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This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) this device may not cause harmful interference, and
(2) this device must accept any interference received, including interference that may cause undesired operation.

CALIFORNIA, USA ONLY

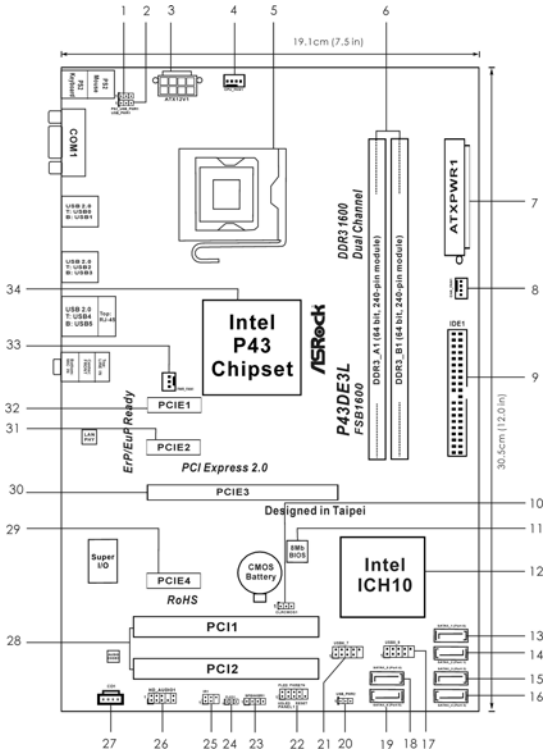
The Lithium battery adopted on this motherboard contains Perchlorate, a toxic substance controlled in Perchlorate Best Management Practices (BMP) regulations passed by the California Legislature. When you discard the Lithium battery in California, USA, please follow the related regulations in advance.
"Perchlorate Material-special handling may apply, see www.dtsc.ca.gov/hazardouswaste/perchlorate"

ASRock Website: http://www.asrock.com

Published May 2010

English

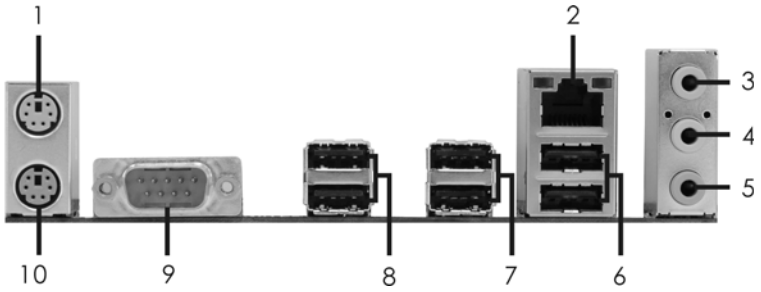
Motherboard Layout



1	PS2_USB_PWR1 Jumper
2	USB_PWR1 Jumper
3	ATX 12V Connector (ATX12V1)
4	CPU Fan Connector (CPU_FAN1)
5	775-Pin CPU Socket
6	2 x 240-pin DDR3 DIMM Slots (Dual Channel: DDR3_A1, DDR3_B1; Blue)
7	ATX Power Connector (ATXPWR1)
8	Chassis Fan Connector (CHA_FAN1)
9	IDE1 Connector (IDE1, Blue)
10	Clear CMOS Jumper (CLRCMOS1)
11	SPI BIOS Chip
12	South Bridge Controller
13	Primary SATAII Connector (SATAII_1 (Port 0), Blue)
14	Secondary SATAII Connector (SATAII_2 (Port 1), Blue)
15	Third SATAII Connector (SATAII_3 (Port 2), Blue)
16	Fourth SATAII Connector (SATAII_4 (Port 3), Blue)
17	USB 2.0 Header (USB8_9, Blue)
18	Fifth SATAII Connector (SATAII_5 (Port 4), Blue)
19	Sixth SATAII Connector (SATAII_6 (Port 5), Blue)
20	USB_PWR2 Jumper
21	USB 2.0 Header (USB6_7, Blue)
22	System Panel Header (PANEL1, White)
23	Chassis Speaker Header (SPEAKER 1, White)
24	Power LED Header (PLED1)
25	Infrared Module Header (IR1)
26	Front Panel Audio Header (HD_AUDIO1, White)
27	Internal Audio Connector: CD1 (Black)
28	PCI Slots (PCI1 - 2)
29	PCI Express x1 Slot (PCIE4, White)
30	PCI Express 2.0 x16 Slot (PCIE3, Blue)
31	PCI Express x1 Slot (PCIE2, White)
32	PCI Express x1 Slot (PCIE1, White)
33	Power Fan Connector (PWR_FAN1)
34	North Bridge Controller

English

I/O Panel



1	PS/2 Mouse Port (Green)	6	USB 2.0 Ports (USB45)
* 2	LAN RJ-45 Port (LAN1)	7	USB 2.0 Ports (USB23)
3	Line In (Light Blue)	8	USB 2.0 Ports (USB01)
* 4	Front Speaker (Lime)	9	Serial Port: COM1
5	Microphone (Pink)	10	PS/2 Keyboard Port (Purple)

* There are two LED next to the LAN port. Please refer to the table below for the LAN port LED indications.

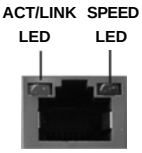
LAN Port LED Indications

Activity/Link LED

Status	Description
Off	No Link
Blinking	Data Activity
On	Link

SPEED LED

Status	Description
Off	10Mbps connection
Orange	100Mbps connection
Green	1Gbps connection



To enable Multi-Streaming function, you need to connect a front panel audio cable to the front panel audio header. After restarting your computer, you will find "VIA HD Audio Deck" tool on your system. Please follow below instructions according to the OS you install.

For Windows® XP / XP 64-bit OS:

Please click "VIA HD Audio Deck" icon , and click "Speaker". Then you are allowed to select "2 Channel" or "4 Channel". Click "Power" to save your change.

For Windows® 7 / 7 64-bit / Vista™ / Vista™ 64-bit OS:

Please click "VIA HD Audio Deck" icon , and click "Advanced Options" on the left side on the bottom. In "Advanced Options" screen, select "Independent Headphone", and click "OK" to save your change.

If you enable Multi-Streaming function, Side Speaker function will be disabled. You can only choose to enable either Multi-Streaming function or Side Speaker function.

English

1. Introduction

Thank you for purchasing ASRock ***P43DE3L*** motherboard, a reliable motherboard produced under ASRock's consistently stringent quality control. It delivers excellent performance with robust design conforming to ASRock's commitment to quality and endurance.

This Quick Installation Guide contains introduction of the motherboard and step-by-step installation guide. More detailed information of the motherboard can be found in the user manual presented in the Support CD.

Because the motherboard specifications and the BIOS software might be updated, the content of this manual will be subject to change without notice. In case any modifications of this manual occur, the updated version will be available on ASRock website without further notice. You may find the latest VGA cards and CPU support lists on ASRock website as well. ASRock website http://www.asrock.com
If you require technical support related to this motherboard, please visit our website for specific information about the model you are using.
www.asrock.com/support/index.asp

1.1 Package Contents

ASRock ***P43DE3L*** Motherboard
(ATX Form Factor: 12.0-in x 7.5-in, 30.5 cm x 19.1 cm)
ASRock ***P43DE3L*** Quick Installation Guide
ASRock ***P43DE3L*** Support CD
2 x Serial ATA (SATA) Data Cables (Optional)
1 x I/O Panel Shield

English

1.2 Specifications

Platform	- ATX Form Factor: 12.0-in x 7.5-in, 30.5 cm x 19.1 cm - Solid Capacitor for CPU power
CPU	- LGA 775 for Intel® Core™ 2 Extreme / Core™ 2 Quad / Core™ 2 Duo / Pentium® Dual Core / Celeron® Dual Core / Celeron®, supporting Penryn Quad Core Yorkfield and Dual Core Wolfdale processors - Supports FSB1600/1333/1066/800 MHz - Supports Hyper-Threading Technology (see **CAUTION 1**) - Supports Untied Overclocking Technology (see **CAUTION 2**) - Supports EM64T CPU
Chipset	- Northbridge: Intel® P43 - Southbridge: Intel® ICH10
Memory	- Dual Channel DDR3 Memory Technology (see **CAUTION 3**) - 2 x DDR3 DIMM slots - Support DDR3 1600/1333/1066/800 non-ECC, un-buffered memory (see **CAUTION 4**) - Max. capacity of system memory: 8GB (see **CAUTION 5**) - Supports Intel® Extreme Memory Profile (XMP)
Expansion Slot	- 1 x PCI Express 2.0 x16 slot (blue @ x16 mode) - 3 x PCI Express x1 slots - 2 x PCI slots
Audio	- 5.1 CH HD Audio (VIA® VT1705 Audio Codec)
LAN	- PCIE x1 Gigabit LAN 10/100/1000 Mb/s - Realtek RTL8111DL - Supports Wake-On-LAN
Rear Panel I/O	I/O Panel - 1 x PS/2 Mouse Port - 1 x PS/2 Keyboard Port - 1 x Serial Port: COM1 - 6 x Ready-to-Use USB 2.0 Ports - 1 x RJ-45 LAN Port with LED (ACT/LINK LED and SPEED LED) - HD Audio Jack: Line in/Front Speaker/Microphone
Connector	- 6 x SATAII 3.0Gb/s connectors, support NCQ, AHCI and "Hot Plug" functions (see **CAUTION 6**) - 1 x ATA133 IDE connector (supports 2 x IDE devices) - 1 x IR header - 1 x Power LED header - CPU/Chassis/Power FAN connector - 24 pin ATX power connector

English

	- 8 pin 12V power connector - CD in header - Front panel audio connector - 2 x USB 2.0 headers (support 4 USB 2.0 ports)
BIOS Feature	- 8Mb AMI BIOS - AMI Legal BIOS - Supports "Plug and Play" - ACPI 1.1 Compliance Wake Up Events - Supports jumperfree - SMBIOS 2.3.1 Support - CPU, DRAM, GTL REF, NB, NB GTL REF, SB Core, SB 1.1V, VTT, PLL Voltage Multi-adjustment - Supports I. O. T. (Intelligent Overclocking Technology)
Support CD	- Drivers, Utilities, AntiVirus Software (Trial Version), ASRock Software Suite (CyberLink DVD Suite - OEM and Trial; Creative Sound Blaster X-Fi MB - Trial)
Unique Feature	- ASRock OC Tuner (see **CAUTION 7**) - Intelligent Energy Saver (see **CAUTION 8**) - Instant Boot - ASRock Instant Flash (see **CAUTION 9**) - ASRock OC DNA (see **CAUTION 10**) - Hybrid Booster: - CPU Frequency Stepless Control (see **CAUTION 11**) - ASRock U-COP (see **CAUTION 12**) - Boot Failure Guard (B.F.G.)
Hardware Monitor	- CPU Temperature Sensing - Chassis Temperature Sensing - CPU/Chassis/Power Fan Tachometer - CPU Quiet Fan - CPU/Chassis Fan Multi-Speed Control - Voltage Monitoring: +12V, +5V, +3.3V, CPU Vcore
OS	- Microsoft® Windows® 7 / 7 64-bit / Vista™ / Vista™ 64-bit / XP / XP 64-bit compliant
Certifications	- FCC, CE, WHQL - ErP/EuP Ready (ErP/EuP ready power supply is required) (see **CAUTION 13**)

* For detailed product information, please visit our website: http://www.asrock.com

English

WARNING

Please realize that there is a certain risk involved with overclocking, including adjusting the setting in the BIOS, applying Untied Overclocking Technology, or using the third-party overclocking tools. Overclocking may affect your system stability, or even cause damage to the components and devices of your system. It should be done at your own risk and expense. We are not responsible for possible damage caused by overclocking.

CAUTION!

1. About the setting of "Hyper Threading Technology", please check page 37 of "User Manual" in the support CD.
2. This motherboard supports Untied Overclocking Technology. Please read "Untied Overclocking Technology" on page 19 for details.
3. This motherboard supports Dual Channel Memory Technology. Before you implement Dual Channel Memory Technology, make sure to read the installation guide of memory modules on page 12 for proper installation.
4. Please check the table below for the CPU FSB frequency and its corresponding memory support frequency.

CPU FSB Frequency	Memory Support Frequency
1600	DDR3 800, DDR3 1066, DDR3 1333, DDR3 1600
1333	DDR3 800, DDR3 1066, DDR3 1333
1066	DDR3 800, DDR3 1066
800	DDR3 800

5. Due to the operating system limitation, the actual memory size may be less than 4GB for the reservation for system usage under Windows® 7 / Vista™ / XP. For Windows® OS with 64-bit CPU, there is no such limitation.
6. Before installing SATAII hard disk to SATAII connector, please read the "SATAII Hard Disk Setup Guide" on page 23 of "User Manual" in the support CD to adjust your SATAII hard disk drive to SATAII mode. You can also connect SATA hard disk to SATAII connector directly.
7. It is a user-friendly ASRock overclocking tool which allows you to surveil your system by hardware monitor function and overclock your hardware devices to get the best system performance under Windows® environment. Please visit our website for the operation procedures of ASRock OC Tuner. ASRock website: http://www.asrock.com
8. Featuring an advanced proprietary hardware and software design, Intelligent Energy Saver is a revolutionary technology that delivers unparalleled power savings. In other words, it is able to provide exceptional power saving and improve power efficiency without sacrificing computing performance. Please visit our website for the operation procedures of Intelligent Energy Saver.
   ASRock website: http://www.asrock.com

English

9. ASRock Instant Flash is a BIOS flash utility embedded in Flash ROM. This convenient BIOS update tool allows you to update system BIOS without entering operating systems first like MS-DOS or Windows®. With this utility, you can press <F6> key during the POST or press <F2> key to BIOS setup menu to access ASRock Instant Flash. Just launch this tool and save the new BIOS file to your USB flash drive, floppy disk or hard drive, then you can update your BIOS only in a few clicks without preparing an additional floppy diskette or other complicated flash utility. Please be noted that the USB flash drive or hard drive must use FAT32/16/12 file system.
10. The software name itself – OC DNA literally tells you what it is capable of. OC DNA, an exclusive utility developed by ASRock, provides a convenient way for the user to record the OC settings and share with others. It helps you to save your overclocking record under the operating system and simplifies the complicated recording process of overclocking settings. With OC DNA, you can save your OC settings as a profile and share with your friends! Your friends then can load the OC profile to their own system to get the same OC settings as yours! Please be noticed that the OC profile can only be shared and worked on the same motherboard.
11. Although this motherboard offers stepless control, it is not recommended to perform over-clocking. Frequencies other than the recommended CPU bus frequencies may cause the instability of the system or damage the CPU.
12. While CPU overheat is detected, the system will automatically shutdown. Before you resume the system, please check if the CPU fan on the motherboard functions properly and unplug the power cord, then plug it back again. To improve heat dissipation, remember to spray thermal grease between the CPU and the heatsink when you install the PC system.
13. EuP, stands for Energy Using Product, was a provision regulated by European Union to define the power consumption for the completed system. According to EuP, the total AC power of the completed system shall be under 1.00W in off mode condition. To meet EuP standard, an EuP ready motherboard and an EuP ready power supply are required. According to Intel's suggestion, the EuP ready power supply must meet the standard of 5v standby power efficiency is higher than 50% under 100 mA current consumption. For EuP ready power supply selection, we recommend you checking with the power supply manufacturer for more details.

2. Installation

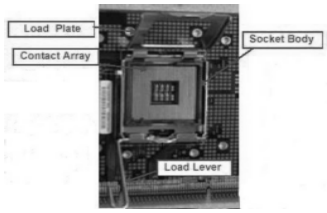
Pre-installation Precautions

Take note of the following precautions before you install motherboard components or change any motherboard settings.

1. Unplug the power cord from the wall socket before touching any component. Failure to do so may cause severe damage to the motherboard, peripherals, and/or components.
2. To avoid damaging the motherboard components due to static electricity, NEVER place your motherboard directly on the carpet or the like. Also remember to use a grounded wrist strap or touch a safety grounded object before you handle components.
3. Hold components by the edges and do not touch the ICs.
4. Whenever you uninstall any component, place it on a grounded antstatic pad or in the bag that comes with the component.
5. When placing screws into the screw holes to secure the motherboard to the chassis, please do not over-tighten the screws! Doing so may damage the motherboard.

2.1 CPU Installation

For the installation of Intel 775-LAND CPU, please follow the steps below.



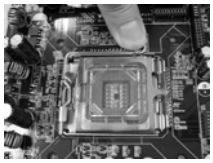
775-Pin Socket Overview

Before you insert the 775-LAND CPU into the socket, please check if the CPU surface is unclean or if there is any bent pin on the socket. Do not force to insert the CPU into the socket if above situation is found. Otherwise, the CPU will be seriously damaged.

English

Step 1. Open the socket:

Step 1-1. Disengaging the lever by depressing down and out on the hook to clear retention tab.



Step 1-2. Rotate the load lever to fully open position at approximately 135 degrees.

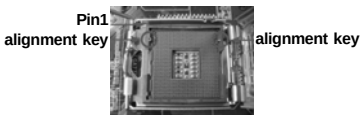
Step 1-3. Rotate the load plate to fully open position at approximately 100 degrees.

Step 2. Insert the 775-LAND CPU:

Step 2-1. Hold the CPU by the edges where are marked with black lines.

Step 2-2. Orient the CPU with IHS (Integrated Heat Sink) up. Locate Pin1 and the two orientation key notches.

775-LAND CPU



775-Pin Socket

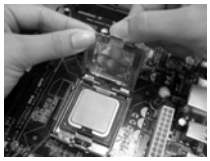
For proper inserting, please ensure to match the two orientation key notches of the CPU with the two alignment keys of the socket.

Step 2-3. Carefully place the CPU into the socket by using a purely vertical motion.

Step 2-4. Verify that the CPU is within the socket and properly mated to the orient keys.

Step 3. Remove PnP Cap (Pick and Place Cap):

Use your left hand index finger and thumb to support the load plate edge, engage PnP cap with right hand thumb and peel the cap from the socket while pressing on center of PnP cap to assist in removal.



English

1. It is recommended to use the cap tab to handle and avoid kicking off the PnP cap.
2. This cap must be placed if returning the motherboard for after service.

Step 4. Close the socket:

Step 4-1. Rotate the load plate onto the IHS.

Step 4-2. While pressing down lightly on load plate, engage the load lever.

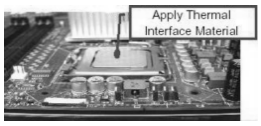
Step 4-3. Secure load lever with load plate tab under retention tab of load lever.

2.2 Installation of CPU Fan and Heatsink

For proper installation, please kindly refer to the instruction manuals of your CPU fan and heatsink.

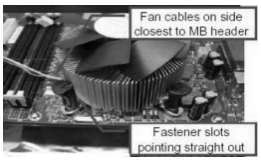
Below is an example to illustrate the installation of the heatsink for 775-LAND CPU.

Step 1. Apply thermal interface material onto center of IHS on the socket surface.

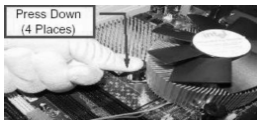


Step 2. Place the heatsink onto the socket. Ensure fan cables are oriented on side closest to the CPU fan connector on the motherboard (CPU_FAN1, see page 2, No. 4).

Step 3. Align fasteners with the motherboard throughholes.



Step 4. Rotate the fastener clockwise, then press down on fastener caps with thumb to install and lock. Repeat with remaining fasteners.



If you press down the fasteners without rotating them clockwise, the heatsink cannot be secured on the motherboard.

Step 5. Connect fan header with the CPU fan connector on the motherboard.

Step 6. Secure excess cable with tie-wrap to ensure cable does not interfere with fan operation or contact other components.

English

2.3 Installation of Memory Modules (DIMM)

P43DE3L motherboard provides two 240-pin DDR3 (Double Data Rate 3) DIMM slots, and supports Dual Channel Memory Technology. For dual channel configuration, you always need to install two **identical** (the same brand, speed, size and chip-type) memory modules in the DDR3 DIMM slots to activate Dual Channel Memory Technology. Otherwise, it will operate at single channel mode.

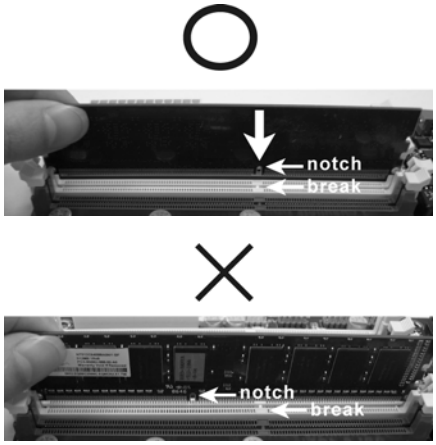
1. It is not allowed to install a DDR or DDR2 memory module into DDR3 slot;otherwise, this motherboard and DIMM may be damaged.
2. If you install only one memory module or two non-identical memory modules, it is unable to activate the Dual Channel Memory Technology.

Installing a DIMM

Please make sure to disconnect power supply before adding or removing DIMMs or the system components.

Step 1. Unlock a DIMM slot by pressing the retaining clips outward.

Step 2. Align a DIMM on the slot such that the notch on the DIMM matches the break on the slot.



The DIMM only fits in one correct orientation. It will cause permanent damage to the motherboard and the DIMM if you force the DIMM into the slot at incorrect orientation.

Step 3. Firmly insert the DIMM into the slot until the retaining clips at both ends fully snap back in place and the DIMM is properly seated.

English

2.4 Expansion Slots (PCI and PCI Express Slots)

There are 2 PCI slots and 4 PCI Express slots on this motherboard.

PCI Slots: PCI slots are used to install expansion cards that have the 32-bit PCI interface.

PCIE Slots:

PCIE1 / PCIE2 / PCIE4 (PCIE x1 slot; White) is used for PCI Express cards with x1 lane width cards, such as Gigabit LAN card, SATA2 card, etc.

PCIE3 (PCIE x16 slot; Blue) is used for PCI Express x16 lane width graphics cards.

Installing an expansion card

Step 1. Before installing the expansion card, please make sure that the power supply is switched off or the power cord is unplugged. Please read the documentation of the expansion card and make necessary hardware settings for the card before you start the installation.

Step 2. Remove the system unit cover (if your motherboard is already installed in a chassis).

Step 3. Remove the bracket facing the slot that you intend to use. Keep the screws for later use.

Step 4. Align the card connector with the slot and press firmly until the card is completely seated on the slot.

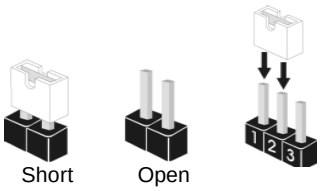
Step 5. Fasten the card to the chassis with screws.

Step 6. Replace the system cover.

English

2.5 Jumpers Setup

The illustration shows how jumpers are setup. When the jumper cap is placed on pins, the jumper is “Short”. If no jumper cap is placed on pins, the jumper is “Open”. The illustration shows a 3-pin jumper whose pin1 and pin2 are “Short” when jumper cap is placed on these 2 pins.



Short Open

Jumper	Setting	
PS2_USB_PWR1 (see p.2, No. 1)		Short pin2, pin3 to enable +5VSB (standby) for PS/2 or USB01 wake up events.
USB_PWR1 (see p.2, No. 2)		Short pin2, pin3 to enable +5V_DUAL for USB23/45 wake up events.
USB_PWR2 (see p.2, No. 20)		Short pin2, pin3 to enable +5VSB (standby) for USB6_7/8_9 wake up events.
Clear CMOS Jumper (CLRCMOS1) (see p.2, No. 10)		

Note: To select +5VSB, it requires 2 Amp and higher standby current provided by power supply.

Note: To select +5V_DUAL, it requires 2 Amp and higher standby current provided by power supply. When you select +5V_DUAL, USB devices can wake up the system under S3 (Suspend to RAM) state.

Note: To select +5VSB, it requires 2 Amp and higher standby current provided by power supply.

Note: CLRCMOS1 allows you to clear the data in CMOS. The data in CMOS includes system setup information such as system password, date, time, and system setup parameters. To clear and reset the system parameters to default setup, please turn off the computer and unplug the power cord from the power supply. After waiting for 15 seconds, use a jumper cap to short pin2 and pin3 on CLRCMOS1 for 5 seconds. However, please do not clear the CMOS right after you update the BIOS. If you need to clear the CMOS when you just finish updating the BIOS, you must boot up the system first, and then shut it down before you do the clear-CMOS action.

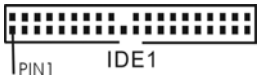
English

2.6 Onboard Headers and Connectors

Onboard headers and connectors are NOT jumpers. Do NOT place jumper caps over these headers and connectors. Placing jumper caps over the headers and connectors will cause permanent damage of the motherboard!

Primary IDE connector (Blue)

(39-pin IDE1, see p.2 No. 9)



connect the blue end to the motherboard

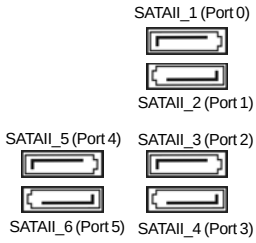
connect the black end to the IDE devices

80-conductor ATA 66/100/133 cable

Note: Please refer to the instruction of your IDE device vendor for the details.

Serial ATAII Connectors

(SATAII_1 (Port 0): see p.2, No. 13)
(SATAII_2 (Port 1): see p.2, No. 14)
(SATAII_3 (Port 2): see p.2, No. 15)
(SATAII_4 (Port 3): see p.2, No. 16)
(SATAII_5 (Port 4): see p.2, No. 18)
(SATAII_6 (Port 5): see p.2, No. 19)



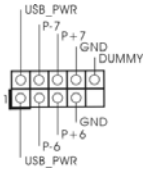
These six Serial ATAII (SATAII) connectors support SATA data cables for internal storage devices. The current SATAII interface allows up to 3.0 Gb/s data transfer rate.

Serial ATA (SATA) Data Cable (Optional)

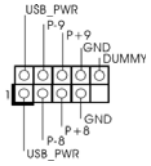
Either end of the SATA data cable can be connected to the SATA / SATAII hard disk or the SATAII connector on this motherboard.

USB 2.0 Headers

(9-pin USB6_7) (see p.2 No. 21)



(9-pin USB8_9) (see p.2 No. 17)



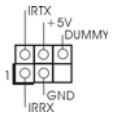
Besides six default USB 2.0 ports on the I/O panel, there are two USB 2.0 headers on this motherboard. Each USB 2.0 header can support two USB 2.0 ports.

English

Infrared Module Header

(5-pin IR1)

(see p.2 No. 25)

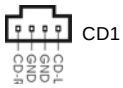


This header supports an optional wireless transmitting and receiving infrared module.

Internal Audio Connectors

(4-pin CD1)

(CD1: see p.2 No. 27)

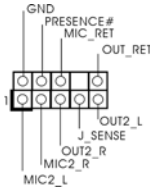


This connector allows you to receive stereo audio input from sound sources such as a CD-ROM, DVD-ROM, TV tuner card, or MPEG card.

Front Panel Audio Header

(9-pin HD_AUDIO1)

(see p.2 No. 26)



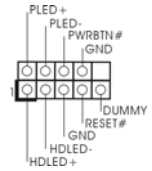
This is an interface for front panel audio cable that allows convenient connection and control of audio devices.

1. High Definition Audio supports Jack Sensing, but the panel wire on the chassis must support HDA to function correctly. Please follow the instruction in our manual and chassis manual to install your system.
2. If you use AC'97 audio panel, please install it to the front panel audio header as below:
   A. Connect Mic_IN (MIC) to MIC2_L.
   B. Connect Audio_R (RIN) to OUT2_R and Audio_L (LIN) to OUT2_L.
   C. Connect Ground (GND) to Ground (GND).
   D. MIC_RET and OUT_RET are for HD audio panel only. You don't need to connect them for AC'97 audio panel.

System Panel Header

(9-pin PANEL1)

(see p.2 No. 22)



This header accommodates several system front panel functions.

Power LED Header

(3-pin PLED1)

(see p.2 No. 24)

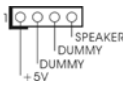
Please connect the chassis power LED to this header to indicate system power status. The LED is on when the system is operating. The LED keeps blinking in S1 state. The LED is off in S3/S4 state or S5 state (power off).

English

Chassis Speaker Header

(4-pin SPEAKER 1)

(see p.2 No. 23)



Please connect the chassis speaker to this header.

Chassis and Power Fan Connectors

(4-pin CHA_FAN1)

(see p.2 No. 8)

(3-pin PWR_FAN1)

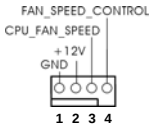
(see p.2 No. 33)

Please connect the fan cables to the fan connectors and match the black wire to the ground pin.

CPU Fan Connector

(4-pin CPU_FAN1)

(see p.2, No. 4)



Please connect a CPU fan cable to this connector and match the black wire to the ground pin.

Though this motherboard provides 4-Pin CPU fan (Quiet Fan) support, the 3-Pin CPU fan still can work successfully even without the fan speed control function. If you plan to connect the 3-Pin CPU fan to the CPU fan connector on this motherboard, please connect it to Pin 1-3.

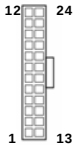
Pin 1-3 Connected

3-Pin Fan Installation

ATX Power Connector

(24-pin ATXPWR1)

(see p.2 No. 7)



Please connect an ATX power supply to this connector.

Though this motherboard provides 24-pin ATX power connector, it can still work if you adopt a traditional 20-pin ATX power supply. To use the 20-pin ATX power supply, please plug your power supply along with Pin 1 and Pin 13.

20-Pin ATX Power Supply Installation

ATX 12V Power Connector

(8-pin ATX12V1)

(see p.2 No. 3)

Please connect an ATX 12V power supply to this connector.

English

Though this motherboard provides 8-pin ATX 12V power connector, it can still work if you adopt a traditional 4-pin ATX 12V power supply. To use the 4-pin ATX power supply, please plug your power supply along with Pin 1 and Pin 5.

4-Pin ATX 12V Power Supply Installation

2.7 Driver Installation Guide

To install the drivers to your system, please insert the support CD to your optical drive first. Then, the drivers compatible to your system can be auto-detected and listed on the support CD driver page. Please follow the order from up to bottom side to install those required drivers. Therefore, the drivers you install can work properly.

2.8 Installing Windows® 7 / 7 64-bit / Vista™ / Vista™ 64-bit / XP / XP 64-bit Without RAID Functions

If you want to install Windows® 7 / 7 64-bit / Vista™ / Vista™ 64-bit / XP / XP 64-bit OS on your SATA / SATAII HDDs without RAID functions, please follow below procedures according to the OS you install.

2.8.1 Installing Windows® XP / XP 64-bit Without RAID Functions

If you want to install Windows® XP / XP 64-bit OS on your SATA / SATAII HDDs without RAID functions, please follow below steps.

AHCI mode is not supported under Windows® XP / XP 64-bit OS.

Using SATA / SATAII HDDs without NCQ function (IDE mode)

STEP 1: Set up BIOS.

A. Enter BIOS SETUP UTILITY → Advanced screen → Storage Configuration.

B. Set “SATAII Configuration” to [Enhanced], and then in the option “Configure SATAII as”, please set the option to [IDE].

STEP 2: Install Windows® XP / XP 64-bit OS on your system.

English

2.8.2 Installing Windows® 7 / 7 64-bit / Vista™ / Vista™ 64-bit Without RAID Functions

If you want to install Windows® 7 / 7 64-bit / Vista™ / Vista™ 64-bit OS on your SATA / SATAII HDDs without RAID functions, please follow below steps.

Using SATA / SATAII HDDs without NCQ function (IDE mode)

STEP 1: Set up BIOS.

A. Enter BIOS SETUP UTILITY → Advanced screen → Storage Configuration.

B. Set "SATAII Configuration" to [Enhanced], and then in the option "Configure SATAII as", please set the option to [IDE].

STEP 2: Install Windows® 7 / 7 64-bit / Vista™ / Vista™ 64-bit OS on your system.

Using SATA / SATAII HDDs with NCQ function (AHCI mode)

STEP 1: Set Up BIOS.

A. Enter BIOS SETUP UTILITY → Advanced screen → Storage Configuration.

B. Set "SATAII Configuration" to [Enhanced], and then in the option "Configure SATAII as", please set the option to [AHCI].

STEP 2: Install Windows® 7 / 7 64-bit / Vista™ / Vista™ 64-bit OS on your system.

2.9 Untied Overclocking Technology

This motherboard supports Untied Overclocking Technology, which means during overclocking, FSB enjoys better margin due to fixed PCI / PCIE buses. Before you enable Untied Overclocking function, please enter "Overclock Mode" option of BIOS setup to set the selection from [Auto] to [Manual]. Therefore, CPU FSB is untied during overclocking, but PCI / PCIE buses are in the fixed mode so that FSB can operate under a more stable overclocking environment.

Please refer to the warning on page 7 for the possible overclocking risk before you apply Untied Overclocking Technology.

English

3. BIOS Information

The Flash Memory on the motherboard stores BIOS Setup Utility. When you start up the computer, please press <F2> during the Power-On-Self-Test (POST) to enter BIOS Setup utility; otherwise, POST continues with its test routines. If you wish to enter BIOS Setup after POST, please restart the system by pressing <Ctl> + <Alt> + <Delete>, or pressing the reset button on the system chassis. The BIOS Setup program is designed to be user-friendly. It is a menu-driven program, which allows you to scroll through its various sub-menus and to select among the predetermined choices. For the detailed information about BIOS Setup, please refer to the User Manual (PDF file) contained in the Support CD.

4. Software Support CD information

This motherboard supports various Microsoft® Windows® operating systems: 7 / 7 64-bit / Vista™ / Vista™ 64-bit / XP / XP 64-bit. The Support CD that came with the motherboard contains necessary drivers and useful utilities that will enhance motherboard features. To begin using the Support CD, insert the CD into your CD-ROM drive. It will display the Main Menu automatically if “AUTORUN” is enabled in your computer. If the Main Menu does not appear automatically, locate and double-click on the file “ASSETUP.EXE” from the BIN folder in the Support CD to display the menus.

1. 主板简介

谢谢你采用了华擎 *P43DE3L* 主板，本主板由华擎严格制造，质量可靠，稳定性好，能够获得卓越的性能。本安装指南介绍了安装主板的步骤。更加详细的主板信息可参看驱动光盘的用户手册。

由于主板规格和BIOS软件将不断升级，本手册之相关内容变更恕不另行通知。请留意华擎网站上公布的升级版本。你也可以在华擎网站找到最新的显卡和CPU支持表。
华擎网址：http://www.asrock.com
如果您需要与此主板有关的技术支持，请参观我们的网站以了解您使用机种的规格信息。
www.asrock.com/support/index.asp

1.1 包装盒内物品

华擎 *P43DE3L* 主板
（ATX规格：12.0英寸 X 7.5英寸，30.5厘米 X 19.1厘米）
华擎 *P43DE3L* 快速安装指南
华擎 *P43DE3L* 支持光盘
两条Serial ATA(SATA)数据线(选配)
一块I/O挡板

1.2 主板规格

架构	– ATX 规格：12.0 英寸 X 7.5 英寸，30.5 厘米 X 19.1 厘米 – CPU 供电电路固态电容
处理器	– LGA 775 支持 Intel® Core™ 2 Extreme / Core™ 2 Quad / Core™ 2 Duo / Pentium® Dual Core / Celeron® Dual Core / Celeron®，支持 Penryn Quad Core Yorkfield 和 Dual Core Wolfdale 处理器 – FSB1600/1333/1066/800MHz – 支持 Hyper-Threading 超线程技术（详见**警告 1**） – 支持异步超频技术（详见**警告 2**） – 支持 EM64T CPU
芯片组	– 北桥：Intel® P43 – 南桥：Intel® ICH10
系统内存	– 支持双通道 DDR3 内存技术（见**警告 3**） – 配备 2 个 DDR3 DIMM 插槽 – 支持 DDR3 1600/1333/1066/800 non-ECC、un-buffered 内存（见**警告 4**） – 最高支持 8GB 系统容量（见**警告 5**） – 支持 Intel® Extreme Memory Profile(XMP)
扩展插槽	– 1 x PCI Express 2.0 x16 插槽(蓝色@ x16 模式) – 3 x PCI Express x1 插槽 – 2 x PCI 插槽
音效	– 5.1 声道高保真音频 (VIA® VT1705 音频编解码器)
板载 LAN 功能	– PCIE x1 Gigabit LAN 10/100/1000 Mb/s – Realtek RTL8111DL – 支持网路唤醒 (Wake-On-LAN)
Rear Panel I/O（后面板输入/输出接口）	I/O 界面 – 1 个 PS/2 鼠标接口 – 1 个 PS/2 键盘接口 – 1 个串行接口 – 6 个可直接使用的 USB 2.0 接口 – 1 个 RJ-45 局域网接口与 LED 指示灯(ACT/LINK LED 和 SPEED LED) – 高保真音频插孔：音频输入 / 前置喇叭 / 麦克风

连接头	- 6 x SATAII 3.0Gb/s 连接头,支持NCQ, AHCI 和热插拔功能（详见警告6） - 1 x ATA133 IDE 插座 （最高支持2 个IDE 驱动器） - 1 x 红外线模块接头 - 1 x 电源指示灯连接排针 - CPU/ 机箱/ 电源风扇接头 - 24 针ATX 电源接头 - 8 针12V 电源接头 - 内置音频接头 - 前置音频面板接头 - 2 x USB 2.0 接口 （可支持4 个额外的USB 2.0 接口）
BIOS	- 8Mb AMI BIOS - 采用AMI BIOS - 支持即插即用（Plug and Play,PnP） - ACPI 1.1 电源管理 - 支持唤醒功能 - 支持jumperfree 免跳线模式 - CPU、DRAM、GTL REF、NB、NB GTL REF、SB Core、SB 1.1V、VTT、PLL 电压多功能调节器 - 支持I.O.T.(智能超频技术)
支持光盘	- 驱动程序,工具软件,杀毒软件（测试版本）,华擎软件套装(CyberLink DVD 套件与Creative Sound Blaster X-Fi MB)(OEM 与试用版)
独家功能	- 华擎超频调节器（详见警告7） - 智能节能器(Intelligent Energy Saver)（详见警告8） - 即时开机功能 - 华擎Instant Flash（见警告9） - 华擎OC DNA （见警告10） - Hybrid Booster(安心超频技术): - 支持CPU 无级频率调控（见警告11） - ASRock U-COP（见警告12） - Boot Failure Guard (B.F.G.,启动失败恢复技术)
硬件监控器	- CPU 温度侦测 - 主板温度侦测 - CPU/ 机箱/ 电源风扇转速计 - CPU 静音风扇 - CPU/ 机箱风扇多速控制 - 电压范围: +12V, +5V, +3.3V, 核心电压

操作系统	- Microsoft® Windows® 7/7 64位元/Vista™/Vista™ 64位元/XP/XP 64位元适用于此主板
认证	- FCC, CE, WHQL - 支持ErP/EuP(需要同时使用支持ErP/EuP的电源供应器)(见警告13)

* 请参阅华擎网站了解详细的产品信息: http://www.asrock.com

警告

请了解超频具有不可避免的风险,这些超频包括调节BIOS设置、运用异步超频技术或使用第三方超频工具。超频可能会影响您的系统稳定性,甚至会导致系统组件和设备的损坏。这种风险和代价须由您自己承担,我们对超频可能导致的损坏不承担责任。

警告!

1、关于“Hyper-Threading Technology”(超线程技术)的设置,请参考CD光盘中的“User Manual”(用户手册, 英文版)第37页, 或是“BIOS设置程序”第9页(中文版)。

2、这款主板支持异步超频技术。请阅读第19页的”Untied Overclocking Technology”(自由超频技术)了解详情。

3、这款主板支援双通道内存技术。在您实现双通道内存技术之前,为能正确安装,请确认您已经阅读了第12页的内存模组安装指南。

4、请检查下面的表格了解内存支持的频率以及与之相对应的CPU 前端总线频率。

CPU 前端总线频率	内存支持的频率
1600	DDR3 800, DDR3 1066, DDR3 1333, DDR3 1600
1333	DDR3 800, DDR3 1066, DDR3 1333
1066	DDR3 800, DDR3 1066
800	DDR3 800

5、由于操作系统的限制,在Windows® 7/Vista™/XP下,供系统使用的实际内存容量可能小于4GB。对於Windows® 操作系统搭配64位元CPU来说, 不会存在这样的限制。

6、在将SATAII硬盘连接到SATAII接口之前,请阅读CD光盘中的“User Manual”(用户手册, 英文版)第23页的“SATAII Hard Disk Setup Guide”(SATAII硬盘安装指南)调整您的SATAII硬盘驱动器为SATAII模式。您也可以直接将SATA硬盘连接到SATAII接口。

7、这是一款具有友好使用介面的华擎超频工具,让您通过硬件监控功能监控您的系统,帮助您在Windows®环境下对硬件运行超频以获得最佳的系统性能。请访问我们的网站了解华擎超频调节器的使用方法。
华擎网站: http://www.asrock.com

简体中文

8、智能节能器(Intelligent Energy Saver)采用先进的软硬件专利设计，这项革新技术带来极佳的节能效果。换句话说，它可以在不牺牲性能的前提下，让系统更省电，并提高能源效率。请访问我们的网站了解智能节能器(Intelligent Energy Saver)的使用方法。
华擎网站: http://www.asrock.com

9、华擎 Instant Flash 是一个内建于 Flash ROM 的 BIOS 更新工具程序。这个方便的 BIOS 更新工具可让您无需进入操作系统(如 MS-DOS 或 Windows®)即可进行 BIOS 的更新。在系统开机自检过程中按下<F6>键或在 BIOS 设置菜单中按下<F2>键即可进入华擎 Instant Flash 工具程序。启动这一程序後，只需把新的 BIOS 文件保存在 U 盘、软盘或硬盘中，轻松点击鼠标就能完成 BIOS 的更新，而不再需要准备额外的软盘或其他复杂的更新程序。请注意：U 盘或硬盘必须使用 FAT32/64 文件系统。

10、软件的名字本身-OC DNA 已经向您透露了它的用途。OC DNA 是华擎独家研发的创新工具程序，它为用户提供一种记录超频设置并与他人分享的简单方法。这个好用的工具程序可帮助您在操作系统中保存超频记录，大大简化了超频设置的记录过程。有了 OC DNA，您可以将超频设置保存为一个设置文件并与朋友分享！请注意：超频设置文件只能在相同的主板上分享和使用。

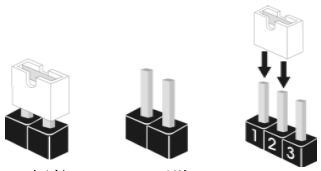
11、尽管本主板提供无级频率调控，但不推荐用户超频使用。不同于标准 CPU 总线频率的非标准频率可能会使系统不稳定，甚至会损害 CPU 和主板。

12、当检测到 CPU 过热问题时，系统会自动关机。在您重新启动系统之前，请检查主板上的 CPU 风扇是否正常运转并拔出电源线，然后再将它插回。为了提高散热性，在安装 PC 系统时请在 CPU 和散热器之间涂一层导热胶。

13、EuP，全称 Energy Using Product(能耗产品)，是欧盟用来定义完整系统耗电量的规定。根据 EuP 的规定，一个完整系统在关机模式下的交流电总消耗必须在 1.00W 以下。为满足 EuP 标准，您需要同时具备支持 EuP 的主板和支持 EuP 的电源供应器。根据 Intel® 的建议，支持 EuP 的电源供应器必须满足在 100mA 电流消耗时，5Vsb 电源效率高于 50%。有关支持 EuP 的电源供应器选择方面的更多细节，我们建议您咨询电源供应器的制作商。

1.3 跳线设置

插图所示的就是设置跳线的方法。当跳线帽放置在针脚上时，这个跳线就是“短接”。如果针脚上没有放置跳线帽，这个跳线就是“开路”。插图显示了一个 3 针脚的跳线，当跳线帽放置在针脚 1 和针脚 2 之间时就是“短接”。



短接　　开路

接 脚	设 定
PS2_USB_PWR1 (见第 2 页第 1 项)	 短接 pin2 和 pin3，就可以设置 +5VSB(待机)，使 PS/2 或 USB01 能唤醒系统。
注意：选择 +5VSB，电源必须能提供 +2 AMP 或更高的待机电流。	
USB_PWR1 (见第 2 页第 2 项)	 短接 pin2 和 pin3，就可以设置 +5V_DUAL，使 USB23/45 能唤醒系统。
注意：选择 +5V_DUAL，电源必须能提供 +2 AMP 或更高的待机电流。当您选择 +5V_DUAL 时，USB 设备可唤醒处于 S3(挂起到内存)状态下的系统。	
USB_PWR2 (见第 2 页第 20 项)	 短接 pin2 和 pin3，就可以设置 +5VSB(待机)，使 USB6_7/8_9 能唤醒系统。
注意：选择 +5VSB，电源必须能提供 +2 AMP 或更高的待机电流。	
清除 CMOS (CLRCMOS1，3 针脚跳线) (见第 2 页第 10 项)	 默认设置　　清除 CMOS

注意：CLRCMOS1 允许您清除 CMOS 里的资料。在 CMOS 里的资料包括系统设置资讯，例如系统密码，日期，时间及系统设置参数。为了清除并重置系统参数到默认设置，请关闭电脑并拔掉电源线，然後用跳线帽短接 CLRCMOS1 上的 pin2 和 pin3 五秒钟。如果您需要再完成 BIOS 刷新时清除 CMOS，您必须首先启动系统，然後在您进行 CMOS 清除操作之前关闭系统。

1.4 板载接头和接口

板载接头和接口不是跳线。切勿将跳线帽放置在这些接头和接口上。
将跳线帽放置在接头和接口上将会导致主板的永久性损坏！

主 IDE 连接头（蓝色）

（39针 IDE1，见第2页第9项）

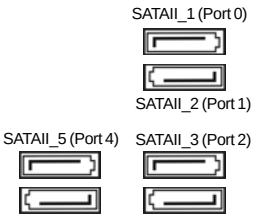
蓝色端接到主板上  黑色端接到硬盘驱动器上

80 针 的 ATA 66/100/133 排线

注意：请查阅您的 IDE 驱动器供应商提供的说明书了解详细资料。

Serial ATAII 接口

（SATAII_1 (Port 0)
见第2页第13项）
（SATAII_2 (Port 1)
见第2页第14项）
（SATAII_3 (Port 2)
见第2页第15项）
（SATAII_4 (Port 3)
见第2页第16项）
（SATAII_5 (Port 4)
见第2页第18项）
（SATAII_6 (Port 5)
见第2页第19项）



这里有六组Serial ATAII (SATAII)接口支持Serial (SATA)数据线作为内部储存设置。目前SATAII 界面理论上可提供高达3.0Gb/s 的数据传输速率。

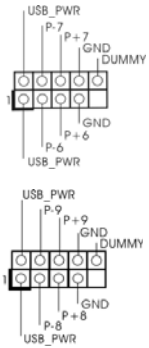
Serial ATA (SATA) 数据线
（选配）

SATA 数据线的任意一端均可连接SATA/SATAII 硬盘或者主板上的SATAII 接口。

USB 2.0 扩展接头

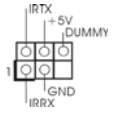
（9针 USB6_7）
（见第2页第21项）

（9针 USB8_9）
（见第2页17项）



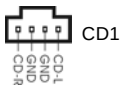
除了位於I/O 面板的六个默认USB 2.0 接口之外，这款主板有两组USB 2.0 接针。这组USB 2.0 接针可以支持两个USB 2.0 接口。

红外线模块接头
(5针 IR1)
(见第2页第25项)



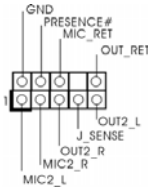
这个接头支持一个选配的无线发送和接受红外线的模块。

内置的音频接头
(4针 CD1)
(见第2页第27项)



可以通过CD-ROM， DVD-ROM，TV 调谐器或MPEG卡接收音频输入。

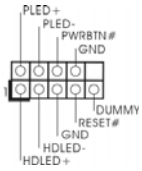
前置音频面板接头
(9针 HD_AUDIO1)
(见第2页第26项)



可以方便连接音频设备。

1. 高保真音频(High Definition Audio，HDA)支持智能音频接口检测功能(Jack Sensing),但是机箱面板的连线必须支持HDA才能正常使用。请按我们提供的手册和机箱手册上的使用说明安装您的系统。
2. 如果您使用AC'97音频面板,请按照下面的步骤将它安装到前面板音频接针:
   A. 将Mic_IN(MIC)连接到MIC2_L。
   B. 将Audio_R(RIN)连接到OUT2_R,将Audio_L(LIN)连接到OUT2_L。
   C. 将Ground(GND)连接到Ground(GND)。
   D. MIC_RET和OUT_RET仅用于HD音频面板。您不必将它们连接到AC'97音频面板。

系统面板接头
(9针 PANEL1)
(见第2页第22项)

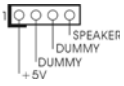


这个接头提供数个系统前面板功能。

电源指示灯连接排针
(3针 PLED1)
(见第2页第24项)

请将机箱电源指示灯连接到这一排针，以指示系统电源状态。当系统正在运行时，LED指示灯亮。在S1模式下，LED指示灯会不停闪烁。在S3/S4或S5模式(关机)下，LED指示灯会熄灭。

机箱喇叭接头
(4针 SPEAKER1)
(见第2页第23项)



请将机箱喇叭连接到这个接头。

机箱，电源风扇接头

(4针 CHA_FAN1)

(见第2页第8项)

请将风扇连接线接到这个接头，并让黑线与接地的针脚相接。

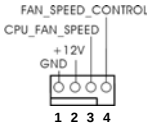
(3针 PWR_FAN1)

(见第2页第33项)

CPU 风扇接头

(4针 CPU_FAN1)

(见第2页第4项)



请将CPU 风扇连接线接到这个接头，并让黑线与接地的针脚相接。

虽然此主板支持4-Pin CPU风扇(Quiet Fan,静音风扇),但是没有调速功能的3-Pin CPU风扇仍然可以在此主板上正常运行。如果您打算将3-Pin CPU风扇连接到此主板的CPU风扇接口,请将它连接到Pin 1-3。

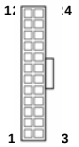
Pin 1-3 连接

3-Pin 风扇的安装

ATX 电源接头

(24针 ATXPWR1)

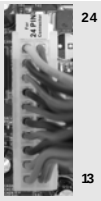
(见第2页第7项)



请将ATX 电源供应器连接到这个接头。

虽然此主板提供24-pin ATX电源接口,但是您仍然可以使用传统的20-pin ATX电源。为了使用20-pin ATX电源,请顺著Pin 1和Pin 13插上电源接头。

20-Pin ATX 电源安装说明



ATX 12V 接头

(8针 ATX12V1)

(见第2页第3项)

请将一个ATX 12V电源供应器接到这个接头。

虽然此主板提供8-pin ATX 12V电源接口,但是您仍然可以使用传统的4-pin ATX 12V电源。为了使用4-pin ATX 12V电源,请顺著Pin 1和Pin 5插上电源接头。

4-Pin ATX 12V 电源安装说明

简体中文

2. BIOS信息

主板上的Flash Memory存储了BIOS设置程序。请再启动电脑进行开机自检(POST)时按下<F2>键进入BIOS设置程序；此外，你也可以让开机自检(POST)进行常规检验。如果你需要在开机自检(POST)之后进入BIOS设置程序，请按下<Ctrl>+<Alt>+<Delete>键重新启动电脑，或者按下系统面板上的重启按钮。有关BIOS设置的详细信息，请查阅随机支持光盘里的用户手册(PDF文件)。

3. 支持光盘信息

本主板支持各种微软视窗操作系统：Microsoft® Windows® 7/7 64位元/Vista™/Vista™ 64位元/XP/XP 64位元。主板随机支持光盘包含各种有助于提高主板效能的必要驱动和实用程序。请将随机支持光盘放入光驱里，如果电脑的“自动运行”功能已启用，屏幕将会自动显示主菜单。如果主菜单不能自动显示，请查找支持光盘内BIN文件夹下的“ASSETUP.EXE”，并双击它，即可调出主菜单。

电子信息产品污染控制标示

依据中国发布的「电子信息产品污染控制管理办法」及SJ/T 11364-2006「电子信息产品污染控制标示要求」，电子信息产品应进行标示，藉以向消费者揭露产品中含有的有毒有害物质或元素不致发生外泄或突变从而对环境造成污染或对人身、财产造成严重损害的期限。依上述规定，您可于本产品之印刷电路板上看见图一之标示。图一中之数字为产品之环保使用期限。由此可知此主板之环保使用期限为10年。

图一

有毒有害物质或元素的名称及含量说明

若您欲了解此产品的有毒有害物质或元素的名称及含量说明，请参照以下表格及说明。

部件名称	有害物质或元素					
	铅(Pb)	镉(Cd)	汞(Hg)	六价铬(Cr(VI))	多溴联苯(PBB)	多溴二苯醚(PBDE)
印刷电路板及其电子组件	X	O	O	O	O	O
外部信号连接头及线材	X	O	O	O	O	O

O: 表示该有毒有害物质在该部件所有均质材料中的含量均在SJ/T 11363-2006标准规定的限量要求以下。

X: 表示该有毒有害物质至少在该部件的某一均质材料中的含量超出SJ/T 11363-2006标准规定的限量要求，然该部件仍符合欧盟指令2002/95/EC的规范。

备注： 此产品所标示之环保使用年限，系指在一般正常使用状况下。