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    FDD Cable
    Thermal Sensor Cable (Optional)
    RS232 Cable (Optional)
    USB Cable (Optional)

Chapter 1 Specification

Introduction

This mainboard features an integration of the powerful processor Intel Pentium 4 and the single-chip North Bridge of ProSavage P4M266A plus South Bridge VT8235, by which the whole system performance is upgraded to 533 MHz system bus.

The Intel P4 processor is a rapid execution engine providing 533/400MHz quadpumped system bus, while, in addition to the built-in S3 Savage4 Graphics Accelerator, ProSavage P4M266A North Bridge plus VT8235 South Bridge supports Intel P4 processor to implement the AGP 4X external bus, the LPC Super I/O, the DDR SDRAM, the USB 2.0 interface and UATA 133/100/66 data transfer rate. This chapter is to introduce to users every advanced function of this high performance integration.

Topics included in this chapter are:
1-1 Component Locations
1-2 Mainboard Specifications**
1-3 Mainboard Specification Table
1-4 Chipset Diagram

** If any difference is found between the mainboard description and the Mainboard you are using, please look up the <u>**Errata/ Update Slip**</u> **enclosed inside for the correction or updated information, or else contact the mainboard Dealer or visit our Web Site for the latest manual update.**

1-1 85MIV3 / 85MIV3-L Components Locations

LAN Controller ⎫
                ⎬ for 85MIV3-L only
RJ45   ⎭

PS/2 Mouse (on top)
PS/2 K/B (underside)
RJ45 (on top)
USB0 (middle)
USB1 (underside)

Fan1
RT1

COM1
LPT1
VGA

LINE OUT
LINE IN
MIC
GAME/MIDI PORT
JAUD1

+12V Power

Fan3
Jp7

VIA P4M266A

AGP (4X / 2X)

VT6103 LAN

PCI 1

VT1612
AC'97 Audio

PCI 2

VIA VT8235

PCI 3

Li Battery

JBAT1

CD_IN1   COM3   WOL1   USB2   USB3

mPGA478B

DDR 266/200MHz

DIMM1 DIMM2 DIMM3

PW1

Main Power

IDE2
IDE1
FD1

RT2

Fan4

IT8705F LPC I/O

BIOS

1-2 Mainboard Specifications

1-2.1 CPU Socket

CPU Socket 478B on board, supporting Intel® Pentium 4 and Northwood processors (including Intel Hyper-Threading CPUs) in the 478-pin package for :
• 533 / 400 MHz System Bus;
• Hyper-pipelined technology;
• Advanced dynamic execution;
• Advanced transfer cache;

1-2.2 System Chipsets

North Bridge VIA ProSavage P4M266A plus South Bridge VT8235 to work with Intel Pentium 4 Processor for managing and arbitrating operations between all system interfaces.

1-2.3 Memory DDR266 / 200 SDRAMs

3 DDR DIMM 184-pin slots on board for DDR266 and DDR200 SDRAMs, at 64bit data transfer rate:
• North Bridge P4M266A directly supporting pseudo-synchronous SDRAM up to 3GB unbuffered DDR SDRAMs.
• Installation of mixed volumes yet same type of DDR SDRAM modules supported .

1-2.4 BIOS

Flash Memory for easy upgrade, supporting BIOS Writing Protection, Year 2000 compliant, and supporting various hardware configuration during booting system (See Chapter 4 BIOS Setup):
• Standard CMOS Features (Times, Date, Hard Disk Type etc,)
• Advanced BIOS Features (Virus Protection, Boot Sequence etc.)
• Advanced Chipset Features (AT Clock, DRAM Timing etc.)
• Power Management Features (Sleep Timer, Suspend Timer etc.)
• PNP/PCI Configurations (IRQ Settings, Latency Timers etc.)
• Integrated Peripherals (Onboard I/O, IRQ, DMA Assign. etc.)
• Hardware Monitor Status (CPU/System Temp., Fan speed etc.)
• Frequency/Voltage Control (CPU clock, Voltage of CPU, DIMM, AGP etc.)

1-2.5 Integrated AGP interface and additional AGP Slot

S3 Graphics ProSavage8 is embedded in chip, supporting:
- 1.5V (4x) / 3.3V (2x) power mode
- 2x/ 4x AD and SBA signalling, AGP pipelined split-transection long-burst transfers up to 1GB/sec
- 15-pin VGA connector on board for analog display
- Additional AGP Slot on board, AGP v2.0 compliant for AGP card application
- VGA Driver enclosed in Support CD for user's installation

1-2.6 Advanced System Power Management

- ACPI 1.0B compliant (Advanced Configuration and Power Interface), including ACPI Suspend mode support (See Power management of BIOS Setup)
- APM V1.2 compliant (Legacy Power Management)
- Wake On LAN supported (See "Power management Features" in BIOS Setup
- Real Time Clock (RTC) with date alarm, month alarm, and century field

1-2.7 Multi-I/O Functions:

- PCI EIDE Controller, supporting:
    -- 2x Ultra ATA 133/100 / 66 / 33 IDE Connectors supporting up to 4 IDE devices;
- Dedicated IR Functions:
    -- Third serial port dedicated to IR function either through the two complete serial ports or the third dedicated port Infrared-IrDA (HPSIR) and ASK (Amplitude Shift Keyed) IR.
- Multi-mode parallel Data transfer:
    -- Standard mode, ECP and EPP support;
- Floppy Disk connector:
    -- One FDD connector with drive swap support;
- Universal Serial Bus Transfer Mode:
    -- USB V2.0 compliant, 480 Mb/s USB Bus, supporting Windows 98 and later operating systems; USB drivers provided in Support CD for installation
    -- 2 built-in USB connectors and two USB Headers which require two additional USB cables to provide 4 more optional USB ports;
- PS/2 Keyboard and PS/2 Mouse
- UARTs (Universal Asynchronous Receiver / Transmitter):
    -- 1x Serial Port COM1 and 1x COM3 Header on board;

1-2.8 Expansion Slots
- 3 PCI Bus Master slots
- One AGP 4X/2X slot
- 3 DDR DIMM slots

1-2.9 Hardware Monitor on board
- Hardware Monitor in IT8705F, providing monitoring and alarm for flexible desktop management of hardware voltage, temperatures and fan speeds.
- Utility Software SmartGuardian for displaying Monitoring status is enclosed in Support CD for user's installation.

1-2.10 AC'97 Audio Codec on board
AC'97 Audio Codec on board
- Supporting 2-channel PCM audio output
- AC'97 Audio Codec Driver enclosed in Support CD for user's installation

1-2.11 LAN on board (for 85MIV3-L only)
PCI local bus single-chip Fast Ethernet Controller VT6103 on board:
- Supporting 10/100Mb data transfer
- Supporting Wake On LAN function through the on-board RJ45 LAN Connector

1-2.12 Form Factor
- Micro-ATX Form Factor, Power Supply ATX spec. version 2.03 compliant, supported by one Main Power Connector, one +12V Power Connector,
- Mainboard size: 245mm x 245mm

1-3 Mainboard Specification Table

SL-85MIV3 / 85MIV3-L Specifications and Features	
CPU	Socket 478B for Intel P4 CPUs (HT CPU included)
North Bridge	VIA ProSavage P4M266A
South Bridge	VIA VT8235
BIOS	AMI BIOS
Memory	Supporting DDR 266/200 SDRAM, up to 3GB in three DDR DIMM slots
I/O Chip	ITE IT8705F
AGP interface	AGP4X / 2X Mode; 1 AGP Slot on board
Audio	AC'97 Audio V2.1 compliant, 2-channel audio
IDE Interface	2 UATA 33/66/100/133 IDE ports
Networking	Fast Ethernet Controller, RJ45 on board (Optional)
PCI Slots	3 PCI Master slots on board
I/O Connectors	6xUSB ports (V2.0), 1xFDD port, 2xCOM ports, 1xLPT, 1xIrDA, 1xPS/2 K/B, 1xPS/2 Mouse
VGA Display	1 x VGA connector on board for analog display
Other Features	Hardware Monitoring in IT8705F ATX 2.03 Power Supply Micro-ATX Form Factor Keyboard/Mouse Power On/Wake up

1-4 Chipset System Block Diagram


```
              ┌─────────────────────────────┐
              │     Intel Pentium 4 CPU     │
              │  (Hyper-Threading Included) │
              └─────────────────────────────┘
                           ↕
                  System Bus 533/400MHz

                    ┌──────────────┐   DDR memory
                    │              │   Interface      ┌──────────┐
  ┌──────────┐ AGP  │ VIA P4M266A  │                  │ System   │
  │ AGP Slot │ 4X/2X│ North Bridge │   DDR 266/200    │ Memory   │
  └──────────┘      │              │   SDRAM          └──────────┘
                    └──────────────┘
                           ↕
                    Bi-directional
                    16-bit Data Bus

  ┌──────────┐ ATA 133/100/66  ┌──────────┐            ┌──────────┐
  │ 2 IDE    │                 │          │  PCI Bus   │ PCI Slots│
  │ Connector│                 │  VT8235  │            └──────────┘
  └──────────┘                 │  South   │  AC'97 2.1 ┌──────────┐
  ┌──────┐  (Optional)         │  Bridge  │            │ Audio    │
  │ RJ45 │                     │          │ (2-channel)│ Connectors│
  └──────┘  ┌─────────┐        │          │            └──────────┘
            │ (VT6103)│        │          │
            └─────────┘        │          │  USB Bus V2.0/1.1 ┌──────┐
  ┌──────────┐                 │          │                   │ USB  │
  │ KB/Mouse │                 └──────────┘                   │ Ports│
  └──────────┘                                                └──────┘

  ┌──────────────┐
  │ IR           │   ┌──────────┐            ┌──────────┐
  │ FDD          │   │ LPC I/O  │            │          │
  │ Serial Ports │   │ IT8705F  │            │   BIOS   │
  │ Printer Port │   └──────────┘            │          │
  │ Game/MIDI    │                           └──────────┘
  │ H/Monitor    │
  └──────────────┘
```

Intel Pentium 4 + VIA P4M266A + VT8235 Diagram

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Chapter 2 Hardware Setup

To Get things ready for Hardware setup !

1. We recommend to install your CPU before any other components. For detailed installation instructions of processor, you can also refer to the pamphlet enclosed in your CPU package.
2. Installing a cooling fan with a good heatsink is a must for proper heat dissipation for your CPU. Get ready an appropriate fan with heatsink for proper installation. Improper fan and installation will damage your CPU.
3. In case CPU Vcore, CPU clock or Frequency Ratio is adjustable on board, please follow the instructions described in the User manual for proper setup. Incorrect setting will cause damage to your CPU.

The following topics are included in this chapter:

2-1 Pentium 4 CPU Installation
2-2 Pentium 4 CPU Fan Installation
2-3 Memory Installation
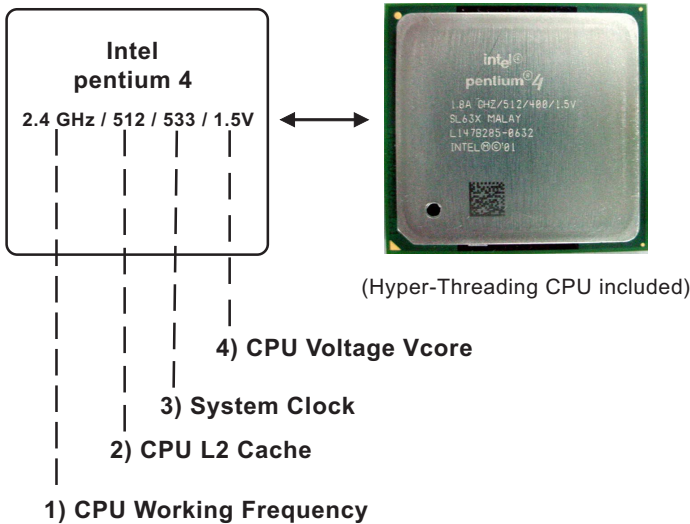**2-4 VGA connector and AGP slot Installation**
2-5 HDD/FDD Installation
2-6 ATX 2.03 Power Supplier Installation
2-7 Jumper and Switch Settings
2-8 Other Connectors Configuration

2-1 CPU Installation with Socket 478B

2-1.1 To Identify a Pentium 4 CPU

(Hyper-Threading CPU included)

4) CPU Voltage Vcore

3) System Clock

2) CPU L2 Cache

1) CPU Working Frequency

On the heatsink side of a Pentium 4 CPU, there printed a line of figures to identify its specifications. The line consists of 4 parts:
1. CPU Working Frequency: this part depicts the working frequency of the CPU. For example,
   2.4 GHz depicts that this CPU is locked to 2.4 GHz working frequency (18 x 133MHz CPU clock);
   2A GHz depicts that this CPU is an A version, locked to 2.0 GHz working frequency (20 x 100MHz CPU clock)
   3.06GHz depicts that this is a 3.06GHz hyper-threading CPU
2. CPU L2 Cache: this part depicts the L2 Cache size. For example,
   512 stands for 512 KB L2 Cache; 256 stands for 256 KB L2 Cache
3. System Clock: this part depicts the System Clock (Front Side Bus) provided by the CPU. For example,
   533 stands for a 533MHz system clock provided by a 133MHz CPU times 4;
   400 stands for a 400 system clock provided by a 100 MHz CPU x 4.
4. CPU Voltage Vcore: this part depicts the CPU Voltage. For example,
   1.5V stands for a CPU of 1.5V Vcore.

Note: System Clock vs CPU Clock
P4 CPU is a quadpumped CPU. The system bus is provided by the CPU clock x 4. Therefore, users can figure out the P4 CPU clock by the System Clock divided by 4.

2-1.2 CPU Installation with Socket 478B

This mainboard is built with CPU Socket 478B (478-pin) supporting the Intel Pentium 4 CPU:

• Follow the steps described in this section to install the 478-pin Pentium 4 CPU into the on board Socket 478.

• After installation of Pentium 4 CPU, you must also install the specific Pentium 4 CPU fan designed in tandem with this CPU. This CPU Fan installation is described in next section.

• This mainboard supports Hyper-threading dual-in-one CPU, the function of which can be enabled by Windows XP. (See illustration on the right.)
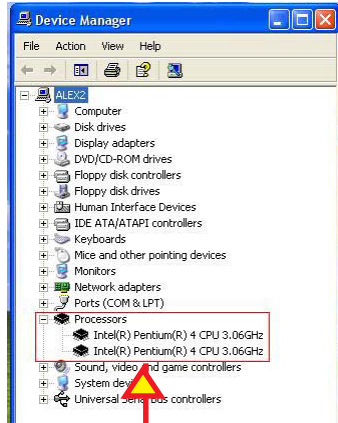

(If Hyper-threading CPU is installed successfully with O/S Win XP, the O/S will enable the dual-in-one CPU function.)

1. First pull sideways the lever of Socket 478, and then turn it up 90^0 so as to raise the upper layer of the socket from the lower platform.
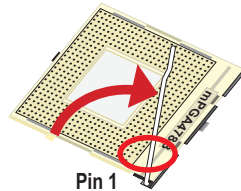
Pin 1

2. Configure Pin 1 of CPU to Pin 1 of the Socket, just as the way shown in the diagram on the right. Adjust the position of CPU until you can feel all CPU pins get into the socket with ease.
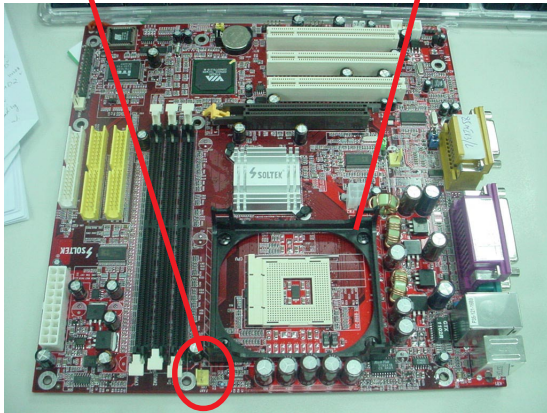

Pin 1
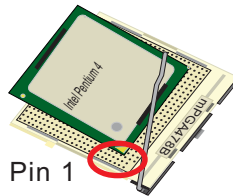
3. Make sure that all CPU pins have completely entered the socket and then lower down the lever to lock up CPU to socket.
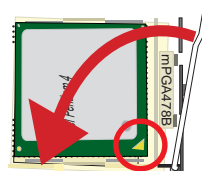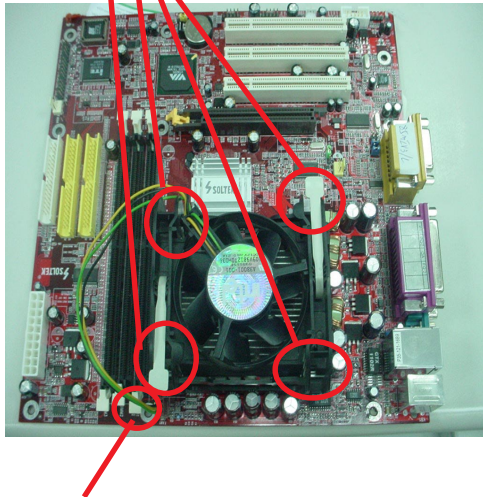
2-2 Pentium 4 CPU Fan Installation:

CPU Fan Connector   Pentium 4 Fanbase

Press down 4 Spring Locks to lock fan to fanbase

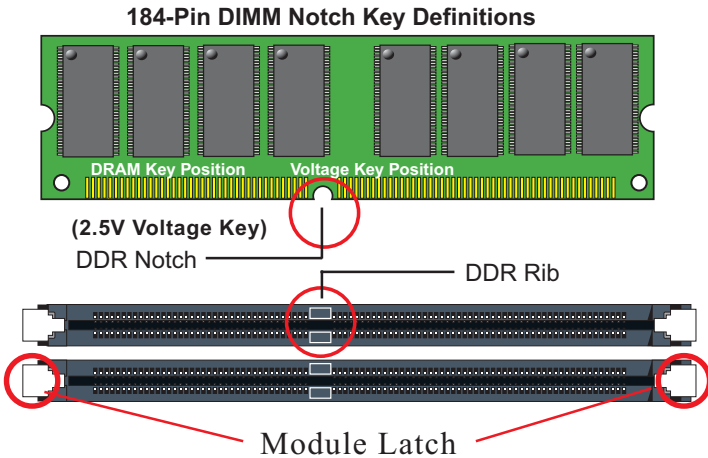Connect Fan Connector to CPU FAN connector

2-3 Memory Installation

How to tackle with the memory Modules:

• Make sure to unplug your Power Supplier before adding or removing memory module. Failure to do so may cause severe damage to both your mainboard and the memory module.

• Pay attention to the orientation of the DIMM slots. Forcing a DIMM in a socket improperly will damage the memory module and slot.

• Make sure you have the right type of memory module for your mainboard.

2-3.1 To Install DDR SDRAM Module for this Mainboard :

• This mainboard only supports up to 3GB unbuffered DDR SDRAM, with 3 DDR DIMM slots on board. Do not insert other type of modules into these slots.

• DDR DIMM slot has 184-pins and one notch. Insert a DDR SDRAM vertically into the 184-pin slot with the notch-to-rib matching. Press the Module down in a gradual way until it surely reaches the bottom and clicks straight up the two latches on the left and right of the slot. If any one of the latches has not turned up completely, you should unplug the module and press it down a bit more firmly.

184-Pin DIMM Notch Key Definitions

DRAM Key Position   Voltage Key Position

(2.5V Voltage Key)
DDR Notch ———————————————— DDR Rib

Module Latch

2-3.2 To Remove a DIMM:

Press down the holding latches on both sides of slot and the module will be released from the DIMM slot.

2-4 VGA connector and AGP slot Installation :

1. To install on-board VGA, please connect your monitor directly to VGA connector on board.

2. To install additional card into AGP 4X slot on board, users can install either a 4X or 2X AGP card with its only card driver.

AGP Accelerator

AGP 4X / 2X Slot

VGA Connector

↓

Analog Monitor
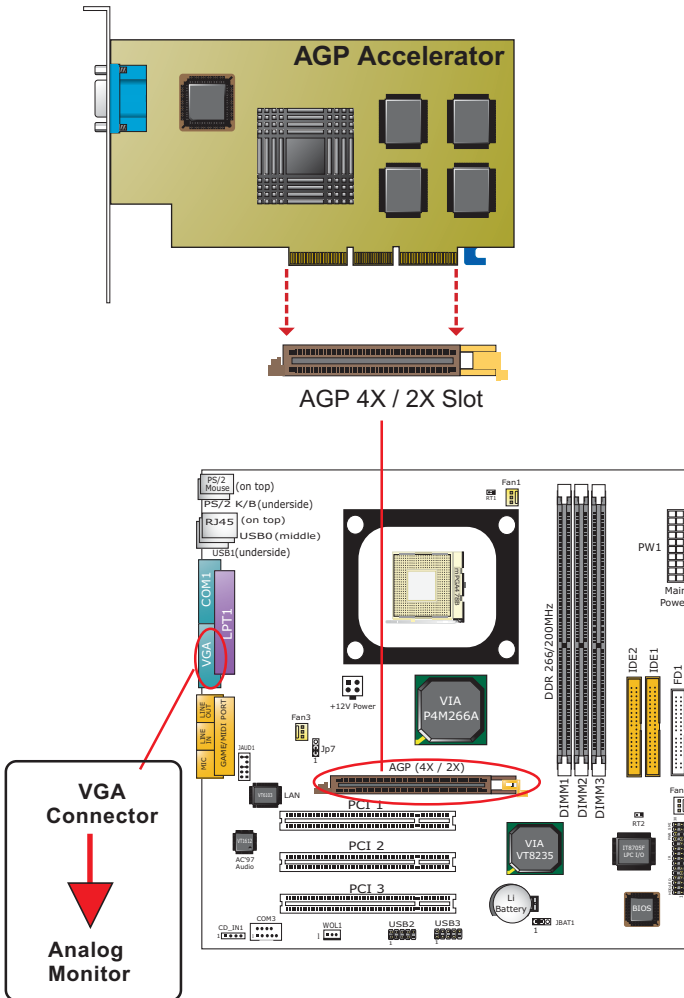
2-5 IDE / FDD Connector Installation

To install IDE Connector, you may connect the blue connector of IDE cable to the primary (IDE1) or secondary (IDE2) connector on board, and then connect the gray connector to your slave device and the black connector to your master device. If you install two hard disks, you must configure the second drive to Slave mode by setting its jumpers correctly. Please refer to your hard disk documentation for the jumper settings.
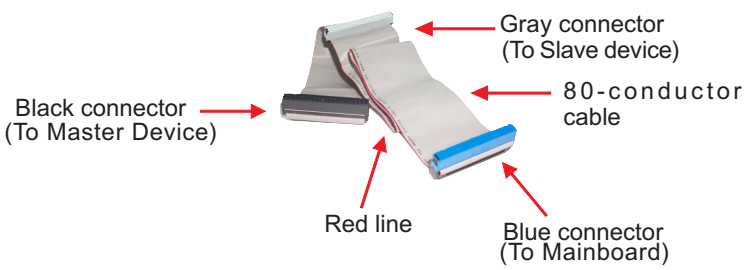
Hard Disk Drive Connector: Orient the red line on the IDE flat cable to Pin1.

IDE2

IDE1

Pin 1 (to Red Line)

Gray connector
(To Slave device)

80-conductor cable

Black connector
(To Master Device)

Red line

Blue connector
(To Mainboard)
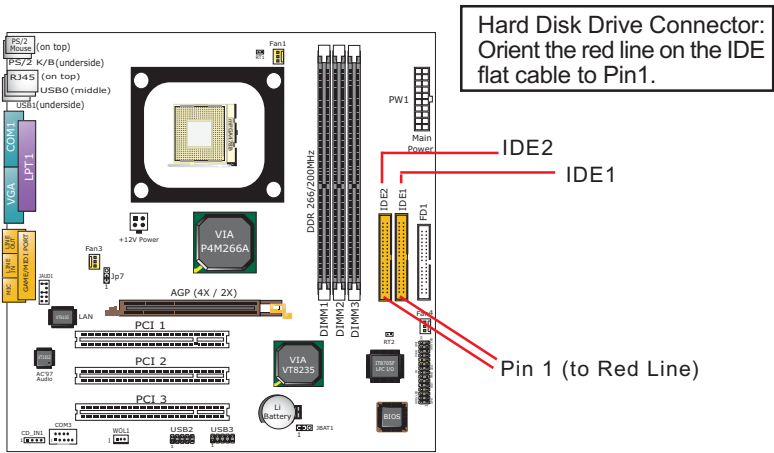
IDE Flat Cable

To install FDD, you should connect the end of FDD cable with single connector to the board , and connect the other end with two connectors to the floppy drives.

Floppy Disk Drive Connector: Orient the red line on the floppy Flat cable to Pin1.

FDD

Pin 1 (to Red Line)

Signal Swap End

To 2nd Floppy Drive

To 1st Floppy Drive

Red line

To Mainboard

FDD Cable
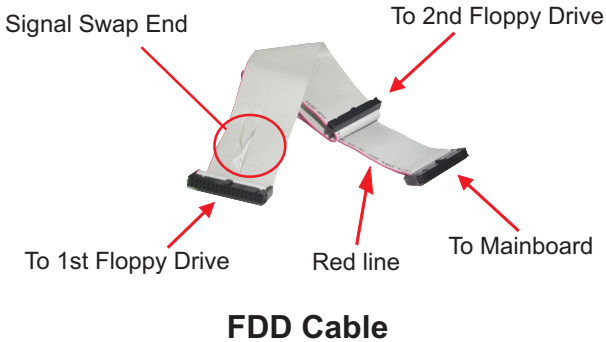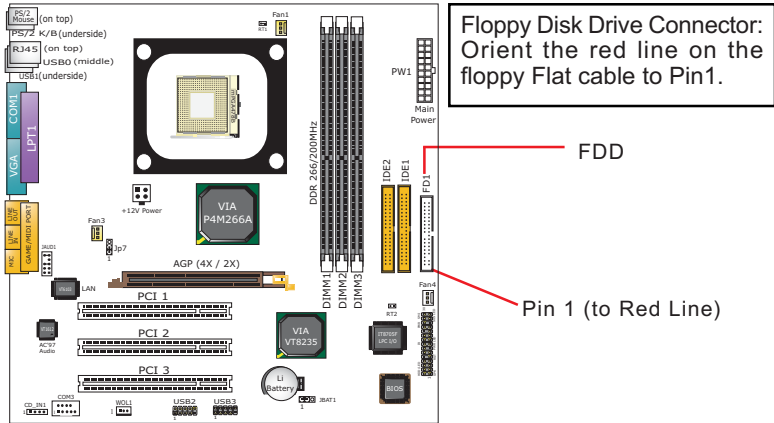
2-6 ATX V2.03 Power Supply Installation

Main Power Connector	
+12V	+5V
5SB	+5V
PWR OK	-5V
GND	GND
+5V	GND
GND	GND
+5V	PS ON#
GND	GND
+3.3V	-12V
+3.3V	+3.3V
Pin1	Pin11

GND	GND
1	2
3	4
+12V	+12V

+12V Power Connector

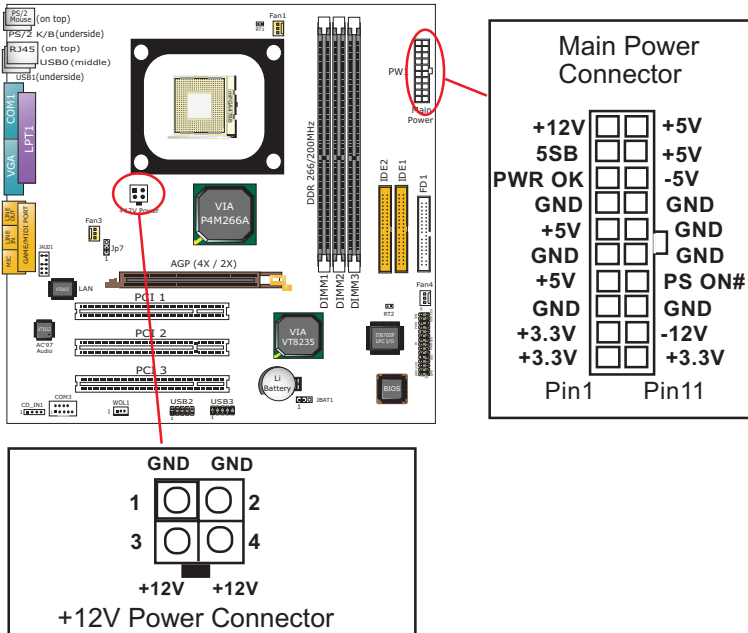ATX V2.03 Power Supply is strongly recommended for mainboard running with 2GHz or higher CPU.

To set up Power Supply on this mainboard:

1. Connect the on-board Main Power Connector (20-pin) to the Main Power Connector (20-pin) of an ATX Power Supply which can be of the latest version 2.03 model, and then connect the square-shaped +12V Power Connector on board to the square-shaped +12V Power Connector of the Power Supply.
    Warning: Both the Main Power Connector and the +12V Power Connector should be connected to Power Supply; otherwise, the system may either not start or be damaged.
2. This ATX Power Supply should be able to provide at least 720mA/ +5V standby power for Wake On Lan function.

2-7 Jumper Settings

The following diagrams show the locations and settings of jumper blocks on the mainboard.
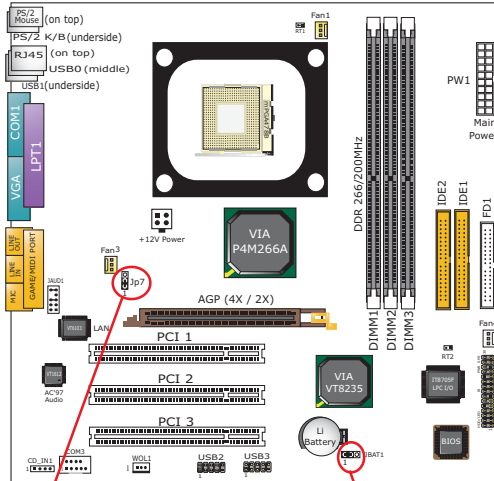
JP7:
CPU Clock Select

1-2 closed	CPU clock Auto Detect
2-3 closed	100MHz selected
All Pins Open	133MHz selected

JBAT1:
Clear CMOS

1-2 closed:	To Hold data (default)
2-3 closed:	To Clear CMOS

How to tackle the Jumpers:

A 3-pin Jumper

If a pin-header (of 2 or more pins) is designed in such a way that its pins can be closed or linked together to set up a specific function, this header is called a jumper in this manual.

A 2-pin Jumper Cap

The conductor inside the cap links two header-pins together.
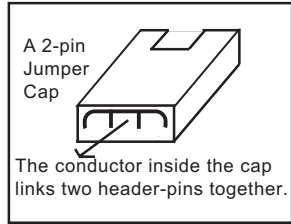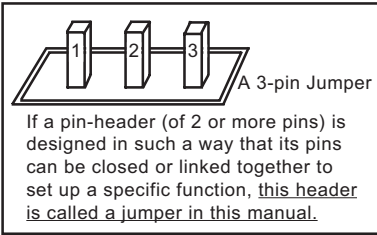
• A Jumper is usually but not necessarily given a "JpX" legend.

• In the Jumper setting diagram, the jumper pins covered with black marks stand for closed pins with jumper cap.

Jp X

1 ▢◖▬◗ **3**

Jumper with Pin 2-3 closed

1 ◖◗◖◗◖◗ **3**

Jumper with all Pins open

1 ◖▬◗▢ **3**

Jumper with Pin 1-2 closed

• Do not remove any jumper cap when power is on. Always make sure the power is off before changing any jumper settings. Otherwise, the mainboard will be damaged.

2-7.1 Jp7: CPU Clock Select

Jp7 is designed for CPU clock select. With Jp7, users can choose the default CPU clock or automatically detected to boot system. Before setting Jp7, users should read the CPU Identification and find out the default CPU clock of the on-board CPU.

1. If Jp7 is set to 1-2 closed, the auto-detect mode will recognize the CPU clock automatically and send the signal to system chips. If a 100MHz CPU is used and detected, the FSB on board will be 400MHz. If a 133MHz CPU is usedand detected, the FSB on board will be 533MHz.
2. If Jp7 is set to 2-3 closed, CPU is set to 100MHz.
3. If Jp7 is set all pins open, CPU clock is set to 133MHz. If a 133MHz CPU is used on board, the system should start without problems. If a 100MHz CPU is used, it may fail to boot up system, you must clear CMOS and reset Jp7 to default settings for booting system.(See JBAT 1 Clear CMOS)

Jp7:
CPU Clock Select
1-2 closed **CPU clock** **Auto Detect**
2-3 closed **100MHz selected**
All Pins Open **133MHz selected**

Further Notes on CPU Overclocking:

1. If you have successfully booted system, with or without CPU overclock, you still can try another CPU overclock in BIOS Setup. Please enter BIOS Setup, choose "Frequency/Voltage Control" menu, and then configure the "CPU Clock" item to raise your CPU clock.

2. CPU overclocking should take all components on board into account. If you fail in BIOS overclocking, you will not be able to restart system. In such case, Power off system and clear CMOS by JBAT1 and then restart your system. And remember to reconfigure whatever should be reconfigured.

3. If your system is already fixed in a cabinet or case, you may not like to take the trouble to clear CMOS. Then power on your system with the power button on the PC case and simultaneously press down the "Insert" key on the keyboard until you see the initial bootup screen appear. And remember you should also enter CMOS BIOS Setup instantly and choose "Load Optimized Defaults" to restore default BIOS .

2-7.2 JBAT1: Clear CMOS

When you have problem with rebooting your system, you can clear CMOS data and restore it to default value. To clear CMOS with Jumper JBAT1, please follow the steps below:

1. Power off system;
2. Set JBAT1 to Pin 2-3 closed.
3. After 2 or 3 seconds, return the JBAT1 setting to Pin1-2 closed.
4. CMOS data are restored to default. Remember never clear CMOS when system power is on.

JBAT1:
Clear CMOS
1-2 closed **(default)** **To hold data**
2-3 closed **To clear CMOS**

2-8 Other Connectors Configuration

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

2-8.1 On Board FAN Connectors
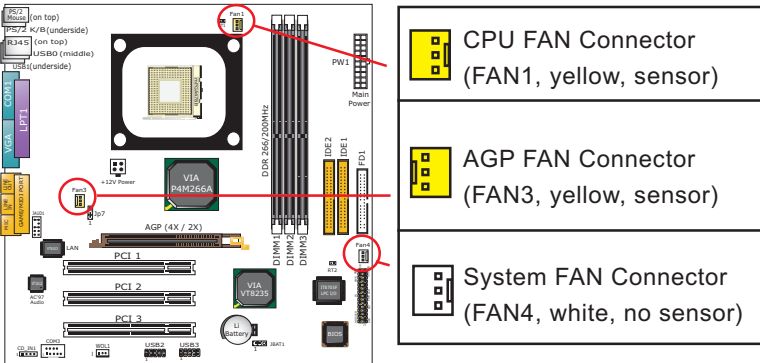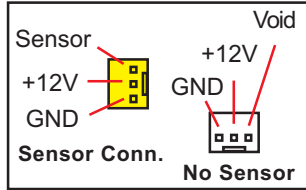
Both Sensor and No-sensor Fan Connectors support CPU/AGP/System/Case cooling fan with +12V mode. Sensor Fan Connector is yellow in color on board. When connecting the wire to any Fan Connector, user should make sure that the red wire is for the positive current and should be connected to pin +12V, and the black wire is Ground and should be connected to pin GND. A Hardware Monitor chipset is on board, with which user can install a Hardware Monitor Utility and read the fan speed transmitted from the sensor fan. Otherwise, user can read the fan speed from the "Hardware Monitor Status" in CMOS BIOS.

A running fan will send out 2 electric pulses per rotation of its fan blade. A Sensor Fan Connector will count the electric pulses and send the information to the System Hardware Monitor which in turn will work out the fan rotation speed and display it with the monitoring program.

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2-8.2 CD-ROM Audio Connector
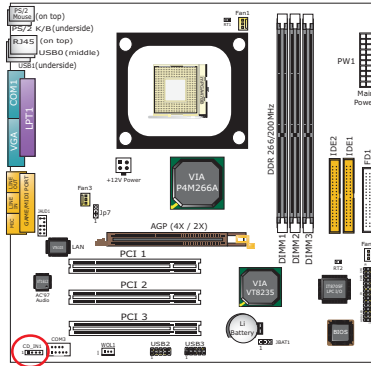
CD-ROM Audio Pin Assignment

CDIN 1	Pin 1	Pin 2	Pin 3	Pin 4
●●●● 1	Left Channel	GND	GND	Right Channel

2-8.3 Chassis Panel Connector

A.   B.   C.   D.

E.   F.   G.   H.   I.   J.   K.
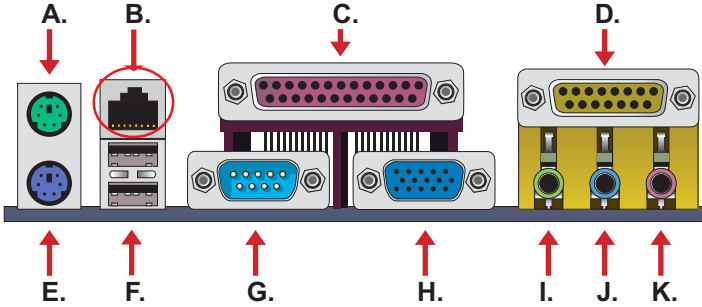
A : PS/2 Mouse Port

B : RJ45 LAN Port (For 85MIV3-L only)

C : LPT1 Port

D : Game/MIDI Port

E : PS/2 Keyboard Port

F : USB 1(underside) / USB0 (middle)

G : COM1 Port

H : VGA Connector

I : Line/Speaker Out

J : Line In

K : Microphone Input

2-8.4 Thermal Resistor and Connector

RT1

RT1 is mounted with Thermal Resistor by default.

RT2

a. To RT2

b. To Devices
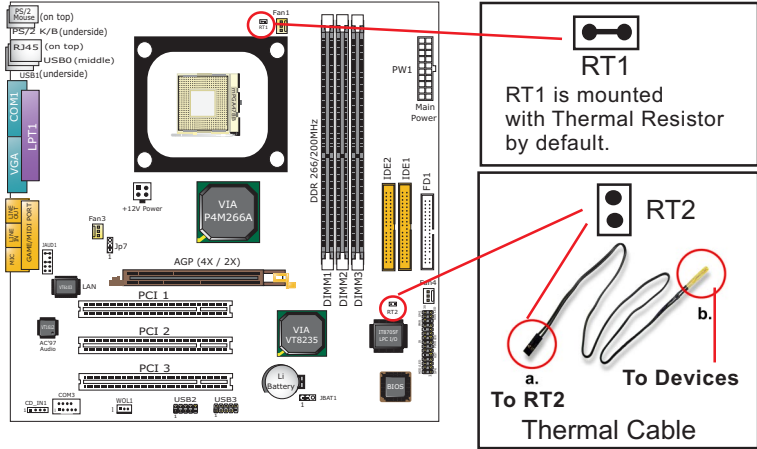
Thermal Cable

1. Resistor RT1: A thermal resistor is mounted by default to connector RT1 so as to detect the temperature of the CPU. What RT2 does is to transmit the thermal signal to BIOS or Hardware Monitor.

2. Connector RT2: A thermal cable is needed to connect RT2 to on-board devices such as HDD, Graphics card etc., so as to detect the temperature generated therein. Please connect the end (a) of the thermal cable to mainboard RT2 header, and tape another end (b) of thermal cable on to the device which you want to monitor. After you have finished the thermal cable installation, you will **see the detected temperature in BIOS setup or Hardware monitor utility.**

2-8.5 PS/2 Mouse And PS/2 Keyboard

PS/2 Mouse Connector   (green, on top)

6 Void — 5 Mouse Clock

4 VCC — 3 GND

2 Void — 1 Mouse Data

6 Void — 5 Keyboard Clock

4 VCC — 3 GND

2 Void — 1 Keyboard Data

PS/2 Keyboard Connector   (purple, underside)
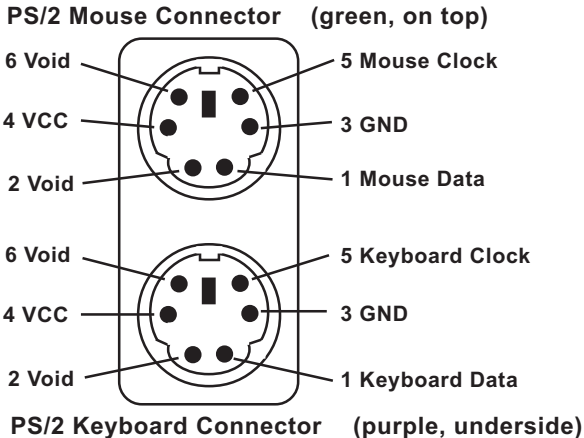
2-8.6 Complex Header

This complex Header consists of 9 connectors providing various supports:

(Optional) ① **SMI** ⎡ GND ──── GND ⎤ ⑤ **Suspend LED**
⎣ SMI SIGNAL ──── SUSPEND LED SIGNAL ⎦

② **Power Switch** ⎡ Vcc
⎣ ATX POWER SWITCH ──── GND ⎤ **Keylock** ⑥ **(Optional)**
KLOCK ⎦

③ **Infrared(IR)** ⎡ Vcc ──── GND ⎤
NO CONNECTION ──── NO CONNECTION **Power LED** ⑦
INFRARED TRANSMIT SIGNAL ──── Vcc ⎦
GND
⎣ INFRARED TRANSMIT SIGNAL ──── GND ⎤ **Reset Switch** ⑧
RESET SIGNAL ⎦

2nd HDD LED ⎡ Logic High (+) ──── SPEAKER SIGNAL ⎤
⎣ HDD LED SIGNAL (−) ──── NO CONNECTION
④ **Speaker** ⑨
1st HDD LED ⎡ HDD LED SIGNAL (−) ──── GND
⎣ Logic High (+) ──── Vcc ⎦

31

(1) SMI Connector (Optional):
Connection: Connected to the case-mounted Suspend Switch.
Function: Manually selecting DOS system into the Suspend
Mode or "Green Mode" by System mangement interrupt.

(2) Power Switch Connector:
Connection**:** Connected to a momentary button or switch.
Function: Manually switching the system between "On" and
"Soft Off". Pressing the momentary button for more than 4
seconds will also turn the system off.

(3) IR Connector (Infrared Connector):
Connection: Connected to Connector IR on board.
Function: Supporting wireless transmitting and receiving module
on board.

(4) 1st HDD LED Connector/2nd HDD LED Connector:
Connection: Connected to HDD LED.
Function: To supply power to HDD LED.

(5) Suspend LED Connector:
Connection: Connected to Suspend Indicator.
Function: To supply power to "Suspend Indicator".

(6) Keylock Connector (Optional):
Connection: Connected to keyboard.
Function: To lock keyboard and disable keyboard function.

(7) Power LED Connector:
Connection: Connected to System Power LED.
Function: To supply power to "System Power LED".

(8) Reset Switch Connector:
Connection: Connected to case-mounted "Reset Switch".
Function: To supply power to "Reset Switch" and support
system reboot function.

(9) Speaker Connector:
Connection: Connected to the case-mounted Speaker.
Function: To supply power to the case-mounted Speaker.

2-8.7 USB Ports and USB Pin-headers

This series provides two USB ports USB0 and USB1 on board supporting various USB devices. In addition, two USB pin-headers are added on board to provide expansion of four more optional USB ports by using two additional USB Cables. Users can order the optional USB cables from your mainboard dealer or vendor.

When plugging the USB cable to USB Header, users must make sure the red wire is connected to Pin 1.

USB Ports USB 1 (underside) & USB 0 (middle)

USB Cable (Optional)

USB Port

Red wire

1

10

USB Pin-headers USB2 and USB3

First USB Port Wiring for Front USB

Red White Green black
+5V D1- D1+ GND

USB Header Pin Assignment

10

1

+5V D2- D2+ GND
Red White Green black

Second USB Port Wiring for Front USB
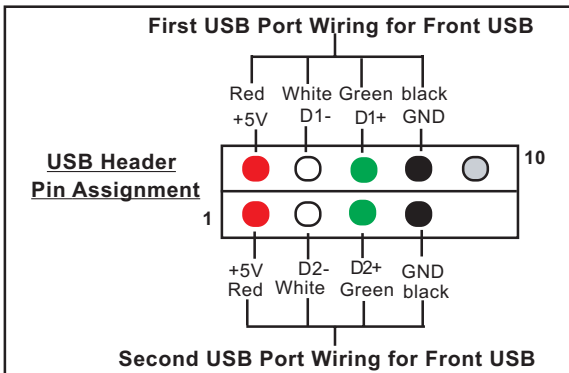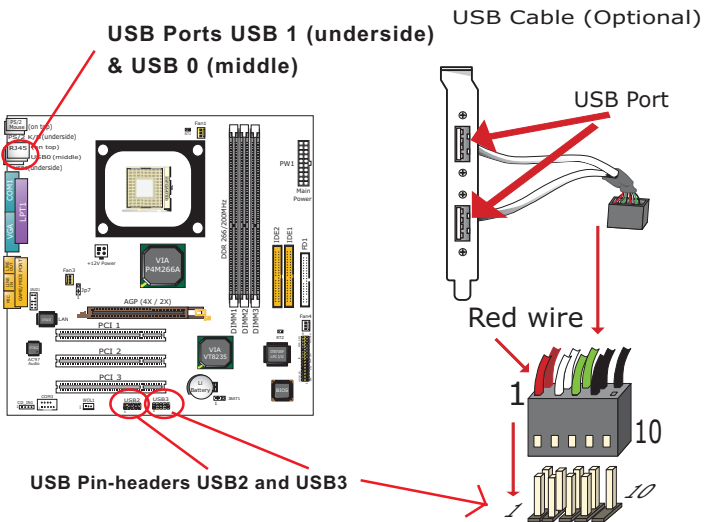
2-8.8 COM 3 Header for one Serial Port

COM 3 Header is built on board, which requires a serial RS232 cable to provide a 9-pin serial connector for a serial device. When you insert RS232 cable to COM 3 header, take notice that the red line of the cable must connect to Pin 1 of COM 3 header.

9-pin Serial Connector

COM 3 Header

Red Line to Pin 1

1

COM 3 female Header
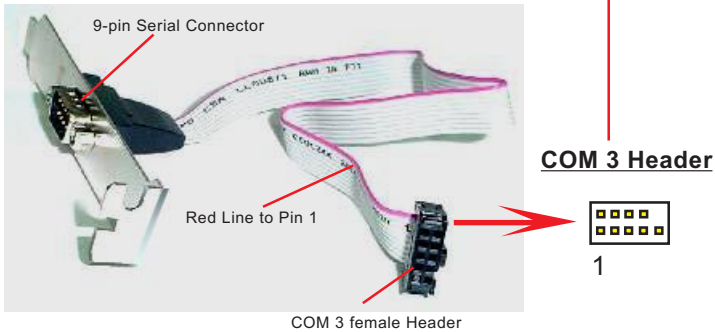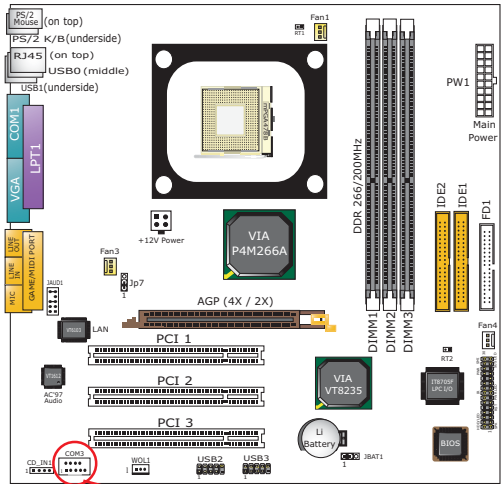
RS232 Cable (Optional)

2-8.9 RJ45 Connector (for 85MIV3-L only)

One RJ45 connector is on board for LAN connection which also support Wake On LAN function.

Yellow LED "On" to indicate Network hub is in connection with the system.

Green LED blinks to indicate that data transmission is undergoing in 10/100 Base T mode.
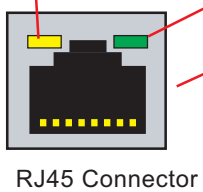
RJ45 Connector
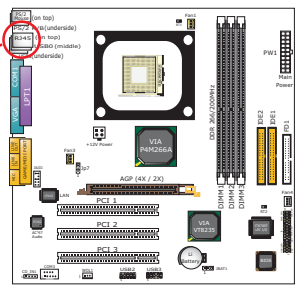
2-8.10 Front Panel Audio Connector

This Mainboard is designed with a Front Panel Audio connector "JAUD1" which provides connection to your chassis.

1. When JAUD1 is set to 5-6 closed and 9-10 closed, this default setting disables this connector and leaves the Back Panel Audio enabled.

2. To use this Front Panel Audio Connector, please open all pins of JAUD1 and connect it to your chassis.

JAUD1: Front Audio Panel Connector

Pin 10 RET L		**Pin 9 FPOUT L**
		Pin 7 (Key)
Pin 6 RET R		**Pin 5 FPOUT R**
Pin 4 Aud Vcc		**Pin 3 Mic VREF**
Pin 2 Aud GND		**Pin 1 Mic In**
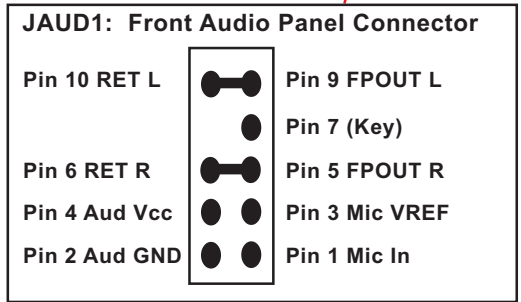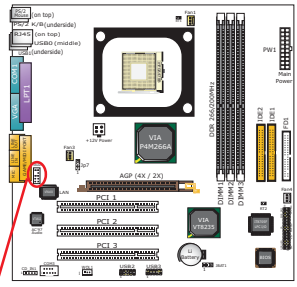
2-8.11 Wake On LAN Connector:

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

WOL1

+5V
Standby

GND

Ring

Connect the Wake On LAN
signal from LAN card to WOL1
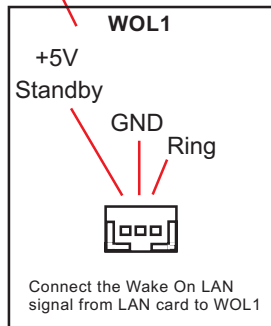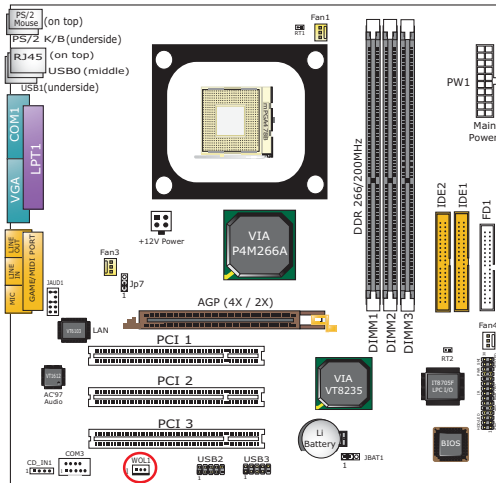
Chapter 3 Software Setup

Drivers, Utilities and Software Installation

Support CD:
This mainboard will be shipped with a Support CD which contains those necessary driver files, Application Softwares and some helpful utilities. It is a user-friendly, auto-run CD which will open itself up in a CD-ROM automatically.

This chapter is devoted to describing the installations of all these essential drivers and utilities on Windows 98SE, Windows ME , Windows 2000 and Windows XP. The installation procedures for all these operating systems are programed into an auto-run mode. What users have to do is read and follow the pop-up instructions. We therefore take the installation on Windows 98SE as the general illustration hereby.

The priority of driver installation should also be noted. Users are recommended to take the following installation order:

3-1 To Open Support CD
3-2 VIA 4-in-1 Drivers Installation
3-3 AC'97 Audio Driver Installation
3-4 DirectX Installation
3-5 Graphics driver installation
3-6 USB 2.0 Driver Installation
3-7 Hardware Monitor Utility Installation
3-8 LAN Driver Installation (for 85MIV3-L only)

3-1 To Open Up Support CD:

1. Please put the Support CD enclosed in your mainboard package into the CD-ROM drive. In a few seconds, the Main Menu will automatic ally appear, displaying the contents to be installed for this series:
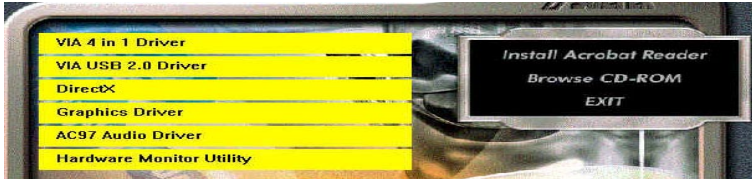
2. In case your system does not open the Support CD automatically, please click to the following path to enter the Main Installation Menu:

   D:\ Autorun.exe (assuming that your CD-ROM Drive is Drive D)

3. Users are recommended to install all the drivers and utilities at a time, though they can be installed separately.
   Also, we should take "VIA 4-in-1 Drivers" as first installation priority to optimize the VIA system.
   From next section, we provide detailed descriptions of all these installations with graphical illustrations.

3-2 VIA 4-IN-1 Drivers Installation

1. Following the procedures of opening the Support CD, click to " VIA 4-in-1 Drivers" to proceed.

2. The VIA Service Pack InstallShield Wizard will pop up to guide you to the VIA Service pack installation. Click "Next" button to continue.
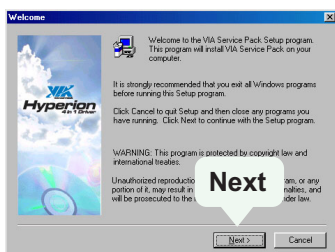
3. "VIA Service Pack README" screen will appear, please click the "Yes" button to agree with the Licence Agreement and continue.
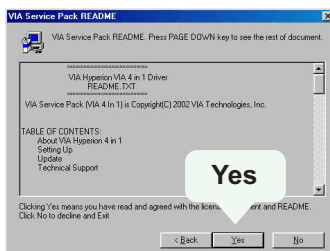
4. On the screen below, check "Normally Install" and click "Next" to continue. (If you check "Quick Install", you will skip the detailed procedures of the VIA 4-in-1 Setup.)

5. Select the checkbox as below and click "Next" to continue:
☑ VIA ATAPI Vendor Support Driver
☑ AGP Driver (AGP 3.0 Supported)
☑ IRQ Routing Miniport Driver
☑ VIA INF Driver 1.70a
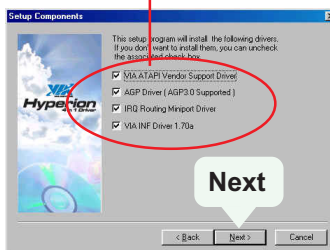
6. Select "Install VIA ATAPI Vendor Support Driver" checkbox, then click the "Next" button to continue.
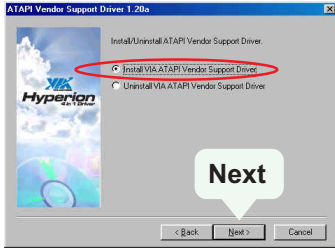
7. Click on "Click to enable DMA Mode" checkbox to enable DMA function, then click the "Next" button to continue.
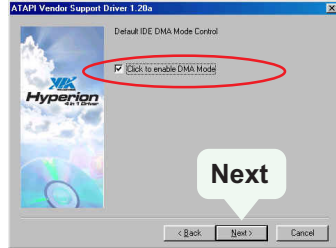
8. Select "Install VIA AGP Driver" in turbo mode and press "Next" button to continue.
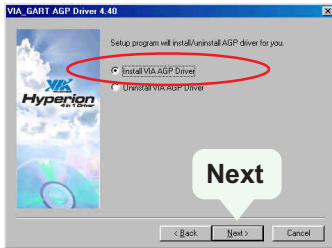
9. Select "Install VIA IRQ Routing Miniport Driver" checkbox, then click the "Next" button to continue.
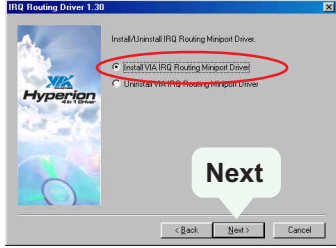
10. After all these setup procedures have finished, you should restart your computer by clicking on **"OK"** so as to put VIA 4-in-1drivers into effect and proceed to next driver installation.
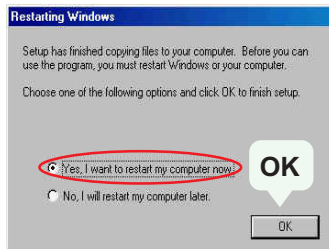
3-3 AC'97 Audio Driver Installation

1. Following the installation of VIA 4-in-1 drivers, you have to restart system so that your system can be reconfigured with VIA 4-in-1. When restarting procedures finish, please open the Support CD with your CD-ROM to enter the Main Installation Menu.
   Then click to "Install AC'97 Audio Driver".

2. The VIA Audio Driver Setup InstallShield Wizard will pop up to guide you to the VIA Audio Driver installation. Press "Next" button to continue.
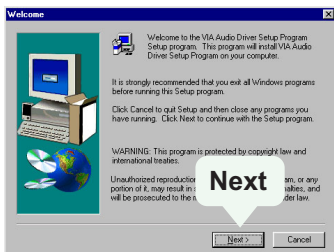
3. When asked to install or remove the audio driver, please select "Install" and press "Next" button to continue.
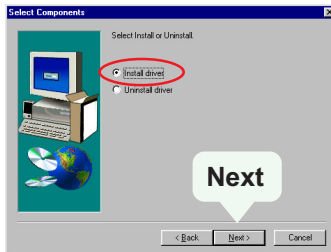
4. After all these setup procedures have completed, click to "Finish" button to exit the Installation program.

3-4 DirectX Installation

1. Following the installation of AC'97 Audio driver, you have to restart system so that your system can be reconfigured with the driver just installed. When restarting procedures finish, please open the Support CD with your CD-ROM to enter the Main Installation Menu.
   Then click to "Install DirectX". This utility will support a better graphic display of the built-in VGA interface.

2. When the screen of "Microsoft DirectX 8.X Setup" appears, please press "Yes" button to continue.

Microsoft DirectX 8.1 Setup

This will install Microsoft DirectX 8.1. Do you wish to continue?

   Yes   No

Yes
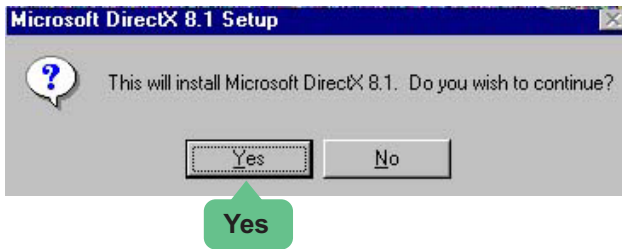
3. After all the setup procedures have completed, click to "OK" button to exit the Installation program and restart your system.

DirectX Setup

DirectX setup needs to restart your machine, press OK to restart now.

   OK

OK
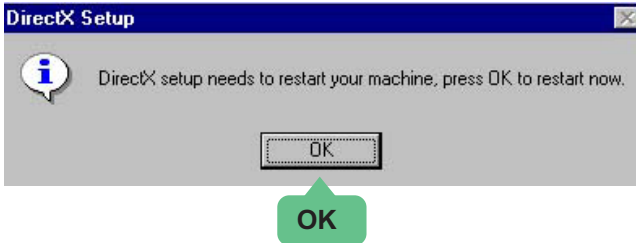
3-5 Graphics Driver Installation

1. Following the installation of DirectX, you have to restart system so that your system can be reconfigured with the utility. When restarting procedures finish, please open the Support CD with your CD-ROM to enter the Main Installation Menu.

   Then click to "Install Graphics Driver". The Graphics Driver is specifically for on-board VGA.

2. When the screen of "ProSavageDDR Driver Setup Program " appears, please press "Next" button to continue.

Next

3. After all the setup procedures have completed, click to "Finish" button to exit the Installation program and re-start your system.

Finish
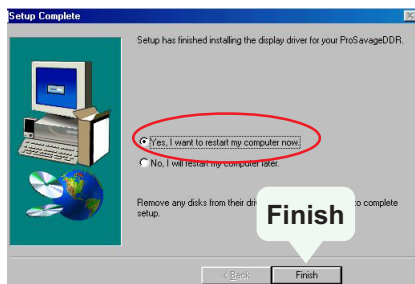
3-6 USB 2.0 Driver installation

VIA USB V2.0 is already integrated on board. Its 480Mb/s transfer rate supports operating system Win98/Me/2000/XP. USB Driver installation procedures are of similar steps in these systems. Please take the following illustrations from Win XP as the USB driver installation guide:

1. Following the procedures of opening the Support CD, click to "Motherboard Drivers" and then choose "VIA USB 2.0 Driver" to proceed. Please notice that the USB card driver is different from the USB 2.0 driver typically for the on-board USB. Do not use the USB card driver here.

2. Instantly the "USB 2.0 Setup Program" will pop up on screen. Click "Next" to continue.
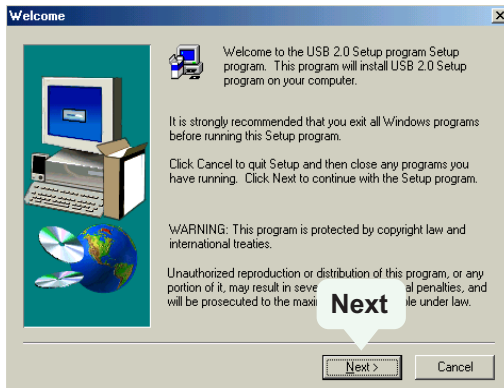
3. Instantly, next screen will pop up to prompt you to select component. Select "Install USB Driver" and click "Next" button to continue.

4. The USB 2.0 Setup Program will then guide you through the whole driver setup until the "Finish" screen appears to prompt you to restart your system. Please click "Finish" button to restart system to put the new driver into effect.
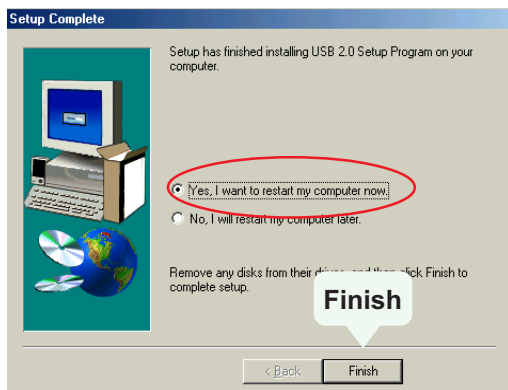
3-7 Hardware Monitor Utility Installation

3-7.1 Installation

Hardware Monitor is built on this mainboard. Its installation is pro-gramed to a fully automated mode on Windows 9X/Me/NT4/2000/XP. Users can follow the model installation below for its installation on various Windows System.

1. Following the procedures of opening the Support CD, click to " Hardware Monitor Utility" to proceed.

2. Then the installation program automatically opens the "Soltek HM Setup" screen. Click "OK" to continue.
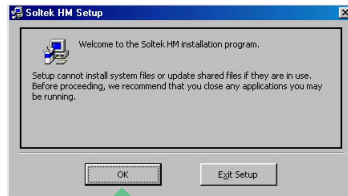
3. Select the Program folder and click the large button to continue.

4. Select the Program group and click "Continue" button to continue.
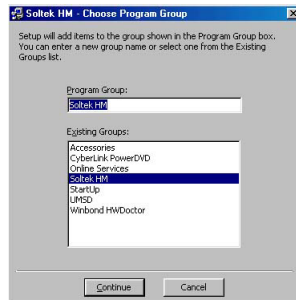
5.On the "Soltek HM Setup" screen, click "OK" to restart your computer so that the Utility can be put into effect.

Soltek HM Setup

Soltek HM Setup was completed successfully.

OK ◄ *OK*

3-7.2 Verification

1. After restarting your computer, click "Start" and choose the following path: \ Soltek HM \ Soltek HM to open the main window of the Soltek Hardware Doctor.
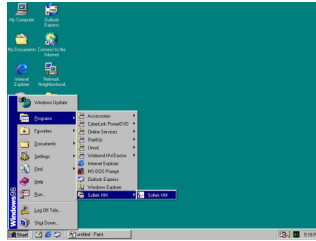
2.Then the pop-up screen will show all information about CPU Temperature, Fan Speed and various Voltages.

Showing the Fan Speed(s) that is supported by the mainboard.

Showing the temperature(s), the function of which is supported by the mainboard.

Click on "Soltek" button to display the function menu.

Showing the Voltage(s) that is supported by the mainboard.

Status Warning LED

*Note: Not all items or functions showing in the above picture will show up. Only those items or functions that are supported by the mainboard will reveal themselves in the above screen.

3-8 LAN Driver Installation (for 85MIV3-L only)

3-8-1. VIA6183 LAN driver on Windows 9X

The VIA 6183 LAN driver contained in the Support CD supports VIA 6103 LAN chip. Yet it is not included in the Autorun Menu. To install VIA LAN driver on Windows 98SE, please follow the steps shown below:

1. On the "Start" screen of your system, please click to the following path:

   \My Computer\properties\Device manager

2. In the "Device manager" screen, you can see the item " PCI Ethernet Controller" with a yellow question mark on its left side, which indicates that the LAN controller is already detected by system but the driver for the on-board LAN Ethernet Controller is not installed yet. Please point to this item with your mouse and double click on it (or click the "Properties" button).

3. Instantly, the "PCI Ethernet Controller Properties" screen shows up. Please click the "General" bar to continue.

4. In the "General" screen, click "Reinstall Driver" button to continue. Please note that the status of "Device Usage" should stay at "Exists in all hardware profiles".
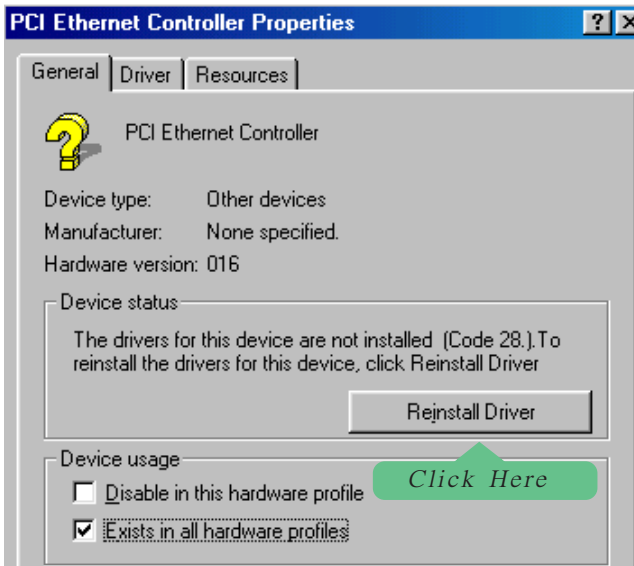
5. In the "Update device Driver Wizard" screen, click "Next" to continue until you see a dialog box asking you to "Specify a location" for the driver. You should **now** insert the Support CD into your CD-ROM.
6. As illustrated in the picture below, check the item "Specify a location" and click the "Browse" button to find out the correct path for the driver. Supposing your CD-ROM drive is Drive E, please type: E:\Driver\Network\VIA6183 into the blank bar. (If you are installing on Win 95OSR2, you should type W95OSR2 instead of Win98.) Then click the "Next" button to continue.

Update Device Driver Wizard

Windows will search for updated drivers in its driver database on your hard drive, and in any of the following selected locations. Click Next to start the search.

☐ Floppy disk drives

☐ CD-ROM drive

☐ Microsoft Windows Update

☑ Specify a location:

E:\Driver\Network\VIA6183\WIN98

Enter the correct path for the location of LAN Driver

Browse...

< Back   Next >   Cancel
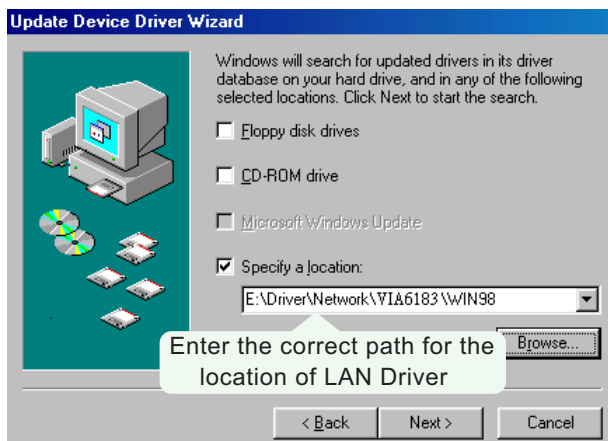
7. The Update Device Driver Wizard will then go on installing the driver, until the "Insert Disk" dialog box shows up. Please withdraw your Support CD and insert the Win 98 CD-ROM into the CD-ROM drive for updating system and click "OK" to continue.
8. The Update Device Driver Wizard will then proceed to update the system with the LAN driver. When the "Finish" screen shows up, click "Finish" to continue.
9. Final Dialog box will appear to remind you that you must restart your computer to finish updating the new hardware. Please click "Yes" to restart system and finish the LAN driver installation.

3-8-2. VIA6183 LAN driver on Windows NT4.0

1. When you newly install Win NT4, the Setup program will ask you whether your computer will participate on a network. please check "Do not connect this computer to a network at this time" and continue with your installation. That means, you are going to install the LAN Adapter and driver after you have finished system installation. By this way, you will set up your LAN Adapter and driver more surely.
2. If you have now installed Win NT4 in your computer, please boot your system and in the "Start" screen click the following path to install your computer networking:
     \Start\Settings\Control Panel\Network (double click)
3. Instantly, a dialog box pops up, asking you, "Windows NT Networking is not installed. Do you want to install it now?" Please click "Yes" to continue.
4. The Network Setup Wizard will then proceed to guide you to the installation of LAN Adapter and Driver, until the "Select Network Adapter" screen pops up, on which you should click "Have Disk" to install the on-board VIA LAN Controller.
5. Instantly, the "Insert Disk" dialog box pops up. You should **now** insert the Support CD into your CD-ROM drive, and then type to the white bar the correct path for the location of the LAN driver. Supposing your CD-ROM drive is drive D, please type the following path:
     D:\Driver\Network\VIA6183\Winnt4 and click "OK" button to continue.
6. Instantly, the Setup program detects the "VIA PCI 10/100MbFast Ethernet Adapter" and shows it on the "Select OEM Option" screen. Please click "OK" to continue.
7. The Setup program will then proceed to install the VIA PCI LAN Adapter and then other networking components such as TCP/IP protocol.
8. During the setup process, if "windows NT Setup" needs to copy some Windows files, you should then withdraw the Support CD and insert back the Win NT4 CD-ROM into your CD-ROM drive to continue.
9. After you have finished other networking components setup, you should restart your syustem to put all the new setups into effect.

10. To verify that the onboard VIA LAN Controller has been set up in system, please click "Start", then "Control Panel", then "Network".

11. In the "Network" screen, click the "Adapter" bar. You can now see the "VIA PCI 10/100Mb Fast Ethernet Adapter is already installed in system.

3-8-3. VIA6183 LAN driver on Windows ME / 2000 / XP

1. When you newly install Windows ME, Windows 2000 or Windows XP, the system will detect the LAN Controller on board and configure it automatically into system. Therefore, user needs not bother to install the LAN controller into these operating systems.

2. To verify the existence of VIA6183 LAN Controller and Driver, please enter the "Control Panel" of your system and click "Network" to open the "Configuration" screen. You can then see the "VIA PCI 10/100MbFast Ethernet Adapter" is already installed in system.

Chapter 4 AMI BIOS Setup

THE BIOS

BIOS stands for Basic Input and Output System. It was once called ROM BIOS when it was stored in a Read-Only Memory (ROM) chip Now manufacturers would like to store BIOS in EEPROM which means Electrically Erasable Programmable Memory. BIOS used in this series of mainboard is stored in EEPROM, and is the first program to run when you turn on your computer.

BIOS performs the following functions:
1. Initializing and testing hardware in your computer (a process called "POST", for Power On Self Test).
2. Loading and running your operating system.
3. Helping your operating system and application programs manage your PC hardware by means of a set of routines called BIOS Run-Time Service.

This Chapter includes the following topics :
4-1 About BIOS Setup
4-2 To Run BIOS Setup
4-3 About CMOS
4-4 The POST (Power On Self Test)
4-5 To Update BIOS
4-6 BIOS Setup

4-1 About BIOS Setup

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

4-2 To Run BIOS Setup

First access BIOS setup menu by pressing < DEL > key after "POST" is complete (before OS is loaded). BIOS will then display the following message:

```
DEL:SETUP
```

4-3 About CMOS

CMOS is the memory maintained by a battery. CMOS is used to store the BIOS settings you have selected in BIOS Setup. CMOS also maintains the internal clock. Every time you turn on your computer, the BIOS Looks into CMOS for the settings you have selected and configures your computer accordingly. If the battery runs out of power, the CMOS data will be lost and POST will issue a "CMOS invalid" or "CMOS checksum invalid" message. If this happens, you have to replace the battery and check and configure the BIOS Setup for the new start.

4-4 The POST (Power On Self Test)

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

4-5 To Update BIOS

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

- The Upgrade Utility can be loaded on a floppy diskette for upgrading saving, and verifying the system BIOS. The Update Utility can also be run from a hard disk drive or a network drive.

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

- Normally, to update BIOS is unnecessary if the system is working fine. Users should only update BIOS when incompatible problems are encountered or new features have to be added to system.

- "AMIFLASH.EXE" is a Flash EPROM Programming utility that updates the BIOS by uploading a new BIOS file to the programmable flash ROM on the mainboard. This program only works in *DOS environment, the utility can not be executed in Win95/98, ME, NT, WINDOWS 2000 or Windows XP environment.*

• Please follow the steps below for updating the system BIOS:

Step 1. Please visit the board maker's website, download the zip files of the latest BIOS and AMI flash utility "AMIFLASH.EXE" for your mainboard. After unzipping, the BIOS file format will be *.ROM, of which " * " stands for the specific BIOS file name.

Step 2. Create a bootable diskette. Then copy the BIOS file and AMI flash utility "AMIXXX.EXE" into the diskette.

Step 3. Insert the diskette into drive A, boot your system from the diskette.

Step 4. Under " A " prompt, type **" AMIXXX.EXE *.ROM "** and then press <Enter> to run BIOS update program. Please note that there should be a space between AMIXXX.EXE and *.ROM. (*.ROM depends on your mainboard model and version code. Instead of typing "*", you should type the specific file name for your specific mainboard). For example, you may type "amiflash(space)LDL005.rom".

Step 5. When the message "Flash ROM Update Completed - Pass." appears, please restart your system.

Step 6. You will see a message "CMOS Memory Size Wrong" during booting the system. Press <Del> or <F1> to run CMOS setup utility, then reload "LOAD SETUP DEFAULTS" or **"Load Optimal Defaults"** and save this change.

4-6 BIOS SETUP --- CMOS Setup Utility

4-6.1 CMOS Setup Utility

This mainboard comes with the AMI BIOS from American Megatrends Inc. Enter the CMOS Setup Utility Main Menu by:

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

   PRESS <Del> TO RUN SETUP

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

```
┌─────────────────────────────────────────────────────────────────┐
│          AMIBIOS NEW SETUP UTILITY - VERSION 3.31a                │
├───────────────────────────────┬─────────────────────────────────┤
│ ▶ Standard CMOS Features       │  Set Supervisor Password         │
│                                │                                  │
│ ▶ Advanced BIOS Features       │  Load Optimal Defaults           │
│                                │                                  │
│ ▶ Advanced Chipset Features    │  Save & Exit Setup               │
│                                │                                  │
│ ▶ Power Management Features     │  Exit Without Saving             │
│                                │                                  │
│ ▶ PNP/PCI Configurations       │                                  │
│                                │                                  │
│ ▶ Integrated Peripherals       │                                  │
│                                │                                  │
│ ▶ Hardware Monitor Status      │                                  │
│                                │                                  │
│ ▶ Frequency/Voltage Control    │                                  │
├───────────────────────────────┴─────────────────────────────────┤
│ F1: Help     ↑↓: Select Item   +/- : Change Values   F9: Setup Defaults │
│ Esc: Exit    ←→: Select Menu    Enter: Select ▶Sub-Menu   F10: Save and Exit │
├─────────────────────────────────────────────────────────────────┤
│   Set Time, Date, Hard Disk Type ...                              │
└─────────────────────────────────────────────────────────────────┘
```

3. Use the arrow keys on your keyboard to select an option, and press <Enter>. Modify the system parameters to reflect the options installed in your system.
4. You may return to the Main Menu anytime by pressing <ESC>.
5. In the Main Menu, "Save & Exit Setup" saves your changes and reboots the system, and "Exit Without Saving" ignores your changes and exits the program.

4-6.2 Standard CMOS Setup

Standard CMOS Setup records some basic system hardware configuration and sets the system clock and error handling. Modify the configuration values of this option if you want to change your system hardware configuration or after you clear CMOS data.

Run the Standard CMOS Setup as follows:
1. Choose "Standard CMOS Setup" from the Main Menu and a screen with a list of options will appear:

Standard CMOS Features		**Setup Help**
System Time	00 19 29	
System Date	May 14 2003 Wed	
▶ Floppy options.		
▶ IDE Device Config		

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

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

<F1>: "Help" gives options available for each item.
<F9>: Setup BIOS default values.
<F10>: Save and Exit Setup.

3. Press <ESC> to return to the Main Menu when you finish setting up all items. The following item descriptions are provided as a quick guide to your setup.

System Time The BIOS shows the time of the day in the format: hh:mm:ss. Choose the field with the Arrow keys and change the time with the Page Up/Page Down +/- keys.

System Date The BIOS shows the date of the day in the format: mm:dd:yy :day of the Week. Choose the field with the Arrow keys and change the value with the Page Up/Page Down +/- keys.

Floppy options Press Enter on "Floppy options" will let you select this field to the type(s) of floppy disk drive(s) installed in your system. The choices are:
1.2MB, 5.25 in.
720KB, 3.5 in.
1.44MB, 3.5 in.
2.88MB, 3.5 in.
Not Installed

IDE Device Config Press Enter on IDE Device Config will let you configure the IDE devices on board and the following menu will reveal the following submenu for your configuration of the hard Disk you have installed:

Primary IDE Master :Maxtor 82560 A4		Setup Help
Type	Auto	
Cylinders	4962	
Heads	16	
Write Precompensation		
Sectors	63	
Maxium Capacity	2561 Mb	
LBA Mode	On	
Black Mode	On	
Fast Programmed I/O Modes	4	
32 Bit Transfer Mode	On	

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

Type This option shows the types of configuration for the IDE devices:

   1-50: Predefined types

   USER: set Parameters by User

   Auto: Set parameters automatically

   CD-ROM: Use for ATAPI CD-ROM drives

Double click [Auto] to set all HDD parameters automatically, including "Cylinders, Heads, Write Precompensation, Sectors, Maximum Capacity and 32 Bit Transfer Mode.

4-6.3 Advanced BIOS Features

Advanced BIOS Features improves your system performance or sets up system features according to your preference.

Run the Advanced BIOS Features as follows:

1. Choose "Advanced BIOS Features" from the Main Menu and a screen with a list of options will appear:

AMIBIOS NEW SETUP UTILITY - VERSION 3.31a

Advanced BIOS Features		Setup Help
Quick Boot	Enabled	
Delay for Hard Drive (Sec.)	2	
Boot Device Priority		
1st Boot Device	Floppy: 1.44 MB 3.5	
2nd Boot Device	CD-ROM	
3rd Boot Device	IDE-0 :Maxtor 20560 A4 -	
Try Other Boot Devices	Yes	
Initial Display Mode	Silent	
Display Mode at Add-On ROM Init	Force BIOS	
S.M.A.R.T for Hard Disks	Disabled	
Bootup Num-lock	On	
Floppy Drive Swap	Disabled	
Floppy Drive Seek	Disabled	
PS/2 Mouse Support	Enabled	
Primary Display	VGA/EGA	
Password Check	Setup	
Ask HDD Password on Every Boot	Yes	
Boot To OS/2	No	
CPU Microcode Updation	Enabled	
L1 Cache	Enabled	
L2 Cache	Enabled	
System BIOS Cacheable	Enabled	
C000,32K Shadow	Cached	
C800,16K Shadow	Disabled	
CC00,16K Shadow	Disabled	
D000,16K Shadow	Disabled	
D400,16K Shadow	Disabled	
D800,16K Shadow	Disabled	
DC00,16K Shadow	Disabled	

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

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

<F1>: "Help" gives options available for each item.
<F9>: Setup BIOS default values.
<F10>: Save and Exit Setup.

3. Press <ESC> to return to the Main Menu when you finish setting up all items. The following item descriptions are provided as a quick guide.

Quick Boot	Allows you to enable (default)/ disable quick boot of your system.
Delay for Hard Drive (Sec.)	Allows you to adjust the time of detecting hard disk on board at booting system. Choices: Disabled; 1~10 sec. in 1 sec. stepping.
1st/2nd/3rd Boot Device	Allows you to set floppy or IDE devices already installed to be the 1st/2nd/3rd boot device. Choises: Disabled; Device(s) installed
Try Other Boot Devices	Allows you to enable/disable system to try to boot with other boot devices. Choises: Yes (default); No
Initial Display Mode	If option is "Silent", it allows user to add logo to initial screen. If option is "BIOS", the normal BIOS display mode will be shown. Choices: Silent (default); BIOS
Display Mode at Add-On ROM Init	If the item "Initial Display Mode" is set to "Silent", two sub-modes are provided for the initial display mode. If "Force BIOS" (default) is chosen, the vendor's logo screen will be followed by the "Add-on ROM" initial screen (the screen showing the add-on card BIOS message). If "Keep Current" is chosen, no "Add-On ROM" screen is followed.

S.M.A.R.T. for Hard Disks Allows you to enable / disable the Self Monitoring Analysis and Reporting Technology for the hard disk. Choices: Enabled; Disabled (default)

Bootup Num-lock Allows you to toggle between On (default) or Off to control the state of the NumLock keys when the system boots. If On, the numeric keypad is in numeric mode. If off, the numeric keypad is in cursor control mode.

Floppy Drive Swap Disabled (default), Floppy Drive A will not be changed to B, nor B to A. Enabled, Floppy Drive A and B will change position.

Floppy Drive Seek Disabled (default), Floppy Drives will not be checked and diagnosed at system bootup; Enabled, Floppy Drives will be checked and diagnosed at system bootup.

PS/2 Mouse Support Enabled (default), PS/2 mouse is supported. Disabled, PS/2 Mouse is not supported

Primary Display Allows you to choose the primary display for the system. Choices: VGA/EGA (default); CGA40x25; CGA80x25; Mono; Absent

Password Check Allows you to set BIOS to check up password with a password prompt at BIOS Setup or whenever re-starting system. Choices: Setup (default); Always

Ask HDD Password on Every Boot Allows you to set HDD password on every boot Choices: Yes (default); No

Boot to OS/2 Allows you to set your system to OS/2 operating system. Choices: Yes; No (default)

CPU Microcode Updation Allows you to enable/disable the CPU Microcode Update function. Choices: Disabled; Enabled (default)

L1 /L2 Cache Use this item to enable/disable the L1/L2 cache.
Choices: Enabled (default); Disabled

System BIOS Cacheable Allows you to enable (default)/ disable the System BIOS Cacheable function.

C000, 32K Shadow Allows you to set these addresses cached, Enabled or Disabled. Default: Cached

C800,CC00,D000,D400, D800,DC00 16K Shadow Allows you to set these addresses cached, Enabled or Disabled. Default: Disabled

4-6.4 Advanced Chipset Features

Advanced Chipset Features is used to modify the values of chipset buffers. These buffers control the system options.

Run the Advanced Chipset Features as follows:

1. Choose "Advanced Chipset Features" from the Main Menu and a list of option will appear:

AMIBIOS NEW SETUP UTILITY - VERSION 3.31a

Advanced Chipset Features		Setup Help
DRAM Timing		
Configure SDRAM timing by SPD	Enabled	
SDRAM Frequency	Auto	
SDRAM CAS# Latency	2.5	
SDRAM Bank Interleave	Disabled	
SDRAM Burst Length	4QW	
SDRAM Command Rate	2T	
Memory Hole	Disabled	
Auto Precharge for TLB/WB	Disabled	
Write Recovery time	2T	
CPU Read DRAm Fast Ready	Disabled	
AGP Mode	4x	
AGP Read Synchronization	Disabled	
AGP Fast Write	Disabled	
AGP Comp. Driving	Auto	
Manual AGP Comp. Driving	CB	
AGP Aperture Size	64MB	
AGP Master 1 W/S Write	Disabled	
AGP Master 1 W/S Read	Disabled	
APIC Interrupt Mode	Enabled	
USB Controller	6 USB Ports	
USB 1.1 Device Legacy Support	Disabled	
USB 1.1 Port 64/60 Emulation	Disabled	

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

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

 <F1>: "Help" gives options available for each item.
 <F9>: Setup BIOS default values.
 <F10>: Save and Exit Setup.

3. Press <ESC> to return to the Main Menu when you finish setting up all items. The following item descriptions are provided as a quick guide to your setup.

Configure SDRAM Timing by SPD SPD (Serial presence detect) is a device in memory module for storing the module information such as DRAM timing and chip parameters. If this option is enabled, BIOS will access SPD automatically to configure module timing. If disabled, DRAM timing can be configured manually.
Default: Enabled

SDRAM Frequency Allows you to set the SDRAM frequency.
Choices: 200MHz; 266MHz; Auto(default)

SDRAM CAS# Latency With SDRAM Timing by SPD disabled, you can select the SDRAM CAS# (Column Address Strode)latency manually. A shorter time means a shorter wait time after the CAS signal.
Choices: 2 Clocks; 2.5 Clocks

SDRAM Bank Interleave This item allows you to enable / disable(default) SDRAM Bank Interleave function (between different memory modules).

SDRAM Burst Length With SDRAM timing by SPD disabled, you can select the SDRAM Burst Length manually.
Choices: 8QW, 4QW(default)

SDRAM Command Rate Allows you to set the SDRAM Command Rate.
Choices: 1T; 2T(default)

Memory Hole Allows you to enabled / disabled (default) the support of Memory Hole which is reserved for ISA card.
Choices: Disabled; 512KB-640KB; 15MB-16MB; 14MB-16MB

Auto Precharge for TLB/WB If enabled, Auto Precharge (refresh charge) is enabled for the TLB (Translation Lookaside Buffer) or Write Back for the system memory access.
Choices: Disabled(default); Enabled

Write Recovery time If Auto Precharge for TLB/WB is enabled, this option is for setting the Wrie Recovery Time.
Choices: 2T(default); 1T

CPU Read DRAM Fast Ready This item allows you to enable / disable the CPU Read DRAM Fast Ready function.
Choices: Disabled(default); Enabled

AGP Mode Allows you to set the AGP Mode on board.
Choices: 4x(default); 2x; 1x

AGP Read Synchroni- Allows you to enabled / disable the AGP Read Syn-
zation chronization function.
Choices: Enabled; Disabled (default)

AGP Fast Write Allows you to enabled / disable the AGP Fast Write
function.
Choices: Enabled; Disabled (default)

AGP Comp. Driving Allows you to Auto or Manually set the AGP Com-
pensation Driving Strength.
Choices: Manual; Auto (default)

Manual AGP Comp. If AGP Comp. Driving is set to Manual, this item al-
Driving lows you to set AGP Compensation Driving Strength.
Choices: 00h ~ FFh

AGP Aperture Size Allows you to set the AGP Aperture Size.
Choices: 4MB; 8MB; 16MB; 32MB; 64MB; 128MB;
256MB;

AGP Master 1 W/S Allows you to enable / disable (default) the support
Write of AGP Master 1 Wait State Write.

AGP Master 1 W/S Allows you to enable / disable (default) the support
Read of AGP Master 1 Wait State Read.

APIC Interrupt Mode Allows you to enable (default) / disable the APIC
function for selecting the APIC Interrupt Mode.

USB Controller Allows you to set the USB Controller on the USB
port(s).
Choices: 6 USB Ports (default) ; 4 USB Ports;
2 USB Ports; Disabled

USB 1.1 Device Legacy Allows you to select the USB Device Legacy support.
Support Choices: No Mice; All Device; Disabled (default)

USB 1.1 Port 64/60 Allows you to enable / disable (default) the Port 64/
Emulation 60 Emulation.

4-6.5 Power Management Features

Power Management Features allows you to set the system's power saving functions.

Run the Power Management Features as follows:

1. Choose "Power Management Features" from the Main Menu and a list of options will appear:

AMIBIOS NEW SETUP UTILITY - VERSION 3.31a

Power Management Features		Setup Help
ACPI Standby State	S1/POS	
Power Management/APM	Enabled	
Video Power Down Mode	Suspend	
Hard Disk Power Down Mode	Stand By	
Standby Time Out (Minute)	Disabled	
Suspend Time Out (Minute)	Disabled	
Power Button Function	On/Off	
Restore on AC/Power Loss	Power Off	
Resume On Ring/WOL	Disabled	
Resume On PME#	Disabled	
Resume On KBC	Disabled	
Wake-Up Key	Any Key	
Resume On PS/2 Mouse	Disabled	
Resume On RTC Alarm	Disabled	
RTC Alarm Date	15	
RTC Alarm Hour	12	
RTC Alarm Minute	30	
RTC Alarm Second	30	

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

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

 <F1>: "Help" gives options available for each item.
 <F9>: Setup BIOS default values.
 <F10>: Save and Exit Setup.

3. Press <ESC> to return to the Main Menu when you finish setting up all items. The following item descriptions are provided as a quick guide to your setup.

ACPI Standby State	This item allows you to select the ACPI Suspend type. You can select S3(STR) for suspending to DRAM if your system supports this mode. Or you can select S1 (POS) for Power on Suspend under ACPI mode. Choices: S1/POS, S3(STR) (Optional)
Power Management/ APM	Allows you to enable (optional)/ disable the Power management / Advanced Power Management function.
Video Power Down Mode	Allows you to select the Video Power Down Mode. Choices: Disabled; Standby; Suspend (default)
Hard Disk Power Down Mode	Allows you to select the Hard Disk Power Down Mode. Choices: Disabled; Standby (default); Suspend
Standby Time Out (Minute)	To set the duration of Standby Time Out. Choices: Disabled; 1; 2; 4; 8; 10; 20; 30; 40; 50; 60
Suspend Time Out (Minute)	To set the duration of Suspend Time Out. Choices: Disabled; 1; 2; 4; 8; 10; 20; 30; 40; 50; 60
Power Button Function	Allows you to set power button function. Choices: On/Off (default); Suspend
Restore on AC/Power Loss	Allows you to set the restore state from AC/Power Loss. Choices: Last State; Power Off (default); Power On
Resume on Ring/WOL	Allows you to enable / disable (default)the Resume on Ring Signal function and Wake On Lan function. An input signal on the serial Ring Indicator (RI) Line (in other words, an incoming call on the modem) awakens the system from a soft off state.
Resume On PME#	Allows you to enable / disable (default) the Resume On PME function.
Resume On KBC	Allows you to enable / disable (default) the Resume On Keyboard Clock function. Choices: S4/S5; Disabled

Wake-Up Key If "Resume On KBC" function is enabled, this option allow you to set the key to wake up the system.
Choices: Any Key

Resume On PS/2 Mouse Allows you to enable / disable (default) the Resume On PS/2 Mouse function.
Choices: S4/S5; Disabled

Resume On RTC Alarm Allows you to enable / disable (default)the Resume On RTC Alarm function.

RTC Alarm Date / Hour / Minute / Second If resume On RTC Alarm is enabled, this field allows you to set the Alarm date Hour, Minute and second.
Date Choices: Every Day; 01 ~ 31
Hour Choices: 00 ~ 23
Minute Choices: 00 ~ 59
Second Choices: 00 ~ 59

4-6.6 PNP / PCI Configurations

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

Run the PNP/PCI Configurations as follows:

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

AMIBIOS NEW SETUP UTILITY - VERSION 3.31a

PNP/PCI Configurations		Setup Help
Plug and play Aware O/S	No	
Clear NVRAM	No	
OnChip VGA Frame Buffer Size	16MB	
PCI Latency Timer (PCI Clocks)	32	
Primary Graphics Adapter	PCI	
PCI IDE Busmaster	Enabled	
PCI Slot1 IRQ Priority	Auto	
PCI Slot2 IRQ Priority	Auto	
PCI Slot3 IRQ Priority	Auto	

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

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

<F1>: "Help" gives options available for each item.
<F9>: Setup BIOS default values.
<F10>: Save and Exit Setup.

3. Press <ESC> to return to the Main Menu when you finish setting up all items. The following item descriptions are provided as a quick guide to your setup.

Plug and Play Aware O/S Select Yes if the system operating environment is Plug-and-Play system (e.g., Windows98).

Clear NVRAM Allows BIOS to clear the NVRAM data.
Choices: No (default); Yes

OnChip VGA Frame Buffer Size Allows you to select the memory size shared with the system.
Choices: None; 8MB; 16MB; 32MB

PCI Latency Timer (PCI Clocks) Allows you to set the PCI Latency Time.
Choices: 32 (default); 64; 96; 192; 128; 160; 192; 224; 248;

Primary Graphics Adapter Allows you to select the Primary Graphics Adapter.
Choices: PCI; AGP

PCI IDE BusMaster Allows you to enable (default) / disable the PCI IDE Bus Master function.

PCI Slot 1/2/3 IRQ Priority Allows you to specify the IRQ for the PCI slots.
Choices: Auto (default); 3; 4; 5; 7; 9; 10; 11

4-6.7 Integrated Peripherals

Integrated Peripherals option allows you to get some information inside your system when it is working.

Run the Integrated Peripherals as follows:

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

AMIBIOS NEW SETUP UTILITY - VERSION 3.31a

Integrated Peripherals		Setup Help
Onboard FDC	Auto	
Onboard Serial Port 1	Auto	
Onboard Serial Port 2	Auto	
Serial Port 2 Mode	Normal	
Onboard Parallel Port	Auto	
Parallel Port Mode	ECP	
Parallel Port IRQ	Auto	
Parallel Port DMA Channel	Auto	
Onboard MIDI Port	Disabled	
MIDI Port IRQ	5	
Onboard Game Port	200	
Onboard IDE	Both	
OnBoard Lan (Optional)	Enabled	
OnBoard LAN P.M.E (Optional)	Enabled	
Onboard AC'97 Audio	Enabled	

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

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

 <F1>: "Help" gives options available for each item.
 <F9>: Setup BIOS default values.
 <F10>: Save and Exit Setup.

3. Press <ESC> to return to the Main Menu when you finish setting up all items. The following item descriptions are provided as a quick guide to your setup.

OnBoard FDC Allows you to enable / disable the Onboard FDC.
Choices: Auto (default); Enabled; Disabled

Onboard Serial Port 1 Allows you to set the Onboard Serial Port 1.
Choices: Auto (default); Disabled; 3F8/COM1; 2F8/
COM2; 3E8/COM3; 2E8/COM4;

Onboard Serial Port 2 Allows you to set the Onboard Serial Port 2.
Choices: Auto (default); Disabled; 3F8/COM1; 2F8/
COM2; 3E8/COM3; 2E8/COM4;

Serial Port 2 Mode Allows you to set the Serial Port 2 Mode.
Choices: Normal (default); IrDA; ASKIR;

OnBoard Parallel Port Allows you to configure onboard Parallel port .
Choices: Auto (default); Disabled; 378; 278; 3BC;

Parallel Port Mode If Parallel Port is not disabled, this item allows you
to configure parallel port mode.
Choices: ECP (default); EPP + ECP; Normal; EPP

Parallel Port IRQ Its variation depends on the selection of "Parallel
Port Mode".

Parallel Port DMA Channel Its variation depends on the selection of "Parallel
Port Mode".

OnBoard MIDI Port Allows you to configure onboard MIDI port address.
The choices: Disabled(default); 300; 310; 320; 330

MIDI Port IRQ If the onboard MIDI port is set at 300 to 330, this
item shows up to allow you to configure the MIDI
Port IRQ5 to IRQ11.

OnBoard Game Port Allows you to configure Onboard Game port
address.
Choices: Disabled; 200h (default); 208h

Onboard IDE Allows you to choose the Onboard IDE Mode.
Choices: Disabled; Primary; Secondary; Both (default)

(Optional) OnBoard LAN Allows you to enable / disable OnBoard Lan.
Choices: Enabled (default); Disabled

(Optional) Onboard LAN P.M.E Allows you to enable / disable OnBoard LAN P.M.E.
Choices: Enabled (default); Disabled

Onboard AC'97 Audio Allows you to enable / disable AC' 97 Audio.
Choices: Enabled (default); Disabled

4-6.8 Hardware Monitor Status

This menu helps you to read only and get more information on the working CPU temperature, FAN speed and voltage.

1. Choose "Hardware Monitor Status" from the Main Menu and a screen with a list of current status of your working system will appear:

AMIBIOS EASY SETUP UTILITY - VERSION 3.31a

Hardware Monitor Status		Setup Help
CPU Vcore	+1.680 V	
+2.5V	+2.528 V	
+3.3V	+3.408 V	
+5.0V	+5.126 V	
+12.0V	+11.187V	
-12.0V	-11.972V	
5V SB	+5.164V	
Battery	+3.296V	
Fan 1 Speed	0 RPM	
Fan 3 Speed	4687 RPM	
Temperature 1	30 ^{0}C/86 ^{0}F	
Temperature 2	0 ^{0}C/32 ^{0}F	
Temperature 3	37˚C/98˚F	

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

2. Press <ESC> to return to the Main Menu. In case any irregular reading appears about your system, it indicates that a problem exists therein. To solve the problem, a hardware engineer or your dealer is recommended.

CPU Vcore Shows CPU core actual voltage value.

+2.5V Shows current voltage against the +2.5V power supply.

+3.3V Shows current voltage against the +3.3V power supply.

+5.0V Shows current voltage against the +5.0V power supply.

+12V Shows current voltage against the +12V power supply.

-12V Shows current voltage against the -12V power supply.

+5V SB Shows current voltage against the +5V SB power supply.

Battery Shows current voltage against battery power supply.

Fan 1 / 3 Displays the current speed of CPU Fan, and other onboard device which user has connected to the onboard Fan Connectors.

Temperature 1 Shows current CPU external temperature.

Temperature 2 Shows current system temperature.

Temperature 3 Shows current CPU internal temperature.

4-6.9 Frequency/Voltage Control

Run the "Frequency/Voltage Control" as following:

1. Choose "Frequency/Voltage Control" from the Main Menu and a
   screen with a list of options will appear:

AMIBIOS EASY SETUP UTILITY - VERSION 3.31a

Frequency/Voltage Control		Setup Help
RedStorm Overclocking Tech (Optional)	(Press Enter)	
CPU Linear Freq	Disabled	
CPU Clock	(100 MHz)	
Spread Spectrum Selection	Disabled	
Auto Detect PCI Slot	Disabled	
CPU Ratio Selection	8.0x	

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

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

   <F1>: "Help" gives options available for each item.
   <F9>: Setup BIOS default values.
   <F10>: Save and Exit Setup.

3. Press <ESC> to return to the Main Menu when you finish setting up
   all items. The following item descriptions are provided as a quick
   guide to your setup.

(Optional) Redstorm Press <Enter> to start *RED STORM OVERCLOCK-*
Overclocking Tech *ING TECH*. This option gives user an easy way to overclocking. It will increase CPU external clock automatically. When CPU external clock increases to an unacceptably high value, BIOS will restart your system, then running at an acceptable CPU external clock.

CPU Linear This item allows you to enable / disable this setting
Frequency function.

CPU Clock If CPU Linear Frequency is set Enabled, this item allows you to set CPU Clock.
Choices: 100MHz ~200MHz in 1MHz stepping.

Spread Spec- If CPU Linear Frequency is disabled, use this item
trum Selection to enable/disable (default)Spread Spectrum Selection. This function will reduce the EMI (Electromagnetic Interference) in your system. If you do not have an EMI problem, leave this item disabled.

Auto Detect PCI Allows you to enable / disable (default) this auto
Slot detection function on PCI slot.

CPU Ratio If CPU onboard is one with an adjustable or un-
Selection locked CPU ratio, this item allows you user to adjust the CPU Ratio.

4-6.10 Set Supervisor Password

This option allows you to set a Supervisor password for the system:

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

[Enter new supervisor password]

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

[Retype new supervisor Password]

4. Enter the same password "exactly" the same as you have just typed to confirm the password and press <Enter>.

5. The following message appears to confirm the new password setup.

> [New supervisor password installed]
>
> Any Key to Continue

6. Then press any key to continue your CMOS Setup. To save the password setup, you should press "Save & Exit Setup" and choose "yes" to exit and save setup.

7. After the Supervisor password is set, you have to choose whether the password is for entering the system or only for entering BIOS Setup program. To make the choice, please enter BIOS Setup and choose "Advanced BIOS Features" in the main menu. (At entering BIOS Setup, you have to enter the password now.) In "Advanced BIOS Features", choose "Password Check" and change the option. The "Setup" option is to set the password only for entering BIOS Setup. The "Always" option is to set the password for entering the system.

8. To change or remove a current supervisor password, choose "Set Supervisor Password" and press <Enter>. An instruction box appears on the screen, prompting you to enter the current password first:

```
[ Enter current supervisor password ]
```

9. Type the current password with keyboard and then press <Enter>. An instruction box appears, prompting you to enter new supervisor password:

```
[ Enter new supervisor password ]
```

10. If you enter a new password into the box, you will be using this new password after you have finished and saved this new setup. Instead, if you press <Enter> before you enter any new password into the instruction box, another message box appears, telling you that you have disabled the Supervisor password. That means, no password is set for either entering BIOS Setup or system:

```
[ Supervisor password disabled ]

Any Key to Continue
```

NOTE: If you forget or lose a supervisor password, the only way to access the system is to clear the CMOS. All setup informations will then be cleared including the password and you need to run the BIOS setup program again so as to reconfigure BIOS.

4-6.11 Load Optimized Defaults

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

[Load Optimized Defaults]

**Press [Enter] to continue
or [ESC] to abort**

Press <Enter> now to load Optimal values for all the Setup options.

4-6.12 Save & Exit Setup

Save & Exit Setup allows you to save all modifications you have specified into the CMOS memory. Highlight this option on the Main Menu and press <Enter>. The following message appears:

[Saving current settings and exit]

**Press [Enter] to continue
or [ESC] to abort**

Press <Enter> key to save the configuration changes and exit CMOS Setup to restart your system.

4-6.13 Exit Without Saving

Exit Without Saving option allows you to exit the Setup Utility without saving the modifications that you have specified. Highlight this option on the Main Menu and press <Enter> and the following message appears:

[Quit Without Saving Changes]

**Press [Enter] to continue
or [ESC] to abort**

Follow the message and press <Enter> key to exit CMOS Setup and restart system.