PXP965 (V2.0)

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FCC Compliance Statement

This equipment has been tested and found to comply with the limits of a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense. However, there is no guarantee that interference will not occur in a particular installation.

CE Mark

The device is in accordance with 89/336 ECC-ENC Directive.

Ver: EG103

PXP965 (V2.0)

Intel® P965 & ICH8
Support Socket 775 Intel® Core™ 2 Extreme/ Core™ 2 Duo/
Pentium® Extreme Edition/ Pentium® 4 Extreme Edition/
Pentium® D/ Pentium® 4/Celeron® D Processor

User Manual

Enabling the Hyper-Threading Technology, your computer system is required to have components as the following:

- **CPU:** An Intel® Pentium® 4 Processor with HT Technology
- **Chipset:** An Intel® Chipset that supports HT Technology
- **BIOS:** A BIOS that supports HT Technology must be enabled
- **OS:** An operating system that supports HT Technology

For more information on Hyper-Threading Technology, go to:
http://www.intel.com/info/hyperthreading

Dimensions (ATX form-factor):

- 245mm x 305mm (W x L)

Operating System:

- Windows® 2000/ XP

Things You Have To Know

- The images and pictures in this manual are for reference only and may vary from the product you received depending on specific hardware models, third party components and software versions.
- This mainboard contains very delicate IC chips. Always use a grounded wrist strap when working with the system.
- Do not touch any IC chip, lead, connector or other components.
- Always unplug the AC power when you install or remove any device on the mainboard or when confuguring pins and switches.

Packing List

- PXP965 (V2.0) Mainboard
- IDE Cable
- SATA Cable
- I/O Bracket
- Setup Driver CD
- Mainboard User Manual CD
- Mainboard Quick Installation Guide

Symbols

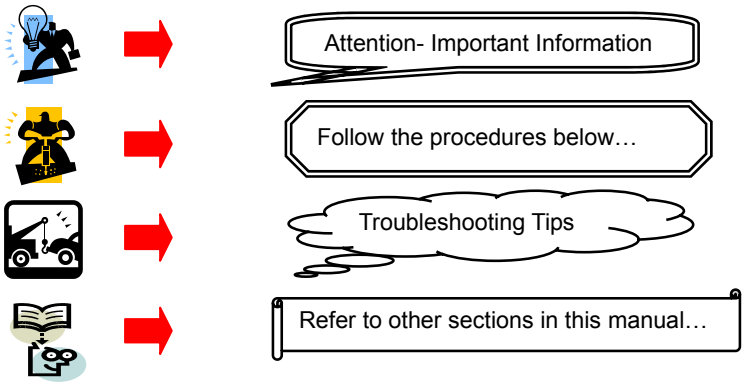


Table of Contents

Chapter 1. Getting Started

Introduction

Thanks for choosing PXP965 (V2.0) Mainboard. It is based on Intel® P965 Northbridge chipset and Intel® ICH8 Southbridge chipset. It supports Intel® Core™ 2 Extreme/ Core™ 2 Duo/ Pentium® Extreme Edition/ Pentium® 4 Extreme Edition/ Pentium® D/ Pentium® 4/ Celeron® D Processor with FSB (Front Side Bus) frequencies of 1066 MHz/ 800 MHz/ 533 MHz.

The PXP965 (V2.0) provides four DIMM (Dual In-Line Memory Modules) sockets which allowing you to install 240-pin, unbuffered non-ECC, DDRII 800/ 667/ 533 SDRAMs. It also supports Dual Channel Technology and allows you installing a total memory capacity of 8 GB.

This mainboard provides one PCI-E x16 interface slot up to x16 mode, one Universal PCI-E interface slot up to x4 mode, and two PCI-E x1 interface slots up to x1 mode can be supported individually. It is recommended that you can insert a graphics card onto the PCI-E x16 slot, and an expansion card which the interface is capable for PCI-E x1 and Universal PCI-E specification. In addition, two PCI slots come with this mainboard and are capable for use with expansion cards.

The PXP965 (V2.0) provides one floppy disk drive connector that can be used with 360KB/720KB/ 1.2MB/1.44MB/2.88MB drives. This mainboard comes with Serial ATA II support with four SATA II connectors which provide up to 3 Gbps data transfer rates. Furthermore, the JMicron® JMB363 chip supports one IDE connector and two additional SATA II ports. The IDE connector is compatible with IDE hard drives supporting Ultra ATA 66/100/133, and these two SATA II ports support RAID 0/ 1 mode **<See Appendix II>**.

The onboard High Definition Audio CODEC (ALC883) supports high quality performance 8-channel audio play (Super 7.1 Channel Audio Effect) **<See Appendix I>**. The mainboard also supports the Sony/Philips Digital Interfaces (S/PDIF) input/ output function.

The PXP965 (V2.0) also comes with an onboard 10/100/1000 Mbps Ethernet LAN chip. There is a LAN port on the back panel of your case that you can directly plug into an Internet cable.

There are maximal ten USB2.0/ 1.1 ports which can be set up on this mainboard.

All the information (including hardware installation and software installation) in this manual are for reference only. The contents in this manual may be updated without notice. The company will not assume any responsibility for any errors or mistakes within.

Specification

CPU:

- Support Socket 775
- Support Intel® Core™ 2 Extreme/ Core™ 2 Duo/ Pentium® Extreme Edition/ Pentium® 4 Extreme Edition/ Pentium® D/ Pentium® 4/ Celeron® D Processor
- Support Hyper-Threading Technology
- Support 1066 MHz/ 800 MHz/ 533 MHz FSB (Front Side Bus) Frequencies

Chipset:

- Northbridge Chipset – Intel® P965
- Southbridge Chipset – Intel® ICH8
- I/O Controller – Fintek® F71882FG
- High Definition Audio Codec – Realtek® ALC883
- GB LAN Controller – Realtek® RTL 8110SC
- IDE Controller – JMicron® JMB363

Memory:

- Four DIMM sockets
- Supports unbuffered & non-ECC DDRII 800/ 667/ 533 SDRAM
- Supports a total memory capacity of up to 8 GB
- Supports Dual Channel data bus

Onboard HD Audio Codec (ALC 883):

- High performance Codec with high S/N ratio (>90 db)
- Compatible with Azalia 1.0 specification
- Supports 8/6/4/2 channel playback capability
- Supports jack sensing and re-tasking function
- Built-in Dolby Digital Live Technology
- Supports Sony/ Philips Digital Interfaces (S/PDIF) functionality

Slots:

- Four PCI-Express interface slots for graphics cards and expansion cards

1. One PCI-E x16 slot: Supports up to x16 mode
2. One Universal PCI-E slot: Supports up to x4 mode
3. Two PCI-E x1 slot: Supports up to x1 mode

- Two PCI interface slots for expansion cards

FDD Connector:

- Supports one FDD connector to set up to two floppy disk drives
- Supports 360KB/ 720KB/ 1.2MB/ 1.44MB/ 2.88MB

IDE Connector:

- One IDE connector
- Supports up to two IDE devices
- Supports Ultra ATA 66/100/133
- Supports high capacity hard disk drives

Serial ATA II Connector:

- Six SATA II connectors
- Supports SATA 2.0 specification with data transfer rate up to 3 Gbps
- One SATA II connector can only support one SATA II HDD
- Supports RAID 0/ 1 mode（only SATA5/SATA6 ports）

Onboard LAN Chip:

- Supports 10/100/1000 Mbps Ethernet LAN

I/O facility Connectors

- Supports one PS/2 mouse port and one PS/2 keyboard port
- One multi-mode Parallel Port is capable to support as the following:
    1. Standard & Bi-direction Parallel Port
    2. Enhanced Parallel Port (EPP)
    3. Extended Capabilities Port (ECP)
- Supports one serial port（COM1）on back panel
- Supports one SPDIF IN port and one SPDIF OUT port on back panel
- Supports one serial port（COM1）header and one IrDA（IR）header with external

devices connected

Universal Serial Bus:

- Four onboard USB 2.0/ 1.1 ports
- Three front USB headers come with this mainboard for additional six USB ports
- Support a maximum of ten USB ports to connect USB compliant devices

BIOS:

- Phoenix-Award™ BIOS
- Support APM 1.2
- Support ACPI 2.0 power management

Green Function:

- Supports Phoenix-Award™ BIOS power management function
- Supports system-wake-from-power-saving-mode by keyboard or mouse touching

Shadow RAM:

- Integrated memory controller provides shadow RAM functionality and supports ROM BIOS

Flash Memory:

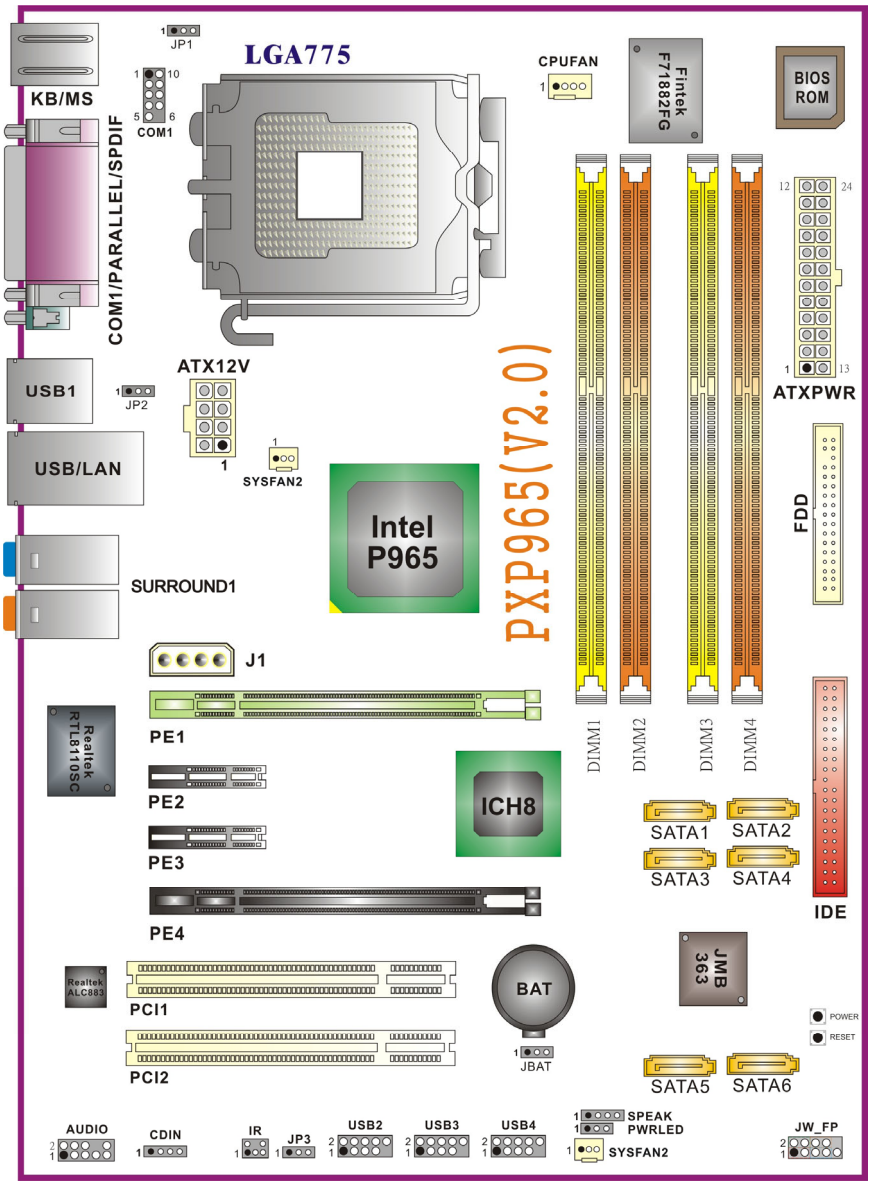
- Supports flash memory functionality
- Supports ESCD functionality

Hardware Monitor Function:

- Monitors CPU/ Chassis Fan Speed
- Monitors CPU and system temperature
- Monitors system voltages

Configuration

Layout of PXP965 (V2.0)



Hardware Installation

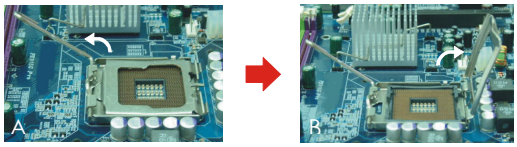
This section will assist you in quickly installing your system hardware. Wear a wrist ground strap before handling components. Electrostatic discharge may damage the system's components.

CPU Processor Installation

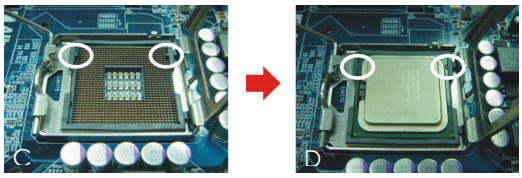
This mainboard supports Intel® Core™ 2 Extreme/ Core™ 2 Duo/ Pentium® Extreme Edition/ Pentium® 4 Extreme Edition/ Pentium® D/ Pentium® 4/ Celeron® D Processor using a Socket 775. Before building your system, we suggest you to visit the Intel website and review the processor installation procedures. http://www.intel.com

CPU Socket 775 Configuration Steps:

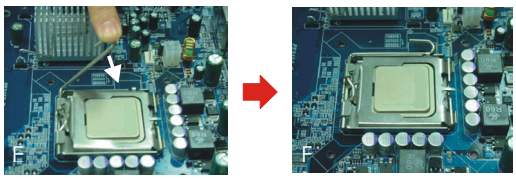
1. Locate the CPU socket 775 on your mainboard and nudge the lever away from the socket as shown. Then lift the lever to a 140-degree angle (A). Next, lift up the iron cover (B).



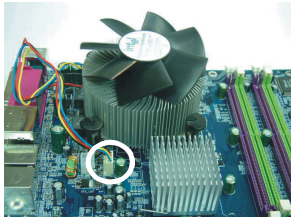
2. There are 2 distinctive marks located near the corners of the socket on the same side as the lever as shown (C). Match these marks with the marks on the CPU and carefully lower the CPU down onto the socket (D).



3. Replace the iron cover and then lower the lever until it snaps back into position (E). This will lock down the CPU (F).



4. Smear thermal grease on the top of the CPU. Lower the CPU fan onto the CPU/CPU socket and secure it using the attachments or screws provided on the fan. Finally, attach the fan power cord to the **CPUFAN** header.

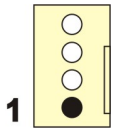


Attention

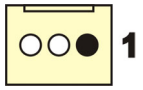
DO NOT touch the CPU pins in case they are damaged. Also, make sure that you have completed all installation steps before powered on the system. Finally, double-check that the cooling fan is properly installed and the CPU fan power cord is securely attached, in case your CPU and other sensitive components are damaged because of high temperatures.

FAN Headers: CPUFAN, SYSFAN1, SYSFAN2

There are three fan headers available for cooling fans. The cooling fans play an important role in maintaining ambient temperatures in your system. The CPUFAN header is attached with a CPU cooling fan. The SYSFAN1 and SYSFAN2 headers are attached with other cooling fans.



CPUFAN



SYSFAN1/ SYSFAN2

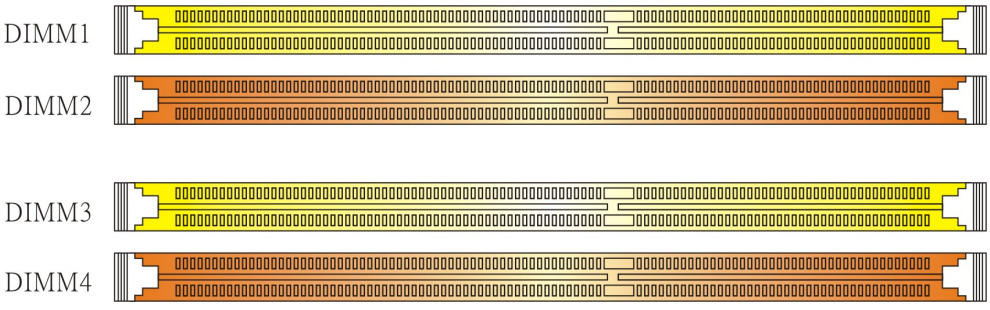
Attention

You can avoid damaging your CPU due to high temperatures with proper cooling equipment. It is recommended that attach a cooling fan on top of your CPU. Use the CPUFAN header to attach the fan cord.

On most fan power cord, the black wire of the fan cable is the “ground” and should be attached to pin-1 of the header.

Memory Installation: DIMM1/2/3/4

The PXP965 (V2.0) provides four DIMM (Dual In-Line Memory Modules) sockets which allowing you to install 240-pin, unbuffered non-ECC, DDRII 800/ 667/ 533 SDRAMs. It also supports Dual Channel Technology and allows you installing a total memory capacity of 8 GB.



Attention

It is recommended that to install memories which are identical specifications (same timing specifications and same DDR II speed) to achieve the best effects. It may cause the failure of power-on or lower memory speed if installing different type, SPD (series presence detects) memories.

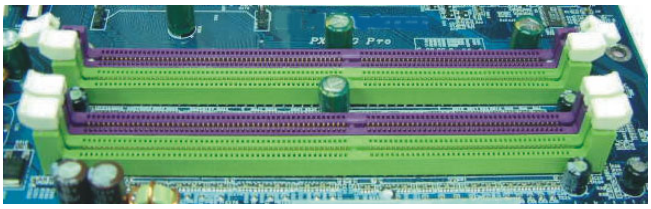
How to enable Dual-Channel DDRII:

1. This mainboard provides Dual-Channel functionality for the four DIMM sockets. Enabling Dual-Channel will significantly increase your data access rate than the before. DIMM1 and DIMM3 share one channel, and DIMM2 and DIMM4 share another channel.
2. To enable Dual-Channel, you need to install memories in the same channel of DIMM sockets. According to the definition by Intel, once one channel of the memory capacity is the same with the other channel, the Dual-Channel will be enabled then.

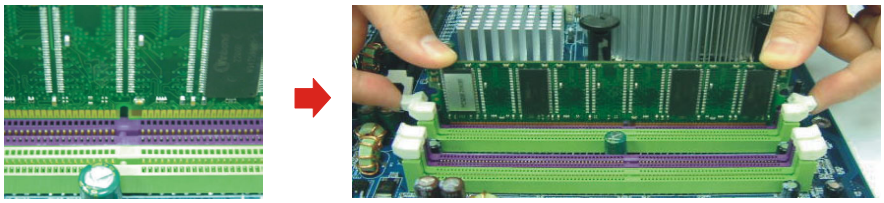
   For example, if you install one 256 MB memory in DIMM1 and another in DIMM3 (256MB x 2 = 512MB), the Dual-Channel can be enabled.
3. If you only need to install one memory, it is recommended to install it in DIMM1 or DIMM2.

Memory Installation Steps:

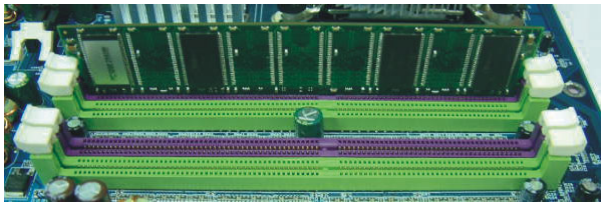
1. Pull the white plastic tabs at both ends of the slot away from the slot.



2. Match the notch on the RAM module with the corresponding pattern in the DIMM slot. This will ensure that the module will be inserted with the proper orientation.



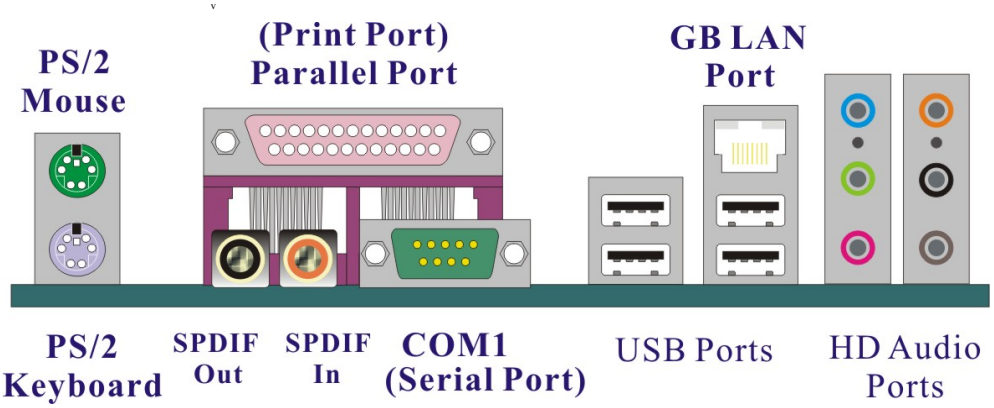
3. Lower the RAM module into the DIMM Slot and press firmly using both thumbs until the module snaps into place.



4. Repeat steps 1, 2 & 3 for the remaining RAM modules.

> * The pictures above are for reference only. Your actual installation may vary slightly from the pictures.

Back Panel Configuration

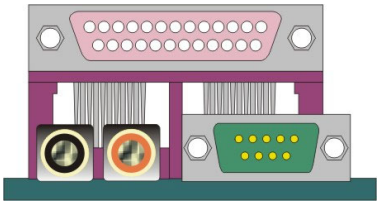


PS/2 Mouse & PS/2 Keyboard Ports: KB/MS

This mainboard provides a standard PS/2 mouse port and a PS/2 keyboard port. The pin assignments are described below.

Serial and Parallel Interface Ports

The mainboard provides one serial port and one parallel port on the back panel.



Parallel Interface Port: PARALLEL

The parallel port on your mainboard is a standard 25-pin one, and is used to connect a parallel printer.

The Serial Interface: COM1

This mainboard provides a serial port COM1 on your back panel, and is used to connect mice, modem and other peripheral devices. Through this port, you can also transfer data from your computer hard disk drive to other computers.

S/PDIF IN/OUT Ports: SPDIF In/ SPDIF Out

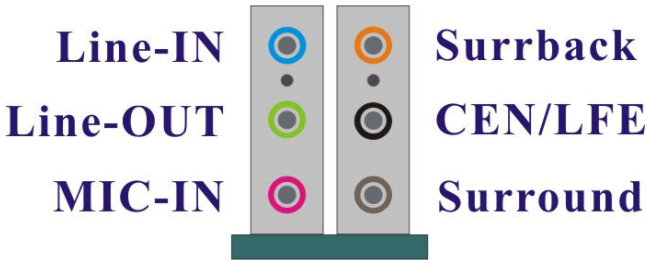
The S/PDIF output is capable of providing digital audio to external speakers or compressed AC3 data to an external Dolby digital decoder. Use this feature only when your stereo system has digital input function. Use S/PDIF In feature only when your device has digital output function.

USB Ports/LAN Port: USB1, USB/LAN

There are four onboard USB 2.0/ 1.1 ports on the back panel. These USB ports are used to attach with USB devices, such as keyboard, mice and other USB supported devices. There is also a 10/100/1000 Mbps Ethernet LAN port available for you to attach an Internet cable.

Audio Ports: SURROUND1

This mainboard provides six HD Audio ports for 8/6/4/2 channel playback capability. With jack sensing, auto detecting and adjusting, the device will make it easier to Plug and Play for you.



Line-In (blue)

This port is for audio input and connects to external audio devices such as CD player, tape player or other audio devices when the 8/6/4/2 channel audio effects driver is enabled.

Line-Out (green)

This port is an output audio port used for connecting to speakers or a headset. A dual channel audio system is to provide basic audio functionality. When the 8/6/4/2 channel audio system is enabled, this port will output audio for the front speakers.

Mic-In (pink)

This port is for connecting to a microphone. When the 8/6/4/2 channel audio system is enabled, this port will be the input of your microphone.

Rear Surround-out (orange)

This port is only functional for the output of the surround sound rear speakers when the 8/6/4/2 channel audio driver is installed and enabled.

Center/ Subwoofer-out (black)

This port connects with the center/ subwoofer speakers. It will be functional when the 8/6 channel audio system is driven for center/ subwoofer output.

Side Surround-out (gray)

This port will be effective for the output of side surround speakers when the 8 channel audio system is set.

This mainboard supports multi-channel audio system which allows you to transform your 2 speaker audio system into 8/ 6/ 4 speaker audio system. See **Appendix I** for more information.

Connectors

Floppy Disk Drive Connector: FDD

The mainboard provides a standard floppy disk drive connector (FDD) that supports 360KB/720KB/ 1.2MB/1.44MB/2.88 MB floppy disk drives using a FDD ribbon cable.

Serial ATA II Connector: SATA1/2/3/4

The four SATA II connectors support up to 3 Gbps data transfer rates, and one SATA connector only can attach one SATA HDD of each time using SATA cables.

IDE Connector and SATA II Connectors: IDE, SATA5/6

The JMicron® JMB363 chip supports one IDE connector and two additional Serial ATA II ports for use

The IDE connector supports Ultra ATA 66/100/133 IDE devices. You can attach a maximum of two IDE devices, such as hard disk drive (HDD), CD-ROM, DVD-ROM, etc. using an IDE ribbon cable.

In general, two IDE devices can be attached onto one IDE connector. If you attach two IDE HDDs, you must configure one drive as the master and the other one as the slave. In this case, one optical device i.e., CD-ROM, DVD-ROM…etc. should be attached to this connector as well.

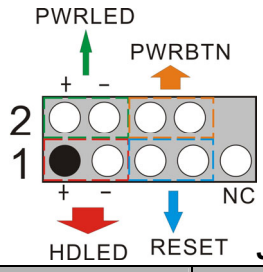
In addition, the SATA5/6 connectors support up to 3 Gbps data transfer rates, and one SATA connector only can attach one SATA HDD of each time using SATA cables.

This mainboard supports RAID 0/ 1 mode; refer **Appendix II** for more information.

Attention

The FDD/ IDE cable is designed and should be attached with a specific direction. One edge of the cable will usually in color such as red, to indicate that should line up with the header pin-1.

Front Panel Headers: JW_FP, PWRLED, SPEAK



JW_FP

Pin	Assignment	Function	Pin	Assignment	Function
1	VCC5 (+)	Hard Drive LED (HDLED)	2	VCC5 (+)	2-pin Power LED (PWR LED)
3	HDDLE (-)		4	PWRLED (-)	
5	GND	Reset Switch (RESET)	6	PWRBTN	Power-on Button (PWRBTN)
7	RSTSW		8	GND	
9	N/A		10	Key	

Hard Drive LED Header: HDLED

If your case front panel has a hard drive LED cable, attach it to this header. The LED will flicker when there is hard disk drive activity.

Reset Switch Header: RESET

This header can be attached to a momentary SPST switch (reset button) cable on your case front panel. The switch is normally left open. When the switch closed, it will cause the mainboard to reset and run the POST (Power-On Self Test).

Power-on Switch Header: PWRBTN

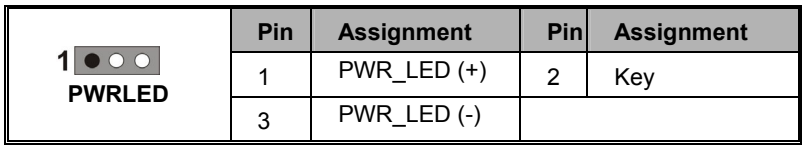
This header can be attached to a power switch cable on your case front panel. You can turn your system on or off by pressing the button attached to this power switch cable.

2-pin Power LED Header: PWR LED

The mainboard provides a 2-pin power LED header. If there is a 2-pin power LED cord on your case front panel, you can attach it to the 2-pin power LED header. Then the power LED will illuminate while the system is powered on.

3-pin Power LED Header: PWRLED

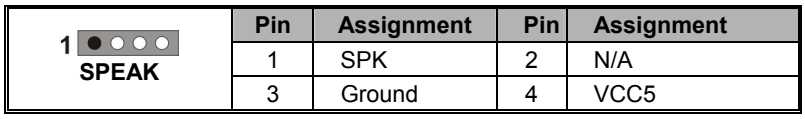
The mainboard also provides a 3-pin power LED header. If there is a 3-pin power LED cord on your case front panel, you can attach it to this 3-pin header instead of attach to the 2-pin one on the SW/LED header.



Pin	Assignment	Pin	Assignment
1	PWR_LED (+)	2	Key
3	PWR_LED (-)		

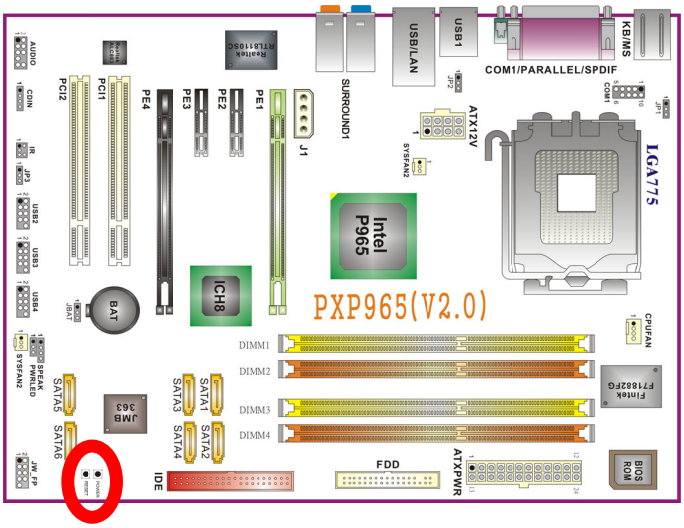
Speaker Header: SPEAK

A speaker cable on your case front panel can be attached to this header. When you reboot the computer, this speaker will issue a short audible (beep). If there are problems during the Power On Self-Test, the system will issue an irregular pattern of audible beeps through this speaker.



Pin	Assignment	Pin	Assignment
1	SPK	2	N/A
3	Ground	4	VCC5

EZ Control Button



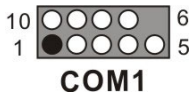
Onboard Buttons: POWER, RESET

The mainboard provides one Power Switch and one Reset Switch buttons for your convenience to turn on or restart your system. If pressing one of them, then you can start your computer easily before the mainboard is set into the case.

Headers & Jumpers

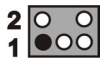
Serial Interface Header: COM1

This mainboard provides one COM1 header for you to connect an external serial connector on the back panel of your case. Attaching the serial connector by a cable (Optional) onto this header, then you can use the serial connector to attach with a mic, modem or other peripheral device.



IrDA Header: IR

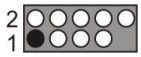
The infrared sensing device attached to this header can support to provide wireless infrared. You can transfer data connectionless to or from the portable device (i.e., laptop, PDA, etc.) which with this header attached.



Pin	Assignment	Pin	Assignment
1	IRRX	2	GND
3	GND	4	N/A
5	IRTX	6	VCC

Front USB Headers: USB2/3/4

This mainboard provides four onboard USB 1.1/2.0 ports (back panel) that attach to USB devices. There are three additional USB headers that can be connected by cables to six more USB ports on the front panel of your case giving you a possible ten USB ports.



USB2/3/4

Pin	Assignment	Pin	Assignment
1	VCC	2	VCC
3	-DATA	4	-DATA
5	+DATA	6	+DATA
7	GND	8	GND
9	Key	10	N/A

Attention

If you are using a USB 2.0 device with Windows 2000/XP, you will need to install the USB 2.0 driver from the Microsoft® website. If you are using Service pack 1 (or later) for Windows® XP, and using Service pack4 (or later) for Windows® 2000, you will not have to install the driver.

Keyboard/Mouse & USB Power On function Header: JP1

PS/2 Keyboard and PS/2 Mouse attached to the back panel can awaken the system from sleep mode. In order to enable this functionality, you must adjust the jumper caps on JP1 header as the table below.

JP1	Assignment
 **Pin 1-2 Closed**	KB/MS & USB Power ON Disable (Default)
 **Pin 2-3 Closed**	KB/MS & USB Power ON Enabled

Note: Close stands for putting a jumper cap onto two header pins.

USB Power On function Header: JP2/ JP3

USB devices attached to the back panel USB ports can awaken the system from sleep mode. In order to enable this functionality, you must adjust the jumper caps on JP2/3 header for +5V or +5VSB mode depending on which USB port that the USB device is attached to.

JP2/ JP3	Assignment	Assignment
1  **Pin 1-2 Closed**	+5V	USB Power On Disable (Default)
1  **Pin 2-3 Closed**	+5VSB	USB Power On Enabled

Note: Close stands for putting a jumper cap onto two header pins.

Clear CMOS Jumper: JBAT

The "Clear CMOS" function is used when you are unable boot your system and need to reset the BIOS settings (CMOS settings) back to the manufacturer's original settings. This is also a way to reset the system password if you have forgotten it.

JBAT	Assignment
1  **Pin 1-2 Closed**	Normal (Default)
1  **Pin 2-3 Closed**	Clear CMOS Data

Note: Close stands for putting a jumper cap onto two header pins.

The following steps explain how to reset your CMOS configurations when you forgot a system password.

1. Turn off your system and disconnect the AC power cable.
2. Set JBAT header to OFF (2-3 Closed).
3. Wait several seconds.
4. Set JBAT header to ON (1-2 closed).
5. Connect the AC power cable and turn on your system.
6. Reset your new password.

Audio Configuration

CD-ROM Audio-In Connector: CDIN

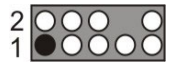
The CD-IN connector is used to attach an audio cable to audio devices such as CD-ROMs, DVD-ROMs etc.

1 

CDIN

Front Panel Audio Header: AUDIO

If your case front panel has audio ports, you can connect them to the Front Audio Header of this mainboard. Therefore, you can use both the front audio panel and back panel audio simultaneously.



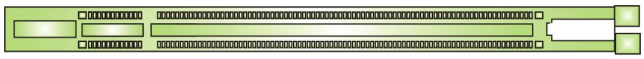
AUDIO

Pin	Assignment	Pin	Assignment
1	AUD_MIC	2	AUD_GND
3	AUD MIC BIAS	4	AUD_VCC
5	AUD_FPOUT_R	6	AUD_RET_R
7	HP_ON	8	N/A
9	AUD_FPOUT_L	10	AUD_RET_L

Slots

PCI-Express x16 Interface slot: PE1

The PE1 slot is the PCI-Express x16 interface slot which can be supported up to x16 mode. It is recommended that you insert a graphics card onto the PE1 slot which the interface is capable for PCI-E x16 specification.



PE1

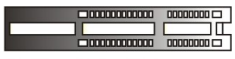
Universal PCI-Express Interface slot: PE4

The PE4 slot is the PCI-Express x4 interface slot which can be supported up to x4 mode. You can insert an expansion card which the interface is capable for PCI-E x4 specification onto the slot.

PE4

PCI-Express x1 Interface slots: PE2/ PE3

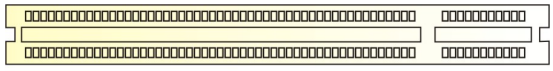
The PE2/3 slots are the PCI-Express x1 interface slots which can be supported up to x1 mode. You can insert an expansion card which the interface is capable for PCI-E x1 specification onto these slots.



PE2/ PE3

PCI Interface Slots: PCI1/2

PCI stands for Peripheral Component Interconnect, which is a bus standard for installing expansion cards such as network card, SCSI card, etc. to these PCI slots.

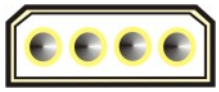


PCI

Power Supply Attachments

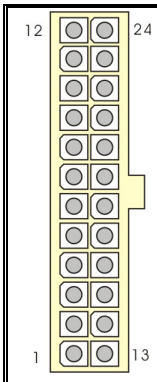
PCIE Power Connector: J1

The 4-pin connector provides an extra +12V for the PCI-E x16 slot in order to increase the stability of your graphics card. You can attach the 4-pin connector to power supply directly.



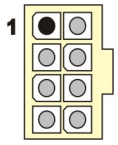
ATX Power Connector: ATXPWR, ATX12V

This mainboard provides two ATX power connectors, a 24-pin ATXPWR connector and an 8-pin ATX12V connector. You must use a power supply that has both of these connectors and both connectors must be attached before the system is powered on. These power connectors support several power management functions such as the instant power-on function. The connector pins are described below.



ATXPWR

Pin	Assignment	Pin	Assignment
1	+3.3V	13	+3.3V
2	+3.3V	14	-12V
3	Ground	15	Ground
4	+5V	16	PS_ON
5	Ground	17	Ground
6	+5V	18	Ground
7	Ground	19	Ground
8	PW_ON	20	-5V
9	+5V standby voltage	21	+5V
10	+12V	22	+5V
11	+12V	23	+5V
12	+3.3V	24	Ground



ATX12V

Pin	Assignment	Pin	Assignment
1	+12V	5	Ground
2	+12V	6	Ground
3	+12V	7	Ground
4	+12V	8	Ground

Attention

In general, power cords are designed and should be attached with a specific direction. The black wire of the power cord is Ground and should be attached onto the header location of Ground.

Chapter 2. BIOS Setup

Introduction

This section describes PHOENIX-AWARD™ BIOS Setup program which resides in the BIOS firmware. The Setup program allows users to modify the basic system configuration. The configuration information is then saved to CMOS RAM where the data is sustained by battery after power-down.

The BIOS provides critical low-level support for standard devices such as disk drives, serial ports and parallel ports. As well, the BIOS controls the first stage of the boot process, loading and executing the operating system.

The PHOENIX-AWARD™ BIOS installed in your computer system's ROM is a custom version of an industry standard BIOS. This means that it supports the BIOS of Intel® based processors.

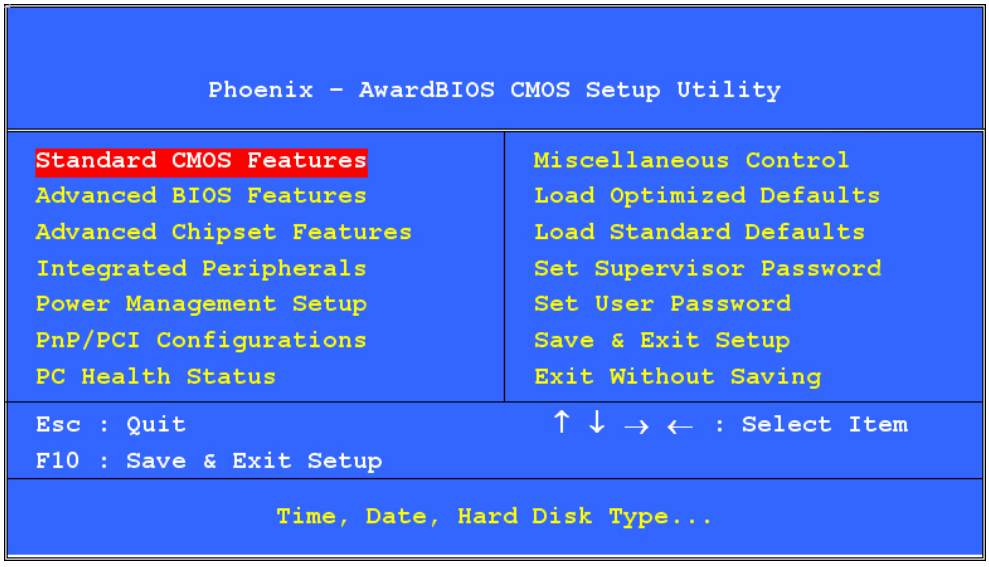
This version of the PHOENIX-AWARD™ BIOS includes additional features such as virus and password protection as well as special configurations for fine-tuning the system chipset. The defaults for the BIOS values contained in this document may vary slightly with the version installed in your system.

Key Function

In general, you can use the arrow keys to highlight options, press <Enter> to select, use the <PgUp> and <PgDn> keys to change entries, press <F1> for help and press <Esc> to quit. The following table provides more detail about how to navigate within the BIOS Setup program.

Keystroke	Function
Up arrow	Move to previous option
Down arrow	Move to next option
Left arrow	Move to the option on the left (menu bar)
Right arrow	Move to the option on the right (menu bar)
Esc	Main Menu: Quit without saving changes Submenus: Exit Current page to the next higher level menu
Move Enter	Move to the option you desire
PgUp key	Increase the numeric value or enter changes
PgDn key	Decrease the numeric value or enter changes
+ Key	Increase the numeric value or enter changes
- Key	Decrease the numeric value or enter changes
Esc key	Main Menu – Quit and do not save changes into CMOS Status Page Setup Menu and Option Page Setup Menu – Exit Current page and return to Main Menu
F1 key	General help on Setup navigation keys
F5 key	Load previous values from CMOS
F6 key	Load the defaults from BIOS default table
F7 key	Load the turbo defaults
F10 key	Save all the CMOS changes and exit

Main Menu



Standard CMOS Features
Include all the adjustable items in standard compatible BIOS.

Advanced BIOS Features
Include all the adjustable items of Award special enhanced features.

Advanced Chipset Features
Include all the adjustable items of chipset special features.

Integrated Peripherals
Include all onboard peripherals.

Power Management Setup
Include all the adjustable items of Green function features.

PnP/PCI Configurations
Include all configurations of PCI and PnP ISA resources.

PC Health Status
It is for monitoring the system status such as temperature, voltage, and fan speeds.

Miscellaneous Control

It is for you to specify settings for Miscellaneous Control, such as the CPU clock and frequency ratio.

Attention

Before going to update BIOS, please change the item,【**Miscellaneous Control**】→ 【**Flash Write Protect**】, from【**Enabled**】to【**Disabled**】. When the BIOS update is done, please adjust the item from【**Disabled**】to【**Enabled**】.

Load Optimized Defaults

It can load the preset system parameter values to set the system in its best performance configurations.

Load Standard Defaults

It can load the preset system parameter values to set the system in its stable performance configurations.

Set Supervisor Password

Set change or disable password. It allows you to limit access to the system and/or BIOS setup.

Set User Password

Set change or disable password. It allows you to limit access to the system.

Save & Exit Setup

Save CMOS value settings to CMOS and exit setup.

Exit Without Saving

Abandon all CMOS value changes and exit setup.

Chapter 3: Software Setup

Software List

Category	Platform
Intel® Chipset INF	Windows 2000 /XP
Realtek® Lan Driver	Windows 2000 /XP
Realtek® Audio Driver	Windows 2000 /XP
JMicron® JMB363 RAID Driver	Windows 2000/ XP
Microsoft® DirectX9.0c	Windows 2000 /XP
Adobe® Acrobat Reader 6	Windows 2000 /XP

Attention: You don't need to install the driver for USB 2.0 version if you are using Windows® XP with Service Pack 2 (or more advanced), or Windows® 2000 with Service Pack 4 (or more advanced).

Software Installation

Place the Driver CD into the CD-ROM drive and the Installation Utility will auto-run. You can also launch the Driver CD Installation Utility manually by executing the Intel.exe program located on the Driver CD. (For more details, please refer to the Readme.txt files that in each folder of the Driver.)

◎ The screen and images are only for general reference. The version of the screens you received with your software may vary slightly.

1. When you insert the driver CD into the CD-ROM, you'll see the screen as the picture below. There are several driver buttons displayed in the "Driver Menu" screen, and you can click on the drivers to install.

- **Intel Chipset INF** – It provides all drivers for the functions which built in both the Northbridge/ Southbridge.
- **Realtek LAN Driver** – It provides the driver of Realtek Network.
- **Realtek Audio Driver** – It provides the driver of Realtek AC'97 Audio CODEC.
- **JMB363 RAID Driver** – It provides the driver of JMicron RAID settings.
- **Microsoft DirectX 9.0c** – It provides the software of Microsoft DirectX9.0c.

2. Click on the "Utility Menu" button, you can choose the software to install.

- **Adobe Acrobat Reader 6** – Installing the Adobe Acrobat Reader program, you can browse files with PDF styled.

3. Click on the “User Manual” button, you can choose the manual to read.

Attention: Before you read manuals, you must install the driver of Adobe Acrobat Reader 6 to browse PDF files.

4. If you click the “Browse CD” button, you can browse all the files in the Driver CD.

Chapter 4: Troubleshooting

Problem 1:

No power to the system. Power light does not illuminate. Fan inside power supply does not turn on. Indicator lights on keyboard are not lit.

Causes:

1. Power cable is unplugged.
2. Defective power cable.
3. Power supply failure.
4. Faulty wall outlet; circuit breaker or fuse blown.

Solutions:

1. Make sure power cable is securely plugged in.
2. Replace cable.
3. Contact technical support.
4. Use different socket, repair outlet, reset circuit breaker or replace fuse.

Problem 2:

System inoperative. Keyboard lights are on, power indicator lights are lit, hard drive is active but system seems “hung”

Causes: Memory DIMM is partially dislodged from the slot on the mainboard.

Solutions:

1. Power Down
2. Using even pressure on both ends of the DIMM, press down firmly until the module snaps into place.

Problem 3:

System does not boot from the hard disk drive but can be booted from the CD-ROM drive.

Causes:

1. Connector between hard drive and system board unplugged.
2. Damaged hard disk or disk controller.
3. Hard disk directory or FAT is corrupted.

Solutions:

1. Check the cable running from the disk to the disk controller board. Make sure both ends are securely attached. Check the drive type in the standard CMOS setup.
2. Contact technical support.
3. Backing up the hard drive is extremely important. Make sure your periodically perform backups to avoid untimely disk crashes.

Problem 4:

System only boots from the CD-ROM. The hard disk can be read and applications can be used but booting from the hard disk is impossible.

Causes: Hard Disk boot sector has been corrupted.

Solutions: Back up data and applications files. Reformat the hard drive. Re-install applications and data using backup disks.

Problem 5:

Error message reading “SECTOR NOT FOUND” displays and the system does not allow certain data to be accessed.

Causes: There are many reasons for this such as virus intrusion or disk failure.

Solutions: Back up any salvageable data. Then performs low level format, partition, and then a high level format the hard drive. Re-install all saved data when completed.

Problem 6:

Screen message says “Invalid Configuration” or “CMOS Failure.”

Causes: Incorrect information entered into the BIOS setup program.

Solutions: Review system’s equipment. Reconfigure the system.

Problem 7:

The Screen is blank.

Causes: No power to monitor.

Solutions: Check the power connectors to the monitor and to the system.

Problem 8:

Blank screen.

Causes:

1. Memory problem.
2. Computer virus.

Solutions:

1. Reboot computer. Reinstall memory. Make sure that all memory modules are securely installed.
2. Use anti-virus programs to detect and clean viruses.

Problem 9:

Screen goes blank periodically.

Causes: Screen saver is enabled.

Solutions: Disable screen saver.

Problem 10:

Keyboard failure.

Causes: Keyboard is disconnected.

Solutions: Reconnect keyboard. Replace keyboard if you continue to experience problems.

Problem 11:

No color on screen.

Causes:

1. Faulty Monitor.
2. CMOS incorrectly set up.

Solutions:

1. If possible, connect monitor to another system. If no color appears, replace monitor.
2. Call technical support.

Problem 12:

The screen displays “C: drive failure.”

Causes: Hard drive cable not connected properly.

Solutions: Check hard drive cable.

Problem 13:

Cannot boot the system after installing a second hard drive.

Causes:

1. Master/slave jumpers not set correctly.
2. Hard drives are not compatible / different manufacturers.

Solutions:

1. Set master/slave jumpers correctly.
2. Run SETUP program and select the correct drive types. Call drive manufacturers for possible compatibility problems with other drives.

Problem 14:

Missing operating system on hard drive.

Causes: CMOS setup has been changed.

Solutions: Run setup and select the correct drive type.

Problem 15:

Certain keys do not function.

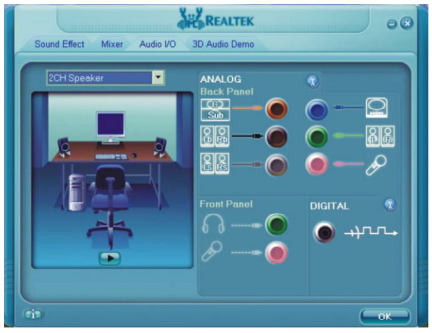
Causes: Keys jammed or defective.

Solutions: Replace keyboard.

Appendix I: 8/6/4/2 Channel Audio Effect Setup

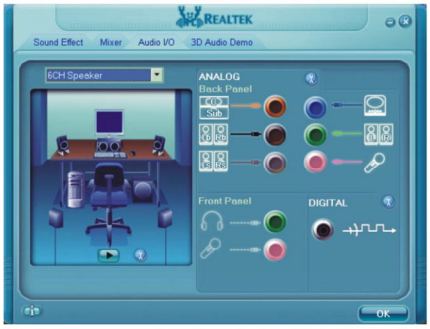
Channels Setup

1. After into the system, click the audio icon from the Windows screen.
2. Click “Audio I/O” button, you can see the screen like the picture below.
3. You can choose 2, 4, 6 or 8 channels by your speakers.
4. You can click the “Auto test” button to test your audio devices.

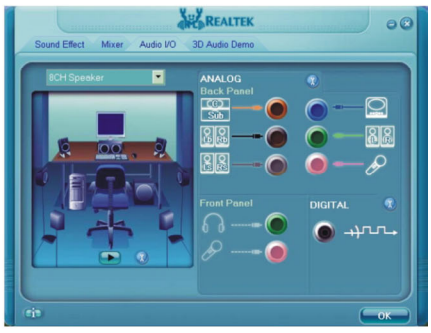


2 Channel

4 Channel



6 Channel



8 Channel

To take advantage of 8 Channel Audio Effects, you must use audio software that supports this functionality. You must also make sure your software is specifically configured for 8 Channel Audio Effect supoort.

Appendix II: SATA 0/1 Specification

Introduction to RAID
(Redundant Array of Independent Disks)

RAID technology is a sophisticated disk management system that manages multiple disk drives, enhancing I/O performance and providing redundancy in order to prevent the loss of data in case any of the individual disks fail. The SATA RAID facility on this board provides RAID 0 (striped) and RAID 1 (mirrored).

Disk Striping (RAID 0)

Striping is a performance-oriented, non-redundant disk storage technology. With RAID striping, multiple disks are used to form a larger virtual disk. Data is then striped or mapped across all the physical disks. In this way modern SATA and ATA bus mastering technology can be used to perform multiple I/O operations in parallel, enhancing performance. While Striping is discussed as a RAID Set type, it actually does not provide fault tolerance.

Disk Mirroring (RAID 1)

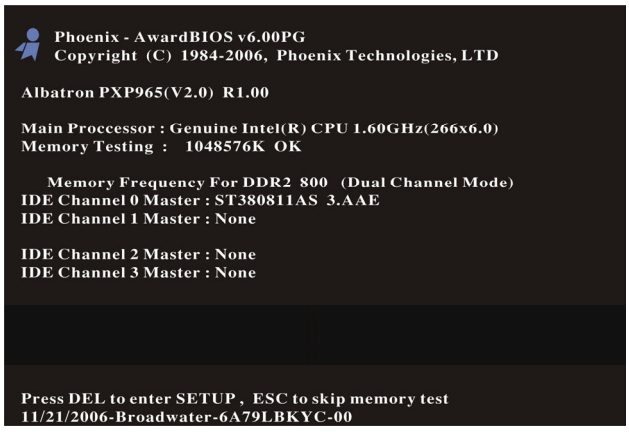
With Disk Mirroring there is a redundant disk that mirrors the main disk. Data that is written to the main disk is also written to the redundant disk. This redundancy provides fault tolerant protection from a single disk failure. If a read/write failure occurs on one drive, the system can still read and write data using the other drive.

Appendix III: IDE CD-ROM/ DVD-ROM Setup

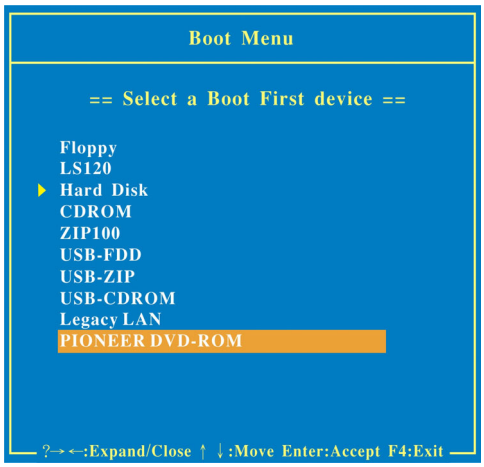
The PXP965 (V2.0) provides one IDE chip (JMicron) for IDE device use. If you are installing the operating system using a CD-ROM/ DVD-ROM, you need to know how to set up these devices. There are two ways configure your CD-ROM/ DVD-ROM which will be explained in two sections below.

Configuring the CD-ROM/DVD-ROM in the Boot Menu → Press【ESC】

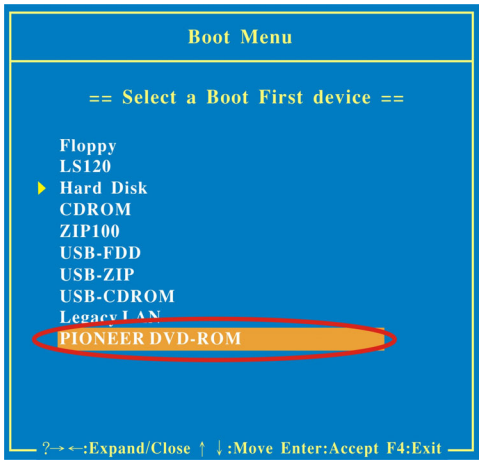
1. When the screen below displays, press【ESC】to enter the Boot Menu.



2. A few seconds later, you will see the screen below.



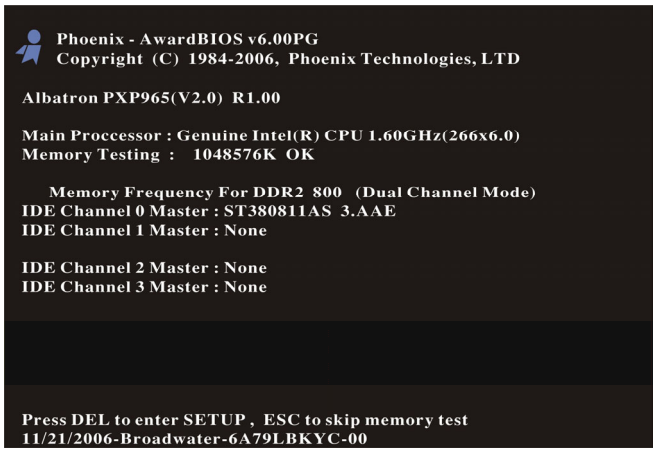
3. Select the name of the CD-ROM/ DVD-ROM that will be configured into your computer (do not select the item “CDROM”). For instance, the system for the screen below has a “PIONEER DVD-ROM”.



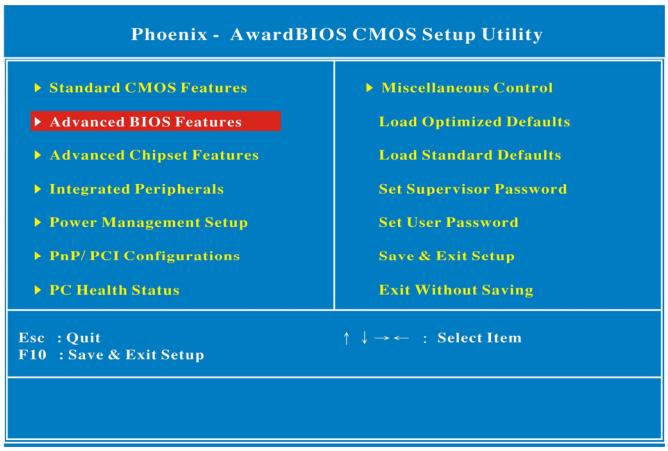
4. Press【Enter】. Your computer will reboot and read the CD-ROM/ DVD-ROM.

Configuring the CD-ROM/DVD-ROM in the BIOS Setup Utility → Press【Delete】

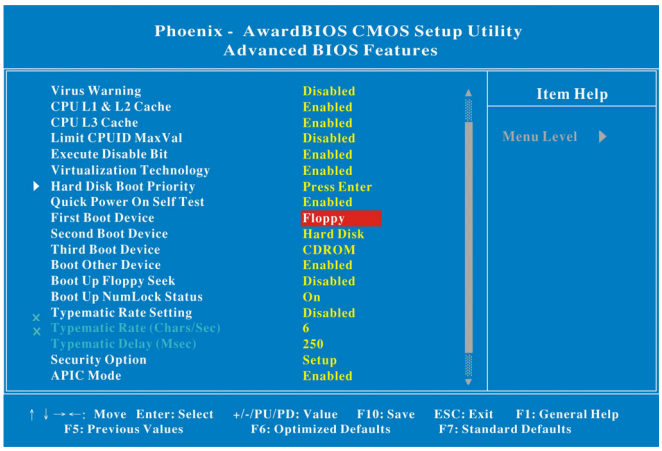
1. When you see the screen shown below, press【Delete】to enter the BIOS Setup screen.



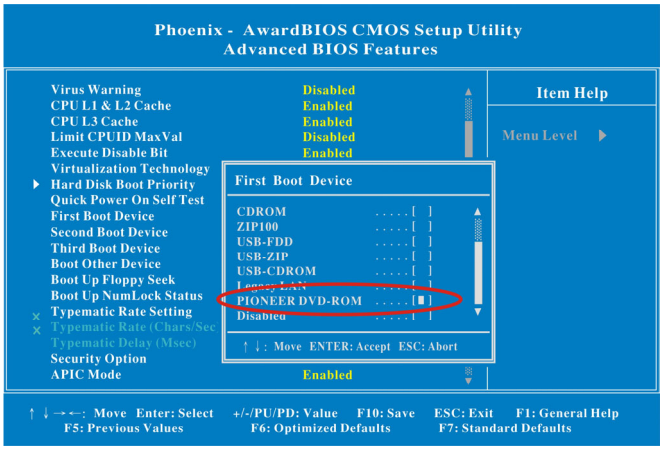
2. Move the arrow keys to the “Advanced BIOS Features” item and press【Enter】.



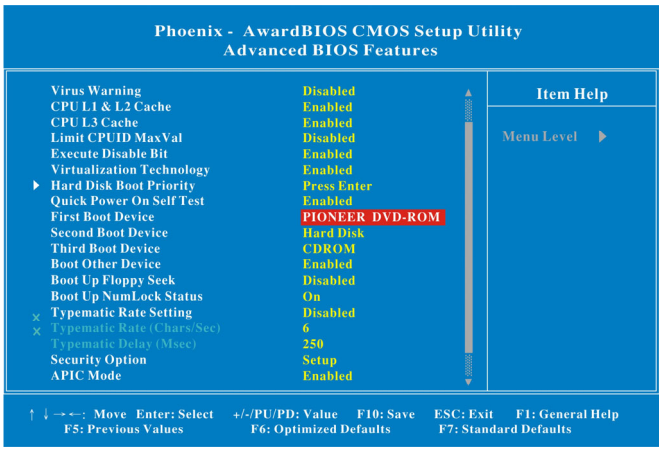
3. After entering the sub-menu, arrow down to the “First Boot Device” item. Press【Enter】.



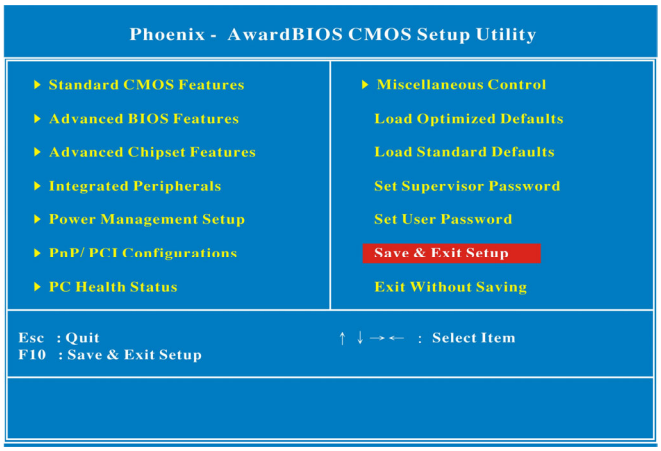
4. A selection box will appear listing several devices. Notice that you can't select the "CDROM" item. Scroll down the list to locate your CD-ROM/ DVD-ROM. Select it and press【Enter】.



5. Confirm that the "First Boot Device" item contains your selection (e.g. "First Boot Device" is "PIONEER DVD-ROM"). Press【ESC】to exit this screen.



6. At the main screen arrow over to the “Save & Exit” item. Press【Enter】.



7. Finally, press “Y”, and then press 【Enter】 to finish the setup. Wait for your computer to reboot and read your CD-ROM/ DVD-ROM.