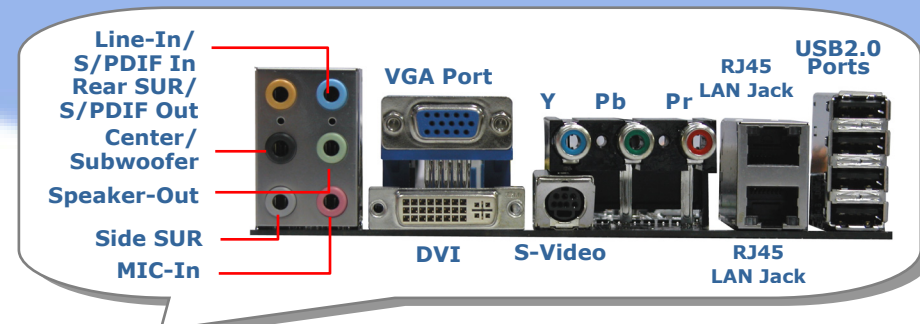
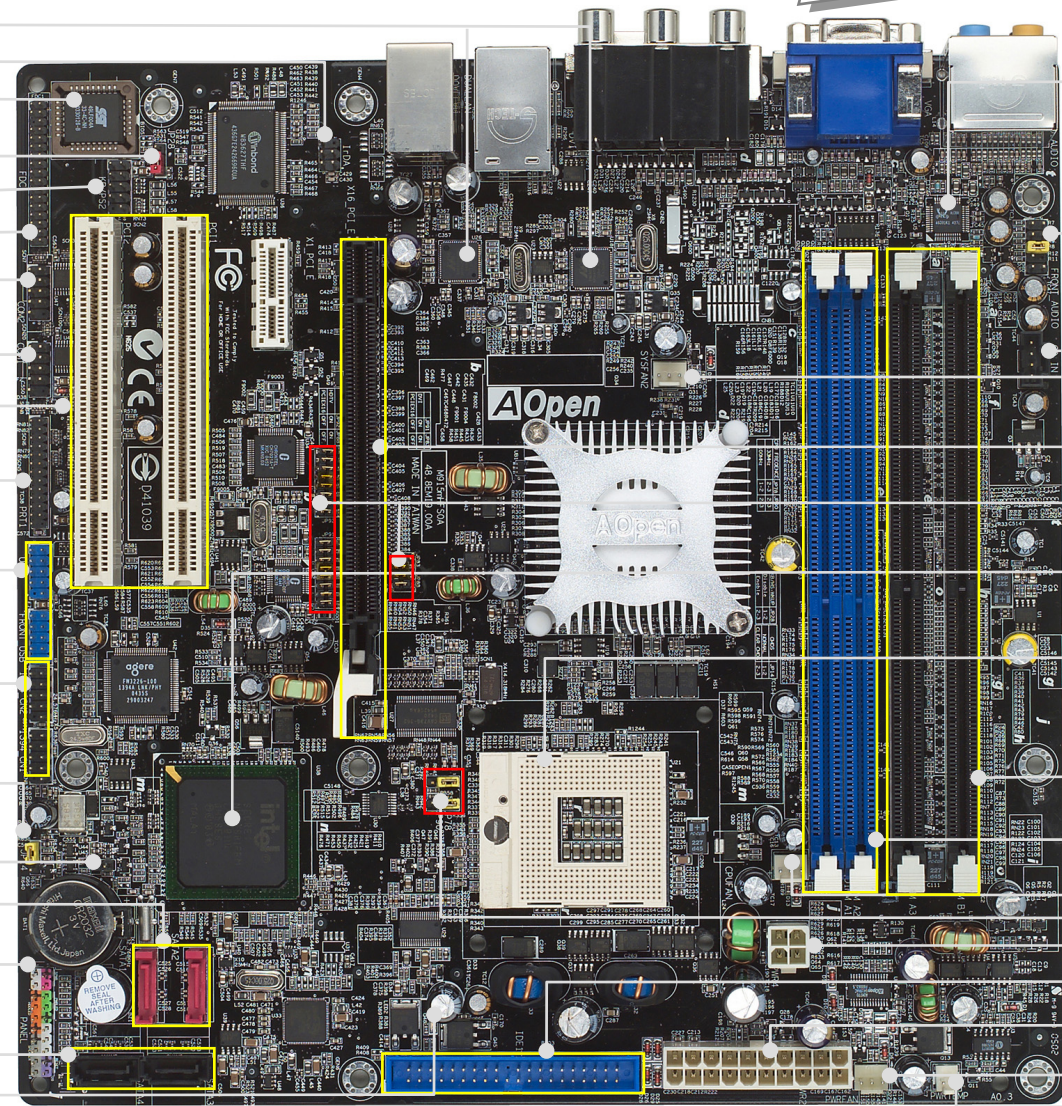


i915GMm-HFS



- Dual Marvell Gigabit LAN Chip
- IRDA Connector
- DieHard BIOS Lite
- JP28 PS2 KB/Mouse Wakeup Jumper
- PS2 KB Connector
- FDD Connector
- COM2 Connector
- COM1 Connector
- 32-bit PCI Expansion Slots x2
- Parallel Connector
- USB 2.0 Connector
- IEEE 1394 Connectors x 2
- JP14 CMOS Data Clear Jumper
- Case Open Connector
- Serial ATA Ports x2
Supports 150 MB/s Transfer Rate
- Front Panel Connector
- Serial ATA II Ports x2
Supports 150 MB/s Transfer Rate
(RAID 0, 1 Supported)
- STBY LED



- Onboard AC'97 CODEC
- Front Audio Connector
- CD_IN Connector
- SYSFAN2 Connector
- PCI Express x16 Slot
- PCIex16 Signal Control Jumper
- Intel® 915GM/ICH6-M Chipsets that support 533 MHz FSB, DDR 333, DDRII 400/533 Dual Channel and PCIex16
- 479-pin CPU socket with Voltage and Frequency Auto-detection that supports Intel® Pentium® M (Dothan and Banias) and Celeron® M CPU
- 240-pin DIMMsx2 support DDRII 400/533 Dual Channel Max. To 2GB
- 184-pin DIMMsx2 support DDR333 Max. To 2GB
- CPUFAN Connector
- FSB Control Jumper
- 4-pin 12V ATX Power Connector
- IDE Connectors (ATA 33/66/100 supported)
- ATX Power Connector
- PWRFAN Connector
- Power Temperature Connector

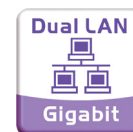
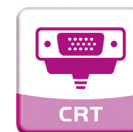
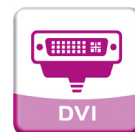
Before You Start

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

Accessory Checklist

- Easy Installation Guide x 1
- Enhanced Full Pictured Manual x 1
- 80-Wire IDE Cable x 1
- Floppy Drive Cable x 1
- Serial ATA Cable x 2
- Serial ATA Power Cable x 2
- S/PDIF Converter x 2
- Back Panel I/O Shield x 1
- Bonus Pack CD x 1
- CPU Cooler x 1
- PS2 Keyboard Connector x 1 + Bracket x2 (MTX+ATX)

Installing By Yourself

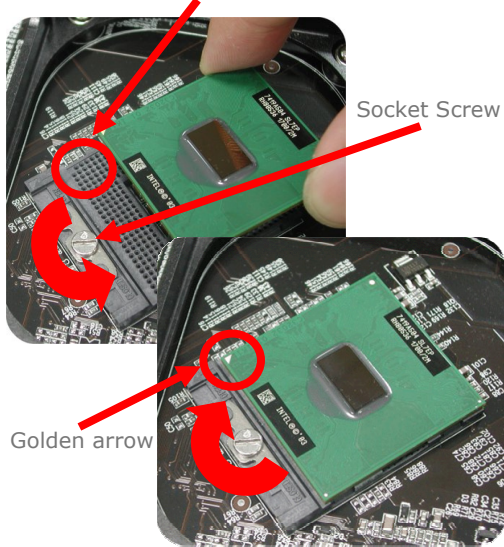


PART NO: 49.8EM0B.EE1

DOC. NO: I915GMMHFS-EG-E0501A

1. Installing CPU

This socket supports uFCPGA & uFCBGA package CPU, which is the latest CPU package developed by Intel. Other forms of CPU package are impossible to be fitted in. Socket Pin 1

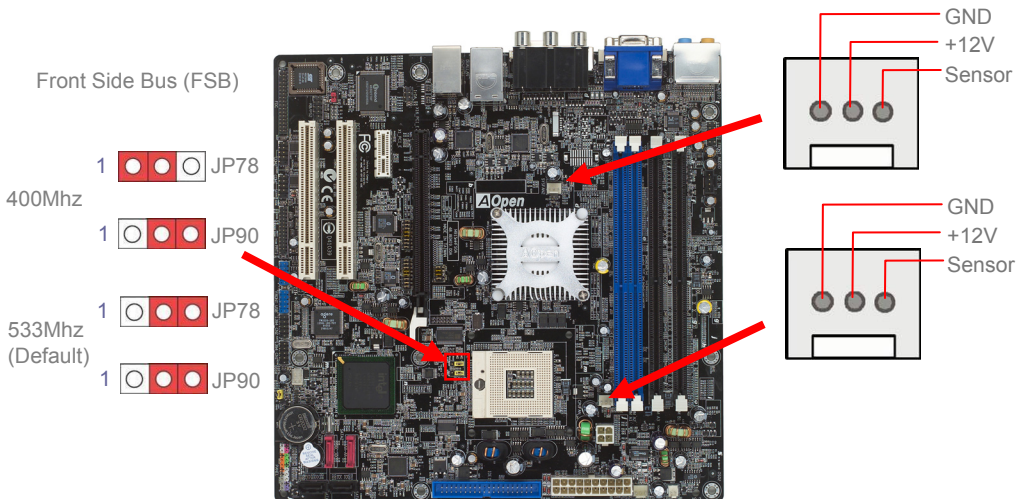


1. Unscrew socket screw counter-clockwise.
2. Locate Pin 1 in the socket and look for a golden arrow on the CPU upper interface. Match Pin 1 and golden arrow. Then insert the CPU into the socket.
3. Lock the socket screw clockwise to fasten CPU.

Note: If you do not match the CPU socket Pin 1 and CPU golden arrow well, you may damage the CPU.

2. Adjusting FSB by jumper

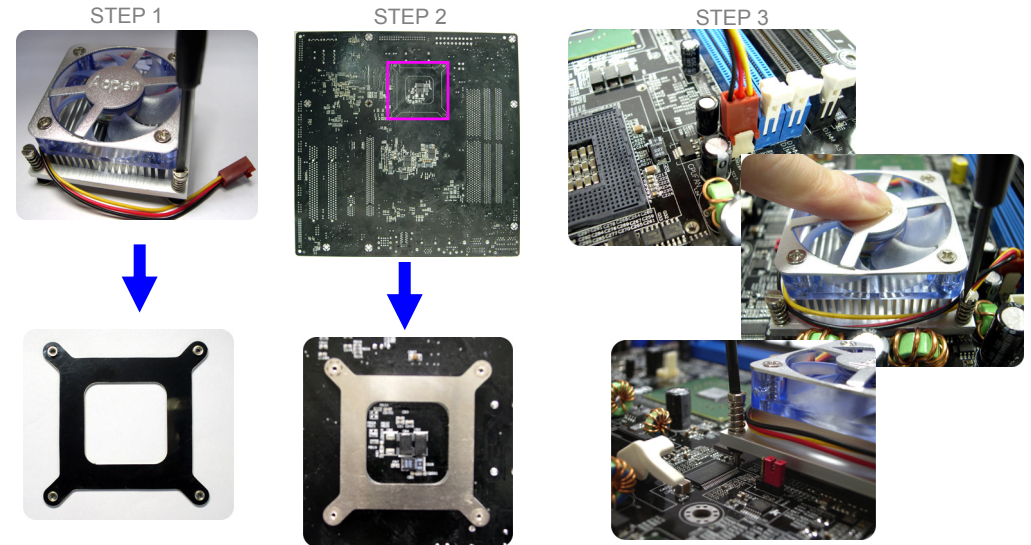
Adjust the FSB speed of the jumper according to the CPU specification.



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

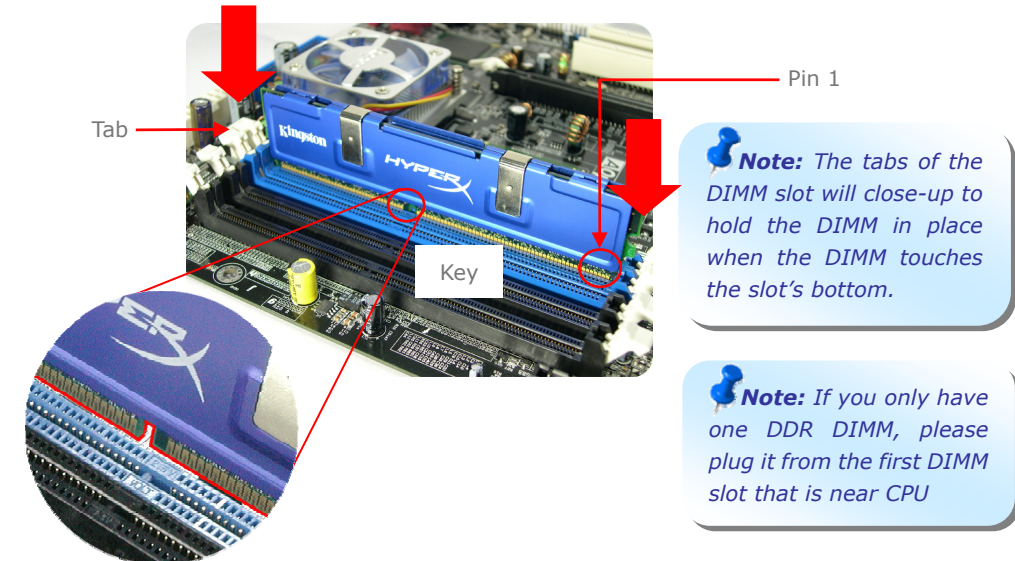
3. Installing Memory Modules

Please mechanically open up AOpen proprietary CPU cooler and first relocated the bottom fan plate and place it to the back of CPU where the motherboard is located. The place the fan facing forward, insert the power plug to the power source and lock the part that stick out from the bottom plate of the fan tightly.



4. Installing Memory Modules

DIMM slots are designed in black which are very easy to recognize. Insert the module straight down to the DIMM slot with both hands and press down firmly until the DIMM module is securely in place.

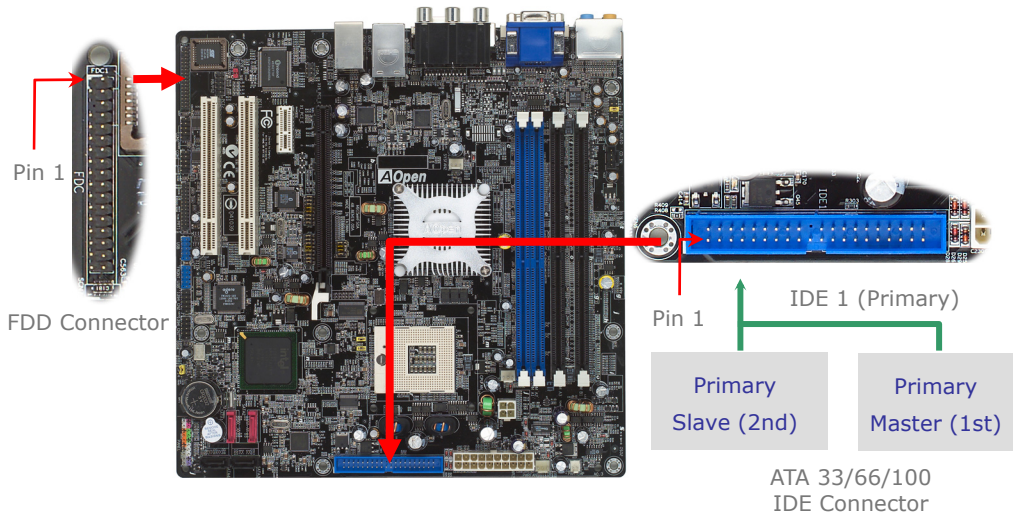


Note: The tabs of the DIMM slot will close-up to hold the DIMM in place when the DIMM touches the slot's bottom.

Note: If you only have one DDR DIMM, please plug it from the first DIMM slot that is near CPU

5. Connecting IDE and Floppy Cables

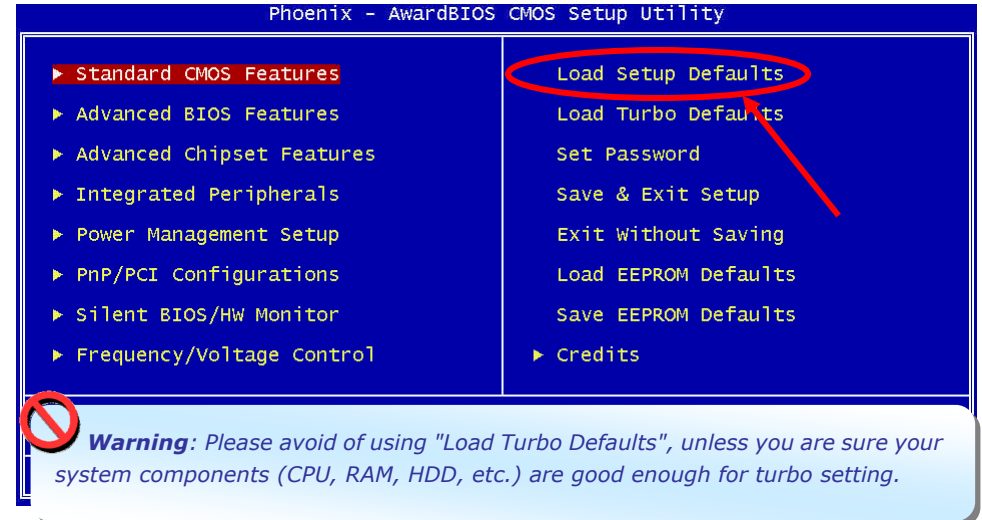
Connect 34-pin floppy cable and 40-pin, 80-wire IDE cable to floppy connector FDD and IDE connector. Be careful of the pin1 orientation. Wrong orientation may cause system damage.



7. Power-on and Loading BIOS Setup

Del

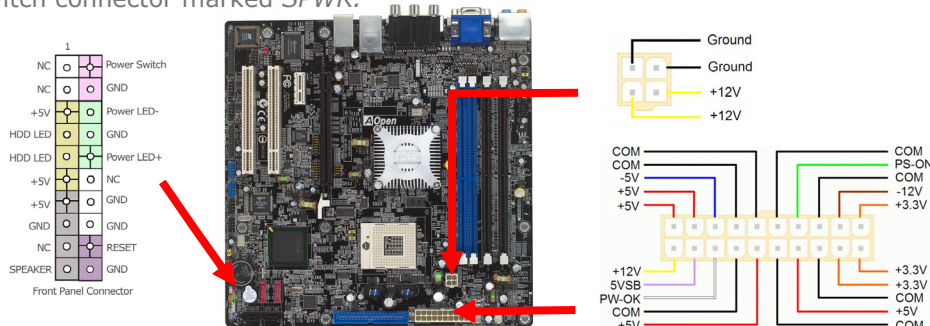
After you finish the setting of jumpers and connect correct cables. Power on and enter the BIOS Setup, press during POST (Power On Self Test). Choose "Load Setup Defaults" for recommended optimal performance.



6. Connecting Front Panel cable and ATX Power Cables

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*.



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

8. AOpen EzInstall and Bonus Pack CD

You can use the autorun menu of Bonus CD disc. Choose the utility and driver from the icons at left side, and then click on the "GO" button to complete installation automatically.



Setting CPU Voltage & Frequency

Setting CPU Core Voltage

This motherboard supports Voltage ID (VID) function to detect CPU voltage automatically during power-on.

Setting CPU Frequency

This motherboard is CPU jumper-less design, you can set CPU frequency through 1MHz stepping CPU Overclocking in the BIOS. CPU Core Frequency = CPU external frequency x CPU Ratio. However, all CPU now selling in the market belong to "Fixed Multiplier". That means users can not adjust the CPU Ratio but only change CPU FSB clock to achieve overclocking.

(Users do the overclocking at their own risk!!)

BIOS Setup > Frequency / Voltage Control > CPU Bus Frequency

CPU Ratio	4x, 5x... 17x, 18x, 20x
CPU FSB (Adjustment manually)	FSB = 400MHz - 533MHz by 1MHz Stepping CPU Overclocking

Processor Number	Architecture	Clock Speed	Front Side Bus	Cache	Ratio
Pentium M 770	90nm	2.13GHz	533MHz	2MB L2	16x
Pentium M 760	90nm	2.00GHz	533MHz	2MB L2	15x
Pentium M 750	90nm	1.86GHz	533MHz	2MB L2	14x
Pentium M 740	90nm	1.73GHz	533MHz	2MB L2	13x
Pentium M 730	90nm	1.60GHz	533MHz	2MB L2	12x
Pentium M 765	90nm	2.10GHz	400MHz	2MB L2	21x
Pentium M 755	90nm	2.00GHz	400MHz	2MB L2	20x
Pentium M 745	90nm	1.80GHz	400MHz	2MB L2	18x
Pentium M 735	90nm	1.70GHz	400MHz	2MB L2	17x
Pentium M 725	90nm	1.60GHz	400MHz	2MB L2	16x
Pentium M 715	90nm	1.50GHz	400MHz	2MB L2	15x
Pentium M 705	130nm	1.50GHz	400MHz	1MB L2	15x
Celeron M 370	90nm	1.50GHz	400MHz	1MB L2	15x
Celeron M 360	90nm	1.40GHz	400MHz	1MB L2	14x
Celeron M 350	90nm	1.30GHz	400MHz	1MB L2	13x
Celeron M 340	130nm	1.50GHz	400MHz	512KB L2	15x
Celeron M 330	130nm	1.40GHz	400MHz	512KB L2	15x

Note: With CPU speed changing rapidly, there might be faster CPU on the market by the time you received this installation guide. This table is kindly for your references only.



Tip: When you fail to overclock, you could:

1. Clear CMOS (JP14) to restore the default setting.
2. After turning power on, press "Home" immediately until the screen appears.

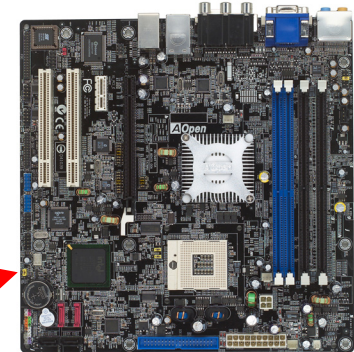


Warning: Intel 915GM chipset support maximum 533MHz (133MHz*4) system bus; higher clock setting may cause serious system damage.

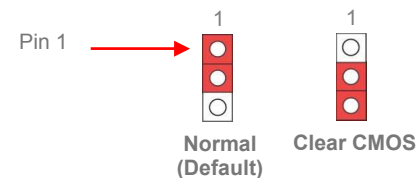
JP14 Clear CMOS

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.



JP14 Clear CMOS Jumper



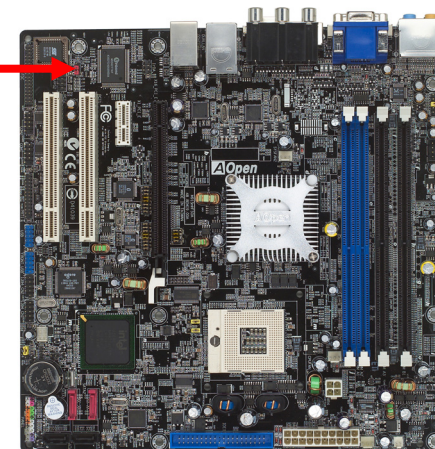
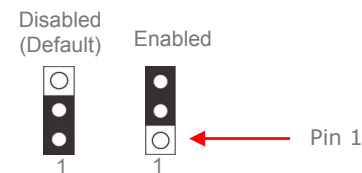
Tip: When should I Clear CMOS?

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

JP28 Keyboard/Mouse Wakeup Jumper

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

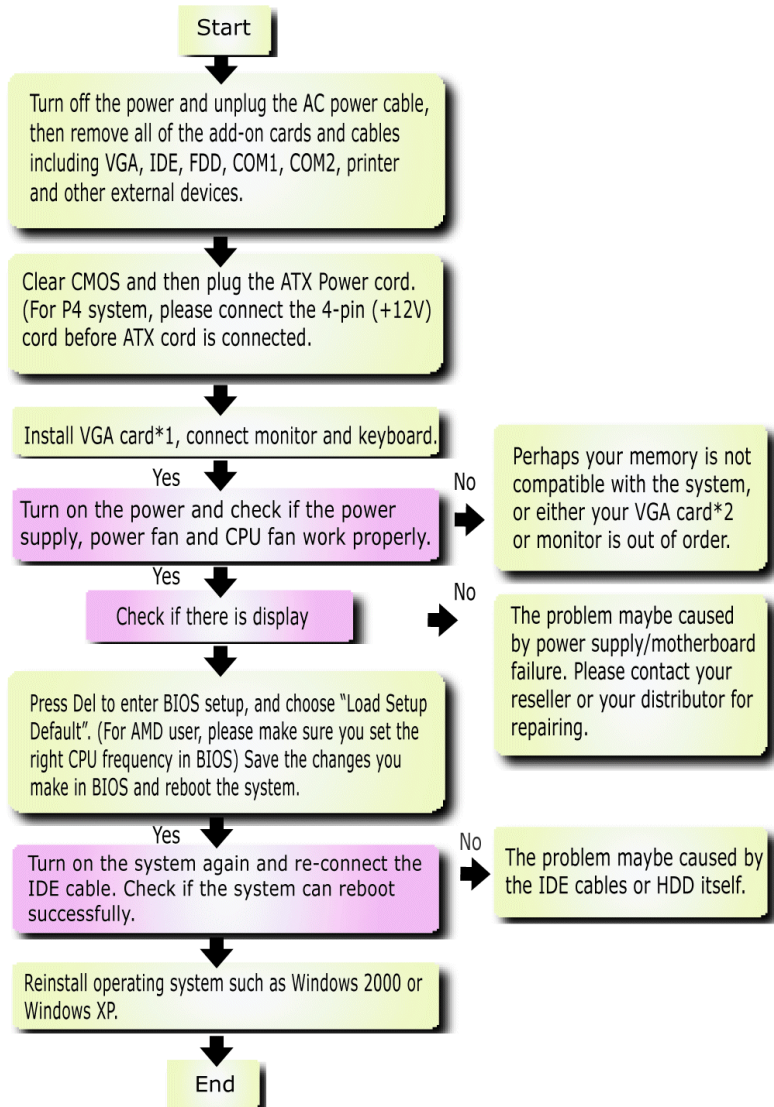
JP28 PS2 KB/Mouse Wakeup Jumper





Troubleshooting

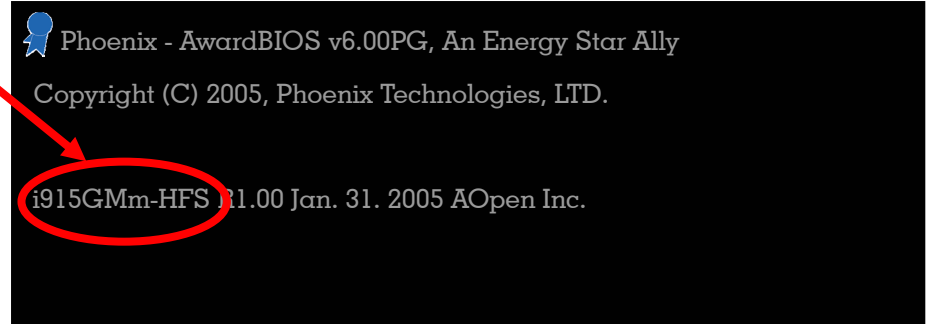
If you encounter any trouble to boot your system, follow the procedures accordingly to resolve the problem.



*1 The VGA card is not necessary to be installed if your monitor is connected to the onboard VGA port.
 *2 If you connect to the onboard VGA port and no screen displays, then your onboard VGA device might have problem.

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:



i915GMm-HFS is model name of motherboard; R1.00 is BIOS version

Register Your Motherboard

Thanks for choosing AOpen product, please register this motherboard at <http://club.aopen.com.tw/productreg/> to become a Gold member of Club AOpen, and to ensure high service quality and priority from AOpen. You will also have a chance to play slot machine game to win prize from AOpen. Please prepare the following information before you start: **Model Name, Part Number (P/N), Serial Number (S/N) and Purchase Date.** The Part Number and Serial number are printed on bar code label. You can find this bar code label on the outside packing or on component side of PCB. For example:



Part No.

Serial No.

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

Phoenix-Award BIOS ERROR Message	
Beep Sound	Message
1 short(Beep)	System booting is normally.
1 long - 1 short(Beep)	DRAM ERROR
1 long - 2 short(Beep)	Display card or monitor connected error
1 long - 3 short(Beep)	Keyboard Error
Long(Beep) continuous	DRAM hasn't inset correctly.

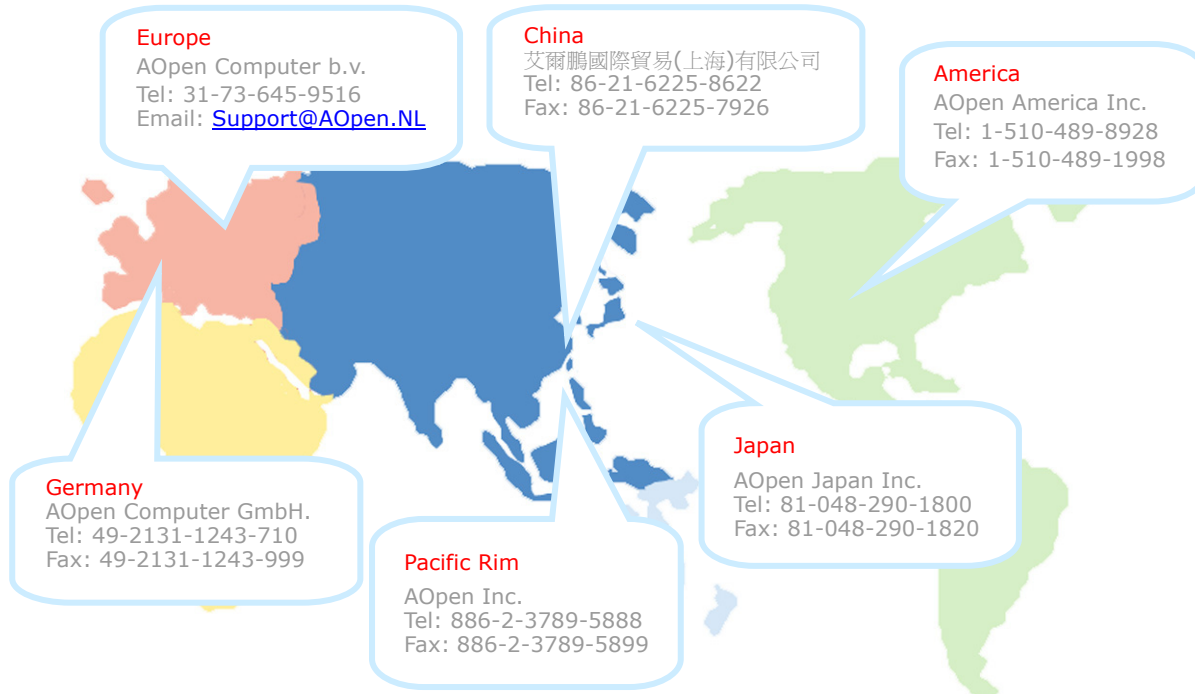


Technical Support

Dear Customer,

Thanks for choosing AOpen products. We invite you to register at <http://www.aopen.com> to become a Gold Member of Club AOpen so as to ensure quality service in the future. In order to maintain the best service to every customer of us, we recommend you to follow the procedures below and seek help from our branches according to the region you buy the product. With your help, we can then continue to provide efficient and the best quality service to every customer.

Thanks very much for your understanding!



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America	http://usa.aopen.com/tech/default.htm
Japan	http://aopen.jp/tech/index.html

Online Manual: To download manual, please log on and then select your preferred language. Under "Type" directory, choose "Manuals" to go to our manual database. You can also find the manual and EIG in AOpen Bonus Pack.
<http://download.aopen.com.tw/downloads>

Test Report: We recommend you to choose board/card/device from the compatibility test reports for assembling your PC. It may prevent incompatibility problems.
<http://english.aopen.com.tw/tech/report/default.htm>

FAQ: Here we list problems that users often encounter and FAQ (Frequently Asked Questions). You may select your preferred language after log on, and may be able to find a solution to your problem.
<http://club.aopen.com.tw/faq/>

Download Software: After log on and having language selected, you may get the latest updated BIOS/utility and drivers you need under "Type" directory. In most case, newer versions of drivers and BIOS have solved earlier bugs or compatibility problems.
<http://download.aopen.com.tw/downloads>

eForum: AOpen eForum is provided to discuss our products with other users, in which your problem probably had been discussed before or will be answered. After log on, you may select your preferred language under "Multi-language".
<http://club.aopen.com.tw/forum>

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.

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.