Motherboard 4845PE

Chapter 1
Motherboard 4845PE

1. 4845PE Specifications

1.1 Introduction

The 4845PE motherboard is an integration of Intel P4 CPUs in Socket-478 packaging and the North Bridge i845PE supporting 533/400 MHz Front Side Bus.

North Bridge i845PE on board also supports DDR 333/ 266 DRAMs in DDR 333MHz main bandwidth, while the South Bridge ICH4 provides stable supports of ULTRA ATA 100, 6-channel Audio playback and USB 2.0/1.1 interface.

The resulting architecture will provide an ideal multi-task environment to support operating systems such as MS-DOS, Windows, Windows NT , Windows ME, Windows 2000, Novell, OS/2, Windows 95/98, Windows 98SE, Windows XP, UNIX, Liunx, SCO UNIX etc. This user-friendly manual is to describe in detail how to install, configure and use this motherboard with drivers and BIOS setup illustrations.

This manual is a general reference of the first release of this motherboard which is subject to update without notice. If any difference is found between this manual and the motherboard you are using, please refer to the Web Site provided on the cover of this manual.

1.2 Package Contents

- HDD UDMA66/100 Cable.
- FDD Cable.
- Flash Memory with BIOS.
- USB2/3 Cable (Optional).
- Fully Setup Driver CD with built in utilities.
- User Manual.

1.3 Specifications and Features

CPU Processor
| Support 533/400MHz System Interface speed.
| Single Socket 478 for Intel P4™ 1.5 to 2.8GHz or higher*
  (Northwood Processor).
| Support Intel Netburst™ Micro-architecture.

* The higher frequency CPU should be compatible with Intel CPU specificiation and the motherboard latest BIOS version which will be released in Acorp Web Site: www.acorp.com.tw

Chipset
| Intel 845PE North Bridge.
| Intel ICH4 South Bridge.

PCI
| Supports 33MHz PCI Bus speed.

DDR SDRAM Memory
| Supporting 64/128/256/512....MB DDR module
| Supporting Synchronous 333/266/200MHz DDR SDRAM
| Supporting a maximum memory size of 2GB with DDR SDRAM.

Bus Slots
| 5 x 32-bit PCI slots.

Universal Serial Bus
| Supporting two on-board Universal Serial Bus(USB)Ports and four external Universal serial Bus(USB)Ports.
| Supporting USB 2.0/1.1

WOL (Wake On LAN)
| Supporting system power-on by LAN Ring-up signal.

Award BIOS
| Supporting Plug & Play specification which detects the peripheral devices and expansion cards automatically
| Supporting CD-ROM, SCSI, LAN BOOT, Temperature sensor, LAN, Alarm Bus CLK setup
| Supporting Desktop Management Interface (DMI) function for recording mainboard specification

ATA 100 On Board
| Supporting four IDE devices.
| Supporting PIO Mode 5, Master Mode, high performance hard disk drives.
| Supporting Ultra DMA 33/66/100 Bus Master Mode.
| Supporting IDE interface with CD-ROM.
| Supporting high capacity hard disk drives.
| Supporting LBA mode.

PCI-Based AC 97 Digital Audio Processor
| AC 97 2.2 compatible Codec, 6-channel Audio interface.
| 18-bit Stereo Full-Duplex Codec with up to 48 KHz sampling rate
| 4 Analog Line-level Stereo inputs for connection from Line, CD, Viedo and AUX
| 2 Analog Line-level Stereo inputs for speakerphone and PC beep

1.4 4845PE Layout Diagram
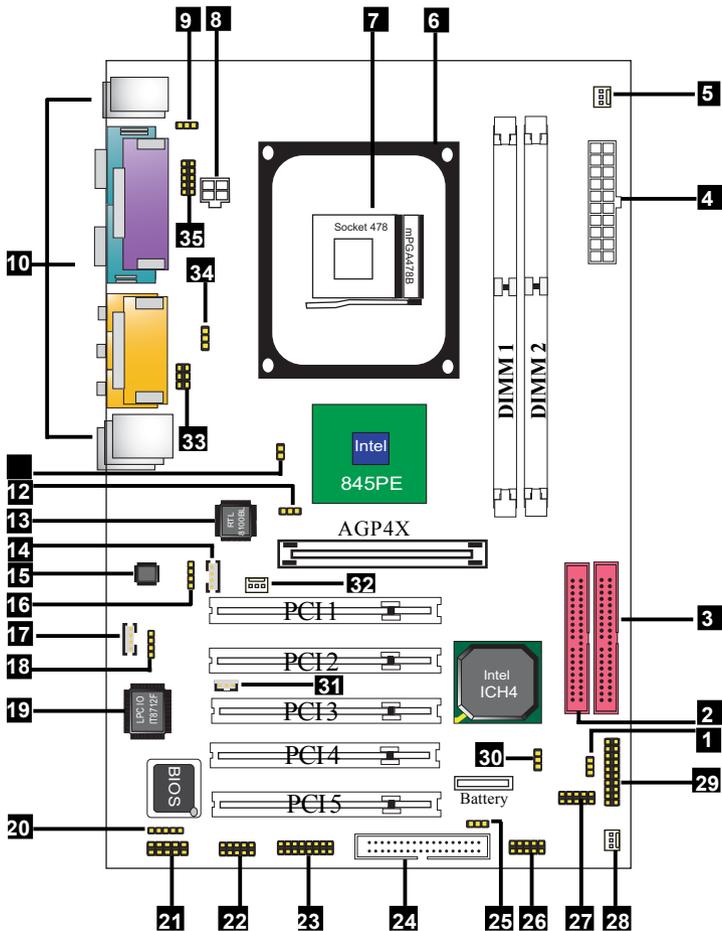
4845PE Component Layout Description:

1. Jp11: USB2 5V or +5Vsb Selector
2. IDE 1: Primary IDE Connector
3. IDE 2: Secondary IDE Connector
4. PW 2: ATX Main Power Connector
5. Fan 2: Cooling Fan Connector
6. P4 CPU Fan Base
7. Socket 478: P4 CPU Socket
8. PW1: +12V ATX Power Connector
9. Jp3: KB/Mouse 5V or +5Vsb selector
10. Back Panel: Back Panel I/O Connectors (USB0/1, Mouse, Keyboard, COM1, COM2A, Printer, Mic in, Line in, Speaker-out, Game Stick)

12. Jp7: Jumper as CPU Frequency Selector
13. Chip RTL8100BL: LAN chip (optional)
14. CDIN2: CD Audio-in Connector
15. Chip ALC650: Chip for AC'97 Audio Codec
16. CDIN1: Pin Header for CD Audio-in
17. AUXIN1: Audio-in Connector
18. VOIN1: Pin Header for Audio-in
19. Chip IT8712F: LPC Input-Output chip
20. IR1: Connector for Infrared signal transmission
21. COM2: Pin Header supporting one serial port
22. SC1: Smart Card Connector (optional)
23. Jp5: Smart Panel II (FWH)
24. FD1: Floppy Disk Drive Connector
25. Jp8: USB1 5V or +5Vsb Selector
26. USB1: Pin Header supporting 2 external USB Ports
27. USB2: Pin Header supporting 2 external USB Ports
28. Fan 3: Cooling Fan Connector
29. Panel 1: Front Panel Connector
30. Jp10: Jumper for clearing CMOS
31. CN2: Wake On LAN Connector
32. FAN1: Cooling Fan Connector
33. Jp2: Smart Panel II Audio/Mic Auto Connector
34. Jp4: USB0/1 5V or +5Vsb Selector
35. ERR1: SPII Printer Error LED Port

1.5 CPU and CPU Fan Installation

This motherboard is designed with Socket 478 for Intel P4™ processor.

1.5.1 CPU Installation with Socket 478

1. Pull the lever sideways away from the socket then raise the lever to a 90-degree angle.
2. Locate Pin 1 in the socket Pin 1 of CPU is marked by the yellow corner or cut edge on the CPU. Match Pin 1 of Socket 478 and Pin 1 of CPU.
3. Pull up the lever of Socket 478 to let the CPU in and press the lever down to lock the CPU.
4. Make sure that Pin 1 of Socket 478 is matching with Pin 1 of CPU.
5. Make sure that all CPU pins are completely in socket before pressing down the socket lever.

Cooling Fan Base

mPGA478B

Socket 478

Pin 1

Intel pentium 4

Level of Socket 478
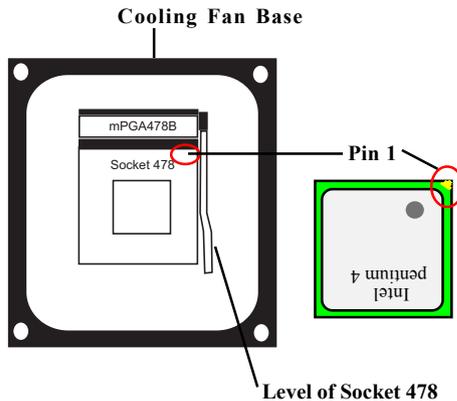
1.5.2 CPU Fan Installation with P4 Fan Base

1. P4 CPU Fan is typically designed with 4 latches and mounted with a thick heatsink. Please do not use other type of CPU fan which cannot match the P4 Fan base on board.
2. Install the P4 CPU fan into the Fan base in such a way that the 4 latches of the CPU Fan match with the 4 Supporters of the CPU Fan Base.
3. Press down the latches to lock CPU Fan to the Fan Base.
4. Then connect the Fan Power Cable to one of the Fan connectors on board.
5. Make sure that the Fan Power Cable is correctly connected to Fan Connector.

Fan Connector for Fan Power Cable

Fan Base

Socket 478

4 Latch-supporters

Mainboard
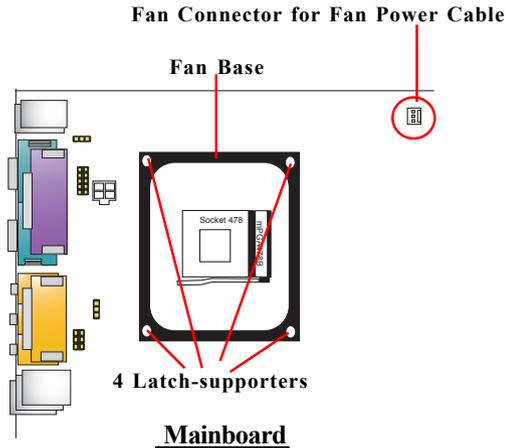
1.6 DDR SDRAM Installation

This motherboard supports a maximized 2GB DDR SDRAM. It provides two184-pin unbuffered DDR sockets. It supports 64MB to 1GB DDR memory module.

DDR SDRAM Installation Procedures:

1. The DDR socket has a "Plastic Safety Tab" and the DDR memory module has an asymmetrical notch", so the DDR memory module can only fit into the slot in one direction.
2. Push the tabs out. Insert the DDR memory modules into the socket at a 90-degree angle then push down the module vertically to fit it into place.
3. The Mounting Holes and plastic tabs should fit over the edge and hold the DDR memory modules in place.

Note: If you want to use DDR 333MHz module, please make sure you are using a 133MHz CPU which is able to provide a 533MHz FSB.

Bank	Memory module
DIMM 1	64MB, 128MB, 256MB, 512MB, 1GB
	184 pin, 2.5V DDR SDRAM
DIMM 2	64MB, 128MB, 256MB, 512MB, 1GB
	184 pin , 2.5V DDR SDRAM
	Total System Memory (Max 2GB)

184-pin DDR Module

DDR Module Notch

DDR Module Rib
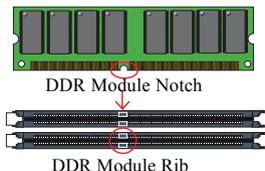
Warning: Be sure to turn off system power whenever to insert or remove a Memory Module. Otherwise, the power will damage the module or even the system.

1.7 Connectors & Jumpers Setting

1.7.1 Back Panel I/O Connectors

This motherboard provides the following back panel connectors:

PS/2 Keyboard (6-pin female) COM1   COM2A   Speaker   Mic   USB0 USB1
                                                                        Line-in
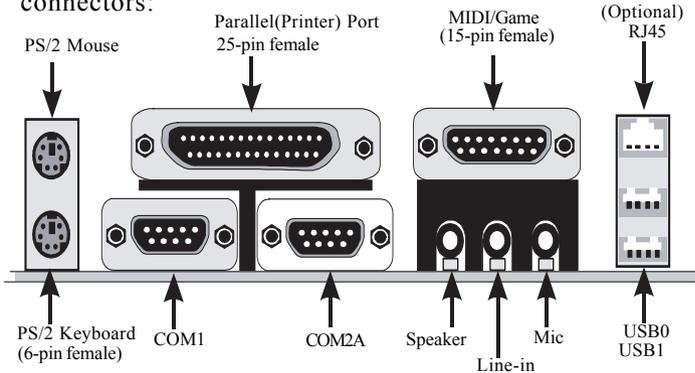
1.7.1.1 PS/2 Mouse / Keyboard CONN.

The motherboard provides a standard PS/2 mouse / Keyboard mini DIN connector for attaching a PS/2 mouse. You can plug a PS/2 mouse / Keyboard directly into this connector.

1.7.1.2 USB Ports: USB0/1

The motherboard provides a OHCI(Open Host Controller Interface)Universal Serial Bus Roots for attaching USB devices such as a keyboard, mouse and other USB devices. You can plug the USB devices directly into this connector.

1.7.1.3 Serial Interface Port: COM1/COM2A

The serial interface port is sometimes referred to as an RS-232 port or an asynchronous communication port. Mice, printers, modems and other peripheral devices can be connected to a serial port. The serial port can also be used to connect computer systems together . If you like to transfer the contents of your hard disk to another system, it can be accomplished with serial port.

COM1/2A

1.7.1.4 Parallel Interface Port

Unlike serial ports, parallel interface ports have been standardized and should not present any difficulty interfacing peripherals to your system. Sometimes called a Centronics port, the parallel port is almost exclusively used with printers. The parallel port on your system is a 25-pin, DB 25 connector.

1.7.1.5 Joystick / Midi Connector

You can connect a joystick or game pad to this connector.

1.7.1.6 Audio Port Connectors

Speaker out is a connector for Speakers or Headphones. Line in is used for external CD player, Tape player, or other audio devices. Mic is a connector for the microphones.

1.7.2 ATX Main Power Connectors: PW1/PW2

This connector supports the power button on-board. Using the ATX power supply, functions such as Modem Ring Wake-Up and Soft Power Off are supported on this motherboard . This power connector supports instant power-on functionality, which means that the system will boot up instantly when the power connector is inserted on the board. ATX 4-pin power connector only support +12V voltage.

Pin PW1 Signal		Pin PW1 Signal	
1	GND	2	GND
3	+12V	4	+12V

Pin PW2 Signal		Pin PW2 Signal	
1	3.3V	11	3.3V
2	3.3V	12	-12V
3	GND	13	GND
4	5V	14	PS-ON
5	GND	15	GND
6	5V	16	GND
7	GND	17	GND
8	PW-OK	18	-5V
9	5V_SB	19	5V
10	12V	20	5V

Note:
When you set up P4 power supply, both PW1 and PW2 must be connected to power.

Important:
To switch on your power supply, please make sure:
1. Memory Module is properly installed.
2. Power supply setup is OK.

1.7.3 Floppy Disk Connector: FDD

This connector supports the provided floppy drive ribbon cable. After connecting the single end to the board, connect the two plugs on the other end to the floppy drives.

1.7.4 Hard Disk Connectors: IDE1/IDE2

These connectors are provided with IDE hard disk ribbon cable into the package . After connecting the end of cable with single connector to the mainboard, connect the other two connectors at the other end to your hard disk. If you install two hard disks, you must configure the second drive to Slave mode by setting its jumper settings. BIOS now supports SCSI device or IDE CD-ROM boot up (see "HDD Sequence SCSI/IDE First" & "Boot Sequence" in the BIOS Features Setup of the BIOS SOFTWARE).

1.7.5 Fan Connectors: FAN1~2

Pin	Definition
1	**Signal**
2	**+12VDC**
3	**Ground**
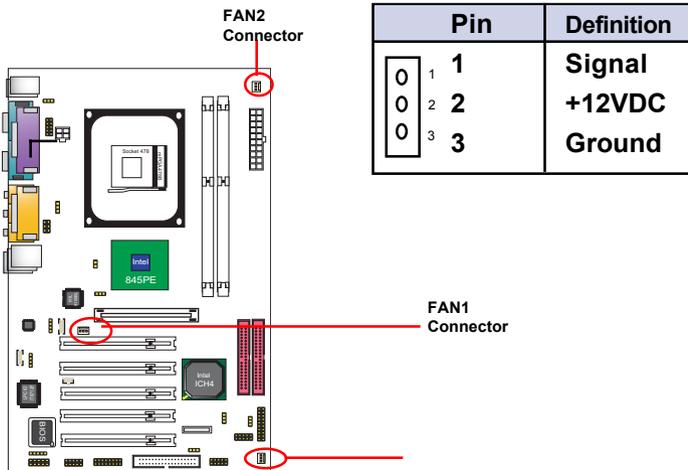
FAN1, FAN2 and FAN3 connectors

1.7.6 CD Audio-In Connectors: CDIN1/CDIN2

CDIN1 and CDIN2 are the connectors for CD-Audio Input signal. Please connect them to CD-ROM CD-Audio output connector. CDIN1 and CDIN2 have the same pin assignment but different pin pitch.

Pin CDIN1	Definition
1	CD-L
2	GND
3	GND
4	CD-R

Pin CDIN2	Definition
1	GND
2	CD-L
3	GND
4	CD-R

1.7.7 Wake On LAN Connector: CN2

CN2 is an Wake On LAN (WOL) connector for transmitting the Ring signal from a PCI LAN card to wake up system. If you use a PCI LAN card for system networking, you can connect this Wake On LAN connector with the PCI LAN card on board for Wake On LAN function.

CDIN1/CDIN2

1   1

CN2: Wake On LAN Connector
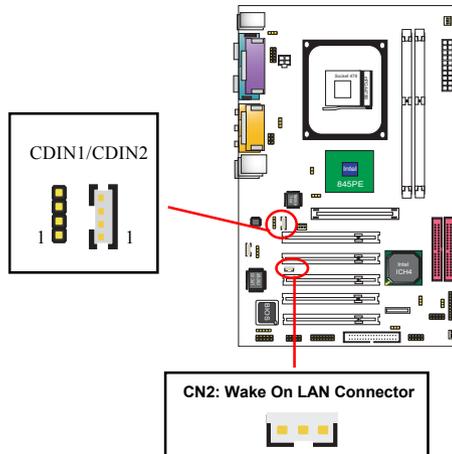
1.7.8 USB Pin Headers: USB1 & USB2

USB1 and USB2 are 2x5 Pin Headers for support of external USB ports. Each USB pin header requires a USB cable for expansion of two USB ports. This optional USB cable is available from your motherboard dealer or vendor.

	USB1			USB2	
	1	**2**		**1**	**2**
Vcc5	○	○	**GND**	**Vcc5** ○ ○ **GND**	
USB4-	○	○	**GND**	**USB2-** ○ ○ **GND**	
USB4+	○	○	**USB5+**	**USB2+** ○ ○ **USB3+**	
GND	○	○	**USB5-**	**GND** ○ ○ **USB3-**	
GND	○	○	**Vcc5**	**GND** ○ ○ **Vcc5**	
	9	**10**		**9** **10**	
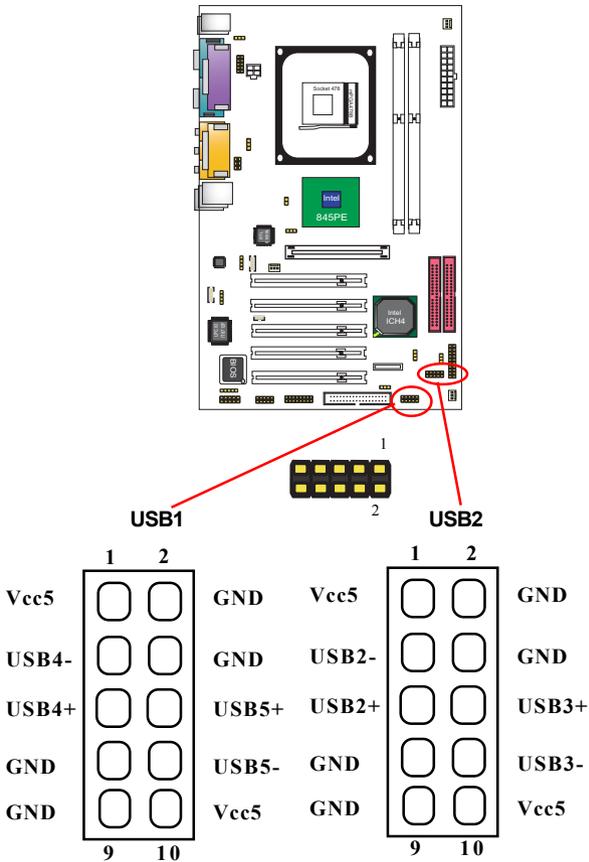
1.7.9 Front Panel Connectors: PANEL1

Front Panel Connectors

20	(+) G LED		19
18		RST (+)	17
16	(+) G-BUN	(+)	15
14	HD LED		13
12	(Void)		11
10		(Void)	9
8	SPEAKER	PW LED	7
6			5
4	(+)	(+)	3
2	PS SW	(+)	1
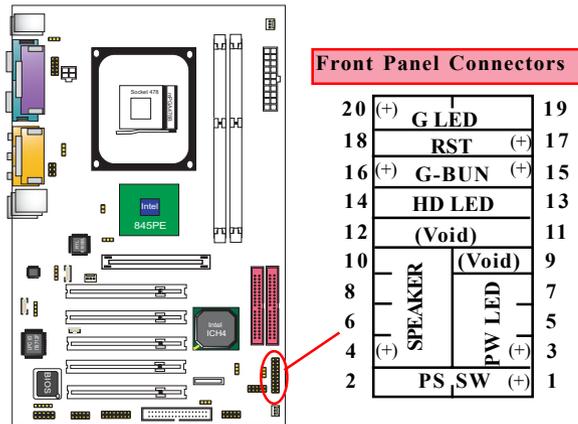
PSSW

The system power is controlled by a momentary switch connected to this lead. Pushing the button once will switch the system ON.

Power LED Lead (PW_LED)

The system power LED lights when the system power is on.

Speaker Connector (SPEAKER)

The speaker (onboard or offboard) provides error beep code information during the Power Self-Test when the computer cannot use the video interface. The speaker is not connected to the audio subsystem and does not receive output from the audio subsystem.

Hard Drive LED Connector (HD_LED)

This connector supplies power to the cabinet IDE activity LED. Read and write activity by devices connected to the Primary or Secondary IDE connectors will cause the LED to light up.

SMI Suspend Switch Lead (G-BUN) (Disabled)

This allows the user to manually place the system into a suspend mode of Green mode. System activity will be instantly decreased to save electricity and expand the life of certain components when the system is not in use. This 2-pin connector (see the figure) connects to the case-mounted suspend switch. If you do not have a switch for the connector, you may use the "Turbo Switch" instead since it does not have a function. If you want to use this connector, the "Suspend Switch" in the Power Management Setup of the BIOS SOFTWARE section should be enabled.

Reset Switch Lead (RST)

The connector can be connected to a reset switch. Press this reset switch to restart system.

1.7.10 IR infrared module: IR1 Connector

This connector supports the optional wireless transmission and reception infrared module. You must configure the setting through the BIOS setup to use the IR function.

Pin	Assignment
1	+5V
2	N/A
3	IRRX
4	GND
5	IRTX
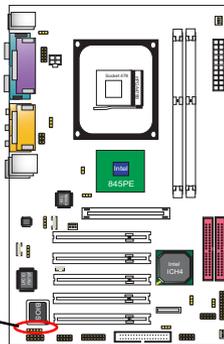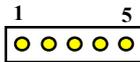
1.7.11 Smart Card Connector: SC1 (optional)

This optional connector supports the Smart Card function providing the connection with aan external Smart card.

1.7.12 Audio-in Connectors: AUXIN1 & VOIN1

No.17 AUXIN1 and No.18 VOIN1 are connectors supporting supporting the external audio-out devices.
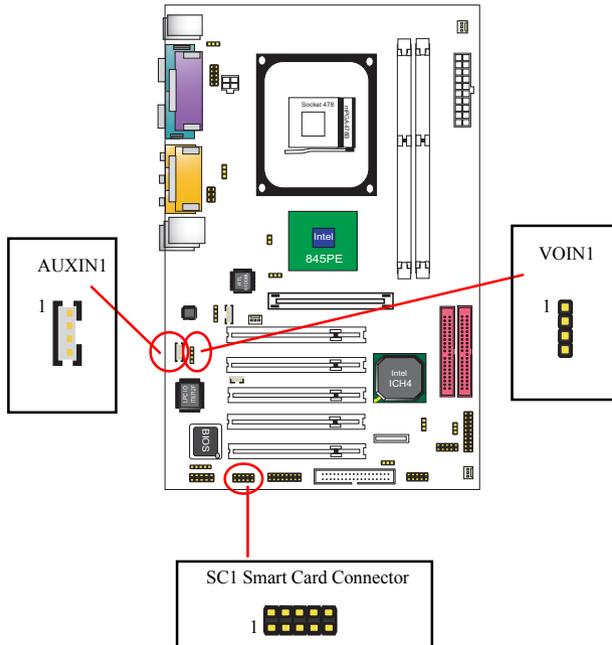
1.7.13 Smart Panel Connectors (optional):
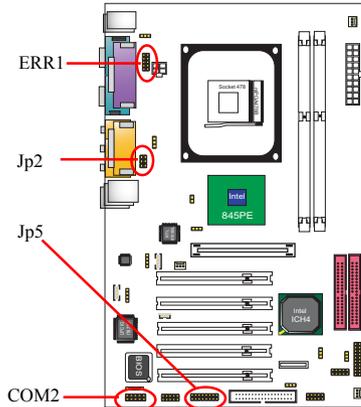
(No. 21 COM2,No.23 Jp5, No.33 Jp2, No. 35 ERR1)

The motherboard provides the pin leads COM2, Jp2, Jp5 and ERR1 for Smart Panel connection. If you want POST Error Code or Smart Panel function, please refer to Smart Panel manual (version 2.0).

1.7.13.1 Front COM2 Header Connector: COM2
For Smart Panel Serial connector to M/B COM2.

Pin	Assignment	Pin	Assignment
1	DCD	2	RX
3	TX	4	DTR
5	GND	6	DSR
7	RTS	8	CTS
9	RI		

1.7.13.2 SPII Printer Error LED Port: ERR1
For Smart Panel connector ERR1 to M/B ERR1.

Pin	Assignment	Pin	Assignment
1	ERD4	2	ERD0
3	ERD5	4	ERD1
5	ERD6	6	ERD2
7	ERD7	8	ERD3
9	GND	10	NC

1.7.13.3 Second BIOS Connector: Jp5
For Smart Panel connector Jp5 to M/B Jp5.

Pin	Assignment	Pin	Assignment
1	VCC3	2	+5V
3	PCI_RST#	4	33MHz
5	CLAD0	6	P66DET
7	CLAD1	8	S66DET
9	GND	10	GND
11	CLAD2	12	HINT
13	CLAD3	14	FWH_IDD1
15	CLAD4	16	VCC3

1.7.13.4 Audio/Mic Auto Connector: Jp2
For Smart Panel connector Jp2 to M/B Jp2.

Pin	Assignment	Pin	Assignment
1	LINE_OUT_L	2	LINE_OUT_R
3	LINE_IN_L	4	LINE_IN_R
5	MIC_IN_L	6	MIC_IN_R

1.7.14 CMOS Function Selector: Jp10

When you have problem with booting system, you may clear CMOS to restore the optimum default BIOS data.
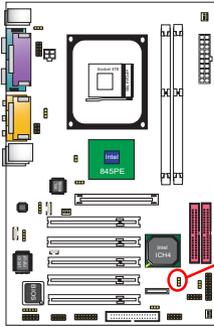
Pin Jp10		Function
1-2 closed		Normal (Default)
2-3 closed		Clear CMOS

1. Remove the Jumper cap of Jp10 from 1-2.
2. After 1 or two seconds, set Jp10 to 2-3 closed with the jumper cap.
3. After 1 or two seconds, restore the Jp10 to 1-2 closed.
   Now, the CMOS RAM has restored to the optimum default setting.

1.7.15 Keyboard/Mouse Wake-up selector: Jp3

Jp3 is designed to wake up system by Keyboard/Mouse:
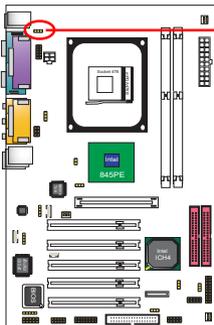
Pin Jp3	Function
2-3 closed	Enabled
1-2 closed	Disabled (default)

1.7.16 CPU Clock Frequency Selector: Jp7

Overclocking is to operate a CPU with a frequency which surpass the default CPU clock. Jp7 jumper is designed to offer a chance for CPU overclocking.when starting system.

If a 100MHz CPU is used on board, setting Jp7 to 1-2 closed or 2-3 closed will not offer a chance of overclocking from 100MHz to 133MHz. Only if Jp7 is set at all pins open, there will be a chance of starting the system with 133MHz.

NOTE:
1. Intel usually provides CPUs with locked CPU frequency so as to forbid CPU overclock. We therefore don't recommend users to do CPU overclocking on Intel CPU because you may risk CPU damage.
2. However, if you are going to do overclocking, please make sure your CPU multiplier is unlocked.

Jp7 Setting	1-2 closed	2-3 closed	Open
CPU(MHz)	Auto-detect (default)	100 MHz	133 MHz

1.7.17 USB2 Wake-up Selector: Jp11

Jp11 is designed to select the USB2 wake up function:
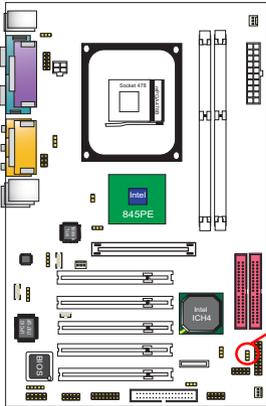
Pin Jp11		Function
1-2 closed		Disabled (Default)
2-3 closed		Enabled

1.7.18 USB1 Wake-up Selector : Jp8

Jp8 is designed to select the USB1 wake up function:
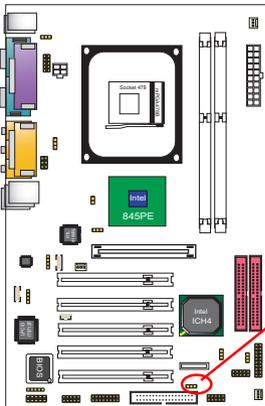
Pin Jp8	Function
1-2	Disabled (default)
2-3	Enabled

1.7.19 Ports USB0/1 Wake-up Selector: Jp4

Jp4 is designed to select the USB2 connector voltage:
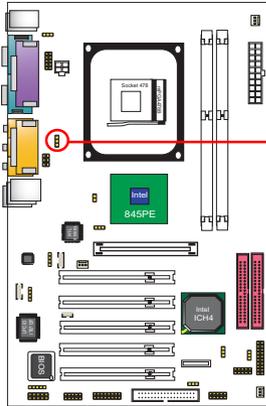
Pin Jp4		Function
1-2 closed		Disabled (Default)
2-3 closed		Enabled

Chapter 2
BIOS Setup

2. BIOS Setup

2.1 BIOS Support

This chapter discusses the Award BIOS Setup program built in the ROM BIOS. The Setup program allows the user to modify the basic system configuration. The modification is then stored in battery-backed RAM so that it can retain the setup information after the power is turned off. The Award BIOS installed in your computer system ROM (Read Only Memory)is a custom version of an industry standard BIOS. The BIOS provides critical low-level support for standard devices such as disk drives and serial and parallel ports. This chapter is intended for guiding you through the process of configuring your system BIOS.

Plug and Play Support

This AWARD BIOS supports the Plug and Play Version 1.0A specification. ESCD(Extended System Configuration Data) write is also supported.

EPA Green PC Support

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

PCI Bus Support

This AWARD BIOS also supports Version 2.1 of the Intel PCI (Peripheral Component Interconnect)local bus specification.

APM Support

This AWARD BIOS supports Version 1.1&1.2 of the Advanced Power Management(APM) specification.Power management features are implemented via the System Management Interrupt(SMI). Sleep and Suspend power management modes are supported. Power to the hard disk drives and video monitors can be managed by this AWARD BIOS.

DRAM Support

SDRAM (Synchronous DRAM) are supported.

CPU Support

This AWARD BIOS supports the Intel P4 Processor.

Setup Menu

In general, you use the arrow keys to highlight items of the Main BIOS Setup Menu, 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 in the Setup program by using the keyboard.

Note:

> **(BIOS version 1.0 is for reference only. If there is a change in BIOS version, please use the actual version on the BIOS.)**

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 item you desired
PgUp key	Increase the numeric value or make changes
PgDn key	Decrease the numeric value or make changes
+Key	Increase the numeric value or make changes
-Key	Decrease the numeric value or make changes
Esc Key	Main menu-Quit and 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 fail-safe defaults from BIOS default
	table
F7 Key	Load the optimized defaults
F10 Key	Save all the CMOS changes and exit

2.2 Main Menu

Once you enter AWARD BIOS CMOS Set up Utility, the Main Menu will appear on the screen and allows you to select from several setup function. Use the arrow keys to select the items and press<Enter> to enter the sub-menu.

> *Attention:*
> *The information about BIOS defaults in this manual is just for reference, please refer to the BIOS installed on board for default BIOS confirmation.*

Phoenix - AwardBIOS CMOS Setup Utility

▶ **Standard CMOS Features**	▶**Frequency/Voltage Control**
▶ **Advanced BIOS Features**	**Load Fail-safe Defaults**
▶ **Advanced Chipset Features**	**Load Optimized Defaults**
▶**Integrated Peripherals**	**Set Supervisor Password**
▶**Power Management Setup**	**Set User Password**
▶**PNP/PCI Configurations**	**Save & Exit Setup**
▶ **PC Health Status**	**Exit without Saving**

Esc : Quit　　F9: Menu in BIOS　　　　　　←→↑↓: Select Item
F10 : Save & Exit Setup
Time , Date , Hard Disk Type ...

Standard CMOS Features
    This setup page includes all the items in standard compatible BIOS.

Advanced BIOS Features
    This setup page includes all the items of the BIOS special enchanced features.

Advanced Chipset Features
    This setup page includes all the items of the Chipset special enchanced features.

Integrated Peripherals
    This selection page includes all the items of the IDE hard drive and Programmed Input/Output features.

Power Management Setup
    This setup page includes all the items of the power manage ment features.

PnP/PCI Configurations
    This setup page includes the user defined or default IRQ Setting.

PC Health Status
    This page shows the hardware Monitor information of the system.

Frequency/Voltage Control
    This setup page controls the CPU's clock and frequency ratio.

Load Fail-safe Defaults
    Use this menu to load the BIOS default values for the minimal/stable performance for your system to operate.

Load Optimized Defaults

These settings are for configuring a workable computer when something is wrong. If you cannot boot the computer successfully, select the BIOS Setup options and try to diagnose the problem after the computer boots. These settings do not provide optional performance.

Set Supervisor/User Password

Change, set, or, disable password. It allows you to limit access to the system and Setup, or just to Setup.

Save & Exit Setup

Save CMOS value changes to CMOS and exit setup.

Exit Without Saving

Abandon all CMOS value changes and exit setup.

2.3 Standard CMOS Features

This main option in the Standard CMOS Setup Menu is divided into 10 fields or items. Each field provides one or more setup choices. Use the arrow keys to highlight the field and then use the <PgUp> or <PgDn> keys to select the value or choice.

Phoenix - AwardBIOS CMOS Setup Utility

Standard CMOS Features

Date(mm:dd:yy)	Tue,Jun 6 2002	Item Help
Time (hh:mm:ss)	11:26:10	
		Menu Level
IDE Primary Master	None	
IDE Primary Slave		Change the day,
IDE Secondary Master		month,year
IDE Secondary Master	None	and century.
Drive A	1.44M,3.5 in	
Drive B	None	
Floppy 3	Disabled	
Video	EGA/VGA	
Halt On	All,But Keyboard	
Base Memory	640K	
Extended Memory	65472K	
Total	1024K	

←→↑↓: Move   Enter:Select   +/-/PU/PD:Value   F10:Save   ESC:Exit F1:General Help
F5:Previous Values   F6:Fail-Safe Defaults   F7:Optimized Defaults

Main Menu Selections

Item	Options	Description
Date (mm : dd :yy)	Month Day Year	Set the system,date. Note that the 'Day' automatically changes when you set the data.
Time (hh : mm : SS)	Hour Minute Second	Select the hour, minute and second of the time.
IDE Primary Master	Options are in its sub menu.	Press<Enter> to enter sub menu.
IDE Primary/ Slave	Options are in its sub menu.	Press<Enter> to enter sub menu.
IDE Second-ary Master	Options are in its sub menu.	Press<Enter> to enter sub menu.
IDE Second-ary Slave	Options are in its sub menu.	Press<Enter> to enter sub menu
Drive A Drive B	None 360K,5.25in, 1.2M,5.25in 720K,3.5M 1.44M,3.5in 2.88M,3.5in	Select the type of floppy disk drive installed in your system.
Floppy 3 Mode Support	Disabled Driver A Driver B Both	Disable or support the 3rd floppy mode in Drive A, or Drive B or both.
Video	EGA/VGA CGA 40 CGA 80 MONO	Select the default video device.

Item	Options	Description
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.
Base Memory	(640K)	The amount of conventional memory detected during boot up.
Extended Memory	(65472K)	The amount of conventional memory detected during boot up.
Total Memory	(1024K)	The total memory available in system.

IDE Primary(Master/Slave)/Secondary(Master/Slave)

Press Enter on these items to show the following sub-menu:

Primary Master/Secondary

IDE HDD Auto-Detection	Press Enter	Item Help
IDE Primary Master	Auto	
Access Mode	Auto	Menu Level
Capacity	13022MB	
Cylinder	25232	
Head	16	
Precomp	0	
Landing Zone	25231	
Sector	61	

←→↑↓: Move   Enter:Select   +/-/PU/PD:Value   F10:Save   ESC:Exit   F1:General Help
F5:Previous Values   F6:Fail-Safe Defaults   F7:Optimized Defaults

IDE HDD Auto-Detection

Press Enter on this item to let BIOS auto-detect your Hard Disk and show all the Primary Hard Disk Parameters (Capacity, Cylinder, Head, Precomp, Landing Zone, Sector) on the menu.

IDE Primary(Master/Slave) / Secondary(Master/Slave)

This item allows you to detect the Hard Disk in 3 ways.

The Choices: Auto: BIOS Auto-detect HDD;

None: No Hard Disk detected;

Manual: Manually detect HDD

Access Mode

This item allows you to select the Access mode to the Hard Disk..

The Choices:

CHS: Select the Cylinder, Head, Sector addressing mode to access Hard Disk;

LBA: Select the Logical Block Addressing mode to access Hard Disk.

Large: Select Large Mode to access Hard Disk;

Auto: Allow BIOS to auto-access Hard Disk;

Capacity

Showing the capacity of Hard Disk in MB.

Cylinder

Showing the number of cylinder in the Hard Disk.

Head

Showing the number of heads in the Hard Disk.

Precomp

The number of Pre-compensation.

Landing Zone

Number of Landing zone in the Hard Disk.

Sector

The number of Sector in the Hard Disk.

2.4 Advanced BIOS Features

Phoenix - AwardBIOS CMOS Setup Utility
Advanced BIOS Features

Virus Warning	Disabled	Item Help
CPU L1 & L2 Cache	Enabled	
Quick Power On Self Test	Enabled	
First Boot Device	Floopy	
Second Boot Device	HDD-0	
Third Boot Device	LS-120	
Boot Other Device	Enabled	
Swap Floppy Drive	Disabled	
Boot Up Floppy Seek	Disabled	
Boot Up NumLock Status	On	
Gate A20 Option	Fast	
Typematic Rate Setting	Disabled	
X Typematic Rate (Chars/Sec)	6	
X Typematic Delay (Msec)	250	
Security Option	Setup	
OS Select For DRAM >64MB	Non-OS2	
HDD S.M.A.R.T. Capability	Disabled	
EPA / (H/W Monitor) Show	Disabled	

←→↑↓: Move   Enter:Select   +/-/PU/PD:Value   F10:Save   ESC:Exit F1:General Help
F5:Previous Values   F6:Fail-Safe Defaults   F7:Optimized Defaults

Virus Warning

This option 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 this area, BIOS will show a warning message on screen and alarm beep.
The Choices:
Disabled(default), Enabled.

CPU L1 & L2 Cache
These fields allow you to Enable or Disable the CPU's L1(Internal) / L2(External) cache to provide better performance.
 The choices:
 Enabled(default); Disabled

Quick Power On Self Test
This category speeds up Power on self-Test(POST) after you power up the computer. If it is set to Enabled, BIOS will shorten or skip some check items during POST.
 The choices:
 Enabled(default); Disabled

First/Secondary/Third Boot Device
This BIOS attempts to load the operating system from the devices in the sequence selected in these items.
 The Choices:
 Floppy(default), LS120, HDD-0, SCSI, CDROM, HDD-1, HDD-2, HDD-3, ZIP100, LAN, USB-FDD, USB-Zip, USB-CDROM, USB-HDD, Disabled.

Boot Other Device
Allows user to set booting from other devices.
 The Choices:
 Enabled(default), Disabled.

Swap Floppy Drive
If the system has two floppy drives, you can swap the logical drive name assignments.
 The Choices:
 Disabled(default), Enabled.

Boot Up Floppy Seek
If enabled, this item allows BIOS to test floppy drives to determine whether they have 40 or 80 tracks.
 The Choices:
 Disabled(default), Enabled.

Boot Up NumLock Status
Select power on state for Numlock..
The Choices
On (default): Numpad is number keys;
Off: Numpad is arrow keys;

Gate A20 Option
Select if chipset or keyboard controller should control Gate A20.
The choices:
Normal: A pin in the keyboard controller controls Gate A20.
Fast (default): Lets chipset control Gate A20.

Typematic Rate Setting
Allows user to adjust the key stroke repeat rate.
The choices:
Enabled: Enabled this option to adjust the keystroke repeat rate; Disabled (default): Disabled.

Typematic Rate (Char/Sec)
Range between 6**(default)** and 30 characters per second. This option controls the speed of repeating keystrokes.

Typematic Delay (Msec)
This option sets the time interval for displaying the first and the second characters.
The Choices: 250(default), 500, 750, 1000.

Security Option
This category allows you to determine whether to use password access the system and Setup,or just Setup.
The choices:
System: To access system and BIOS Setup with correct password.
Setup (default): To access BIOS Setup with correct password.

OS Select For DRAM >64MB
Select the operating system that is running with greater than 64MB of RAM on the system.
The Choices: Non-OS2(default), OS2.

HDD S.M.A.R.T. Capability
Allows user to choose the Self-monitoring Analysis and Reporting Technology for Hard Disk Drive.
The choices: Disabled(default); Enabled

EPA / (H/W Monitor) Show
Use this item to enable/disable the Environmental Protection Association (EPA) / Hardware Monitor) logo on initiating screen..
The choices: H/W Monitor; EPA Logo

2.5 Advanced Chipset Features

This section allows you to configure the system based features of the installed chipset. This chipset manages bus speeds and access to system memory resources, such as DRAM and external cache. It also coordinates communications of the PCI bus. It must be stated that these items should never be altered. The default settings are set up to provide the best operating conditions for your system. The time you might need to make any changes would be if you discover that data is lost while using your system.

Phoenix - AwardBIOS CMOS Setup Utility
Advanced Chipset Features

		Item Help
DRAM Timing Selectable	By SPD	
CAS Latency Time	2	
Active to Precharge Delay	6	
DRAM RAS# to CAS# Delay	3	
DRAM RAS# Precharge	3	
Turbo Mode	Disabled	
Memory Frequency for	Auto	
System BIOS Cacheable	Enabled	
Video BIOS Cacheable	Disabled	
Memory Hole At 15M-16M	Disabled	
Delayed Transaction	Enabled	
Delay Prior to Thermal	16 Min	
AGP Aperture Size (MB)	128MB	
** On-Chip VGA Setting **		
On-Chip VGA	Enabled	
On-Chip Frame Buffer Size	8MB	
Boot Display	Auto	

←→↑↓: Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5:Previous Values F6:Fail-Safe Defaults F7:Optimized Defaults

DRAM Timing Selectable
Use this item to select the DRAM Timing mode.
The Choices:
By SPD: DRAM Timing is by Serial Presence Detect (SPD) which is located on the memory module itself.
Manual: DRAM Timing is set manually with the options following this item below.

CAS Latency Time
This item is to set CAS (Column Access Stroke) Latency time.
The Choices: Auto; 1.5; 2; 2.5;

Active to Precharge Delay
This item is to set Active to Precharge Delay cycle.
The Choices: Auto; 7; 6; 5

DRAM RAS# to CAS# Delay
This item is to set the DRAM RAS (Row Access Stroke) to CAS (Column Access Stroke) Delay cycle.
The Choices: Auto; 3; 2

DRAM RAS# Precharge
This item is to set the DRAM RAS Precharge cycle.
The Choices: Auto; 3; 2

TurboMode
Use this item to disable/enable the Turbo Mode .
The Choices: Disabled(default); Enabled.

Memory Frequency For
This item is to set the DRAM frequency.
The Choices: Auto(default); DDR266; DDR333 (if DDR333 is applied)

System BIOS Cacheable
When enabled, the access to the system BIOS ROM address at F0000H-FFFFFFH is cached.
The Choices: Enabled(default), Disabled.

Video BIOS Cacheable
Enabled: Enable Video BIOS Cacheable.
Disabled (default):Disable Video BIOS Cacheable.

Memory Hole At 15-16M
In order to improve performace, certain space in memory can be reserved for ISA cards. This memory must be mapped into the memory's space below 16MB.
The Choices: Disabled(default); Enabled.

Delayed Transaction
This item is to enable/disable the Delayed Transaction function.
The Choices: Enabled (default), Disabled.

Delay Prior to Thermal
This item is to set the Delay Prior to Thermal cycle.
The Choices: 4min; 8min; 16min(default); 32min.

AGP Aperture Size
Select the size of the Accelerated Graphic Port(AGP) aperture . The aperture is a portion of the PCI memory address range dedicated for graphics memory address space. Host cycle that hit the aperture range are forwarded to the AGP without any translation.
The Choices: 128MB(default); 64MB,;32MB; 16MB; 8MB; 4MB;256MB

On-Chip VGA
Enable or disable the On-chip VGA.
The Choices: Enabled (default); Disabled.

On-Chip Frame Buffer Size
If the Window Size is not disabled, this item is to set the Frame Buffer size.
The Choices: 1MB; 8MB(default)

Boot Display
Select the Boot Display mode
The Choices: Auto (default); CRT; TV; EFP .

2.6 Integrated Peripherals

Phoenix - AwardBIOS CMOS Setup Utility
Integrated Peripherals

		Item Help
Onchip Primary PCI IDE	Enabled	
IDE Primary Master PIO	Auto	
IDE Primary Slave PIO	Auto	
IDE Primary Master UDMA	Auto	
IDEPrimary Slave UDMA	Auto	
On-Chip Secondary PCI IDE	Enabled	
IDE Secondary Master PIO	Auto	
IDESecondary Slave PIO	Auto	
IDE Secondary Master UDMA	Auto	
IDE Secondary Slave UDMA	Auto	
USB Controller	Enabled	
USB 2.0 Controller	Enabled	
USB Keyboard Support	Disabled	
AC97 Audio	Auto	
AC97 Modem	Auto	
RTL8100LAN Chip	Disabled	
Init Display First	PCI Slot	
Onboard AC97 Codec	Enabled	
IDE HDD Block Mode	Enabled	
Onboard FDC Controller	Enabled	
Onboard Serial Port 1	3F8/IRQ4	
Onboard Serial Port 2	2F8/IRQ3	
UART Mode Select	Normal	
UR2 Duplex Mode	Half	
Onboard Parallel Port	378/IRQ7	
Parallel Port Mode	ECP	
ECP Mode Use DMA	3	
PWRON After PWR-Fail	Off	
Game Port Address	201	
MIDI Port Address	330	
MIDI Port IRQ	10	

←→↑↓: Move   Enter:Select   +/-/PU/PD:Value   F10:Save   ESC:Exit   F1:General Help
F5:Previous Values   F6:Fail-Safe Defaults   F7:Optimized Defaults

On-Chip Primary PCI IDE
Use this item to enable or disable the primary IDE channels that are integrated on the mainboard.
The Choices: Enabled (default); Disabled

IDE Primary Master/Slave PIO
Auto (default):BIOS will automatically detect the IDE HDD Accessing mode.
Mode 0~4: Manually set the IDE Accessing mode.

IDE Primary Master/Slave UDMA

Auto (default):BIOS will automatically enable Ultra DMA mode of the IDE HDD Accessing .
Disabled: UDMA mode is disabled

On-Chip Secondary PCI IDE
Use this item to enable or disable the secondary IDE channels that are integrated on the mainboard.
The Choices: Enabled (default); Disabled

IDE Secondary Master/Slave PIO
Auto (default):BIOS will automatically detect the IDE HDD Accessing mode.
Mode 0~4: Manually set the IDE Accessing mode.

IDE Secondary Master/Slave UDMA
Auto (default):BIOS will automatically enable the Ultra DMA mode of the IDE HDD Accessing mode.
Disabled: Ultra DMA disabled.

USB Controller
Use this item to enable or disable the USB Controller.
The Choices: Enabled (default); Disabled

USB 2.0 Controller

If USB Controller is enabled, use this item to enable or disable USB 2.0 controller.

The Choices: Enabled (default); Disabled

USB Keyboard Support

If USB Controller is enabled, use this item to enable or disable the USB Keyboard Support.

The Choices: Enabled (default); Disabled

AC97 Audio / Modem

Use this item to enable/disable the AC97 Audio/Modem function.

The Choices: Auto(Automatically enabled); Disabled

RTL8100 LAN Chip

Use this item to enable/disable the onboard RTL8100 LAN chip.

The Choices: Disabled; Enabled

Init Display First

Use this item to enable or disable the onboard USB controller.

The Choices: PCI Slot(default); Onboard/ AGP

Onboard AC'97 Codec

Use this item to enable or disable the onboard AC'97 Codec.

The Choices: Enabled(default); Disabled

IDE HDD Block Mode

If your IDE HDD supports block mode select, enabled is for automatic detection of the optimal number of block read/write per sector the drive can support..

The Choices: Enabled(default); Disabled

Onboard FDC Controller

The choices: Enabled (default) Disbled

Onboard Serial Port 1/2

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

The Choices: Auto; 3F8/IRQ4; 2F8/IRQ3; 3E8/IRQ4; 2E8/ IRQ3; Disabled.

UART Mode Select
This item allows you to select which Infra Red(IR) function of the onboard I/O chip you wish to use.
The Choices: Normal(default), IrDA, SCR, ASKIR.

UR2 Duplex Mode
This item allows you to select which Infra Red(IR) function of the onboard I/O chip you wish to use.
The Choices: Half (default), Full.

Onboard Parallel Port
This item allows you to select the onboard parallel port and IRQ.
The Choices: 378/IRQ7; 278/IRQ5; 3BC/IRQ7; Disabled

Parallel Port Mode
The choices are for Parallel Port Mode select:
SPP: Using Parallel port as Standard Parallel Port.
EPP: Using Parallel port as Enhanced Parallel Port.
ECP (default): Using Parallel port as ExtendedCapabilites Port.
ECP+EPP: Using Parallel port as ECP+EPP mode.

ECP Mode Use DMA
The Choices: 3(default), 1.

PWRON After PWR-Fail
Set the Power-on mode when power resumes after power fails.:
The choices: Off (default); On; Former-Sts (former status)

Game Port Address
The choices are for setting Game Port Address:
201 (default); 209; Disabled

MIDI Port Address
The choices are for setting MIDI Port Address:
300; 330 (default); Disabled.

MIDI Port IRQ
The choices are for setting MIDI Port IRQ:
10 (default): 5

2.7 Power Management Setup

Phoenix - AwardBIOS CMOS Setup Utility

Power Management Setup

		Item Help
ACPI Function	Enabled	
ACPI Suspend Type	S1(POS)	
Power Management	User Define	
Video Off Method	V/H Sync+Blank	
Video Off In Suspend	No	
Suspend Type	Stop Grant	
Modem Use IRQ	3	
Suspend Mode	Disabled	
HDD Power Down	Disabled	
Soft-off by PWR-BTTN	Instant-off	
Power On By PME	Disabled	
Power On By Modem Ring	Disabled	
Power On By WOL	Disabled	
Power On By USB	Disabled	
Resume by Alarm	Disabled	
X Date (of Month) Alarm	0	
X Time(hh:mm:ss) Alarm	0 : 0 : 0	
Power ON Function	Button Only	
KB Power On Passward	Enter	
Hot Key Power On	Ctrl-F1	
** Reload Global Timer Events **		
Primary IDE 0	Disabled	
Primary IDE 1	Disabled	
Secondary IDE 0	Disabled	
Secondary IDE 1	Disabled	
FDD,COM, LPT Port	Disabled	
PCI PIRQ [A-D]#	Disabled	

←→↑↓: Move   Enter:Select +/-/PU/PD:Value F10:Save   ESC:Exit F1:General Help
F5:Previous Values   F6:Fail-Safe Defaults   F7:Optimized Defaults

ACPI Function

> The choices are for enabling or disabling the Advanced Configuration and Power Management (ACPI).

ACPI Suspend Type
The choices are for setting the ACPI Suspend Type.
S1(Power On Suspend)(default); S3(Suspend To RAM); S1&S3

Power Management
The choices are for setting the Power management mode:
User Define (default); Min Saving; Max Saving.

Video Off Method
The choices are for determining the manner in which the monitor
is blanked.
The choices:
V/H SYNC+Blank (default): Turn off the vertical and horizontal
synchronization ports and write blanks to the video buffer.
Blank Screen: Writes blanks to the video buffer.
DPMS Supported: Initial display power management signaling.

Video Off in Suspend
This field determines when to activate the video off feature for
monitor power management.
The Choices:Always on; No; Yes(default)

Suspend type
Use this item to select the Suspend Type.
The choices: Stop Grant(default); Power On Suspend

Modem Use IRQ
This determines the IRQ, which can be applied in Modem use.
The choices: 3 (default); 4;5; 7; 9; 10; 11; NA

Suspend Mode
Use this item to set the Suspend time.
The choices: Disabled(default); 1~60 min.

HDD Power Down
Use this item to set the HDD Power Down time.
The choices: Disabled(default); 1~15 min..

Soft-off by PWR-BTTN
   Enables you to set the power button function in DOS.
   The Choices: Instant off(default); Delay 4 Sec.

Power On By PME
   Use this item to enable/disable the Power On by PME function.

Power On By Modem Ring
   Use this item to enable/disable the Power On by Modem Ring
   signal.

Power On By WOL
   Use this item to enable/disable the Power On by WOL function.

Power On By USB
   Use this item to enable/disable the Power On by USB function..

Resume by Alarm
   Use this item to enable/disable the RTC Alarm Resume function.
   Date: If RTC Alarm Resume is enabled, set the date with this
   item.
   Time: If RTC Alarm Resume is enabled, set the time with this
   item.

Power On Function
   Use this item to select the Power On Mode.
   The Choices: Button Only; Keyboard 98; Password; Hot Key;
   Mouse Move; Mouse Click; Any Key

KB Power On Password
   Enables you to set the Password by keyboard for Power On.

Hot Key Power On
   Enables you to set the Hot Key for Power On.
   The Choices: Ctrl-F1 ~ Ctrl-F12

Reload Global Timer Events:
When enabled, the following devices listed below will restart the global timer for Standby mode.

Primary IDE 0/1
The choices:Disabled (default); Enabled

Secondary IDE 0/1
The choices:Disabled (default); Enabled.

FDD, COM, LPT Port
The choices: Disabled (default); Enabled

PCI PIRQ[A-D]#
The choices: Disabled (default); Enabled

2.8 PnP/PCI Configurations

This section describes configuration of the PCI bus system. PCI or Personal Computer Interconnect, is a system which allows I/O devices to operate at speeds nearing the speed of the CPU itself when communicating with the components on board. This section covers some very technical items and it is strongly recommended that only experienced users should make any changes to the default settings.

Phoenix - AwardBIOS CMOS Setup Utility

PnP/PCI Configurations

Reset Configuration Data	Disabled	Item Help
Resources Controlled By	Auto(ESCD)	
x IRQ Resources	Press Enter	
PCI/VGA Palette Snoop	Disabled	

←→↑↓: Move   Enter:Select   +/-/PU/PD:Value   F10:Save   ESC:Exit   F1:General Help
F5:Previous Values   F6:Fail-Safe Defaults   F7:Optimized Defaults

Reset Configuration Data

The system BIOS supports the PnP feature so the system needs to record which resource is assigned and proceeds to get rid of resource conflict. Every peripheral device has a node, which is called ESCD (Extended System Configuration Data. This node records which resources are assigned to it. If Disabled (Default) is chosen, the system ESCD will update only when the new configuration varies from the last one. If Enabled is chosen, the system is forced to update ESCDs and then is automatically reset to the "Disabled" mode.

Resources Controlled By

By Choosing "Auto"(default), the system BIOS will detect the system resources and automatically assign the relative IRQ and DMA channel for each peripheral. By choosing "Manual", the user will need to assign IRQ & DMA for add-on cards. Be sure that no IRQ/DMA and I/O port conflict exists.

IRQ Resources :

Press Enter to configure the following Submenus

IRQ Resources

IRQ Resources		Item Help
IRQ-3 assigned to	: PCI Device	
IRQ-4 assigned to	: PCI Device	
IRQ-5 assigned to	: PCI Device	
IRQ-7 assigned to	: PCI Device	
IRQ-9 assigned to	: PCI Device	
IRQ-10 assigned to	: PCI Device	
IRQ-11 assigned to	: PCI Device	
IRQ-12 assigned to	: PCI Device	
IRQ-14 assigned to	: PCI Device	
IRQ-15 assigned to	: PCI Device	

←→↑↓: Move   Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5:Previous Values F6:Fail-Safe Defaults F7:Optimized Defaults

IRQ Resources

When resources are controlled manually, assign each system interrupt a type, depending on the type of device using the interrupt.

PCI / VGA Palette Snoop

Choose Disabled or Enabled. Some graphic controllers which 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.

However, the color information coming from the VGA controller is drawn from the palette table inside the VGA controller to generate the proper colors, and the graphic controller needs to know what is in the palette of the VGA controller. To do this, the non-VGA graphic controller watches for the write access to the VGA palette and registers the snoop data. In PCI based systems, the Write Access to the palette will not show up on the ISA bus if the PCI VGA controller responds to the Write.

In this case, the PCI VGA controller should not respond to the Write, it should only snoop the data and permit the access to be forwarded to the ISA bus. The non-VGA ISA graphi controller can then snoop the data on the ISA bus.Unless you have the above situation, you should disable this option.
The choices: Disabled (default); Enabled

2.9 PC Health Status

Phoenix - AwardBIOS CMOS Setup Utility
PC Health Status

	Item Help
Vccp Vcc 1.5V Vcc 3.3V Vcc 5.0V Vcc 12.0V Vsb 5.0V Voltage Battery System Temperature CPU Temperature Fan 1 Speed Fan 2 Speed Fan 3 Speed	

←→↑↓: Move   Enter:Select   +/-/PU/PD:Value   F10:Save   ESC:Exit F1:General Help
F5:Previous Values   F6:Fail-Safe Defaults   F7:Optimized Defaults

This menu shows the current status of the system, CPU and
CPU Fan. No value in this menu can be changed manually.

Vcc 1.5V/+3.3V/+5V/12V/5Vsb
These items show the respective voltage running on board.

Voltage Battery
These items show the battery voltage used on board.

System/CPU Temp
This item shows the current System/CPU temperature.

FAN1/2/3 Speed
This item shows the fan speed running on board.

2.10 Frequency/Voltage Control

Phoenix - AwardBIOS CMOS Setup Utility
Frequency/Voltage Control

CPU Clock Ratio	8 X	Item Help
Auto Detect PCI CLK	Ensabled	
Spread Spectrum	Disabled	
CPU Clock	100MHz	

←→↑↓: Move   Enter:Select   +/-/PU/PD:Value   F10:Save   ESC:Exit F1:General Help
F5:Previous Values   F6:Fail-Safe Defaults   F7:Optimized Defaults

CPU Clock Ratio
Use this item to set CPU Clock Ratio..
The Choices: 8X to 50X in 1X stepping

Auto Detect PCI CLK
This item allows you to enable/disable auto detect PCI CLOCK.
The Choices: Disabled; Enabled (default)

Spread Spectrum
This function is designed for the EMI test only.
The Choices: Disabled(default); +/- 0.25; +/- 0.35; +/- 0.45; -0.5

CPU Clock
Allows you to set the CPU clock for next boot..
The Choices: 100MHz ~165MHz in 1MHz stepping

2.11 Load Fail-Safe Defaults

When you press <Enter> on this item, you get a confirmation dialog box with a message similar to below:

Phoenix - AwardBIOS CMOS Setup Utility

▶ **Standard CMOS Features**	▶ **Frequency/Voltage Control**
▶ **Advanced BIOS Features**	**Load Fail-safe Defaults**
▶ **Advanced Chipset Features**	**Load Optimized Defaults**
▶ **Integrated Peripherals**	**Set Supervisor Password**
▶ **Power Management Setup**	**Set User Password**
▶ **PNP**	Load Fail-Safe Default (Y/N)? N
▶ **PC Health Status**	**Exit without Saving**

Esc : Quit   F9: Menu in BIOS   ←→↑↓: Select Item
F10 : Save & Exit Setup
Time , Date , Hard Disk Type ...

Pressing 'Y' loads the default values that are factory settings for optimal performance of system operations.

2.12 Load Optimized Defaults

When you press <Enter> on this item, you get a confirmation dialog box with a message similar to:

Phoenix - AwardBIOS CMOS Setup Utility

▶ **Standard CMOS Features**	▶ **Frequency/Voltage Control**
▶ **Advanced BIOS Features**	Load Fail-safe Defaults
▶ **Advanced Chipset Features**	**Load Optimized Defaults**
▶ **Integrated Peripherals**	**Set Supervisor Password**
▶ **Power Management Setup**	**Set User Password**
▶ **PNP/P**	Load Optimized Default (Y/N)? N
▶ **PC Health Status**	**Exit without Saving**

Esc : Quit   F9: Menu in BIOS   ←→↑↓: Select Item
F10 : Save & Exit Setup

Time , Date , Hard Disk Type ...
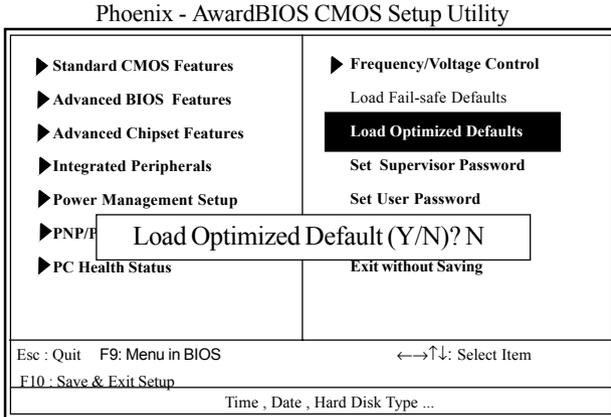
Pressing 'Y' loads the default values that are factory settings for optimal performance of system operations.

2.13 Set Supervisor / User Password

Phoenix - AwardBIOS CMOS Setup Utility

▶ **Standard CMOS Features**	▶ **Frequency/Voltage Control**
▶ **Advanced BIOS Features**	Load Fail-safe Defaults
▶ **Advanced Chipset Features**	**Load Optimized Defaults**
▶ **Integrated Peripherals**	**Set Supervisor Password**
▶ **Power Management Setup**	**Set User Password**
▶ PNP/PCI	Enter Password:
▶ **PC Health Status**	**Exit without Saving**

Esc : Quit   F9: Menu in BIOS   ←→↑↓: Select Item
F10 : Save & Exit Setup

Time , Date , Hard Disk Type ...

When you select this function, the following message will appear at the center of the screen to assist you in creating a password.

Enter Password (for Supervisor/User)

Type a password, up to eight characters, and press <Enter>.The password you type now will clear any previously entered password from CMOS memory. You will be asked to confirm the password. Type the password again and press <Enter>. You may also press <ESC> to abort the selection and not enter a password. To disable the password, just press <Enter> when you are prompted to enter a password. A message will confirm that you wish to disable the password. Once the password is disabled, the system will boot without asking user to enter a password.

Password for System or BIOS Setup

If you select "System" at the Security Option of BIOS Features Setup Menu, you will be prompted for the password every time when the system is rebooted, or any time when you try to enter Setup. If you select "Setup" at the Security Option of BIOS Features Setup Menu, you will be prompted only when you try to enter Setup.

2.14 Save & Exit Setup

Phoenix - AwardBIOS CMOS Setup Utility

▶ **Standard CMOS Features**	▶ **Frequency/Voltage Control**
▶ **Advanced BIOS Features**	Load Fail-safe Defaults
▶ **Advanced Chipset Features**	**Load Optimized Defaults**
▶ Integra Save to CMOS & Exit (Y/N)? Y	
▶ **Power Management Setup**	**Set User Password**
▶ **PNP/PCI Configurations**	**Save & Exit Setup**
▶ **PC Health Status**	**Exit without Saving**

Esc : Quit   F9: Menu in BIOS   ←→↑↓: Select Item
F10 : Save & Exit Setup
Time , Date , Hard Disk Type ...

Typing "Y" will quit the Setup Utility and save the user setup value to RTC CMOS RAM.
Typing "N" will return to the Setup Utility.

2.15 Exit Without Saving

Phoenix - AwardBIOS CMOS Setup Utility

▶ **Standard CMOS Features**	▶ **Frequency/Voltage Control**
▶ **Advanced BIOS Features**	Load Fail-safe Defaults
▶ **Advanced Chipset Features**	**Load Optimized Defaults**
▶ Integrated Peripherals	Set Supervisor Password
▶ Power	Quit Without Saving (Y/N)? N
▶ **PNP/PCI Configurations**	**Save & Exit Setup**
▶ **PC Health Status**	**Exit without Saving**

Esc : Quit   ←→↑↓: Select Item
F10 : Save & Exit Setup

Time , Date , Hard Disk Type ...

Typing "Y" will quit the Setup Utility without saving to RTC
CMOS RAM.
Typing "N" will return to the Setup Utility.

Chapter 3
Drivers & Utilities

3. Drivers & Utilities

There are motherboard drivers and utilities included in the disc attached in this motherboard package. You don't have to install all of them for booting your system. But after you have finished the hardware installation, you have to install an operation system (such as windows XP) before you are able to install any drivers or utilities.

> **Note: Please be aware of the different Procedures for installing drivers for Windows 98/ME/XP/2000 .**

3.1 Auto-run Menu

You can use the auto-run menu in the driver CD attached in the motherboard package. Then choose the utility or driver and select model name. The autorun starting screen looks like below:

3.2 Installing Intelinf

    Enter the item "INTEL CHIPSET INSTALLATION" of the Autorun program and install Intelinf for Intel Chipsets support and Plug-n-Play INF support. Follow the illustrations below :
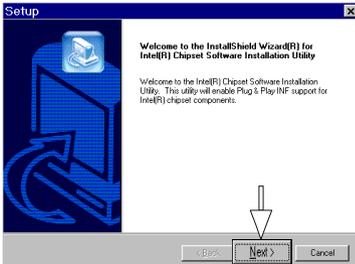

(1)
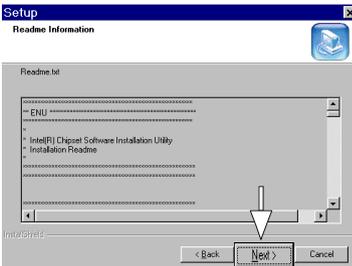**Click "Driver" Item.**
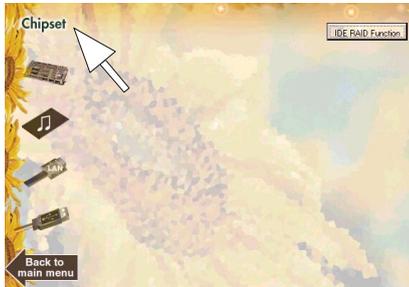
(2)
Click "Chipset" Item.
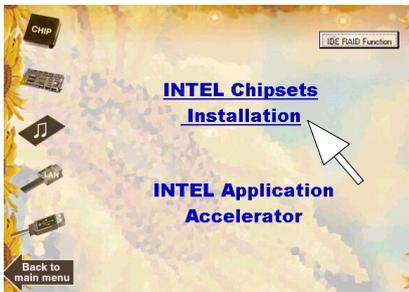
(3)
Click "Intel Chipsets Installation" Item.
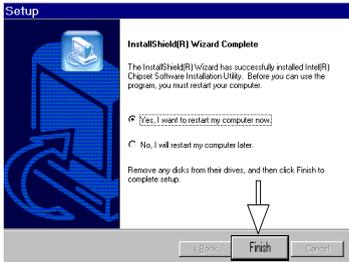
(4)
Click "Next".

(5)
Click "Yes".

(6)
Click "Next".

(7)
Click "Finish".

Note: Install the Intel INF Driver before the Intel Application accelerator Driver.

3.3 Installing Application Accelerator

Install the Intel Application Accelerator for Microsoft Windows 98SE/ME/2000/XP. The program is designed to improve performance of the storage sub-system and overall system performance.
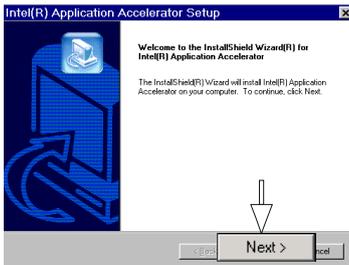

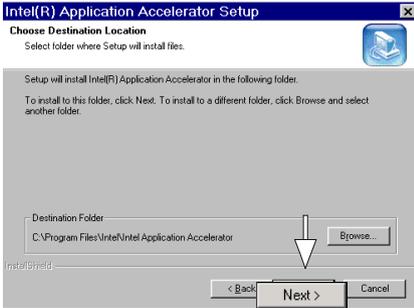**(1)**
Click "Driver" Item.

(2)
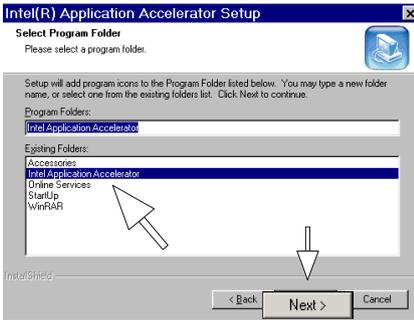**Click "Chipset" Item.**

(3)
Click "Intel Application
Accelerator" Item.

(4)
You will see a pop-up
dialogue of IAA
installation.

(5)
Click "Next".

(6)
Click "Yes".

(7)
Click "Next".

(8)
Click "Finish".

3.4 Installing Audio Driver

This motherboard comes with an AC97 CODEC V2.2, 6-channel compatible. You can find the Audio driver from this Auto-run menu.

(1)
Click "Driver" Item.

(2)
Click "Audio" Item.

(3)
Click "ALC101" Item.
Please note that this
Motherboard shares the
Audio driver ALC650 with
ALC101.

(4)
Click "Next".

(5)
Click "Finish".

3.5 Installing USB 2.0 Device

    Please read carefully the pop-up text file after clicking the item shown on the screen. The text file will notify you how to install your USB devices in your O.S. completely.

(1)
Click the "USB " item.

(2)
Click the "USB 2.0 ICH4 INF Package".

Note: **Please note that this USB 2.0 only supports Win 2000 and Win XP.**

3.5.1 Install USB2.0 driver for Win 2000

```
檔案(F)  編輯(E)  格式(O)  說明(H)
====================================================================================
Install USB2.0 Driver windows 2000 Driver Manually

1. Right click the "My Computer" icon on the desktop.
   When the menu appears click "Properties" item.

2. Select "Hardware" page and then click [Device Manager] button.

3. View device by type and find "PCI Universal Serial Bus" node.

4. Right click the "PCI Universal Serial Bus" node.

5. When the menu appears, click the "Properties" item.

6. Please select [Driver] page and click "Update Driver..." button.

7. When the "Upgrade Device Driver Wizard" window appears, click Next to continue.

8. Select "Search for a suitable driver for ny device(recommended)" option and click Next.
   Choose "Specify a location" check box and then click Next.

   or you can also select "Display a list of the known drivers for this device so that
   I can choose a specific driver" option and click Next. Click "Have Disk..." button.

9. Type or browse the path {CD ROM Drive}:\MB\USD2.0\USD2 to the driver.

10. Follow the instruction to complete the installation.
====================================================================================
```

3.5.2 Install USB2.0 driver for Win XP

```
檔案(F)  編輯(E)  格式(O)  說明(H)
====================================================================================
Install USB2.0 Driver windows XP Driver Manually

1. Click the "Start" button.

2. Right click the "My Computer".
   When the menu appears click "Properties" item.

3. Select "Hardware" page and then click [Device Manager] button.

4. View device by type and find "PCI Universal Serial Bus" node.

5. Right click the "PCI Universal Serial Bus" node.

6. When the menu appears, click the "Properties" item.

7. Please select [Driver] page and click "Update Driver..." button.

8. When the "Upgrade Device Driver Wizard" window appears, click Next to continue.

9. Select "Search for a suitable driver for ny device(recommended)" option and click Next.
   Choose "Specify a location" check box and then click Next.

   or you can also select "Display a list of the known drivers for this device so that
   I can choose a specific driver" option and click Next. Click "Have Disk..." button.

10. Type or browse the path {CD-ROM Drive}:\MB\USB2.0\USB2 to the driver.
```

Appendices

Quick Jumper Setup

Jp9: Keyboard/Mouse Wake-up	
Pin Jp9	**Function**
1-2	**Disabled**
2-3	**Enabled** (**default**)
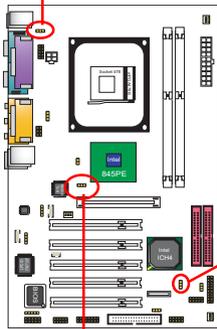
Pin Jp10		Function
1-2 closed		**Normal (Default)**
2-3 closed		**Clear CMOS**

Jp7 Setting	1-2 closed	2-3 closed	Open
CPU(MHz)	Auto-detect (default)	100 MHz	133 MHz

Memo