AOpen
Solutions·Components

DX34 Plus-U

Easy Installation Guide

PS/2 Mouse Connector

SPP/ECP/EPP Print Port

USB Connector

RJ45 LAN Connector

PS/2 Keyboard Connector

COM 2 Port

COM 1 Port

WOL Connector (Wake On LAN)

Intel 82559 10/100 LAN Controller

AGP Pro Slot

32 Bit PCI Slot x 5

4Mbit Flash BIOS

SCSI Card HDD LED Connector

Adaptec Ultra3 SCSI Controller

System Fan Connector

ATA/100 IDE Connector

Dual Channel Ultra3 SCSI Connector

Low ESR Capacitor

Dual CPU Sockets

CPU #1

CPU #2

Thermal Sensor Connector

CPU Fan Connector

VIA Apollo Pro 133A Chipset

PC-133 DIMM Slot x 3

SSI ATX Power Connector

AGP Pro Power Connector

Redundant SPS Connector

Front Panel Connector

BP (Back plane) Connector

Before You Start

Everything you need to boot this motherboard is included in this Easy Installation Guide. For more information, a complete *Online User's Manual* can be found in the *Bonus Pack CD Disc*. Thanks for the help of saving our earth!

Accessory Checklist

- ☑ **Hard Drive IDE Cable x 1**
- ☑ **80-Wire IDE Cable x 1**
- ☑ **Floppy Drive Cable x 1**
- ☑ **Ultra 160 SCSI 68 pin Cable x 1**
- ☑ **Bonus Pack CD disc x 1**
- ☑ **User Manual x 1**
- ☑ **This Easy Installation Guide x 1**
- ☑ **I/O Bracket x 1**
- ☑ **ASM Lite x 1**

PART NO: 90.50F30.007   DOC. NO: DX34PU-EG-E0110B
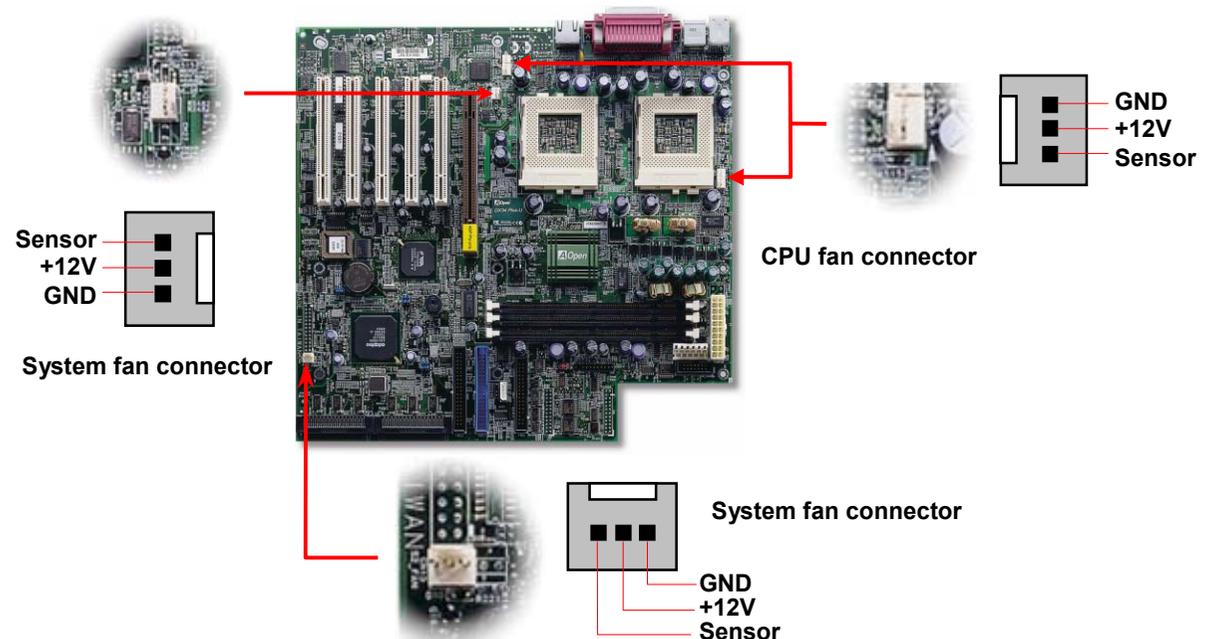
1. Installing CPU

CPU Pin 1 and cut edge
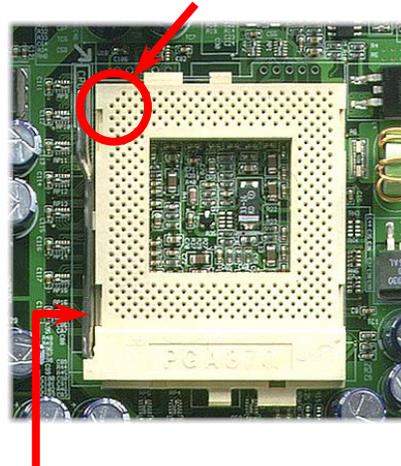
CPU socket lever

1. Pull up the CPU socket lever and up to 90-degree angle.
2. Locate Pin 1 in the socket and look for a (golden) cut edge on the CPU upper interface. Match Pin 1 and cut edge. Then insert the CPU into the socket.
3. Press down the CPU socket lever and finish CPU installation.

Note: *If you do not match the CPU socket Pin 1 and CPU cut edge well, it may damage the CPU.*

2. Installing CPU & Housing Fan

Plug in the CPU fan cable to the 3-pin **CPU FAN** connector and housing fan cable to the **Housing Fan** connector.

GND
+12V
Sensor

CPU fan connector

Sensor
+12V
GND

System fan connector

System fan connector

GND
+12V
Sensor

3. Installing Thermal Sensor (Optional)

The Thermal Sensor Connector (CN12 & CN1) provides you to use the thermal sensor to detect the temperature of the components on the motherboard.


GND
Sensor
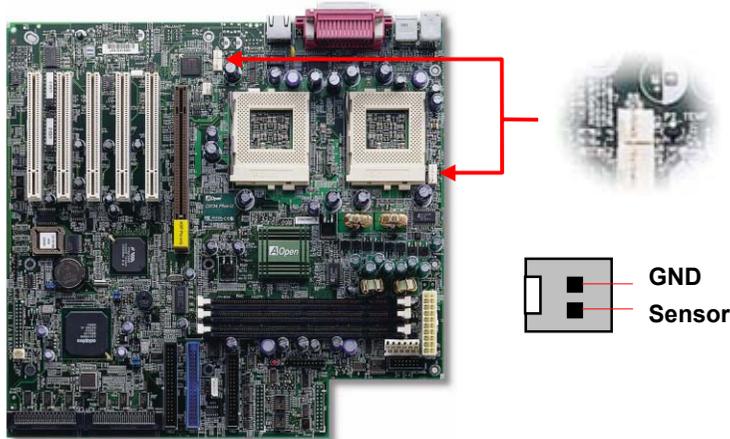
4. Supported CPU Type

The DX34 Plus-U supports Intel® Socket 370 Celecron™ and Pentium III series CPU. Including the code name Tualatin 512K cache CPU for dual CPU configuration.

	Processor Name	CPU Package
Single Processor	PentiumII	All
	Pentium !!!	All
	Celeron	FCPGA
Dual Processor	Pentium II	All
	Pentium !!!	Coppermine
	Pentium !!! 512K	Tualatin

5. SW1 Setting CPU FSB Frequency & Ratio

When you are using the Intel® engineer sample CPU with DX34/DX34Plus, the SW1 allows you select the CPU ratio from 2 to 9.5. You can adjust the SW1 to get the correct CPU working ratio and frequency.
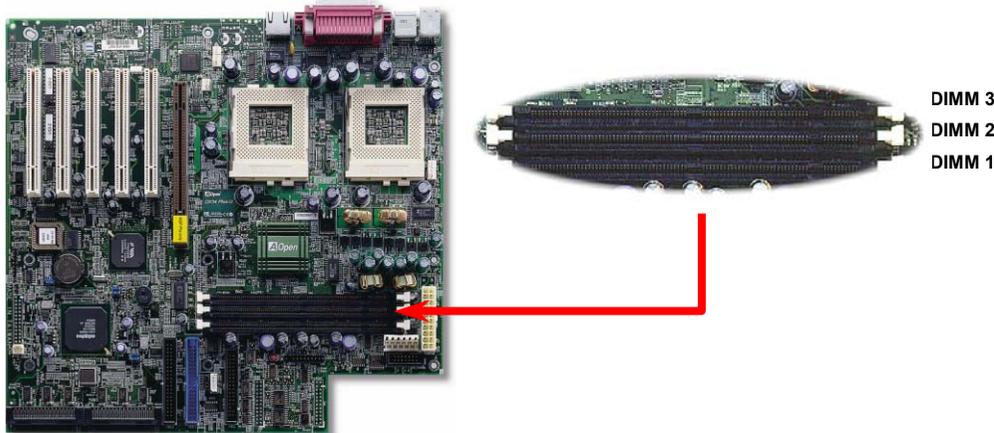

ON   OFF

1

SW1
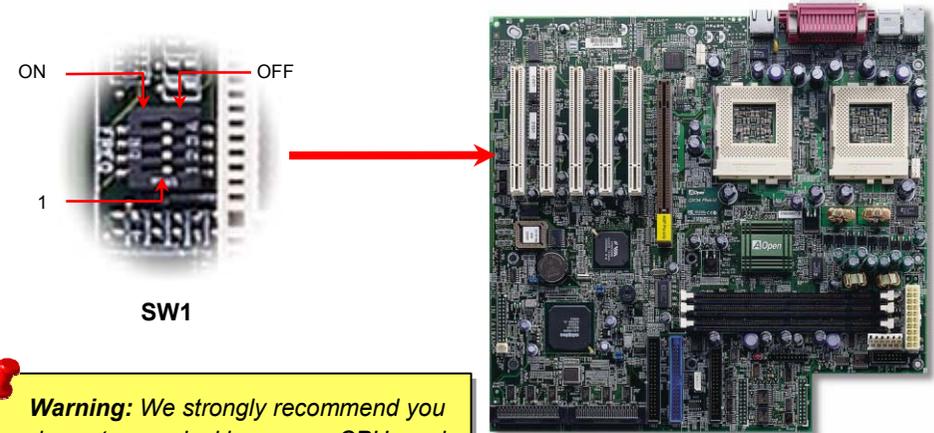
Warning: We strongly recommend you do not overclocking your CPU and system for get more system reliability.

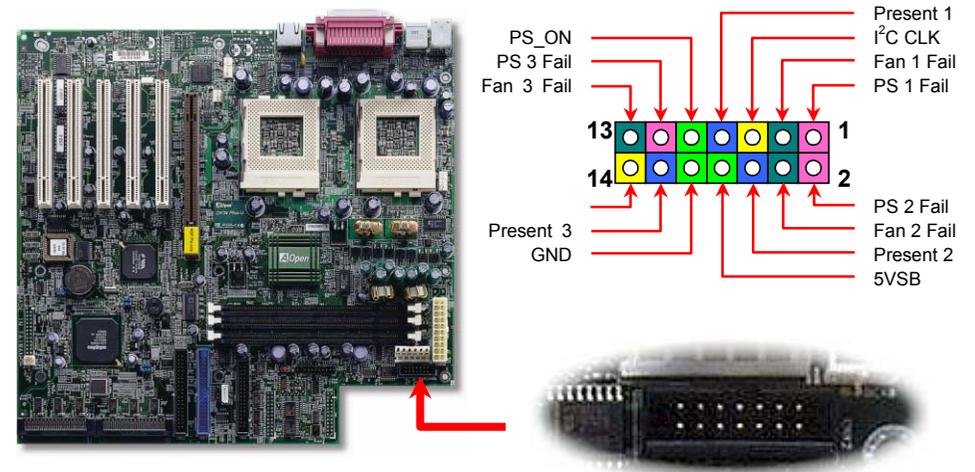| Bit1	Bit2	Bit3	Bit4	Coppermine			Coppermine D-step	
				Ratio	100Mhz	133Mhz	Ratio	FSB 133Mhz
On	On	On	On	X2	200	266	X4	533
On	Off	On	On	X2.5	250	333	X9.5	1266
On	On	Off	On	X3	300	400	X8.5	1133
On	Off	Off	On	X3.5	350	466	X9	1200
On	On	On	Off	X4	400	533	Reserved	Reserved
On	Off	On	Off	X4.5	450	600	Reserved	Reserved
On	On	Off	Off	X5	500	667	Reserved	Reserved
On	Off	Off	Off	X5.5	550	733	X5.5	733
Off	On	On	On	X6	600	800	X6	800
Off	Off	On	On	X6.5	650	866	X6.5	866
Off	On	Off	On	X7	700	933	X7	933
Off	Off	Off	On	X7.5	750	1000	X7.5	1000
Off	On	On	Off	X8	800	1066	X8	1066
Off	Off	On	Off	X8.5	850	1133	Reserved	Reserved
Off	On	Off	Off	X9	900	1200	Reserved	Reserved
Off	Off	Off	Off	X9.5	950	1266	X2	266

6. Install DIMM Modules

This motherboard has three 168-pin DIMM sockets that allow you to install PC100 or PC133 memory up to 1.5GB. The DX34 Plus - U supports not only SDRAM but also ECC or Registered DRAM.

DIMM 3
DIMM 2
DIMM 1

7. Connecting ATX and AGP Pro Power Connector

The DX34Plus-U uses standard ATX power connector. The 6-pin AGP Pro Power connector provides extra +5V and +3.3V power for AGP Pro VGA card. Make sure you plug in the right direction.

	+5V
5VSB	+5V
	-5V
COM	COM
+5V	COM
COM	COM
+5V	PS-ON
COM	COM
+3.3V	-12V
+3.3V	+3.3V

Standard ATX Power Connector

AGP Pro Power
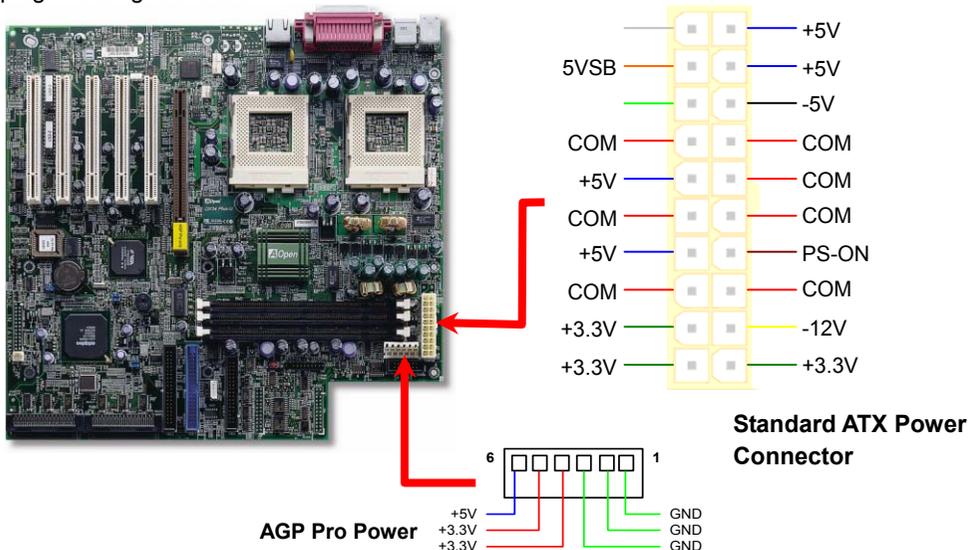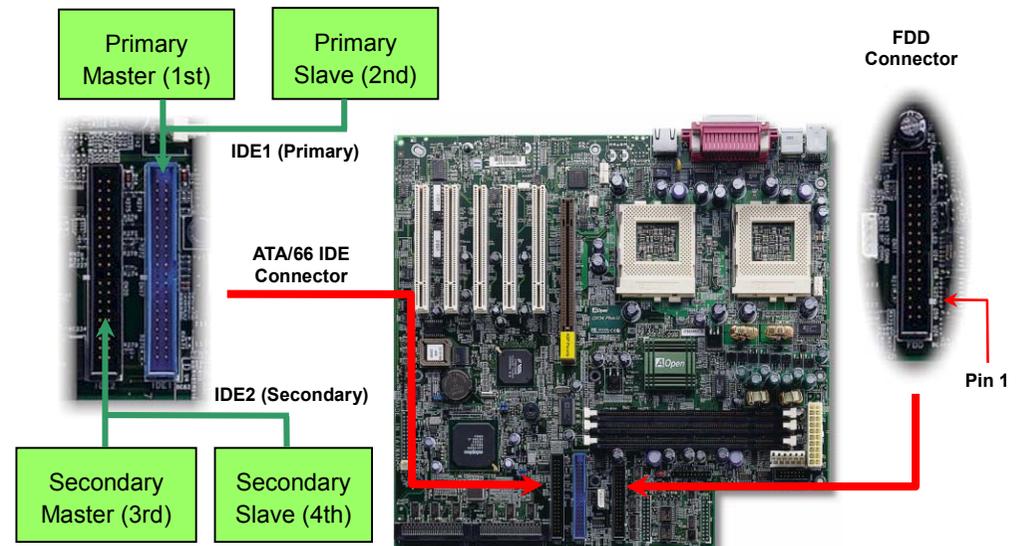
6   1

+5V   GND
+3.3V   GND
+3.3V   GND

8. Redundant SPS Monitoring Connector

This motherboard implements Redundant SPS monitoring connector to provide hardware monitoring signals. It is feasible to install an additional 337-watt power supply module (optional with AOpen Server Housing) in a hot swappable configuration. If any SPS failed, a signal will be sent to a hardware monitoring device.

PS_ON
PS 3 Fail
Fan 3 Fail

Present 1
I^2C CLK
Fan 1 Fail
PS 1 Fail

13   1
14   2

Present 3
GND

PS 2 Fail
Fan 2 Fail
Present 2
5VSB

9. Connecting IDE & FDD Cable

Connect 34-pin floppy cable and 40-pin ATA100 or ATA33 IDE cable to floppy connector FDC and IDE connector **IDE1**, **IDE2**. Pin1 of cable is normally marked with red color. Be careful of the pin1 orientation. Wrong orientation may cause system damage.

Primary Master (1st)
Primary Slave (2nd)

IDE1 (Primary)

FDD Connector

ATA/66 IDE Connector

IDE2 (Secondary)

Secondary Master (3rd)
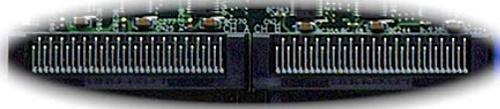Secondary Slave (4th)

Pin 1

10. Connecting 68-pin Ultra3 SCSI Cable

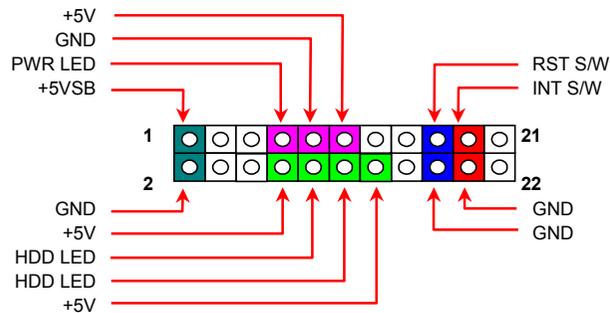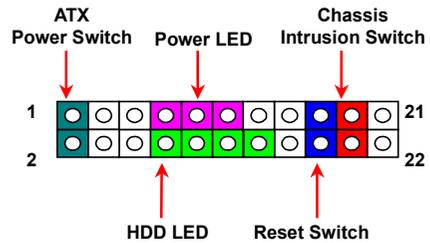The DX34Plus-U provides two 68-pin Ultra Wide/Ultra 2/3 SCSI connectors for 16-bit or 16-bit differential SCSI devices.
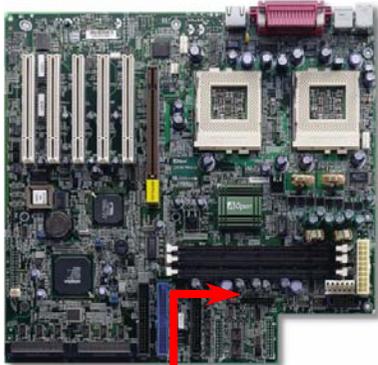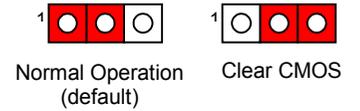
68-pin SCSI Ultra3 Connectors

11. Connecting Front Panel Connector

Attaching such as power LED, speaker, reset switch, power switch connector, etc.… to corresponding pins.

ATX
Power Switch

Power LED

Chassis
Intrusion Switch

1   21
2   22

HDD LED   Reset Switch

+5V
GND
PWR LED
+5VSB

RST S/W
INT S/W

1   21
2   22

GND
+5V
HDD LED
HDD LED
+5V

GND
GND

12. JP14 Clear CMOS

You can clear CMOS to restore system default setting. To clear the CMOS, follow the procedure below.

1. Turn off the system and unplug the AC power.

2. Remove ATX power cable from connector PWR2.

3. Locate JP14 and short pins 2-3 for a few seconds.

4. Return JP14 to its normal setting by shorting pins 1 & pin2.

5. Connect ATX power cable back to connector PWR2.

Normal Operation (default)   Clear CMOS

13. Connecting SCSI Card LED Connector

The 4-pin SCSI LED connector can be connected to a PCI SCSI control card activity LED connector. Read or write activity by devices connected to the SCSI card will make the LED lighting up.

CN23 →

CN24 →

14. Select Buzzer or Ext. Speaker (Optional)

There is one jumper cap over pin1 and pin2 of JP4 for internal buzzer. If you want to use external case-mounted speaker instead of internal buzzer, please remove jumper cap to short pin2 and pin3.

1

JP4

1

Buzzer
(Default)

1

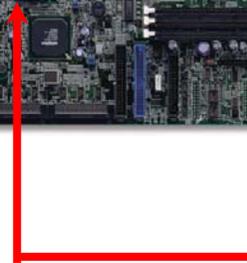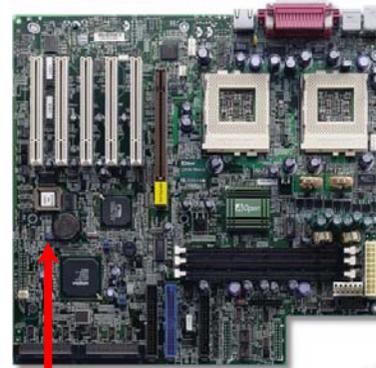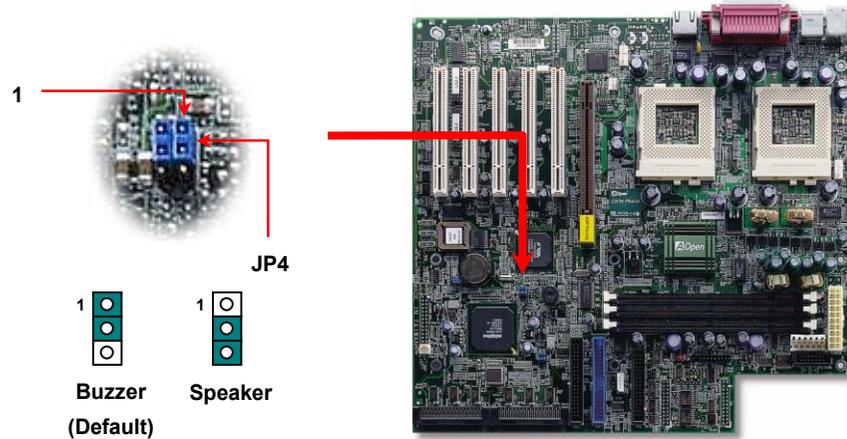**Speaker**

15. On board SCSI controller Channel

The **JP3/JP3X** allows you to enable or disable the on-board SCSI Channel A and B terminator control function. The SCSI **Channel A** is controlled by **JP3;** the **Channel B** is controlled by **JP3X**.

JP3   **JP3X**

1

ON
(Default)

OFF

16. Wake On LAN

This feature is very similar as Wake On Modem, but it goes through local area network. To use Wake On LAN function, you must have a network card with chipset that supports this feature, and connect a cable from LAN card to motherboard WOL connector.

+5VSB
GND
LID
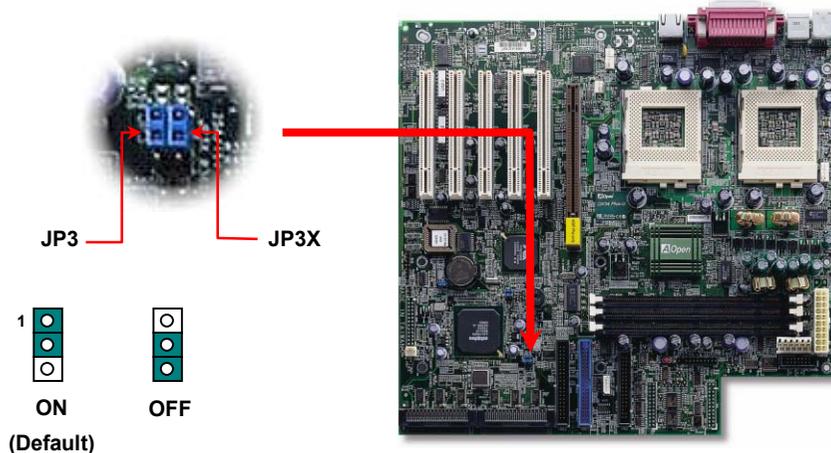
17. Power-On and Load BIOS Setup

After you finish the setting of jumpers and connect correct cables. Power on and enter the BIOS Setup, press <Del> during POST (Power On Self Test). Choose "Load Default Setting" for recommended optimal performance.

Del

```
                    Setup Utility

         • System Information
         • Product Information
         • Disk Drives
         • Onboard Peripherals
         • Power Management
         • Boot Options
         • Date and Time
         • System Security
         • System Event Log


           Load Default Settings
           Abort Settings Change



                    <ALT+H>
```

Warning: Please avoid of using "Load Turbo Defaults", unless you are sure your system components (CPU, DRAM, HDD, etc.) are good enough for turbo setting.
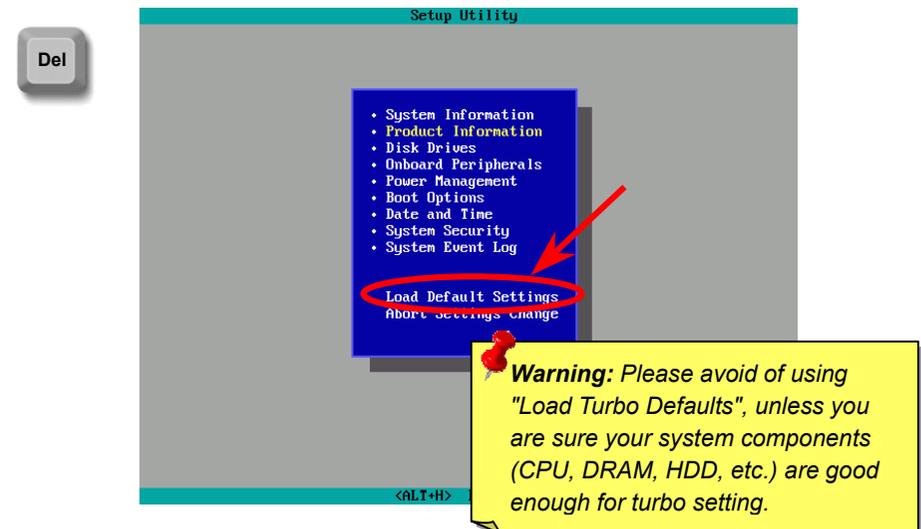
Troubleshooting

If you encounter any trouble to boot you system, follow the procedures accordingly to resolve the problem.

```
                    ┌──────────┐
                    │   Start  │
                    └────┬─────┘
                         ↓
┌──────────────────────────────────────────────┐
│ Turn off the power and unplug the AC power     │
│ cable, then remove all of the addon cards and  │
│ cables, including VGA, IDE, FDD, COM1,         │
│ COM2 and Printer.                              │
└────────────────────┬───────────────────────────┘
                         ↓
┌──────────────────────────────────────────────┐
│ Make sure if the jumper settings for CPU and   │
│ DRAMs are correct.                             │
└────────────────────┬───────────────────────────┘
                         ↓
              ┌──────────────────┐
              │   Clear CMOS.    │
              └────────┬─────────┘
                         ↓
┌──────────────────────────────────────────────┐
│ Install the VGA card. Then connect your        │
│ monitor and keyboard.                          │
└────────────────────┬───────────────────────────┘
                         ↓
         ◇ Turn on the power, and check if ◇  ──No──→ The problem was probably caused
           the power supply and CPU fan               by power supply or motherboard
           work properly.                             failure. Please contact your reseller
                         │ Yes                        or local distributor for repairing.
                         ↓
         ◇ Check if there is display. ◇ ──No──→ Perhaps your VGA card or monitor
                         │ Yes                    is defective.
                         ↓
         ◇ Press Ctrl, and Alt key at the ◇ ──No──→ It is very possible that your keyboard
           same time, hold them and then             is defective.
           press Del to see if the
           system reboots.
                         │ Yes
                         ↓
┌──────────────────────────────────────────────┐
│ During system rebooting, press Del to enter    │
│ BIOS Setup. Choose "Load Setup Default".       │
└────────────────────┬───────────────────────────┘
                         ↓
         ◇ Turn off the system and ◇ ──No──→ The problem should be caused by the
           re-connect the IDE cable.              IDE cables or HDD itself.
           Check if the system can
           reboot successfully.
                         │ Yes
                         ↓
┌──────────────────────────────────────────────┐
│ Re-install Windows 95, Windows 98 or Windows NT.│
└────────────────────┬───────────────────────────┘
                         ↓
                    ┌──────────┐
                    │    End   │
                    └──────────┘
```
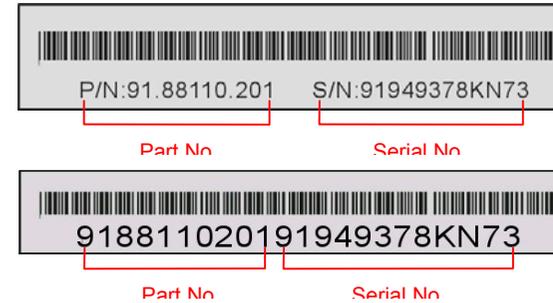
Part Number and Serial Number

The Part Number and Serial number are printed on bar code label. You can find this bar code label on the outside packing, on ISA/CPU slot or on component side of PCB. For example:

P/N:91.88110.201   S/N:91949378KN73

Part No   Serial No

918811020191949378KN73

Part No   Serial No

P/N: 91.88110.201 is part number, **S/N: 91949378KN73** is serial number.

Technical Support

Dear Customer,

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Thanks very much for your understanding!

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French	*http://aofr.aopen.com.tw/tech/contact/techfr.htm*
Simplified Chinese	*http://www.aopen.com.cn/tech/contact/techcn.htm*

1 **Online Manual:** Please check the manual carefully and make sure the jumper settings and installation procedure are correct.
http://www.aopen.com.tw/tech/download/manual/default.htm

2 **Test Report:** We recommend to choose board/card/device from the compatibility test reports for assembling your PC.
http://www.aopen.com.tw/tech/report/default.htm

3 **FAQ:** The latest FAQ (Frequently Asked Questions) may contain a solution to your problem.
http://www.aopen.com.tw/tech/faq/default.htm

4 **Download Software:** Check out this table to get the latest updated BIOS/utility and drivers.
http://www.aopen.com.tw/tech/download/default.htm

5 **News Group:** Your problem probably had been answered by our support engineer or professional users on the news group.
http://www.aopen.com.tw/tech/newsgrp/default.htm

6 **Contact Distributors/Resellers:** We sell our products through resellers and integrators. They should know your system configuration very well and should be able to solve your problem more efficien n important reference for you if next time you want to buy something else from them.

7 **Contact Us**: Please prepare detail system configuration and error symptom before contacting us. The **part number**, **serial number** and **BIOS version** are also very helpful.