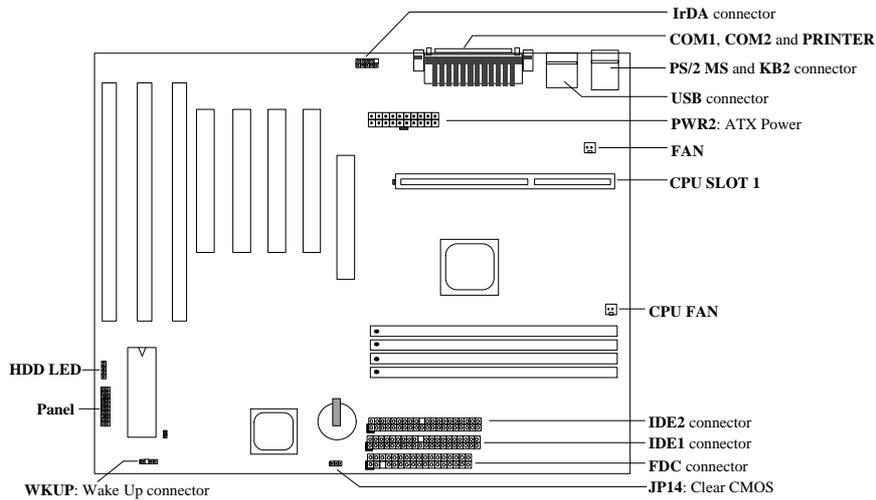


## Quick Installation Guide

Thanks for purchasing AOpen's AX6L motherboard. This Guide will help you installing the system. Following figure shows the location of the jumpers and connectors on this motherboard:



AX6L implements many special features as following:

**Jumper-less Design** Pentium II VID signal and Smbus clock generator provide CPU voltage auto-detection and allows user to set CPU frequency through CMOS setup, no jumper or switch is needed.

**Battery-less Motherboard** AX6L implements EEPROM and special circuit (patent applied) that allows you to save your current CPU and CMOS Setup configurations without the need of battery. The RTC (real time clock) can also keep running as long as power cord is plugged.

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

**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.

**RTC Wake Up Timer** Program the date/time to wake up your system.

**Over-current Protection** Full line (5V, 12V, 3.3V and CPU) over-current protection to prevent any accident short circuit.

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

**Fan Monitoring** Two fan connectors, warning when CPU or housing fan is malfunction.

**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, AX6L supports 75/83.3MHz external clock. Please note that it is user's risk to do over-clocking.

**FCC DoC certificate** AX6L has passed FCC DoC test. The radiation is very low, you can use any kind of housing.



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

## Quick Installation Guide

### Setting CPU Core Voltage

This motherboard supports Pentium II (Klamath) VID function, the CPU core voltage is automatically detected, the range is from 1.3V to 3.5V.

### Setting CPU Frequency

The CPU frequency selection is set by going into:

**BOIS Setup à Chipset Features Setup à CPU Clock Frequency**

(The possible setting is 66, 68.5, 75 and 83.3 MHz)

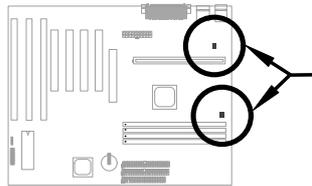
**BOIS Setup à Chipset Features Setup à CPU Clock Ratio**

(The possible setting is 1.5x, 2x, 2.5x, 3x, 3.5x, 4x, 4.5x, 5x, 5.5x, 6x, 6.5x, 7x, 7.5x, and 8x)

***Core frequency = Ratio \* External bus clock***

INTEL Pentium II	CPU Core Frequency	Ratio	External Bus Clock
Klamath 233	233MHz =	3.5x	66MHz
Klamath 266	266MHz =	4x	66MHz
Klamath 300	300MHz =	4.5x	66MHz
Klamath 333	333MHz =	5x	66MHz

### Connecting CPU Fan



Plug in the fan cable to the 3-pin **CPU FAN** or **FAN** connector. Both of these two fan connectors can support hardware monitoring function, however, you can only use the CPU FAN connector to control the fan power ON/OFF.

### Compatibility issue between Intel PIIX4 chipset & Seagate HDD

Some of Seagate HDD models listed below may have compatibility issue with 3.3V PIIX4 chipset (Intel 440LX and 430TX PCIsset). These HDD can only accept 3.1V as high level signal (actually, it should be 2.0V for TTL), and PIIX4 uses 3.3V, that makes these HDD have possibility that can not recognize output from PIIX4. Please avoid of using these HDD.

**Belize:** ST32177A, ST31720A, ST32531A and ST33240A.

**Maui (without Ultra DMA support):** ST31010A, ST32120A, ST31721A, ST33220A and ST34340A.

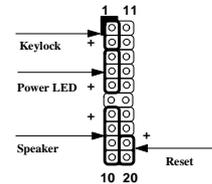
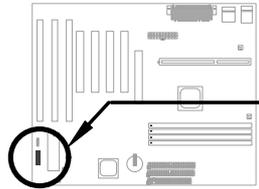
### Battery-less Motherboard

To preserve the earth, AOpen AX6L implements the world first battery-less motherboard design. There is no need to have battery for RTC (real time clock) and CMOS Setup as long as ATX power cable is plugged. In case of the AC power is shutdown or power cord is removed by accident, the CMOS Setup and system configuration can be restored from EEPROM, only the system clock needed to be re-set to current date/time.

## 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.

### 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

You need the bus master IDE driver and the bus master IDE HDD to support bus master IDE mode. This driver is available in the bundled CD or our web. You may run setup.exe directly to install this program.



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

### 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 develop an utility HWMON2, which can help you monitor the CPU temperature and voltage. This program is available in the bundled CD title or our homepage.

### 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. AX6L 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

### 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, AX6L130.BIN.
2. Bootup the system from floppy without loading any memory handler (such as EMM386) or device driver.
3. Execute C:> AOFLASH AX6L130.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.

#### More help for latest information:

<b>Taiwan:</b>	<a href="http://www.aopen.com.tw">http://www.aopen.com.tw</a>
<b>USA:</b>	<a href="http://www.aopenamerica.com">http://www.aopenamerica.com</a>
	<a href="http://www.aopen-usa.com">http://www.aopen-usa.com</a>
<b>Europe:</b>	<a href="http://www.aopen.nl">http://www.aopen.nl</a>

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