PX925X/PX925XE Series

Copyright

All rights are reserved. No part of this publication may be reproduced, transmitted, transcribed, stored in a retrieval system or translated into any language or computer language, in any form or by any means, electronic, mechanical, magnetic, optical, chemical, manual or otherwise, without the prior written permission of the company. Brands and product names are trademarks or registered trademarks of their respective companies.

The vendor makes no representations or warranties with respect to the contents herein and especially disclaim any implied warranties of merchantability or fitness for any purpose. Further the vendor reserves the right to revise this publication and to make changes to the contents herein without obligation to notify any party beforehand. Duplication of this publication, in part or in whole, is not allowed without first obtaining the vendor's approval in writing.

Trademark

All the trademarks or brands in this document are registered by their respective owner.

Disclaimer

We make no warranty of any kind with regard to the content of this user's manual. The content is subject to change without notice and we will not be responsible for any mistakes found in this user's manual. All the brand and product names are trademarks of their respective companies.

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.

120410109M2N

Ver: EG101

Important, please read!!!

- The images and pictures in this manual are for reference only and may vary slightly from actual product installation depending on specific hardware models, third party components and software versions.
- Unplug your computer when installing components and configuring switches and pins.
- This mainboard contains very delicate IC chips. Use a grounded wrist strap when working with the system.
- Do not touch the IC chips, leads, connectors or other components.
- Unplug the AC power when you install or remove any device on the mainboard.

Package Contents

- PX925X/ PX925XE Series mainboard
- IDE ATA Cable
- FDC Cable
- USB Bracket (optional)
- Game Port Bracket (optional)
- SPDIF & FRONT AUDIO Port Bracket (optional)
- SATA Power cord (optional)
- SATA Cable (optional)
- Mainboard Setup Driver CD
- Mainboard User Manual CD
- Mainboard Quick Installation Guide

Symbols

PX925X/PX925XE Series

Intel® 925X/925XE & ICH6/ICH6R/ICH6RW
Supports Socket 775 Intel® Pentium® 4
Prescott Processor

User Manual

Enabling Hyper-Threading for your computer system requires ALL of the following components

- **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):

- 244mm x 305mm (W x L)

Operating System:

- Supports most popular operating systems: Windows® 2000/ XP

Contents

CHAPTER 1. GETTING STARTED 1

INTRODUCTION.....1
SPECIFICATION.....2
Configuration.....5
Layout of PX925XE PRO 5
Layout of PX925XE PRO-R 6
Layout of PX925X.....7
Layout of PX925X-R.....8
Layout of PX925X PRO.....9
Layout of PX925X PRO-R.....10
HARDWARE INSTALLATION 11
CPU Processor Installation.....11
Back Panel Configuration.....14
Connectors.....16
Front Panel Indicator: SW/LED、PWRLED、SPEAKER.....17
Headers & Jumpers.....18
Audio Connectors.....20
Slots.....21
Power Supply Attachments.....22

CHAPTER 2. BIOS SETUP.....23

INTRODUCTION.....23
MAIN MENU 25
ADVANCED BIOS FEATURES 27
INTEGRATED PERIPHERALS.....33
POWER MANAGEMENT.....37
HARDWARE MONITOR 40
LOAD DEFAULTS.....41
EXIT MENU.....42

CHAPTER 3: SOFTWARE SETUP.....43

SOFTWARE LIST 43
SOFTWARE INSTALLATION.....43

CHAPTER 4: TROUBLESHOOTING.....46

APPENDIX I: 2/ 4/ 6 /8 CHANNEL SETUP.....49
APPENDIX II: SATA RAID SETUP 50
APPENDIX III: INTEL® DESKTOP PROCESSORS FEATURE SET REFERENCE TABLE . 60

Chapter 1. Getting Started

Introduction

Congratulations on choosing from the PX925X/ PX925XE series of mainboards! The PX925X series includes the PX925X, PX925X-R, PX925X PRO and PX925X PRO-R. The PX925XE series includes the PX925XE PRO and PX925XE PRO-R. These mainboards are based on the Intel® 925X/ 925XE Northbridge chipsets and the Intel® ICH6/ ICH6R/ ICH6RW Southbridge chipset. The PX925X series supports Intel® Pentium® 4 Prescott Processors with FSB (Front Side Bus) frequencies of 800 MHz and the PX925XE series supports Intel® Pentium® 4 Prescott Processors with FSB 800/1066 MHz.

These mainboards provide 4 DIMM sockets using 240-pin DDRII SDRAM and supports install up to 4 GB memory size. They also support dual-channel mode. You must install unbuffered/ non-ECC or with-ECC DDRII 400/ 533 DIMM memory for the PX925X series and unbuffered/ non-ECC DDRII 400/ 533 DIMM memory for the PX925XE series (for more details, see Memory Installation section).

These mainboards provide one 16-lane (x16) PCI-Express slot for use with a PCI-Express graphics card. This slot can provide 4 GB/s bandwidths in each direction. It also has two 1-lane (x1) PCI-Express slots for additional cards. These slots provide 250 MB/s bandwidths in each direction.

These mainboards provide a built-in IDE facility (Ultra ATA 66/100) that supports DMA and PIO modes. They also include 2 built-in RAID IDE slots (Ultra ATA 133) that support RAID 0, RAID 1, RAID 0+1 and JBOD modes. These mainboards also have 4 built-in Serial ATA slots capable of 150 MB/s transfer rates on each channel. The SATA slots also support RAID 0 or 1 for the PX925X-R/ PX925X PRO-R / PX925XE PRO-R.

These mainboards also come with an HD Audio sound codec (Azalia standard compliant) which supports high quality HD Audio with 8 channel capabilities. Sony/Philips Digital Interfaces are also supported.

These mainboards support up to 8 USB2.0 ports and also provide an infrared header for wireless infrared transmissions.

These mainboards come with a LAN chip (Broadcom BCM5789) that provides up to 1 GB/s network connectivity. The PX925X PRO/ PRO-R and PX925XE PRO/ PRO-R also come with a secondary LAN chip (VIA VT6105 LAN controller) which provides an additional back panel LAN port capable of 10/100 Mbit/s transmission speeds.

The company's 3 Year Limited Warranty for this product covers both labor costs and replacement parts during the 1st year. Only labor costs are covered during the 2nd and 3rd years (replacement parts will be charged during the 2nd and 3rd years).

All of the information in this manual is for reference only. This specification is subject to change without notice.

Specification

CPU:

- Supports Socket 775 Pentium® 4 Prescott processor
- Supports Hyper-Threading Technology
- 800 MHz FSB (Front Side Bus) frequency (for PX925X series)
- FSB (Front Side Bus) 800/1066 MHz (for PX925XE series)

Chipset:

- Northbridge Chipset – Intel® 925X/925XE
- Southbridge Chipset – Intel® ICH6 for PX925X/ PX925X PRO/ PX925XE PRO
  Intel® ICH6R for PX925X-R/ PX925PRO-R/ PX925XE PRO-R
- I/O Controller – Winbond W83627THF
- RAID IDE Controller – ITE IT8212F
- HD Aduio Codec – Realtek ALC880
- Gb LAN Controller – Broadcom® BCM5789
- Mb LAN Controller – VIA® VT6105 (for PX925X PRO/PX925X PRO-R/PX925XE series)

DRAM Memory:

- Uses either DDRII 400 or DDRII 533 memory DIMM
- SDRAM modules must be unbuffered/ non-ECC(the PX925XE series)
  Unbuffered/ non-ECC or with ECC(the PX925X series)
- Supported memory module increments are 256 MB /512 MB /1 GB
- Supports install up to 4 GB memory size, but available total memory capacity is 3.2～3.5GB
- Supports Dual-Channel data bus

PCI-Express BUS Slots:

- Provides 1 x 16 PCI Express slot with 4 GB/s bandwidth (each direction)
- Provides 2 x 1 PCI Express slots with 250 MB/s bandwidth (each direction)
- All PCI Express slots are fully PCI Express 1.0a compliant

PCI BUS Slots:

- Provides 3 PCI slots
- Contains 33MHz, 32bit PCI interface, PCI 2.3 is compliant

Infrared:

- Supports IrDA Version 1.0 SIR Protocol with a maximum baud rate of up to 115.2 Kbps

Universal Serial Bus:

- Supports up to 8 USB ports for USB compliant interface devices
- Supports USB 2.0 Enhanced Host Controller Interface (EHCI) and USB 1.1 Universal Host Controller Interface (UHCI)

Onboard IDE Facilities:

- Supports Ultra ATA 66/ 100, DMA and PIO modes
- Supports IDE interface with CD-ROM
- Supports high capacity hard disk drives
- IDE slot can support 2 IDE drives

Raid IDE controller:

- Two RAID IDE slots that supports Ultra ATA 133 IDE
- Supports hard disk drives only
- Each slot can support 2 IDE drives
- Supports RAID 0, RAID 1, RAID 0+1 and JBOD modes

Onboard SATA Bus:

- 4 SATA IDE slots
- SATA 1.0 compatible
- Supports 150 MB/s transfer rates
- Supports RAID 0, RAID 1 modes (for PX925X-R/ PX925X PRO-R /PX925XE PRO-R only)

Hardware Monitor Function:

- Monitors CPUFAN/ CHASFAN/ AUXFAN Speeds
- Monitors system Voltage

HD Audio Sound Codec Onboard:

- HD Audio (High Definition Audio) protocol compliance
- Compliant with Azalia specifications
- 8-channel playback capability
- Supports Sony/ Philips Digital Interfaces (S/PDIF)

LAN Controller:

- Broadcom BCM5789 LAN controller supports Ethernet 10/100/1000 Mbit/s connectivity.
- The PX925X PRO/ PRO-R and the PX925XE PRO/ PRO-R provide an additional LAN facility using a built-in VIA® VT6105 chipset which supports Ethernet 10/100 Mbit/s network connectivity.

I/O facilities:

- One multi-mode Parallel Port capable of supporting the following specifications:
  1. Standard & Bi-direction Parallel Port
  2. Enhanced Parallel Port (EPP)
  3. Extended Capabilities Port (ECP)
- Contains two serial port, 16550 UART
- Supports Infrared Data Transmissions using IrDA
- Supports PS/2 mice and PS/2 keyboards
- Supports 360 KB/720 KB/1.2 MB/1.44 MB/2.88 MB floppy disk drives
- Contains 1 Game header

BIOS:

- Phoenix-Award™ BIOS
- Supports APM1.2
- Supports ACPI2.0 power management

Watch Dog Timer:

- This mainboard contains a special feature called the "Watch Dog Timer" which is used to detect when the system hangs during the POST stage due to certain BIOS configuration problems. Once a problem is detected, the Watch Dog will reset the configurations and reboot the system.

Automatically over-clocking facility:

- When the power load over the regular value range, then the system will automatically over-clocking for the current state and keep the system normalize. Until the power restore the default value range, the system will also restore the regular clock range. The regular value range is depending on the peripheral devices you installed.

Configuration
Layout of PX925XE PRO

Layout of PX925XE PRO-R

Layout of PX925X

Layout of PX925X-R

Layout of PX925X PRO

Layout of PX925X PRO-R

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® Pentium® 4 processors using a Socket 775. Before building your system, we suggest you 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 cable to the **CPUFAN** adapter.

Attention: DO NOT touch the pins on the socket (the pins are sensitive and can be easily damaged). Also, make sure that you have completed all of the installation steps before starting the system. Finally, double-check that the heatsink is properly installed and make sure that the CPU fan power cable is securely attached (cooling problems can cause overheating, leading to damage to the CPU and other sensitive components).

FAN Headers

Three power headers are available for the cooling fans. Cooling fans play an important role in maintaining the ambient temperature in your system.

Attention: We strongly recommend that you use a CPU fan sink with your CPU. You can attach the power cable from the CPU fan sink to the CPUFAN Header.

Memory Installation

These mainboards contain 4 memory slots which use 240-pin DDRII SDRAM with a total memory capacity of up to 3.2～3.5 GB. You must install unbuffered/ non-ECC (or with ECC for the PX925X series) DDR-SDRAM DIMMs with either 256 MB, 512 MB, or 1 GB of memory. These modules must be either DDRII 400 or DDRII 533 SDRAM.

Attention: We strongly recommend that You have to install modules in same specification to achieve the best effects. (Same timing specifications and same DDR speed) lest the failure of power-on or low memory speed if you install modules in different type, different SPD (series presence detect).

How to enable Dual-Channel DDRII:
These mainboards provide Dual-Channel functionality for its DIMM slots. Enabling Dual-Channel can significantly increase your data access rates. DIMM1 and DIMM2 share one channel, while DIMM3 and DIMM4 share the second channel. Enabling Dual-Channel simply means to make sure that the total memory for the two channels are balanced. For example: If you install one 256 MB module in DIMM1 and one in DIMM2 (256MB x 2 = 512MB), you must install a total of 512 MB between DIMM3 and DIMM4. In balancing the memory on the two channels, you have, in effect, enabled Dual-Channel.

RAM Module Installation:

The following instructions explains memory module installation for these mainboards:

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 Connectors: KB/MS

These mainboards provide a standard PS/2 mouse connector and PS/2 keyboard connector. The pin assignments are described below:

Pin	Assignment	Pin	Assignment
1	Data	4	+5 V (fused)
2	No connect	5	Clock
3	Ground	6	No connect

Serial and Parallel Interface Ports

These mainboards come equipped with two serial ports and one parallel port.

Parallel Interface Port: PRT

The parallel port on your system has a 25-pin, DB25 connector that is used to interface with parallel printers and other devices using a parallel interface.

The Serial Interface: COM1/COM2

The serial interface port is sometimes referred to as an RS-232 port or an asynchronous communication port. Mice, modems and other peripheral serial devices can be connected to this port.

USB & (GB) LAN Connectors:USB/GBLAN and USB/(LAN is optional)

These mainboards come with 4 USB ports and a Gb/s LAN port. The PX925X PRO/ PRO-R and PX925XE PRO/ PRO-R have secondary additional 10/100 Mbit/s LAN port. The USB connectors are used to attach to keyboards, mice and other USB devices. You can plug the USB devices directly into this connector. The LAN connectors can be attached directly to a network.

Pin	Assignment 10/100M(1G)	Pin	Assignment 10/100M(1G)
1	TX+ (TX+)	5	NC (TRD2-)
2	TX- (TX-)	6	RX- (RX-)
3	RX+ (RX+)	7	NC (TRD3+)
4	NC (TRD2+)	8	NC (TRD3-)

Pin	Assignment	Pin	Assignment
1/5	+5 V (fused)	3/7	USBP2+/P3+
2/6	USBP2-/P3-	4/8	Ground

Audio Port Connectors: Sound

This mainboard comes equipped with 6 Audio Ports. The Mic-in, Line-in and Front Speaker-out are standard audio ports that provide basic audio functionality. When you install the 8 Channel Audio Effects driver (4/6/8 channel audio), the other 3 audio ports will be enabled (see appendix 1).

Line In (blue) Connects to an external audio device such as a CD player, tape player or other audio devices that provide audio.
Front Speaker-Out (green) Connects to standard audio speakers for audio output. This port becomes the surround sound front speakers when the 8 Channel Audio Effects (4/6/8 speakers) driver is installed and enabled. Also note that this port provides the most amperage of all the ports making it suitable for headphones and speakers without their own power cables.
Mic In (pink) Connects to a microphone.
Surround Back Speaker-out (black) This port represents the surround sound back speakers and is only functional when the 4/ 6/ 8 Channel Audio Effects driver is installed and enabled.
Center/Subwoofer (orange) This port represents the Center/Subwoofer speakers and is only functional when the 6/ 8 Channel Audio Effects driver is installed and enabled.
Surround Speaker-out (gray) This port represents an auxiliary port and is only functional when 8 Channel Audio Effects driver is installed and enabled.

With these mainboards, you can turn your default 2-speaker audio system into a 4, 6, or 8 speaker audio system by installing the 8 Channel Audio Effects driver. See appendix I for more information.

Connectors

Floppy Disk Connector: FDC

These mainboards provide a standard floppy disk connector (FDC) that supports 360K, 720K, 1.2M, 1.44M and 2.88M floppy diskette drives. This connector supports the floppy drive ribbon cables provided in the packaging.

Hard Disk Connectors: IDE1/ RAID IDE1-2/ SATA1-4

These mainboards provide a standard IDE connector that supports PIO Mode 0~4, Bus Master, Ultra ATA 66/100. These boards also contain 2 RAID IDE connectors that supports Ultra ATA 133 transmission rates and RAID 0/1/0+1 and JBOD modes. 4 Serial ATA connectors are also available and can provide 150 MB/s transmission rates and RAID 0/ 1 modes for the PX925X-R/ PRO-R and PX925XE PRO-R.

IDE1 (Primary IDE Connector)

You can connect 2 IDE devices to the IDE1 connector using a single ribbon cable with 3 connectors (2 for the drives and one to connect to the board). If you are connecting 1 drive, you should configure it as the Master device. If you are connecting a second drive, you must configure it as the Slave device (see your hard drive manual for master/slave configuration specifics). If you have an IDE CD-ROM drive, you just can attach it to this connector.

RAID IDE1/ RAID IDE2 (RAID IDE connectors)

These connectors are capable of sophisticated disk management using RAID 0/1/0+1 and JBOD modes (**for more details about RAID IDE configuration, please refer to the ITE RAID Controller manual**) . As with the IDE1 connector, you can connect 2 drives to this connector. If you are attaching a second drive, the first drive must be configured as the Master with the second drive being the Slave (see hard drive manual for master/slave configuration specifics). This connector can be only used with hard disk devices.

RAID 0 (disk striping) 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 disk drives can perform multiple I/O operations in parallel, enhancing performance.

RAID 1 (disk mirroring) 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.

RAID 0+1 This mode combines both the performance benefits of RAID 0 with the fault tolerance of RAID 1

JBOD (Just a Bunch Of Disks) This mode provides you with a way to combine many hard drives to create a larger drive. The JBOD drive will operate with the same functionality as a standard hard drive.

SATA1-4 (Serial ATA connectors)

These SATA connectors support Serial ATA 150 and the PX925X-R/ PX925PRO-R/ PX925XE PRO-R supports RAID 0/ 1 modes. Each SATA connector can only support one serial ATA device. **Note**: With most storage devices, there is a power cable that you need attach to a power source (power supply). **(for more details, please refer to the appendix II.)**

Front Panel Indicator: SW/LED、PWRLED、SPEAKER

HD LED (Hard Drive LED Connector/ red)

This connector can be attached to an LED on the front panel of a computer case. The LED will flicker during any disk activity.

RST SW (Reset Connector/ blue)

This connector can be attached to a momentary SPST switch. This switch is normally left open. When closed it will cause the mainboard to reset and run the POST (Power On Self Test).

PWR-LED (2-pin Power LED/ green)

The mainboard provides a two-pin power LED connector. If there is a 2-pin power LED cable on the front panel of your computer case, you can attach it to the 2-pin power LED connector. The LED will illuminate showing that the computer is powered on.

PWR ON (Power Button/ orange)

This connector can be attached to a front panel power switch. The switch must pull the Power Button pin to ground for at least 50 ms to signal the power supply to switch on or off (the time required is due to internal debounce circuitry on the system board). At least two seconds must pass before the power supply will recognize another on/off signal.

PWR-LED (3-Pin Power LED/ green)

These mainboards provides a 3-pin power LED connector. If there is a 3-pin power LED cable on the front panel of a computer case, you can attach it to the 3-pin power LED connector. The LED will illuminate showing that the computer is powered on.

SPEAKER (Speaker/ violet)

A front panel speaker can be attached to this connector. This speaker is used for audible beeps during the boot up process (Power On Self-Test). A single "short beep" is normal, while "irregular beeps" signal problems.

Headers & Jumpers

Infrared Header: IrDA

You can attach an infrared device to this connector and use this connector for connectionless infrared data transfers.

IrDA

Game Port Header: GAME PORT

There is a game port header on these mainboards. To use this header, you must attach a game port bracket-cable so that you can interface to gaming devices (game port bracket is optional).

GAME PORT

Case Open Warning Header: CASE OPEN

This connector is used to warn the user that the computer case has been previously opened. To use this functionality, you have to enable the CASE OPEN warning function in the BIOS Setup Utility. When your computer case is opened, your system will show alert messages during boot up. To use this function, your computer case must be equipped with a "case open" cable.

CASE OPEN

Clear CMOS Jumper: JP1

The "Clear CMOS" jumper allows you to reset your CMOS configurations. This is particularly useful when you have forgotten your system password and cannot boot to the operating system.

The following steps explain how to reset your CMOS configurations when you have forgotten your system password.
1. Turn off your system and disconnect the AC power cable.
2. Set JP1 to OFF (2-3 Closed).
3. Wait several seconds.
4. Set JP1 to ON (1-2 closed).
5. Connect the AC power cable and turn on your system.
6. Reset your new password.

Front USB Headers (Yellow): USB3/ USB4

These mainboards provide 2 USB headers on the board allowing for 4 additional USB ports. To make use of these headers, you must attach a USB bracket/cable with USB ports (some models will come packaged with a USB 4-port bracket-cable). The optionally packaged bracket will have two connectors that you can connect to the headers (USB3, USB4). The other end (bracket containing the USB ports) is attached to the computer casing.

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.

Audio Connectors

CD-ROM Audio-In Header: CD-IN

This header is used to connect to the CD-ROM/DVD audio cable

Front Panel Audio Header (Orange): FRONT AUDIO

You can use the Front Panel Audio header (FRONT AUDIO) to connect to a separate audio bracket or to connect to case embedded audio equipment. The Front AUDIO header provides MIC-in and Line–out functionality and cannot be used simultaneously with the back panel mic and speakers. An SPDIF/Audio bracket is optionally packaged with some models.

S/PDIF Header (Red): SPDIF

S/PDIF (Sony/Philips Digital Interface) is an audio transfer file format which provides high quality audio using optical fiber and digital signals. This mainboard is equipped with an SPDIF header and must be used with a bracket-cable containing S/PDIF ports. An SPDIF/Audio bracket is optionally packaged with some models. The bracket has RCA connectors similar to that used with most consumer audio products and TOS-Link connectors and you can use these connectors to output/input audio to and from an S/PDIF device. The devices you connect to must be S/PDIF compliant for optimal effect.

SPDIF & FRONT AUDIO bracket
You can connect this bracket to the SPDIF and FRONT AUDIO Headers.

Slots

These slots are designed for expansion cards to complement and enhance the functionality of the mainboard.

PCI-Express slots: PCI-E X16 & PCI-E1/ PCI-E2

PCI-E x16 slots are for installing PCI-Express graphics cards. The PCI-E x1 slot is for expansion cards which fit the PCI-E x1 slot.

PCI Slots: PCI1/ PCI2/ PCI3

This mainboard is equipped with 3 standard PCI slots. PCI stands for Peripheral Component Interconnect and is a bus standard for expansion cards, which has, for the most part, supplanted the older ISA bus standard. This PCI slot is designated as 32 bit.

Power Supply Attachments

ATX Power Connector: ATX_PWR、ATX_12V

This mainboard requires two ATX power connections. The first is a 24-pin connector and the second is a 4-pin connector. Attach the 4-pin connector first and then attach the 24-pin connector. Make sure the connectors are secure before applying power. (ATX_PWR can be attached to a 20-pin connector but be extra careful with the connector orientation when connecting the cables)

ATX_12V

ATX_PWR

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.

Plug and Play Support

This PHOENIX-AWARD™ BIOS supports the Plug and Play Version 1.0A specification as well as ESCD (Extended System Configuration Data) write.

EPA Green PC Support

This PHOENIX-AWARD™ BIOS supports Version 1.03 of the EPA Green PC specification.

APM Support

This PHOENIX-AWARD™ BIOS supports Version 1.1 & 1.2 of the Advanced Power Management (APM) specification. These features include system sleep and suspend modes in addition to hard disk and monitor sleep modes. Power management features are implemented using the System Management Interrupt (SMI).

PCI/ PCI-Express Bus Support

This PHOENIX-AWARD™ BIOS also supports Version 2.3 of the Intel PCI (Peripheral Component Interconnect) local bus specification and the PCI-Express v1.0a specification.

DRAM Support

DDR (Double Data Rate) SDRAM (Synchronous DRAM) is supported.

Supported CPUs

This PHOENIX-AWARD™ BIOS supports the Intel® Pentium® 4 CPUs.

Key Function

In general, you can use the arrow keys to highlight items, 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 item
Down arrow	Move to next item
Left arrow	Move to the item on the left (menu bar)
Right arrow	Move to the item 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 item 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

When you enter the PHOENIX-AWARD™ BIOS Utility, the Main Menu will appear on the screen. The Main menu allows you to select from several configuration options. Use the left/right arrow keys to select a particular configuration screen from the top menu bar or use the down arrow key to access and configure the information below.

Main Menu Setup Configuration Options

Item	Options	Description
Date	mm dd yyyy	Set the system date. Note that the 'Day' automatically changes when you set the date.
Time	Hh: mm: ss	Set the current time of the system.
IDE Channel 0/1 Master	Options contained in sub menu.	Press <Enter> to enter the sub menu.
IDE Channel 0/1 Slave	Options contained in sub menu.	Press <Enter> to enter the sub menu.
SATA Channel 0/1 Master	Options contained in sub menu.	Press <Enter> to enter the sub menu.
SATA Channel 0/1 Slave	Options contained in sub menu.	Press <Enter> to enter the sub menu.
Driver A	None 360k, 5.25 in 1.2M, 5.25 in 720K, 3.5 in 1.44M, 3.5 in 2.88M, 3.5 in	Select the type of floppy disk drive installed in your system.
Video	EGA/VGA CGA 40 CGA 80 MONO	Select the default video device.
Halt On	All Errors No Errors All, but Keyboard All, but Diskette All, but Disk/ Key	Select the situation in which you want the BIOS to stop the POST process and notify you.
Security	Options contained in sub menu.	Press <Enter> to enter the sub menu.
Base Memory	N/A	Displays the amount of conventional memory detected during boot up.
Extended Memory	N/A	Displays the amount of extended memory detected during boot up.
Total Memory	N/A	Displays the total memory available in the system.

Advanced BIOS Features

Removable Device Priority

Select removable device priority. Just like floppy, LS120, ZIP-100, USB-FDD and USB-ZIP.

Hard Disk Boot Priority

Select hard disk boot priority.

CD-ROM Boot Priority

Select CD-ROM boot priority.

First /Second/Third Boot Device

Select the order in which devices will be searched in order to find a boot device.

Options: Removable (default for first boot device)、Hard Disk (default for third boot device)、CDROM (default for second boot device)、Disabled

Boot Other Device

The setting allows the system to try to boot from other devices if the system fails to boot from the 1st/ 2nd/ 3rd boot devices. Options: Enabled (default)、Disabled

Boot Up Floppy Seek

When Enabled, the BIOS tests (seeks) floppy drivers to determine whether they have 40 or 80 tracks. Only 360 KB floppy drivers have 40 tracks. Drives with 720 KB, 1.2 MB and 1.44 MB capacity have 80 tracks. Because very few modern PCs have 40-tracks floppy drivers, we recommend that you set this field to "Disabled". Options: Enbaled、Disabled (default)

Advanced BIOS Features

CPU Feature

Delay Prior

Select the delay time before thermal activation from high temperatures.

Options: 4 Min、8 Min、16 Min (default)、32 Min

Thermal Management

This item will monitor the CPU thermal to prevent the CPU damage with high temperature.

Limit CPUID MaxVal

When the limit CPUID MaxVal is set to 3, the item should be set to "Disabled" for Windows XP. Options: Enabled、Disabled (default)

Virus Warning

This item allows you to choose the Virus Warning feature for IDE Hard Disk boot sector protection. If this function is enabled and someone attempts to write data into thia area, BIOS will display a warning message on the screen and sound an audio alarm (beep).

Options: Disabled (default)、Enabled

CPU L1 & L2 Cache

Make CPU internal cache active or inactive. System performance may degrade if you disable this item. Options: Enabled (default)、Disable.

Hyper-Threading Technology

When you install a CPU include Hyper-Threading Technolong. And this item will allow you to enable or disabled the Hyper-Threading technology.

Options: Disabled、Enabled (default)

Quick Power On Self Test

Allows the system to skip certain tests while booting. This will speed up the boot process.

Options: Enabled (default)、Disabled.

Boot Up NumLock Status

Selects the power on state for NumLock.

Options:	On (default)	Numpad keys are number keys.
	Off	Numpad keys are arrow keys.

Typematic Rate Setting

When "Enabled", the "typematic rate" and "typematic delay" can be configured. Typematic Rate determines the keystroke repeat rate used by the keyboard controller..

Options: Disabled (default)、Enabled

Typematic Rate (Chars/Sec)

The rate at which a character repeats when you hold down a key.

Options: 6 (default)、8、10、12、15、20、24、30

Typematic Delay (Msec)
The delay before keystrokes begin to repeat. Options: 250 (default)、500、750、1000

APIC Mode
By enabling this option, "MPS version control for OS" can be configured.

Options: Disabled、Enabled (default)

MPS Version Control For OS
The 1.1 version is the older version that supports 8 more IRQs in the Windows NT environment. Choose the new 1.4 version for Windows 2000 and Windows XP.

Options: 1.4 (default)、1.1

OS Select For DRAM > 64MB
Select "OS2" only if you are running the OS/2 operating system with greater than 64MB of RAM. Options: Non-OS2 (default)、OS2

HDD S.M.A.R.T. Capability
Self Monitoring Analysis and Reporting Technology is a technology that enables a PC to attempt to predict the possible failure of storage drives.

Options: Disabled (default)、Enabled

Intel OSB Logo Show
This item allows you to show or hide the small LOGO EPA.

Options: Disabled、Enabled (default)

Advanced Chipset Features
DRAM Timing Selectable
This item determines DRAM clock/ timing using SPD or manual configuration.

Make sure your memory module has SPD (Serial Presence Data), if you want to select the "By SPD" option. Options: Manual、By SPD (default)

CAS Latency Time
This item determines CAS Latency. When synchronous DRAM is installed, the number of clock cycles of CAS latency depends on the DRAM timing. Do not reset this field from the default value specified by the system engineer. This field is adjustable only when "DRAM Timing Selectable" is set to "Manual". This field is locked when "DRAM Timing Selectable" is set to "By SPD" and is automatically determined by the system. Options: 5、4、3、Auto

DRAM RAS# to CAS# Delay
This item allows you to select a delay time between the CAS and RAS strobe signals. It only applies when DRAM is written to, read from, or refreshed. This field is adjustable only when "DRAM Timing Selectable" is set to "manual". This field is locked when "DRAM Timing Selectable" is set to "By SPD" and is automatically determined by the system.

Options: 5、4、3、2、Auto

DRAM RAS# Precharge

This item allows you to select the DRAM RAS# precharge time. The ROW address strobe must precharge again before DRAM is refreshed. An inadequate configuration may result in incomplete data. This field is adjustable only when "DRAM Timing Selectable" is set to "manual". This field is locked when "DRAM Timing Selectable" is set to "By SPD" and is automatically determined by the system. Options: 5、4、3、2、Auto

Precharge Delay

This item allows you to select DRAM Active to Precharge Delay. This field is locked when "DRAM Timing Selectable" is set to "By SPD" and is automatically determined by the system. Options: Auto、4～15

System BIOS Cacheable

When enabled, accesses to system BIOS ROM addressed at F0000H-FFFFFH are cached, provided that the cache controller is enabled. Options: Enabled (default), Disabled

Video BIOS Cacheable

Select "Enabled" to allow caching of the video BIOS which may improve performance. If any other program writes to this memory area, a system error may result. Options: Enabled, Disabled (default)

Memory Hole at 15M-16M

When enabled, you can reserve an area of system memory for ISA adapter ROM. When this area is reserved, it cannot be cached. Refer to the user documentation of the peripheral you are installing for more information. Options: Disabled (default)、Enabled

PCI Express Root Port Func

PCI Express Port1-2

This item allows you to enabled or disabled PCI Express x 1 port 1-2.

Options: Auto (default)、Disabled

PCI-E Compliancy Mode

This item allows you select the PCI-E Compliancy Mode. Options: V1.0a (default)、V1.0

DRAM Data Integrity (for PX925X series only)

This item will display the DRAM date integrity mode. Options: ECC(the PX925X series) or NON-ECC

PnP/PCI Configurations

Reset Configuration Data

Select "Enabled" to reset the Extended System Configuration Data (ESCD) if you have installed a new add-on card and the system reconfiguration has caused such a serious conflict that the OS cannot boot. Options: Disabled (default)、Enabled

Resources Controlled By
BIOS can automatically configure all the boot and Plug and Play compatible devices. If you choose Auto, you will not be able to manually assign IRQ DMA and memory base address fields, since BIOS automatically assigns them. Options: Auto (ESCD) (default)、Manual

IRQ Resources
When resources are controlled manually, you can assign each system interrupt a type, depending on the type of device using the interrupt. This is only configurable when "Resources Controlled By" is set to "Manual".

Options: IRQ-3/ 4/ 5/ 7/ 9/ 10/ 11/ 12/ 14/ 15 assigned to PCI device

PCI / VGA Palette Snoop
Some graphic controllers that are not VGA compatible take the output from a VGA controller and map it to their display as a way to provide boot information and VGA compatibility.
Options: Disabled (default)、Enabled

PCI Latency Timer (CLK)
This item allows you to set up the PCI Latency Time (0-255). If you select the "32" it will optimize PCI speeds. Options: 0-255、32 (default)

PCI SLOT1-3
This item allows you to select an IRQ address for PCI slot 1-3.

Options: Auto (default)、3、4、5、7、9、10、11、12、14、15

PCI Express relative items
Maximum payload Size
This item allows you to set the PCI Express Maximum payload size per time. Options: 4096 (default)、128、256、512、1024、2048

Frequency/Voltage Control
Afterburner Mode
This item allows you to enable or disable afterburner mode function. If you set to "enabled", the system will automatically over-clocking for the current state and keep the system normalize when the power load over the regular value range. Until the power restore the regular value range, the system will also restore the default clock range. The regular value range is depending on the peripheral devices you installed. Please set to "disabled" when the system is always in over-clocking state or it is always in nonover-clocking state. Options: Disabled (default)、Enabeld

CPU Host Frequency (MHz)
This item displays the CPU Host frequency. You can set it from XXX to 300. The default depends on your CPU frequency. The default for this field depends on the CPU installed.

CPU Clock Ratio

This field will only display if the CPU has not been set to a locked state by the CPU manufactory. If your CPU is locked, you will not be able to adjust the "CPU Clock Ratio". The default depends on your CPU.

System Memory Frequency

This item allows you to select Memory Frequency.

Options: Auto (default)、533 MHz、400 MHz

CPU Speed Detected

This item displays the default CPU speed.

CPU Speed Setting

This item displays the CPU speed that you setting for. If you don't change the "CPU Host Frequency" or the "CPU Clock Ratio" and the item will display the current CPU speed.

PCI Express Selectable

This item determines the PCI-E frequency. One of the options available to you is "Auto". Using the "Auto" option will instruct the system to automatically calculate the frequency. When you select the option "Fixed" then the following item "Fixed PCIE Freq (MHz)" will be available. Options: Auto (default)、Fixed

Fixed PCIE Freq (MHz)

This field is adjustable only When the "PCI Express Selectable" is set to "Fixed". This item allows you to select the PCIE frequency. Options: 100 ~ 150

CPU:PCIE:PCI Freq (MHz)

This item displays the current CPU、PCIE and PCI frequencies.

Spread Spectrum

The Spread Spectrum function can reduce the EMI (Electromagnetic Interference) generated. Options: Enabled (default)、Disabled

DDR Voltage (Volt)

This item allows you to adjust the RAM voltage.

Options: Default (default)、+0.4V、+ 0.3V、+ 0.2V、+ 0.1V

NB Voltage (Volt)

This item allows you to adjust the North Bridge voltage.

Options: Default (default)、+0.3V、+ 0.2V、+ 0.1V

Default CPU Voltage (Volt)

This item displays the CPU default Voltage.

CPU Voltage (Volt)

This item allows you to adjust your CPU core voltage. Options: 0.85~1.9 (The default depends on your CPU.)

Integrated Peripherals

Init Display First

With systems that have multiple video cards, this option determines whether the primary display uses a PCI slot or an AGP slot. Options: PCIEx、PCI Slot (default)

OnChip IDE Device

IDE HDD Block Mode

Block mode is otherwise known as block transfer, multiple commands, or multiple sector read/write. Select the "Enabled" option if your IDE hard drive supports block mode (most new drives do). The system will automatically determine the optimal number of blocks to read and write per sector. Options: Enabled (default)、Disabled

On-Chip channel0/channel1 PCI IDE

The mainboard chipset contains a PCI IDE interface with support for two IDE channels. These two IDE channels are for IDE1 and SATA1/2/3/4 connectors use. Select "Enabled" to activate the first and/or second IDE interface. Select "Disabled" to deactivate the interface if you are going to install a primary and/or secondary add-in IDE interface. Options: Enabled (default)、Disabled

IDE channel0/ channel1/Master/Slave PIO

The IDE PIO (Programmed Input / Output) fields let you set a PIO mode (0-4) for each of the IDE devices that the onboard IDE interface supports. Modes 0 to 4 will increase performance incrementally. In Auto mode, the system automatically determines the best mode for each device. Options: Auto (default)、Mode0、Mode1、Mode2、Mode3、Mode4.

IDE channel0 /channel1 /Master / Slave UDMA

Ultra DMA 100 functionality can be implemented if it is supported by the IDE hard drives in your system. As well, your operating environment requires a DMA driver (Windows 95 OSR2 or a third party IDE bus master driver). If your hard drive and your system software

both support Ultra DMA 100, select "Auto" to enable BIOS support. Options: Auto (default)、Disabled

OnChip Serial ATA Setting

SATA Mode

This field is adjustable only When the "On-Chip Serial ATA" is set to "Enhanced MODE".This allows you to select the SATA mode. Select [AHCI] to allow the SATA having Advanced Host Controller Interface (AHCI) feature, which supports improved serial ATA disk performance with native command queuing.

Options: IDE (default)、SATA、ACHI

On-Chip Serial ATA

This field allows you to select the on-chip Serial ATA operating mode which will determine how you will use your Serial ATA drives with the other standard IDE drives. This system can physically attach 2 IDE drives and 4 SATA drives but will have certain limitations as described below.

Options：

Disabled	Disable on-chip serial ATA. No Serial ATA devices installed.
Auto(default)	BIOS will auto-detect the presence of any SATA devices. If you install 2 (or 1) IDE drivers + 4 (or 3) SATA drivers → Enhanced Mode 2 (or 1) IDE drivers + 2 (or 1) SATA drivers (Must connect with SATA1 +3 or SATA2+4) → Combined Mode 4 (or 3 or 2 or 1)SATA drivers → SATA only 2 (or 1) IDE drivers → Disabled
Combined Mode	Windows® 98/ME can recognize IDE devices but cannot directly recognize an SATA device and therefore you must use this mode to allow the SATA device to simulate an IDE device by assuming the role of one IDE channel in the system. This means that you will have one available IDE channel for 2 SATA drives to use (each IDE channel can support 2 IDE drives). If you were to install all both IDE drives and 4 SATA drives, you will only see 2 of the SATA drives along with the 2 IDE drives in this mode.
Enhanced Mode	In this mode, you can use all 6 hard disk drives (including 2 IDE drives and 4 SATA drives). Note: You cannot use "Enhanced" mode with Windows® 98/ME. It only support to install Windows® 2000/ XP if you want to boot from SATA device. (It's restriction from Microsoft.)
SATA Only	Select this option when you install SATA drives only.

PATA IDE Mode

This item allows you to select an IDE channel for PATA IDE devices. When you install the SATA device(s) to the SATA1 or 3 or 1+3, this item should be set to channel 1. When you install the device(s) to the SATA2 or 4 or 2+4, this item should be set to channel 0.

Options: Channel 0 (default)、channel 1

SATA Port

This item will display which IDE channel will be used to the SATA device.

Options: SATA2, 4 is channel 1、SATA1,3 is channel 0

Onboard Device

Onboard PCI Express LAN

This option allows you to enable or disabled onboard PCI-Express LAN (BCM5789).

Options: Enabled (default)、Disabled

USB Controller

This option should be enabled if your system has a USB port installed on the system board. You will need to disable this feature if you add a higher performance controller.

Options: Enabled (default)、Disabled

USB 2.0 Controller

This item is for disable or enable EHCI controller only. This BIOS itself may/ may not have high speed USB support will be automatically turn on when high speed device were attached. Options: Enabled (default)、Disabled

USB Keyboard Support

Enables support for USB attached keyboards. Options: Disabled (default)、Enabled

Audio Device

This item allows you to control the onboard audio. Options: Auto (default)、Disabled

10/100 Mb LAN Device

This item allows you to enable or disable the 10/ 100 Mb LAN Device. Options: Enabled (default)、Disabled

IDE RAID Device

This item allows you to enable or disable the IDE RAID Device. Options: Enabled (default)、Disabled

Onboard I/O Chip Setup

Power On Function

This option allows you to select a way to power on your computer. Options: Password、Hot KEY、Mouse Left、Mouse Right、Any KEY、BUTTON ONLY (default), and Keyboard 98

KB Power On Password

This it the password that your system will use as part of the power-on sequence. This field is only configurable when "Power On Function" is set to "Password".

Hot Key Power ON

This option allows you to use the Ctrl key along with a hot key (function key) to power on your system. This field is only configurable when "Power On Function" is set to "Hot Key".

Options: Ctrl-F1、Ctrl-F2…… Ctrl-F12

Onboard FDC Controller

Select "Enabled" if your system has a floppy disk controller (FDC) installed on the system board and you wish to use it. If you install an add-in FDC or the system has no floppy drive, select "Disabled". Options: Enabled (default)、Disabled

Onboard Serial Port 1-2

Select an address and corresponding interrupt for the first/ second serial port.

Options: Disabled、3F8/IRQ4 (default for port1)、2F8/IRQ3 (default for port2)、3E8/IRQ4、2E8/IRQ3、Auto

UART Mode Select

This item allows you to select the Infra Red (IR) standard to be used.

Options: Normal (default)、IrDA

RxD, TxD Active

This item determines the RxD and TxD frequencies. This field only configurable if "UART Mode Select" is set to "ASKIR" or "IrDA". Options: Hi / Lo (default)、Hi / Hi、Lo / Hi、Lo / Lo

IR Transmission Delay

This item allows you to enable/disable IR transmission delay. This field only configurable if "UART Mode Select" is set to "ASKIR" or "IrDA". Options: Enabled (default)、Disabled

UR2 Duplex Mode

Select the transmission mode used by the IR interface. Full-duplex mode permits simultaneous bi-directional transmission. Half-duplex mode permits transmission in only one direction at a time. This field only configurable if "UART Mode Select" is set to "ASKIR" or "IrDA". Options: Half (default)、Full

Use IR Pins

Consult your IR peripheral documentation to select the correct setting of the TxD and RxD signals. This field is only configurable if "UART Mode Select" is set to "ASKIR" or "IrDA".

Options: RxD2、DxD2 (default)

Onboard Parallel Port

Select an address and corresponding interrupt for the onboard parallel port.

Options: 378/IRQ7 (default)、278/IRQ5、3BC/IRQ7、Disabled

Parallel Port Mode

This option allows you to select a parallel port mode for the onboard parallel port.

Options:

ECP (default)	Extended Capabilities Port.
EPP	Enhanced Parallel Port.
SPP	Standard Printer Port.
ECP＋EPP	ECP & EPP mode.
Normal	

EPP Mode Select
Select EPP port type 1.7 or 1.9. This field is only configurable if "Parallel Port Mode" is set to "EPP" or "ECP+EPP". Options: EPP 1.9(default)、EPP 1.7

ECP Mode Use DMA
Select a DMA Channel for the parallel port when using the ECP mode. This field is only configurable if "Parallel Port Mode" is set to "ECP". Options: 3 (default)、1

PWRON After PWR-Fail
This field will determine whether your system will boot after restoring power after a power failure. If you select "On", the system will boot whether or not the system was on before power failure. If you select "Former-Sts", the system will be restored to the status before the power failure. Options: Off (default)、On、Former-Sts

Game Port Address
Game port I/O address. Options: 201 (default)、209、Disabled

Midi Port Address
Midi port Base I/O address. Options: Enbaled (default)、Disabled

Midi Port IRQ
This item determines the IRQ that the Midi Port will use. Options: 10 (default)、5

Power Management

The Power Management Setup Menu allows you to configure your system to utilize energy conservation features as well as power-up/ power-down options.

ACPI Suspend Type

The item allows you to select the suspend type using the ACPI operating system.

Options:

S1 (POS) (default)	Power on Suspend
S3 (STR)	Suspend to RAM
S1 & S3	POS and STR

Run VGABIOS if S3 Resume

Select whether you want to run VGABIOS when the system wakes up from the S3 suspend function. This field is not configurable if "ACPI Suspend Type" is set to "S1(POS)".

Options: Auto (default)、Yes、No

Power Management

There are three options of Power Management:

1. Min. Saving

Minimum power management

Suspend Mode = 1hour

HDD Power Down = 15 minutes

2. Max. Saving

Maximum power management (only available for sl CPUs).

Suspend Mode = 1 minute

HDD Power Down = 1 minute

3. User Defined (default)

Allows you to set each mode individually.

When this option is enabled, each of the ranges are from 1 minute to 1 hour except for HDD Power Down, which ranges from 1 minute to 15 minute and includes a "disable" option.

Note: If you select Min. or Max. Power Saving modes, the "HDD Power Down" value and the "Suspend Mode" value are both fixed.

Video Off Method

This option determines the manner in which the monitor goes blank.

Options:

V/H SYNC+Blank	This selection will cause the system to turn off the vertical and horizontal synchronization ports and write blanks to the video buffer.
Blank Screen(default)	This option only writes blanks to the video buffer.
DPMS Support	Initial display power management signaling.

Video Off In Suspend

This determines whether power to the monitor is switched off when the computer is in suspend mode. Options: Yes、No (default)

Suspend Type

This item allows you to select the suspend type under the ACPI operating system.

Options: Stop Grant (default)、PwrOn Suspend

Modem Use IRQ

This determines the modem's IRQ. Options: 3 (default)、4、5、7、9、10、11、NA.

Suspend Mode

This item allows you to select the suspend time under the ACPI operating system.

Options: Disabled(default)、1Min、2Min、4Min、8Min、12Min、20Min、30Min、40Min、1Hour

HDD Power Down

When enabled, the hard disk drive will power down after a certain configurable period of system inactivity. All other devices remain active.

Options: Disabled (default)、1 Min、2 Min、3 Min、4 Min、5 Min、6 Min、7 Min、8 Min、9 Min、10 Min、11 Min、12 Min、13 Min、14 Min、15Min

Soft-Off by PWRBTN

In situations where the system enters a "hung" state, you can configure the BIOS so that you are required to pre the power button for more than 4 seconds before the system enters the Soft-Off state.

Options: Delay 4 Sec, Instant-Off (default).

Wake Up Control

If you highlight the "Wake Up Control" label and then press the enter key, it will display a submenu with the following options:

PCI PME Wake Up

This option will also cause the system to wake up with any onboard PCI interface LAN activity. Options: Disabled (default)、Enabled

Ring Wake Up

This option allows you to awaken the system upon receiving an incoming call to modem device. Options: Disabled (default)、Enabled.

USB KB Wake-up From S3

This item allows you to awaken the system from suspend mode using a USB keyboard.

Options: Enabled、Disabled (default)

* This option is configurable only when the ACPI Suspend Type is set to S3.

RTC Wake Up

When "Enabled", you can set the date and time at which the RTC (real-time clock) alarm awakens the system from Suspend mode. Options: Enabled、Disabled (default).

Date (of Month) Alarm

You can choose which date of the month the system will boot up. This field is only configurable when "RTC Wake Up" is set to "Enabled".

Time (hh: mm: ss) Alarm

You can choose the hour, minute and second the system will boot up. This field is only configurable when "RTC Wake Up" is set to "Enabled".

Reload Global Timer Events

When a system goes into suspend mode, certain devices must be inactive for a period of time. Conversely, if any of those devices have any activity, the system will awaken. You can select the devices that will participate in suspend/power-on activity by configuring these fields. Devices include: Primary IDE 0/ Primary IDE 1/ Secondary IDE 0/ Secondary IDE 1/ FDD,COM,LPT Port/ PCI PIRQ [A-D]#. Options: Disabled (default), Enabled

PCI Express PM Function

PCI Express PME

This option will also cause the system to wake up with any onboard PCI-Express interface LAN activity. Options: Disabled (default)、Enabled

Hardware Monitor

Case Open Warning

If this function is set to "Enabled" and the case had been previously opened, the system will automatically display alert messages on the screen when you power on your computer. If this function is set to "Disabled", the system will not show alert messages when you power on your computer even if the case had been previously opened.

Options: Disabled (default)、Enabled

Smart CPUFAN Temperature

This function allows you to select the CPU temperature. If the CPU temperature is higher than the value you've selected, the CPUFAN will accelerate till the temperature cools down to the defaulted value you set.

Options: Disabled (default)、30°C / 86°F、35°C / 95°F、40°C / 104°F、45°C / 113°F、50°C / 122°F、55°C / 131°F、60°C / 140°F、65°C / 149°F、70°C / 158°F、75°C / 167°F、80°C / 176°F、85°C / 185°F、auto.

Load Defaults

Load System Default Settings

Load System Default Settings.

Load System Turbo Settings

Load System Turbo Settings.

Load CMOS From BIOS

Load defaults from flash ROM for systems without batteries.

Save CMOS To BIOS

Save defaults to flash ROM for systems without batteries.

Exit Menu

Save & Exit Setup

Save all configuration changes to CMOS (memory) and exit setup. A confirmation message will be displayed before proceeding.

Exit Without Saving

Abandon all changes made during the current session and exit setup. A confirmation message will be displayed before proceeding.

Chapter 3: Software Setup

Software List

Category	Platform
Intel Chipset INF	Windows 98 /ME /2000 /XP
Realtek Audio Driver	Windows 2000 /XP
Intel IAA RAID (for PX925X-R/PRO-R and PX925XE PRO-R)	Windows 2000 /XP
ITE RAID	Windows 2000 /XP
VIA Network Driver (Only for PX925X PRO/PRO-R and PX925XE PRO/PRO-R)	Windows 98 /ME /2000 /XP
Broadcom Network Driver	Windows 98 /ME /2000 /XP
Trend PC-Cillin	Windows 98 /ME /2000 /XP
Microsoft DirectX	Windows 98 /ME /2000 /XP
Adobe Acrobat Reader	Windows 98 /ME /2000 /XP
VCT	Windows 98 /ME /2000 /XP

Note: Because the Realtek HD Audio does not support Windows® 98/ ME, therefore we strongly recommend you installing Windows® 2000/ XP.

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 buttons displayed in the main screen as shown below.

- Intel Chipset INF – provides all the drivers of the functions that built in the Northbridge/ Southbridge
- Realtek Audio Driver – provides the driver of Realtek HD Audio Codec

Note : You can only install this driver if you are using Windows® XP with Service Pack1 (or more advanced). You will see a screen as shown right after finishing the driver installation and rebooting the system, click "Continue Anyway" to complete the installation. You can only install this driver if you are using Windows® 2000 with Service Pack4 (or more advanced).

- Intel IAA RAID – For PX925X-R/ PX925X PRO-R/ PX925XE PRO-R, provides the driver of SATA RAID
- ITE RAID – provides the driver of ITE RAID Controller
- VIA Network Driver – for PX925X PRO/ PRO-R and PX925XE PRO/ PRO-R, provides the driver of VIA Network
- Broadcom Network Driver – provides driver of Broadcom (Gb) Network

2. Click the "Tool Menu" and you can choose the software to install.

- Trend PC-Cillin 2004 – provides the software of Trend PC-Cillin 2004 (Anti-virus program)
- Microsoft DirectX – provides software of Microsoft DirectX
- Acrobat Reader – install Adobe Acrobat Reader program that you can browse pdf files
- Virtual Cable Tester – provides Virtual Cable Tester for Gb LAN connection testing

3. If you click the "Browse CD" button from the screen in step 1, you can browse all the files in the Driver CD.

4. Click "Exit" button to exit the program.

How to install Windows® 98/ ME to the SATA device?

1. Make sure that the "On-Chip Serial ATA" option is set to " Combined Mode" in the BIOS Setup Utility. (For more details, please see page 32 "OnChip Serial ATA Setting".)

   BIOS Setup Utility -> Integrated Peripherals → OnChip IDE Device → On-Chip Serial ATA → "Combined Mode"
2. Save all BIOS configurations and exit the BIOS setup utility.
3. Place the Windows® 98/ME CD into the CD-ROM drive to begin the OS installation process. During the installation you will see that the SATA device has been assigned to the C: drive. Continue and complete the installation of the Windows® OS.
4. Because the SATA device only support windows® 2000/ XP, therefore, If you want to install windows® 98/ ME, you must had the SATA devices simulate PATA device (by using IDE channel). So that you should set the "On-Chip Serial ATA" options to "Combined Mode" all time in the BIOS Setup Utility.

Installing ITE RAID Drivers during Windows® 2000/XP Installation with the IDE RAID Device

Preparation: Before beginning with the steps in this section copy the "ITE RAID Driver" and associated files from the bundle CD Driver to an empty floppy disk [Location of files on CD-ROM => \ Driver \ ITE RAID \ IDE \ WIN2K (or WINXP)\ includes 4 files (iteraid.cat/ iteraid.sys/ iteraid.inf/ txtsetup.oem]. This will have to be done on another system if you are installing the system from scratch.

1. During Windows installation, the "Windows Setup" screen will prompt you with "Press F6 if you need to install third party SCSI or RAID driver". Press <F6>".
2. Press 's' when setup asks if you want to specify an additional device. Insert the floppy disk which includes the "ITE RAID Driver" into the floppy drive. Press 'Enter' and select the appropriate OS device driver.
3. Press 'Enter' again to continue the setup process.
4. Follow the setup instructions and select your choice for partition and file system.
5. After setup examines your disks, it will copy files to the Windows® 2000/ XP installation folders and restart the system. After the system is rebooted the setup program will continue with the installation all the way to completion.
6. Wait until Windows® 2000/ XP finishes installing devices, regional settings, networking settings, components, and the final set of tasks. Reboot the system if you are asked to do so.

See "ITE RAID CONTROLLER" user manual for more information.

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: 2/ 4/ 6 /8 Channel Setup

1. After into the system, click the audio icon from the Windows screen.
2. Click Speaker Configuration button, you can see the screen like the picture below.
3. You can choice 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 RAID Setup

Introduction to RAID

RAID (Redundant Array of Independent Disks) technology is a sophisticated disk management system that manages multiple disk drives. It enhances I/O performance and provides redundancy in order to prevent the loss of data in case of individual disk failure. The SATA RAID facility on the PX925X-R/ PX925 PRO-R/ PX925XE PRO-R mainboard provides RAID 0 and RAID 1 functionality.

RAID 0 (disk striping) Striping is a performance-oriented, non-redundant disk storage technology that uses multiple disks to form a larger virtual disk. Data is then striped or mapped across all the physical disks. In this way the disk drives can perform multiple I/O operations in parallel, enhancing performance.

RAID 1 (disk mirroring) 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.

On this mainboard, RAID 0 and RAID 1 cannot be used together which means they cannot be used in the same RAID volume. However, you can build a RAID 0 volume and a separate RAID 1 volume on the same set of disks. The minimum number of hard drives for a RAID volume is 2.

SATA RAID Configuration

(Using the RAID Option ROM Utility)

Creating a New RAID volume

Before creating a RAID Volume, make sure you have installed at least two SATA drives into the system. It is recommended that you use the same capacity drives for all the SATA devices you will configure with RAID.

1. First, you have to configure the "Enhanced Mode" option and the "RAID" option in the BIOS Setup Utility. To accomplish this, boot your system and press the "Del" key when prompted to enter the BIOS Setup Utility. On the "Peripherals" screen select the "OnChip IDE Device" item which will take you to the "OnChip IDE Device" screen. On this screen, choose the "On-Chip Serial ATA" item and select the "Enhanced Mode" option. From the same "OnChip IDE Device" screen choose the "SATA Mode" item and select the "RAID" option. Exit the Setup utility. The BIOS menu paths below are for your reference:

   Peripherals>>OnChip IDE Device>>On-Chip Serial ATA>> set to "Enhanced Mode"
   Peripherals>>OnChip IDE Device>>SATA Mode>>set to "RAID"

2. Start up the RAID Option ROM RAID Utility by booting up the system. During the POST (Power-On Self Test), you will be given an opportunity to enter the RAID Option ROM RAID Utility. The screen will prompt you as follows: *Press <CTRL-I> to enter Configuration utility…*
   Press the <CTRL-I> key to enter the RAID Option ROM Utility. The first screen will display as shown. On this screen, choose the "Create RAID Volume" option and press <Enter>.

3. Upon initial configuration of your disks, you will see the "CREATE VOLUME MENU" screen as shown below. First, type in a name for your RAID volume (note that the name cannot exceed in 16 characters). Press <Enter>.

4. On the same screen, as shown below, select either "RAID 0 (Stripe)" or "RAID 1 (Mirror)" according to your configuration requirements. Then press <Enter>.

5. The minimum requirement for a RAID volume is 2 SATA drives. When you install more than two SATA devices, the "Disks" field will be available for you to select the disks to be used by the RAID volume. Otherwise, press <Enter>.

6. If you had configured the RAID 0 mode (step 3), the "Strip Size" field will be accessible for you to select the striping size. This field will affect data access performance. We recommend that you to use the system default value of "128 KB". Press <Enter>.

7. On the same screen, as shown below, you can enter the size (in GB) of your RAID volume. The default is the maximum capacity you can configure according to the disks you have selected and the type of RAID volume. Typically, you would choose the default for your RAID volume. However, if you want to build more than one RAID volume on the same disks, you must use this field to allocate the sizes manually for each RAID volume. Press <Enter>.

8. Next, press <Enter> on the "Create Volume" field. A confirmation message will display as shown below. Press <Y> to complete the RAID volume configuration.

9. After the volume has been successfully created, the Array List screen will display as shown below. Note that "Port" number on the screen represents one of the devices attached to one of the SATA connectors. Port 0 represent SATA1, Port 1 represents SATA2, Port 2 represents SATA3, and Port 3 represents SATA4.

Attention

The "Driver model"、"Size" and "serial No.",located on these screen reflect the disk drives installed on the SATA connectors. The example disk drive information may vary with the actual information that displays on your screen.

Deleting a RAID Volume

1. You can delete an existing volume by choosing the "Delete RAID Volume" item as shown below. **Note** that all data associated with the volume will be deleted and unrecoverable. Also, if you delete a bootable RAID volume, the system will become unbootable after you perform the delete.

2. On the next screen (below) press <Delete>.

3. A warning/ confirmation message will display as shown below. Press <Y> to confirm.

4. After you have deleted the volume, the screen will show as shown below.

Note : The "Reset Disk to Non-RAID" option may also be used to delete a RAID volume. This function resets the drives when there is a mismatch in the RAID volume information and item 2 (Delete RAID Volume) is unable to delete the volume.

Resetting a RAID Disk to Non-RAID Status

This option will **REMOVE ALL DATA** on a RAID drive including any internal RAID structures. You would use this option in case of an incompatible RAID volume or a failed RAID disk. It is **IMPORTANT** that you backup any accessibly important data on the system before performing this task.

1. After you select the "Reset disks to Non-RAID" option, a list of drives will appear for you to select from. Use the arrow keys to go to the drive you want to select for Reset. Select the disk that you want to reset using the space bar.
2. After you have selected the drive, press <Enter>.
3. A confirmation message will appear. Press <Y> to begin the reset process.

Installing SATA RAID Drivers during Windows 2000/ XP Installation

This section describes how to install the required SATA RAID Drivers during a Windows® 2000 or XP installation.

Preparation: Before beginning with the steps in this section copy the "SATA RAID Driver" and associated files from the bundle CD Driver to an empty floppy disk [Location of files on CD-ROM => \ Driver \ Intel \ IAA_Raid \ floppy \ ..] There are several files to be copied. This will have to be done on another system if you are installing the system from scratch.

1. During Windows installation, the "Windows Setup" screen will prompt you with "Press F6 if you need to install third party SCSI or RAID driver". Press <F6>.
2. Press 's' when setup asks if you want to specify an additional device. Insert the floppy disk which includes the "Intel IAA RAID Driver" into the floppy drive. Press 'Enter' and select the "Intel® 82801FR SATA RAID Controller" item, then press<Enter>.
3. Press 'Enter' again to continue the setup process.
4. Follow the setup instructions and select your choice for partition and file system.
5. After setup examines your disks, it will copy files to the Windows® 2000/ XP installation folders and restart the system. After the system is rebooted the setup program will continue with the installation all the way to completion.
6. Wait until Windows® 2000/ XP finishes installing devices, regional settings, networking settings, components, and the final set of tasks. Reboot the system if you are asked to do so.

Note : Even if you are not installing RAID functionality initially, you can set up a "SATA RAID Ready" drive by installing the RAID drivers during the Windows installation. A "SATA RAID Ready" drive allows you to migrate to a full RAID system at a later time.

Migrating from an "RAID Ready" configuration to a full RAID configuration

(Using the Intel Storage Utility.)

If you only have one SATA disk to install initially, you cannot set up a RAID volume because the minimum of disks for a RAID volume is two. However you can initially install your single drive as a "RAID Ready" drive and at a later time (after obtaining a second SATA drive) you can upgrade the system to a RAID 0 or RAID 1 system. You can do this without re-installing the operating system again. You will need to use the Inter Storage Utility to accomplish this.

Build a "SATA RAID Ready" System

The following steps outline how to build an "SATA RAID Ready" system with Windows® XP or Windows® 2000 installed on a single SATA hard drive.

1. Attach your SATA hard drive.
2. Next, you have to configure the "Enhanced Mode" option and the "RAID" option in the BIOS Setup Utility. To accomplish this, boot your system and press the "Del" key when prompted to enter the BIOS Setup Utility. On the "Peripherals" screen select the "OnChip IDE Device" item which will take you to the "OnChip IDE Device" screen. On this screen, choose the "On-Chip Serial ATA" item and select the "Enhanced Mode" option. From the same "OnChip IDE Device" screen choose the "SATA Mode" item and select the "RAID" option. Exit the Setup utility. The BIOS menu paths below are for your reference:

   Peripherals>>OnChip IDE Device>>On-Chip Serial ATA>> set to "Enhanced Mode"
   Peripherals>>OnChip IDE Device>>SATA Mode>>set to "RAID"

3. Begin Windows installation, please refer to the section "Installing SATA RAID Drivers during Windows® 2000/XP Installation (also for SATA RAID Ready)" for more details.
4. Finish the Windows installation and install all necessary drivers.
5. Install the Intel Application Accelerator 4.0 software via the CD-ROM included with your mainboard. This will install the Intel Storage Utility that can be used to manage the RAID configuration. The Intel Application Accelerator has a feature that can be used to migrate a "RAID Ready" configuration to a RAID 0 or RAID 1 configuration.

This concludes the instructions for building a "RAID Ready Drive".

Upgrading a "RAID Ready Drive" to a RAID Volume

This section describes how to upgrade the "RAID Ready drive" to a RAID volume. Before proceeding with the steps below, it is important that you back up all important information on your "RAID Ready Drive".

1. Attach a second SATA hard drive to one of the unused SATA connectors.

2. Next, run the Intel® Storage Utility from the following link in the Start Menu : Start => Programs => Inter® Application Accelerator => Intel Application Accelerator. The screen will display as below. From the "Actions" menu on the toolbar, select "Create RAID Volume from Existing Hard Drive".

3. The Create RAID Volume from Existing Hard Drive Wizard will display as shown below. Click "Next".

4. On the next screen, you can type in a volume name (16 characters or less) in the Volume Name box. You can select the RAID type (RAID 0 or RAID 1) in the RAID Level box. You can select a strip size on the Strip Size box for RAID 0 configurations. Click <Next>.

5. Next, you have to select the source drive (original RAID Ready Drive) from the list provided. Highlight the source drive and click "→" to move it to the "Selected" box. The screen will show as right, then click <Next>.
   Important: To identify your source drive, you must first identify which physical connector your source drive is connected to (SATA1, SATA2 etc.). Once you identify the connector, you must determine what port number corresponds to that connector. Port 0 is SATA1. Port 1 is SATA2. Port 2 is SATA3. Port3 is SATA4. Once you determine the Port number, you can make a selection from the "Available" list box.

Attention
The pictures above are for reference only. The example disk drive information in these pictures will differ with the information that displays on your screen.

6. Next, you have to choose the available drive to be the second drive of your RAID volume. Highlight one of the available driver and click the "→" to move it to the Selected box. The screen will display as shown below. Click <Next>.

7. On the next screen, as shown below, you can enter the size of the volume. The default is the maximum (default) capacity you can use according to the disk space on your drives and the type of RAID volume you selected. Click <Next>

8. On the next screen as shown below, click <Finish> to begin the actual migration process.

9. A popup screen will appear displaying the RAID migrate states which will report on the progress of the migration.

Appendix III: Intel® Desktop Processors Feature Set Reference Table

Intel Pentium® 4 Processors reference table:

Processor Number	Processor Generation/ Socket	Clock Speed	Front Side Bus	Cache	Intel Technologies
7XX Sequence					
720	Prescott/LGA775	3.73 GHz	1066 MHz	2MB L2	HT
5XX Sequence					
580	Prescott/LGA775	4.00 GHz	800 MHz	1MB L2	HT
570	Prescott/LGA775	3.80 GHz	800 MHz	1MB L2	HT
560	Prescott/LGA775	3.60 GHz	800 MHz	1MB L2	HT
550	Prescott/LGA775	3.40 GHz	800 MHz	1MB L2	HT
540	Prescott/LGA775	3.20 GHz	800 MHz	1MB L2	HT
530	Prescott/LGA775	3.00 GHz	800 MHz	1MB L2	HT
520	Prescott/LGA775	2.80 GHz	800 MHz	1MB L2	HT

Intel Celeron® Processors reference table:

Processor Number	Processor Generation/ Socket	Clock Speed	Front Side Bus	Cache	Intel Technologies
3XX Sequence					
350	Prescott/LGA775 & mPGA 478	3.20 GHz	533 MHz	256K L2	
345	Prescott/LGA775 & mPGA 478	3.06 GHz	533 MHz	256K L2	
340	Prescott/LGA775 & mPGA 478	2.93 GHz	533 MHz	256K L2	
335	Prescott/LGA775 & mPGA 478	2.80 GHz	533 MHz	256K L2	
330	Prescott/mPGA478	2.66 GHz	533 MHz	256K L2	
325	Prescott/mPGA478	2.53 GHz	533 MHz	256K L2	