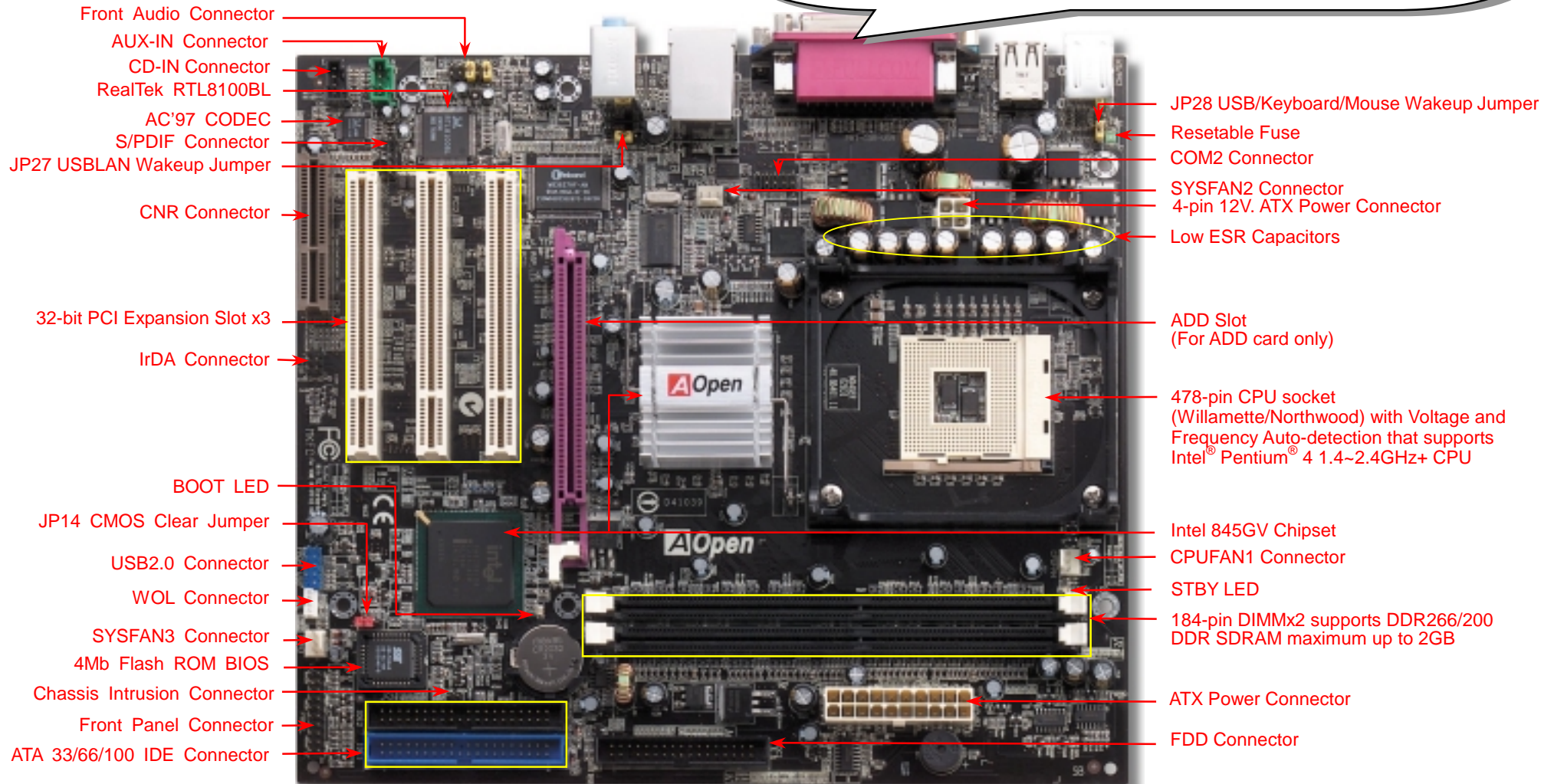
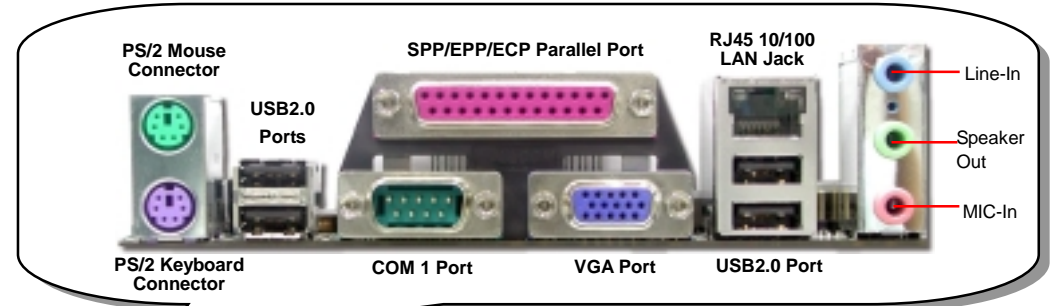


MX4GVR



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**. Thanks for the help of saving our earth.

Accessory Checklist

- This Easy Installation Guide x1
- 80-wire IDE Cable x1
- Floppy Disk Drive Cable x1
- Registration Card x1
- Bonus Pack CD x1
- S/PDIF Cable x 1 (User Upgrade Optional)
- Retention Module x1
- I/O Shield x1



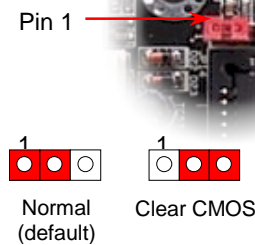
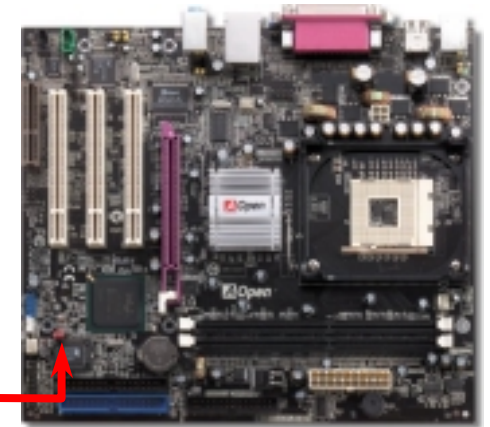
PART NO: 49.8B411.E01

DOC. NO: MX4GVR-EG-E0208A

1. 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 pin 1 & pin 2.
5. Connect ATX power cable back to connector PWR2.

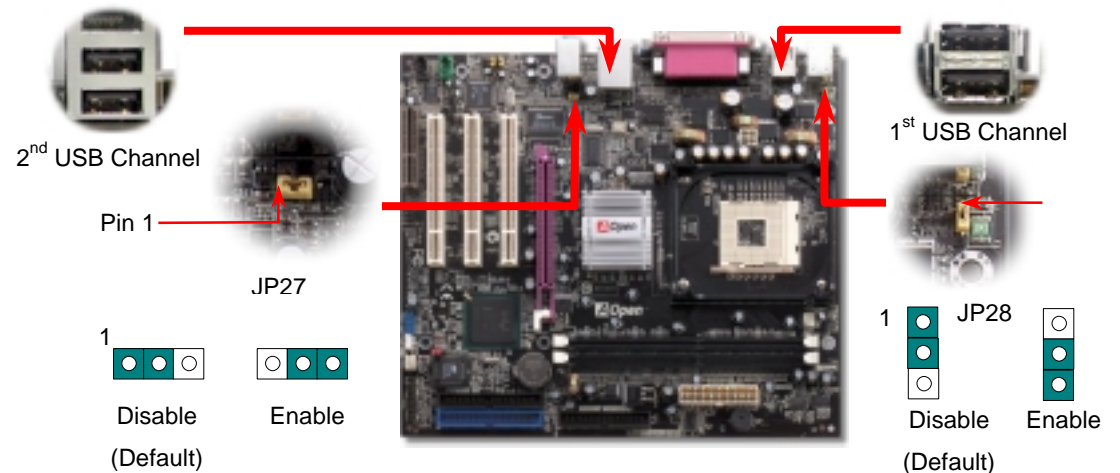


Tip: When should I Clear CMOS?

1. Boot fail because of overclocking...
2. Forget password...
3. Troubleshooting...

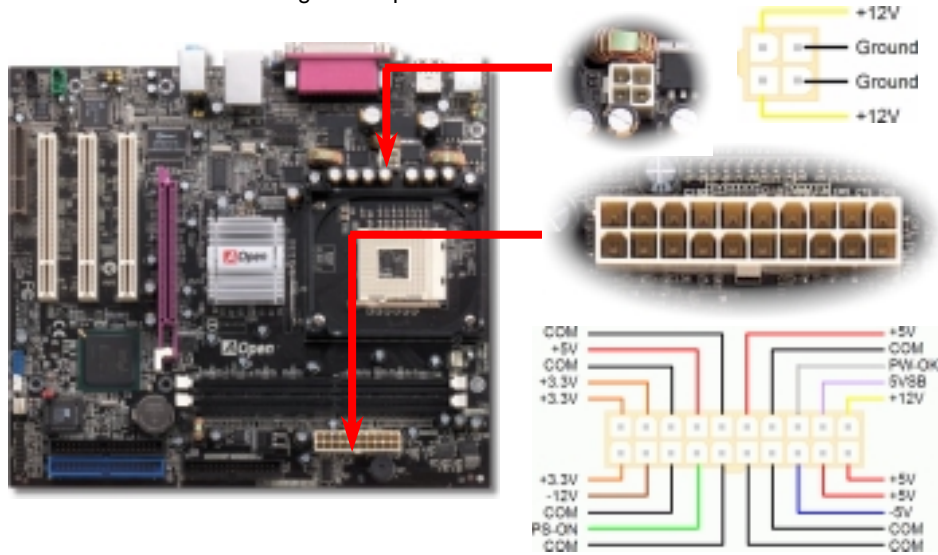
2. JP27/28 Keyboard/Mouse Wakeup Jumper

This motherboard provides USB and PS2 keyboard / mouse wake-up function. You can use JP27 / JP28 to enable or disable this function, which could resume your system from suspend mode with keyboard or mouse installed. JP28 controls 1st USB channel, and JP27 controls 2nd USB channel. The factory default setting is set to "Disable"(1-2), and you may enable this function by setting the jumper to 2-3.



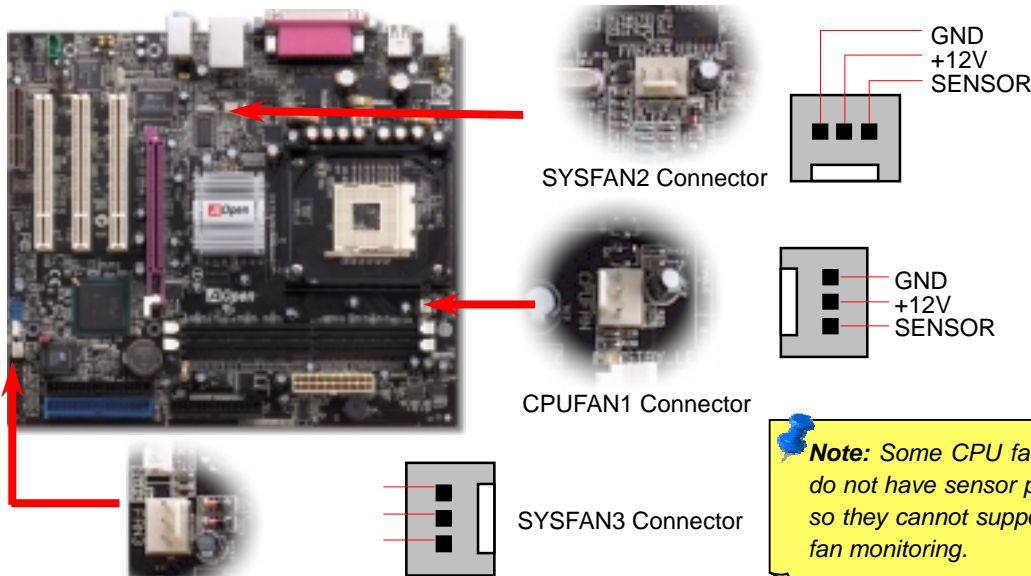
3. ATX Power Connectors

This motherboard comes with a 20-pin and 4-pin ATX power connector as shown below. Make sure you plug in the right direction. We strongly recommend you to insert the 4-pin connector before connecting the 20-pin connector.



4. Installing CPU & System Fan

Plug in the CPU fan cable to the 3-pin **CPUFAN1** connector. If you have chassis fan, you can also plug it in **SYSFAN2** or **SYSFAN3** connector.



Note: Some CPU fans do not have sensor pin so they cannot support fan monitoring.

5. Setting CPU Voltage & Frequency

Setting CPU Core Voltage

This motherboard supports CPU VID function. The CPU core voltage will be automatically detected.

Setting CPU Frequency

This motherboard is CPU jumper-less design, you can set CPU frequency through the BIOS setup, and no jumpers or switches are needed. The default setting is "table select mode". You can adjust the FSB from "CPU Host/SDRAM/PCI Clock" for overclocking.

BIOS Setup > Frequency / Voltage Control > CPU Speed Setup

CPU Ratio	8x, 10x... 21x, 22x, 23x, 24x
CPU FSB (By BIOS table)	100 and 133MHz.

Northwood CPU	CPU Core Frequency	FSB Clock	System Bus	Ratio
Pentium 4 1.6G	1600MHz	100MHz	400MHz	16x
Pentium 4 1.6G	1600MHz	133MHz	533MHz	12x
Pentium 4 1.7G	1700MHz	133MHz	533MHz	13x
Pentium 4 1.8G	1800MHz	100MHz	400MHz	18x
Pentium 4 2.0G	2000MHz	100MHz	400MHz	20x
Pentium 4 2.2G	2200MHz	100MHz	400MHz	22x
Pentium 4 2.26G	2260MHz	133MHz	533MHz	17x
Pentium 4 2.4G	2400MHz	100MHz	400MHz	24x
Pentium 4 2.4G	2400MHz	133MHz	533MHz	18x
Pentium 4 2.53G	2530MHz	133MHz	533MHz	19x
Pentium 4 2.66G	2660MHz	133MHz	533MHz	20x
Pentium 4 2.80G	2800MHz	133MHz	533MHz	21x

Willamette CPU	CPU Core Frequency	FSB Clock	System Bus	Ratio
Pentium 4 1.8G	1800MHz	100MHz	400MHz	18x
Pentium 4 1.9G	1900MHz	100MHz	400MHz	19x
Pentium 4 2.0G	2000MHz	100MHz	400MHz	20x

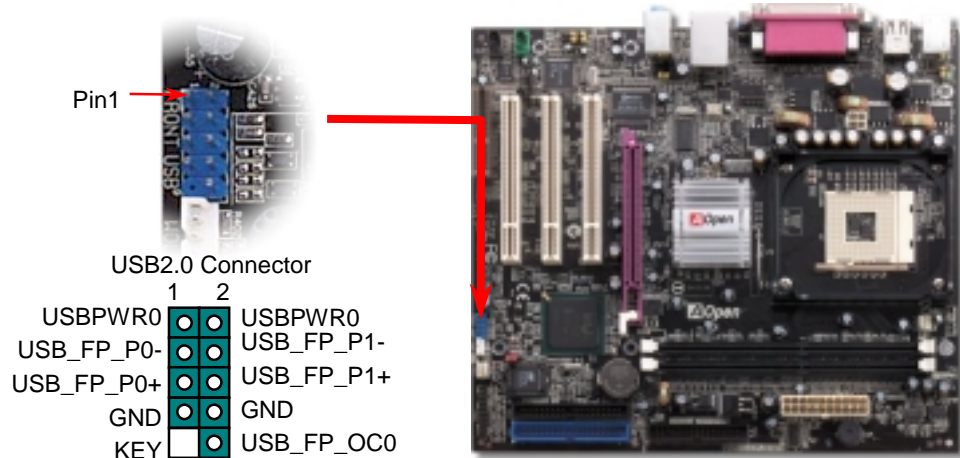
Celeron CPU	CPU Core Frequency	FSB Clock	System Bus	Ratio
1.7G	1700MHz	100MHz	400MHz	17x
1.8G	1800MHz	100MHz	400MHz	18x

Note: Since the latest processor, Northwood, would detect the clock ratio automatically, you may not be able to adjust the clock ratio in BIOS manually.

Warning: Intel 845GV supports maximum 533MHz system bus and 66MHz AGP clock; higher clock setting may cause serious system damage.

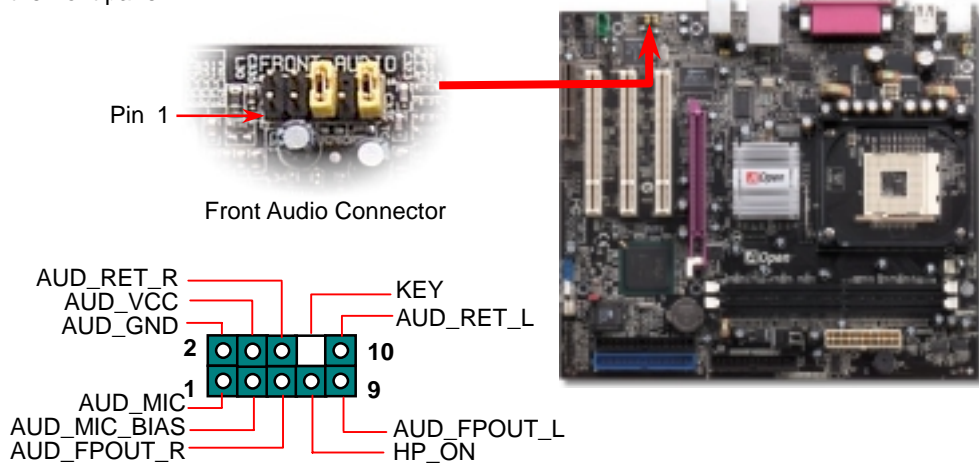
6. 2nd USB2.0 Connectors

This motherboard provides six USB connectors to link USB devices, such as mouse, keyboard, modem, printer, etc. There are four ports on the PC99 back panel. You can use proper cable to connect other USB connectors to the back panel or front panel of chassis.



7. Front Audio Connector

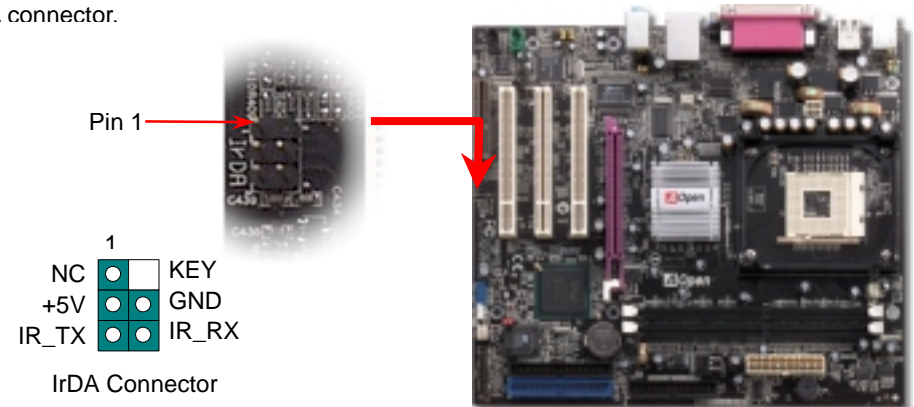
If the housing has been designed with an audio port on the front panel, you'll be able to connect onboard audio to front panel through this connector. By the way, please remove 5-6 and 9-10 jumper caps from the Front Audio Connector before connecting the cable. Please do not remove these 5-6 and 9-10 yellow jumper caps if there's no audio port on the front panel.



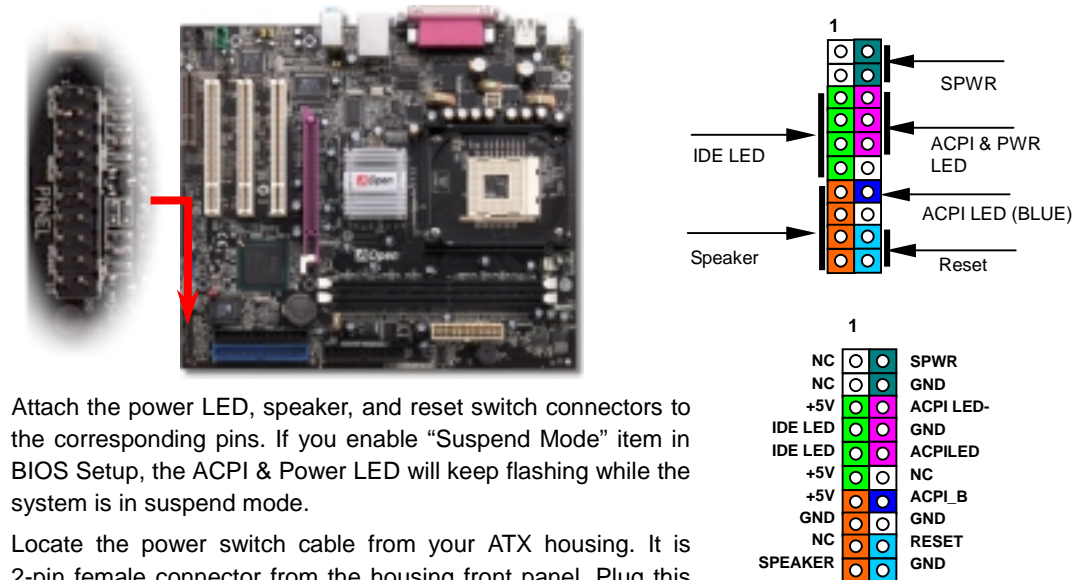
8. IrDA Connector

The IrDA connector can be configured to support wireless infrared module, with this module and application software such as Laplink or Windows 95 Direct Cable Connection, the user can transfer files to or from laptops, notebooks, PDA devices and printers. This connector supports HPSIR (115.2Kbps, 2 meters) and ASK-IR (56Kbps).

Install the infrared module onto the **IrDA** connector and enable the infrared function from BIOS Setup, UART Mode, make sure to have the correct orientation when you plug in the IrDA connector.



9. Connecting Front Panel Cable

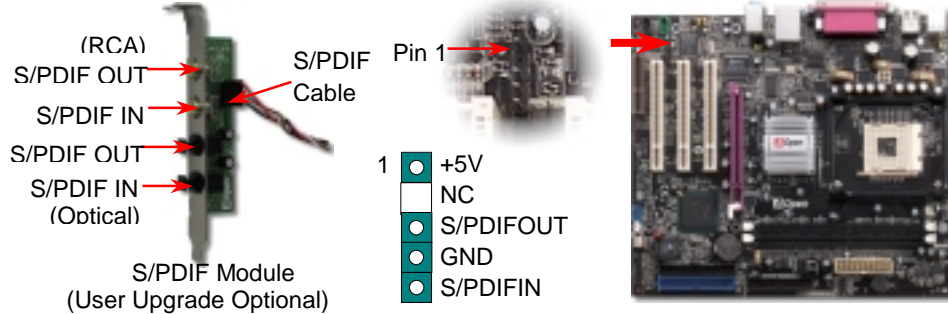


Attach the power LED, speaker, and reset switch connectors to the corresponding pins. If you enable "Suspend Mode" item in BIOS Setup, the ACPI & Power LED will keep flashing while the system is in suspend mode.

Locate the power switch cable from your ATX housing. It is 2-pin female connector from the housing front panel. Plug this connector to the soft-power switch connector marked **SPWR**.

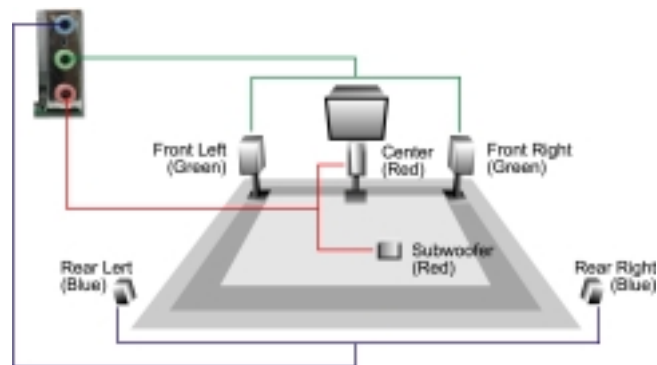
10. S/PDIF (Sony/Philips Digital Interface) Connector

S/PDIF (Sony/Philips Digital Interface) is a newest audio transfer file format, which provides impressive audio quality through optical fiber and allows you to enjoy digital audio instead of analog audio. Through a specific audio cable, you can connect the S/PDIF connector to other end of the S/PDIF audio module, which bears S/PDIF digital output. Normally there are two S/PDIF outputs as shown, one for RCA connector, the most common one used for consumer audio products, and the other for optical connector with better audio quality. Same as outputs, you can also connect RCA or optical audio products to input connectors on the module and have the voice or music come out from your computer. However, you must have a S/PDIF supported speaker/amplifier/decoder with S/PDIF digital input/output to connect to the S/PDIF digital input/output to make the most out of this function.



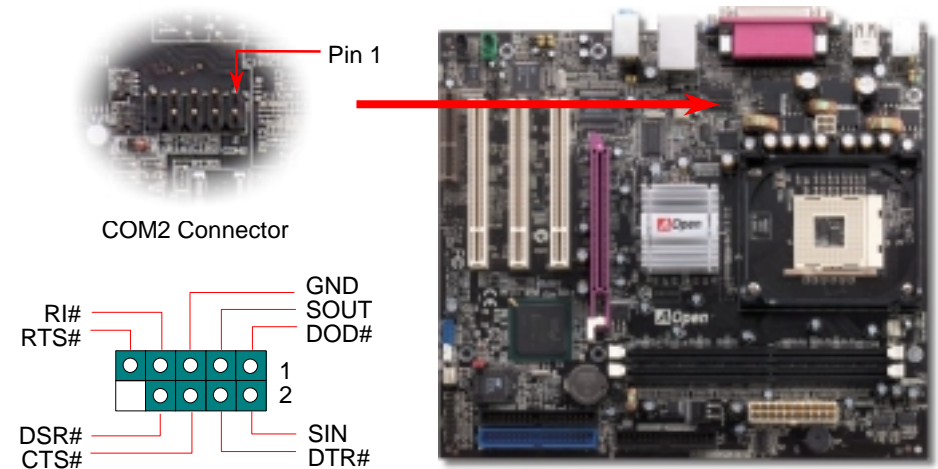
11. Super 5.1 Channel Audio Effects

This motherboard comes with an ALC650 CODEC, which supports high quality of 5.1 Channel audio effects, bringing you a brand new audio experience. On the strength of the innovative design of ALC650, you're able to use standard line-jacks for surround audio output without connecting any external module. To apply this function, you have to install the audio driver in the Bonus Pack CD as well as an audio application supporting 5.1 Channel. Picture below represents the standard location of all speakers in 5.1 Channel sound track. Please connect the plug of your front speakers to the green "Speaker out" port, rear speakers' plug to the blue "Line in" port and both of the center and subwoofer speakers to the red "MIC in" port.



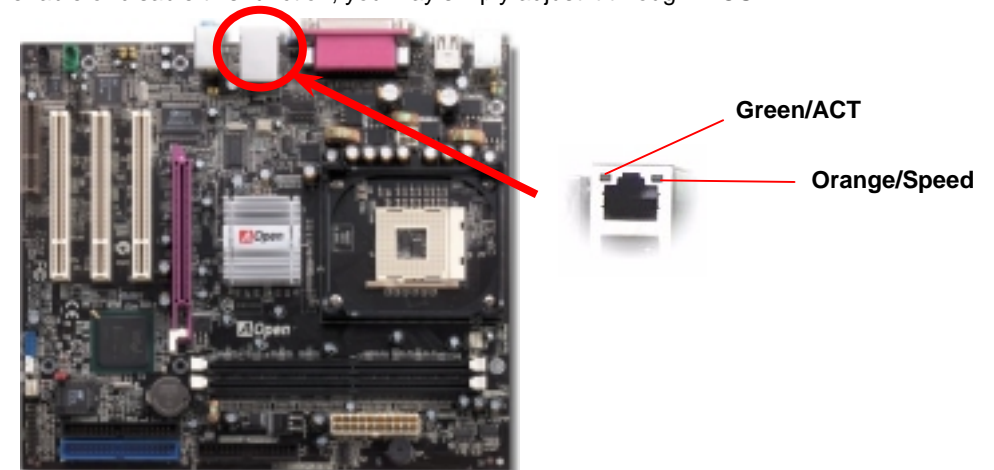
12. COM2 Connector

This motherboard provides two serial ports. One of them is on back panel connector, and the other is on the upper middle of board. With proper cable, you can connect it to the back panel of chassis.



13. Support 10/100 Mbps LAN Onboard

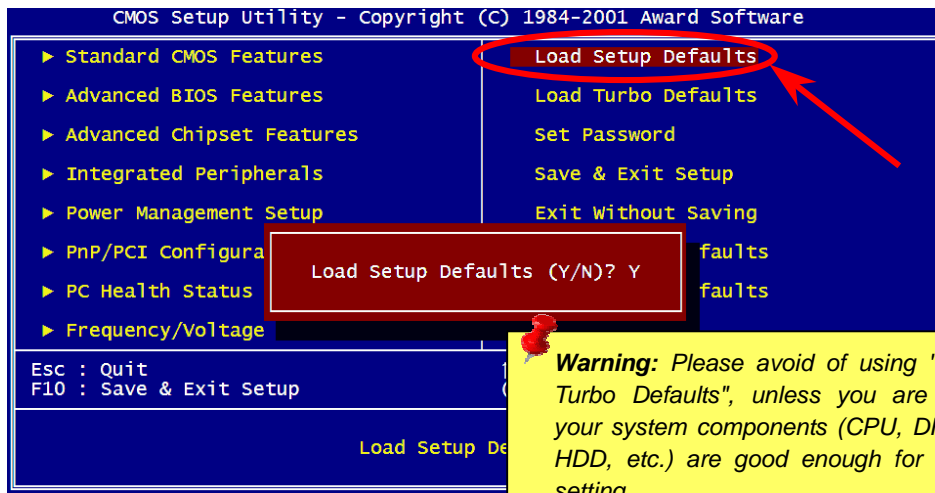
On the strength of RealTek RTL8100BL LAN controller on board, which is a highly-integrated Platform LAN Connect device, it provides 10/100M bps Ethernet for office and home use, the Ethernet RJ45 connector is located on top of USB connectors. The green LED indicates the link mode, it lights when linking to network and blinking when transferring data. The orange LED indicates the transfer mode, and it lights when data is transferring in 100Mbps mode. To enable or disable this function, you may simply adjust it through BIOS.



14. Power-on and Load BIOS Setup

Del

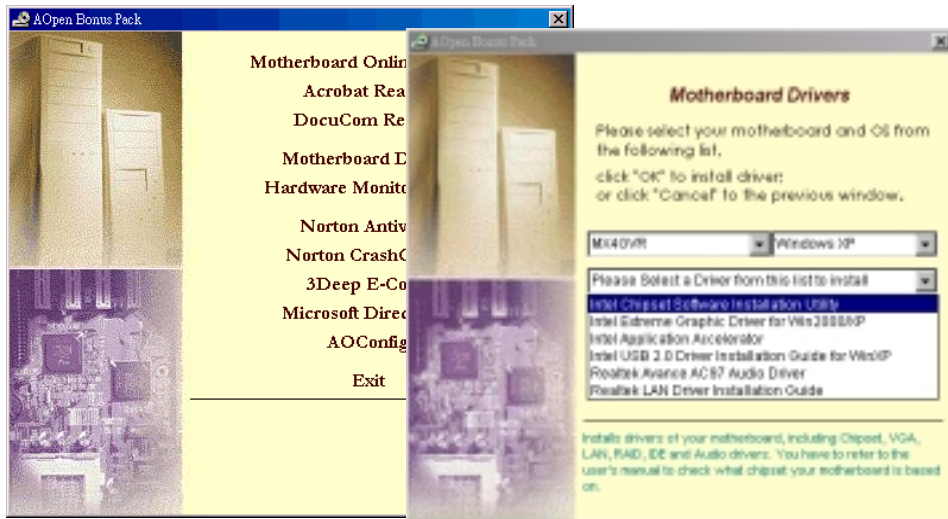
After you finish jumper settings and connect correct cables, power on and enter the BIOS Setup. Press during POST (Power On Self Test). Choose "Load Setup Defaults" for recommended optimal performance.



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.

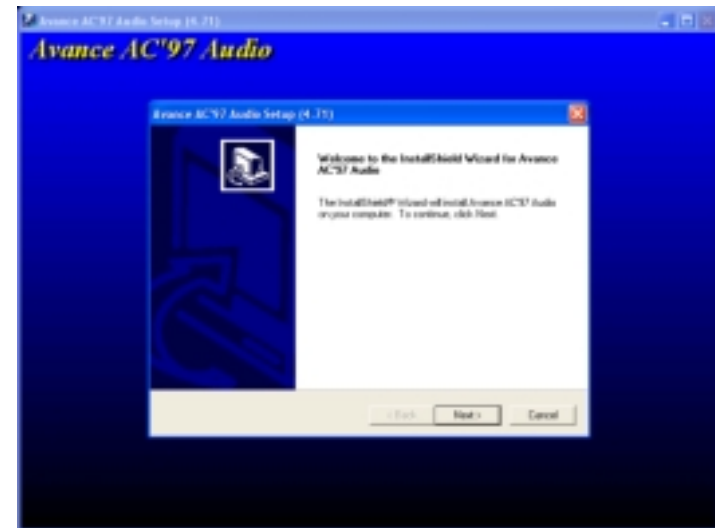
15. AOpen Bonus Pack CD

You can use the autorun menu of Bonus CD. Choose the utility and driver and select model name. After selecting the model name, you can install its AGP, IAA, Audio, LAN and USB2.0 drivers from this CD.



16. Installing Onboard Sound Driver

This motherboard comes with [AC97 CODEC](#). This audio driver supports Windows 98SE and upper Windows OS; you can find the audio driver from the Bonus Pack CD auto-run menu.



17. BIOS Upgrade under Windows Environment

You may accomplish BIOS upgrade procedure with EzWinFlash by the following steps, and it's STRONGLY RECOMMENDED to close all the applications before you start the upgrading.

1. Download the new version of BIOS package [zip](#) file from our official web site. Unzip the download BIOS package (ex: WMX4GVR102.ZIP) with WinZip (<http://www.winzip.com>) in Windows environment.
2. Save the unzipped files into a folder, for example, WMX4GVR102.EXE & WMX4GVR102.BIN.
3. Double click on WMX4GVR102.EXE, EzWinFlash will detect the model name and BIOS version of your motherboard. If you had got the wrong BIOS, you will not be allowed to proceed with the flash steps.
4. You may select preferred language in the main menu, then click [Start Flash] to start the BIOS upgrade procedure.
5. EzWinFlash will complete all the process automatically, and a dialogue box will pop up to ask you to restart Windows. You may click [YES] to reboot Windows.
6. Press at POST to [enter BIOS setup](#), choose "Load Setup Defaults", then "Save & Exit Setup". Done!

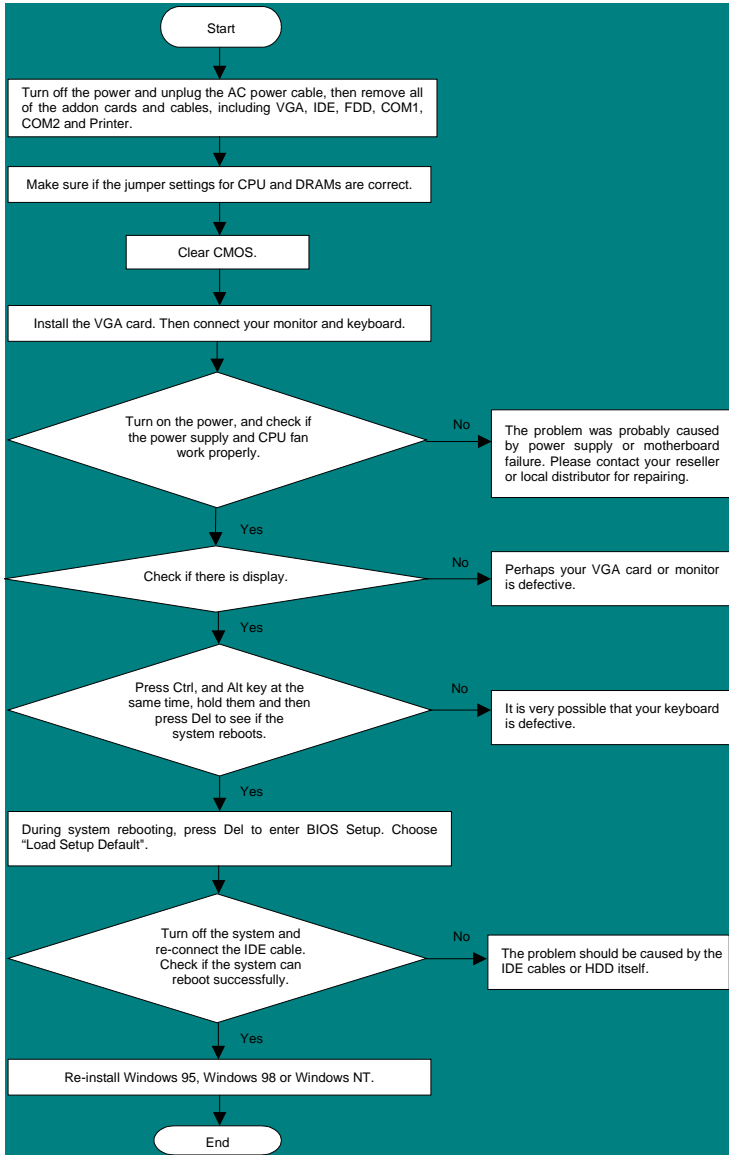
It is strongly recommended NOT to turn off the power or run any application during FLASH PROCESS.

Warning: The upgrade of new BIOS will permanently replace your original BIOS content after flashing. The original BIOS setting and Win95/Win98 PnP information will be refreshed and you probably need to re-configure your system.



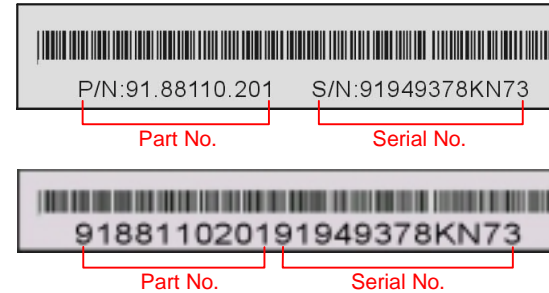
Troubleshooting

If you encounter any trouble while booting your system, follow the procedures accordingly to resolve the problem.



Part Number and Serial Number

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



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

Model name and BIOS version

Model name and BIOS version can be found on upper left corner of first boot screen (POST screen). For example:



MX4GVR is model name of motherboard; **R1.02** is BIOS version



Technical Support

Dear Customer,

Thanks for choosing AOpen products. To provide the best and fastest service to our customer is our first priority. However, we receive numerous emails and phone-calls worldwide everyday, it is very hard for us to serve everyone on time. We recommend you follow the procedures below and seek help before contact us. With your help, we can then continue to provide the best quality service to more customers.

Thanks very much for your understanding!

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German <http://www.aopencom.de/tech/default.htm>

Simplified Chinese <http://www.aopen.com.cn/tech/default.htm>

1

Online Manual: Please check the manual carefully and make sure the jumper settings and installation procedure are correct.
<http://english.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://english.aopen.com.tw/tech/report/default.htm>

3

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

4

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

5

News Group: News posted by computer experts. You are welcome to join any discussion there.
<http://english.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 efficiently and provide 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.