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MoDT mini ITX nMCP7AUt-V Series Enable The Power Of Mini ITX Form Factor User Guide

Contents

MoDT mini ITX nMCP7AUt-V Series Enable The Power Of Mini ITX Form Factor

Specifications

- Form Factor: mini ITX
- Chipset: nMCP7AUt-V series

Connectors

- Mouse Connector
- Keyboard Connector
- RJ45 LAN Jack
- DVI Port
- HDMI Port
- USB 2.0 Port x 6
- Line In (S/PDIF In)
- Rear SUR (S/PDIF Out)
- Speaker Out Center/Subwoofer
- MIC-In Side SUR

Features

- Energy Saving
- Silent AV Thermal
- PCI Express x 16 Slot
- Realtekcodec ALC889
- So-Dimm DDR2 800 support

Installing CPU
This socket supports LGA-775 CPU. Follow these steps to install the CPU:

1. Pull the CPU socket lever and plate up.

2. Remove the plastic cap from the CPU socket plate.

3. Locate Pin 1 in the socket and align it with the golden arrow on the CPU upper interface.

4. Insert the CPU into the socket, ensuring Pin 1 and the golden arrow match.

5. Press down the CPU socket plate and lever to finish the installation.

Installing Memory Module

The motherboard supports SO-DIMM-type memory. Follow these steps to install the memory module:

1. Ensure correct direction of the memory module and align it properly.

2. Use your finger to push the memory module vertically into the SO-DIMM holder until the tabs lock it in place.
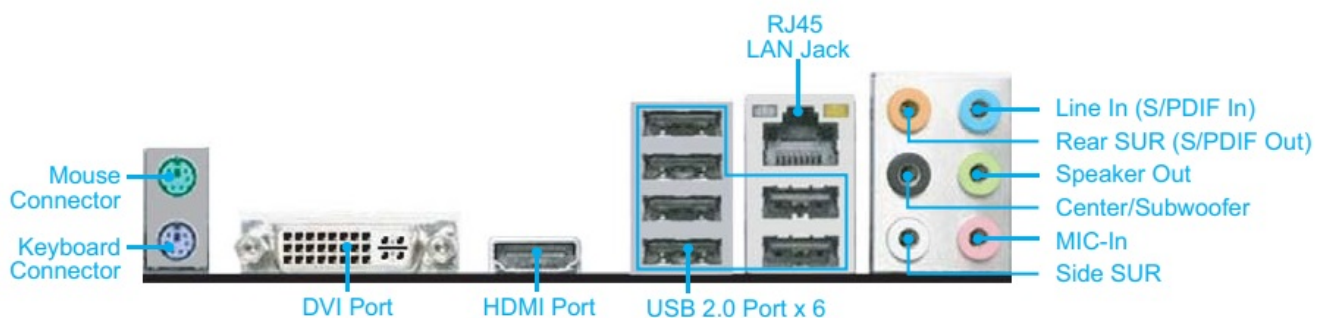
FAQ

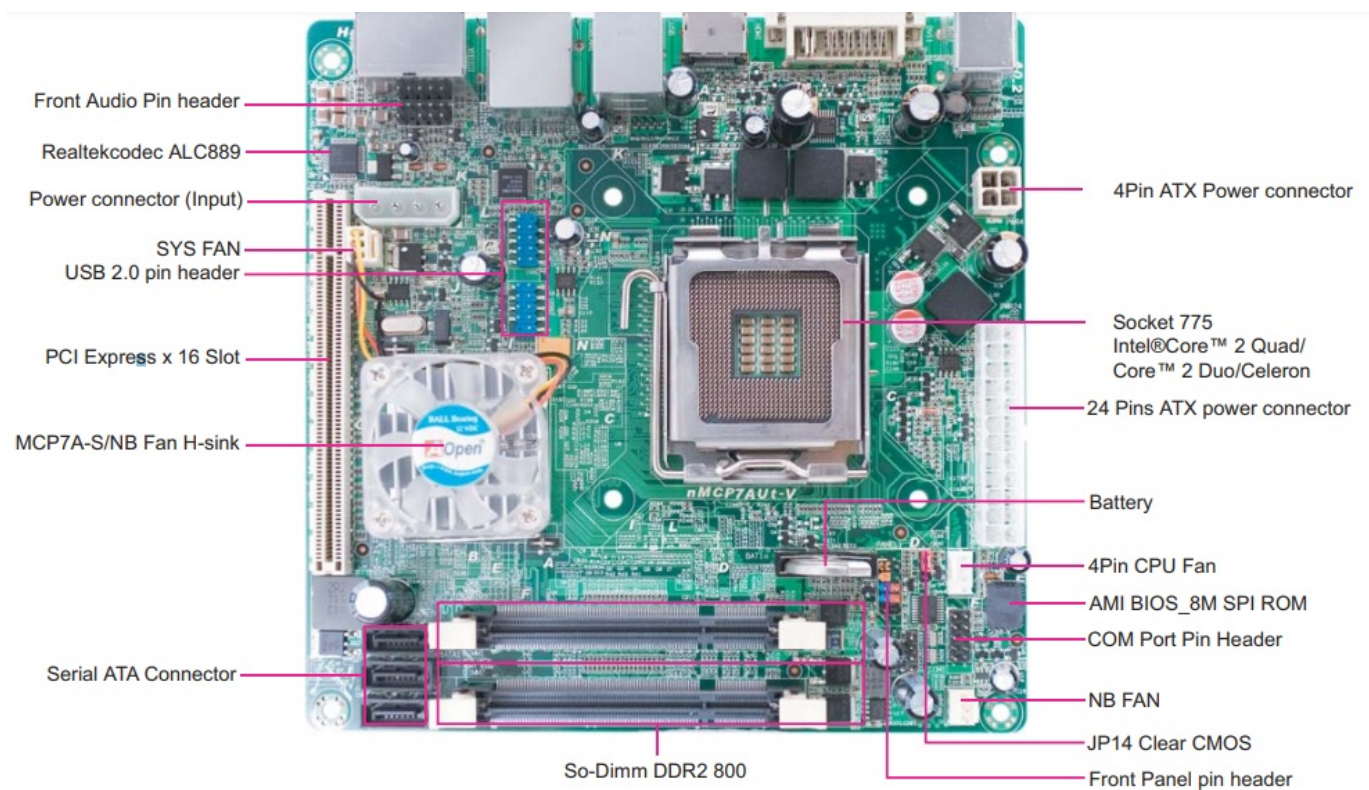**Q: Can I use a different CPU package other than LGA-775?**

A: No, only LGA-775 CPUs are supported by this motherboard. Using a different CPU package may cause damage.

mini ITX nMCP7AUt-V series
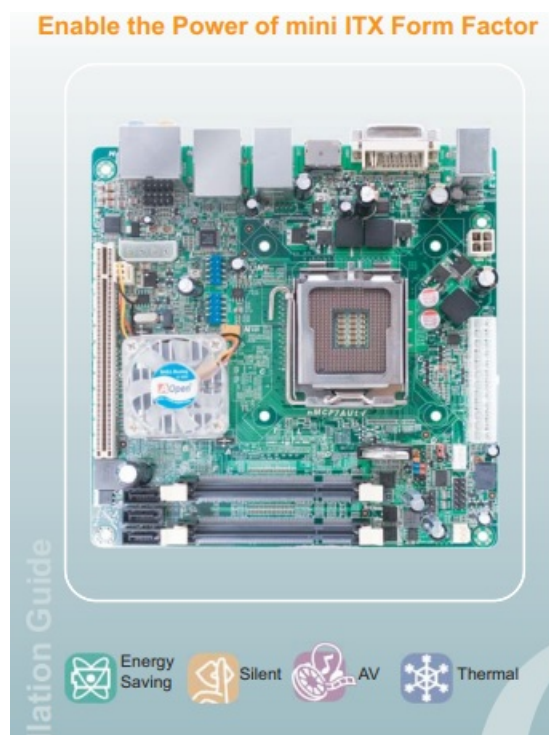
MoDT is initiated by AOpen since 2004

Front Audio Pin header
Realtekcodec ALC889
Power connector (Input)
SYS FAN
USB 2.0 pin header
PCI Express x 16 Slot
MCP7A-S/NB Fan H-sink
Serial ATA Connector

4Pin ATX Power connector
Socket 775 Intel®Core™ 2 Quad/ Core™ 2 Duo/Celeron
24 Pins ATX power connector
Battery
4Pin CPU Fan
AMI BIOS_8M SPI ROM
COM Port Pin Header
NB FAN
JP14 Clear CMOS
Front Panel pin header

So-Dimm DDR2 800

Note:The pictures above may look slightly different from the product you purchased due to our constant product improvement effort.

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

Accessories List

IO Bracket

mini ITX nMCP7A EIG

S-ATA Cable x 2

DVI to D-Sub Converter

AOpen Bonus CD

Power Cable x 2

Installing By Yourself

1. Installing CPU
2. Installing CPU Fan & System Fan
3. Installing Memory Module
4. Installing HD, CD-ROM and SATA Disk, etc
5. Connecting Front Panel Cable
6. Connecting Back Panel Ports
7. Loading Default BIOS
8. Installing Operating System (such as, Windows Vista)
9. Installing Drivers & Utilities

Installing CPU

This socket supports LGA-775 CPU, which is the CPU package developed by intel. Other forms of CPU package are impossible to fitted in.

1. Pull CPU socket lever and plate up .
2. Remove plastic cap from CPU socket plate .
3. 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 .
4. Press down CPU socket plate and lever to finish CPU installation .

CPU socket lever — CPU socket plate — Golden arrow

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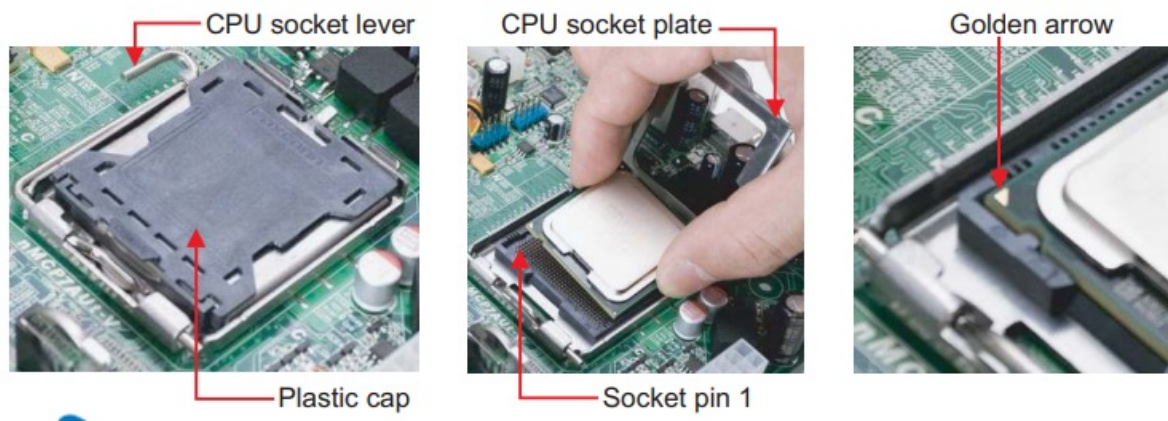
Note:
If you do not match the CPU socket Pin 1 and CPU golden arrow well, you may damage the CPU.

CPU Frequency Table

| Processor	L2 Cache	FSB	Speed	Ratio	Support BIOS Version
Core 2 Duo E8400	6M	1333	3.0G	9	R1.00
Core 2 Duo E6550	4M	1333	2.33G	7	R1.00
Core 2 Duo E6850	4M	1333	3.0G	9	R1.00
Core 2 Duo E7400	3M	1066	2.8G	10.5	R1.00
Core 2 Duo E7200	3M	1066	2.53G	9.5	R1.00
Core 2 Quad Q6700	4M*2	1066	2.66G	10	R1.00
Pentium Dual-Core E5400	2M	800	2.7G	13.5	R1.00

* MCP7A support front side BUS 667/800/1066MHz.

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.

Installing Memory Module

The motherboard provide SO-DIMM type memory support. There're two SO-DIMM 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 SO-DIMM slot with vertical 90º. Make sure memory module plug into slot completely.
3. There're tabs which located in the side of SO-DIMM 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.
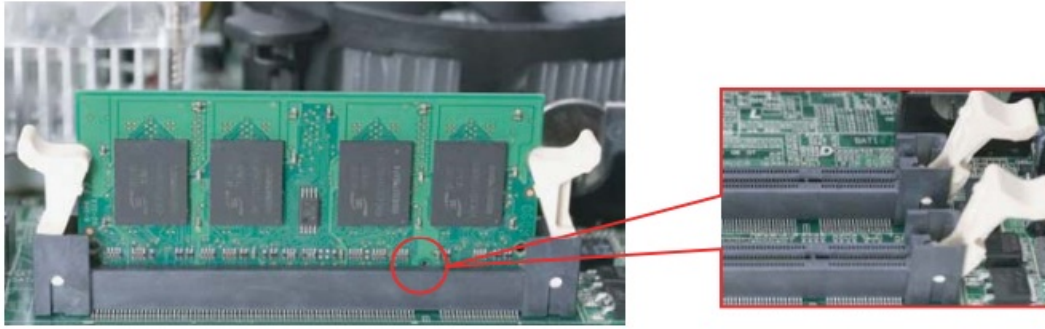
Installing ODD Device

The motherboard provides three 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.


SATA Power Cord
To Connect SATA Device

SATA Signal Cable
To Connect SATA Device

Installing HDD Device

The motherboard provides three 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.

SATA Signal Cable
To Connect SATA Device

SATA Power Cord
To Connect SATA Device
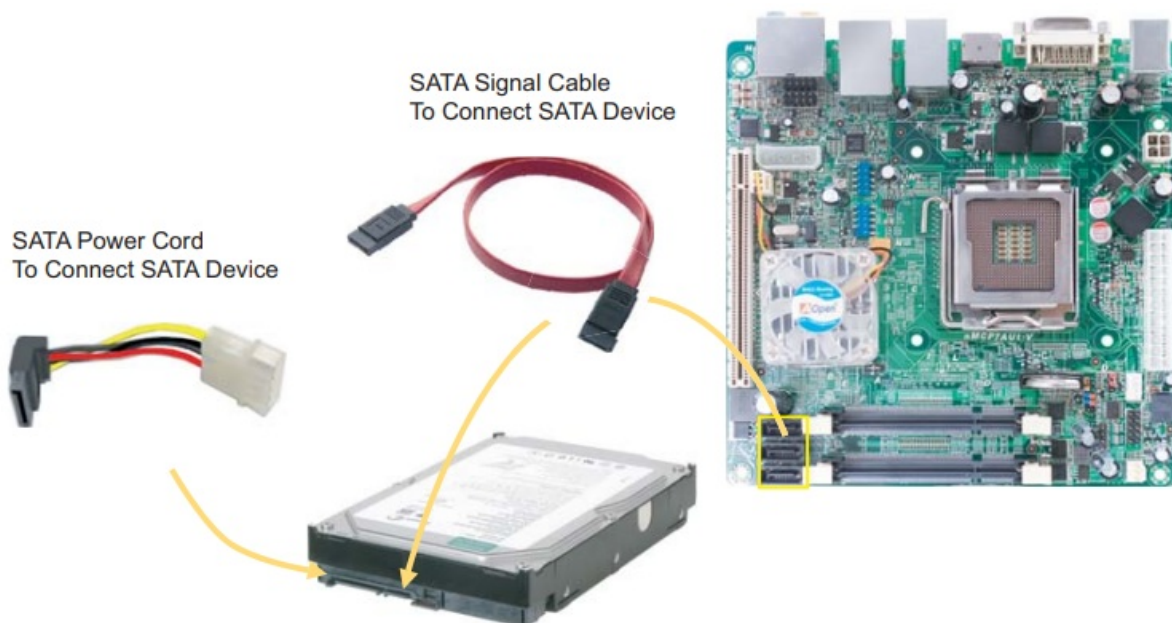
JP14 Clear CMOS

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 AC power.
2. Remove ATX power cable from connector PWR24.
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 PWR24.
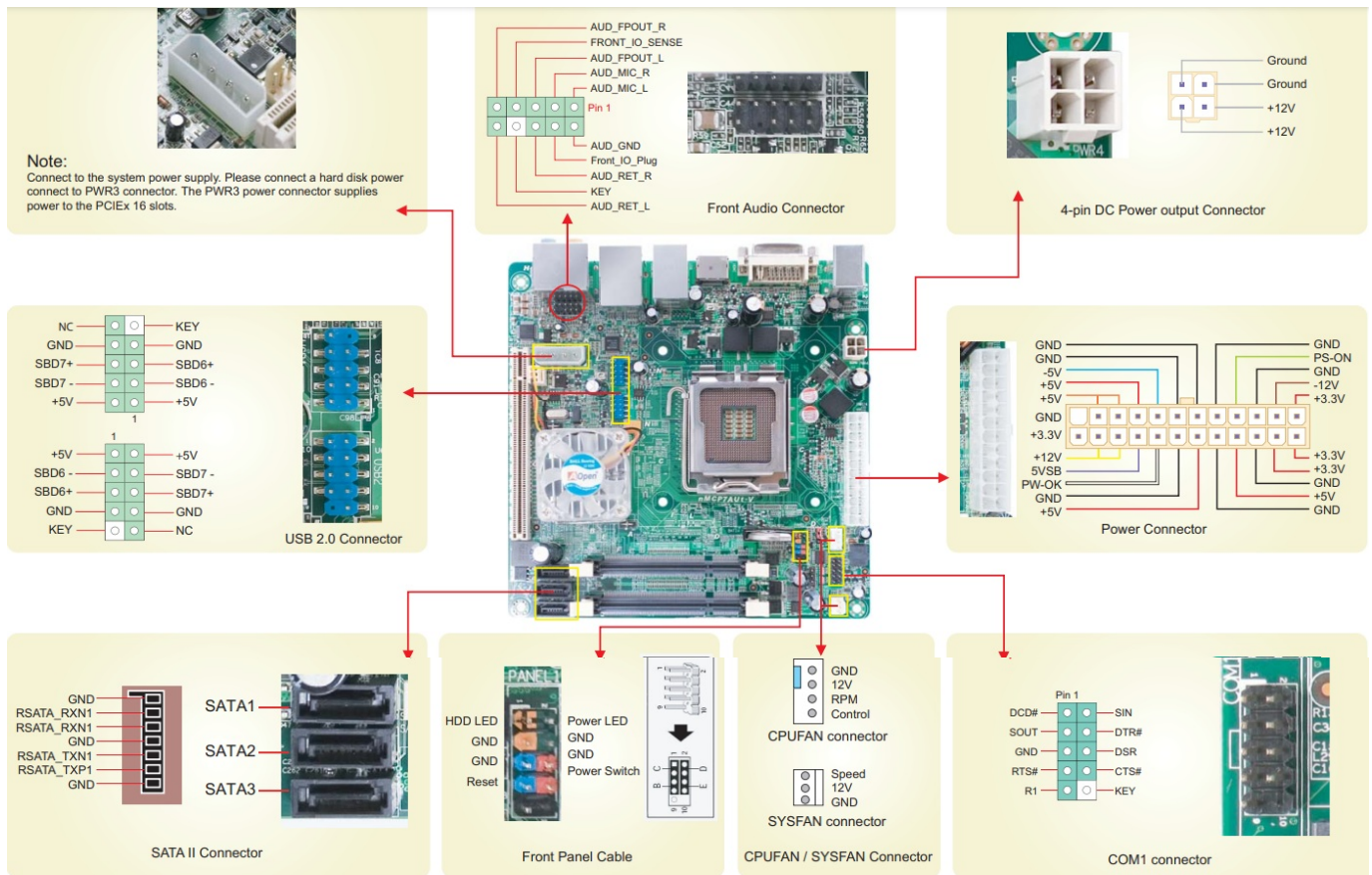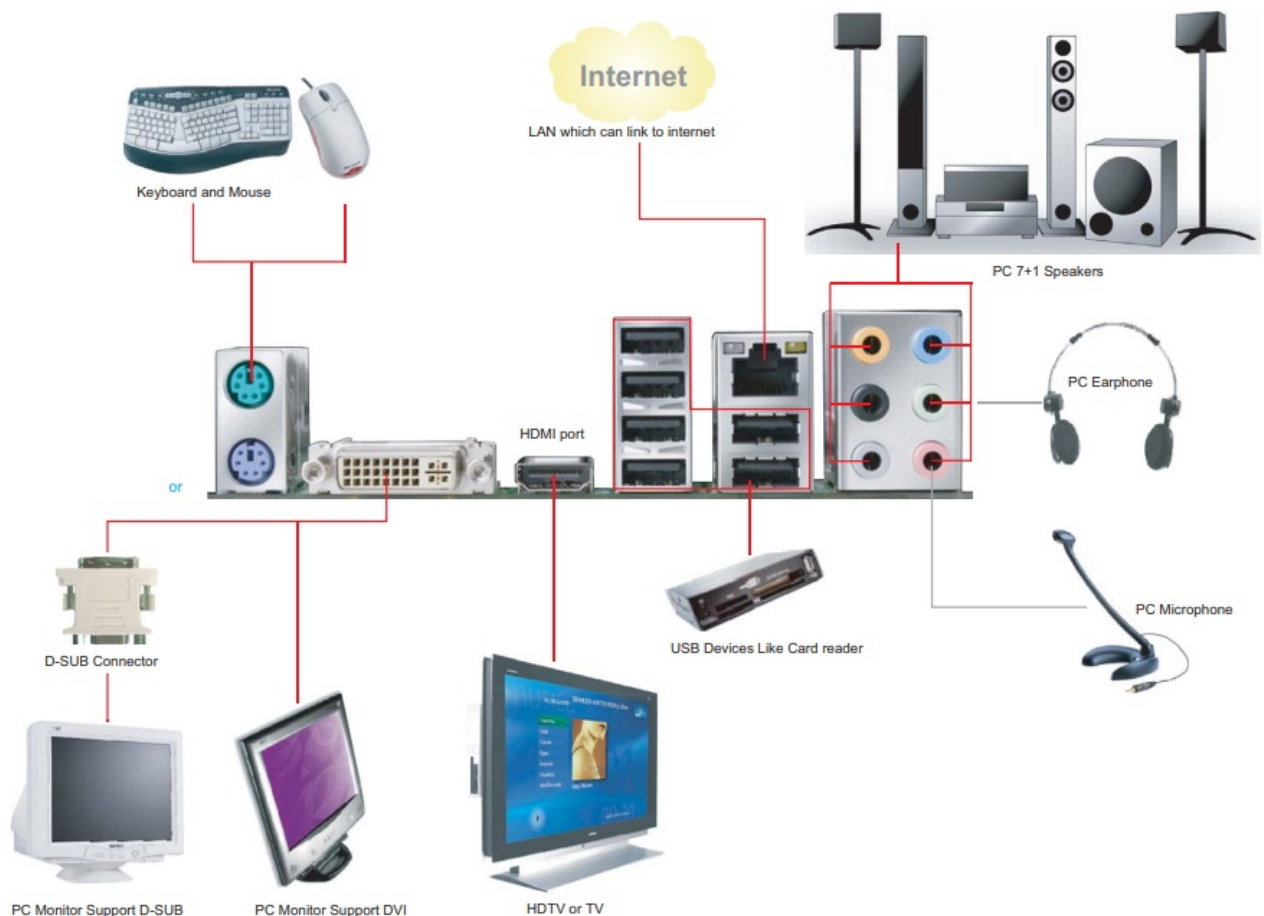

JP14 Clear CMOS Jumper

Clear CMOS   Normal (Default)

Tip: When should I clear CMOS?
1. Boot fail .....
2. Forget password .....
3. Trouble shooting .....

Connectors & PINs Definitions

Note:
Connect to the system power supply. Please connect a hard disk power connect to PWR3 connector. The PWR3 power connector supplies power to the PCIEx 16 slots.

AUD_FPOUT_R
FRONT_IO_SENSE
AUD_FPOUT_L
AUD_MIC_R
AUD_MIC_L
Pin 1
AUD_GND
Front_IO_Plug
AUD_RET_R
KEY
AUD_RET_L

Front Audio Connector

Ground
Ground
+12V
+12V

4-pin DC Power output Connector

NC		KEY
GND		GND
SBD7+		SBD6+
SBD7 -		SBD6 -
+5V		+5V

1

+5V		+5V
SBD6 -		SBD7 -
SBD6+		SBD7+
GND		GND
KEY		NC

USB 2.0 Connector

GND .... GND
GND .... PS-ON
-5V .... GND
+5V .... -12V
+5V .... +3.3V
GND
+3.3V
+12V .... +3.3V
5VSB .... +3.3V
PW-OK .... GND
GND .... +5V
+5V .... GND

Power Connector

GND
RSATA_RXN1
RSATA_RXN1
GND
RSATA_TXN1
RSATA_TXP1
GND

SATA1
SATA2
SATA3

SATA II Connector

PANEL 1

HDD LED .... Power LED
GND .... GND
GND .... GND
Reset .... Power Switch

Front Panel Cable

GND
12V
RPM
Control

CPUFAN connector

Speed
12V
GND

SYSFAN connector

CPUFAN / SYSFAN Connector

Pin 1

DCD# .... SIN
SOUT .... DTR#
GND .... DSR
RTS# .... CTS#
R1 .... KEY

COM1 connector

Back Panel Connections

Internet

LAN which can link to internet

Keyboard and Mouse

PC 7+1 Speakers

PC Earphone

HDMI port

or

D-SUB Connector

USB Devices Like Card reader

PC Microphone
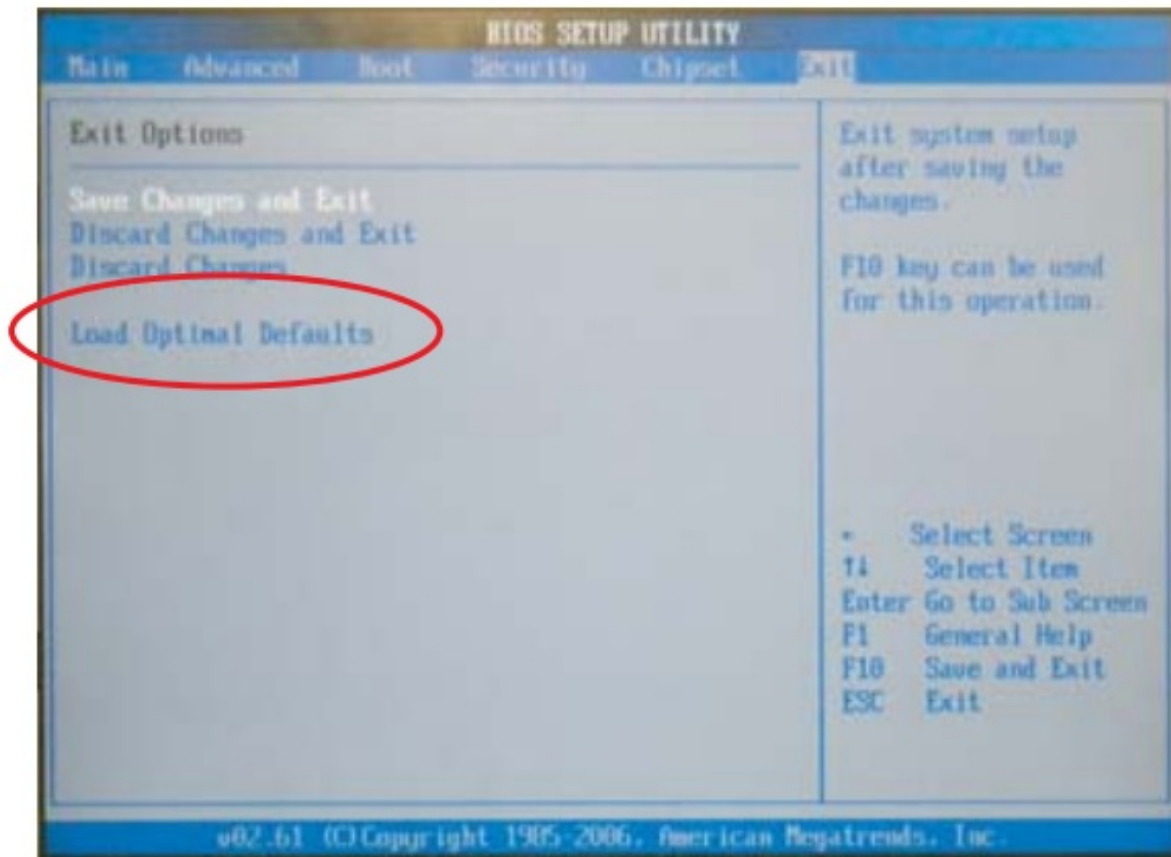
PC Monitor Support D-SUB

PC Monitor Support DVI

HDTV or TV

Power – on and Loading BIOS Setup

![Del key]

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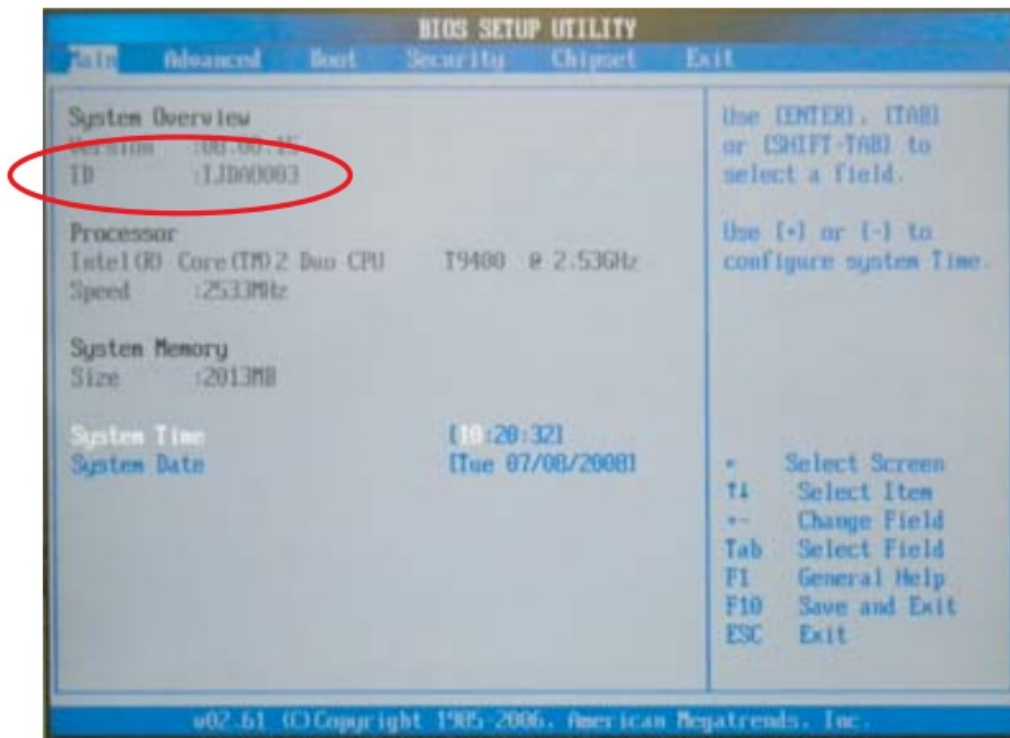

Warning:
Please avoid of using "Load Optimized Defaults", unless you are certain your system components (CPU, SDRAM, HDD, etc.) have been proven acceptable for use.

BIOS Version
BIOS version can be found when you enter BIOS setting pattern. For example, 003 is BIOS version.

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.

Register Your Motherboard

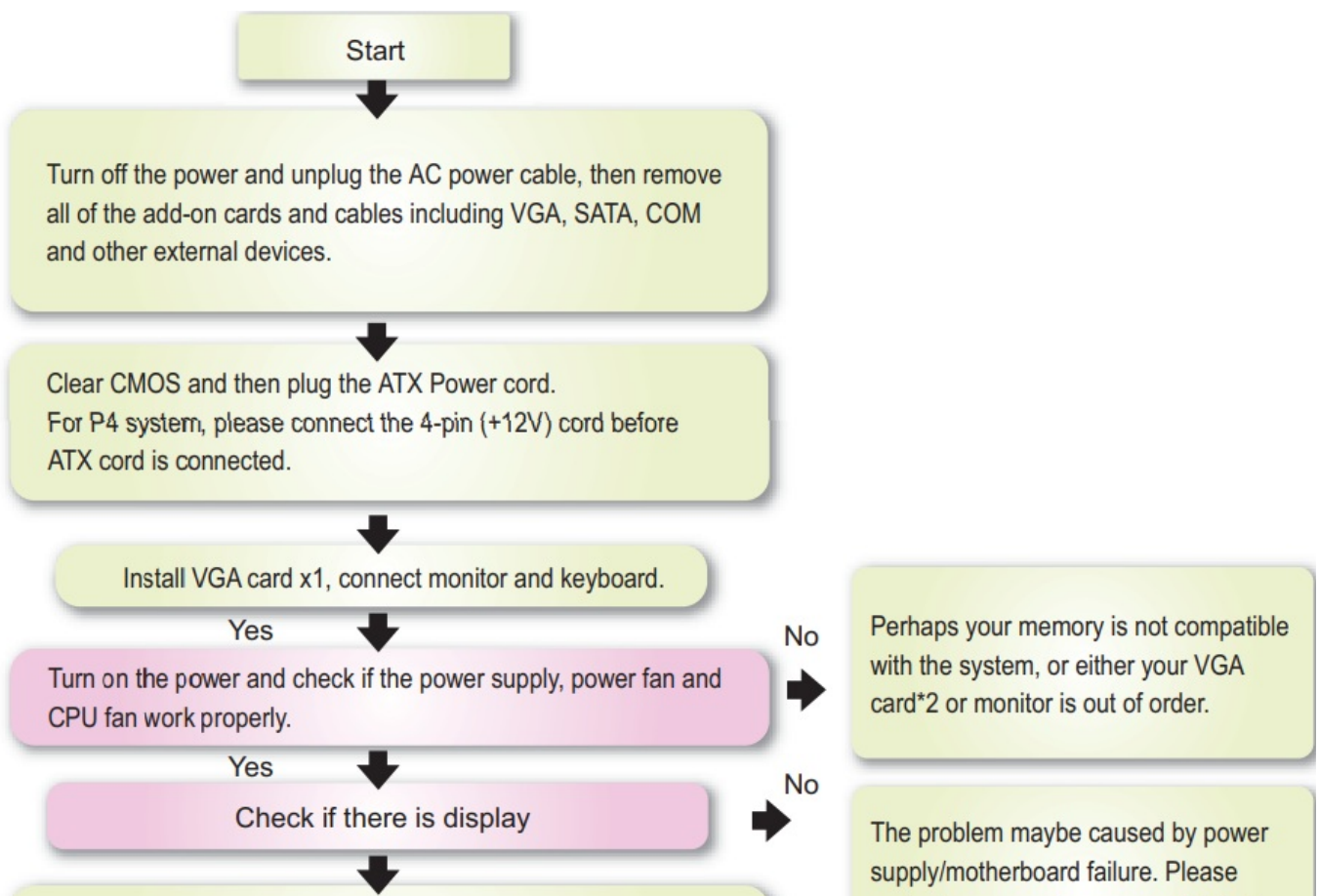You can find this bar code label on the outside packing or on component side of PCB.
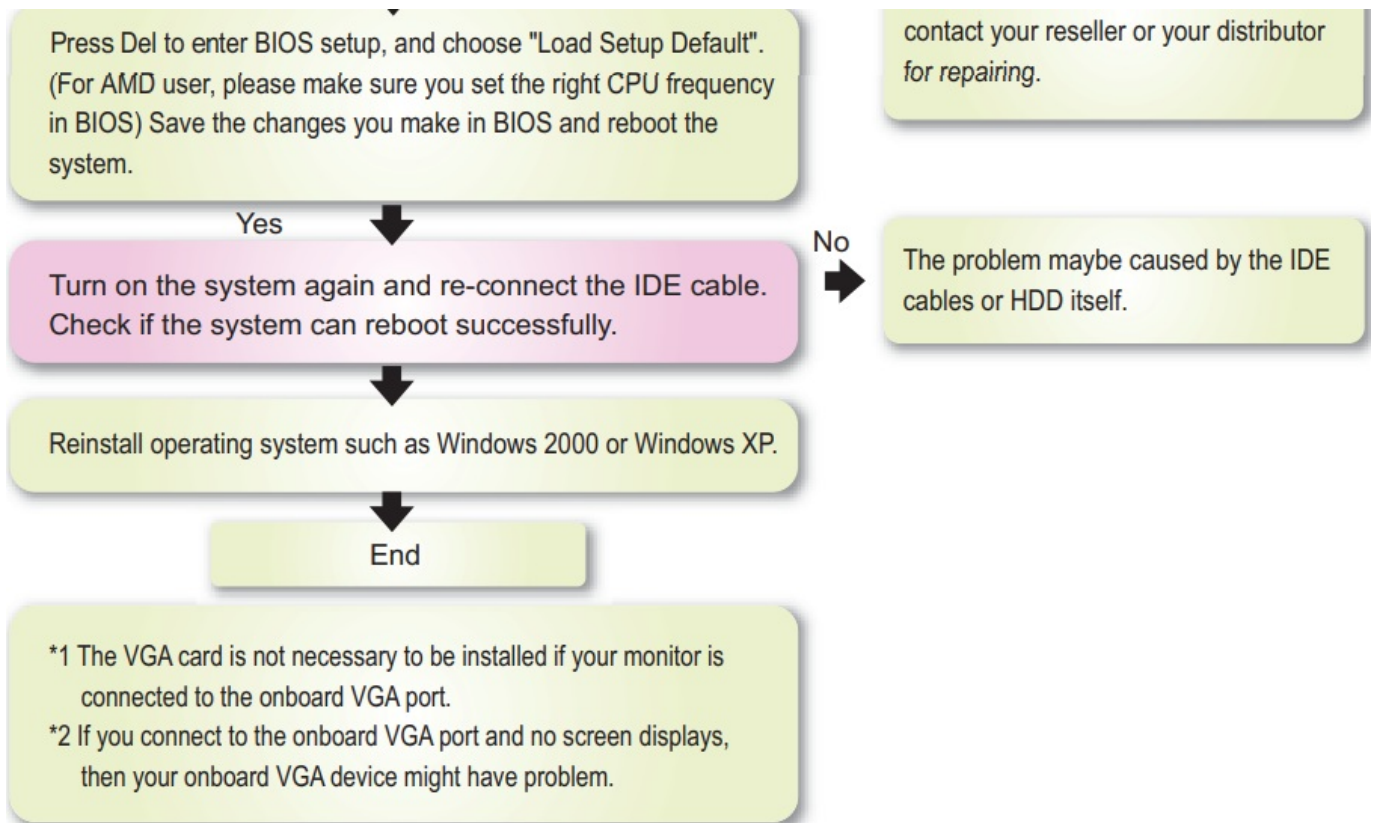
Part No.   Serial No.

P/N: 918ET10I500 is part number.
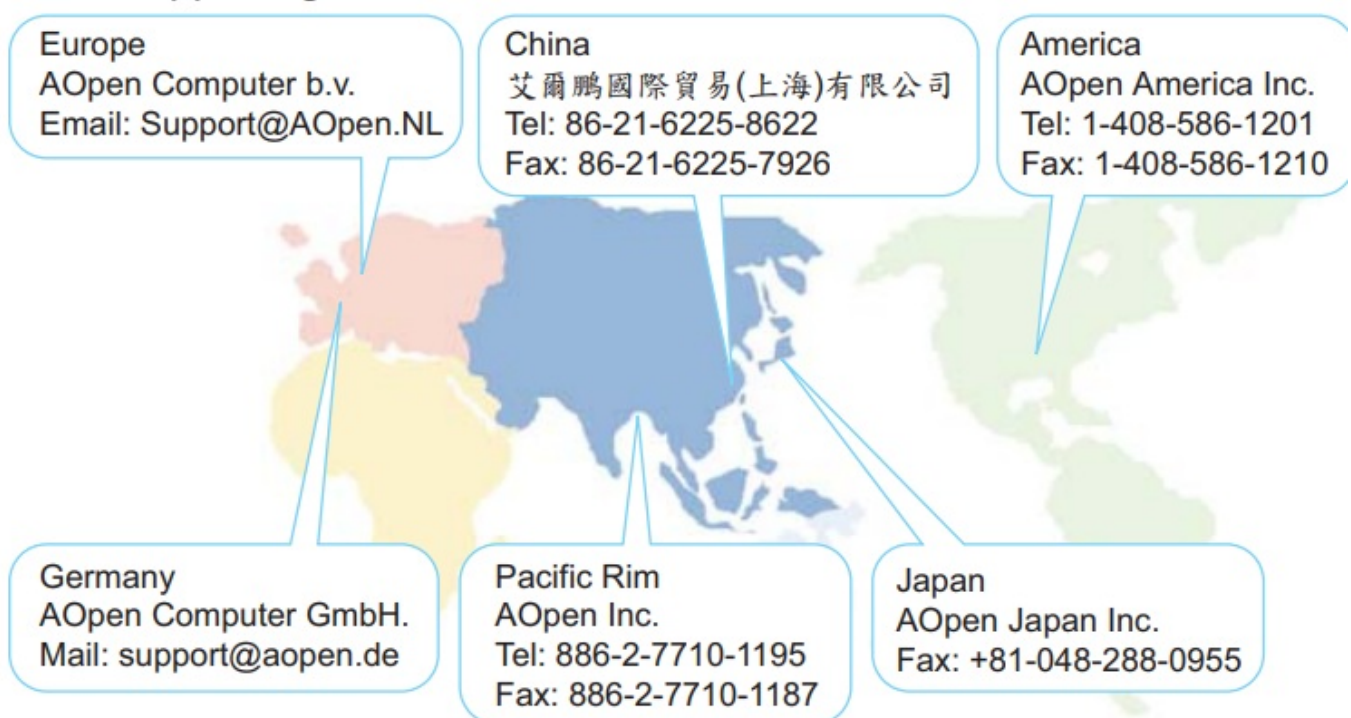S/N: 91949378KN73 is serial number.

For example:

Trouble Shooting

Start

Turn off the power and unplug the AC power cable, then remove all of the add-on cards and cables including VGA, SATA, COM and other external devices.

Clear CMOS and then plug the ATX Power cord.
For P4 system, please connect the 4-pin (+12V) cord before ATX cord is connected.

Install VGA card x1, connect monitor and keyboard.

Yes

Turn on the power and check if the power supply, power fan and CPU fan work properly.

Yes

Check if there is display

No → Perhaps your memory is not compatible with the system, or either your VGA card*2 or monitor is out of order.

No → The problem maybe caused by power supply/motherboard failure. Please

Press Del to enter BIOS setup, and choose "Load Setup Default". (For AMD user, please make sure you set the right CPU frequency in BIOS) Save the changes you make in BIOS and reboot the system.

contact your reseller or your distributor *for repairing.*

Yes

No

Turn on the system again and re-connect the IDE cable. Check if the system can reboot successfully.

The problem maybe caused by the IDE cables or HDD itself.

Reinstall operating system such as Windows 2000 or Windows XP.

End

*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.

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

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!

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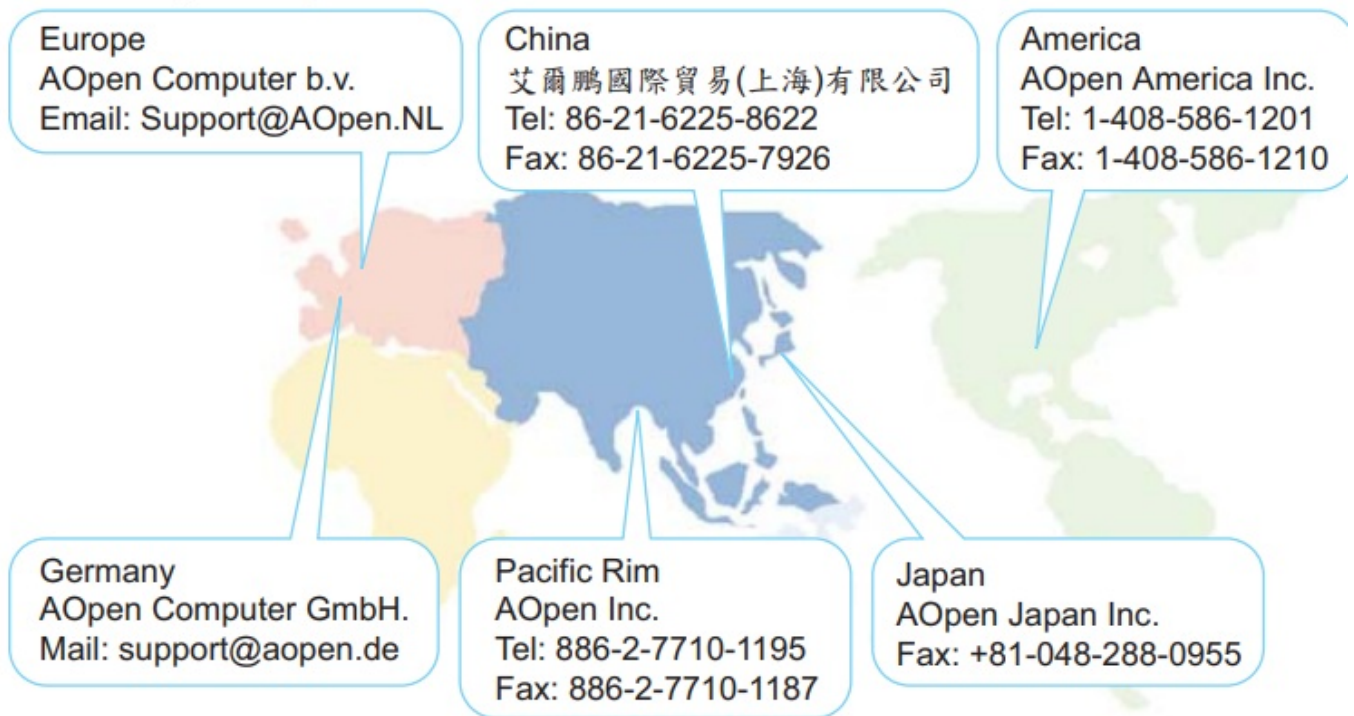
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RCL: We recommend you to choose board/card/device from the compatibility recommand component list for assembling your PC. It may prevent incompatibility problems.
http://www.aopen.com > Chose Territory > RCL
FAQ: Here we list problems that users often 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.
http://www.aopen.com > Chose Territory > Download
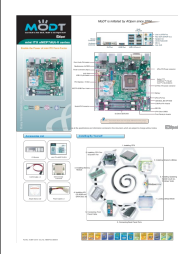
Download Software: After log on and having language selected, you may get the latest updated BIOS/utility and drivers you need under "Type" directory. In most case, newer versions of drivers and BIOS have solved earlier bugs or compatibility problems.
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Documents / Resources

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mini ITX nMCP7AUt-V Series Enable The Power Of Mini ITX Form Factor, mini ITX nMCP7AUt-V, Series Enable The Power Of Mini ITX Form Factor, Power Of Mini ITX Form Factor, Mini ITX Form Factor

References

- **AOPEN JAPAN – Bright Ideas Connected**
- **Digital Signage Media Player Hardware | Embedded Computing, All-in-one touch displays, Chrome | AOPEN**
- **Digital Signage Media Player Hardware | Embedded Computing, All-in-one touch displays, Chrome | AOPEN**
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- **User Manual**