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

English

Motherboard Layout

1	PS2_USB_PW1 Jumper	
2	ATX 12V Power Connector (ATX12V1)	
3	AM3+ CPU Socket	
4	CPU Heatsink Retention Module	
5	CPU Fan Connector (CPU_FAN1)	
6	2 x 240-pin DDR3 DIMM Slots	
	(Dual Channel A: DDR3_A1, DDR3_B1)	
7	2 x 240-pin DDR3 DIMM Slots	
	(Dual Channel B: DDR3_A2, DDR3_B2)	
8	ATX Power Connector (ATXPWR1)	
9	SPI Flash Memory (8Mb)	
10	Southbridge Controller	
11	SATA2 Connector (SATAII_5)	
12	SATA2 Connector (SATAII_6)	
13	SATA2 Connector (SATAII_4)	
14	SATA2 Connector (SATAII_3)	
15	Chassis Fan Connector (CHA_FAN1)	
16	SATA2 Connector (SATAII_1)	
17	SATA2 Connector (SATAII_2)	
18	Chassis Speaker Header (SPEAKER1)	
19	Clear CMOS Jumper (CLRCMOS1)	
20	Power LED Header (PLED1)	
21	System Panel Header (PANEL1)	
22	USB 2.0 Header (USB6_7)	
23	PS2_USB_PW2 Jumper	
24	USB 2.0 Header (USB8_9)	
25	PS2_USB_PW3 Jumper	
26	USB 2.0 Header (USB10_11)	
27	PS2_USB_PW4 Jumper	
28	Front Panel Audio Header	
	(HD_AUDIO1)	
29	Infrared Module Header (IR1)	
30	PCI Slots (PCI1-2)	
31	PCI Express x1 Slot (PCIE3)	
32	PCI Express x16 Slot (PCIE2)	
33	PCI Express x1 Slot (PCIE1)	
34	Power Fan Connector (PWR_FAN1)	
35	Northbridge Controller	

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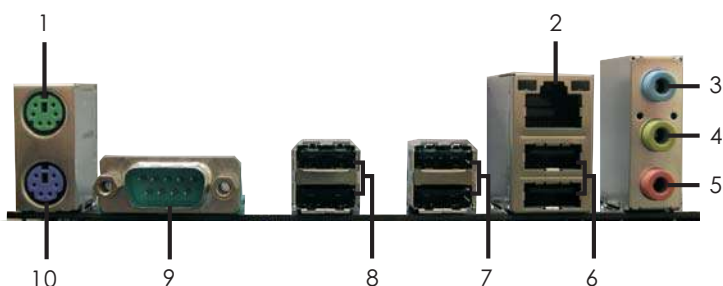
1	PS/2 Mouse Port (Green)	6 USB 2.0 Ports (USB01)
2	LAN RJ-45 Port (LAN)	7 USB 2.0 Ports (USB45)
3	Line In (Light Blue)	8 USB 2.0 Ports (USB23)
4	Front Speaker (Lime)	9 Serial Port (COM1)
5	Microphone (Pink)	10 PS/2 Keyboard Port (Purple)

* 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
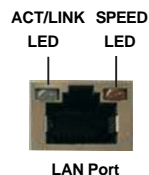
To enable Multi-Streaming function, you need to connect a front panel audio cable to the front panel audio header. Please refer to below steps for the software setting of Multi-Streaming.
For Windows® XP:
After restarting your computer, you will find "Mixer" tool on your system. Please select "Mixer ToolBox"   , click "Enable playback multi-streaming", and click "ok". Choose "2CH" or

"4CH" and then you are allowed to select "Realtek HDA Primary output" to use Rear Speaker and Front Speaker, or select "Realtek HDA Audio 2nd output" to use front panel audio. Then reboot your system.
For Windows® 7 / Vista™:
After restarting your computer, please double-click "Realtek HD Audio Manager" on the system tray. Set "Speaker Configuration" to "Quadraphonic" or "Stereo". Click "Device advanced settings", choose "Make front and rear output devices playbacks two different audio streams simultaneously", and click "ok". Then reboot your system.

English

1. Introduction

Thank you for purchasing ASRock *970 Pro* 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. In this manual, chapter 1 and 2 contain introduction of the motherboard and step-by-step guide to the hardware installation. Chapter 3 and 4 contain the configuration guide to BIOS setup and information of 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 *970 Pro* Motherboard
    (ATX Form Factor: 12.0-in x 8.2-in, 30.5 cm x 20.8 cm)
ASRock *970 Pro* Quick Installation Guide
ASRock *970 Pro* 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 8.2-in, 30.5 cm x 20.8 cm - All Solid Capacitor design

CPU	- Support for Socket AM3+ processors
	- Support for AM3 processors: AMD Phenom™ II X6 / X4 / X3 /
	  X2 (except 920 / 940) / Athlon II X4 / X3 / X2 / Sempron
	  processors
	- Supports 8-Core CPU
	- Digi Power Design
	- 4 + 1 Power Phase Design
	- Supports CPU up to 140W
	- Supports AMD OverDrive™ with ACC feature (Advanced
	  Clock Calibration)
	- Supports AMD's Cool 'n' Quiet™ Technology
	- FSB 2600 MHz (5.2 GT/s)
	- Supports Untied Overclocking Technology
	- Supports Hyper-Transport 3.0 (HT 3.0) Technology

Chipset	- Northbridge: AMD 770 - Southbridge: AMD SB710
Memory	- Dual Channel DDR3 Memory Technology - 4 x DDR3 DIMM slots - Support DDR3 1600(OC)/1333/1066/800 non-ECC, un-buffered memory (see **CAUTION 1**) - Max. capacity of system memory: 16GB (see **CAUTION 2**)
Expansion Slot	- 1 x PCI Express 2.0 x16 slot (PCIE2 @ x16 mode) - 2 x PCI Express 2.0 x1 slots - 2 x PCI slots
Audio	- 5.1 CH HD Audio (Realtek ALC662 Audio Codec)
LAN	- PCIE x1 Gigabit LAN 10/100/1000 Mb/s - Realtek RTL8111C - 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 SATA2 3.0Gb/s connectors, support RAID (RAID 0, RAID 1, RAID 10 and JBOD), NCQ, AHCI and "Hot Plug" functions

	- 1 x IR header
	- 1 x Power LED header
	- 1 x CPU Fan connector (4-pin)
	- 1 x Chassis Fan connector (3-pin)
	- 1 x Power Fan connector (3-pin)
	- 24 pin ATX power connector
	- 8 pin 12V power connector
	- Front panel audio connector
	- 3 x USB 2.0 headers (support 6 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 VID Voltage Multi-adjustment
Support CD	- Drivers, Utilities, AntiVirus Software (Trial Version), AMD OverDrive™ Utility, CyberLink MediaEspresso 6.5 Trial, ASRock MAGIX Multimedia Suite - OEM
Unique Feature	- ASRock OC Tuner (see **CAUTION 3**)
	- ASRock Intelligent Energy Saver (see **CAUTION 4**)
	- ASRock Instant Boot
	- ASRock Instant Flash (see **CAUTION 5**)
	- ASRock OC DNA (see **CAUTION 6**)
	- ASRock APP Charger (see **CAUTION 7**)
	- ASRock XFast USB (see **CAUTION 8**)
	- ASRock XFast LAN (see **CAUTION 9**)
	- ASRock XFast RAM (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
	- Voltage Monitoring: +12V, +5V, +3.3V, Vcore
OS	- Microsoft® Windows® 7 / 7 64-bit / Vista™ / Vista™ 64-bit / XP / XP Media Center / XP 64-bit compliant
Certifications	- FCC, CE, Microsoft® WHQL Certificated
	- ErP/EuP Ready (ErP/EuP ready power supply is required)

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

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. Whether 1600MHz memory speed is supported depends on the AM3 / AM3+ CPU you adopt. If you want to adopt DDR3 1600 memory module on this motherboard, please refer to the memory support list on our website for the compatible memory modules.
   ASRock website   http://www.asrock.com

2. 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.

3. 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

4. Featuring an advanced proprietary hardware and software design, Intelligent Energy Saver is a revolutionary technology that delivers unparalleled power savings. The voltage regulator can reduce the number of output phases to improve efficiency when the CPU cores are idle. In other words, it is able to provide exceptional power saving and improve power efficiency without sacrificing computing performance. To use Intelligent Energy Saver function, please enable Cool 'n' Quiet option in the BIOS setup in advance. Please visit our website for the operation procedures of Intelligent Energy Saver.
   ASRock website   http://www.asrock.com

5. 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.

English

6. 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.

7. If you desire a faster, less restricted way of charging your Apple devices, such as iPhone/iPod/iPad Touch, ASRock has prepared a wonderful solution for you - ASRock APP Charger. Simply installing the APP Charger driver, it makes your iPhone charged much quickly from your computer and up to 40% faster than before. ASRock APP Charger allows you to quickly charge many Apple devices simultaneously and even supports continuous charging when your PC enters into Standby mode (S1), Suspend to RAM (S3), hibernation mode (S4) or power off (S5). With APP Charger driver installed, you can easily enjoy the marvelous charging experience than ever.

   ASRock website   http://www.asrock.com

8. ASRock XFast USB can boost USB storage device performance. The performance may depend on the property of the device.

9. ASRock XFast LAN provides a faster internet access, which includes below benefits. LAN Application Prioritization: You can configure your application priority ideally and/or add new programs. Lower Latency in Game: After setting online game priority higher, it can lower the latency in game. Traffic Shaping: You can watch Youtube HD video and download files simultaneously. Real-Time Analysis of Your Data: With the status window, you can easily recognize which data streams you are currently transferring.

10. ASRock XFast RAM fully utilizes the memory space that cannot be used under Windows® OS 32-bit CPU. ASRock XFast RAM shortens the loading time of previously visited websites, making web surfing faster than ever. And it also boosts the speed of Adobe Photoshop 5 times faster. Another advantage of ASRock XFast RAM is that it reduces the frequency of accessing your SSDs or HDDs in order to extend their lifespan.

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.

2. Installation

This is an ATX form factor (12.0-in x 8.2-in, 30.5 cm x 20.8 cm) motherboard.
Before you install the motherboard, study the configuration of your chassis to en-
sure that the motherboard fits into it.

Pre-installation Precautions

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

> Before you install or remove any component, ensure that the
> power is switched off or the power cord is detached from the
> power supply. Failure to do so may cause severe damage to the
> motherboard, peripherals, and/or components.

1. Unplug the power cord from the wall socket before touching any
    component.
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 anti-
    static 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

Step 1.   Unlock the socket by lifting the lever up to a 90° angle.

Step 2.   Position the CPU directly above the socket such that the CPU corner with
          the golden triangle matches the socket corner with a small triangle.

Step 3.   Carefully insert the CPU into the socket until it fits in place.

> The CPU fits only in one correct orientation. DO NOT force the CPU
> into the socket to avoid bending of the pins.

Step 4.   When the CPU is in place, press it firmly on the socket while you push
          down the socket lever to secure the CPU. The lever clicks on the side tab
          to indicate that it is locked.

Lever 90° Up

CPU Golden Triangle

Socket Corner
Small Triangle

STEP 1:
Lift Up The Socket Lever

STEP 2 / STEP 3:
Match The CPU Golden Triangle
To The Socket Corner Small
Triangle

STEP 4:
Push Down And Lock
The Socket Lever

2.2 Installation of CPU Fan and Heatsink

After you install the CPU into this motherboard, it is necessary to install a
larger heatsink and cooling fan to dissipate heat. You also need to spray
thermal grease between the CPU and the heatsink to improve heat dissipation.
Make sure that the CPU and the heatsink are securely fastened and in good
contact with each other. Then connect the CPU fan to the CPU FAN connec-
tor (CPU_FAN1, see Page 2, No. 5). For proper installation, please kindly
refer to the instruction manuals of the CPU fan and the heatsink.

English

2.3 Installation of Memory Modules (DIMM)

This motherboard provides four 240-pin DDR3 (Double Data Rate 3) DIMM slots, and supports Dual Channel Memory Technology. For dual channel configuration, you always need to install **identical** (the same brand, speed, size and chip-type) DDR3 DIMM pair in the slots. In other words, you have to install **identical** DDR3 DIMM pair in **Dual Channel A** (DDR3_A1 and DDR3_B1; see p.2 No.6) or **identical** DDR3 DIMM pair in **Dual Channel B** (DDR3_A2 and DDR3_B2; see p.2 No.7), so that Dual Channel Memory Technology can be activated. This motherboard also allows you to install four DDR3 DIMMs for dual channel configuration, and please install **identical** DDR3 DIMMs in all four slots. You may refer to the Dual Channel Memory Configuration Table below.

Dual Channel Memory Configurations

	DDR3_A1 (Black Slot)	DDR3_B1 (Black Slot)	DDR3_A2 (Black Slot)	DDR3_B2 (Black Slot)
(1)	Populated	Populated	-	-
(2)	-	-	Populated	Populated
(3)*	Populated	Populated	Populated	Populated

* For the configuration (3), please install **identical** DDR3 DIMMs in all four slots.

1. If you want to install two memory modules, for optimal compatibility and reliability, it is recommended to install them in the slots: DDR3_A1 and DDR3_B1, or DDR3_A2 and DDR3_B2.
2. If only one memory module or three memory modules are installed in the DDR3 DIMM slots on this motherboard, it is unable to activate the Dual Channel Memory Technology.
3. If a pair of memory modules is NOT installed in the same Dual Channel, for example, installing a pair of memory modules in DDR3_A1 and DDR3_A2, it is unable to activate the Dual Channel Memory Technology .
4. It is not allowed to install a DDR or DDR2 memory module into DDR3 slot; otherwise, this motherboard and DIMM may be damaged.
5. If you adopt DDR3 1600 memory modules on this motherboard, it is recommended to install them on DDR3_A2 and DDR3_B2 slots.

English

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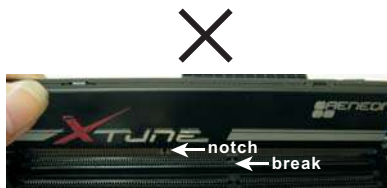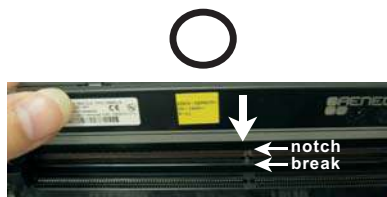
The DIMM only fits in one correct orientation. It will cause permanent damage to the motherboard and the DIMM if you force the DIMM into the slot at incorrect orientation.

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.

2.4 Expansion Slots (PCI and PCI Express Slots)

There are 2 PCI slots and 3 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 (PCIE x1 slot) is used for PCI Express cards with x1 lane width cards, such as Gigabit LAN card and SATA2 card.

PCIE2 (PCIE x16 slot) is used for PCI Express x16 lane width graphics cards.

PCIE3 (PCIE x1 slot) is used for PCI Express cards with x1 lane width cards, such as Gigabit LAN card and SATA2 card.

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
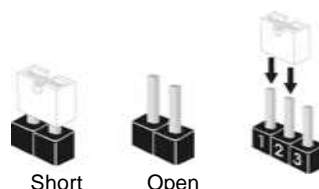
Jumper	Setting	
PS2_USB_PW1 (see p.2, No. 1)	1_2 +5V 2_3 +5VSB	Short pin2, pin3 to enable +5VSB (standby) for PS/2 or USB wake up events.

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

PS2_USB_PW2 (see p.2, No. 24)	1_2 +5V 2_3 +5VSB	Short pin2, pin3 to enable +5VSB (standby) for USB6_7 wake up events.

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

PS2_USB_PW3 (see p.2, No. 26)	1_2 +5V 2_3 +5VSB	Short pin2, pin3 to enable +5VSB (standby) for USB8_9 wake up events.

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

PS2_USB_PW4 (see p.2, No. 28)	1_2 +5V 2_3 +5VSB	Short pin2, pin3 to enable +5VSB (standby) for USB10_11 wake up events.

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

Clear CMOS Jumper (CLRCMOS1) (see p.2, No. 20)	1_2 Default 2_3 Clear CMOS	

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

ASRock *970 Pro* Motherboard

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.
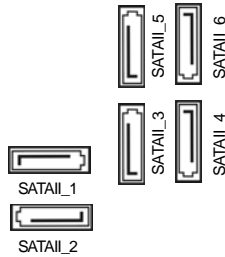
2.6 Onboard Headers and Connectors

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!

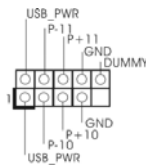|		
Serial ATAII Connectors		These six Serial ATAII (SATAII) connectors support SATAII or SATA hard disk for internal storage devices. The current SATAII interface allows up to 3.0 Gb/s data transfer rate.
(SATAII_1: see p.2, No. 17)		
(SATAII_2: see p.2, No. 18)		
(SATAII_3: see p.2, No. 15)		
(SATAII_4: see p.2, No. 14)		
(SATAII_5: see p.2, No. 12)		
(SATAII_6: see p.2, No. 13)		

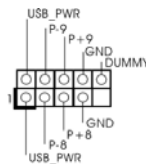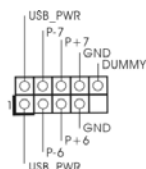|		
Serial ATA (SATA) Data Cable (Optional)		Either end of the SATA data cable can be connected to the SATA / SATAII hard disk or the SATAII connector on this motherboard.

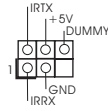|		
USB 2.0 Headers (9-pin USB10_11) (see p.2 No. 27)	USB_PWR P-11 P+11 GND DUMMY GND P+10 P-10 USB_PWR	Besides six default USB 2.0 ports on the I/O panel, there are three USB 2.0 headers on this motherboard. Each USB 2.0 header can support two USB 2.0 ports.
(9-pin USB8_9) (see p.2 No. 25)	USB_PWR P-9 P+9 GND DUMMY GND P+8 P-8 USB_PWR	
(9-pin USB6_7) (see p.2 No. 23)	USB_PWR P-7 P+7 GND DUMMY GND P+6 P-6 USB_PWR	

ASRock *970 Pro* Motherboard

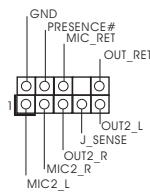Infrared Module Header

(5-pin IR1)

(see p.2 No. 30)

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

Front Panel Audio Header

(9-pin HD_AUDIO1)

(see p.2, No. 29)

This is an interface for the 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.

  E. Enter BIOS Setup Utility. Enter Advanced Settings, and then select Chipset Configuration. Set the Front Panel Control option from [Auto] to [Enabled].

  F. Enter Windows system. Click the icon on the lower right hand taskbar to enter Realtek HD Audio Manager.

   For Windows® XP / XP 64-bit OS:

   Click "Audio I/O", select "Connector Settings"   , choose

   "Disable front panel jack detection", and save the change by clicking "OK".

   For Windows® 7 / 7 645-bit / Vista™ / Vista™ 64-bit OS:

   Click the right-top "Folder" icon   , choose "Disable front

   panel jack detection", and save the change by clicking "OK".

  G. To activate the front mic.

   For Windows® XP / XP 64-bit OS:

   Please select "Front Mic" as default record device.

   If you want to hear your voice through front mic, please deselect "Mute" icon in "Front Mic" of "Playback" portion.
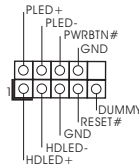
   For Windows® 7 / 7 64-bit / Vista™ / Vista™ 64-bit OS:

   Go to the "Front Mic" Tab in the Realtek Control panel.

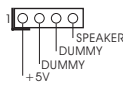   Click "Set Default Device" to make the Front Mic as the default record device.

English

ASRock *970 Pro* Motherboard

System Panel Header

(9-pin PANEL1)

(see p.2 No. 22)

PLED+
PLED-
PWRBTN#
GND

DUMMY
RESET#
GND
HDLED-
HDLED+

This header accommodates several system front panel functions.
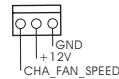
Chassis Speaker Header

(4-pin SPEAKER 1)

(see p.2 No. 19)

SPEAKER
DUMMY
DUMMY
+5V

Please connect the chassis speaker to this header.

Chassis and Power Fan Connectors

(3-pin CHA_FAN1)

(see p.2 No. 16)

GND
+12V
CHA_FAN_SPEED
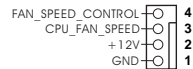
Please connect the fan cables to the fan connectors and match the black wire to the ground pin.

(3-pin PWR_FAN1)

(see p.2 No. 35)

PWR_FAN_SPEED
+12V
GND

CPU Fan Connector

(4-pin CPU_FAN1)

(see p.2 No. 5)

FAN_SPEED_CONTROL   4
CPU_FAN_SPEED   3
+12V   2
GND   1

Please connect the 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.
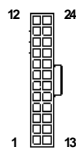
Pin 1-3 Connected

3-Pin Fan Installation
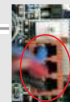
ATX Power Connector

(24-pin ATXPWR1)

(see p.2 No. 8)

12   24

1   13

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.

12   24

20-Pin ATX Power Supply Installation

1   13

English

ATX 12V Power Connector

(8-pin ATX12V1)

(see p.2 No. 2)

1 4
5 8

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

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.

1 4
5 8

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 With RAID Functions

If you want to install Windows® 7 / 7 64-bit / Vista™ / Vista™ 64-bit / XP / XP 64-bit on
your SATA / SATA2 HDDs with RAID functions, please refer to the document at the
following path in the Support CD for detailed procedures:
..\ RAID Installation Guide

2.9 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 / SATA2 HDDs without RAID functions, please follow below procedures
according to the OS you install.

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

If you want to install Windows® XP / XP 64-bit on your SATA / SATA2 HDDs without RAID
functions, please follow below steps.

Using SATA / SATA2 HDDs without NCQ and Hot Plug functions (IDE mode)

STEP 1: Set up BIOS.
A. Enter BIOS SETUP UTILITY → Advanced screen→ Storage
   Configuration.
B.   Set the "SATA Operation Mode" option to [IDE].
STEP 2: Install Windows® XP / XP 64-bit OS on your system.

2.9.2 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 on your SATA /
SATA2 HDDs without RAID functions, please follow below steps.

Using SATA / SATA2 HDDs without NCQ and Hot Plug functions (IDE mode)

STEP 1: Set up BIOS.
A. Enter BIOS SETUP UTILITY → Advanced screen → Storage
   Configuration.
B.   Set the "SATA Operation Mode" option to [IDE].
**STEP 2: Install Windows® 7 / 7 64-bit / Vista™ / Vista™ 64-bit OS on your
   system.**

Using SATA / SATA2 HDDs with NCQ and Hot Plug functions (AHCI mode)

STEP 1: Set Up BIOS.
A. Enter BIOS SETUP UTILITY → Advanced screen → Storage
   Configuration.
B.   Set the "SATA Operation Mode" option to [AHCI].
**STEP 2: Install Windows® 7 / 7 64-bit / Vista™ / Vista™ 64-bit OS on your
   system.**

2.10 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 [CPU, PCIE, Async.]. 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.

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 Media Center / 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 *970 Pro* 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。此快速安装指南包括主板介绍和分步安装向导。

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.cn

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.cn/support/index.cn.asp

1.1 包装盒内物品

华擎 *970 Pro* 主板
   (ATX 规格: 12.0英寸 X 8.2英寸, 30.5厘米 X 20.8厘米)

华擎 *970 Pro* 快速安装指南

华擎 *970 Pro* 支持光盘

两条Serial ATA(SATA)数据线(选配)

一块I/O挡板

简体中文

1.2 主板规格

架构	– ATX 规格：12.0 英寸 X 8.2 英寸，30.5 厘米 X 20.8 厘米 – 全固态电容设计
处理器	– 支持 Socket AM3+ 处理器 – 支持 AM3 处理器：AMD Phenom™ II X6 / X4 / X3 / X2 (920/940 除外) / Athlon II X4 / X3 / X2 / Sempron 处理器 – 八核心 CPU 就绪 – Digi 电源设计 – 4+1 电源相位设计 – 支持高达 140W 的 CPU – 通过 ACC （高级时钟校准）功能支持 AMD OverDrive™ 系统调节 – 支持 AMD Cool 'n' Quiet™ 冷静技术 – 支持 FSB 2600 MHz (5.2 GT/s) – 支持异步超频技术 – 支持 Hyper-Transport 3.0 (HT 3.0) 技术
芯片组	– 北桥：AMD 770 – 南桥：AMD SB710
系统内存	– 支持双通道内存技术 – 配备 4 个 DDR3 DIMM 插槽 – 支持 DDR3 1600 (超频)/1333/1066/800 non-ECC 、un-buffered 内存（见警告 1） – 系统最高支持 16GB 容量（见警告 2）
扩展插槽	– 1 x PCI Express 2.0 x16 插槽 （PCIE2 @ x16 模式） – 2 x PCI Express 2.0 x1 插槽 – 2 x PCI 插槽
音效	– 5.1 声道高保真音频 （Realtek ALC662 音频编解码器）
板载 LAN 功能	– PCIE x1 Gigabit LAN 10/100/1000 Mb/s – Realtek RTL8111C – 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

简体中文

连接头	– 6 x SATA2 3.0Gb/s 连接头，支持RAID (RAID 0，
	  RAID 1，RAID 10 和 JBOD)，NCQ，AHCI 和 "热插拔" 功
	  能
	– 1 x 红外线模块接头
	– 1 x 电源指示灯连接排针
	– 1 x CPU 风扇接头(4针)
	– 1 x 机箱风扇接头(3针)
	– 1 x 电源风扇接头(3针)
	– 24 针 ATX 电源接头
	– 8 针 12V 电源接头
	– 前置音频面板接头
	– 3 x USB 2.0接口 （可支持6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 – 支持 SMBIOS 2.3.1 – CPU VID 电压多功能调节器

支持光盘	– 驱动程序,工具软件,杀毒软件（测试版本）,AMD
	  OverDrive™ 工具,CyberLink MediaEspresso 6.5 试用版,
	  华擎 MAGIX Multimedia 套装－OEM

独家功能	– 华擎超频调节器（详见警告3）
	– 华擎智能节能器(Intelligent Energy Saver)(见警告4)
	– 华擎即时开机功能
	– 华擎 Instant Flash（见警告5）
	– 华擎 OC DNA （见警告6）
	– 华擎 APP Charger（见警告7）
	– 华擎 XFast USB（见警告8）
	– 华擎 XFast LAN（见警告9）
	– 华擎 XFast RAM（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 – 电压范围: +12V，+5V，+3.3V，核心电压

简体中文

操作系统	- Microsoft® Windows® 7/7 64 位元 /Vista™/Vista™ 64 位元 /XP/XP 多媒体中心 /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）

* 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. 1600MHz 内存频率是否支持在于您使用的 AM3/AM3+ CPU 。如果您想在这款主板上使用 DDR3 1600 内存条，请查阅我们网站的内存支持列表了解兼容的内存。华擎网站 http://www.asrock.com.cn

2. 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。

3. 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.cn

4. 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。当 CPU 核心闲置时，电压调节器可以简小输出电压的相数，有助于提升能源效率。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。为了使用智能节能器(Intelligent Energy Saver)的功能，请在 BIOS 的高级设置里启用 Cool 'n' Quiet 选项。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.cn

5. 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。启动这一程序后，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。

6. 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。

7. 若您想要更快速、更自由地为您的苹果设备,如 iPhone/iPad/iPod touch 充电,华擎为您提供了一个绝妙的解决方案-华擎 APP Charger。只需安装 APP Charger 驱动程序,用电脑为 iPhone 充电最多可比以往快 40%。华擎 APP Charger 允许您同时为多部苹果设备快速充电,甚至可以在电脑进入待机(S1)、挂起至内存(S3)、休眠(S4)或关机(S5)模式下持续为设备充电。只需安装了 APP Charger 驱动程序,您立刻就能拥有非凡的充电体验。

8. 华擎 XFast USB 可以提升 USB 存储设备性能。性能可能因设备特性不同而存在差异。

9. 华擎 XFast LAN 可提供更快的网络访问，包括以下许诸多好处。网络应用程序优先级：您可以设置理想的应用程序优先级，并可以添加新程序。游戏更少延迟：将在线游戏设置为较高的优先级，可降低游戏中的延迟。流量定形：您可以在观看 Youtube 高清视频的同时进行文件下载。实时分析您的数据：通过状态窗口，您可以清楚地看到目前正在传输的是哪个数据流。

10. 华擎 XFast RAM 能充分利用 Windows® 操作系统 32-bit CPU 无法使用的内存空间。它可缩短之前访问过的网站的加载时间，从而加快网络冲浪速度。此外，它还能提升 Adobe Photoshop 运行的速度高达五倍之多。华擎 XFast RAM 的另一项优势是它能减少访问 SSD 或 HDD 的频次，从而延长它门的使用寿命。

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。

简体中文

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_PW1 (见第 2 页第 1 项)	1_2 +5V	2_3 +5VSB	短接 pin2 和 pin3，就可以设置 +5VSB(待机)，使 PS/2 或 I/O 面板上的 USB 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。

PS2_USB_PW2 (见第 2 页第 24 项)	1_2 +5V	2_3 +5VSB	短接 pin2 和 pin3，就可以设置 +5VSB(待机)，使 USB6_7 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。

PS2_USB_PW3 (见第 2 页第 26 项)	1_2 +5V	2_3 +5VSB	短接 pin2 和 pin3，就可以设置 +5VSB(待机)，使 USB8_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。

PS2_USB_PW4 (见第 2 页第 28 项)	1_2 +5V	2_3 +5VSB	短接 pin2 和 pin3，就可以设置 +5VSB(待机)，使 USB10_11 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 20 项)	1_2 默认设置	2_3 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。
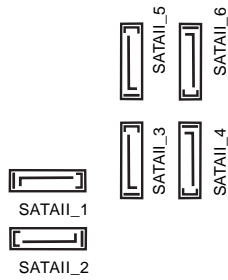
简体中文

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！

Serial ATAII 接口

(SATAII_1: 见第 2 页第 17 项)
(SATAII_2: 见第 2 页第 18 项)
(SATAII_3: 见第 2 页第 15 项)
(SATAII_4: 见第 2 页第 14 项)
(SATAII_5: 见第 2 页第 12 项)
(SATAII_6: 见第 2 页第 13 项)

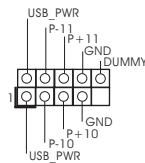这里有六组 Serial ATAII (SATAII) 接口支持 Serial (SATA) 数据线作为内部储存设置。目前 SATAII 界面理论上可提供高达 3.0Gb/s 的数据传输速率。

Serial ATA (SATA) 数据线

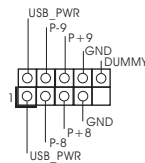(选配)

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。
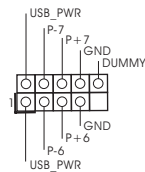

USB 2.0 扩展接头

(9 针 USB10_11)
(见第 2 页第 27 项)

除了位於 I/O 面板的六个默认 USB 2.0 接口之外，这款主板有三组 USB 2.0 接针。这组 USB 2.0 接针可以支持两个 USB 2.0 接口。
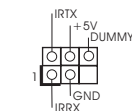
(9 针 USB8_9)
(见第 2 页第 25 项)
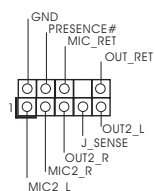
(9 针 USB6_7)
(见第 2 页第 23 项)

红外线模块接头

(5 针 IR1)
(见第 2 页第 30 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。

简体中文

前置音频面板接头　　　　　　　　　　　可以方便连接音频设备。
(9针 HD_AUDIO1)
(见第 2 页第 29 项)

```
        GND
        PRESENCE#
          MIC_RET
              OUT_RET
        ┌─────────────┐
        │ ○ ○ ○ ○   ○ │
     1  │ ○ ○ ○ ○ ○ │
        └─────────────┘
               OUT2_L
            J_SENSE
         OUT2_R
      MIC2_R
    MIC2_L
```

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。

   E. 进入 BIOS 设置程序。进入 Advanced Settings(高级设置)并选择
      Chipset Configuration(芯片组配置)。将 Front Panel Control
      (前面板控制)选项由 Auto(自动)设置为 Enabled(启用)。

   F. 进入 Windows 系统。点击右下角任务栏上的图标进入 Realtek HD
      Audio Manager(Realtek 高保真音频管理器)。
      支持 Windows® XP/XP 64 位元操作系统:
      点击"Audio I/O"(音频输入/输出接口),点选"Connector
      Settings"(连接设置)   ,选择"Disable front panel jack
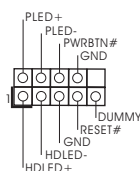
      detection"(关闭前面板插孔检测)并点击"OK"保存更改。
      支持 Windows® 7/7 64 位元/Vista™/Vista™ 64 位元操作系统:
      点击右上角的"Folder"(文件)图标   ,选择"Disable

      front panel jack detection"(关闭前面板插孔检测)并点击
      "OK"保存更改。

   G. 启用前置麦克风。
      支持 Windows® XP/XP 64 位元操作系统:
      请选择"Front Mic"(前置麦克风)作为默认录音设备。
      如果您想通过前置麦克风聆听您的声音,请点击"Playback"(播
      放)部分"Front Mic"(前置麦克风)一项里的"Mute"(静音)图
      标。
      支持 Windows® 7/7 64 位元/Vista™/Vista™ 64 位元操作系统:
      进入 Realtek 控制面版的"Front Mic"(前置麦克风)选项卡。
      点击"Set Default Device"(设置默认设备)将前置麦克风设置
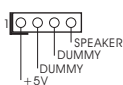   为默认录音设备。

简体中文

ASRock *970 Pro* **Motherboard**

系统面板接头	PLED+ PLED- PWRBTN# GND DUMMY RESET# GND HDLED- HDLED+	这个接头提供数个系统前面板功能。
(9针 PANEL1)		
(见第2页第22项)		

机箱喇叭接头	SPEAKER DUMMY DUMMY +5V	请将机箱喇叭连接到这个接头。
(4针 SPEAKER1)		
(见第2页第19项)		
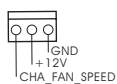
机箱，电源风扇接头	GND +12V CHA_FAN_SPEED	请将风扇连接线接到这个接头，并让黑线与接地的针脚相接。
(3针 CHA_FAN1)		
(见第2页第16项)		
(3针 PWR_FAN1)	PWR_FAN_SPEED +12V GND	
(见第2页第35项)		

电源指示灯连接排针	PLED- PLED+ PLED+	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。
(3针 PLED1)		
(见第2页第21项)		
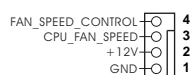
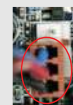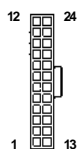|		
CPU 风扇接头	FAN_SPEED_CONTROL 4 CPU_FAN_SPEED 3 +12V 2 GND 1	请将CPU 风扇连接线接到这个接头，并让黑线与接地的针脚相接。
(4针 CPU_FAN1)		
(见第2页第5项)		

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	12 24 1 13	请将ATX 电源供应器连接到这个接头。
(24针 ATXPWR1)		
(见第2页8项)		

简体中文

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 3 插上电源接头。

20-Pin ATX 电源安装说明

ATX 12V 电源接口

(8 针 ATX12V1)

(见第 2 页第 2 项)

请注意，必需将带有 ATX 12V 插头的电源供应器连接到这个插座，这样就可以提供充足的电力。如果不这样做，就会导致供电故障。

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 芯片存储了 BIOS 设置程序。启动计算机，在机器开机自检(POST)的过程中按下<F2>键，就可进入 BIOS 设置程序，否则将继续进行开机自检之常规检验。如果须要在开机自检后进入 BIOS 设置程序，请按下 <Ctl> + <Alt> + <Delete>键重新启动计算机，或者按下系统面板上的重启按钮。功能设置程序储存有主板自身的和连接在其上的设备的缺省和设定的参数。这些信息用于在启动系统和系统运行需要时，测试和初始化元器件。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 多媒体中心 /XP 64 位元。主板附带的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，如果计算机的"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 文件并双击它，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 1 0 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。

简体中文