# FCC Statement

This equipment has been tested and found to comply with the 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 a residential installation.

Any changes or modification made to this equipment void the user's authority to operate this equipment.

This equipment generates, uses, and 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 harmful interference to radio or television 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.
* Increase the separation between the equipment and receiver.
* Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
* Consult the dealer or an experienced radio/TV technician for help.
* All external cables connecting to this basic unit must be shielded.

## C. D. C. Statement

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus as set out in the radio interference regulations or the Canadian Department of Communications.

## CE Mark

This equipment is in conformity with the EMC directive.

# Overview

The information in this document is subject to change without notice and should not be construed as a commitment by the manufacturer.

The manufacturer assumes no responsibility for any errors that might appear in this document.

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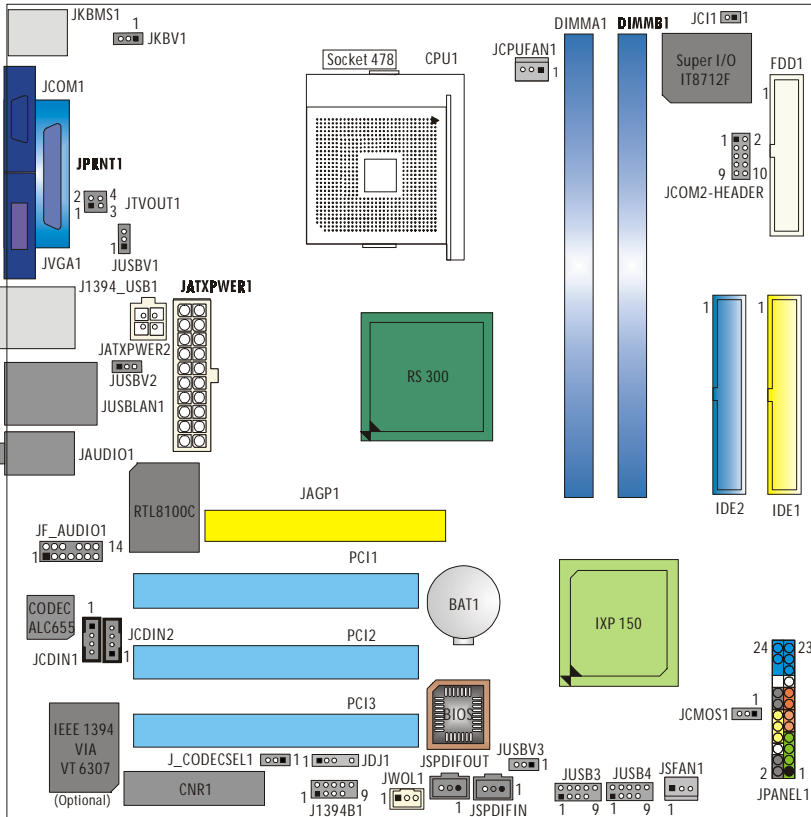
# Important Safety Information

1. Please read these safety instructions carefully.
2. Please keep this User's Manual for later reference.
3. Please disconnect this equipment from AC outlet before cleaning. Don't use liquid or sprayed detergent for cleaning. Use moisture sheet or clothe for cleaning.
4. For pluggable equipment, the socket-outlet shall be installed near the equipment and shall be easily accessible.
5. Please keep this equipment from humidity.
6. Lay this equipment on a reliable surface when install. A drop or fall could cause injury.
7. Do not leave this equipment in an environment unconditioned, storage temperature above 40°C, it may damage the equipment.
8. The openings on the enclosure are for air convection hence protect the equipment from overheating. DO NOT COVER THE OPENINGS.
9. Make sure the voltage of the power source when connect the equipment to the power outlet.
10. Place the power cord such a way that people can not step on it. Do not place anything over the power cord. The power cord must be rated for the product and for the voltage and current marked on the product's electrical ratings label. The voltage and current rating of the cord should be greater than the voltage and current rating marked on the product.
11. All cautions and warnings on the equipment should be noted.
12. If the equipment is not use for long time, disconnect the equipment from mains to avoid being damaged by transient over-voltage.
13. Never pour any liquid into ventilation openings, this could cause fire or electrical shock.
14. Never open the equipment. For safety reason, qualified service personnel should only open the equipment.
15. If one of the following situations arises, get the equipment checked by service personnel:
    a. The Power cord or plug is damaged.
    b. Liquid has penetrated into the equipment.
    c. The equipment has been exposed to moisture.
    d. The equipment has not work well or you can not get it work according to user's manual.
    e. The equipment has dropped and damaged.
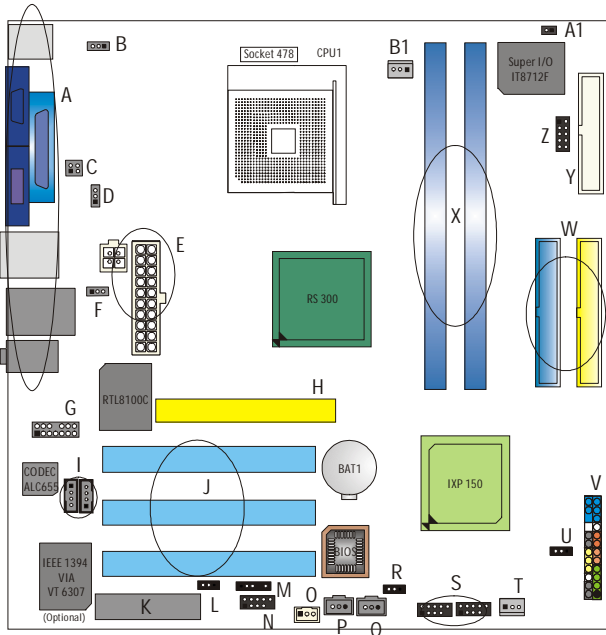    f. If the equipment has obvious sign of breakage

# Table of Contents

# Section 1. Layout of  P4ARA-M



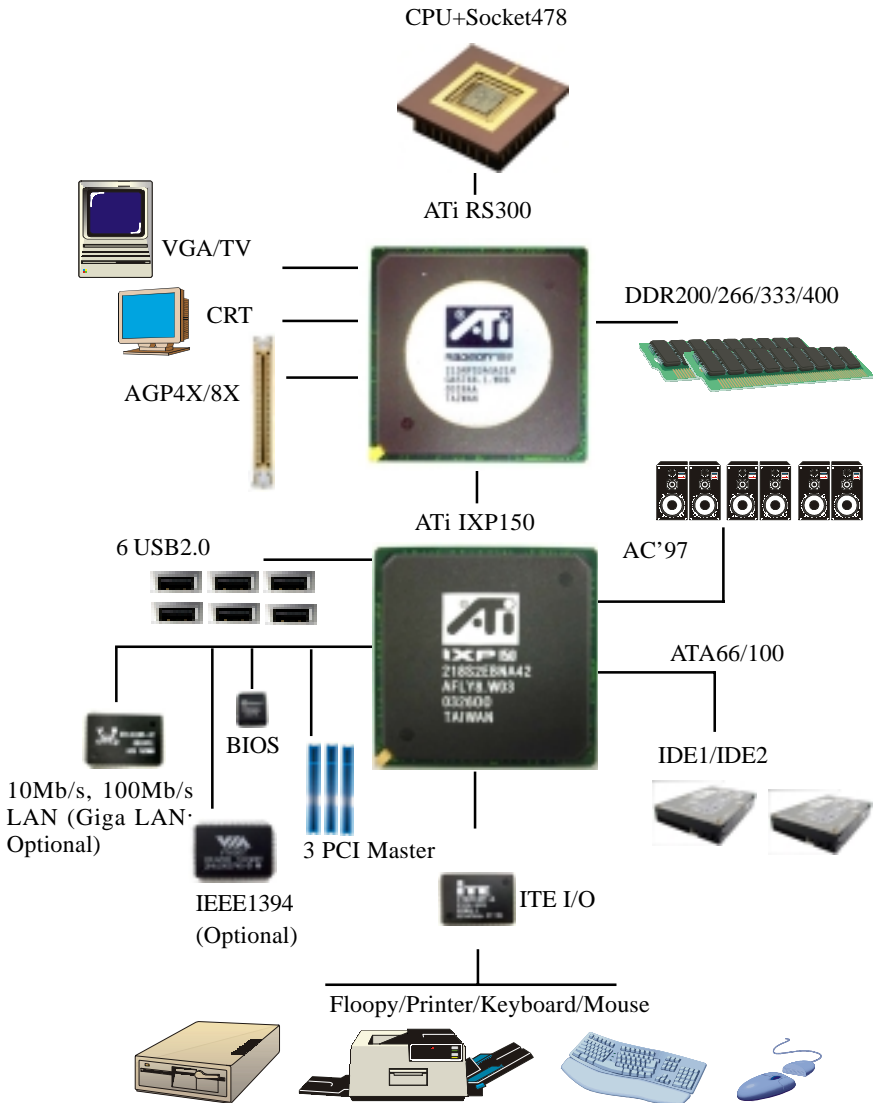**NOTE: "●" represents the first pin.**

# Section 2. Component Index

This section helps you to locate the components in the motherboard and to find the details about them easily according to the mentioned pages.



| | |
|---|---|
| A  Back Panel Connectors | B  JKBV1: Power Source Selection for Keyboard and Mouse |
| C  JTVOUT1: TV OUT Header | D  JUSBV1: Power Source Selection for USB |
| E  JATXPWER1-2: ATX Power Connectors | F  JUSBV2: Power Source Selection for USB |
| G  JF_AUDIO1: Front Panel Audio Header | H  JAGP1: Accelerated Graphics Port Slot |
| I  JCDIN1-2: CD-ROM Audio-In Headers | J  PCI1-3: Peripheral Component Interconnect Slots |
| K  CNR1: Communication Network Riser Slot (Optional) | L  J_CODECSEL1: CNR Onboard Selection |
| M  JDJ1: Audio DJ Connector | N  J1394B1: Front 1394B Header  (Optional) |
| O  JWOL1: Wake On LAN Header | P  JSPDIFOUT: Digital Audio Connector |
| Q  JSPDIFIN: Digital Audio Connector (Optional) | R  JUSBV3: Power Source Selection for USB |
| S  JUSB3/JUSB4: Front USB Headers | T  JSFAN1: System Fan Header |
| U  JCMOS1: Clear CMOS Jumper | V  JPANEL1: Front Panel Connector |
| W  IDE1-2: Hard Disk Connectors | X  DIMMA1/DIMMB1: DDR DIMM Modules |
| Y  FDD1: Floppy Disk Connector | Z  JCOM2-HEADER: COM2 Header |
| A1 JCI1: Case Open Connector | B1 JCPUFAN1: CPU Fan Connector |

# Section 3. P4ARA-M System Structure

CPU+Socket478



ATi RS300

VGA/TV

CRT

AGP4X/8X

DDR200/266/333/400

ATi IXP150

6 USB2.0

AC'97

ATA66/100

BIOS

IDE1/IDE2

10Mb/s, 100Mb/s LAN (Giga LAN· Optional)

3 PCI Master

IEEE1394 (Optional)

ITE I/O

Floopy/Printer/Keyboard/Mouse

# Section 4. P4ARA-M Features

In this section, you shall find all the information about the motherboard in your computer, including its features, various jumpers, headers, connectors, and also the installation guide to help you a quick and correct installation of your system.

## A. Hardware

### CPU
* Supports Socket 478.
* Supports the Intel® Pentium 4 Processor.
* Front Side Bus at 400/533/800 MHz.

### Chipset
* North Bridge: RS300
* South Bridge: IXP150

### Super I/O
* Chip: ITE IT8712F.
* Provides the most commonly used legacy Super I/O functionality.
* Environment Control initiatives,
  - H/W Monitor
  - Fan Speed Controller (optional)
  - ITE's "Smart Guardian" function

### Slots
* Three 32-bit PCI bus master slots.
* One AGP 4X/8X compatible slot.
* One CNR slot.

### On Board IDE
* Supports four IDE disk drives.
* Supports PIO Mode 5, Bride Mode and Ultra DMA 33/66/100 Bus Master Mode.

### IEEE 1394 Chip (Optional)
* Chip: VIA VT6307.
* Supports 2 ports with transfer up to 400Mb/s.

### On Board AC'97 Sound Codec
* Chip: ALC655.
* Compliant with AC'97 specification.
* AC'97 2.2 interface.
* Supports S/PDIF-In, S/PDIF-Out.
* Supports 6 channels.

### LAN Chip
* Chip: Realtek RTL8100C/(RTL8110S: Optional).
* Support 10 Mb/s, 100 Mb/s auto-negotiation operation (and 1000Mb/s: only for RTL8110S) .
* Half/Full duplex capability.
* Supports ACPI, PCI power management.

## Main Memory

* Supports up to two DDR devices.
* Supports 266/333/400 MHz DDR devices.
* Maximum memory size is 2GB.
* **Note:** For DDR400, do not use over 16 memory chips (loads), or it will automatically change to DDR333.

**Total Memory Size with Unbuffered DIMMs**

| DIMM Socket Location | DDR Module | Total Memory Size (MB) |
|---|---|---|
| DIMMA1 | 64MB/128MB/256MB/512MB/ 1GB *1 | Max is 2GB |
| DIMMB1 | 64MB/128MB/256MB/512MB/ 1GB*1 | |

## On Board Peripherals

*a. Rear side*

- 1 x serial port. (JCOM1)
- 1 x Parallel Port
- 1 x VGA Port
- 1 x Audio ports in vertical.
- 1 x RJ-45 LAN jack.
- 1 x PS/2 mouse and PS/2 keyboard.
- 2 x USB2.0 ports.
- 1 x IEEE 1394 Firewire™ port (optional)

*b. Front Side*

- 1 floppy port supports 2 FDDs with 360K, 720K, 1.2M, 1.44M and 2.88Mbytes**.**
- 1 x IEEE1394 Firewire™ port (optional)
- 4 x USB2.0 ports.
- 1 S/PDIF-Out and 1 S/PDIF-In connector (Optional)
- 1 x Serial port header (JCOM2-HEADER) (Optional)

## Dimension

* Micro ATX Form Factor: 24.4 cm x 24.4 cm. (W x L)

## B. BIOS & Software
## BIOS

* Award legal BIOS.
* Supports APM1.2, ACPI, USB Function.
* The BIOS configuration manual can be found in the Setup Driver CD.

## Software

* Supports 9th Touch™, FLASHER™, Bootblocker™, WinFlasher™ and StudioFun!(Optional), Warpspeeder™ (Optional).
* Offers the highest performance for Windows 2000, Windows XP, Linux, UNIX series, etc.

# Section 5. Package contents

**Check what you have bought before you start your DIY action. If there are anything missing, please contact your dealer immediately.**

* HDD Cable X 1
* FDD Cable X 1
* User's Manual X1
* USB 2.0 Cable X1 (optional)
* Rear I/O Panel for ATX Case X1 (optional)
* Fully Setup Driver CD X1
* StudioFun! Application CD X1 (optional)
* S/PDIF-In/Out Cable X 1 (optional)
* IEEE 1394 Cable X 1 (optional)

# Section 6. Installation and Setup

**In this section, you will learn how to install the CPU, DDR Module, and also how to set up jumpers and all the information about the components on the motherboard. Not only can you find the installation steps, but also the details and locations of the components on the motherboard.**

## 1. CPU Installation

The motherboard supports the Intel Pentium® Socket-478 processor. When you are installing the CPU, make sure the CPU has a cooling fan attached on the right to prevent overheating. If you do not find the cooling fan, contact your dealer and make sure to install them before turning on the computer.

**Step1:** Pull the lever sideways away from the socket and then raise the lever up to a 90-degree angle.

**Step2:** Look for the white dot/cut edge. The white dot/cut edge should point towards the lever pivot. The CPU will fit only in the correct orientation.

**Step3:** Hold the CPU down firmly, and then close the lever.

**Step4:** Put the CPU fan on the CPU and buckle it. Connect the CPU fan power cable to the JCFAN1. This completes the installation.

## 2 Central Processing Unit: CPU

These fan headers support cooling fans built in the computer. Orient the fans to make the heat sink fins to allow air flow to go across the onboard heat sinks instead of the expansion slots. The fan wiring and plug may be different according to the fan manufacturer. Connect the fan cable to the connector while matching the black wire to the ground pin.
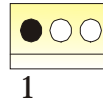
(1) CPU Fan Headers: JCPUFAN1
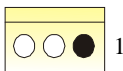
| Pin | Assignment |
|-----|------------|
| 1 | Ground |
| 2 | +12V |
| 3 | FAN RPM Rate Sense |

(2) System Fan Headers: JSFAN1 (Optional)

| Pin | Assignment |
|-----|------------|
| 1 | Ground |
| 2 | +12V |
| 3 | FAN RPM Rate Sense |

1

# 3. Installing DDR Module

1. Unlock a DIMM slot by pressing the retaining clips outward. Align a DIMM on the slot such that the notch on the DIMM matches the break on the slot.

2. Insert the DIMM firmly and vertically into the slot until the retaining chip snap back in place and the Dimm is properly seated.
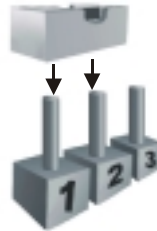
# 4. How to set up Jumpers?

The illustration shows how to set up jumpers. When the Jumper cap is placed on pins, the jumper is "close". If no jumper cap is placed on the pins, the jumper is "open". The illustration shows a 3-pin jumper whose pin1and 2 are "close" when jumper cap is placed on these 2 pins.

Jumper open          Jumper close          Pin1-2 close

# 5. Jumpers, Headers,  Connectors & Slots:

**(1) Floppy Disk Connector: FDD1**

The motherboard provides a standard floppy disk connector that supports 360K, 720K, 1.2M, 1.44M and 2.88M floppy disk types. This connector supports the provided floppy drive ribbon cables.

**(2) Hard Disk Connectors: IDE1/ IDE2**

The motherboard has a 32-bit Enhanced PCI IDE Controller that provides PIO Mode 0~4, Bus Master, and Ultra DMA 33/ 66/ 100 functionality. It has two HDD connectors IDE1 (primary) and IDE2 (secondary).

The IDE connectors can connect a master and a slave drive, so you can connect up to four hard disk drives. The first hard drive should always be connected to IDE1.

**(3) Peripheral Component Interconnect Slots: PCI1-3**

This motherboard is equipped with 3 standard PCI slots. PCI stands for Peripheral Component Interconnect, and it is a bus standard for expansion cards. This PCI slot is designed as 32 bits.

**(4) Accelerated Graphics Port Slot: JAGP1**

Your monitor will attach directly to that video card. This motherboard supports video cards for PCI slots, but it is also equipped with an Accelerated Graphics Port (AGP). An AGP card will take advantage of AGP technology to improve video efficiency and performance, especially with 3D graphics.

**(5) Communication Network Riser Slot: CNR1 (Optional)**

The CNR specification is an open Industry Standard Architecture, and it defines a hardware scalable riser card interface, which supports modem only.

**(6) Clear CMOS Jumper: JCMOS1**

This jumper helps you to clear the Real Time Clock (RTC) Ram in CMOS. You can erase the CMOS RTC Ram data to clear the CMOS memory of date, time, and system setup parameters.

| JCMOS1 | Assignment | |
|--------|-----------|---|
| Pin 1-2 Close | Normal Operation (default) | 1 ⬤◯◯ |
| Pin 2-3 Close | Clear CMOS Data | 1 ⬤◯◯ |

\* Clear CMOS Procedures:

1. Remove AC power line.

2. Set the jumper to "Pin 2-3 Close".

3. Wait for five seconds.

4. Set the jumper to "Pin 1-2 Close".

5. Power on the AC.

6. Reset your desired password or clear the CMOS data.

## (7) Front USB Header: JUSB3/ JUSB4

The motherboard provides two USB 2.0 Pin Header. USB 2.0 technology increases Data transfer rate up to a maximum throughput of 480 Mbps, which is 40 times faster than USB 1.1, and is ideal for connecting high-speed USB interface peripherals such as USB HDD, digital cameras, MP3 players, printers, modems, etc.

| Pin | Assignment | Pin | Assignment |
|-----|------------|-----|------------|
| 1 | +5V(fused) | 2 | +5V(fused) |
| 3 | USBP-0 | 4 | USBP-1 |
| 5 | USBP+0 | 6 | USBP+1 |
| 7 | Ground | 8 | Ground |
| 9 | KEY | 10 | NC |
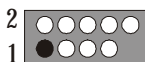
## (8) Power Source Selection for USB: JUSBV1/JUSBV2/JUSBV3

| JUSBV1/JUSBV2 JUSBV3 | Assignment | Description |
|---|---|---|
| Pin 1-2 close | +5V | JUSBV1: 5V for USB at the J1394_USB1 port connector. JUSBV2: 5V for USB at the JUSBLAN1port connector. JUSBV3: 5V for USB at the JUSB3/ JUSB4 port connectors. |
| Pin 2-3 close | +5V Standby Voltage | JUSBV1: J1394_USB1 port is powered with standby voltage of 5V. JUSBV2: JUSBLAN1 port is powered with standby voltage of 5V. JUSBV3: JUSB3/JUSB4 port is powered with standby voltage of 5V. |

**Note:** In order to support the function "Power-on the system via USB devices function," " JUSBV1/JUSBV2/ JUSBV3" jumper cap should be placed on pin 2-3 respectively.

## (9) Wake On LAN Header: JWOL1

This connector allows you to connect to a LAN card with Wake On LAN function. You can wake up the computer by remote control through a local area network.

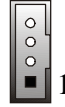| Pin | Assignment |
|-----|------------|
| 1 | +3.3V Standby Voltage |
| 2 | Ground |
| 3 | Wake up |

JWOL1

### (10) CD-ROM Audio-In Header: JCDIN1/JCDIN2
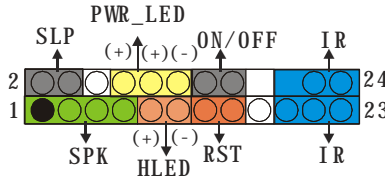
This header allows you to receive stereo audio input from sound sources, such as CD-ROM, TV Tuner, MPEG card, etc.

| Pin | Assignment |
|-----|------------|
| 1 | Left Channel Input |
| 2 | Ground |
| 3 | Ground |
| 4 | Right Channel Input |

### (11) Front Panel Connector: JPANEL1

The connector is for electrical connection to the front panel switches and LEDs.

| Pin | Assignment | Function | Pin | Assignment | Function |
|-----|------------|----------|-----|------------|----------|
| 1 | +5V | Speaker | 2 | Sleep Control | SleepButton |
| 3 | NA | Connector | 4 | Ground | |
| 5 | NA | | 6 | NA | NA |
| 7 | Speaker | | 8 | Power LED (+) | POWER LED |
| 9 | HDD LED (+) | Hard DriveLED | 10 | Power LED (+) | |
| 11 | HDD LED (-) | | 12 | Power LED (-) | |
| 13 | Ground | Reset Button | 14 | Power Button | Power-on Button |
| 15 | Reset Control | | 16 | Ground | |
| 17 | NA | | 18 | KEY | |
| 19 | NA | IrDA | 20 | KEY | IrDA |
| 21 | +5V | Connector | 22 | Ground | Connector |
| 23 | IRTX | | 24 | IRRX | |

### (12) Power Source Selection for Keyboard/Mouse: JKBV1

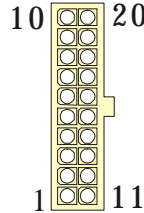| JKBV1 | Assignment | Description |
|-------|------------|-------------|
| Pin 1-2 close | +5V | 5V for keyboard and mouse |
| Pin 2-3 close | +5V_SB | PS/2 Mouse and PS/2 Keyboard are powered with +5V standby voltage. |

**Note:** In order to support the function "power-on the system via keyboard and mouse function, " "JKBV1" jumper cap should be placed on pin 2-3.

**(13) Power Connectors: JATXPWER1/ JATXPWER2**

The motherboard supports ATX power supply for the power system. Before installing the power supply connector, please make sure that all components are installed properly.

| PIN | Assignment | PIN | Assignment |
|-----|-----------|-----|-----------|
| 1 | +3.3V | 11 | +3.3V |
| 2 | +3.3V | 12 | -12V |
| 3 | Ground | 13 | Ground |
| 4 | +5V | 14 | PS_ON |
| 5 | Ground | 15 | Ground |
| 6 | +5V | 16 | Ground |
| 7 | Ground | 17 | Ground |
| 8 | PW_OK | 18 | -5V |
| 9 | +5V_SB | 19 | +5V |
| 10 | +12V | 20 | +5V |

| PIN | Assignment | PIN | Assignment |
|-----|-----------|-----|-----------|
| 1 | +12V | 3 | Ground |
| 2 | +12V | 4 | Ground |
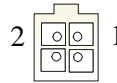
**(14) Front 1394 Header: J1394B1 (Optional)**

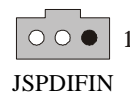| Pin | Assignment | Pin | Assignment |
|-----|-----------|-----|-----------|
| 1 | A1+ | 2 | A1- |
| 3 | Ground | 4 | Ground |
| 5 | B1+ | 6 | B1- |
| 7 | +12V | 8 | +12V |
| 9 | KEY | 10 | Ground |
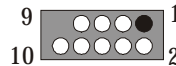
**(15) Digital Audio Connector: JSPDIFOUT/JSPDIFIN (Optional)**

The connector is used to connect SPDIF (Sony & Philips Digital Interconnect Format) interface for digital audio transmission.

| Pin | Assignment |
|-----|-----------|
| 1 | +5V |
| 2 | SPDIF_OUT |
| 3 | Ground |

JSPDIFOUT
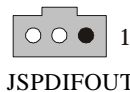
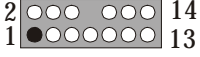| Pin | Assignment |
|-----|-----------|
| 1 | +5V |
| 2 | SPDIF_IN |
| 3 | Ground |

JSPDIFIN

**(16) Front Panel Audio Header: JF_AUDIO1**
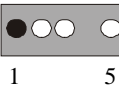
The connector allows you to connect to the front panel audio.

| Pin | Assignment | Pin | Assignment |
|-----|-----------|-----|-----------|
| 1 | Mic In/Center | 2 | Ground |
| 3 | Mic Power/Bass | 4 | Audio Power |
| 5 | RT Line Out/Speaker Out Right | 6 | RT Line Out/Speaker Out Right |
| 7 | Reserved | 8 | Key |
| 9 | LFT Line Out/Speaker Out Left | 10 | LFT Line Out/Speaker Out Left |
| 11 | RT Line In/Rear Speaker Right | 12 | RT Line In/Rear Speaker Right |
| 13 | LFT Line In/Rear Speaker Left | 14 | LFT Line In/Rear Speaker Left |

**(17) AUDIO DJ Connector: JDJ1**

| Pin | Assignment | Pin | Assignment |
|-----|-----------|-----|-----------|
| 1 | SMBDATA | 2 | SMBCLK |
| 3 | INT_B | 4 | KEY |
| 5 | ATX_PWROK | | |

**(18) TV Out Header: JTVOUT1**

| Pin | Assignment | Pin | Assignment |
|-----|-----------|-----|-----------|
| 1 | TV_Y | 2 | Ground |
| 3 | COMP | 4 | TV_C |

**(19) CNR Onboard Selection: J_CODECSEL1**

| J_CODECSEL1 | Assignment |
|-----|-----------|
| Pin 1-2 close | On-board Codec is used (default). |
| Pin 2-3 close | CNR Codec is used. |

**(20) Case Open Connector: JCI1**

| Pin | Assignment |
|-----|-----------|
| 1 | Case Open Signal |
| 2 | Ground |

### (21) COM2 Header: JCOM2-Header

| Pin | Assignment | Pin | Assignment |
|-----|------------|-----|------------|
| 1 | RIN1 | 2 | RIN3 |
| 3 | DOUT2 | 4 | DOUT3 |
| 5 | Ground | 6 | RIN2 |
| 7 | DOUT1 | 8 | RIN4 |
| 9 | -XRI1 | 10 | NA |

### (22) Back Panel Connectors





6 Channel Speakers
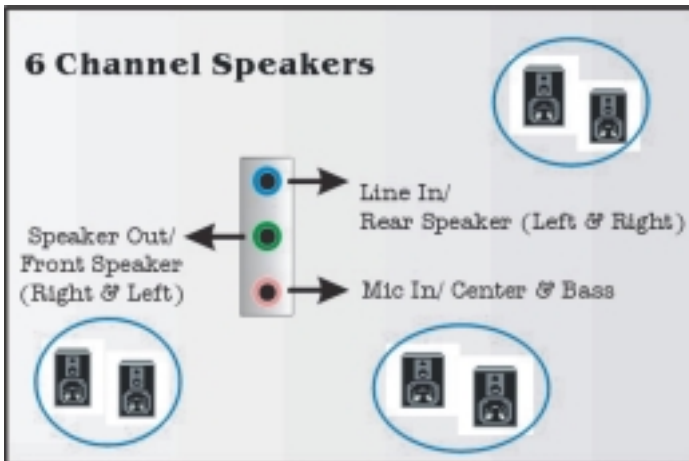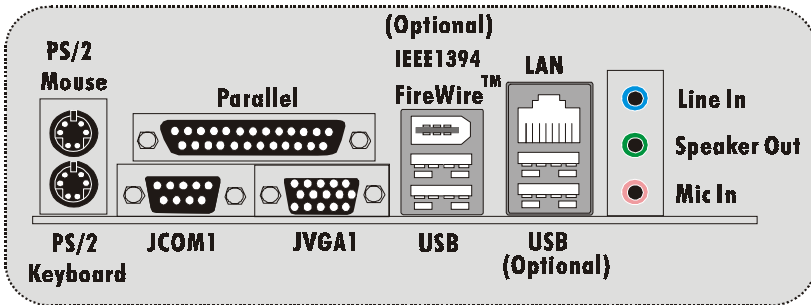
# Section 7. Trouble Shooting

| PROBABLE | SOLUTION |
|---|---|
| No power to the system at all; power light doesn't illuminate; fan inside power supply does not turn on. Indicator light on keyboard does not turn on. | * Make sure power cable is securely plugged in.* Replace cable.<br>* Contact technical support. |
| System inoperative. Keyboard lights are on, power indicator lights are lit, and hard drive is spinning. | * Using even pressure on both ends of the DIMM, press down firmly until the module snaps back in places. |
| System does not boot from hard disk drive, but it can be booted from CD-ROM drive. | * Check cable running from disk to disk controller board. Make sure both ends are securely plugged in; check the drive type in the standard CMOS setup.<br>* Backing up the hard drive is extremely important. All hard disks are capable of breaking down at any time. |
| System only boots from CD-ROM. Hard disk can be read and applications can be used but booting from hard disk is impossible. | * Back up data and applications files. Reformat the hard drive. Re-install applications and data using backup disks. |
| Screen message says "Invalid Configuration" or "CMOS Failure." | * Review system's equipment. Make sure correct information is in setup. |
| Cannot boot system after installing second hard drive. | * Set master/slave jumpers correctly.<br>* Run SETUP program and select correct drive types. Call drive manufacturers for compatibility with other drives. |
| Error message reading "SECTOR NOT FOUND" or other error messages not allowing certain data to be retrieved. | * Back up any salvageable data. Then, low-level format, partition, and high-level format the hard drive. Re-install all saved data when completed. |

| PROBABLE | SOLUTION |
|---|---|
| Scree is blank. | * Check the power connectors to monitor and to system. Make sure monitor is connected to display card. |
| Screen goes blank periodically. | * Disable screen saver. |
| Memory problem. | * Reboot computer. Reinstall memory, and make sure that all memory modules are installed in correct sockets. |
| Computer virus. | * Use anti-virus programs to detect and clean viruses. |
| Keyboard failure. | * Reconnect keyborad. Check keys again. If no improvement, replace keyboard. |
| No display on screen. | * If possible, connect monitor to another system. If no color still, replace monitor. |
| C: drive failure. | * Check hard drive cable. |
| Missing operating system on hard drive. | * Run setup and select correct drive type. |
| Certain keys do not function. | * Replace keyboard. |
| Keyboard is locked, no keys function. | * Unlock keyboard. |

# WarpSpeeder™



## Introduction

[ WarpSpeeder™ ], a new powerful control utility, features three user-friendly functions including Overclock Manager, Overvoltage Manager, and Hardware Monitor.

With the Overclock Manager, users can easily adjust the frequency they prefer or they can get the best CPU performance with just one click. The Overvoltage Manager, on the other hand, helps to power up CPU core voltage and Memory voltage. The cool Hardware Monitor smartly indicates the temperatures, voltage and CPU fan speed as well as the chipset information. Also, in the About panel, you can get detail descriptions about BIOS model and chipsets. In addition, the frequency status of CPU, memory, AGP and PCI along with the CPU speed are synchronically shown on our main panel.

Moreover, to protect users' computer systems if the setting is not appropriate when testing and results in system fail or hang, [ WarpSpeeder™ ] technology assures the system stability by automatically rebooting the computer and then restart to a speed that is either the original system speed or a suitable one.

## System Requirement

OS Support: Windows 98 SE, Windows Me, Windows 2000, Windows XP DirectX: DirectX 8.1 or above. (The Windows XP operating system includes DirectX 8.1. If you use Windows XP, you do not need to install DirectX 8.1.)

## Installation

1. Execute the setup execution file, and then the following dialog will pop up. Please click "Next" button and follow the default procedure to install.
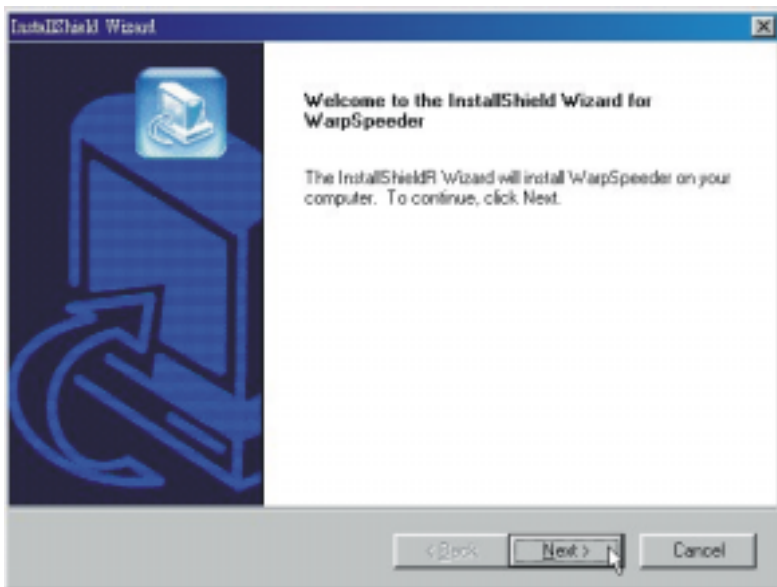
2. When you see the following dialog in setup procedure, it means setup is completed. If the "Launch the WarpSpeeder Tray Utility" checkbox is checked, the Tray Icon utility and [WarpSpeeder™] utility will be automatically and immediately launched after you click "Finish" button.
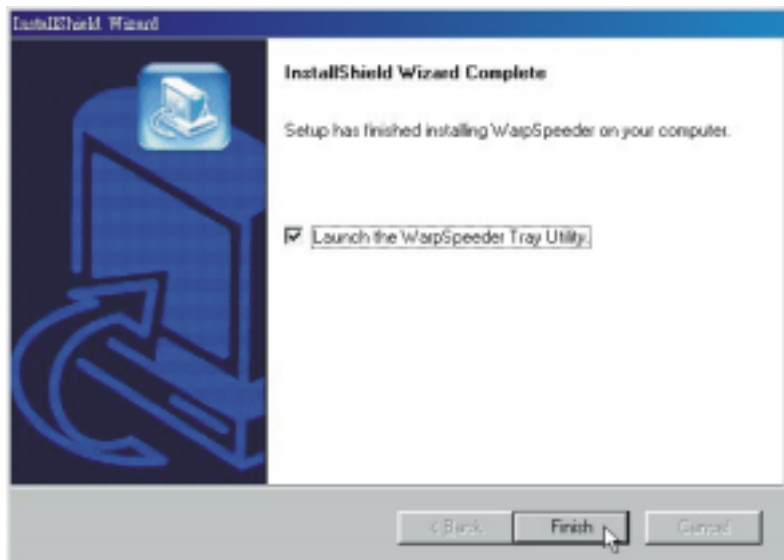
## Usage

[WarpSpeeder™] includes 1 tray icon and 5 panels:

1. Tray Icon:

Whenever the Tray Icon utility is launched, it will display a little tray icon on the right side of Windows Taskbar.



This utility is responsible for conveniently invoking [WarpSpeeder™] Utility. You can use the mouse by clicking the left button in order to invoke [WarpSpeeder™] directly from the little tray icon or you can right-click the little tray icon to pop up a popup menu as following figure. The "Launch Utility" item in the popup menu has the same function as mouse left-click on tray icon and "Exit" item will close Tray Icon utility if selected.
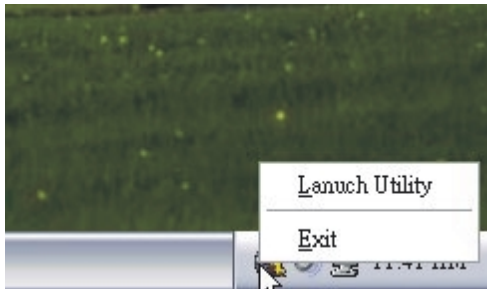


2. Main Panel

If you click the tray icon, [ WarpSpeeder™ ] utility will be invoked. Please refer do the following figure; the utility's first window you will see is Main Panel.

Main Panel contains features as follows:

a. Display the CPU Speed, CPU external clock, Memory clock, AGP clock, and PCI clock information.

b. Contains About, Voltage, Overclock, and Hardware Monitor Buttons for invoking respective panels.
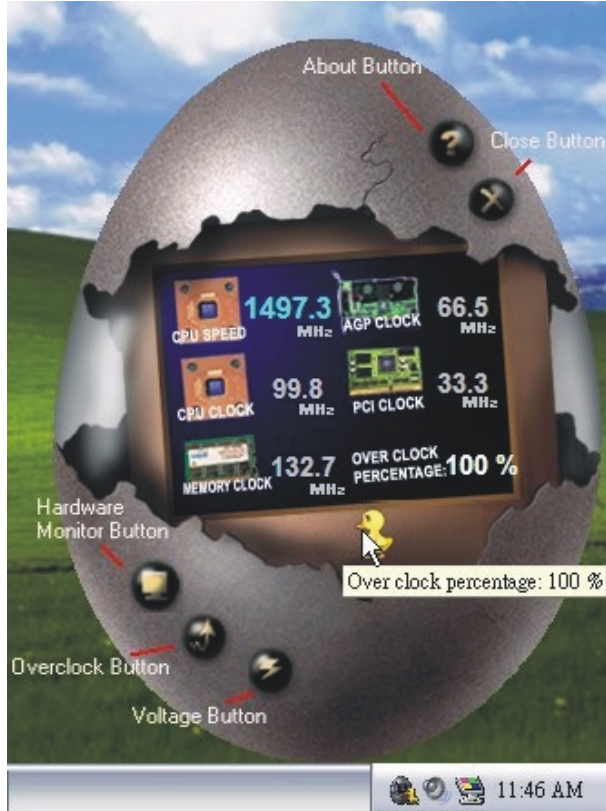
c. With a user-friendly Status Animation, it can represent 3 overclock percentage stages:

Duck walking => overclock percentage from 100% ~ 110 %

Duck running => overclock percentage from 110% ~ 120%

Duck burning => overclock percentage from 120% ~ above



3. Voltage Panel

Click the Voltage button in Main Panel, the button will be highlighted and the Voltage Panel will slide out to up as the following figure.

In this panel, you can decide to increase CPU core voltage and Memory voltage or not. The default setting is "No". If you want to get the best performance of overclocking, we recommend you click the option "Yes".

4. Overclock Panel

   Click the Overclock button in Main Panel, the button will be highlighted and the Overclock Panel will slide out to left as the following figure.



Overclock Panel contains these features:

a. "-3MHz button", "-1MHz button", "+1MHz button", and "+3MHz button": provide user the ability to do real-time overclock adjustment.

*Warning: Manually overclock is potentially dangerous, especially when the overclocking percentage is over 110 %. We strongly recommend you verify every speed you overclock by click the Verify button. Or, you can just click Auto overclock button and let [ WarpSpeeder™ ] automatically gets the best result for you.*

b. "Recovery Dialog button": Pop up the following dialog. Let user select a restoring way if system need to do a fail-safe reboot.
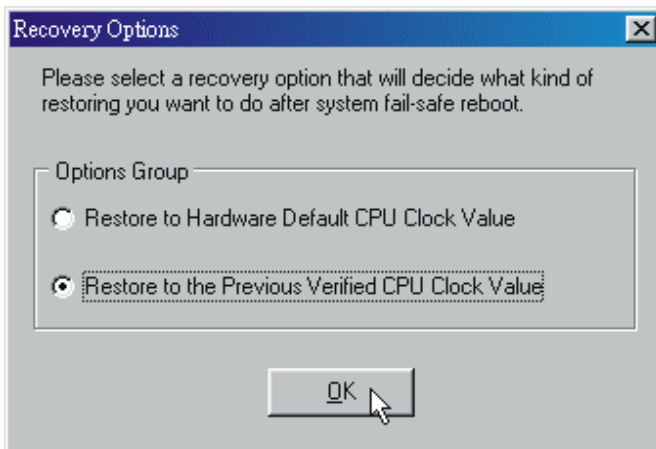


c. "Auto-overclock button": User can click this button and [ WarpSpeeder™ ] will set the best and stable performance  and frequency automatically. [WarpSpeeder™] utility will execute a series of testing until system fail. Then system will do fail-safe reboot by using Watchdog function. After reboot, the [ WarpSpeeder™ ] utility will restore to the hardware default setting or load the verified best and stable frequency according to the Recovery Dialog's setting.

d. "Verify button": User can click this button and [ WarpSpeeder™ ] will proceed a testing for current frequency. If the testing is ok, then the current frequency will be saved into system registry. If the testing fail, system will do a fail-safe rebooting. After reboot, the [ WarpSpeeder™ ] utility will restore to the hardware default setting or load the verified best and stable frequency according to the Recovery Dialog's setting.

Note: Because the testing programs, invoked in Auto-overclock and Verify, include DirectDraw, Direct3D and DirectShow tests, the DirectX 8.1 or newer runtime library is required. And please make sure your display card's color depth is High color (16 bit) or True color( 24/32 bit ) that is required for Direct3D rendering.
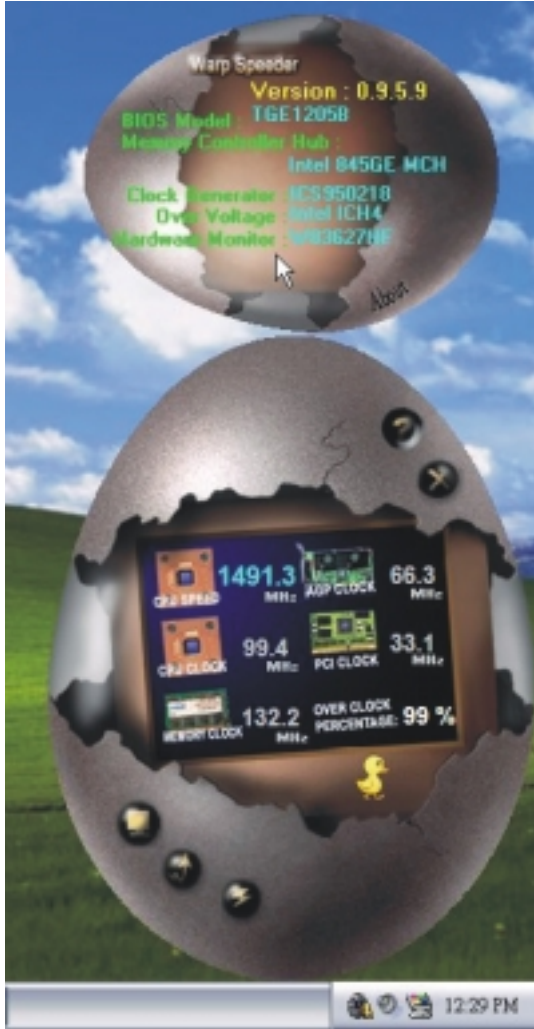
**5. Hardware Monitor Panel**

Click the Hardware Monitor button in Main Panel, the button will be high-lighted and the Hardware Monitor panel will slide out to left as the following figure. In this panel, you can get the real-time status information of your system. The information will be refreshed every 1 second.



**6. About Panel**

Click the About button in Main Panel, the button will be highlighted and the About Panel will slide out to up as the following figure.

In this panel, you can get model name and detail information in hints of all the chipset that are related to overclocking. You can also get the mainboard's BIOS model and the Version number of [ WarpSpeeder™ ] utility.

Note: Because the overclock, overvoltage, and hardware monitor features are controlled by several separate chipset, [ WarpSpeeder™ ] divide these features to separate panels. If one chipset is not on board, the correlative button in Main panel will be disabled, but will not interfere other panels' functions. This property can make [ WarpSpeeder™ ] utility more robust.

# StudioFun!™

## Introduction

StudioFun!™ is a media-player based on optimized GNU/Linux distribution to bring a "Room Theater" experience into life. It plays DVD, VCD, MP3, Audio CD and other multimedia. Furthermore, Users can take snapshots of video and customize the saved images as screensavers or photo slideshows. Of course, the images can be stored in USB mass storage devices like flash disks and USB floppy disks.

## Hardware Requirements

The supported hardware list of StudioFun! updates regularly. So please check the "hwreq.txt" located in the root of StudioFun! CD to get the latest supporting information.

## Installation and Usage

Please refer to the manual, located in the "Manual" folder under the root of StudioFun! CD, to get the most updated and detailed information of StudioFun. The manual comes in 3 different formats - Word format, PDF file format, or HTML format. Users can choose the favorite one.

11/04/2003