

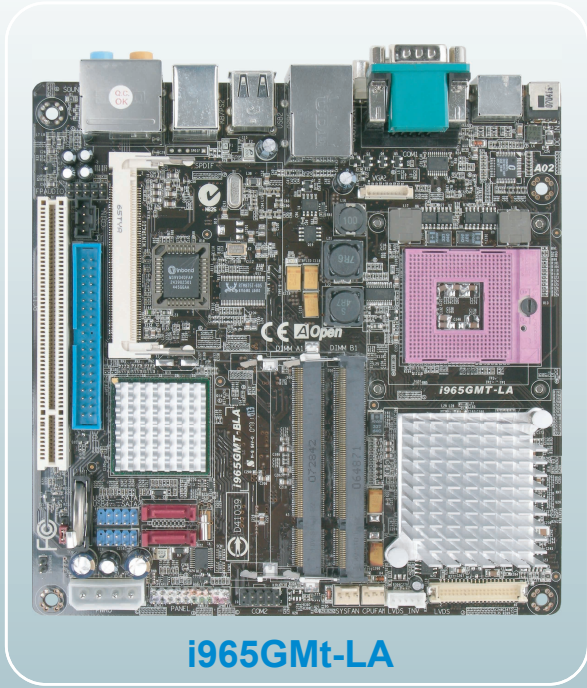
MoDT

Cool Stuff is Hot Stuff, MoDT is the Right Stuff



mini ITX 965

Enable the Power of mini ITX Form Factor



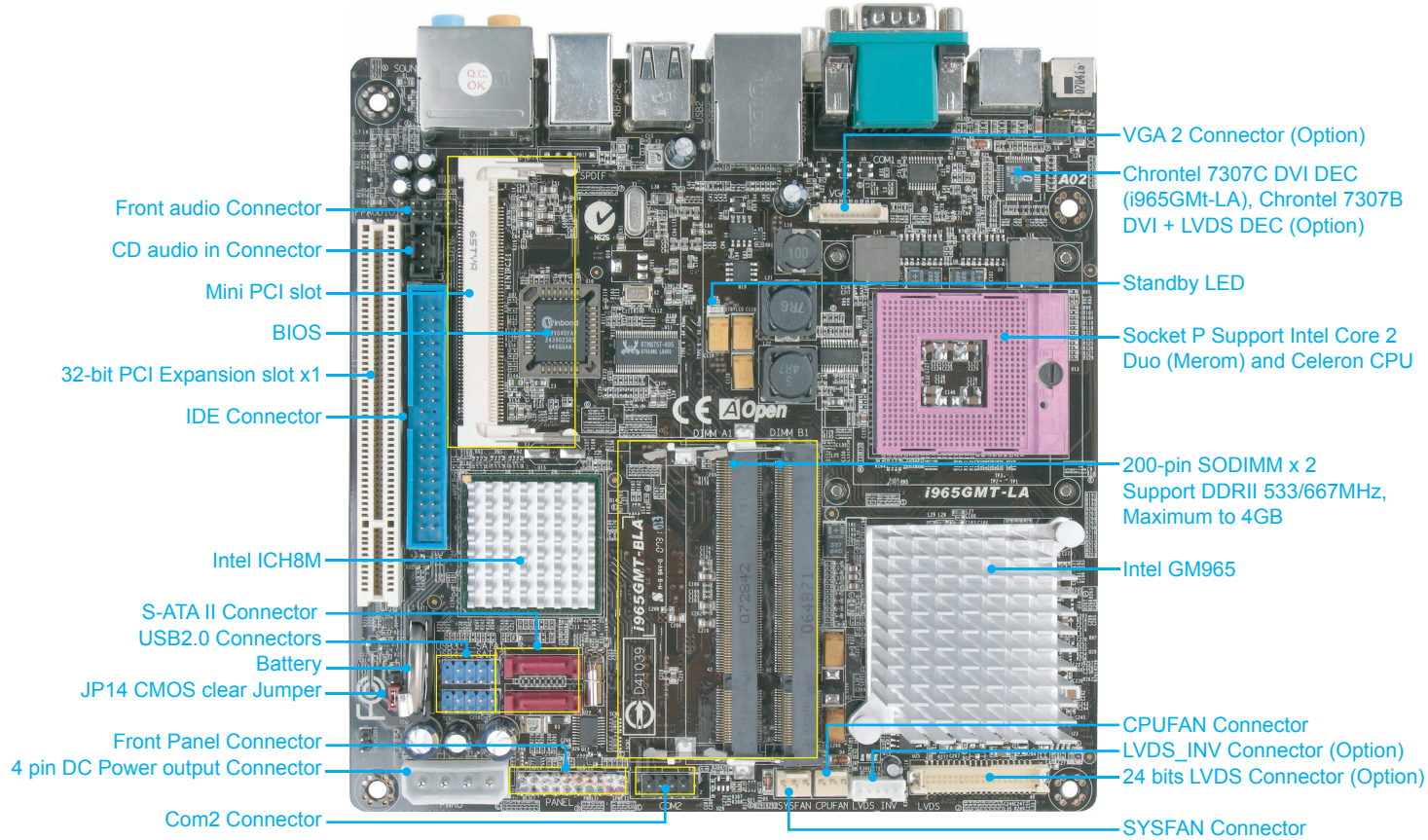
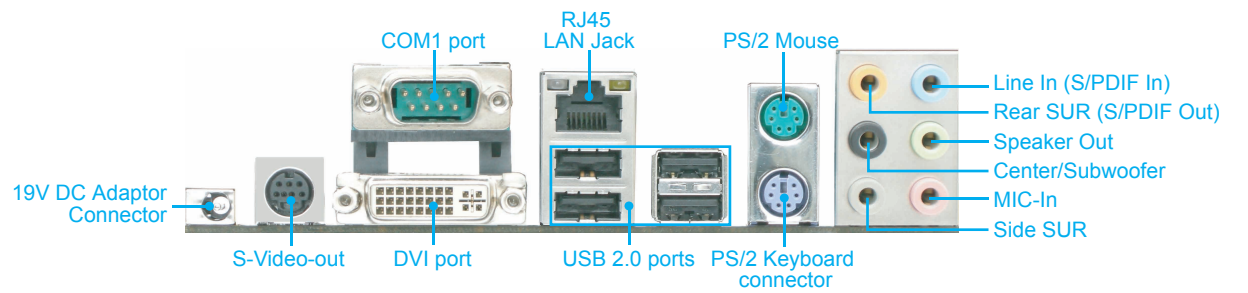
i965GMt-LA



Easy Installation Guide

AOpen reserves the right to revise all the specifications and information contained in this document, which are subject to change without notice.

MoDT is initiated by AOpen since 2004



Accessories List



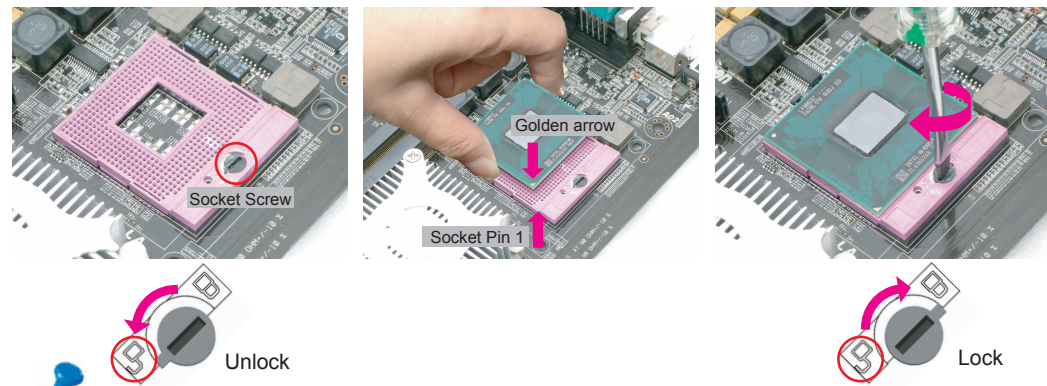
Installing By Yourself



1. Installing CPU

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

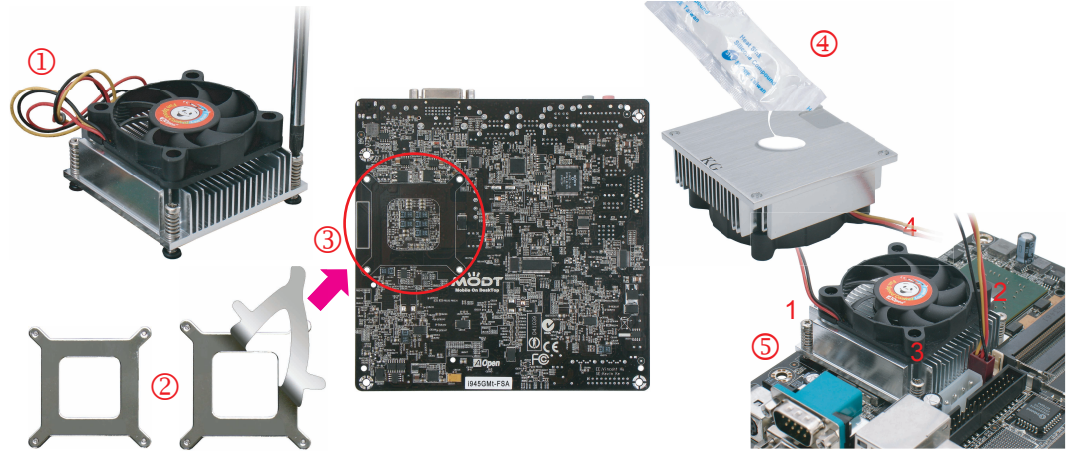
1. Unscrew socket screw counter-clockwise.
2. Locate Pin 1 in the socket and look for a golden arrow on the CPU upper interface. Match Pin 1 and golden arrow. Then insert the CPU into the socket.
3. Lock the socket screw clockwise to fasten CPU.



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

2. Installing CPU Cooler

1. Remove the four screws of the CPU heatsink and take the bracket from heatsink.
2. Tear off the label from bracket for easily pasted on the bottom of main board.
3. Place bracket properly on the back side as picture.
4. Smear over the thermal compound under the center of heatsink smoothly and let it be well mixed.
5. Please follow concave of direction on bottom of heatsink, Put the CPU Fan & heatsink on the processor and lock the four screws of the heatsink with bracket (on the MB back side). Please make sure the screws are well tied between the motherboard and heatsink.



CPU Frequency Table

Processor Number	Architecture	Clock Speed	Front Side Bus	L2 Cache
Core 2 Duo T7800	65nm	2.60 GHz	800 MHz	4MB
Core 2 Duo T7700	65nm	2.40 GHz	800 MHz	4MB
Core 2 Duo T7500	65nm	2.20 GHz	800 MHz	4MB
Core 2 Duo T7300	65nm	2.00 GHz	800 MHz	4MB
Core 2 Duo T7100	65nm	1.80 GHz	800 MHz	2MB
Core 2 Duo T7250	65nm	2.00 GHz	800 MHz	2MB
Celeron 550	65nm	2.00 GHz	533 MHz	1MB
Celeron 540	65nm	1.86 GHz	533 MHz	1MB
Celeron 530	65nm	1.73 GHz	533 MHz	1MB

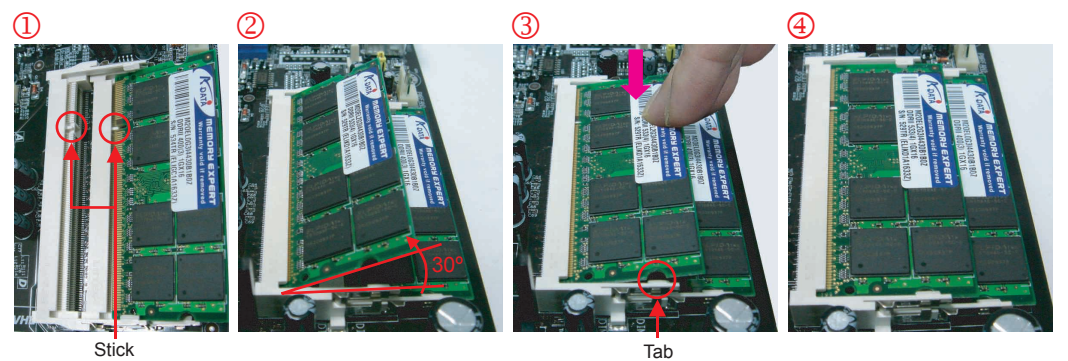
Note:
With CPU speed changing rapidly, there might be faster CPU on the market by the time you received this installation guide. This table is kindly for your references only.

Above table is Intel® Core™ 2 Duo / Celeron CPU numbers and simple specification for your reference only.

3. Installing Memory Module

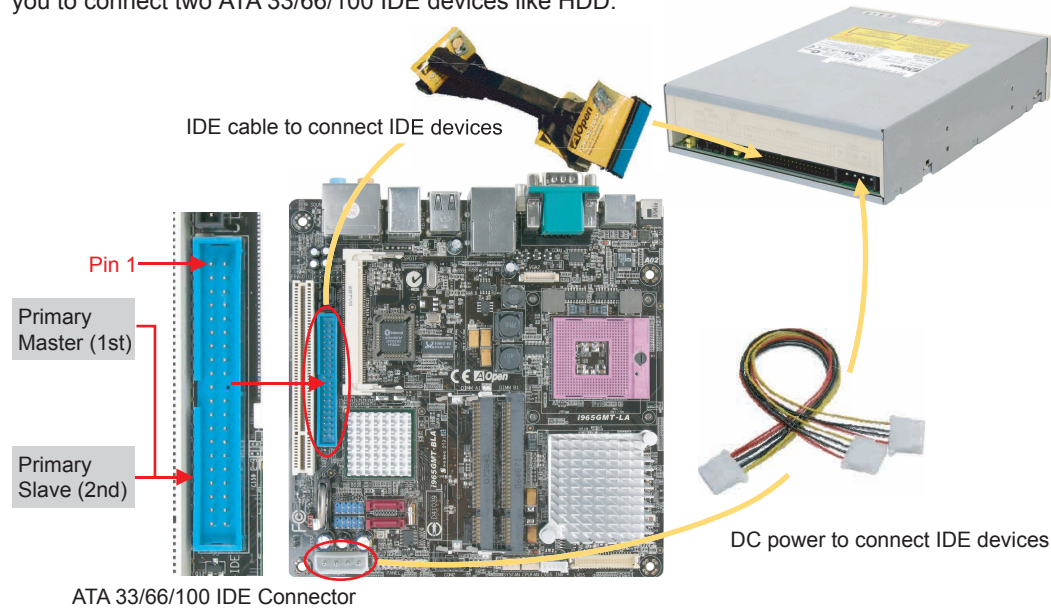
The motherboard provide SODIMM type memory support. There're two SODIMM memory slots which motherboard provided. The installation of memory module as below.

1. Put the memory module with correct direction. Notice there's one stick to make sure direction is correct.
2. Plug in memory module into SODIMM slot with angle 20~30°. Make sure memory module plug into slot completely.
3. There're tabs which located in the side of SODIMM holder. Use finger to push memory module vertically until the tabs lock memory module tightly.
4. Now, the memory modules have been plugged properly with horizontal flat.



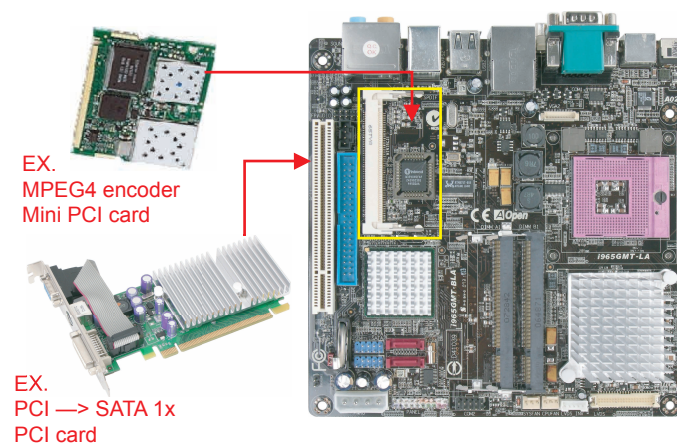
4. Installing IDE Cable

The motherboard provides one IDE connector which allow you to connect two ATA 33/66/100 IDE devices like HDD.



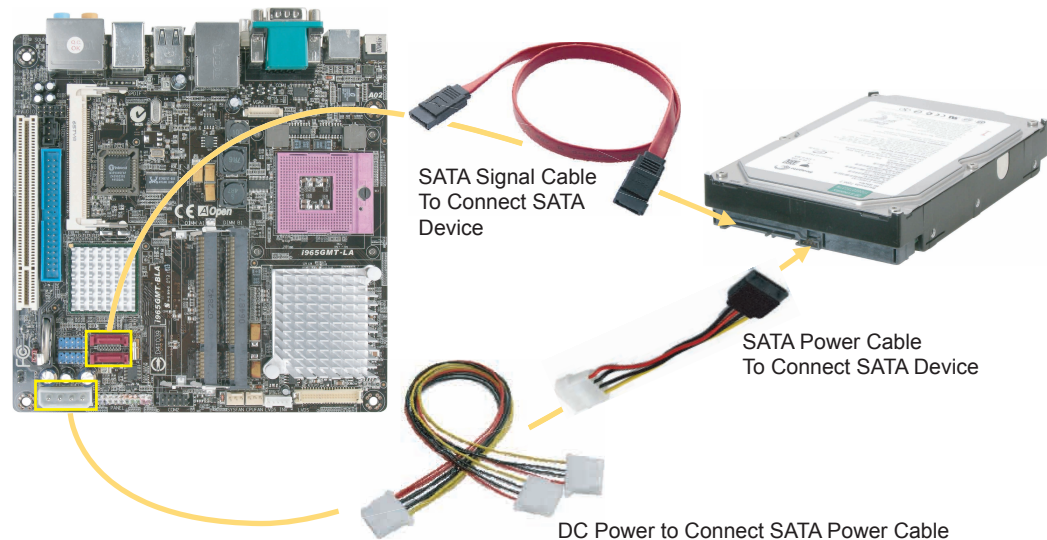
6. Mini PCI and PCI Installation

The motherboard provides one Mini PCI slot and one PCI slot for users to upgrade his PC functions. Now, the Mini PCI can have digital TV tuner and Video MPEG4 decoder card ...etc. for expansion. The PCI cards have SATA II and Firewire and USB cards ... etc. for expansion.



5. Installing SATA Cable

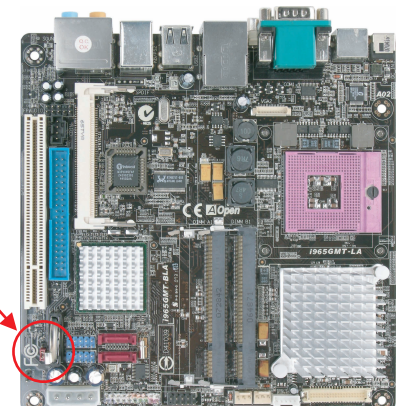
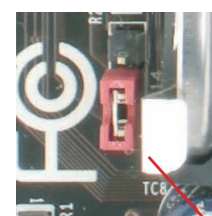
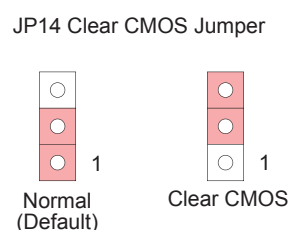
The mother board provides two SATA connectors. Connect SATA cable to the on board SATA connector. You can find SATA cable in our package. (this is SATA signal cable) And please also connect 5V power connector with SATA power cable.



7. JP14 Clear CMOS

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

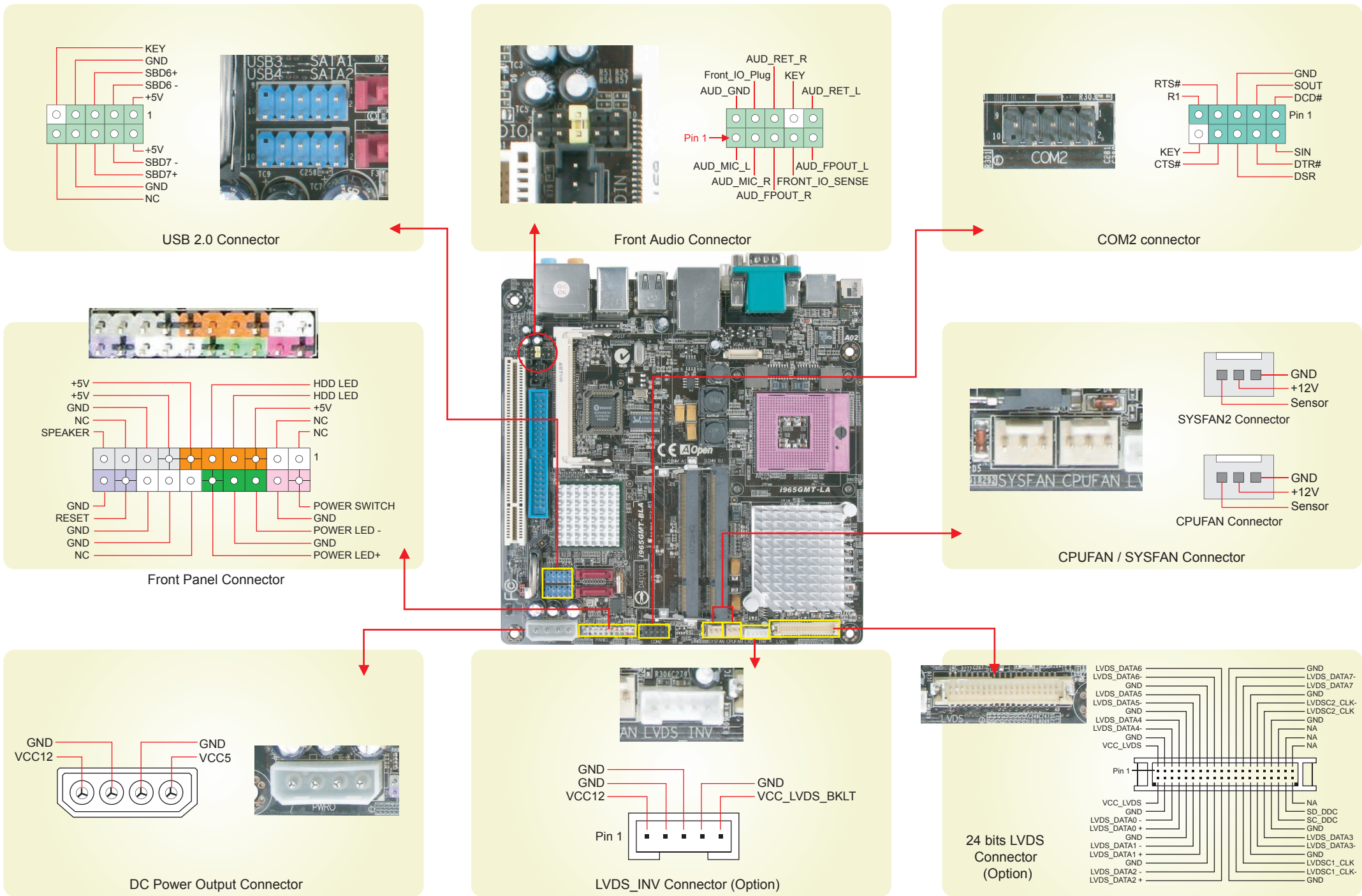
1. Turn off the system and unplug the DC Adaptor from Connector.
2. Locate JP14 and short pins 2-3 for a few seconds.
3. Return JP14 to its normal setting by connecting it to Pin 1-2 again.
4. Connect DC Adaptor back to connector.



Tip: When should I clear CMOS?

1. Boot fail
2. Forget password
3. Trouble shooting

Connectors & PINs Definitions



Back Panel Connections



Power Consumption

The motherboard design provides:

Parts	Voltage	Current	Power
CPU	1.3x V	43A Max.	60W Max.
Memory	1.8 V	9A Max.	16.2W Max.
North & South Bridge	1.5 V	6A Max.	9W Max.
	1.05 V	8A Max.	8.4W Max.
DC 5V devices	5 V	7A Max.	35W Max.
DC 12V devices	12 V	3A Max.	36W Max.

The power consumption — 90 W provides basic system configuration as below.

- i965GMt-LA mini iTX Motherboard
- Intel® Core 2 Duo CPU T7800 x1
- 256MB SODIMM memory Module x 2
- IDE 3.5" hard disk x 1
- USB keyboard x 1
- USB Mouse x 1
- CPU Fan + Heatsink x 1

The motherboard had bundle one 90W AC to DC power adaptor, its specification as
 - INPUT AC100-240V ~ 1.5A
 - OUTPUT DC 19V ~ 4.74A

Note:

Please notice on the power, AOpen mother board provided, is 90W AC-DC adaptor. And the board can offer 145W to connect different peripherals. But it needs to be careful while connecting many peripherals and cause power over 90W. It will causes the system cannot boot-up or cannot work smoothly base on the loading your system has. If your system over 90W please change it to larger power supply: 19V AC-DC adaptor.

VGA & Video Support

The motherboard's Graphic/Video Output as left pictures. It supports DVI-I connector. But there's DVI to D-SUB connector bundle which allows you to connect D-SUB monitor. Also, it provided a S-VIDEO connector in back side which allows you to connect Video consumer electronics. The motherboard has "S-VIDEO to YPbPr / Composite" cable which can link TV or HDTV or DVD recorder.

Notice:

YPbPr/S-VIDEO/Composite. These three video signals can act one time one signal since common source. Users cannot connect it together to show video.

PC graphic resolution table	
Resolution	Color depth
2048 x 1536	256/ 16bit/ 32bit
1680 x 1050	256/ 16bit/ 32bit
1600 x 1200	256/ 16bit/ 32bit
1400 x 1050	256/ 16bit/ 32bit
1440 x 900	256/ 16bit/ 32bit
1280 x 1024	256/ 16bit/ 32bit
1280 x 720	256/ 16bit/ 32bit
1024 x 768	256/ 16bit/ 32bit
640 x 480	256/ 16bit/ 32bit

PC Graphic resolution support

Maximum : 1600 x 1200 x 32bit

Video resolution support

YPbPr: 480p/720p/1080i/1080p

TV video resolution support

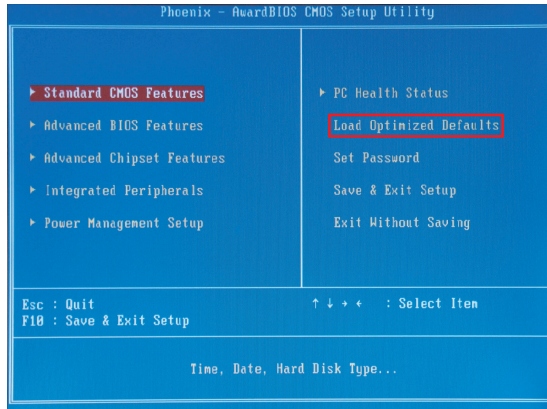
Special resolution 16:9 support

AUO 32" 16:9 Panel: 1366 x 768

(Users need to check with your TV panels vender about it)

Power - on and Loading BIOS Setup

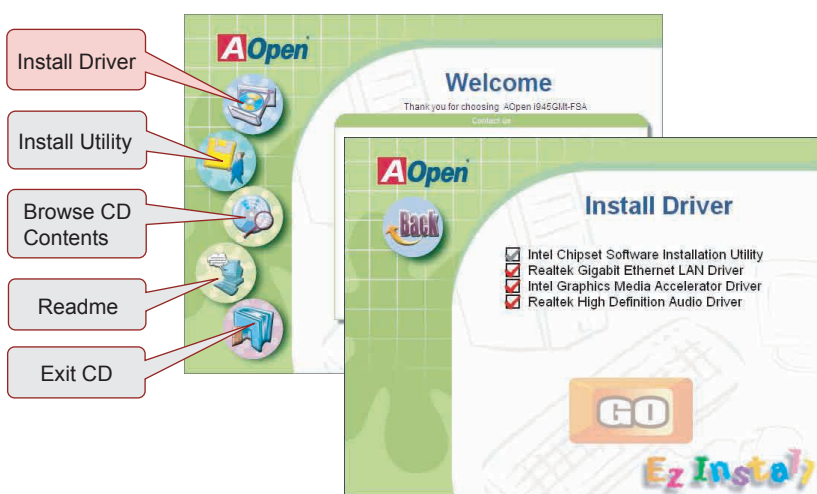
Del After finish the setting of jumpers and connect correct cables. Power on and enter the BIOS Setup, then press during POST (Power On Self Test). Choose "Load Optimized Defaults" for recommended optimal performance.



Warning: Please avoid of using "Load Optimized Defaults", unless you are certain your system components (CPU, SDRAM, HDD, etc.) have been proven acceptable for use.

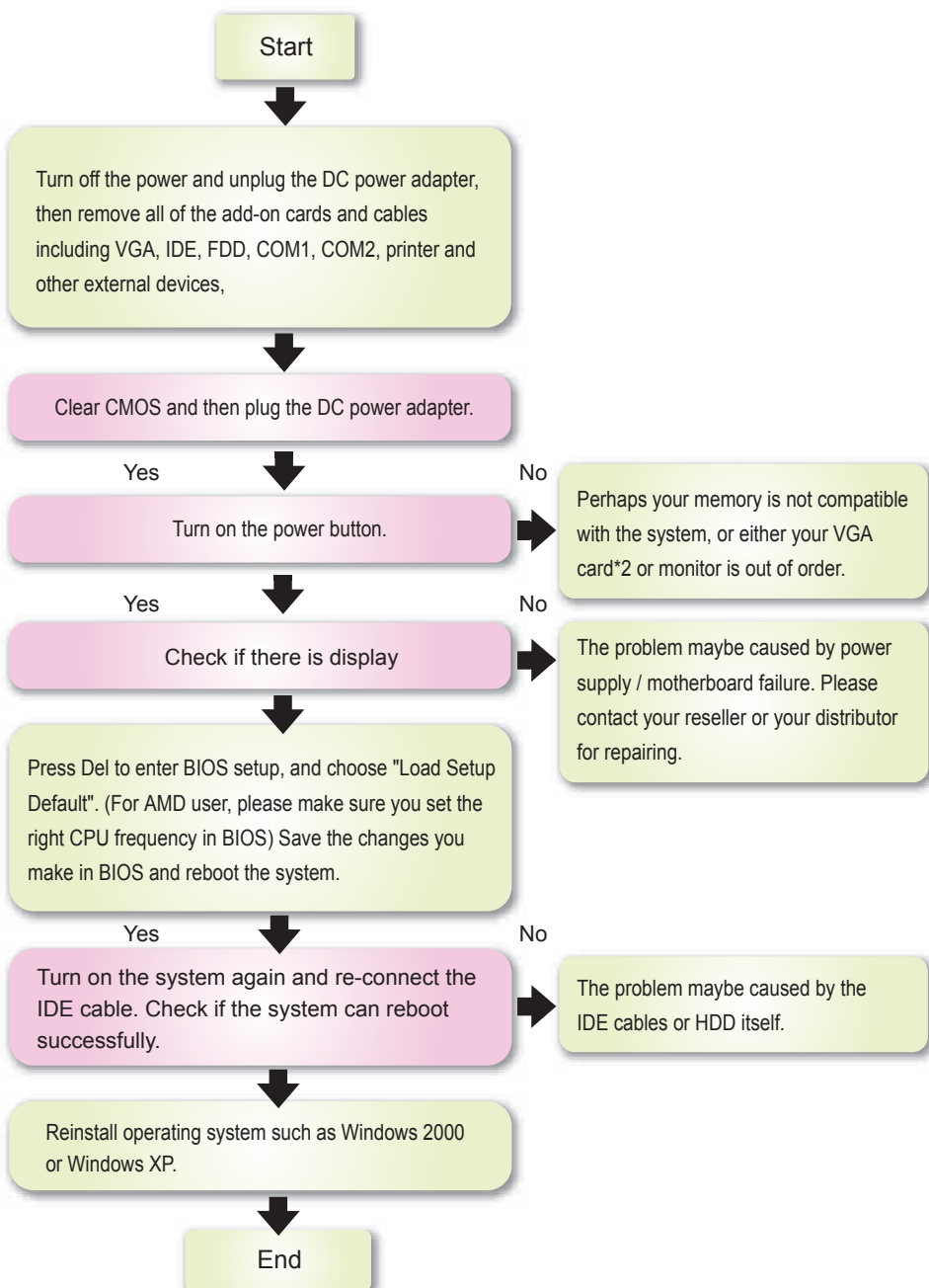
Aopen EzInstall and Bonus Pack CD

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.



Trouble Shooting

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

Phoenix - AwardBIOS v6.00PG, An Energy Star Ally
Copyright (C) 2004, Phoenix Technologies, LTD.
i965GMt-LA R1.00 Sep. 02. 2007 AOpen Inc.

i965GMt-LA is model name of motherboard; R1.00 is BIOS version.

Register Your Motherboard

You can find this bar code label on the outside packing or on component side of PCB. For example:



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 connected error Monitor Connected error
1 long - 3 short (Beep)	Keyboard error
Long (Beep) continuous	DRAM hasn't insert correctly.

Technical Support

Dear Customer,

Thanks for choosing AOpen products. 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!

AOpen Technical Supporting Team

<p>Europe AOpen Computer b.v. Email: Support@AOpen.NL</p>	<p>China 艾爾騰國際貿易(上海)有限公司 Tel: 86-21-6225-8622 Fax: 86-21-6225-7926</p>	<p>America AOpen America Inc. Tel: 1-408-586-1201 Fax: 1-408-586-1210</p>
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<http://www.aopen.com> > Chose Territory > Download

RCL: We recommend you to choose board/card/device from the compatibility recommend component list for assembling your PC. It may prevent incompatibility problems.
<http://www.aopen.com> > Chose Territory > RCL

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://www.aopen.com> > Chose Territory > Tech.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.
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