Enabled HDD Power Down mode between 1 to 15 mins.

- **Doze Mode**

Disabled	Disabled Suspend Mode. (Default Value)
1 min - 1 Hour	Setup the timer to enter Suspend Mode.

- **Suspend Mode**

Disabled	Disabled Suspend Mode. (Default Value)
1 min - 1 Hour	Setup the timer to enter Suspend Mode.

- **PM Control by APM**

Yes	Enable software APM function. (Default Value)
No	Disable software APM function.

- **Soft-off by Power Button**

Instant off	Soft switch ON/OFF for Power Button. (Default Value)
Delay-4Sec	Soft switch ON 4 Sec for Power off.

- **State After Power Failure**

The field lets you determine the state that your PC returns to after a power failure.

Auto	(Default)
On	If set to On, the PC will restart after a power failure.
Off	If set to Off, the PC will not boot after a power failure.

- **Wake Up Event**

- **Power On by PCI card**

Disabled	Disable this function.
Enabled	Power on by PCI card. <b>(Default Value)</b>

- **Wake Up On Ring**

Disabled	Disabled Wake Up On Lan / Ring function. <b>(Default Value)</b>
Enabled	Enabled Wake Up On Lan / Ring function.

- **RTC Alarm Resume**

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

Disabled	Disable this function. <b>(Default Value)</b>
Enabled	Enable alarm function to POWER ON system.

If RTC Alarm Lead To Power On is Enabled.

RTC Alarm Date :	Every Day,1~31
RTC Alarm Hour:	0~23
RTC Alarm Minute :	0~59
RTC Alarm Second :	0~59



## Boot

CMOS Setup Utility-Copyright( C ) 1984-2001 Award Software		
Main	Advanced	Boot
First Boot Device	[Floppy]	Item Help
Second Boot Device	[CDROM]	Menu Level ▶
Third Boot Device	[HDD]	
Boot Up Floppy Seek	[Enabled]	
Boot Up NumLock Status	[ON]	
Console Redirection	[Disabled]	
Agent Connect via	[NULL]	
Agent wait time(min)	[1]	
Agent after boot	[Disabled]	
Full Screen LOGO Show	[Enabled]	
Onboard LAN1 Boot ROM	[Disabled]	
Onboard LAN2 Boot ROM	[Disabled]	

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

Figure 3: Boot

- First / Second / Third Boot device

Floppy	Select your boot device priority by Floppy.
LS120	Select your boot device priority by LS120.
ZIP100	Select your boot device priority by ZIP100.
HDD-0-3	Select your boot device priority by HDD-0-3.
SCSI	Select your boot device priority by SCSI.
CDROM	Select your boot device priority by CDROM.
Disable	Disable this function.
LAN	Select your boot device priority by LAN.

- **Boot Up Floppy Seek**

During POST, BIOS will determine the floppy disk drive installed is 40 or 80 tracks. 360 K type is 40 tracks 720 K, 1.2 M and 1.44 M are all 80 tracks.

Enabled	BIOS searches for floppy disk drive to determine it is 40 or 80 tracks. Note that BIOS can not tell from 720 K, 1.2 M or 1.44 M drive type as they are all 80 tracks. <b>(Default value)</b>
Disabled	BIOS will not search for the type of floppy disk drive by track number. Note that there will not be any warning message if the drive installed is 360 K.

- **Boot Up NumLock Status**

Select power on state for NumLock.

On	Keypad is number keys. <b>(Default value)</b>
Off	Keypad is arrow keys.

- **Console Redirection**

Disabled	Attempt to redirect console via when Keyboard absent. <b>(Default Value)</b>
Enabled	Attempt to redirect console via COM port

- **Agent Connect via**

NULL	Direct connection agent wait time(min)
------	--

- **Agent wait time(min)**

1	Set agent wait time to 1 min. <b>(Default Value)</b>
2	Set agent wait time to 2 min.
4	Set agent wait time to 4 min.
8	Set agent wait time to 8 min.

- **Agent after boot**

Disabled	Disable agent after boot function. <b>(Default Value)</b>
Enabled	keep agent running after OS boot .

- **Full Screen Logo Show**

Disabled	Disable this function
Enabled	Show full screen logo. <b>(Default Value)</b>

---

- Onboard LAN1 Boot ROM

Disabled	Disable this function <b>(Default Value)</b>
Enabled	Select your boot device priority by LAN1.

- Onboard LAN2 Boot ROM

Disabled	Disable this function. <b>(Default Value)</b>
Enabled	Select your boot device priority by LAN2.

## Server

CMOS Setup Utility-Copyright( C ) 1984-2001 Award Software							
Main	Advanced	Boot	Server	Security	Defaults	PC Health	Exit
Clear All DMI Event Log		[No]				Item Help	
View DMI Event Log		[Enter]				Menu Level ▸	
Event Log Capacity		Space Available					
Halt On		[All, But Keyboard]					

Figure 4: Server

- Clear All Event Logs

Yes	DMI event log will be clear at next POST stage.
No	Clear All Event Logs automatic. <b>(Default Value)</b>

- View DMI Event Log

Enter	Press [Enter] to Show all DMI Event logs
-------	--

- Event Log Capacity

Space Available	The space in event log is Full or available.
-----------------	--

- Halt on

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

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

## Security

CMOS Setup Utility-Copyright( C ) 1984-2001 Award Software							
Main	Advanced	Boot	Server	Security	Defaults	PC Health	Exit
Set Supervisor Password						Item Help	
Set User Password						Menu Level ▶	
Security Option [Setup]							

Figure 5: Security

The BIOS Setup program allows you to specify two separate passwords: a **SUPERVISOR PASSWORD** and a **USER PASSWORD**. When disabled, anyone may access all BIOS Setup program function. When enabled, the Supervisor password is required for entering the BIOS Setup program and having full configuration fields, the User password is required to access only basic items.

- **Security Option**

This category allows you to limit access to the system and Setup, or just to Setup.

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

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

Defaults

CMOS Setup Utility-Copyright( C ) 1984-2001 Award Software							
Main	Advanced	Boot	Server	Security	Defaults	PC Health	Exit
Load Fail-Safe Default Load Optimized Default						Item Help	
						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							

Figure 6: Default

- **Load Failsafe Defaults**  
Selecting this field loads the factory defaults for BIOS and Chipset Features which the system automatically detects.
- **Load Optimal Defaults**  
BIOS defaults contain the most appropriate values of the system parameters that allow minimum system performance.

## PC Health

CMOS Setup Utility-Copyright( C ) 1984-2001 Award Software							
Main	Advanced	Boot	Server	Security	Defaults	PC Health	Exit
CPU Warning Temperature		[Disabled]					
FAN 1 Error		[3600]					
FAN 2 Error		[6000]					
FAN 3 Error		[6000]					
FAN 4 Error		[3600]					
System Voltage Spectrum		[Disabled]					
Current CPU Temp.		44/111°F					
Current System Temp.		30/86°F					
Current FAN1 Speed		0RPM					
Current FAN2 Speed		0RPM					
Current FAN3 Speed		0RPM					
Current FAN4 Speed		6940RPM					
+3.3V		3.31 V					
+5V		4.94 V					
+12V		11.96 V					
SB5V		4.86 V					
Vtt		1.52V					
↑↓→ ←:Move   Enter:Select   +/-/PU/PD:Value   F10:Save   ESC:Exit   F1:General Help F5:Previous Values   F6:Fail-Safe Defaults   F7:Optimized Defaults							

Figure 7: PC Health

- CPU Warning Temperature

Disabled	Disabled this function. . (Default Value)
50°C / 122°F	Monitor CPU Temp. at 50°C / 122°F.
63°C / 127°F	Monitor CPU Temp. at 63°C / 127°F.
56°C / 133°F	Monitor CPU Temp. at 56°C / 133°F.
60°C / 140°F	Monitor CPU Temp. at 60°C / 140°F.
63°C / 145°F	Monitor CPU Temp. at 63°C / 145°F.
66°C / 151°F	Monitor CPU Temp. at 66°C / 151°F.
70°C / 158°F	Monitor CPU Temp. at 70°C / 158°F.
75°C / 167°F	Monitor CPU Temp. at 75°C / 167°F.
80°C / 176°F	Monitor CPU Temp. at 80°C / 176°F.
85°C / 185°F	Monitor CPU Temp. at 85°C / 185°F.
90°C / 194°F	Monitor CPU Temp. at 90°C / 194°F.
95°C / 205°F	Monitor CPU Temp. at 95°C / 205°F.

- **Fan Error**

Fan1 / Fan 2 / Fan3/ Fan 4

Disabled	Fan Error Function Disabled. <b>(Default value)</b>
7200/6000/4800/3600/3000/2400/1800/1200/900/600/300 RPM Low limit for FAN speed.	

- **System Voltage Spectrum**

Disabled	System voltage spectrum Function Disabled. <b>(Default value)</b>
20.0/15.0/12.0/10.0/9.0/8.0/7.0/6.0/5.0/4.5/4.0/3.5/3.0/2.5/2.0/1.5/1.0% voltage tolerance before warning.	

- **Current CPU / System Temp. (°C / °F)**

Detect CPU / System / Temperature automatically.

- **Current Fan 1 / Fan2 / Fan 3 / Fan 4 Speed**

Detect Fan 1 / Fan2 / Fan 3 / Fan 4 Speed status automatically.

- **Current Voltage (V)**

CPU Vcore / +3.3v / +5V / +12V / SB5v / Vtt

Detect system's voltage status automatically.



## Exit

CMOS Setup Utility-Copyright( C ) 1984-2001 Award Software							
Main	Advanced	Boot	Server	Security	Defaults	PC Health	Exit
Save & Exit Setup Exit Without Saving							
<div>↑↓→ ←:Move   Enter:Select   +/-/PU/PD:Value   F10:Save   ESC:Exit   F1:General Help F5:Previous Values   F6:Fail-Safe Defaults   F7:Optimized Defaults</div>							

Figure 8: Exit

- **Save & Exit Setup**  
Type "Y" will quit the Setup Utility and save the user setup value to RTC CMOS.  
Type "N" will return to Setup Utility.
- **Exit Without Saving**  
Type "Y" will quit the Setup Utility without saving to RTC CMOS.  
Type "N" will return to Setup Utility..



## Technical Support /RMA Sheet

Customer/Country:	Company:	Phone No.:
Contact Person:	E-mail Add. :	

Model name/Lot Number:	PCB revision:
BIOS version:	O.S./A.S.:

Hardware Configuration	Mfs.	Model name	Size:	Driver/Utility:
CPU				
Memory Brand				
Video Card				
Audio Card				
HDD				
CD-ROM / DVD-ROM				
Modem				
Network				
AMR / CNR				
Keyboard				
Mouse				
Power supply				
Other Device				

 Problem Description:

---



---

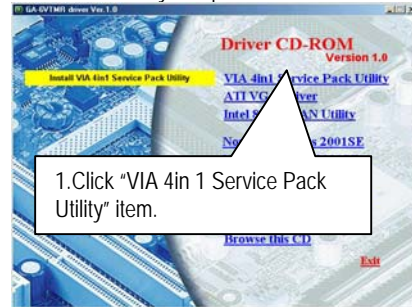
## Appendix

Picture below are shown in Windows 98 ( driver CD:1.0)

### Appendix A: VIA Chipsets Driver Installation

#### A. VIA 4 in 1 Service Pack Driver:

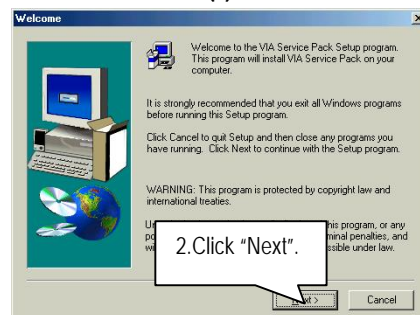
Insert the driver CD-title that came with your motherboard into your CD-ROM driver, the driver CD-title will auto start and show the installation guide. If not, please double click the CD-ROM device icon in "My computer", and execute the setup.exe.



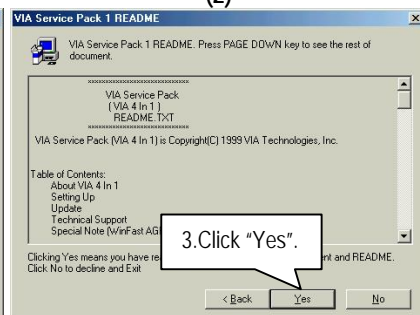
(1)



(2)



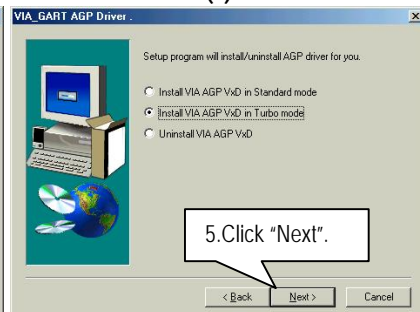
(3)



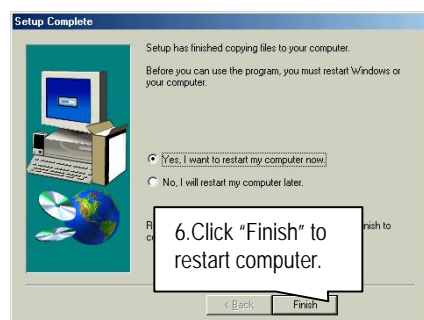
(4)



(5)



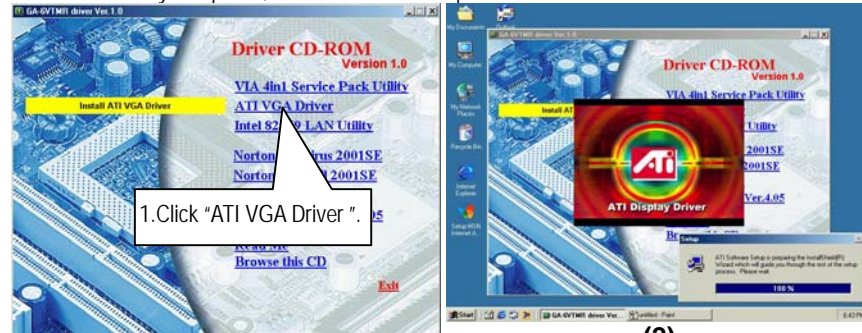
(6)



(7)

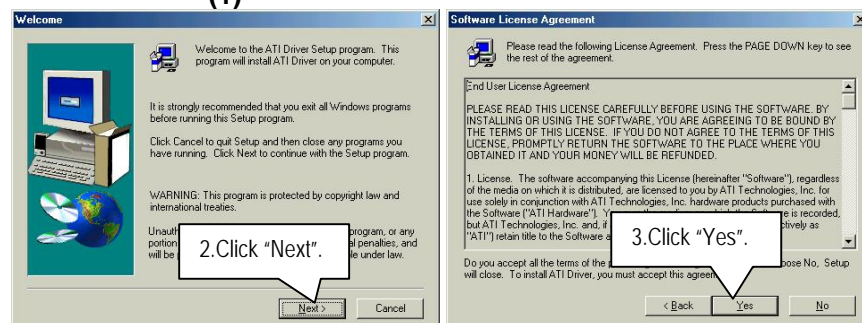
## Appendix B : ATi VGA Driver Installation

Insert the driver CD-title that came with your motherboard into your CD-ROM driver, the driver CD-title will auto start and show the installation guide. If not, please double click the CD-ROM device icon in "My computer", and execute the setup.exe.



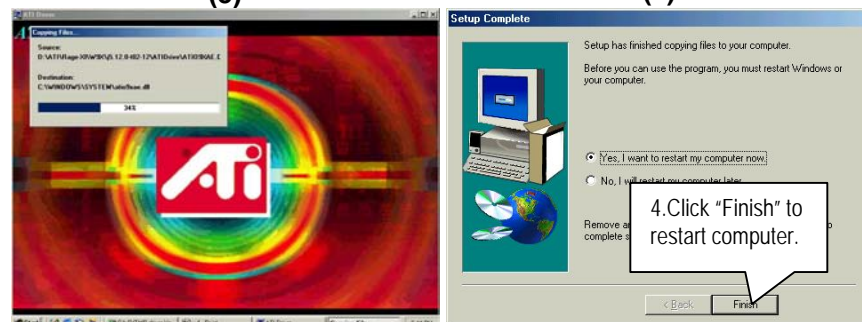
(1)

(2)



(3)

(4)

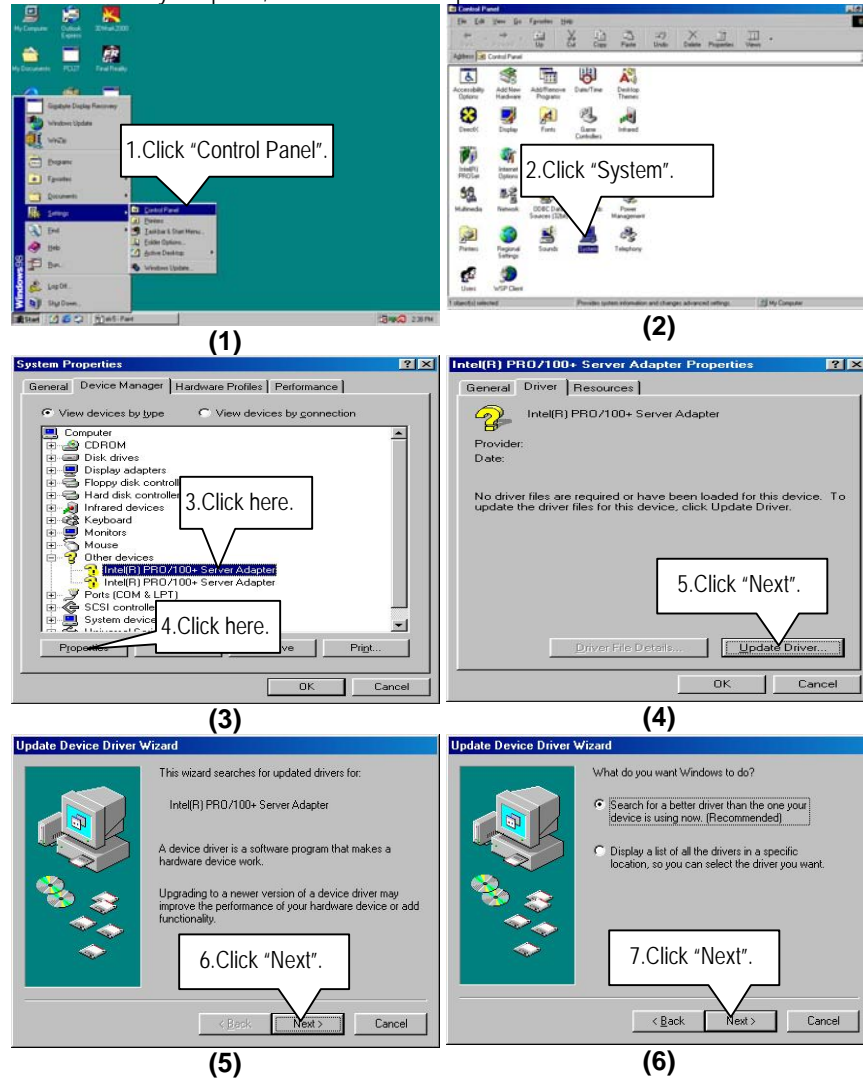


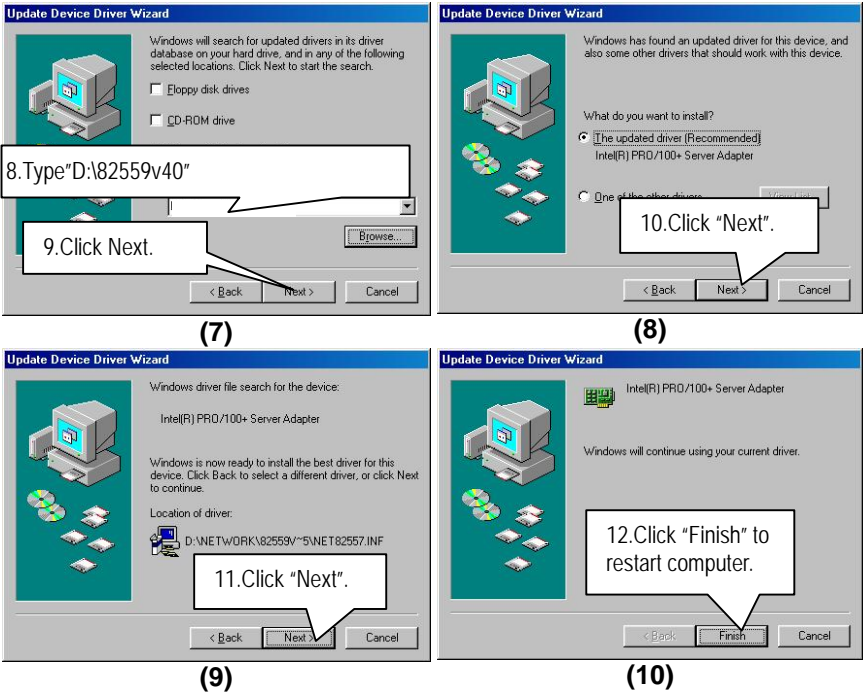
(5)

(6)

### Appendix C : Intel 82559 LAN Driver Installation

Insert the driver CD-title that came with your motherboard into your CD-ROM driver, the driver CD-title will auto start and show the installation guide. If not, please double click the CD-ROM device icon in "My computer", and execute the setup.exe.

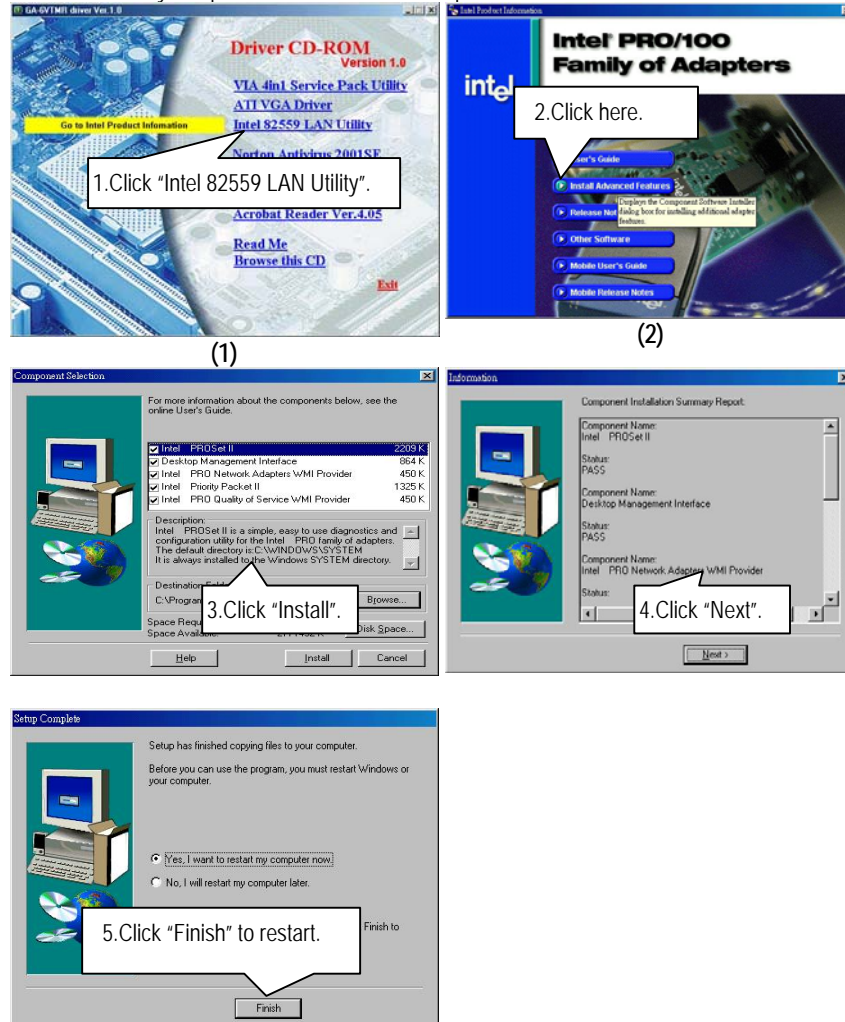






## Appendix D: Intel 82559 LAN Utility Installation

Insert the driver CD-title that came with your motherboard into your CD-ROM driver, the driver CD-title will auto start and show the installation guide. If not, please double click the CD-ROM device icon in "My computer", and execute the setup.exe.



## Appendix E: BIOS Flash Procedure

You can select flash BIOS in DOS mode.

- Please check your **BIOS vendor (AMI or AWARD)**, your **motherboard name** and **PCB version** on the motherboard.

1. Format a bootable system floppy diskette by the command "**format a:/s**" in command mode.
2. Visit the Gigabyte website at [http:// www.gigabyte.com.tw](http://www.gigabyte.com.tw) ,Select the BIOS file you need and download it to your bootable floppy diskette.
3. Insert the bootable diskette containing the BIOS file into the floppy diskette driver.
4. Assuming that the floppy diskette driver is A, reboot the system by using the A: driver. At the A: > prompt, run the BIOS upgraded file by executing the Flash BIOS utility and the BIOS file with its appropriate extension.

Example: *(AMI tool) (Where 6VTMR.f1 is name of the BIOS file name)*

A:>flashxxx.exe 6VTMR.f1 ↵

Example: *(Award tool) (Where 6VTMR.f1 is name of the BIOS file name)*

A:>wdfash.exe 6VTMR.f1 ↵

5. Upon pressing the <Enter> key, a flash memory writer menu will appear on screen. Enter the new BIOS file name with its extension filename into the text box after file name to program.
6. If you want to save the old BIOS file(perform as soon as system is operational, this is recommended), select Y to **DO YOU WANT TO SAVE BIOS**, then type the old BIOS filename and the extension after filename to save: This option allows you to copy the contents of the flash memory chip onto a diskette, giving you a backup copy of the original motherboard BIOS in case you need to re-install it. Select N to **DO YOU WANT TO SAVE BIOS**, if you don't want to save the old BIOS file.
7. After the decision to save the old BIOS file or not is made, select Y to **ARE YOU SURE TO PROGRAM** when the next menu appear; wait until a message showing Power Off or Reset the system appears. Then turn off your system.
8. Remove the diskette and restart your system.
9. Hold down <Delete> key to enter BIOS setup. You must select "Load Setup BIOS Default" to activate the new BIOS, then you may set other item from the main menu.

## Appendix F: Acronyms

Acronyms	Meaning
ACPI	Advanced Configuration and Power Interface
APM	Advanced Power Management
AGP	Accelerated Graphics Port
AMR	Audio Modem Riser
ACR	Audio Communication Riser
BIOS	Basic Input / Output System
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
DRM	Dual Retention Mechanism
DRAM	Dynamic Random Access Memory
DDR	Double Data Rate
ECP	Extended Capabilities Port
ESCD	Extended System Configuration Data
ECC	Error Checking and Correcting
EMC	Electromagnetic Compatibility
EPP	Enhanced Parallel Port
ESD	Electrostatic Discharge
FDD	Floppy Disk Device
HDD	Hard Disk Device
IDE	Integrated Dual Channel Enhanced
IRQ	Interrupt Request
I/O	Input / Output
IOAPIC	Input Output Advanced Programmable Input Controller
ISA	Industry Standard Architecture
LAN	Local Area Network
LBA	Logical Block Addressing
LED	Light Emitting Diode
MHz	Megahertz
MIDI	Musical Interface Digital Interface
MTH	Memory Translator Hub
MPT	Memory Protocol Translator
NIC	Network Interface Card
OS	Operating System

To be continued...

Acronyms	Meaning
OEM	Original Equipment Manufacturer
PAC	PCI A.G.P. Controller
POST	Power-On Self Test
PCI	Peripheral Component Interconnect
RIMM	Rambus in-line Memory Module
SCI	Special Circumstance Instructions
SECC	Single Edge Contact Cartridge
SRAM	Static Random Access Memory
SMP	Symmetric Multi-Processing
SMI	System Management Interrupt
USB	Universal Serial Bus
VID	Voltage ID