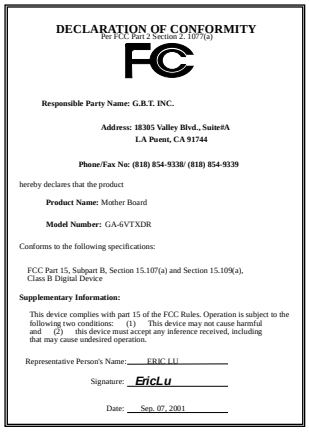
FCC Compliance Statement:



DECLARATION OF CONFORMITY
Per FCC Part 2 Section 2. 1077(a)

Responsible Party Name: G.B.T. INC.

Address: 18305 Valley Blvd., Suite#A
LA Puent, CA 91744

Phone/Fax No: (818) 854-9338/ (818) 854-9339

hereby declares that the product

Product Name: Mother Board

Model Number: GA-6VTXDR

Conforms to the following specifications:

FCC Part 15, Subpart B, Section 15.107(a) and Section 15.109(a), Class B Digital Device

Supplementary Information:

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 and (2) this device must accept any inference received, including that may cause undesired operation.

Representative Person's Name: ERIC LU

Signature: EricLu

Date: Sep. 07, 2001

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 Träding GMbH
Ausschlager Weg 41, 1F, 20537 Hamburg, Germany

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

Mother Board
GA-6VTXDR

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

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

☐ **EN 60065**	Safety requirements for mains operated electronic and related apparatus for household and similar general use	☐ **EN 60950**	Safety for information technology equipment including electrical business equipment
☐ **EN 60335**	Safety of household and similar electrical appliances	☐ **EN 50091-1**	General and Safety requirements for uninterruptible power systems (UPS)

Manufacturer/Importer

Signature : *Rex Lin*

(Stamp)

Date : Sep. 07, 2001

Name : Rex Lin

6VTXDR

Socket 370 Dual Processors Motherboard

USER'S MANUAL

Socket 370 Dual Processors Motherboard
REV.1.0 First Edition
12ME-6VTXDR-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) Hardware Setup	Instructions on setting up the motherboard
5) Performance & Block Diagram	Product performance & block diagram
6) Advanced Networking Services	Advanced Networking Services for Windows NT* 4 and Windows 2000 (Teaming)
7) BIOS Setup	Instructions on setting up the BIOS software
8) Technical Support/RMA Sheet	Document equipment used for after sales service
9) Appendix	General reference

Table Of Content

Revision History

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

Sep. 20, 2001 Taipei, Taiwan, R.O.C

Item Checklist

- ☑ The 6VTXDR motherboard
- ☑ Cable for IDE / floppy device
- ☑ Diskettes or CD (Driver CD) for motherboard driver & utility
- ☑ 6VTXDR user's manual
- ☐ Internal COM B Cable (Optional)

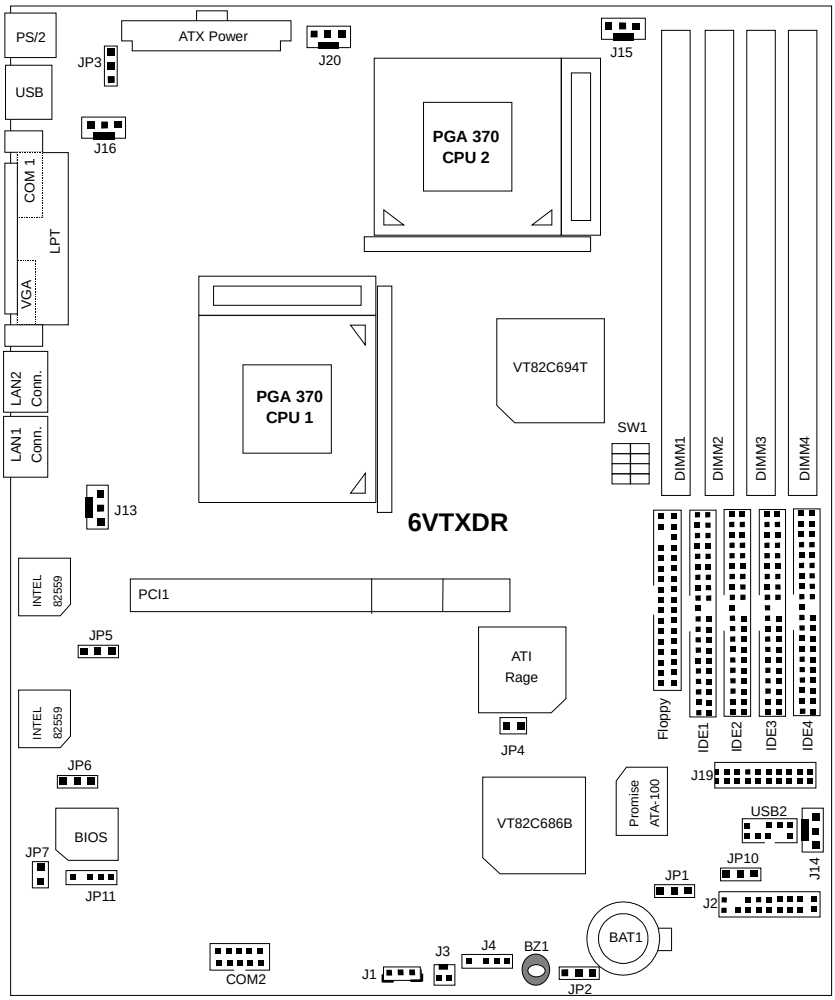
Features Summary

Form Factor	• 30.5 cm x 24.8 cm ATX size form factor, 6 layers PCB.
CPU	• 2 Socket 370 processor Supports all new Pentium III processors (FC-PGA & FC-PGA2 package) Supports100/133MHz system bus frequency Can't Support processor with Vcore above 1.8V • L2 cache in CPU (Depend on CPU)
Chipset	• VT82C694T (VIA Apollo Pro 133T) • VT82C686B
Clock Generator	• ICS 9248AF-63 • 100/133 MHz system bus speeds (PCI 33MHz)
Memory	• 4 168-pin DIMM sockets • Support PC-100 / PC-133 SDRAM and VCM SDRAM • Support up to 4GB DRAM (Max) • Support only 3.3V SDRAM DIMM • Support 72bit ECC type DRAM integrity mode • Support registered or un-buffered DRAM
I/O Control	• VT82C686B
Slots	• 1 PCI slot supports 33MHz & PCI 2.2 compliant
On-Board IDE	• IDE 1and IDE 2 Support PIO mode 3, 4, UDMA 33 / ATA 66 IDE & ATAPI CD-ROM • IDE 3 and IDE 4 Compatible with RAID, Ultra ATA/100, Ultra ATA/66, UDMA 33, EIDE 4 IDE bus master IDE ports for up to 8 ATAPI devices
On-Board Peripherals	• 1 floppy port supports 2 FDD with 360K, 720K, 1.2M, 1.44M and 2.88M bytes • 1 parallel ports supports Normal/EPP/ECP mode • 1 serial ports (COM 1) • 4 USB ports • 1 IrDA connector for Fast IrDA
On-Board VGA	• Onboard AGP ATI RAGE XL 2X
On-Board LAN	• Onboard INTEL 82559 Dual Ethernet

To be continued…

On-Board RAID	• Support data striping (RAID 0) or mirroring (RAID 1) . • Support concurrent dual IDE controller operation. • Support IDE bus master operation. • Displays status and error checking messages during boot-up. • Mirroring supports automatic background rebuilds • Feature LBA and Extended Interrupt13 drive translation in controller onboard BIOS.
Hardware Monitor	• CPU / Power / System fan revolution detect • CPU / Power / System temperature detect • System voltage detect • CPU overheat shutdown detect
PS/2 Connector	• PS/2® Keyboard interface and PS/2® Mouse interface
BIOS	• Licensed AMI BIOS, 4M bits flash ROM
Additional Features	• Support Wake-On-LAN (WOL) • Support Internal / External Modem Ring On • Includes 5 fan power connectors • Poly fuse for keyboard over-current protection

6VTXDR 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.

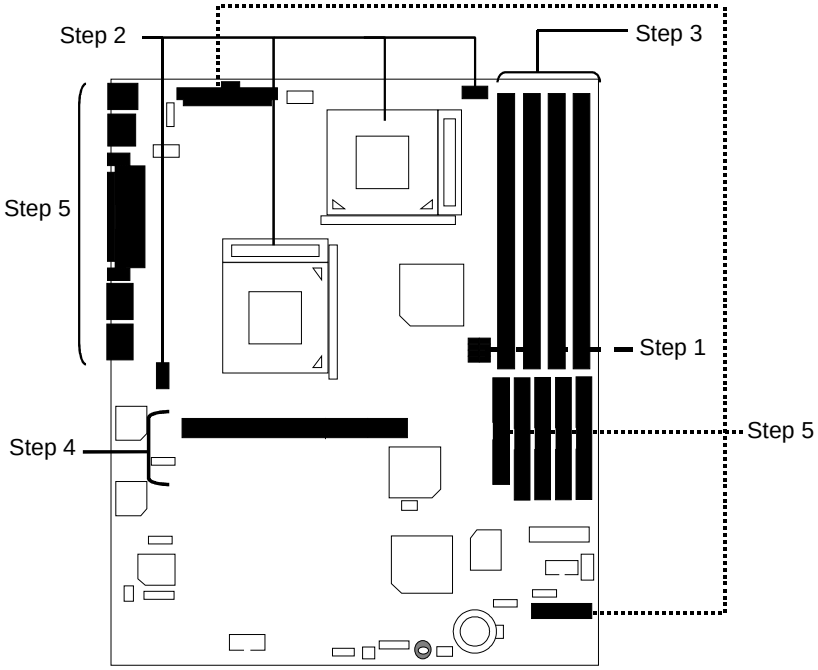
1. Unplug your computer when working on the inside.
2. Use a grounded wrist strap before handling computer components. If you do not have one, touch both of your hands to a safely grounded object or to a metal object, such as the power supply case.
3. Hold components by the edges and try not touch the 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

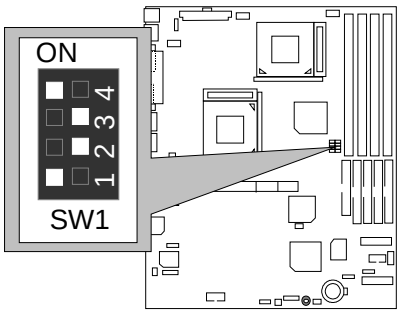


CPU Speed Setup

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.

SW1 (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



You can change the DIP switch **(SW1)** selection to set up the CPU Speed.
The CPU frequency RATIO is 5.
The FSB is 100MHz, than CPU speed is 500MHz.
The FSB is 133MHz, than CPU Speed is 667MHz.

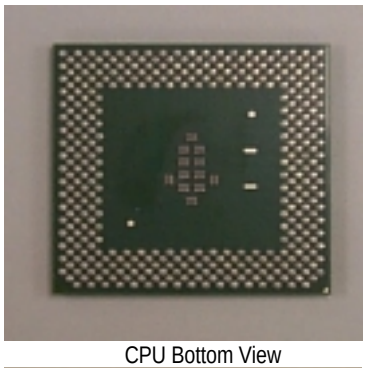
- **The CPU speed must match with the frequency ratio. It will cause system hanging up if the frequency ratio is higher than that of CPU.**
- **For dual CPU use, the same CPU must be used in CPU socket1 and 2. (The same stepping, FSB, ratio)**
- **Intel Processor all have locked Frequency Multiple, so you can not change the CPU Frequency Multiple.**

CPU Installation

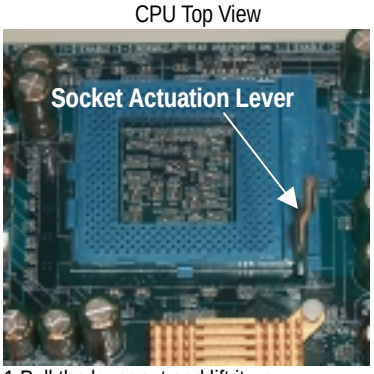
Please make sure the CPU type and speed is supported by your motherboard.

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

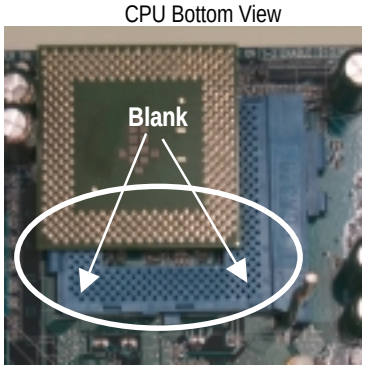
CPU Top View



CPU Bottom View



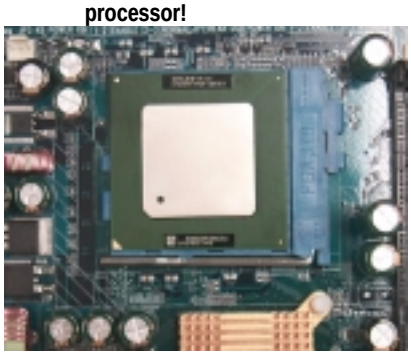
1.Pull the lever out and lift it up.



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

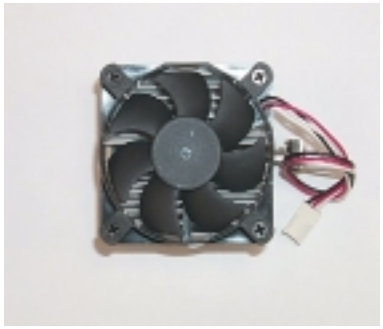
CPU Heat Sink Installation:

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!**

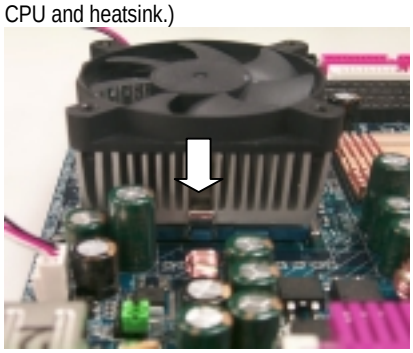


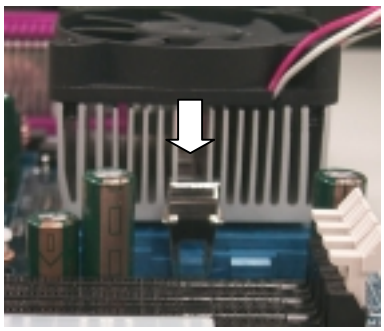
3.Align CPU and insert it

(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.

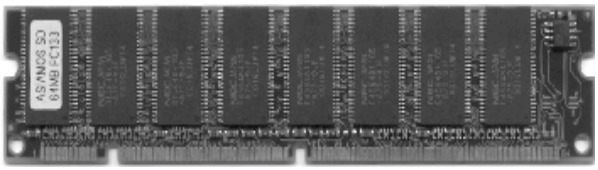
6. Hook the other end of the cooler bracket to the CPU socket.

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

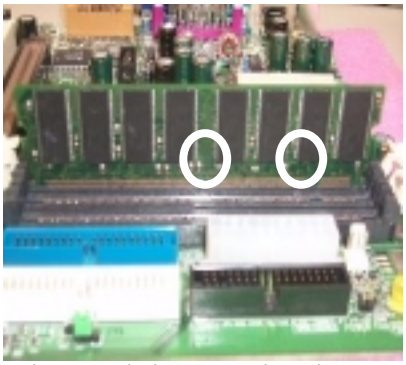
(Please refer to the cooler's installation manual for detailed installation steps)

Memory Installation

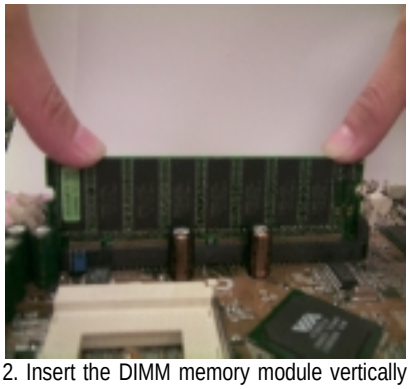
The motherboard has 4 dual inline memory module (DIMM) sockets support 4 banks. The BIOS will automatically detects memory type and size. To install the memory module, just push it vertically into the DIMM Slot .The DIMM module can only fit in one direction due to the two notch. Memory size can vary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

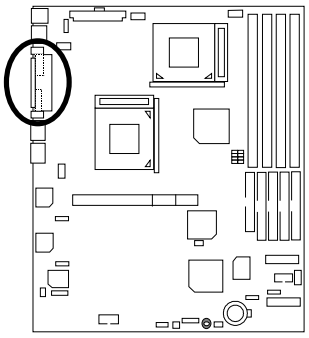
Install memory in any combination table:

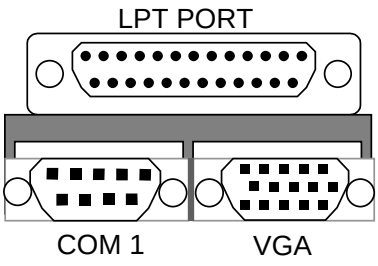
DIMM	168-pin SDRAM DIMM Modules	
DIMM 1	Supports 16 / 32 / 64 / 128 / 256 / 512 MB / 1GHz	X 1 pcs
DIMM 2	Supports 16 / 32 / 64 / 128 / 256 / 512 MB / 1GHz	X 1 pcs
DIMM 3	Supports 16 / 32 / 64 / 128 / 256 / 512 MB / 1GHz	X 1 pcs
DIMM 4	Supports 16 / 32 / 64 / 128 / 256 / 512 MB / 1GHz	X 1 pcs

★Total System Memory (Max 4GB)

Connectors

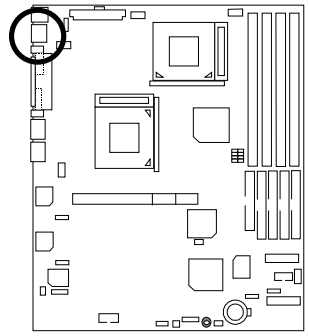
COM 1 / VGA / LPT Port

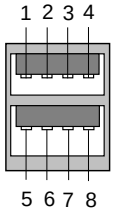




Please note:
This mainboard supports 1 standard COM port, 1 VGA port and 1 LPT port. Device like printer can be connected to LPT port ; mouse and modem etc can be connected to COM port.

USB 1 Connector

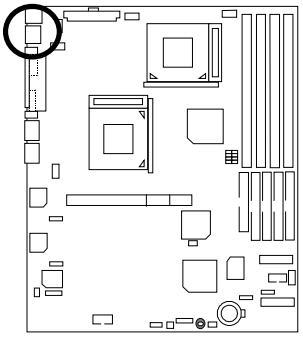


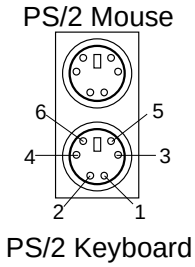


Pin No.	Definition
1	USB Power
2	USB D0-
3	USB D0+
4	GND
5	USB Power
6	USB D1-
7	USB D1+
8	GND

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

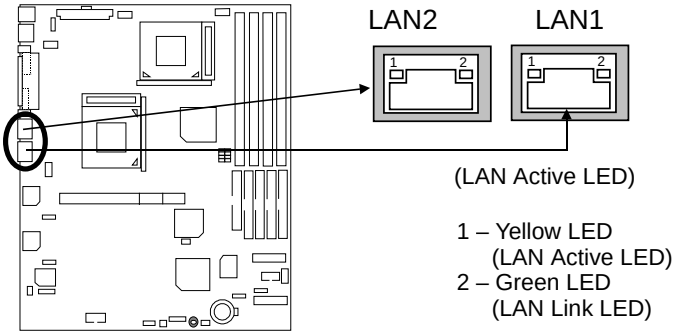




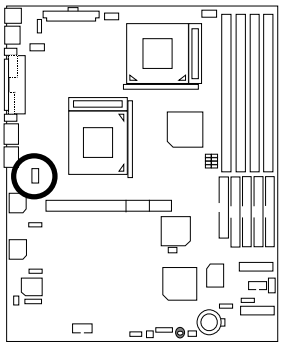
PS/2 Mouse/ Keyboard	
Pin No.	Definition
1	Data
2	NC
3	GND
4	Power
5	Clock
6	NC

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

LAN Connector



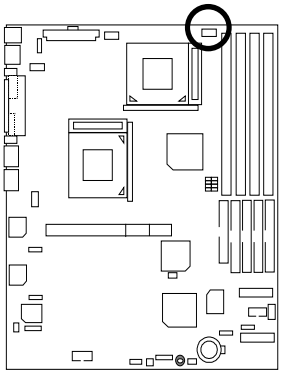
J13 : CPU Fan 1



Pin No.	Definition
1	Control
2	+12V
3	SENSE

Please note, a proper installation of the CPU cooler is essential to prevent the CPU from running under abnormal condition or damaged by overheating.

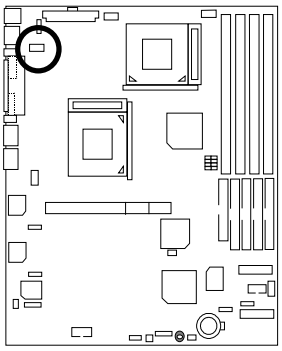
J15 : CPU Fan 2



Pin No.	Definition
1	Control
2	+12V
3	SENSE

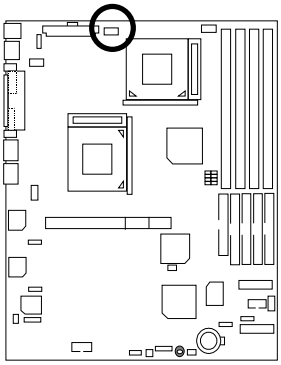
Please note, a proper installation of the CPU cooler is essential to prevent the CPU from running under abnormal condition or damaged by overheating.

J16 : Power Fan 1



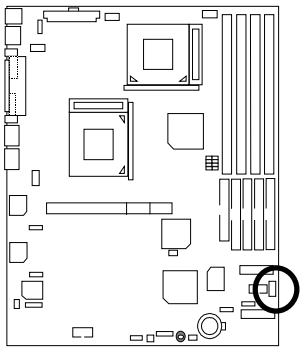
Pin No.	Definition
1	Control
2	+12V
3	SENSE

J20 : Power Fan 2



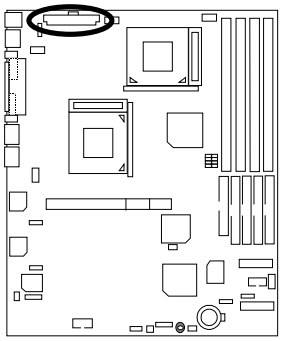
Pin No.	Definition
1	Control
2	+12V
3	SENSE

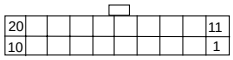
J14 : Panel Fan



Pin No.	Definition
1	Control
2	+12V
3	SENSE

ATX Power

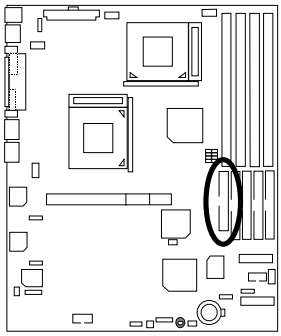


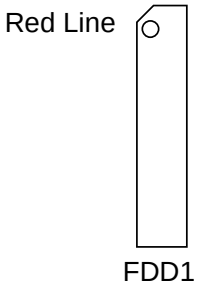


Pin No.	Definition
3,5,7,13, 15-17	GND
1,2,11	3.3V
4,6,19,20	VCC
10	+12V
12	-12V
18	-5V
8	Power Good
9	5V SB stand by+5V
14	PS-ON(Soft On/Off)

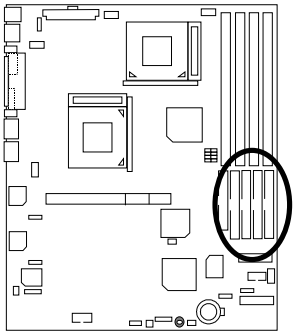
Please note:
AC power cord should only be connected to your power supply unit after ATX power cable and other related devices are firmly connected to the mainboard.

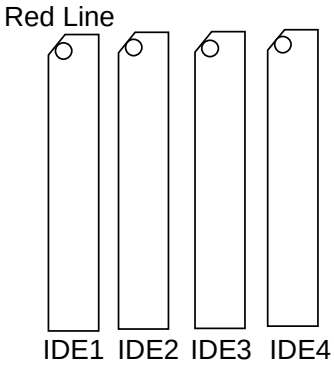
Floppy Port



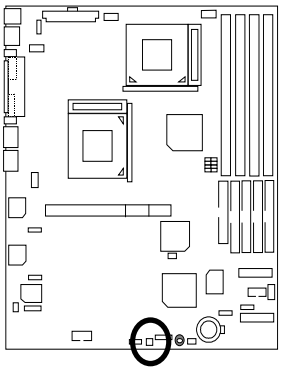


IDE1 (Primary), IDE2 (Secondary), IDE3/IDE4(ATA100 or IDE RAID)



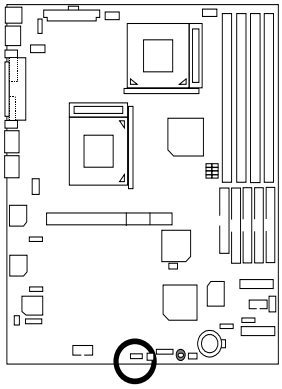


J3 : Ring Power On (Internal Modem Card Wake Up)



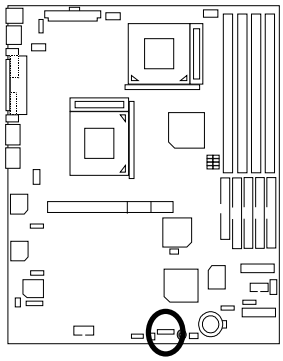
Pin No.	Definition
1	Signal
2	GND

J1 : Wake On LAN



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

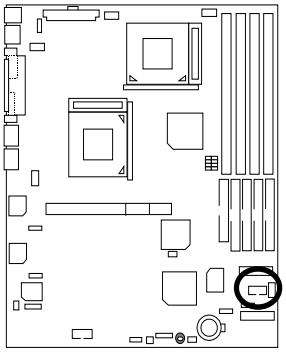
J4 : IR

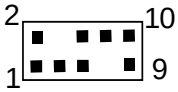


Pin No.	Definition
1	VCC (+5V)
2	NC
3	IR Data Input
4	GND
5	IR Data Output

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.

USB 2 Connector

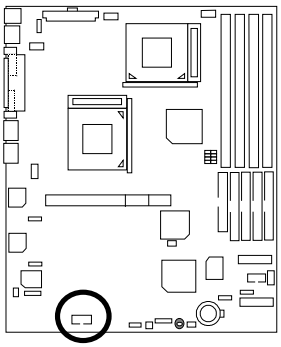


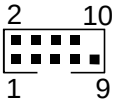


Pin No.	Definition
1,10	+5V
2,9	GND
3	USB D2-
4,7	NC
5	USB D2+
6	USB D3+
8	USB D3-

Please note:
Be careful with the polarity of the front panel USB connector. Check the pin assignment while you connect the front panel USB cable. Please contact your nearest dealer for optional front panel USB cable.

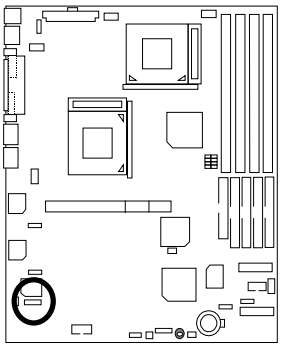
COM 2





COM 2

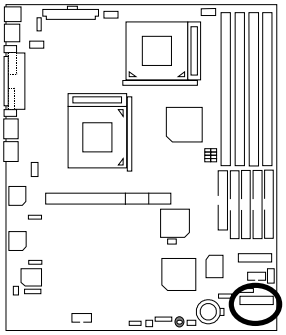
SM BUS

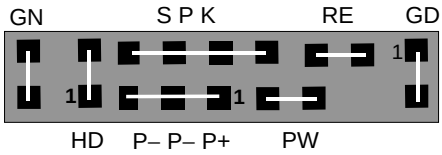


Pin No.	Definition
1	SMB CLK
2	NC
3	GND
4	SMB DATA
5	+5V

Panel And Jumper Definition

J2 : 2x11 Pins Jumper

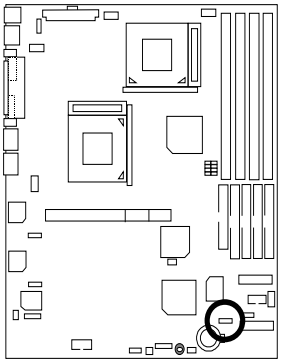


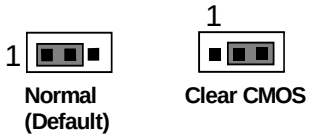


GN (Green Switch)	Open: Normal Operation Close: Entering Green Mode
GD (Green LED)	Pin 1: LED anode(+) Pin 2: LED cathode(–)
HD (IDE Hard Disk Active LED)	Pin 1: LED anode(+) Pin 2: LED cathode(–)
SPK (Speaker Connector)	Pin 1: VCC(+) Pin 2- Pin 3: NC Pin 4: Data(–)
RE (Reset Switch)	Open: Normal Operation Close: Reset Hardware System
P+P–P–(Power LED)	Pin 1: LED anode(+) Pin 2: LED cathode(–) Pin 3: LED cathode(–)
PW (Soft Power Connector)	Open: Normal Operation Close: Power On/Off

Please note, Please connect the power LED, PC speaker, reset switch and power switch etc of your chassis front panel to the front panel jumper according to the pin assignment above.

JP1 : Clear CMOS Function

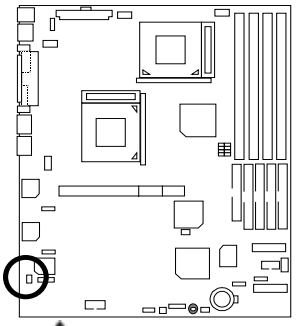


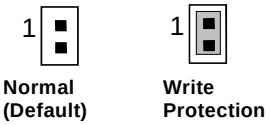


Pin No.	Definition
1-2 Close	Normal (Default)
2-3 Close	Clear CMOS

Please note, You may clear the CMOS data to its default values by this jumper

JP7 : BIOS Flash ROM Write Protect (Optional)

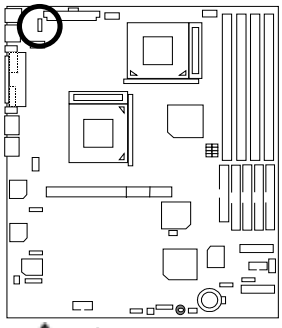




Pin No.	Definition
Close	BIOS Write Protection
Open	Normal (Default)

Please note, To flash/upgrade BIOS on this MB JP7 must be set to open. We recommend JP7 to be set to "close", whenever user does not need to flash/upgrade the BIOS.

JP3 : USB device Wake up Selection

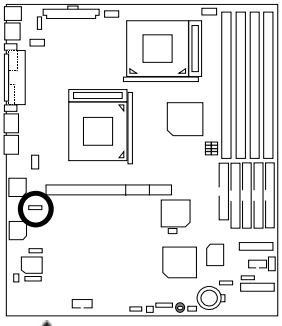


Normal (Default) **Enable**

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

Please note: To use "USB KB/MS Wakeup from S3" function, set BIOS setting "USB KB/MS Wake up from S3" to ENABLED and enable jumpers JP3.
*(Power on the computer and as soon as memory counting starts, press <Del>. You will enter BIOS Setup. Select the item "POWER MANAGEMENT SETUP", then select "USB KB/MS Wake up from S3". Remember to save the setting by pressing "ESC" and choose the "SAVE & EXIT SETUP" option.)

JP5 : Onboard LAN1 Selection

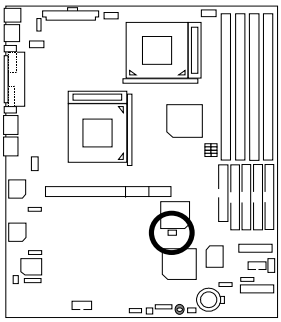


Enabled (Default) **Disabled**

Pin No.	Definition
1-2 close	Onboard LAN1 Enabled
2-3 close	Onboard LAN1 Disabled

Please note: This MB supports optional LAN chip.If the MB has optional LAN chip the user can enable the LAN function by setting the JP 5 to 1-2, user can disable the optional LAN function by setting the JP 5 to 2-3. JP 5 will have any effect if the board does not have optioal LAN chip

JP4 : Onboard AGP Selection

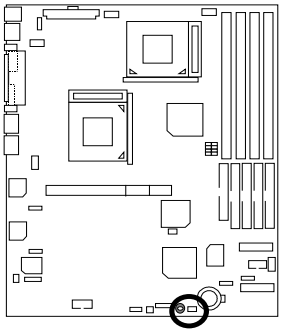


1 
Enabled (Default)

1 
Disabled

Pin No.	Definition
Open	Onboard AGP Disabled
Close	Onboard AGP Enabled

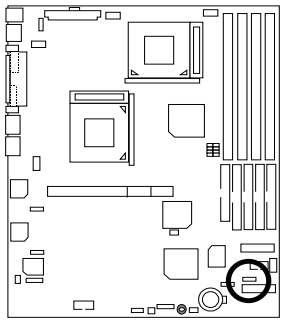
JP2 : Case Open



1 

Pin No.	Definition
1	Signal
2	GND
3	NC

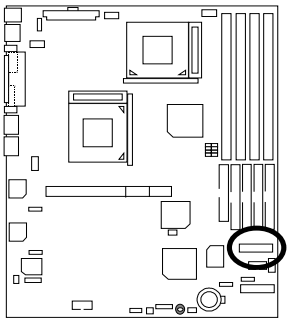
JP10 : IDE RAID Selection

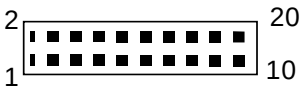


Enabled (Default) **Disabled**

Pin No.	Definition
1-2 close	IDE Raid Disabled
2-3 close	IDE Raid Enabled

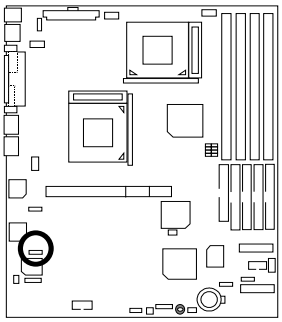
J19 : Panel LED Connector





Pin No.	Definition
1-2	CPU FAN1
3-4	CPU FAN2
5-6	SYSTEM FAN
7-8	SYSTEM EVENT
9	LAN1 Active
10	LAN1 Link
11-12	LAN1 Speed
13	LAN2 Active
14	LAN2 Link
15-16	LAN2 Speed
17-18	Power LED
19-20	Power Button

JP6 : Onboard LAN2 Selection

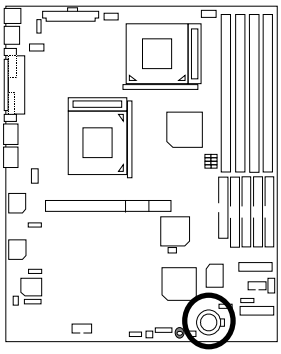


Enabled (Default) **Disabled**

Pin No.	Definition
1-2 close	Onboard LAN2 Enabled
2-3 close	Onboard LAN2 Disabled

Please note: This MB supports optional LAN chip.If the MB has optional LAN chip the user can enable the LAN function by setting the JP6 to 1-2, user can disable the optional LAN function by setting the JP6 to 2-3. JP6 will have any effect if the board does not have optioal LAN chip

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

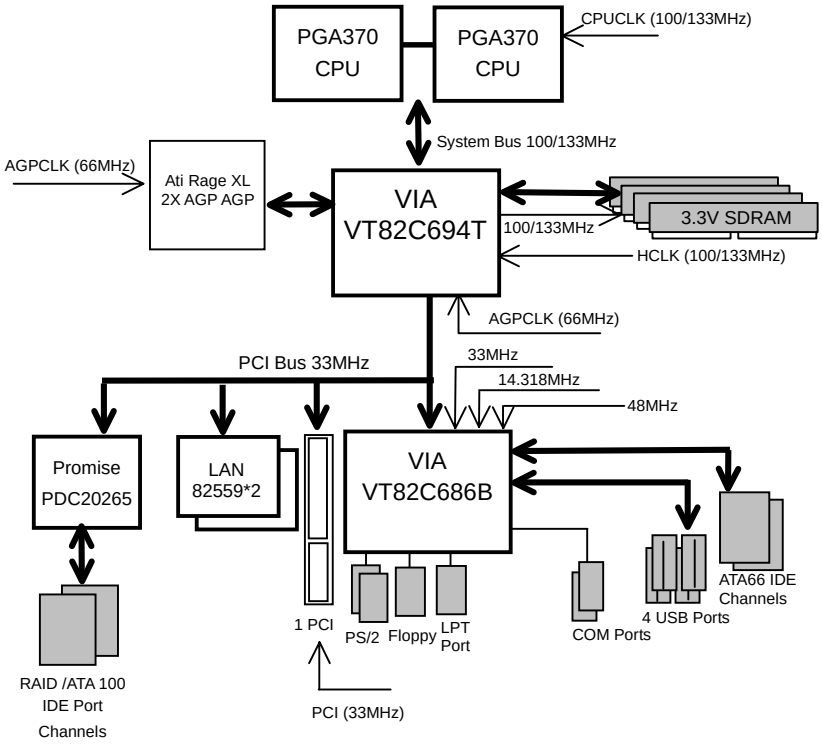
The following performance data list is the testing results of some popular benchmark testing programs.

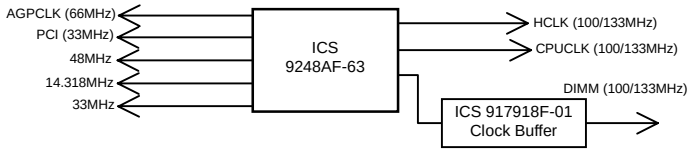
These data are just referred by users, and there is no responsibility for different testing data values gotten by users. (The different Hardware & Software configuration will result in different benchmark testing results.)

- CPU Intel® Pentium III Processor 1260MHz x 2 (Taulatin)
- DRAM 128MB*2 (KingMax PC-150)
- CACHE SIZE 512KB include in CPU
- DISPLAY Onboard ATI Rage XL 2X
- STORAGE Onboard Promise RAID (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	
	CPU1	CPU2	CPU1	CPU2
Internal MHz	1262.33	1262.39	1262.38	1262.36
External MHz	132.88	132.88	132.88	132.88
SiSoft Sandra 20001				
CPU/FPU Benchmark	7117/3363		5641/3361	
CPU Multi-Media Benchmark	13817/17158		13817/17158	
Drivers Benchmark	32231		28954	
Memory Benchmark	360/386		343/369	
Winstone 2001				
CC Winstone 2001	70.3		69.4	
Business Winstore 2001	52.4		51.5	

Block Diagram





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 71)

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.

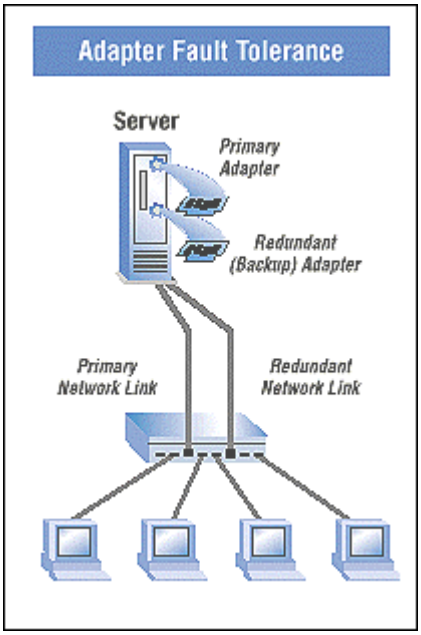
  Note: Windows NT 4.0 Service Pack 5 or later is required for implementing Adapter Teaming properly. Install Service Pack prior to configuring Adapter Teaming.

- 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.

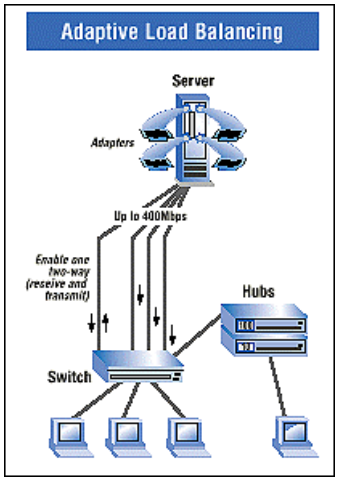
2.3 Manageability

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.

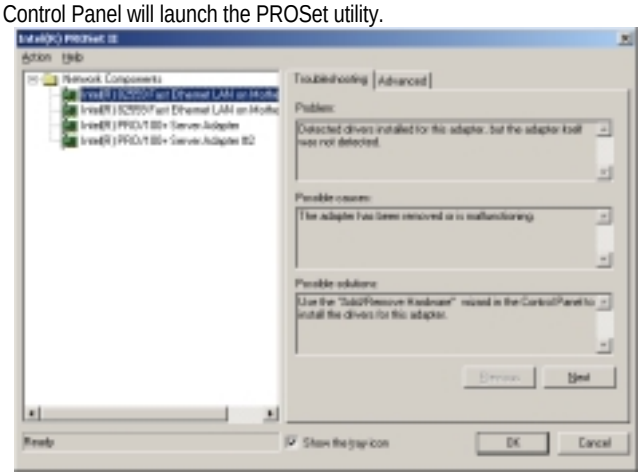
3.3 Manageability

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.

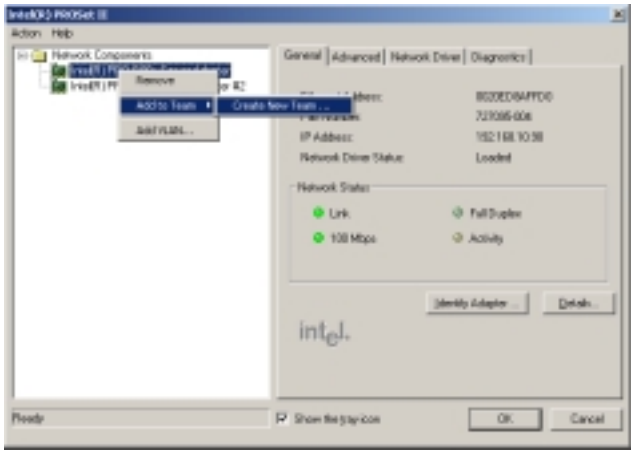
4. General Instructions

4.1 Perform Teaming In Windows NT4.0 Or Windows 2000

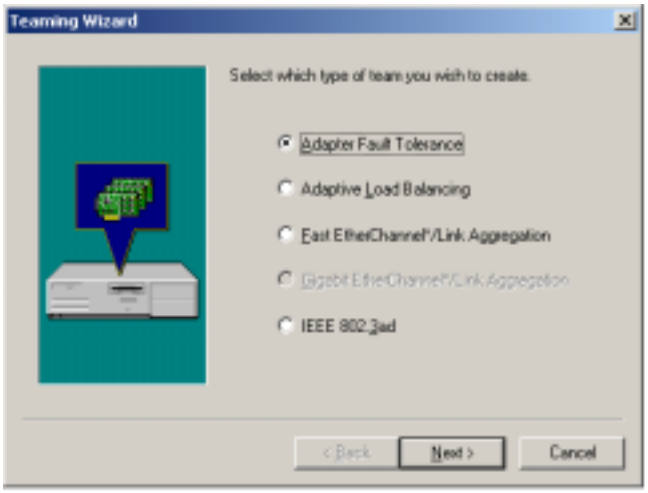
1. Setup Intel PROSet II. Then, double-click on the Intel (R) PROSet II icon in the Control Panel will launch the PROSet utility.



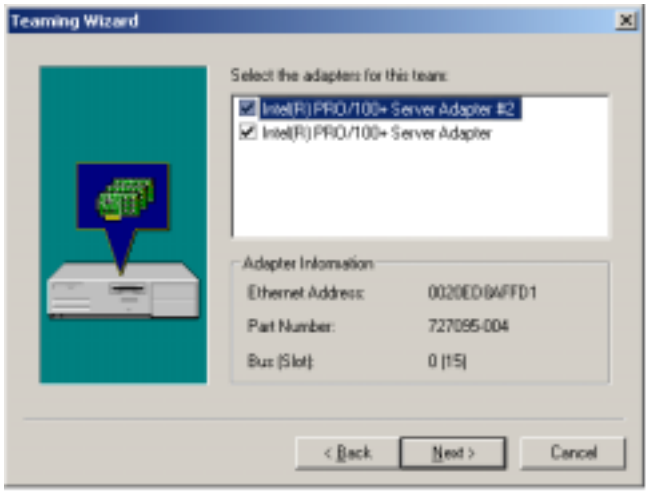
2. Create a new team .



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

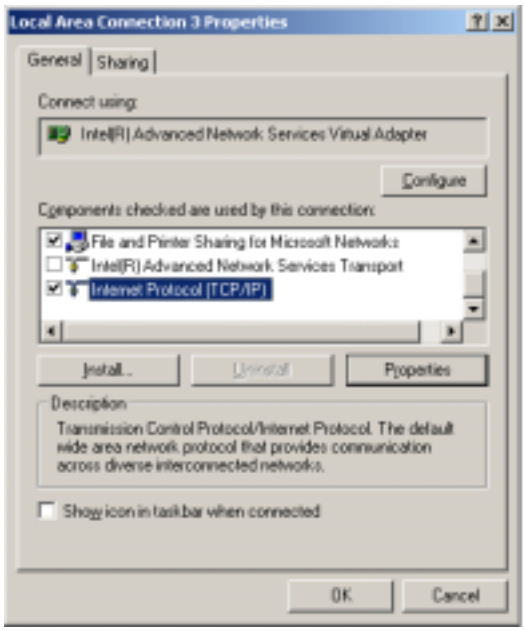


4. Add a check in the checkbox for each adapter you want as a part of the team and click Next.



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.



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 <Del> immediately will allow you to enter Setup. If the message disappears before you respond and you still wish to enter Setup, restart the system to try again by turning it OFF then ON or pressing the "RESET" bottom on the system case. You may also restart by simultaneously press <Ctrl> – <Alt>– <Del> keys.

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 value from CMOS, only for Option Page Setup Menu
<F6>	Load the default CMOS value from BIOS default table, only for Option Page Setup Menu
<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>.

The Main Menu **(For example: BIOS Ver. : F2)**

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

AMIBIOS SIMPLE SETUP UTILITY-VERSION 1.24e (C) 1999 American Megatrends, Inc. All Rights Reserved	
STANDARD CMOS SETUP	INTEGRATED PERIPHERALS
BIOS FEATURES SETUP	HARDWARE MONITOR & MISC SETUP
CHIPSET FEATURES SETUP	SUPERVISOR PASSWORD
POWER MANAGEMENT SETUP	USER PASSWORD
PNP/PCI CONFIGURATION	IDE HDD AUTO DETECTION
LOAD FAIL-SAFE DEFAULTS	SAVE & EXIT SETUP
LOAD OPTIMIZED DEFAULTS	EXIT WITHOUT SAVING
ESC : Quit ↑↓←→ : Select Item (Shift) F2 : Change Color F5 : Old Values F6 : Load Fail-Safe Defaults F7: Load Optimized Defaults F10: Save & Exit	
Time, Date, Hard Disk Type, …	

Figure 1: Main Menu

- **Standard CMOS Setup**

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

- **BIOS Features Setup**

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

- **Chipset Features Setup**

  This setup page includes all the items of chipset special features.

- **Power Management Setup**

  This setup page includes all the items of Green function features.

- **PnP/PCI Configurations**

  This setup page includes all the configurations of PCI & PnP ISA resources.

- **Load Fail-Safe Defaults**

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

- **Load Optimized Defaults**

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

- **Integrated Peripherals**

  This setup page includes all onboard peripherals.

- **Hardware Monitor & MISC Setup**

  This setup page is auto detect fan and temperature status.

- **Supervisor password**

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

- **User password**

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

- **IDE HDD auto detection**

  Automatically configure hard disk parameters.

- **Save & Exit Setup**

  Save CMOS value settings to CMOS and exit setup.

- **Exit Without Saving**

  Abandon all CMOS value changes and exit setup.

Standard CMOS Setup

The items in Standard CMOS Features Menu (Figure 2) are divided into 9 categories. Each category includes no, one or more than one setup items. Use the arrows to highlight the item and then use the <PgUp> or <PgDn> keys to select the value you want in each item.

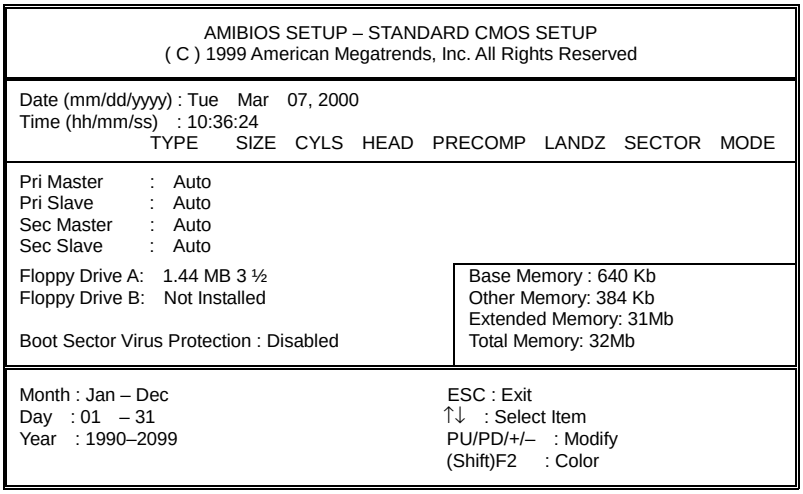


Figure 2: Standard CMOS Setup

- **Date**

The date format is <Week> <Month> <Day>, <Year>.

Week	The week, from Sun to Sat, determined by the BIOS and is display-only
Month	The month, Jan. Through Dec.
Day	The day, from 1 to 31 (or the maximum allowed in the month)
Year	The year, from 1990 through 2099

- **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.

- **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>.

- **Floppy Drive A / Floppy Drive B**

  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.

- **Boot Sector Virus Protection**

  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. **(Default Value)**

- **Memory**

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

  Base Memory

  The POST of the BIOS will determine the amount of base (or conventional) memory installed in the system.
  The value of the base memory is typically 512 K for systems with 512 K memory installed on the motherboard, or 640 K for systems with 640 K or more memory installed on the motherboard.

  Extended Memory

  The BIOS determines how much extended memory is present during the POST. This is the amount of memory located above 1 MB in the CPU's memory address map.

  Other Memory

  This refers to the memory located in the 640 K to 1024 K address space. This is memory that can be used for different applications.
  DOS uses this area to load device drivers to keep as much base memory free for application programs. Most use for this area is Shadow RAM.

BIOS Features Setup

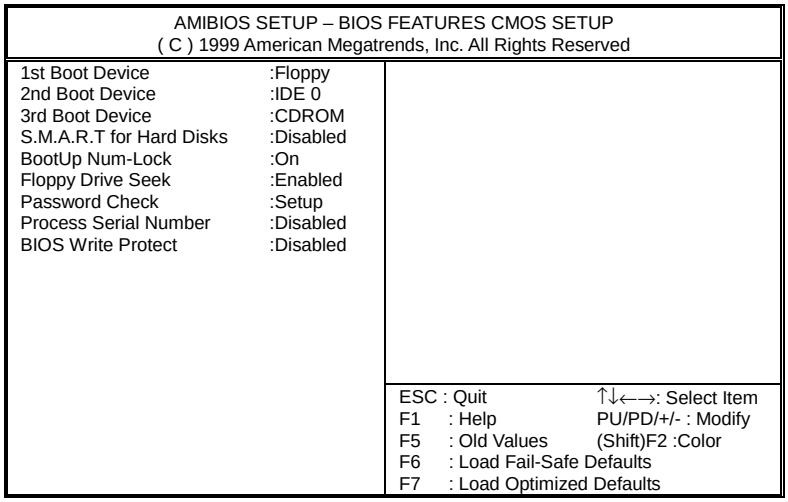


Figure 3: BIOS Features Setup

- **1st / 2nd / 3rd Boot Device**

Floppy	Boot Device by Floppy.
LS / ZIP A:	Boot Device by LS / ZIP A:.
CDROM	Boot Device by CDROM.
SCSI	Boot Device by SCSI.
NETWORK	Boot Device by NETWORK.
IDE-0~IDE-3	Boot Device by IDE-0~IDE-3.
Disabled	Boot Device by Disabled.
ATAPI ZIP C:	Boot Device by ATAPI ZIP C:.

- **S.M.A.R.T. for Hard Disks**

Enabled	Enabled S.M.A.R.T. Hard for Disks.
Disabled	Disabled S.M.A.R.T. Hard for Disks. **(Default Value)**

- **Boot Up Num-Lock**

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

- **Floppy Drive Seek**

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

Enabled	BIOS searches for floppy disk drive to determine if it is 40 or 80 tracks. Note that BIOS can not tell from 720, 1.2 or 1.44 drive type as they are all 80 tracks. **(Default Value)**
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.

- **Password Check**

Setup	Set Password Check to Setup. **(Default Value)**
Always	Set Password Check to Always.

- **Processor Serial Number**

Disabled	Disabled Processor Serial Number. **(Default Value)**
Enabled	Enabled Processor Serial Number.

- **BIOS Write Protect**

Disabled	Enabled BIOS Write Function. **(Default Value)**
Enabled	BIOS Write Protect.

Chipset Features Setup

AMIBIOS SETUP –CHIPSET FEATURE CMOS SETUP
(C) 1999 American Megatrends, Inc. All Rights Reserved

*** DRAM Timing ***	
Top Performance	:Disabled
SDRAM Timing by SPD	:Disabled
SDRAM CAS# Latency	:Auto
CPU/DRAM Frequency	:Auto
C2P Concurrency & Master	:Enabled
DRAM Integrity Mode	:Disabled
AGP Aperture Size	:64MB
USB Controller	:All USB Port
USB Legacy Support	:Disabled

ESC : Quit	↑↓←→: Select Item
F1: Help	PU/PD/+/- : Modify
F5 : Old Values	(Shift)F2 :Color
F6 : Load Fail-Safe Defaults	
F7 : Load Optimized Defaults	

Figure 4: Chipset Features Setup

- **Top Performance**

  If you wish to maximize the performance of your system, set "Top Performance" as "Enabled".

Disabled	Disabled this function. **(Default Value)**
Enabled	Enabled Top Performance function.

- **SDRAM Timing by SPD**

Disabled	SDRAM Timing by SPD Function Disabled. **(Default Value)**
Enabled	SDRAM Timing by SPD Function Enabled.

- **SDRAM CAS# Latency**

3	For Slower SDRAM DIMM module.
2	For Fastest SDRAM DIMM module.
Auto	Detect SDRAM CAS# Latency automatically. **(Default Value)**

- **CPU/DRAM Frequency**

  1. System Bus Speed: 100MHz

Auto	Set CPU/DRAM Frequency to Auto. **(Default Value)**
100/100MHz	Set CPU/DRAM Frequency is 100/100MHz.
100/133MHz	Set CPU/DRAM Frequency is 100/133MHz.

2. System Bus Speed: 133MHz

Auto	Set CPU/DRAM Frequency to Auto. **(Default Value)**
133/100MHz	Set CPU/DRAM Frequency is 133/100MHz.
133/133MHz	Set CPU/DRAM Frequency is 133/133MHz.

- **C2P Concurrency & Master**

Enabled	Enabled C2P Concurrency & Master. **(Default Value)**
Disabled	Disabled C2P Concurrency & Master.

- **DRAM Integrity Mode**

ECC	For 72 bit ECC type DIMM Module.
Disabled	Normal Setting. **(Default Value)**

- **AGP Aperture Size**

4MB	Set AGP Aperture Size to 4MB.
8MB	Set AGP Aperture Size to 8 MB.
16MB	Set AGP Aperture Size to 16 MB.
32MB	Set AGP Aperture Size to 32 MB.
64MB	Set AGP Aperture Size to 64 MB. **(Default Value)**
128MB	Set AGP Aperture Size to 128 MB.
256MB	Set AGP Aperture Size to 256 MB.

- **USB Controller**

USB Port 0&1	USB Controller for USB Port 0&1.
USB Port 2&3	USB Controller for USB Port 2&3.
All USB Port	USB Controller for All USB Port. **(Default Value)**
Disabled	USB Controller Function Disabled.

- **USB Legacy Support**

Keyboard	Set USB Legacy Support Keyboard.
Keyb+Mouse	Set USB Legacy Support Keyboard +Mouse.
Disabled	Disabled USB Legacy Support Function. **(Default Value)**

Power Management Setup

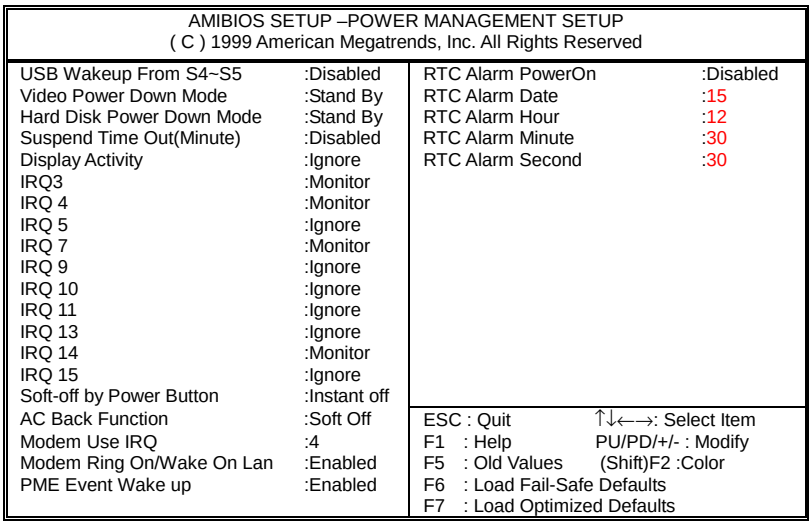


Figure 5: Power Management Setup

- **USB Wakeup From S4~S5**

Disabled	Disabled USB Device Wakeup From S4~S5 Function. **(Default Value)**
Enabled	Enabled USB Device Wakeup From S4~S5 Function.

- **Video Power Down Mode**

Disabled	Disabled Video Power Down Mode Function.
Suspend	Set Video Power Down Mode to Suspend.
Stand By	Set Video Power Down Mode to Stand By. **(Default Value)**

- **Hard Disk Power Down Mode**

Disabled	Disabled Hard Disk Power Down Mode Function.
Suspend	Set Hard Disk Power Down Mode to Suspend
Stand By	Set Hard Disk Power Down Mode to Stand By. **(Default Value)**

- **Suspend Time Out (Minute.)**

Disabled	Disabled Suspend Time Out Function. **(Default Value)**
1	Enabled Suspend Time Out after 1min.
2	Enabled Suspend Time Out after 2min.
4	Enabled Suspend Time Out after 4min.
8	Enabled Suspend Time Out after 8min.
10	Enabled Suspend Time Out after 10min.
20	Enabled Suspend Time Out after 20min.
30	Enabled Suspend Time Out after 30min.
40	Enabled Suspend Time Out after 40min.
50	Enabled Suspend Time Out after 50min.
60	Enabled Suspend Time Out after 60min.

- **Display Activity**

Ignore	Ignore Display Activity**. (Default Value)**
Monitor	Monitor Display Activity.

- **IRQ 3~IRQ15**

Ignore	Ignore IRQ3 ~IRQ15.
Monitor	IRQ3~IRQ15.

- **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.

- **AC Back Function**

Memory	This function depends on computer status.
Soft-Off	Set System Soft-Off Status. **(Default value)**
Full-On	Set System Full-On Status.

- **Modem Use IRQ**

NA	Set MODEM Use IRQ to NA.
3	Set MODEM Use IRQ to 3.
4	Set MODEM Use IRQ to 4. **(Default Value)**
5	Set MODEM Use IRQ to 5.
7	Set MODEM Use IRQ to 7.

- **Modem Ring On/Wake On Lan**

Disabled	Disabled Modem Ring On/Wake On Lan.
Enabled	Enabled Modem Ring On/Wake On Lan. **(Default Value)**

- **PME Event Wake up**

Disabled	Disabled PME Event Wake up function.
Enabled	Enabled PME Event Wake up function. **(Default Value)**

- **RTC Alarm PowerOn**

You can set "RTC Alarm PowerOn" item to Enabled and key in date/time to power on system.

Disabled	Disable this function. **(Default Value)**
Enabled	Enable alarm function to POWER ON system.

If the "RTC Alarm PowerOn" is Enabled.

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

PnP/PCI Configuration

AMIBIOS SETUP –PNP/PCI CONFIGURATION SETUP
(C) 1999 American Megatrends, Inc. All Rights Reserved

Plug and Play Aware O/S	:No
Reset Configuration Data	:No
VGA Boot From	:AGP
PCI VGA Palette Snoop	:Disabled
DMA Channel 0	:PnP
DMA Channel 1	:PnP
DMA Channel 3	:PnP
DMA Channel 5	:PnP
DMA Channel 6	:PnP
DMA Channel 7	:PnP
IRQ 3	:PCI/PnP
IRQ 4	:PCI/PnP
IRQ 5	:PCI/PnP
IRQ 7	:PCI/PnP
IRQ 9	:PCI/PnP
IRQ 10	:PCI/PnP
IRQ 11	:PCI/PnP
IRQ 14	:PCI/PnP
IRQ 15	:PCI/PnP

ESC : Quit	↑↓←→: Select Item
F1 : Help	PU/PD/+/- : Modify
F5 : Old Values	(Shift)F2 :Color
F6 : Load Fail-Safe Defaults	
F7 : Load Optimized Defaults	

Figure 6: PnP/PCI Configuration

- **Plug and Play Aware O/S**

Yes	Enable Plug and Play Aware O/S function.
No	Disable Plug and Play Aware O/S function **(Default Value)**

- **Reset Configuration Data**

Yes	Clear PnP information in ESCD & update DMI data.
No	Disabled this function. **(Default Value)**

- **VGA Boot From**

AGP	Primary Graphics Adapter From AGP. **(Default Value)**
PCI	Primary Graphics Adapter From PCI.

- **PCI VGA Palette Snoop**

Enabled	For having Video Card on ISA Bus and VGA Card on PCI Bus.
Disabled	For VGA Card only. **(Default Value)**

- **DMA Channel (0,1,3,5,6,7)**

PnP	The resource is used by PnP device.
ISA/EISA	The resource is used by ISA / EISA device (PCI or ISA).

- **IRQ (3,4,5,7, 9,10,11,14,15)**

PCI/PnP	The resource is used by PCI/PnP device.
ISA/EISA	The resource is used by ISA / EISA device (PCI or ISA).

Load Fail-Safe Defaults

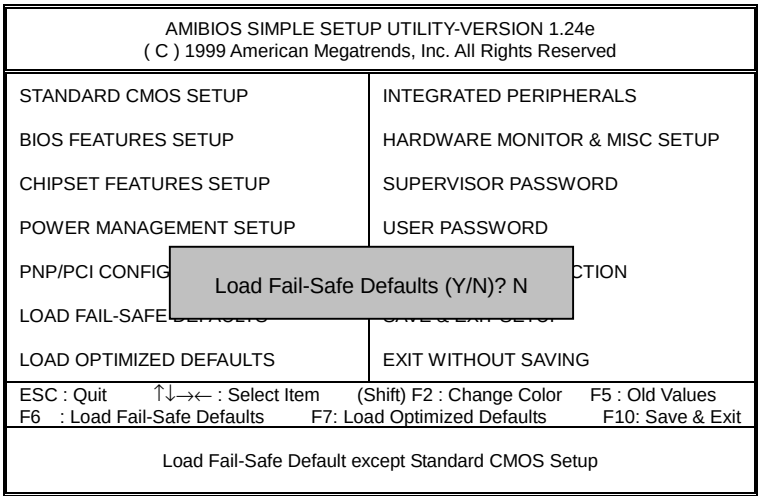


Figure 7: Load Fail-Safe Defaults

- **Load Fail-Safe Defaults**

  BIOS defaults contain the most appropriate values of the system parameters that allow minimum system performance.

Load Optimized Defaults

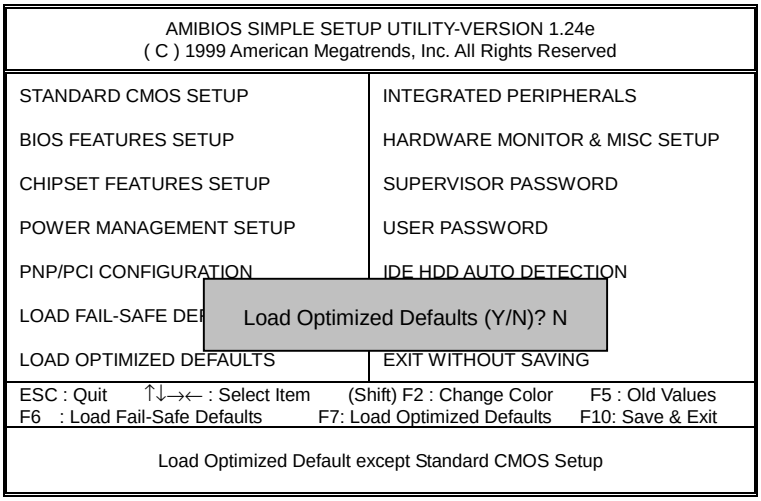


Figure 8: Load Optimized Defaults

- **Load Optimized Defaults**

  Optimized defaults contain the most appropriate system parameter values to configure the system to achieve maximum performance.

Integrated Peripherals

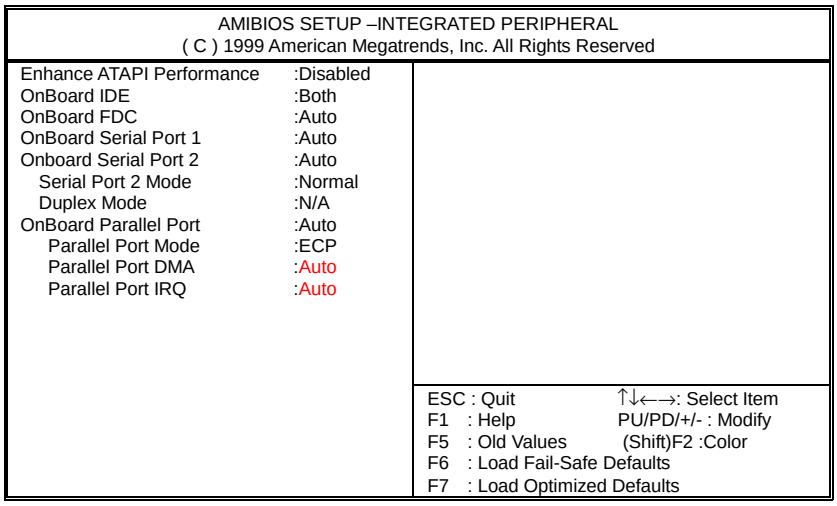


Figure 9: Integrated Peripherals

- **Enhance ATAPI Performance**

  If you wish to maximize the performance of your ATAPI devices , set "Enhance ATAPI Performance" as "Enabled" . Please note, enabling this function may cause your ATAPI devices become unstable. For power End-User use only.

Disabled	Disable Enhance ATAPI Performance. **(Default Value)**
Enabled	Enhance ATAPI Performance function.

- **OnBoard IDE**

Disabled	Disabled onboard IDE
Both	Set onboard IDE is Both. **(Default Value)**
Primary	Set onboard IDE is Primary.
Secondary	Set onboard IDE is Secondary.

- **OnBoard FDC**

Auto	Set onboard FDC is Auto. **(Default Value)**
Disabled	Disabled onboard FDC.
Enabled	Enabled onboard FDC.

- **OnBoard Serial Port 1**

Auto	BIOS will automatically setup the port 1 address. **(Default Value)**
3F8/COM1	Enable onboard Serial port 1 and address is 3F8.
2F8/COM2	Enable onboard Serial port 1 and address is 2F8.
3E8/COM3	Enable onboard Serial port 1 and address is 3E8.
2E8/COM4	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. **(Default Value)**
3F8/COM1	Enable onboard Serial port 2 and address is 3F8.
2F8/COM2	Enable onboard Serial port 2 and address is 2F8.
3E8/COM3	Enable onboard Serial port 2 and address is 3E8.
2E8/COM4	Enable onboard Serial port 2 and address is 2E8.
Disabled	Disable onboard Serial port 2.

- **Serial Port 2 Mode**

(This item allows you to determine which Serial Port 2 Mode of onboard I/O chip)

ASK IR	Set onboard I/O chip Serial Port 2 to ASK IR Mode.
IrDA	Set onboard I/O chip Serial Port 2 to IrDA Mode.
Normal	Disable this function. **(Default Value)**

- **Duplex Mode**

Half Duplex	IR Function Duplex Half.
N/A	Disable this function. **(Default Value)**
Full Duplex	IR Function Duplex Full.

- **OnBoard Parallel port**

378	Enable On Board LPT port and address is 378.
278	Enable On Board LPT port and address is 278.
3BC	Enable On Board LPT port and address is 3BC.
Auto	Set On Board LPT port is Auto. **(Default Value)**
Disabled	Disable On Board LPT port.

- **Parallel Port Mode**

EPP	Using Parallel port as Enhanced Parallel Port.
ECP	Using Parallel port as Extended Capabilities Port. **(Default Value)**
Normal	Normal Operation.

- **Parallel Port DMA**

Auto	Set Auto to parallel port mode DMA Channel. **(Default Value)**
3	Set Parallel Port DMA is 3.
1	Set Parallel Port DMA is 1.
0	Set Parallel Port DMA is 0.

- **Parallel Port IRQ**

7	Set Parallel Port IRQ is 7.
Auto	Set Auto to parallel Port IRQ DMA Channel. **(Default Value)**
5	Set Parallel Port IRQ is 5.

Hardware Monitor & MISC Setup

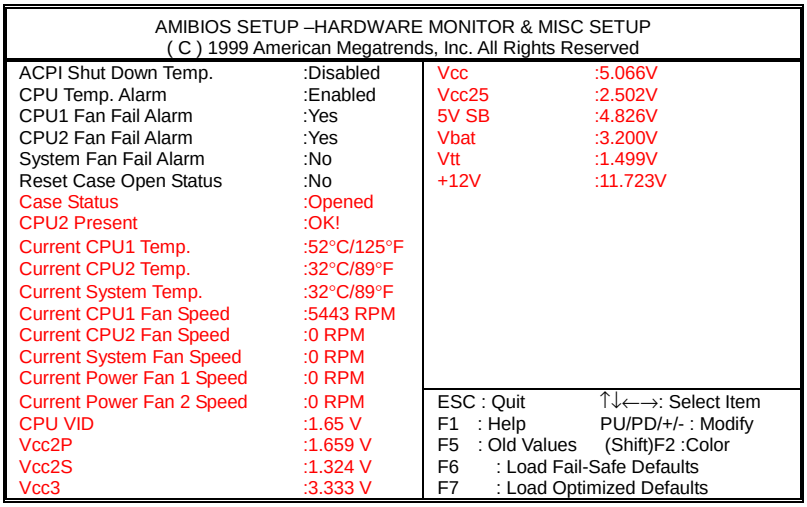


Figure 10: Hardware Monitor & MISC Setup

- **ACPI Shutdown Temp. (°C / °F)**

(This function will be effective only for the operating systems that support ACPI Function.)

Disabled	Disabled ACPI Shutdown function. **(Default Value)**
60°C / 140°F	Monitor CPU Temp. at 60°C / 140°F, if Temp. > 60°C / 140°F system will automatically power off.
70°C / 158°F	Monitor CPU Temp. at 70°C / 158°F, if Temp. > 70°C / 158°F system will automatically power off.
80°C / 176°F	Monitor CPU Temp. at 80°C / 176°F, if Temp. > 80°C / 176°F system will automatically power off.
90°C / 194°F	Monitor CPU Temp. at 90°C / 194°F, if Temp. > 90°C / 194°F system will automatically power off.

- **Fan Fail Alarm**

CPU 1/ CPU 2 / System

No	Fan Fail Alarm Function Disabled.
Yes	Fan Fail Alarm Function Enabled.

- **Reset Case Open Status**
- **Case Status**

  If the case is closed, “Case Status” will show “Closed”.
  If the case have been opened, “Case Status” will show “Closed”.
  If you want to reset “Case Status” value, set “Reset Case Open Status” to “Yes” and save CMOS, your computer will restart.

- **CPU 2 Present.**

  Detect CPU 2 Status automatically.

- **Current Temp. (°C / °F)**

  Detect CPU 1 / CPU 2 / System Temperature automatically.

- **Current Fan Speed**

  Detect CPU 1 / CPU 2 / System / Power 1 / Power 2 Fan speed status automatically.

- **Current Voltage (V)**

  CPU VID / Vcc2P / Vcc2S / Vcc3/ Vcc / Vcc25 / 5V SB / Vbat / Vtt / +12 V

  Detect system’s voltage status automatically.

Set Supervisor / User Password

When you select this function, the following message will appear at the center of the screen to assist you in creating a password.

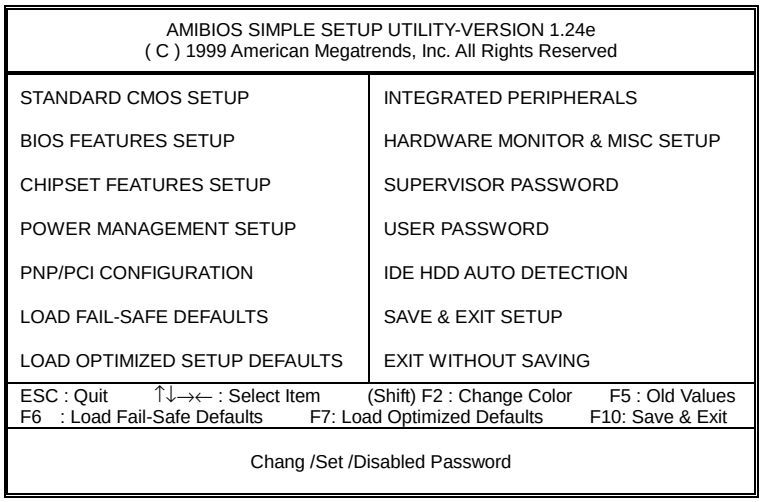


Figure 11: Password Setting

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

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

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

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

IDE HDD AUTO Detection

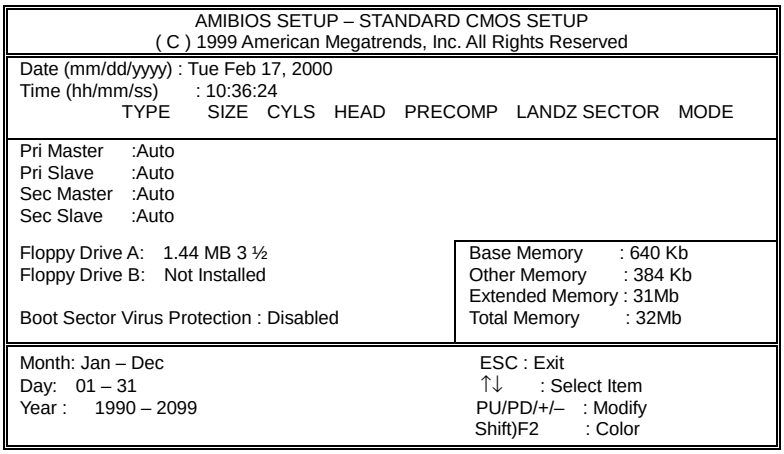


Figure 12: IDE HDD Auto Detection

Type "Y" will accept the H.D.D. parameter reported by BIOS.

Type "N" will keep the old H.D.D. parameter setup. If the hard disk cylinder number is over 1024, then the user can select LBA mode or LARGER mode for DOS partition larger than 528 MB.

Save & Exit Setup

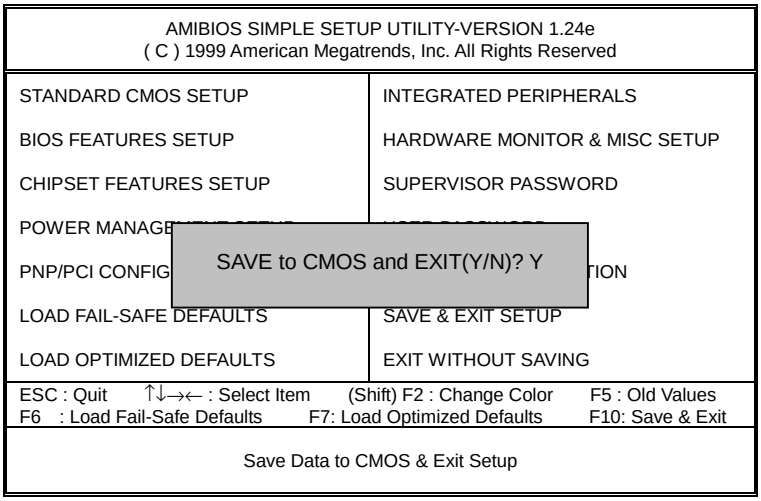


Figure 13: Save & Exit Setup

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

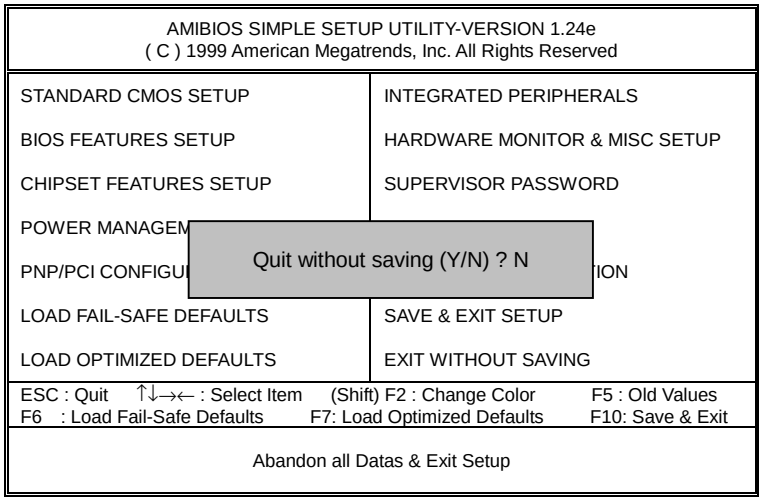


Figure 14: Exit Without Saving

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:

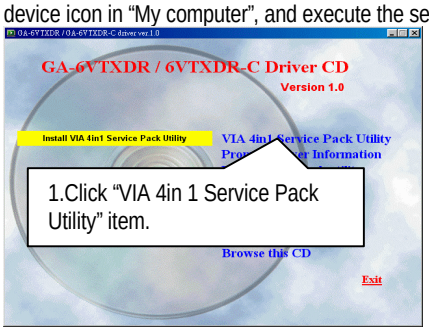
Appendix

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

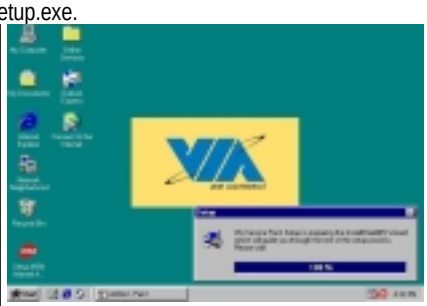
Appendix A: VIA Chipsets Driver Installation

A. VIA 4 in 1 Service Pack Driver:

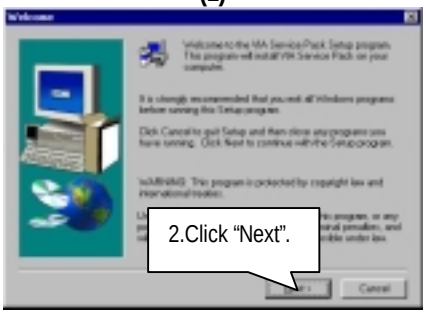
Insert the driver CD-title that came with your motherboard into your CD-ROM driver, the driver CD-title will auto start and show the installation guide. If not, please double click the CD-ROM device icon in "My computer", and execute the setup.exe.



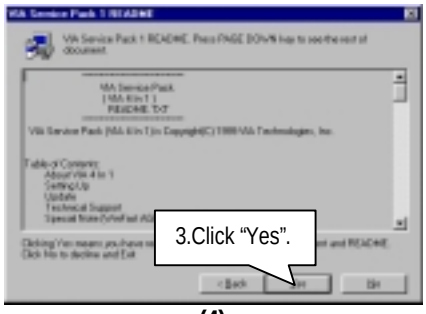
(1)



(2)



(3)



(4)

(5)

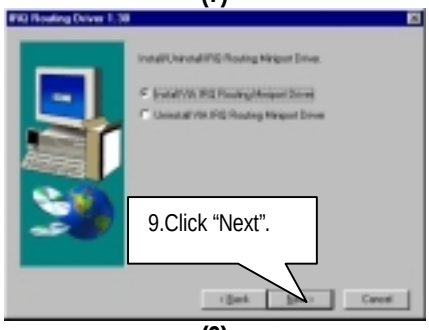
(6)


6.Click “Next”.

(7)


7.Click “Next”.

(8)


9.Click “Next”.

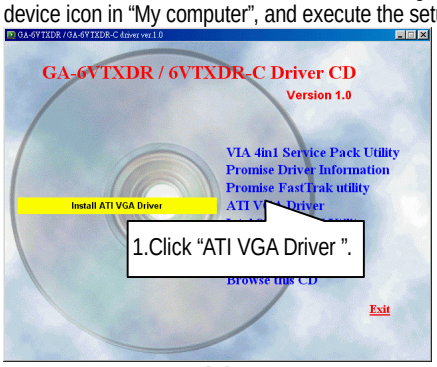
(9)


10.Click “Finish” to restart computer.

(10)

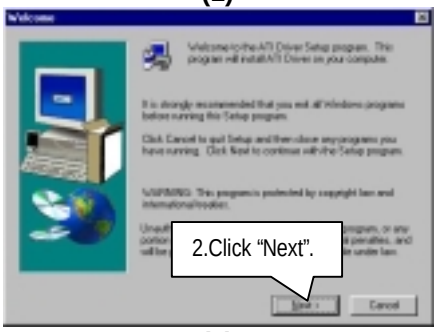
Appendix B : ATi VGA Driver Installation

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.

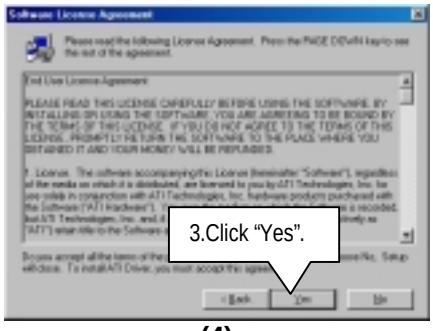


(1)

(2)

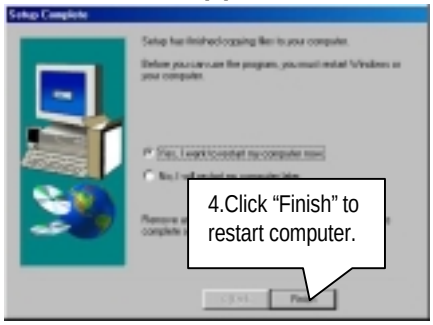


(3)



(4)

(5)

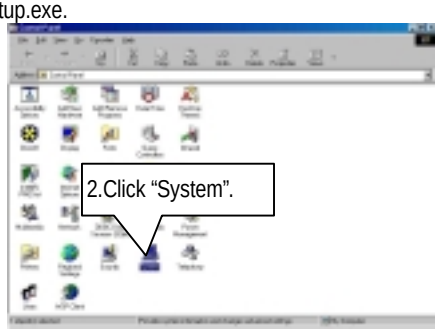


(6)

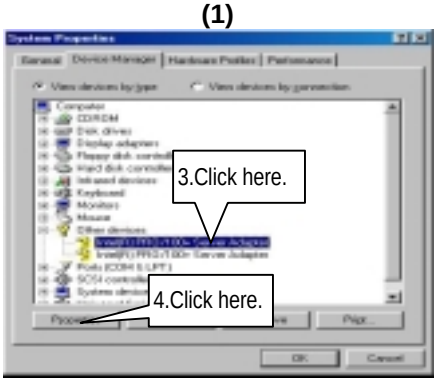
Appendix C : Intel 82559 LAN Driver Installation

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.

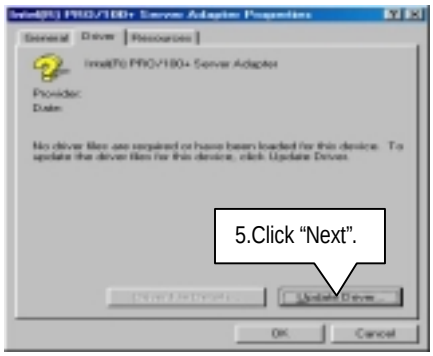
(1)



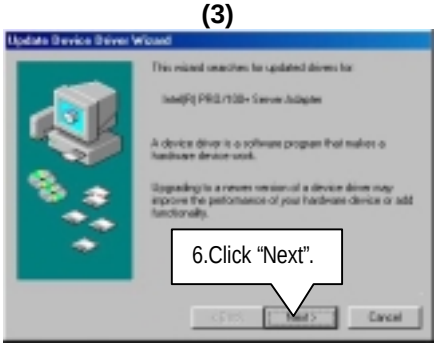
(2)



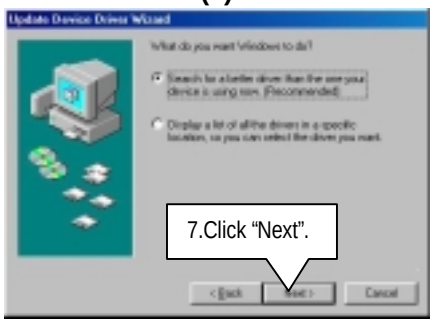
(3)



(4)



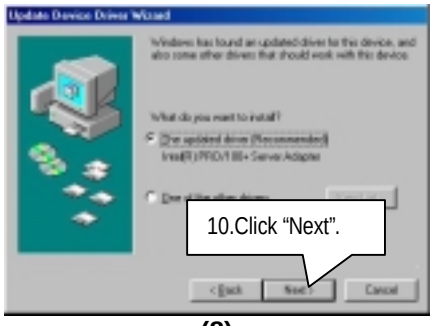
(5)



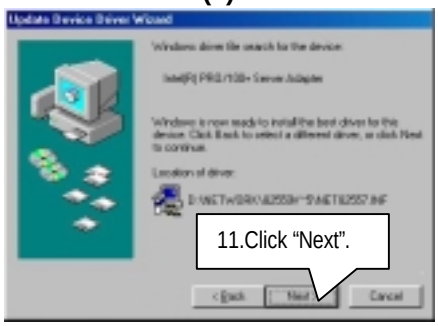
(6)


8.Type"D:\82559v40"
9.Click Next.

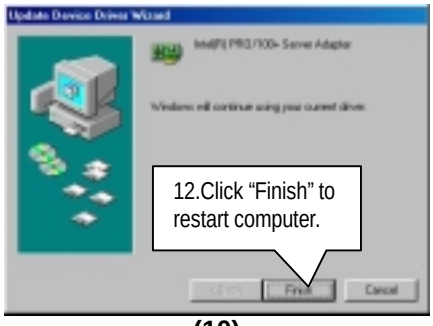
(7)


10.Click "Next".

(8)


11.Click "Next".

(9)

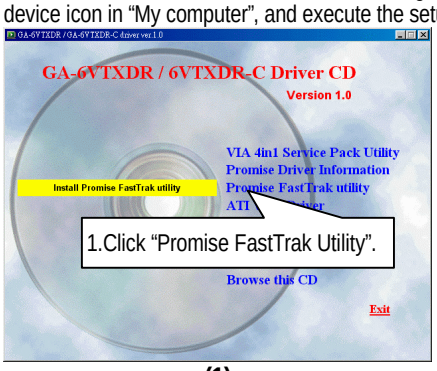

12.Click "Finish" to restart computer.

(10)

Appendix D: Promise PCI Device Installation

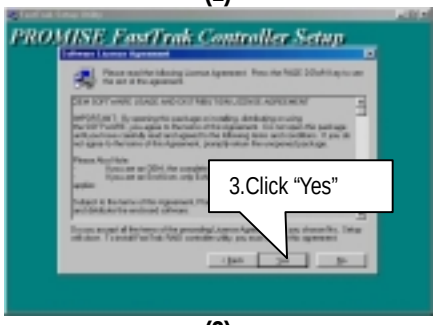
A. FastTrak Utility Installation:

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.

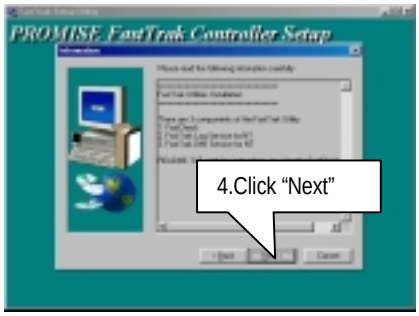


(1)

(2)

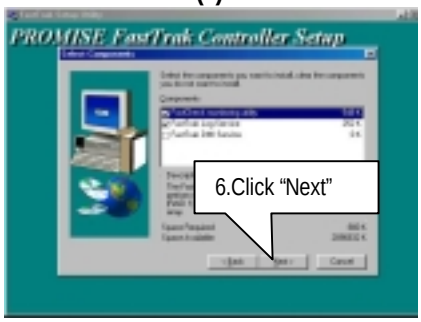


(3)



(4)

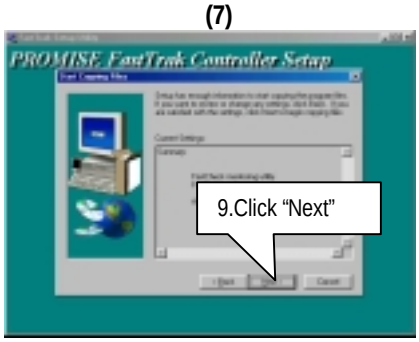
(5)



(6)

(7)

(8)



(9)

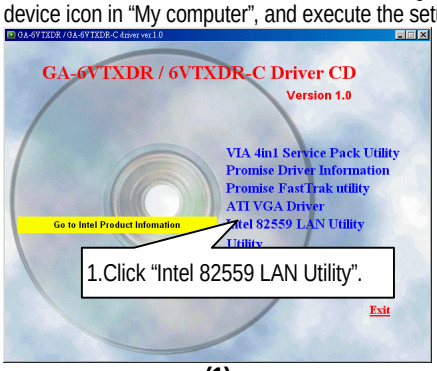
(10)

B. Promise RAID Driver Installation:

If you want to realize the setup information in detail, please refer to the “Installing Drivers section of the RAID Manual” for setting your system completely.

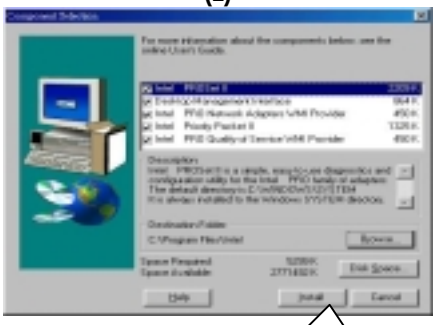
Appendix E: Intel 82559 LAN Utility Installation

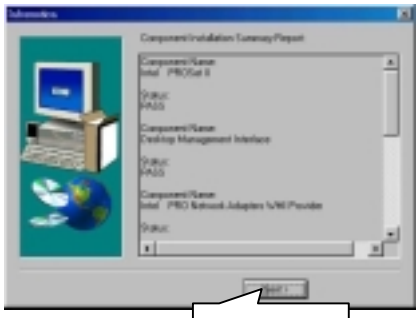
Insert the driver CD-title that came with your motherboard into your CD-ROM driver, the driver CD-title will auto start and show the installation guide. If not, please double click the CD-ROM device icon in “My computer”, and execute the setup.exe.



(1)

(2)





Appendix F: 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 ,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 6VTXDR.f1 is name of the BIOS file name)*

   A:>flashxxx.exe 6VTXDR.f1 ↵

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

   A:>wdflash.exe 6VTXDR.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 G: 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