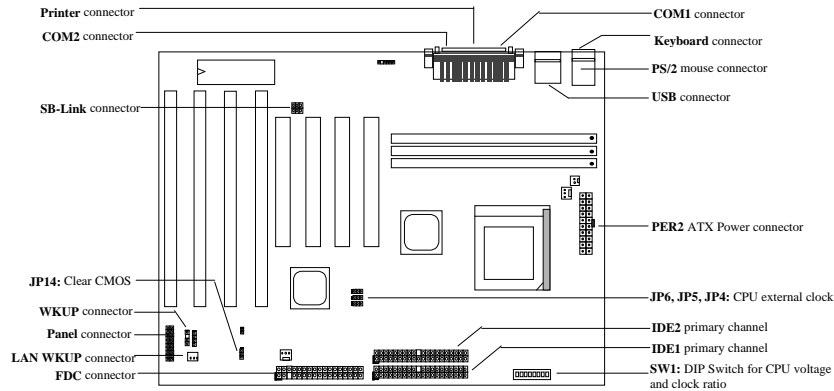


# Quick Installation Guide

Thanks for purchasing AOpen's AX5TC motherboard. This Guide will help you installing the system. Following figure shows the location of the jumpers and connectors on this motherboard:



AX5TC implements many special features as following:

**Full-range CPU core voltage** This motherboard supports the CPU core voltage from 1.3V to 3.5V, that can be applied to various CPU type in future.

**Suspend to Hard Drive** This function saves your work to HDD and resumes within a short time.

**Zero Voltage Modem Wake Up** Through this feature, it is possible to have system totally power off and wakeup to automatically answer a phone call, such as answering machine or to send/receive fax.

**Over-current Protection** CPU Vcore over-current protection to prevent any accident short circuit.

**CPU Thermal Protection** Warning when CPU temperature is higher than a predefined value.

**CPU Fan Monitoring** The system will alarm CPU fan malfunction to prevent CPU overheat.

**System Voltage Monitoring** This design will monitor your system working voltage continuously.

**Switching Regulator** High efficient switching regulator for future CPU.

**75/83.3MHz External Clock** For user's convenience, AX5TC supports 75/83.3MHz external clock. Please note that it is user's risk to do over-clocking.

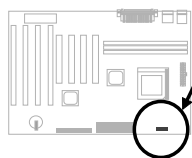
**PCI Sound Card connector** If you have a Creative-compatible PCI sound card, it is necessary to link the card to this connector for compatibility issue under DOS environment.



*Note: This Quick Installation Guide is only for quick reference. For more information, please see the User's manual.*

## Setting CPU Core Voltage

The switch 4-8 of **SW1** is used to select CPU core voltage.

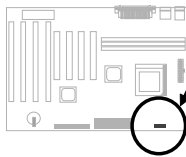


Vcore	S4	S5	S6	S7	S8	CPU
3.52V	ON	ON	ON	ON	OFF	6x86/K5
3.45V	OFF	ON	ON	ON	OFF	P54C/IDT C6
3.2V	OFF	OFF	ON	ON	OFF	K6-233
2.9V	ON	OFF	OFF	ON	OFF	K6-166/200 or M2
2.8V	OFF	OFF	OFF	ON	OFF	P55C
2.2V	OFF	ON	OFF	OFF	OFF	K6-266/300

# Quick Installation Guide

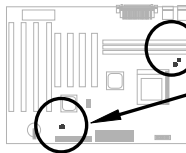
## Setting CPU Frequency

The switch 1-3 of **SW1** is used to select CPU core voltage.



S1	S2	S3	CPU Frequency Ratio
OFF	OFF	OFF	1.5x (3.5x)
ON	OFF	OFF	2x
ON	ON	OFF	2.5x (1.75x)
OFF	ON	OFF	3x
ON	OFF	ON	4x
ON	ON	ON	4.5x
OFF	ON	ON	5x

## Connecting CPU Fan



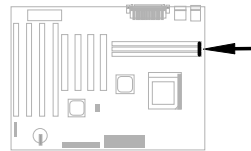
Plug in the fan cable to the 2-pin **FAN1** or 3-pin **FAN2** according to the type of your fan. **FAN3** can be reserved for the housing fan. The fan monitoring function must work with a 3-pin fan, because the 3-pin fan has an extra pin named SENSE, which periodically sends fan signal out.



**Warning:** It is recommended to adopt a larger fan on PP/MT-233 or AMD K6 for better air flow in the system. Refer to AOpen's web site (<http://www.aopen.com.tw>) to choose a proper CPU fan.

## Installing System Memory

The DIMM types supported are EDO (Extended Data Out) and SDRAM (Synchronous DRAM). This board has three 168 pin DIMM sockets (Dual-in-line Memory Module) that allow you to install system memory up to 256 MB.



## Compatibility issue between Intel PIIX4 chipset & Seagate HDD

Some old Seagate HDD without Ultra DMA may have compatibility issue with 3.3V PIIX4 chipset (Intel 440LX & 430TX). New Ultra DMA models have no such problem.

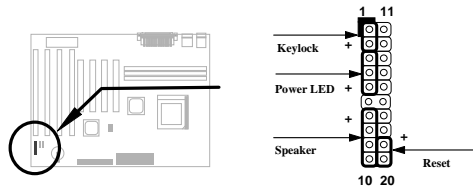


**Tip:** If you find a **green label** on the top cover between the label and the damper (the text on the outer circumference of the label reads "3.3V & 5V Interface Compatible"), this HDD is tested OK for PIIX4.

# Quick Installation Guide

## Connecting Front Panel Cable

Attach the power LED, keylock, speaker, and reset switch connectors to the corresponding pins.



## Load BIOS Setup Default

To enter the BIOS Setup, press **DEL** during POST (Power-On Self Test). Choose "Load Setup Defaults" for recommended optimal performance. Please avoid of using "Load Turbo Defaults", unless you are sure your system components (CPU, DRAM, HDD, etc.) are good enough for turbo setting. For detailed information, please refer to "AWARD BIOS" section in the User's Manual.

## To Eliminate "?" Marks in Win95

Intel has introduced 430TX or 440LX chipset with latest feature of "ACPI", "USB" & "Ultra DMA/33". Since these devices are so new that Win95 did not anticipate to support them on Aug. of '95 which Win95 initially is being released. To solve this problem, AOpen software team spends few weeks to develop an utility -- AOchip.exe. You can find this utility in the bundled CD title or from our web site. It is very user friendly and can be used on any TX/LX mainbaord, not limited to AOpen's motherboard. For using this utility, run aochip.exe directly.

## Installing Ultra DMA/33 Driver

This driver is available in the bundled CD or our web. You may run setup.exe directly to install this program. After installation, you will see following under Device Manager:

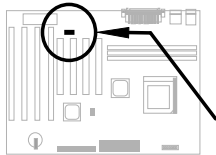
### -Hard Disk Controllers

- Intel 82371AB PCI Bus Master IDE Controller
- Primary Bus Master IDE Controller
- Secondary Bus Master IDE Controller



**Warning:** Installing this driver may cause Suspend to Hard Drive failure.

## PCI Sound Card Connector



The SB-LINK connector can be used to link Creative-compatible PCI sound card. If you have a Creative-compatible PCI sound card, it is necessary to link the card to this connector for compatibility issu under DOS environment.

## Zero Voltage Modem Wake Up

In conjunction with ATX soft power On/Off, it is possible to have system totally power off and wakeup to automatically answer a phone call such as answering machine or to send/receive fax. The most important break through is not only external box modem but also internal modem card can be used to support Modem Wake Up. AX5TC and MP56 internal modem card implement special circuit to make sure the modem card work properly without any power. For more information about Modem Wake Up, please see the user's manual.

# Quick Installation Guide

## **CPU Thermal Protection**

When CPU temperature is higher than a predefined value, the CPU speed will automatically slow down and the PC speaker will beep. To work with this feature, AOpen software team also developed a Hardware Monitor Utility, which could help you monitor the CPU temperature and voltage. This program is available in the bundled CD title or on our web site.

## **How to use Suspend to Hard Drive?**

Option 1: Use **/file** switch (applied to FAT16 file system):

Please use following command to create a hidden file in the root directory of your hard disk for Suspend to Hard Drive to save the system status and memory image.

```
C:>AOZVHDD /c /file
```

Please make sure that you have enough continuous HDD space for creating this hidden file. For example, if you have 32MB of system memory and 4MB of VGA memory, you need at least 36MB (32MB + 4MB) of continuous HDD space. If AOZVHDD failed to allocate the HDD space, you may run "DEFRAG" Utility or "Disk Defragmenter" which come with MS-DOS or Win'95 to free HDD space.

Option2: Use **/partition** switch (applied to FAT16/FAT32 file system):

To create a separate partition for Suspend to Hard Drive, please make sure you have reserved a free partition. We suggest you reserve the free partition which space is appropriate for your future memory expansion. For example, if you have 32MB of system memory and 4MB of VGA memory currently, but you plan to upgrade system memory to 64MB in the near future, then you may reserve a 68MB (64MB+4MB) space by using a disk utility (such as fdisk). Next, use following command to create a suspend partition:

```
C:>AOZVHDD /c /partition
```

If there is no extra free partition and you don't want your data lost, please do not use this partition method.

For more information, please see user's manual.

## **How to Upgrade BIOS?**

To upgrade your BIOS, please follow the steps as below:

1. Get new BIOS binary file from AOpen's web site. For example, AX5TC120.BIN.
2. Bootup the system from floppy without loading any memory handler (such as EMM386) or device driver.
3. Execute C:> AOFLASH AX5TC120.BIN
4. After loading the new BIOS code, the utility will prompt you to save original BIOS code into your HDD or floppy. Please press "Y" to store it as "BIOS.OLD".
5. After the old BIOS has been successfully saved, press "Y" to replace BIOS.
6. DO NOT turn off the power during "FLASHING".
7. Reboot the system by turn off the power after "FLASHING".
8. Press "DEL" key to enter BIOS setup during POST.
9. Reload the "BIOS SETUP DEFAULT" and reconfigure other items as previous set.
10. Save & Exit. Done!

For more information, please refer to "BIOS Flash Utility" in the user's manual.