

FCC & CE COMPLIANCE

Federal Communication Commission Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection. This equipment generates, uses, and can emit radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Warning: Shielded cables must be used in order to comply with emission limits. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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The specifications in this guide are subject to change without notice.

This User Guide Belongs To:

Serial Number:

Date of Purchase:

USING THIS GUIDE

This Guide is designed to help you build a reliable computer based on the Intel-G31 Motherboard platform.

Chapter 1 – COMMODORE PHOENIX Introduction

This chapter provides a checklist of the items that ship with the unit and an introduction to the external connectors and indicators.

Chapter 2 – System Overview

This chapter includes an introduction to system specifications, the Motherboard layout, and chipset information as well as use of the external connectors.

Chapter 3 – Hardware Installation and Component Replacement

This chapter explains how to prepare a Bare Bone GX31 for use and how to make the various connections to other computer components and peripheral items. It also instructs the end-user how to replace or upgrade components.

Chapter 4 – CMOS Setup Utility

This chapter explains how to use the system setup utility that is stored in the COMMODORE PHOENIX's firmware.

Chapter 5 – Drivers and Utilities

This chapter briefly describes the drivers and utility programs that are packaged with the COMMODORE PHOENIX.

Chapter 6 – Service and Support

Provides contact information for Technical Support and product services.

Chapter 7 – Appendix A

Pin definitions for Motherboard connectors and jumpers.

COMMODORE PHOENIX User Guide

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1. COMMODORE PHOENIX Introduction

The COMMODORE PHOENIX brings you the most cost efficient, space-saving computer and network environment available today and gives you the power and performance of a full-size desktop computer in the space of a standard-size PC keyboard.

This state-of-the-art Zero-Footprint-PC is fully compatible with the Intel® Core™ 2 Duo and Core 2 Quad CPUs. It allows the installation of up to 4GB DDR2 667/800MHz memory and one 3.5" Ultra SATA hard drive, one Optical Drive (CD-ROM, CD-RW/DVD-ROM, DVD-RW), one mini PCI card as well as one mini PCIe card.

1.1 Unpacking

The COMMODORE PHOENIX comes securely packed in a sturdy cardboard shipping carton. As soon as you receive the computer, open the carton and carefully remove and inspect for:

This User Guide on the Drivers CD Quick Reference Guide
Drivers on CD-ROM disc
External AC 110/220V Power Adapter
Power Cord

NOTE: After removing the COMMODORE PHOENIX from its plastic bag, inspect the unit and the accessories. Contact your vendor immediately in the case of missing or damaged parts.

1.2 The Indicator Panel and Control Buttons



Figure 1 Indicator Panel

There are six LEDs on the COMMODORE PHOENIX indicator panel as follows from left to right:

This LED will light to indicate hard disk drive activity.

Num lock LED This LED indicates the on/off status of the Num lock key.

Caps lock LED This LED indicates the on/off status of the Caps lock key.

Scroll lock LED This LED indicates the on/off status of the Scroll lock key.

LAN link LED This LED will light to indicate good Ethernet cable connection.

LAN active LED This LED will light to indicate Ethernet data flow.

HDD LED

There are five Control Buttons on the COMMODORE PHOENIX indicator panel as follows from left to right:

LOG OFF Hotkey that launches the MS Windows logon screen prompt

FAV Hotkey that launches the Default Browser Favorites/Bookmarks

www Hotkey that launches the Default Internet Browser Application

MAIL Hotkey that launches the Default EMAIL Application

Power Button This Button powers the unit On/Off, & launches/recovers the unit into/out of Suspend mode

1.3 The Optical Drive Side

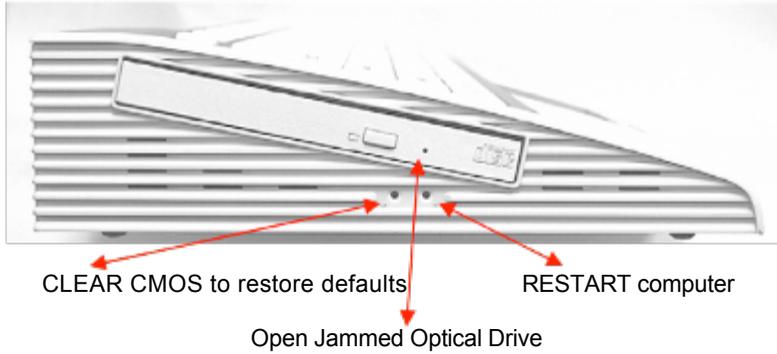


Figure 2 The Optical Drive Side

NOTE: The unit does not ship with an Optical Drive unless ordered as such.

1.4 The Back Panel



Figure 3 The Back Panel

1.5 Software Installation Options

If your system was ordered without a CD-ROM, you may load software with an external peripheral via the LAN, USB or Parallel ports.

2. System Overview

2.1 Introduction

The COMMODORE PHOENIX incorporates the Intel® Core™ 2 Quad LGA 775-pin CPU socket, providing a high performance/low cost space-saving solution. The COMMODORE PHOENIX uses the Intel® G31 chipset, which supports the Intel® Core™ 2 Duo and Core™ 2 Quad Processors. The COMMODORE PHOENIX system therefore offers high bandwidth interfaces such as dual-channel DDR2 main memory, 800/1066MHz FSB, integrated graphics controller with Intel® Graphics Media Accelerator 3100, Intel® Communication Streaming Architecture featuring a Dedicated Network Bus (DNB) interface for wire-speed Gigabit Ethernet (GbE) and Hi-Speed USB 2.0 connectivity to ensure the flexibility one expects.

In addition to providing the Intel® Graphics Media Accelerator 3100 the 3D enhancements enable greater flexibility and scalability and improved realism with support for Microsoft DirectX 9.0c Shader Model 2.0 and OpenGL 1.4. Intel® Graphics also support the highest levels of the Windows Vista Aero experience providing stunning media, incredible visuals and new 3D capabilities. For business users, Intel validates the chipset, processor, graphics and software stack to provide a well-tested platform with support for Microsoft® Windows Vista, Windows® XP, Linux (top distributions) and OS/2 (SciTech). Dynamic Video Memory Technology (DVMT) 3.0 supports up to 289MB of Shared Video Memory allocating system memory dynamically. The display of Dual/Multi-Monitor windows using LCD-VGA and DVI external screens is supported.

The COMMODORE PHOENIX provides a total communication solution including Realtek 8168B/8111C Gigabit Ethernet (GbE) for networking requirements, and four external 480Mbps USB2.0 Hi-Speed ports. The COMMODORE PHOENIX also offers Realtek AL888 High

Definition Audio which is fully compliant with the Azalia 1.0 specs. It enables premium Dolby Digital 5.1 Surroundsound, delivers six channels of enhanced sound quality and advanced features such as multiple audio streams and jack re-tasking. Two built-in 2.5 watt stereo speakers are positioned on the front with three audio jacks for Audio Out, Line-in, and Microphone on the rear panel. The built-in Dual Independent SATA2 channels allow data transfer rates up to 3Gbps. In addition, one UDMA ATA100 IDE channel supports one Optical drive. The independent data paths for Storage Interface channels can greatly improve the system performance in a multi-tasking environment.

2.2 System Specifications**2.2.1 Hardware**

CPU Support	Intel® Core™ 2 Duo, Intel® Core™ 2 Quad @ 1066MHz FSB LGA775 up to 95W. Intel® Pentium® D Processors with Hyper-Threading Technology, Intel® Celeron® D processor, support from 1.3GHz ~ 3.4GHz 1066/800MHz System Bus. Supporting 9x, 5x & 6x series processors with EM64T.
Motherboard Core Logic	Intel G31 Express Chipset
Memory	2 x DDR2 240-pin SO-DIMM sockets, up to 4GB. Supports PC2-5300 667MHz & PC2-6400 800MHz SO-DIMMs.
HDD Support	Integrated Serial ATA controller facilitates high-speed transfers at up to 3Gbps. 2 x SATA2 ports.
Video & Graphics	Intel® Graphics Media Accelerator 3100. Support for Microsoft DirectX 9.0c Shader Model 2.0, OpenGL 1.4. Intel® Graphics also support the highest levels of the Windows Vista Aero experience. Dynamic Video Memory Technology (DVMT) 3.0 supports up to 289MB of Shared Video Memory; system memory is allocated where it is needed dynamically. Supports built-in Dual/Multi-Monitor windows displays using LCD monitor & DVI external display.
Networking	1 Gigabit (GbE) Fast Ethernet, using Realtek RTL 8168B/8111C.
Removable HDD	Optional removable 2.5" hard disk drive.
Audio	Realtek AL888 High Definition Audio enables premium Dolby Digital 5.1 Surroundsound with six channels of enhanced sound quality and delivers advanced features such as jack re-tasking. The audio is fully compliant with Azalia 1.0 spec. Two built-in 2.5 watt stereo speakers with three audio jacks for Audio Out, Line-in, and Microphone.
I/O Ports	4 USB 2.0 Ports with transfer rate up to 480Mbps, 2 RS-232 Serial Ports, 1 Parallel Port supporting SPP/EPP/ECP, 1 PS/2 mouse port, 1 POS or PS/2 keyboard port, 1 DVI.
Touch Pad	Built-in Synaptic two-button touch-pad with vertical and horizontal scroll.
Optical Drive	One slim type Optical Drive, CDRW-DVD, or DVD+/-RW.
Expansion Slots	One mini PCI-e, One mini PCI
System Bios	AMI Flash BIOS supports ACPI, API, DMI, Plug & Play, and security password. Supports booting from HDD, PXE, LAN, CD-ROM, and any USB device.
Keyboard	Full-Size Enhanced Windows keyboard, detachable keytop matrix.
LED Indicators	On/Off LED, HDD, LAN Active.
Hotkeys	WWW, Mail, Favorite, Log Off.
Power Supply	Uses 180Watt AC Adapter. Input: universal 100 ~ 240V AC, 50-60Hz. Output: 19V DC, 9.48A, Controlled by Dual Mode Power button on the keyboard. Low power sleep mode saves energy.
BIOS Security	AMI BIOS System POST and BIOS setup password protection. TCG/TPM version 1.2 Support
Security Lock	Security lock slot located on the back of the system case
Dimensions	18.5"W x 9.0"D x 0.5"H front, 2.5"H rear.

Guide

Weight	Unit: 7.4 lbs (3.4kg), Power Adapter: 1.1lbs (0.5kg).
Operating Environment	Ambient Temperature: 0°C ~ 50°C (operating).
Relative Humidity	10% ~ 90% (non-condensing)
Operating System	Microsoft Windows Vista/XP/2000, LINUX.
Available Colors	Silver/Black
Certifications	FCC Class A, CE

Power Management**2.2.2**

Compliant with EPA, APM 1.2 and ACPI, ATX soft on/off power control
Power on by keyboard and PS/2 mouse
Power on by alarm
Power on by Wake On LAN (WOL)
Fan off in sleep mode

System Management**2.2.3**

CPU temperature warning and system temperature detection
CPU and system voltage detection
System fan RPM detection and thermal control
CPU voltage auto-detection

2.2.4 Software

AMI PCI BIOS
4M-bit Flash BIOS
Supports APM, Plug and Play, Multi-Boot including PXE, DMI and EIDE devices
Supports ACPI

Environment**2.2.5**

	0°C - 50°C (operating)
Ambient Temperature	10 to 90% (non-condensing)
Relative Humidity	0 to 500 Hz
Vibration	

2.3 Back Panel Connectors

The back panel provides external access to the following connectors (as seen from left to right):



Figure 4 Back Panel Connectors

2.3.1 Security Cable Lock Slot

The Security Cable Lock Slot is provided so you may use a standard Notebook Cable Lock accessory if desired.

2.3.2 Parallel Port

Connect a printer or other parallel device to the 25-pin parallel port.



Figure 5 Security Cable Lock Slot ♦ Parallel Printer Port

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2.3.3 Serial Ports (COM1 & COM2)

Connect a serial device such as a mouse or modem to the 9-pin serial ports.

2.3.4 DC-IN Connector

Connect the External Power Supply here.

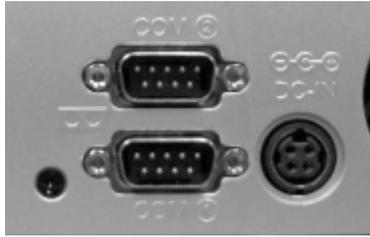


Figure 6 Serial Ports and DC-IN Connector

2.3.5 PS/2 Mouse Port

Connect a PS/2 mouse to the green 6-pin mini DIN connector. The system will automatically assign the correct IRQ address to the PS/2 mouse if one is connected.

2.3.6 PS/2 Keyboard or POS Port

Connect a PS/2 keyboard or a POS device to the purple mini DIN connector. An adapter must be used to connect a standard AT size (large DIN) connector.

2.3.7 Universal Serial Bus Ports

You can connect four USB devices from the Universal Serial Bus Ports. The four USB 2.0 ports have a transfer rate up to 480Mbps and have an integrated 2 UHCI host controller for full-speed (11Mbps) and low-speed (1.5Mbps) USB devices.

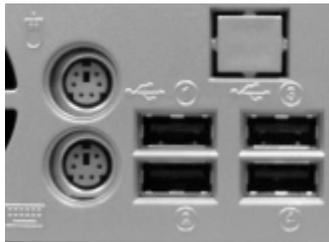


Figure 7 PS/2 Mouse Port ♦ PS/2 Keyboard or POS Port ♦ USB Ports

2.3.8 VGA Port

Connect an external monitor to the blue 15-pin VGA port.

2.3.9 Audio Port Connectors

These connectors are located on the back side of your unit. You can connect various audio devices to these audio jacks as follows:

- **Headphone** - Connect headphones or external speakers.
- **Line-In** - Connect any audio source to record audio onto your computer or to play audio through your computer's sound chip and speakers.
- **Microphone** - Connect a microphone to record audio to your computer.



Figure 8 VGA Port ♦ Audio device RCA jacks

2.3.10 DVI Port

This connector provides DVI signal to a standard Digital Video Monitor or a television as a display device.

2.3.11 Gigabit Ethernet (GbE) LAN Port

Connect RJ-45 Ethernet Cable here.



Figure 9 DVI ♦ Gigabit Ethernet (GbE) LAN Port

3. Hardware Installation & Replacement

This chapter explains how to use your COMMODORE PHOENIX to build a powerful computer as well as how to replace components that are already populating the system. If you are replacing existing components, read *all* of the instructions in the “Building a Bare Bone System” section 3.1.1 and 3.1.2 *FIRST* and then go to the section that applies to the component you wish to replace.

3.1 Building a Bare-Bone System

At a minimum, you will need the components listed below in order to build a fully functioning system.

Before using your computer, you must complete the following steps:

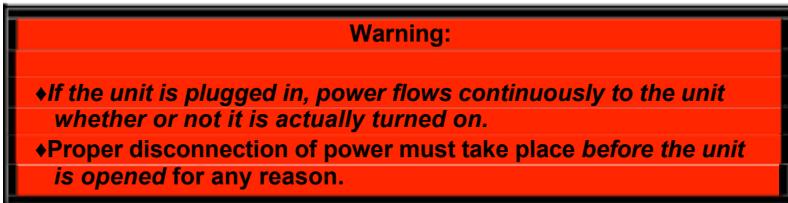
- Install Memory Modules.
- Install the CPU.
- Install Peripheral Devices.
- Connect Case Fans and Power Adapter.
- Turn on the unit and setup the BIOS.

NOTE: Computer components and electronic circuit boards can be damaged by discharges of static electricity. Working on computers that are still connected to a power supply can be extremely dangerous. Follow the guidelines below to avoid damaging your computer.

3.1.1 PHYSICAL ORIENTATION

All directions provided are presuming a physical orientation of the computer as if you were the user with the touch pad in the lower left and the on/off button in the top right corner. You are supplied with all necessary Phillips screws for the hard disk drive installation and for the system case.

3.1.2 REMOVING THE KEYPAD (Opening the Computer)



NOTE: To protect the system components from static electricity a grounded wrist strap or equivalent precaution is recommended. Whenever components are removed from the system they must be placed in an anti-static bag or on a grounded surface.

1. First remove the two Phillips screws on the back of the unit and the single screw in the small plastic cover on the outside of the Keytop to the left of the PCI slot blanking plate. Turn over the COMMODORE PHOENIX and remove the five Phillips screws from the base. Bare bone units ship unassembled, so this step is not necessary if the unit has not yet been populated with components.
2. Turn the keyboard right side up and lift the center front of the Keytop being careful of the two wire connections that remain inside. Lift the rear of the Keytop forward and upward to clear the connectors on the back of the unit.
3. Before fully removing the Keytop, be sure to disconnect the two cables that connect the Keytop to the Motherboard. They are:
 - a. The 20-way Ribbon cable from the keyboard controller PCB CN7 in the Keytop, connected to header JFP1 on the Motherboard.
 - b. The 44-way Ribbon cable from the Optical drive in the Keytop connected to IDE1 on the Motherboard.
4. Once you have disconnected the cables, lift the Keytop off the computer and set it aside.

3.2 Memory Installation

Maximum system memory supported by the COMMODORE PHOENIX is 4.0 GB. The COMMODORE PHOENIX has two DDR2 Sockets. Memory can be installed using t240-pin DDR2 DIMM memory modules. There are no jumper settings required for the memory size or type, which is automatically detected by the BIOS. Memory modules must meet the following requirements:

-
- DDR2 SPEED 667/800MHz
 - PC5300 DDR2 667MHz
 - PC6400 DDR2 800MHz

1. First remove the Keytop as instructed in Section 3.1.2 being careful to follow instructions regarding the disconnection of power.
2. To install memory, line up the bottom of the memory with the pattern notches on the memory slot (it will only go in one way). Depress the memory into the slot and the clips will click into place.

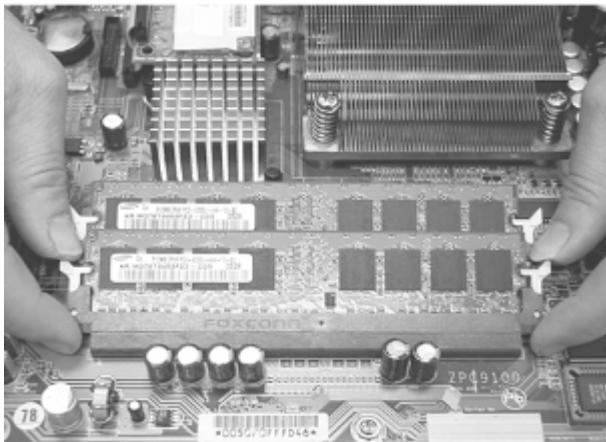


Figure 10 Installing Memory

3.3 CPU and CPU Heatsink Installation

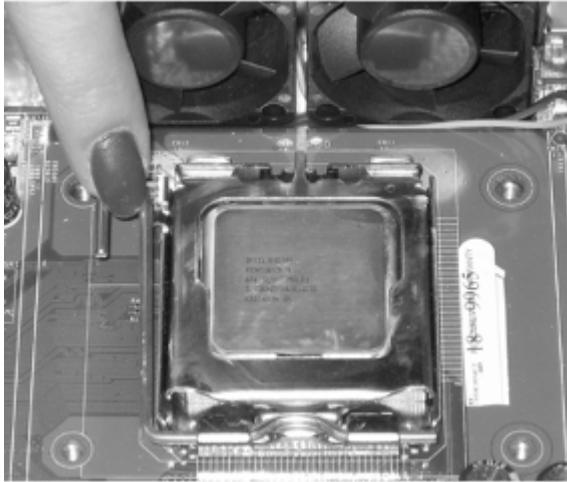


Figure 11 CPU Installation

CPU Installation Procedure

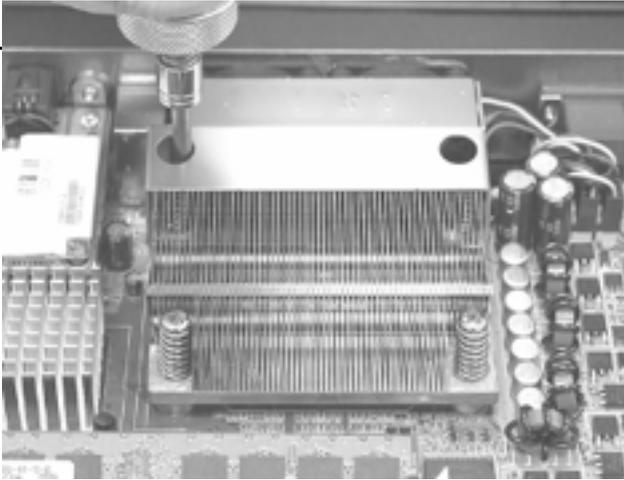
On the motherboard, identify the Intel LGA-775 CPU Socket.

Push the CPU socket lever slightly to the side and then raise it as far as it can go. Lift CPU metal cover.

Identify the package orientation corner notches for the LGA-775 socket.

Insert CPU into socket, and lower CPU metal cover as shown in the picture above. The processor should drop into place without any force. If it doesn't seat properly, check that you have the CPU orientation in the correct position. Swing the locking lever down to lock the processor in place and latch the lever under the catch on the side of the socket.

The Heatsink only fits one way over the CPU. Center the Heatsink over the CPU aligning the four screws. Screw in the Heatsink diagonally being careful not to use force.



de

Figure 12 Installing the CPU Heatsink

Configuration of the processor is automatically carried out using the system setup utility.

3.3.2 Removing the CPU and Heatsink

To remove the CPU from the Motherboard, follow these steps:

1. Remove the Heatsink by unscrewing the four screws holding it in place and gently lifting it off the CPU.
2. Push the CPU socket lever slightly to the side and then raise it as far as it can go. Lift CPU metal cover and remove the processor.

3.4 Installing Peripheral Devices

3.4.1 Installing a SATA Hard Disk Drive

A SATA drive cable supports the Serial ATA format hard disk drive. This hard drive can be any capacity as long as it matches the 3.5" form factor of the COMMODORE PHOENIX hard drive mounting bracket. Consult the documentation that came with your **SATA** drive for details on jumper locations and settings.

1. Install the metal bracket onto the hard disk drive using the flathead Phillips screws provided.

Insert the hard disk drive into the base unit as shown.

- 2.

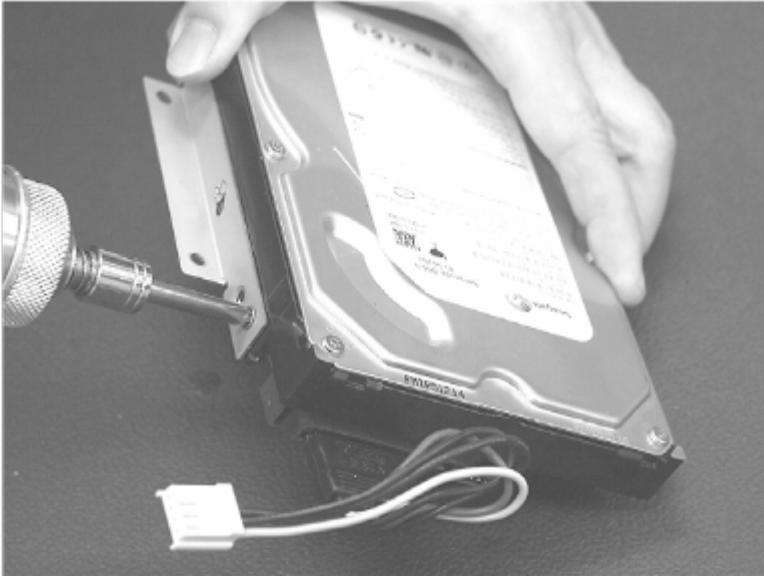


Figure 13 Installing the Hard Disk Drive into Mounting Frame
Connect the Serial ATA cable connector to the hard disk drive.

- 3.
4. Connect the 4-wire power cable to the hard disk drive and JPWR1 on the motherboard.

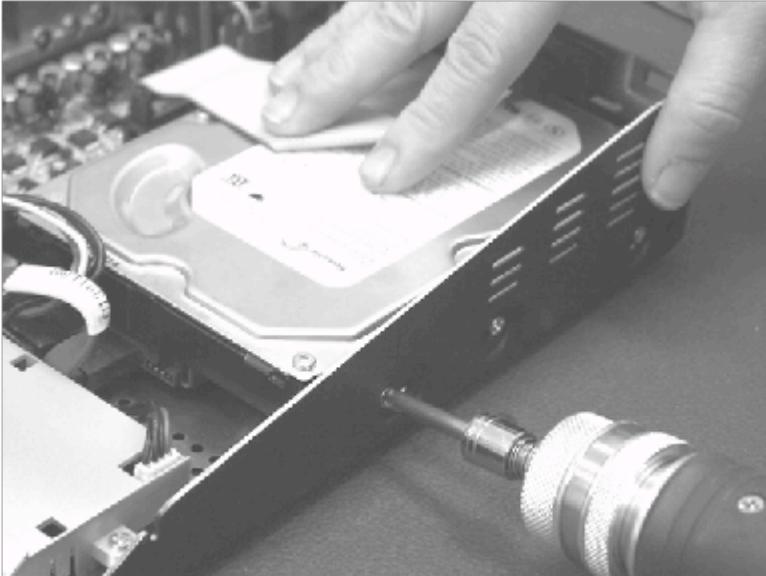


Figure 14 Installing the Hard Disk Drive into the Base Unit

5. Moving aside the Parallel Printer cable, slide the hard disk drive into position to install the mounting screws both on the base of the unit and on the right side of the case.
6. Attach the LPT1 Parallel Printer cable connector to motherboard header JLPT1.

3.4.2 Installing a Multimedia Device

The multimedia device can be any slim type CD-ROM, CD-RW, DVD-ROM, or DVD-RW drive.

1. First, remove the Keytop as instructed in Section 3.1.2.
2. Then, remove the blanking plate from the left side of the Keytop by pushing in the center to pop it out of the notches on the side.

3. Lining up the device door flush with the opening in the left side of the Keytop, install the device with the two Phillips screws provided.

4. Attach the 44-wire ribbon cable to the IDE1 connector on the left front of the Motherboard.

5. The Plug and Play BIOS will auto detect the device without any software configuration.

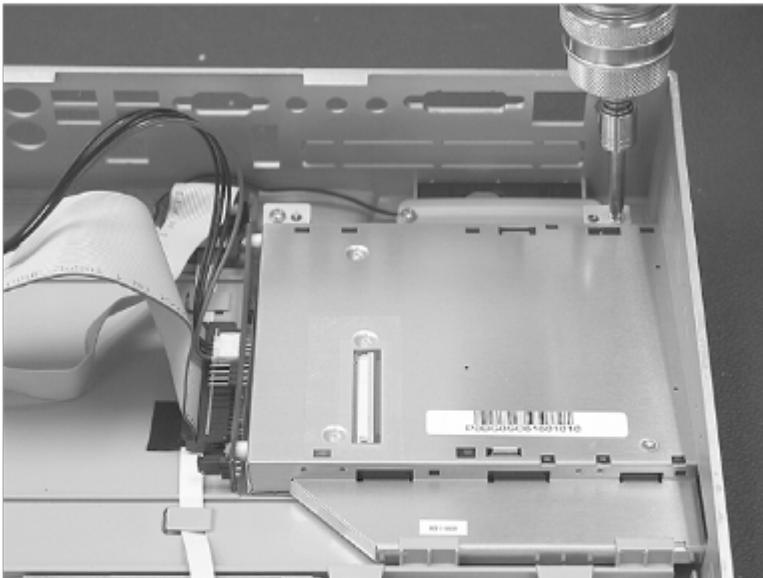


Figure 15 Installing a Multimedia Device

3.4.3 Installing a Mini-PCI Card

1. Remove the Keytop as instructed in section 3.1.2.
2. Insert the Mini-PCI card at a 45 degree angle and press down until the side clips click into place (use 32-bit 124-pin card edge Type IIIB).
3. Replace the Keytop. As instructed in section 3.1.2.
4. Replace the small plastic cover on the outside of the Keytop to the left of the PCI slot blanking plate with the Phillips screw provided.
5. Install the drivers from the CD provided with the card.

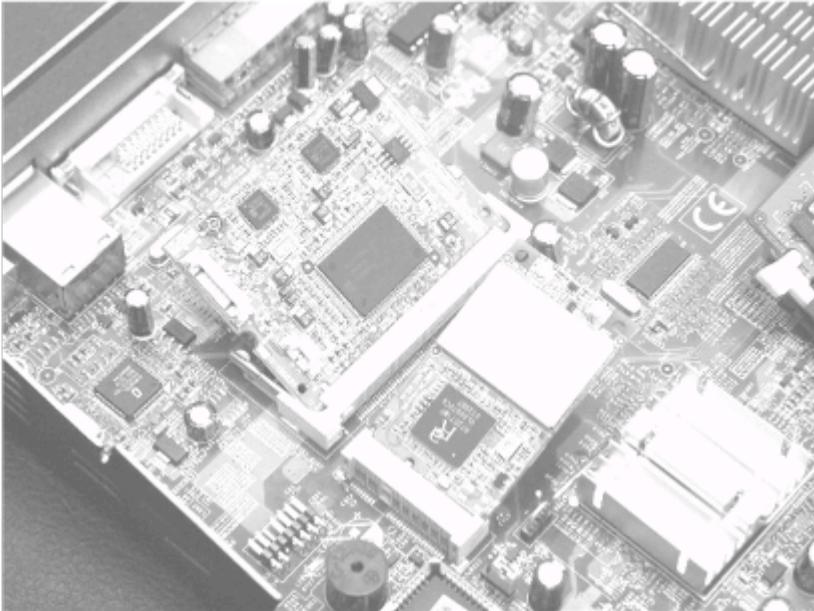


Figure 16 Inserting a Mini-PCI slot card

3.4.4 Installing a Mini PCIe Card

1. Remove the Keytop as instructed in section 3.1.2.
2. Remove the Phillips screw in H1.
3. Insert the Mini-PCIe card at a 45 degree angle into the Mini PCIE 1 slot and press down until level with the mounting hole at H1.
4. Replace the Phillips screw into H1.
5. Replace the Keytop as instructed in section 3.1.2.
6. Replace the small plastic cover on the outside of the Keytop to the left of the PCI slot blanking plate with the Phillips screw provided.
7. Install the drivers from the CD provided with the card.

3.5 Removing the Keyboard Matrix & Controller PCB

1. Remove the Keytop as instructed in section 3.1.2.
2. Remove keyboard controller board and unfasten the two flex cables.
3. Remove CD/DVD drive if present.
4. Remove six Phillips screws to release keytop matrix.

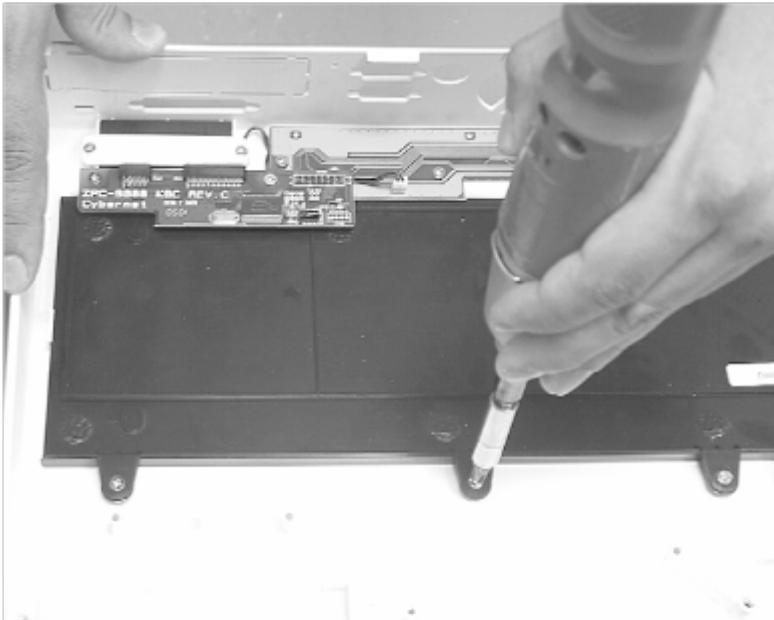


Figure 17 Removing the Keytop Matrix

3.6 Replacing the System Fans

There are two system fan connectors (FAN1, FAN2) on the COMMODORE PHOENIX Motherboard which supports two 12V DC fans.

You may replace the system fans as follows:

1. Remove the CPU & Heatsink as shown in section 3.3.2.
2. Disconnect the system fan power connectors at FAN1 and FAN2 locations on the Motherboard.
3. Remove the 8 Phillips fan screws and slide the system fans up and out of the system case.
4. Insert the new system fans, replace the 8 Phillips screws and connect the system fan wires to the FAN1 and FAN2 headers on the Motherboard.

Replace the CPU & Heatsink as shown in section 3.3.1.

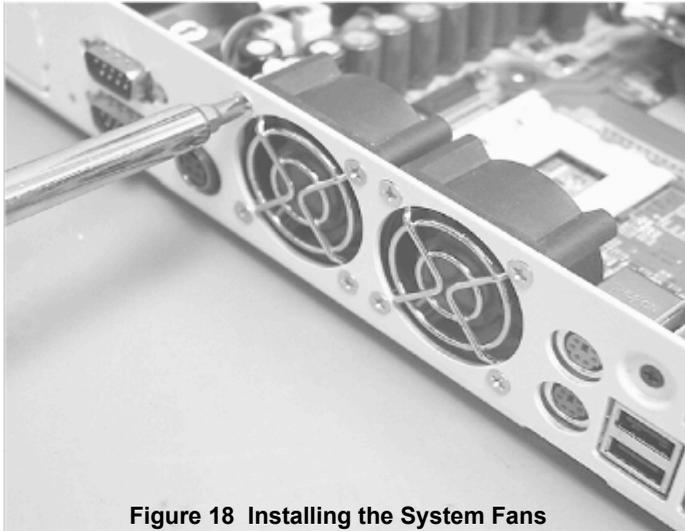


Figure 18 Installing the System Fans

NOTE: The unit ships with the fans installed and already connected.

3.7 Installing a Removable Hard Disk Drive

1. Remove existing internal hard disk drive if one is present.
2. Assemble the Removable HDD kit with a 2.5" HDD, as instructed with its accompanying documentation.
3. Break the Removable HDD punch-out both in the metal case, and the keytop plastic.
4. Install the removable HDD kit as instructed in section 3.4.1, Installing a SATA hard disk drive.



Figure 19 Installing a Removable Hard Disk Drive

3.8 Closing the System

Carefully reverse the process of opening the system. Be sure to make the Motherboard connections as follows:

- a. The 20-way Ribbon cable from the keyboard controller PCB CN7 in the Keytop must be connected to header JFP1 on the Motherboard.
- b. The 44-way Ribbon cable from the Optical drive interface in the Keytop must be connected to header IDE1 on the Motherboard.

Make certain that the back of the Keytop clears the back connectors and carefully lower the Keytop over the base unit. Then, turn over the unit and replace the five Phillips screws to the bottom, plus the two screws on the back of the unit.

NOTE: Upon hardware configuration completion, CMOS setup should be run to ensure that the system information is correct.

4. CMOS Setup Utility

This section allows you to configure the system based on the specific features of the installed chipset. This chipset manages bus speeds and access to system memory resources such as SDRAM and the external cache. The default settings have been chosen because they provide the best operating conditions for your system. The only time you might consider making any changes would be if you discovered that data was being lost while using your system.

The COMMODORE PHOENIX employs the latest AMI BIOS CMOS chip with support for Windows

Plug and Play and Intel Core 2 Duo and Core 2 Quad series processors with EM64.

This CMOS chip contains the ROM Setup instructions for configuring the COMMODORE PHOENIX's BIOS. The BIOS (Basic Input and Output System) Setup program is a menu driven utility that enables you to make changes to the system configuration and tailor your system to suit your individual work needs. It is a ROM-based configuration utility that displays the system's configuration status and provides you with a tool to set system parameters. These parameters are stored in non-volatile battery backed-up CMOS RAM that saves this information even when the power is turned off. When the system is turned back on, the system is configured with the values found in CMOS.

Easy-to-use pull down menus allow you to configure such items as:

- Hard drives, optical drives, and peripherals
- Video display type and display options
- Password protection from unauthorized use
- Power management features

The settings made in the Setup program directly affect how the computer performs. It is important, therefore, first to try to understand all the Setup's options, and second, to make settings appropriate for the way the computer is used.

This program should be executed under the following conditions:

- When changing the system's First Boot Device or resetting the system clock
- When a configuration error is detected by the system and you are prompted to make changes to the Setup program
- When redefining the communication ports to prevent any conflicts
- When making changes to the Power Management configuration
- When changing the password or making changes to the security setup

Normally, CMOS setup is needed when the system hardware is not consistent with the Information contained in the CMOS RAM, whenever the CMOS RAM has lost power or the system features need to be changed.

4.1 Entering Setup

When the system is powered on, the BIOS will enter the Power-On Self Test (POST) routines. These routines perform various diagnostic checks. If an error is encountered, the error will be reported in one of two different ways:

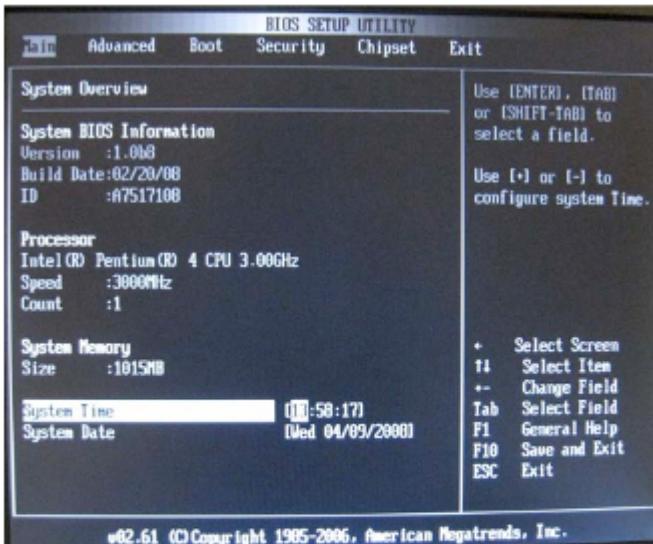
- If the error occurs before the display device is initialized, a series of beeps will be transmitted.
- If the error occurs after the display device is initialized, the screen will display the error message.

After the POST routines are completed, the following message appears:

"Press DEL (or Delete) to enter SETUP"

To access the AMI BIOS SETUP program, you don't have to wait for the POST process. Hold down the key immediately to display the "CMOS SETUP UTILITY" screen, which provides access to the utility's various functions.

Figure 20 CMOS Setup Utility – Main Menu Screen



4.2 Control Key Definitions

Listed below are explanations of the keys displayed at the right side of the CMOS Setup Utility screen:

Up arrow	Move to previous item
Down arrow	Move to next item
Left arrow	Select Previous Screen
Right arrow	Select Next Screen
Enter, Tab or Shift-Tab	To Select a Field
ESC key	Main Menu - Quit and don't save changes into CMOS Status Page Setup Menu and Option Page Setup Menu - Exit current page and return to Main Menu
+	Increase the numeric value or make changes
-	Decrease the numeric value or make changes
F1 key	General help, only for Status Page Setup Menu and Option Page Setup Menu
F2 key	Changes colors of the screen
F3 key	Changes colors of the screen
F4 key	Reserved
F5 key	Restore the previous CMOS value from CMOS, only for Option Page Setup Menu
F6 key	Load the Failsafe Defaults, only for Option Page Setup Menu
F7 key	Discard Changes [ok] [cancel]
F8 key	Load Failsafe Defaults [ok] [cancel]
F9 key	Load Optimal Defaults [ok] [cancel]
F10 key	Save all the CMOS changes, only for Main Menu

4.3 Main Menu Help

The on-line description of the highlighted setup function is displayed at the bottom of the screen. Press <F1> to pop up a small help window that describes the appropriate keys to use and the possible selections for the highlighted item. To exit the Help Window, press <ESC>.

4.4 CMOS Setup Utility Main Menu

Power on the computer and press immediately to run the CMOS Setup Utility. The setup main menu will appear on the screen.

SYSTEM OVERVIEW: This page includes System BIOS Information, Processor, System memory and displays the System Time and System Date.

ADVANCED SETTINGS: This setup page includes sub-menus for CPU Configuration, IDE Configuration, Hardware Health Configuration, ACPI Configuration and USB Configuration.

BOOT SETTINGS: This page includes Full Screen Logo Display, Bootup Num-Lock Wait for 'F1' If Error, Hit 'Del' Message Display as well as sub-menus for Boot Device Priority, Hard Disk Drives, CD/DVD Drives.

SECURITY SETTINGS: This page includes Change Supervisor Password and Change User Password.

ADVANCED CHIPSET SETTINGS: This page includes sub-menus for North Bridge Configuration and South Bridge Configuration.

EXIT OPTIONS: This page includes Save Changes and Exit, Discard Changes and Exit, Discard Changes, Load Optimal Defaults and Load Failsafe Defaults.

4.5 Load Fail-Safe Defaults Option

The **FAIL-SAFE DEFAULT** values are the most appropriate for the greatest stability according to the system parameters. The command to Load Failsafe Defaults is found in the EXIT OPTIONS page.

4.6 Load Optimized Defaults Option

The COMMODORE PHOENIX is shipped with the Optimized Defaults loaded. The optimized defaults place demands on the system that may be greater than the performance level of the components, such as the CPU and the memory. You can cause fatal errors or instability if you install the optimized defaults when your hardware does not support them. The command to Load Optimized Defaults is found in the EXIT OPTIONS page.

4.7 Change [Set] Password

The Password utility sets the password. The COMMODORE PHOENIX is shipped with the password disabled. If you want to change (or set) the password, you must first enter the current password, (if adding one *for the first time*, just press <Enter> when asked for the current password), then, at the prompt, enter your new password. The password is case sensitive. You can use up to six alphanumeric characters. Press <Enter> after entering the password. At the next prompt, confirm the new password by retyping it and pressing <Enter> again.

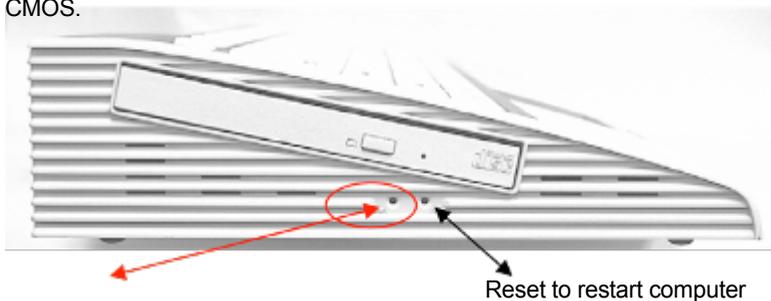
To disable the password, select "Clear User/Supervisor Password" press <Enter> [OK] or [Cancel].

NOTE: If you have established supervisor and user passwords, only the supervisor password allows you to enter the BIOS Setup Program.
NOTE: If you forget your password, the only way to solve this problem is to clear the CMOS memory as described below.

4.8 Clear CMOS

You may need to clear the CMOS if you are unable to boot-up the system due to a forgotten password, an incorrect CPU clock setup, or the need to reset the CMOS settings to default values after the system BIOS has been updated.

Power off the system and disconnect the power cable. Locate CMOS recessed pin-hole on the left side of the COMMODORE PHOENIX unit. Insert an unfolded paperclip to depress the micro switch located inside. This will clear the CMOS.



Clear CMOS to restore factory default

5. Drivers and Utilities

5.1 Intel G31 Chipset Drivers

The COMMODORE PHOENIX Utilizes the Intel G31 chipset, designed to support the Intel Core 2 Duo and Core 2 Quad processors. The COMMODORE PHOENIX drivers CD contains Intel G31 Chipset drivers for:

- Windows VISTA, Windows7, Linux
- Windows 2000/XP

5.2 Extreme Graphics 2 Video Drivers

The COMMODORE PHOENIX Utilizes the Intel Graphics Media Accelerator 3100 technology integrated video graphics controller. The COMMODORE PHOENIX drivers CD contains drivers for:

- Windows VISTA , Windows7, Linux
- Windows 2000/XP

5.3 LAN Drivers

The COMMODORE PHOENIX has a built-in Gigabit Ethernet (GbE) LAN adapter.

The COMMODORE PHOENIX drivers CD contains Realtek LAN drivers for:

- Windows VISTA, Windows7, Linux
- Windows 2000/XP
- Windows 98/98SE/ME

5.4 Audio Drivers

The COMMODORE PHOENIX has built-in integrated audio using Realtek AL888 High Definition Audio.

The COMMODORE PHOENIX drivers CD contains the Realtek Audio drivers for:

- Windows VISTA , Windows7, Linux
- Windows 2000/XP

5.5 Touchpad Drivers

The COMMODORE PHOENIX has a built-in Synaptics Touchpad. The

COMMODORE PHOENIX drivers CD contains Synaptics Touchpad drivers for:

- Windows VISTA , Windows7, Linux
- Windows 2000/XP

5.6 Installation Instructions

To install the COMMODORE PHOENIX System Chipset, Video, LAN, Audio, and Touchpad drivers, find the drivers in the correct directory and execute the relevant setup files. Please refer to the readme.txt file under each directory for more drivers information.

NOTE: Recent releases of operating systems always include setup programs that load automatically and guide you through the installation.

6. Service and Support

6.1 Technical Support

If you need technical support, information on products, or updated versions of the BIOS, drivers or utilities, access the Internet and point your browser to:
www.CommodoreUSA.net

Select SUPPORT and FAQ-support for answers to most problems, or select Download to access all product Drivers and Utilities software.

If you need further assistance, you can talk with one of our friendly support representatives by dialing one of the following numbers:

USA Tel: 954-344-6000

Email: support@commodoreusa.net

6.2 Online Services

Commodore USA, LLC has consistently won recognition for excellence in the design and manufacturing of high quality products. Please visit our website at: <http://www.commodoreusa.net> to see the very latest information on all of our exciting, new products. We also provide a wide range of services, information, and help online, including, but not limited to the following:

- Contact Information
- Press/News Releases
- Products/Accessories Information
- Value Added Reseller Information
- Online Purchasing
- Sales/Marketing Media Downloads
- Extended Warranty Information
- Online RMA requests (via SUPPORT, then Request RMA)

7. Appendix A: Pin Definitions

CONNECTORS

MINI-DIN PS/2 Keyboard & Mouse Port

Pin No.	Signal	Pin No.	Signal
1	MS Data	7	KB Data
2	N.C.	8	N.C.
3	Gnd	9	Gnd
4	MS Vcc	10	KB Vcc
5	MS Clock	11	KB Clock
6	N.C.	12	N.C.

VGA1: VGA Connector D-SUB VGA

Pin No.	Signal	Pin No.	Signal
1	VGA-RED	9	Vcc
2	VGA-GREEN	10	Gnd
3	VGA-BLUE	11	NC
4	NC	12	DDC Data
5	Gnd	13	Hsync
6	Gnd	14	Vsync
7	Gnd	15	DDC Clock
8	Gnd		

MINI-DIN 4 (DC-IN) Power Input

Pin No.	Signal
1	Gnd
2	Gnd
3	VIN(19V)
4	VIN(19V)

JPWR1: MINI-PWR4 HDD Power

Pin No.	Signal
1	VCC
2	Gnd
3	Gnd
4	+12V

JFP1: KEYTOP INTERFACE Cable Connector

Pin No.	Signal	Pin No.	Signal
1	SPK-RO	2	SPK-LO
3	SPK-RN	4	SPK-LN
5	GND	6	GND
7	TPAD CLK	8	USBP4+
9	TPAD DATA	10	USBP4-
11	5VDUAL	12	5VDUAL
13	5VDUAL	14	PWRBTIN
15	VCC	16	VCC
17	LINKLED	18	GND
19	ACTLED	20	3VSB

DVI1: DVI-D Dual Link Port Connector

Pin No.	Signal	Pin No.	Signal
1	TDC2-	13	NC
2	TDC2+	14	VCC
3	GND	15	GND
4	NC	16	HPDET
5	NC	17	TDC0-
6	MDVIS CLK	18	TDC0+
7	MDVIS DATA	19	GND
8	NC	20	NC
9	TDC1-	21	NC
10	TDC1+	22	GND
11	GND	23	TLC+
12	NC	24	TLC-

SATA1: SATA HDD Connector

Pin No.	Signal
1	GND
2	A+
3	A-
4	GND
5	B-
6	B+
7	GND

IDE1: Ultra-ATA CD Connector

Pin No.	Signal	Pin No.	Signal
1	RESET#	2	CDGND
3	DATA 7	4	DATA 8
5	DATA 6	6	DATA 9
7	DATA 5	8	DATA10
9	DATA 4	10	DATA11
11	DATA 3	12	DATA12
13	DATA 2	14	DATA13
15	DATA 1	16	DATA14
17	DATA 0	18	DATA15
19	GND	20	NC
21	IDEREQ	22	GND
23	IOW#	24	GND
25	IOR#	26	GND
27	ICHRDY#	28	GND
29	DACK	30	GND
31	IRQ14	32	NC
33	A1	34	LID
35	A0	36	A2
37	IDECS0	38	IDECS1
39	HDD LED	40	GND
41	VCC	42	VCC
43	GND	44	NC

USB1-2: USB Connector 1 & 2

USB1		USB2	
Pin No	Signal	Pin No	Signal
1	USBVCC	5	USBVCC
2	Data-	6	Data-
3	Data+	7	Data+
4	Gnd	8	Gnd

USB3-4: USB Connector 3 & 4

USB3		USB4	
Pin No	Signal	Pin No	Signal
1	USBVCC	5	USBVCC
2	Data-	6	Data-
3	Data+	7	Data+
4	Gnd	8	Gnd

COM1/COM2: Serial Port 1 and Serial Port 2

Pin No	Signal	Pin No	Signal
1	DCD	2	RXD
3	TXD	4	DTR
5	GND	6	DSR
7	RTS	8	CTS
9	RI	10	NC

FAN1/FAN2: System Fan1 and Fan2 Header

Pin No.	Signal
1	GND
2	12V
3	Speed CTRL

JLPT1: Parallel Port Connector

Pin No.	Signal	Pin No.	Signal
1	STB-	2	AFD-
3	PD0	4	ERR-
5	PD1	6	INIT-
7	PD2	8	SLIN-
9	PD3	10	Gnd
11	PD4	12	Gnd
13	PD5	14	Gnd
15	PD6	16	Gnd
17	PD7	18	Gnd
19	ACK-	20	Gnd
21	BUSY	22	Gnd
23	PE	24	Gnd
25	SLCT	26	NC

SW_CMOS1: Clear CMOS Micro-Switch

Pin No.	Signal
1	Clear CMOS
2	GND
3	GND
4	GND

SW_RST1: System RESET Micro-Switch

Pin No.	Signal
1	RESET#
2	GND
3	GND
4	GND