V170 SBC

Mini-ITX Fanless SBC w/VIA Eden, VIA CX700 Chipset, VGA, LCD, Giga Ethernet and PCI Interface.

User Manual Version 1.0

FCC Statement

This device complies with part 15 FCC rules. Operation is subject to the following two conditions：

- This device may not cause harmful interference.
- 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 against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at him own expense.

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Trademark Acknowledgement

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If the serial number and the product shipping data differ by over 30 days, the in-warranty service will be made according to the shipping date. In the serial numbers the third and fourth two digits give the year of manufacture, and the fifth digit means the month (e. g., with A for October, B for November and C for December).

For example, the serial number 1W07Axxxxxxxx means October of year 2007.

Packing List

Before using this Motherboard, please make sure that all the items listed below are present in your package：

- V170 Motherboard
- User Manual
- User's Manual & Driver CD
- 1 x SATA HDD Cable
- 1 x SATA HDD Power Cable
- 1 x USB cable
- 1 x COM Port cable

If any of these items are missing or damaged, contact your distributor or sales representative immediately.

Customer Service

We provide service guide for any problem as follow steps：

Step1: visit the website at http://www.winmate.com/ to find the update information about the product.

Step2, contact with your distributor, sales representative, or our customer service center for technical support if you need additional assistance. You may have the following information ready before you call：

- Product serial number
- Peripheral attachments
- Software (OS, version, application software, etc.)
- Description of complete problem
- The exact wording of any error messages

In addition, free technical support is available from our engineers every business day. We are always ready to give advice on application requirements or specific information on the installation and operation of any of our products. Please do not hesitate to call or e-mail us.

Safety Precautions

- **Warning!**

Always completely disconnect the power cord from your chassis whenever you work with the hardware. Do not make connections while the power is on. Sensitive electronic components can be damaged by sudden power surges. Only experienced electronic personnel should open the PC chassis.

- **Caution!**

Always ground yourself to remove any static charge before touching the CPU card. Modern electronic devices are very sensitive to static electric charges. As a safety precaution, use a grounding wrist strap at all times. Place all electronic components in a static-dissipative surface or static-shielded bag when they are not in the chassis.

Safety and Warranty

1. Please read these safety instructions carefully.
2. Please keep this user's manual for later reference.
3. Please disconnect this equipment from any AC outlet before cleaning. Do not use liquid or spray detergents for cleaning. Use a damp cloth.
4. For plug gable equipment, the power outlet must be installed near the equipment and must be easily accessible.
5. Keep this equipment away from humidity.
6. Put this equipment on a reliable surface during installation. Dropping it or letting it fall could cause damage.
7. The openings on the enclosure are for air convection. Protect the equipment from overheating. DO NOT COVER THE OPENINGS.
8. Make sure the voltage of the power source is correct before connecting the equipment to the power outlet.
9. Position the power cord so that people cannot step on it. Do not place anything over the power cord.
10. All cautions and warnings on the equipment should be noted.
11. If the equipment is not used for a long time, disconnect it from the power source to avoid damage by transient over-voltage.
12. Never pour any liquid into an opening. This could cause fire or electrical shock.
13. Never open the equipment. For safety reasons, only qualified service personnel should open the equipment.
14. If any of the following situations arises, get the equipment checked by service personnel:
    A. The power cord or plug is damaged.
    B. Liquid has penetrated into the equipment.
    C. The equipment has been exposed to moisture.
    D. The equipment does not work well, or you cannot get it to work according to the user's manual.
    E. The equipment has been dropped and damaged.
    F. The equipment has obvious signs of breakage.
15. Do not leave this equipment in an uncontrolled environment where the storage temperature is below -10°C (-14°F) or above 55°C (131°F). It may damage the equipment.

Revision History

Version	Date	Note	Author
0.1	2007.06.12	✓ Initial Release	Shawn Kuo
0.2	2007.07.18	✓ Feature, Spec Format, Function Block, Board Dimension revised	Shawn Kuo
1.0	2008.02.20	✓ Package List Modified ✓ BIOS Menu Modified ✓ Add Panel ID List ✓ Add 12V DC-IN and 24V DC-IN Option	Shawn Kuo

Contents

CHAPTER 1

General Information

This chapter includes V170 Motherboard background information. The section includes:

- Introduction
- Features
- Motherboard Specification
- Function Block
- Board Dimensions

Chapter 1 General Information

1.1 Introduction

V170 is a high performance, high flexibility and low power motherboard with the most advanced and complete all-in-one x86 system processor VIA CX700 chipset which integrates from quadruple host data bus, DDR2 memory controller to Serial ATA and USB ports for media processing. The VIA CX700 is based on a highly sophisticated power efficient architecture which enables power dissipation only 3.5 watts maximum compensated with VIA C7 and fanless VIA Eden. V170 is designed to satisfy most of the applications in the industrial computer market, such as POS, KIOSK, Industrial Automation, Programmable Control System, and HMI. It also could be an embedded system with multi-COM port interface, and on-board gigabits Ethernet to meet the business and industrial applications.

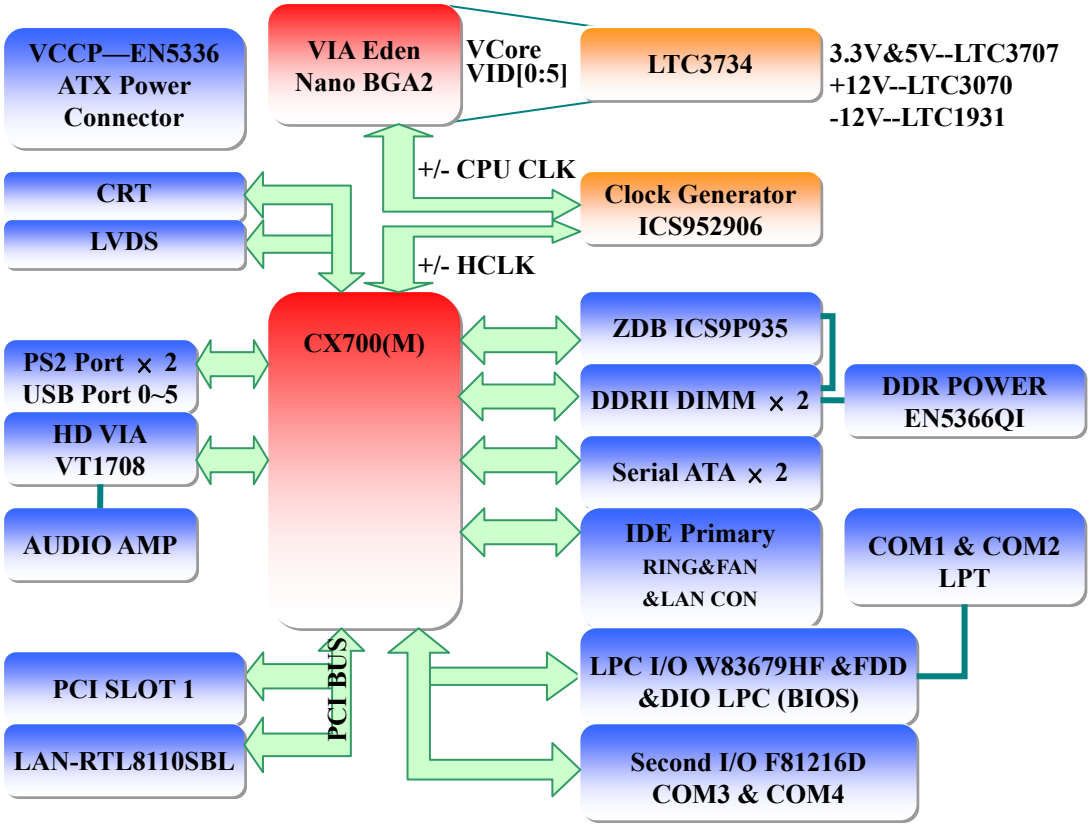
1.2 Features

- Mini-ITX Form Factor (170mm x 170mm)
- VIA Eden™ 1.0GHz by EBGA Type, Fanless Design
- System Memory Up To 2GB DDR2 400/533 SDRAM
- VIA CX700 Chipset
- Integrated LVDS/VGA UniChrome Pro II 3D/2D Graphics Processor
- VIA VT1708 High Definition Audio Controller
- Gigabit LAN
- 2 x SATA, 1 x EIDE, 6 x USB 2.0, 1 x PCI, 1 x RJ45, 1 x VGA
- 4 x COM, 1 x FDD, 1 x IrDA, 1 x MODEM

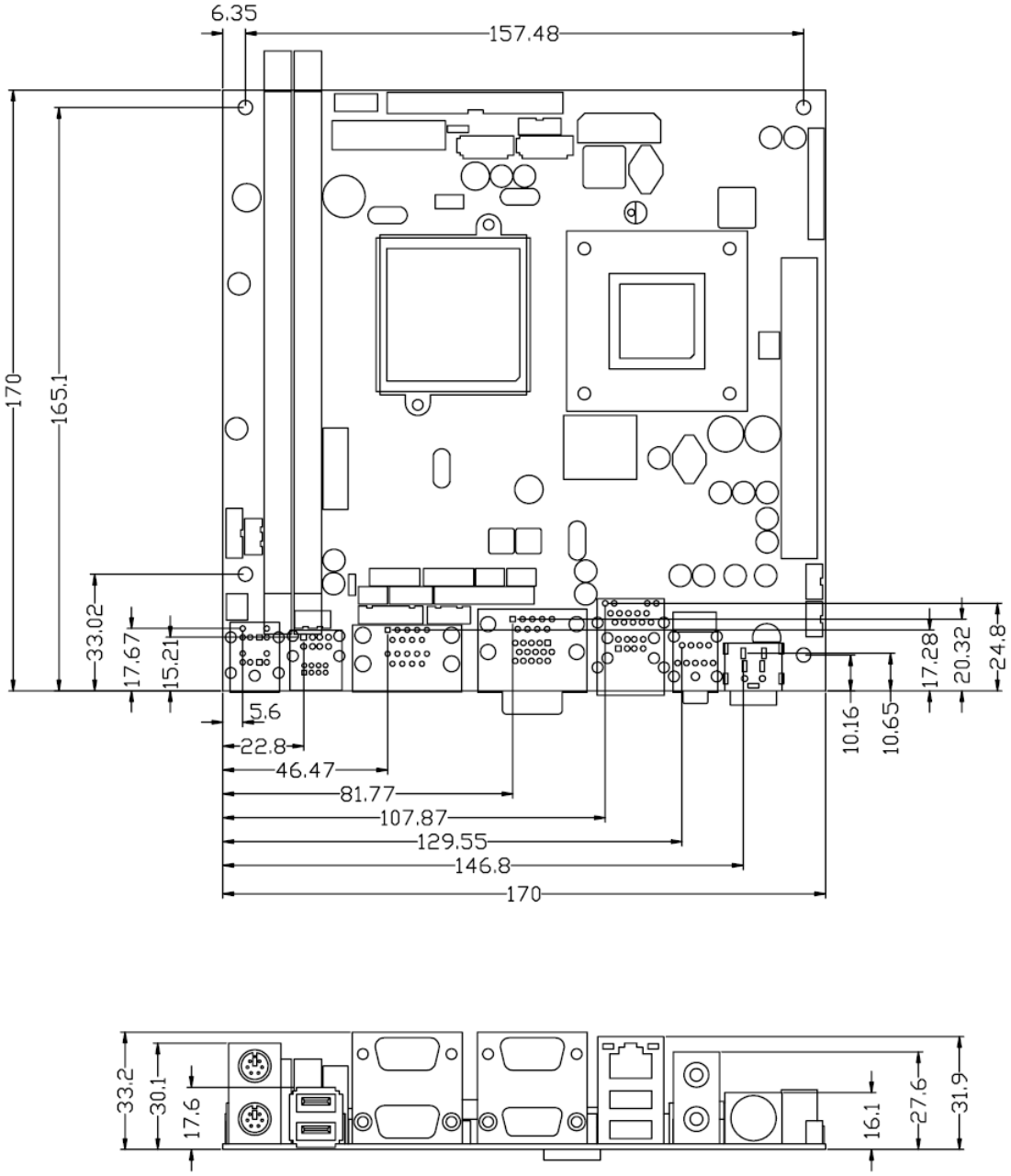
1.3 Motherboard Specifications

CPU Type	VIA Eden™ by EBGA Type
CPU Speed	1 GHz
CPU HT	400MHz
Chipset	VIA CX700 w/ VIA UniChrome™ Pro Integrated Graphics Processor, MPEG-2 Hardware Video Acceleration
Cache	256KB
BIOS	4MB Award BIOS
VGA	Integrated VGA/LCD Controller, 2D/3D GUI engine, Sharing memory architecture up to 64 MB
LVDS	Dual Channel/2 x Single Channel LVDS, support panel resolution from VGA through UXGA(1600 x 1200)
LAN	Realtek 8110SBL LAN Controller (10/100/1000 Mb)
Memory Type	Two DDR2 slots 240 pin Support up to 2GB DDR2 400 / 533 SDRAM
LPC I/O	Winbond 83697HF supports IrDA x 1, Parallel x 1, Hardware monitoring, FDC COM1 (RS-232) by Pin Header ,COM2 (RS-232/422/485) by D-sub 9p
Keyboard/Mouse	PS/2 connectors (I/O) and on board pin header for internal use
IDE	44pin box header with 5V pin out, 2.0 pitch supports Ultra DMA 133
Sound	VIA HD Codec VT1708 Line out, Mic in with amplifier Phone jack x 2 and internal Connector for line out or Pin Header
USB	2 x USB (Pin Header), 4 x USB (connector)
Watchdog Timer:	256 level
Edge Connectors	2 x PS/2 connector for keyboard/mouse 1 x Gigabit LAN RJ-45 + 1 x dual USB stack connector 1 x Dual DB9 for COM 3 & COM 4 1 x Dual DB9 for COM 2 & VGA 1 x Audio Jack for Audio (Line-Out, Mic-In) 4 x USB ports 1 x DC-In Jack
On Board Pin-Header Connectors	1 x 44 pins box-header 2 x Serial ATA I / II 3.0 Gb/s 1 x 10pins pin-header for COM1(RS232) 1 x 10pins pin-header for USB 4/5(2x5) 1 x 4pins pin-header for CD_IN (1x4) 1 x 4pins pin-header for Speaker out (1x4) 1 x 40pins DF13 Connector for LVDS 1 x 4pins 12V/5V External Power Connector 1 x 10pins pin-header for Front Panel (2x5) 1 x 3pins pin-header for CPU Fan 1 x 3pins pin-header for System Fan 1 x 26P FPC Connector 1 x 26pins pin-header for parallel port support SPP/EPP/ECP 1 x 5pins pin-header for IrDA 1 x 10pins pin-header for DIO 1 x 16pins pin-header for MODEM
Mechanical and environmental:	➢ Dimensions (L x W): 170 mm x 170 mm (6.7” x 6.7”) ➢ Power supply voltage: +12Volts DC-input(Optional +24 Volts DC-IN) ➢ Power consumption (typical): 20W ➢ Operating temperature:0~55ºC ➢ Operating Humidity: 30~90% Relative humidity, non-condensing

1.4 Function Block



1.5 Board dimensions



Unit: mm

CHAPTER 2

Installations

This chapter provides information on how to use the jumps and connectors on V170 Motherboard.
The Sections include:

- Memory Module Installation
- I / O Equipment Installation
- Setting the Jumpers
- Connectors on V170 Motherboard

Chapter 2 Installations

2.1 Memory Module Installation

V170 Motherboard provides two 240-pin DIMM slot. The socket supports up to 2GB DDR2 533 SDRAM. When installing the Memory device, please follow the steps below：

Step.1. Locate the DIMM slot in the motherboard.

Step.2. Unlock a DIMM slot by pressing the retaining clips outward.

Step.3. Align a DIMM on the socket such that the notch on the DIMM matches the break on the slot.

Step.4. Firmly insert the DIMM into the slot until the retaining clips snap back in place and the DIMM is properly seated.

Available DDR2 SDRAM Configurations, refer to the table below for available DDR2 SDRAM configurations on the mainboard.

Slot	Module Size	Total
DIM1	64MB, 128MB, 256MB, 512MB, 1GB	64MB-1GB
DIM2	64MB, 128MB, 256MB, 512MB, 1GB	64MB-1GB
Maximum supported system memory		64MB-2GB

2.2 I/O Equipment Installation

2.2.1 PS/2 Keyboard and PS/2 Mouse

V170 Motherboard provides two connector supports PS/2 interface. In other cases, especially in embedded applications, a mouse is not used. Therefore, the BIOS standard setup menu allows you to select* “All, But Keyboard” under the “Halt On”. This allows no-keyboard operation in embedded system applications without the system halting under POST.

2.2.2 Audio function

The VIA HD capabilities are provided by a VIA HD Codec VT1708 chip supporting digital audio outputs. The onboard VT1708 is a 20-bit DAC and 18-bit ADC supporting full-duplex VIA HD 2.3 compatible stereo audio CODEC for multimedia, including host/soft audio based designs. The audio interface includes two jacks: microphone-in and line-out.

2.2.3 Serial COM ports

One RS-232 ports with 16C550 UART (or compatible) with 16-byte FIFO buffer. Three optional COM ports support RS-232. When an optional touch-screen is ordered with V170 Motherboard, serial com port can connect to a serial or an optional touch-screen. One optional COM port supports RS232/422/485 choice through jumper setting.

2.2.4 Ethernet interface

V170 Motherboard is equipped with Realtek RTL8110SBL chipset which is fully compliant with the PCI 10/100/1000 Mbps Ethernet protocol compatible. It is supported by major network operating systems. The Ethernet port provides a standard RJ-45 jack.

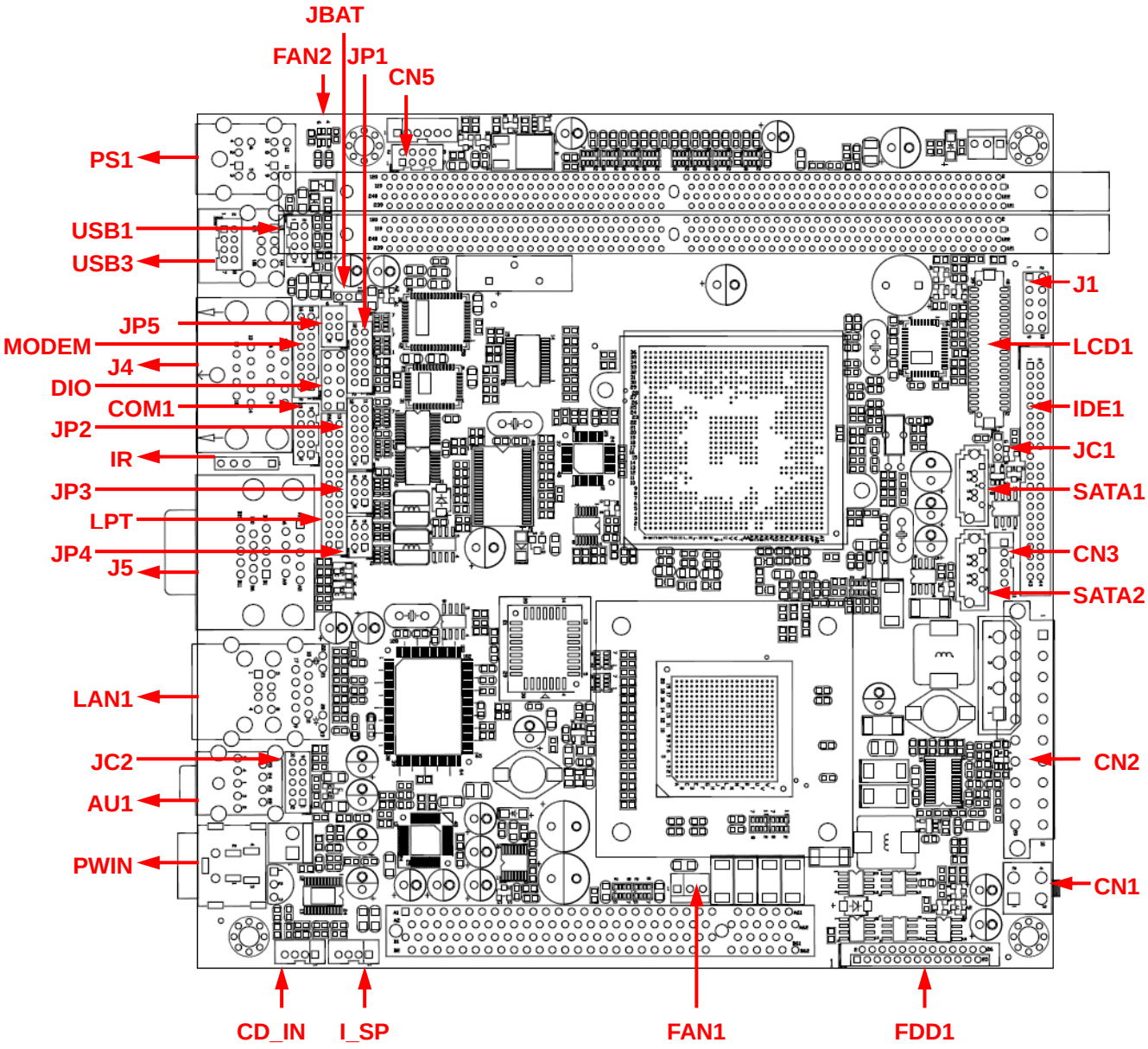
2.2.5 USB ports

Four USB (Two is optional) devices may be connected to the system through an adapter cable. Various adapters may come with USB ports. USB usually connect the external system to the system. The USB ports support hot plug-in connection. Anyway, you should install the device driver before you use the device.

2.2.6 External VGA

V170 Motherboard has one VGA port that can be connected to an external CRT/ LCD monitor. Use VGA cable to connect to an external CRT / LCD monitor, and connect the power cable to the outlet The VGA connector is a standard 15-pin D-SUB connector

2.3 Jumpers and Connectors



Locating Jumpers and Connectors (front side)

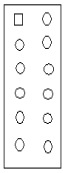
2.4 Jumper Setting

Label	Function	Note
JC1	LVDS Panel Power Selector	3x1 header, pitch 2.0 mm
JP1	COM1,COM2 RS232 +5V / +12V Power Setting	2*6 header, pitch 2.0 mm
JP2	COM3,COM4 RS232 +5V / +12V Power Setting	2*6 header, pitch 2.0 mm
JP3	RS232/422/485 Selector	2x3 header, pitch 2.0 mm
JP4	RS232/422/485 Selector	2x3 header, pitch 2.0 mm
JP5	RS232/422/485 Selector	2x3 header, pitch 2.0 mm
JBAT	Clear CMOS Contents	3x1 header, pitch 2.0 mm

2.4.1 JC1: LVDS Panel Power Select

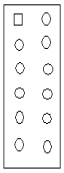
JC1	LVDS Panel Power
	3.3V (default)
	5V

2.4.2 JP1: COM1, COM2 RS232 +5V / +12V Power Setting

Pin #	Signal Name	JP1	Signal Name	Pin #
1	RI(Default)		RI(Default)	2
3	RI		+12v	4
5	RI		+5V	6
7	RI(Default)		RI(Default)	8
9	RI		+12V	10
11	RI		+5V	12

COM1 Settings: Pin 1-2 short =, Standard COM Port, Pin 3-4 short = +12V, Pin 5-6 = +5V
COM2 Settings: Pin 7-8 short =, Standard COM Port, Pin 9-10 short = +12V, Pin 11-12 = +5V

2.4.3 JP2: COM3,COM4 RS232 +5V / +12V Power Setting

Pin #	Signal Name	JP2	Signal Name	Pin #
1	RI(Default)		RI(Default)	2
3	RI		+12v	4
5	RI		+5V	6
7	RI(Default)		RI(Default)	8
9	RI		+12V	10
11	RI		+5V	12

COM3 Settings: Pin 1-2 short =, Standard COM Port, Pin 3-4 short = +12V, Pin 5-6 = +5V

COM4 Settings: Pin 7-8 short =, Standard COM Port, Pin 9-10 short = +12V, Pin 11-12 = +5V

2.4.4 JP3,JP4,JP5 COM2 Select RS232/422/485

The jumper can be configured to operate in RS-232/422/485 mode.

	RS232	RS485	RS422
JP5 	1-2	3-4	5-6
JP4 	3-5 4-6	1-3 2-4	1-3 2-4
JP3 	3-5 4-6	1-3 2-4	1-3 2-4

2.4.5 JBAT: Clear CMOS Contents

Use JBAT to clear the CMOS contents. *Note that the ATX-power connector should be disconnected from the board before clearing CMOS.*

JBAT	Setting	Function
	Pin 1-2 Short/Closed	Normal
	Pin 2-3 Short/Closed	Clear CMOS

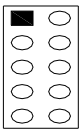
2.5 Connectors and Pin Assignment

The table below lists the function of each of the board's connectors.

Label	Function	Note
J1	PW/Reset Switch and Indicator Connector	2x5 header, pitch 2.0 mm
FDD1	Floppy Drive Connector	26 pin connector
LCD1	LVDS PANEL OUTPUT	40 pin connector
CN3	INVERTER BKL Connector	1x4 header, pitch 2.54 mm
PS1	PS/2 Keyboard/Mouse Connectors	PS/2 connector
USB1	USB 4/5 Connectors	2x4 header, pitch 2.0 mm
I_SP	INTERNAL SPEAKER Connector	4x1 header, pitch 2.54 mm
J4	COM3/COM4 D-SUB 9PIN Connector X 2 (UP-COM3, DOWN-COM4)	9 pin com port connector
USB3	USB2/3 Connectors	2x4 header, pitch 2.0 mm
LAN1	RJ45 + USB0/1 connector	RJ45/USB connector
CD_IN	CD-In Audio Connector	4x1 header, pitch 2.54 mm
LPT	Parallel Port (26PIN Header)	13x2 pin header
PWIN	12V DC IN (Optional 24V)	DC Jack
J5	COM2 + CRT (D-SUB 9PIN+D-SUB 15PIN Connector)	4 pin DC Jack
CN1	ATX 12V DC-IN (Optional 24V)	4 pin ATX connector
COM1	Com port connector	2x5 header, pitch 2.0 mm
JC2	External Audio Connector	2x5 header, pitch 2.0 mm
MODEM	Onboard modem connector	2x8 header, pitch 2.0 mm
CN5	External PS/2 Keyboard /Mouse Connector	2x4 header, pitch 2.0 mm
SATA1,SATA2	SATA HDD Connector	SATA connector
DIO	Digital 4-in 4-out I/O Connector	2x5 header, pitch 2.0 mm
IDE1	IDE Connector	2x22 header, pitch 2.0 mm
CN2	ATX Power Supply Connector	20 pin ATX connector
FAN1,FAN2	CPU Fan Power Connector	3x1 header, pitch 2.0 mm
AU1	Line Out, Mic In Connector	3.5mm audio jack
IR	IrDA Connector	5x1 header, pitch 2.0 mm

* Not Default Connector

2.5.1 J1: PW/Reset Switch and Indicator Connector



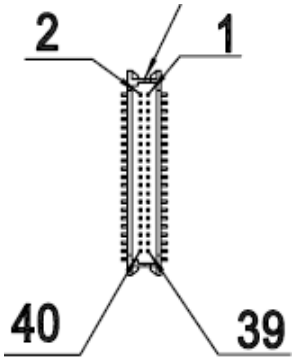
Signal Name	Pin	Pin	Signal Name
Ground	1	2	PW-ON
Ground	3	4	Reset_SW
IDE_LED-	5	6	IDE_LED+
Power_LED+	7	8	Power_LED-
LAN_LED-	9	10	LAN_LED+

2.5.2 FDD1: Floppy Drive Connector

FDD is a slim 26-pin connector and will support up to 2.88MB FDD.

Signal Name	Pin #	Pin #	Signal Name
VCC	1	2	INDEX
VCC	3	4	DRV_SEL
VCC	5	6	DSK_CH
NC	7	8	NC
NC	9	10	MOTOR
DINST	11	12	DIR
NC	13	14	STEP
GND	15	16	WDATA
GND	17	18	WGATE
GND	19	20	TRACK
NC	21	22	WPROT
GND	23	24	RDATA
GND	25	26	SIDE

2.5.3 LCD1: LVDS PANEL OUTPUT



Signal Name	Pin #	Pin #	Signal Name
VDD	2	1	A4M
VDD	4	3	A4P
Ground	6	5	Ground
Ground	8	7	A5M
AOM	10	9	A5P
AOP	12	11	Ground
Ground	14	13	A6M
A1M	16	15	A6P
A1P	18	17	Ground
Ground	20	19	CLK2M
A2M	22	21	CLK2P
A2P	24	23	Ground
Ground	26	25	A7M
CLK1M	28	27	A7P
CLK1P	30	29	NC
Ground	32	31	NC
A3M	34	33	NC
A3P	36	35	NC
NC	38	37	NC
NC	40	39	NC

2.5.4 CN3: INVERTER BKL CONNECTOR

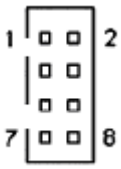
Pin #	Signal Name
1	Ground
2	Ground
3	ENABKL
4	12V

2.5.5 PS1: PS/2 Keyboard/Mouse Connectors

Pin #	Signal Name
1	Data
2	No Connection
3	Ground
4	+5V
5	Clock
6	No Connection

2.5.6 USB1: USB 4/5 Connectors

The following table shows the pin outs of the USB pin headers connectors. Overall, the one pin header support four USB ports (USB 2.0 compliant).

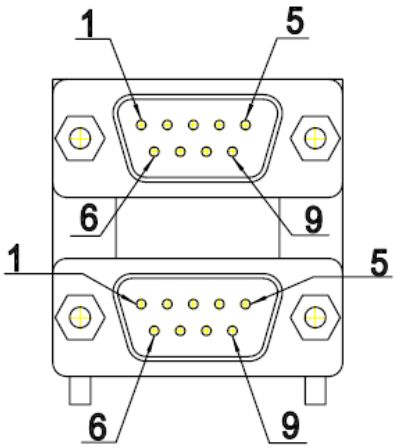


Signal Name	Pin	Pin	Signal Name
Vcc	1	2	Vcc
USB5-	3	4	USB4-
USB5+	5	6	USB4+
Ground	7	8	Ground

2.5.7 I_SP : INTERNAL SPEAKER Connector

Pin #	Signal Name
1	SPK_LN
2	SPK_LO
3	SPK_RN
4	SPK_RO

2.5.8 J4: COM3/COM4 D-SUB 9PIN Connector X 2 (UP-COM3, DOWN-COM4)

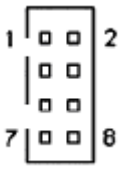


Signal Name	Pin	Pin	Signal Name
DCD, Data carrier detect	1	6	DSR, Data set ready
RXD, Receive data	2	7	RTS, Request to send
TXD, Transmit data	3	8	CTS, Clear to send
DTR, Data terminal ready	4	9	RI, Ring indicator
Ground	5		

Signal Name	Pin	Pin	Signal Name
DCD, Data carrier detect	1	6	DSR, Data set ready
RXD, Receive data	2	7	RTS, Request to send
TXD, Transmit data	3	8	CTS, Clear to send
DTR, Data terminal ready	4	9	RI, Ring indicator
Ground	5		

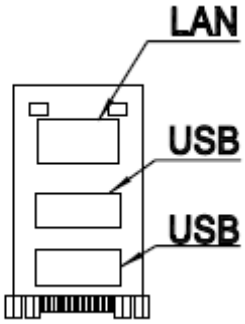
2.5.9 USB3: USB2/3 Connectors

The following table shows the pin outs of the USB pin headers connectors. Overall, one pin header supports four USB ports (USB 2.0 compliant).



Signal Name	Pin	Pin	Signal Name
Vcc	1	2	Vcc
USB3-	3	4	USB2-
USB3+	5	6	USB2+
Ground	7	8	Ground

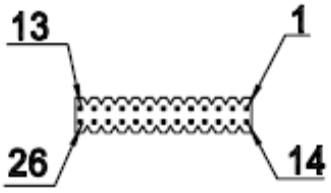
2.5.10 LAN1 : RJ45 + USB0/1 connector



2.5.11 CD_IN: CD-In Audio Connector

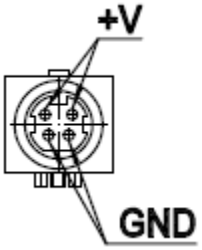
Pin #	Signal Name
1	CD Audio R
2	Ground
3	Ground
4	CD Audio L

2.5.12 LPT : Parallel Port (26PIN Header)

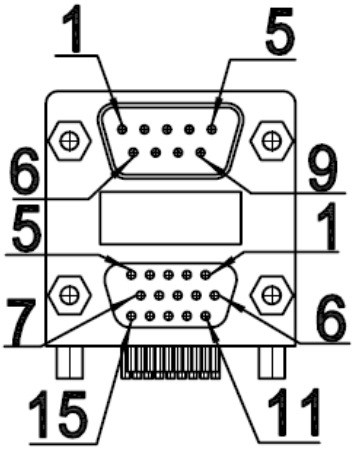


Signal Name	Pin #	Pin #	Signal Name
Line printer strobe	1	14	AutoFeed
PD0, parallel data 0	2	15	Error
PD1, parallel data 1	3	16	Initialize
PD2, parallel data 2	4	17	Select
PD3, parallel data 3	5	18	Ground
PD4, parallel data 4	6	19	Ground
PD5, parallel data 5	7	20	Ground
PD6, parallel data 6	8	21	Ground
PD7, parallel data 7	9	22	Ground
ACK, acknowledge	10	23	Ground
Busy	11	24	Ground
Paper empty	12	25	Ground
Select	13	N/A	N/A

2.5.13 PWIN:DC POWER IN (DC19V ~ DC24V)



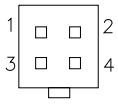
2.5.14 J5 : COM2 + CRT (D-SUB 9PIN+D-SUB 15PIN Connector)



Signal Name	Pin	Pin	Signal Name
DCD, Data carrier detect	1	6	DSR, Data set ready
RXD, Receive data	2	7	RTS, Request to send
TXD, Transmit data	3	8	CTS, Clear to send
DTR, Data terminal ready	4	9	RI, Ring indicator
Ground	5		

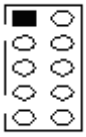
Signal Name	Pin	Pin	Signal Name
Red	1	9	+5V
Green	2	10	Ground
Blue	3	11	NC
NC	4	12	SPD2
Ground	5	13	HSYNC
Ground	6	14	VSYNC
Ground	7	15	SPCLK2
Ground	8		

2.5.15 CN1: ATX 12V/+12V Power Connector



Pin #	Signal Name
1	Ground
2	Ground
3	+12V
4	+12V

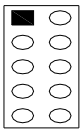
2.5.16 COM1: Com port connector



Signal Name	Pin	Pin	Signal Name
DCD, Data carrier detect	1	2	DSR, Data set ready
RXD, Receive data	3	4	RTS, Request to send
TXD, Transmit data	5	6	CTS, Clear to send
DTR, Data terminal ready	7	8	RI, Ring indicator
Ground	9	10	No Connect.

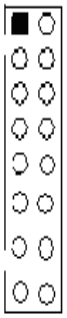
2.5.17 JC2: External Audio Connector

JC2 is a 10-pin header that is used to connect to the optional audio cable card that integrates jacks for Line Out and MIC.

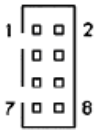


Signal Name	Pin	Pin	Signal Name
MIC2_IN_L	1	2	Ground
MIC2_IN_R	3	4	NC
LINE2_OUT_R	5	6	MIC2_JD
FRONT_IO_SEN	7	8	INT_SP_DIS
LINE2_OUT_L	9	10	MIC2_JD

2.5.18 MODEM: Onboard modem connector

Signal Name	Pin	MODEM	Pin	Signal Name
NC	1		2	Ground
DCD, Data carrier detect	3		4	RXD, Receive data
TXD, Transmit data	5		6	DTR, Data terminal ready
DSR, Data set ready	7		8	RTS, Request to send
+5V	9		10	NC
CTS, Clear to send	11		12	RI, Ring indicator
NC	13		14	MODEM SP
MODEM RESET	15		16	Ground

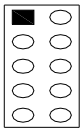
2.5.19 CN5: External PS/2 Keyboard /Mouse Connector



Signal Name	Pin	Pin	Signal Name
KB-DATA	1	2	M-DATA
KB-CLK	3	4	M-CLK
GND	5	6	GND
VCC	7	8	Vcc

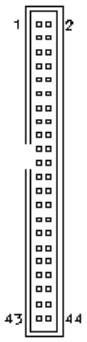
2.5.20 SATA1,SATA2 : SATA HDD Connector

2.5.21 DIO: Digital 4-in 4-out I/O Connector



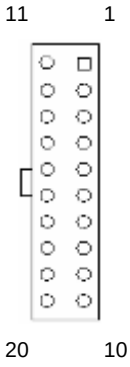
Signal Name	Pin	Pin	Signal Name
Ground	1	2	Vcc
Out3	3	4	Out1
Out2	5	6	Out0
Int3	7	8	Int1
Int2	9	10	Int0

2.5.22 IDE1 : IDE Connector



Signal Name	Pin #	Pin #	Signal Name
Reset IDE	1	2	Ground
Host data 7	3	4	Host data 8
Host data 6	5	6	Host data 9
Host data 5	7	8	Host data 10
Host data 4	9	10	Host data 11
Host data 3	11	12	Host data 12
Host data 2	13	14	Host data 13
Host data 1	15	16	Host data 14
Host data 0	17	18	Host data 15
Ground	19	20	Key
DRQ0	21	22	Ground
Host IOW	23	24	Ground
Host IOR	25	26	Ground
IOCHRDY	27	28	Host ALE
DACK0	29	30	Ground
IRQ14	31	32	No connect
Address 1	33	34	No connect
Address 0	35	36	Address 2
Chip select 0	37	38	Chip select 1
Activity	39	40	Ground
Vcc	41	42	Vcc
Ground	43	44	N.C.

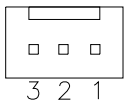
2.5.23 CN2 : ATX Power Supply Connector



Signal Name	Pin #	Pin #	Signal Name
3.3V	11	1	3.3V
-12V	12	2	3.3V
Ground	13	3	Ground
PS-ON	14	4	+5V
Ground	15	5	Ground
Ground	16	6	+5V
Ground	17	7	Ground
-5V	18	8	Power good
+5V	19	9	5VSB
+5V	20	10	+12V

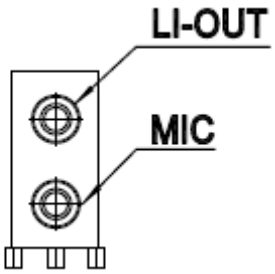
2.5.24 FAN1,FAN2: CPU Fan Power Connector

FAN1, FAN2 is a 3-pin header for CPU fans. The fan must be a 12V (500mA) fan.



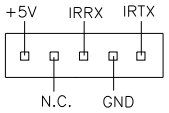
Pin #	Signal Name
1	**Ground**
2	**+12V**
3	**Rotation detection**

2.5.25 AU1: Line Out, MIC Connector



2.5.26 IR: IrDA Connector

IR is used for an optional IrDA connector for wireless communication.



Pin #	Signal Name
1	+5V
2	No connect
3	Ir RX
4	Ground
5	Ir TX

CHAPTER 3

Award BIOS Setup

This chapter describes how to set BIOS configuration

- Starting Setup
- Award BIOS Setup
- Standard CMOS Features
- Advanced BIOS Features
- Advanced Chipset Features
- Integrated Peripherals
- Power Management Setup
- PnP/PCI Configurations
- PC Health Status
- Frequency/Voltage Control
- Load Fail-Safe Defaults
- Load Optimized Defaults
- Set Supervisor/User Password
- Save & Exit Setup
- Exit Without Saving

Chapter 3 BIOS SETUP

3.1 Starting Setup

AwardBIOS™ has a built-in setup program that allows users to modify the basic system configuration. The information is stored in battery-backed Flash so that it retains the setup information even if the system power is turned off.

Note:

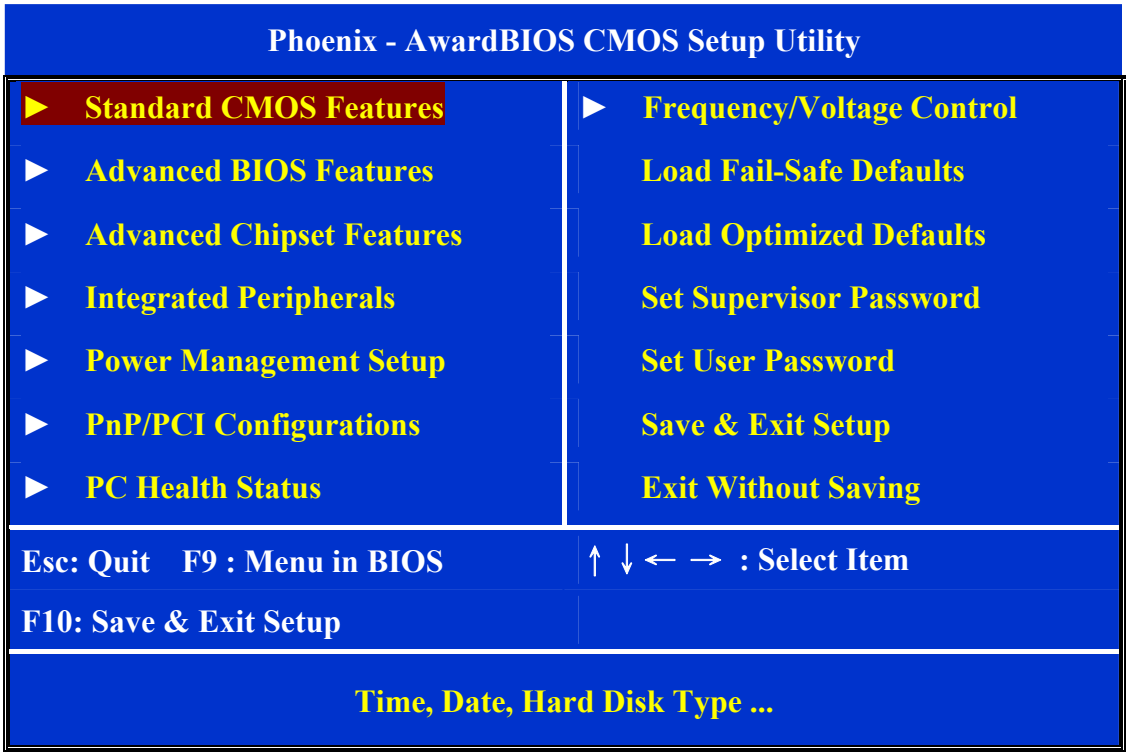
Values for the various setup items that appear on your own screen (including default values) may not be the same as the values shown on the screen figures in this chapter. This is because the BIOS is revised and updated from time to time. If in doubt, check Winmate website for the latest BIOS versions and related information.

The system BIOS is managing and executing a variety of hardware related functions in the system, including:

- System date and time
- Hardware execution sequence
- Power management function
- Allocation of system resources

3.2 Award BIOS Setup

Once you enter the Award BIOS™ CMOS Setup Utility, the Main Menu will appear on the screen. The Main Menu allows you to select from several setup functions and two exit choices. User the arrow keys to select among the items and press <Enter> to accept and enter the sub-menu.



The BISO Setup Main Menu screen is shown above.

Note that a brief description of each highlighted selection appears at the bottom of the screen.

- **Setup Items**

  The main menu includes the following main setup categories.

- **Standard CMOS Features**

  This menu displays the basic information about your system.

- **Advanced BIOS Features**

  Use this menu to set the advanced features available on your system.

- **Advanced Chipset Features**

  Use this menu to change the values in the chipset registers and optimize your system's performance.

- **Integrated Peripherals**

  Use this menu to specify your setting for integrated peripherals.

- **Power Management Setup**
  Use this menu to specify your setting for power management.

- **PnP/PCI Configurations**
  This option configures how PnP (Plug and Play) and PCI expansion cards operate in your system.

- **PC Health Status**
  This entry shows the current system temperature and voltage.

- **Frequency/Voltage Control**
  Use this menu to set system frequency and voltage control.

- **Load Fail-Safe Defaults**
  Use this menu to install fail-safe defaults for all appropriate items in the setup utility.

- **Load Optimized Defaults**
  Use this menu to install optimized defaults for all appropriate items in the setup utility.

- **Set Supervisor Password**
  Use this menu option to set the BIOS supervisor password.

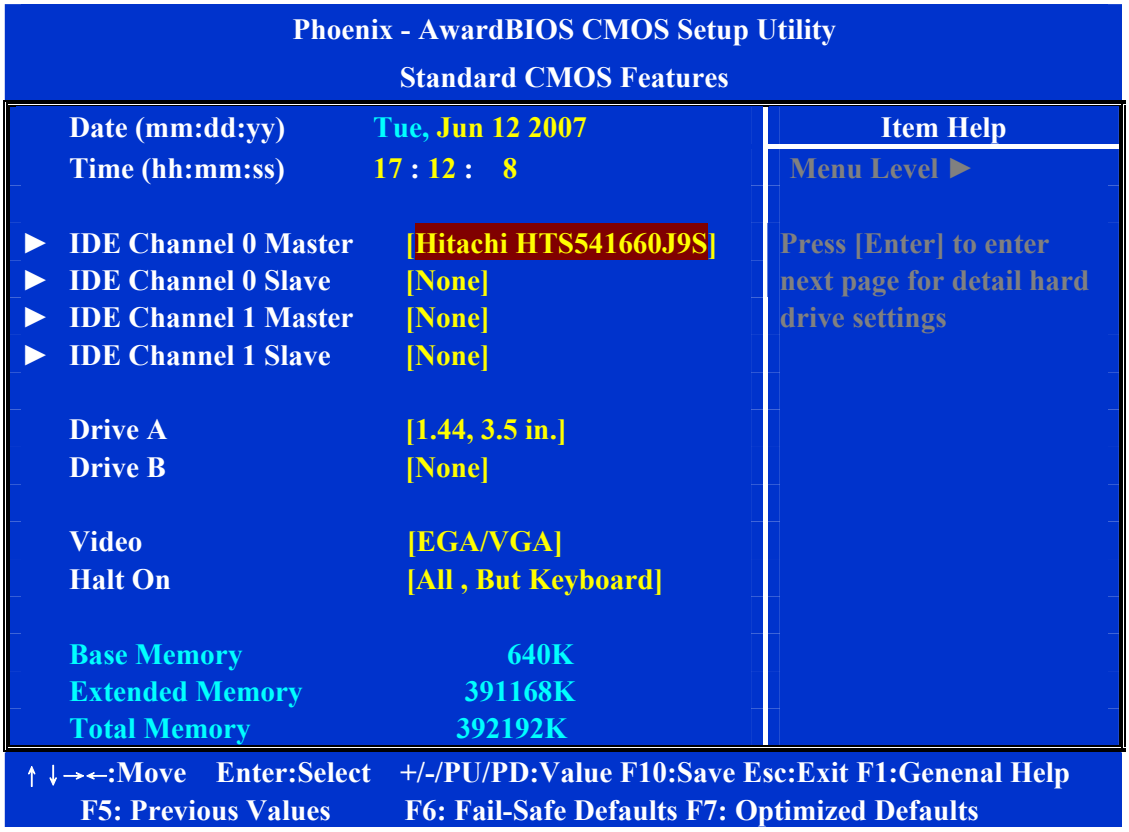
- **Set User Password**
  Use this menu option to set the BIOS user password.

- **Save & Exit Setup**
  Save the changes that you have made in the Setup Utility and exit the Setup Utility.

- **Exit Without Saving**
  Abandon all changes that you have made in the Setup Utility and exit the Setup Utility.

3.3 Standard CMOS Features

The Standard CMOS Features Setup allows users to configure system components such as date, time, hard disk drive, floppy drive and display. Use the arrow keys to highlight the item and then use the <Page Up> or <Page Down> keys to select the value you want in each item.



The standard CMOS Features screen is shown above. Follow each item:

- **Date (mm : dd : yy)**

  Set the system date. Note that if you are running a Windows OS, this item are automatically updated whenever you make changes to the Windows Date.

- **Time (hh : mm : ss)**

  Set the system time. The time is converted based on the 24-hour military-time clock. For example, 5:00:00 p.m. is 17:00:00.

- **IDE Channel 0/1 Master/Slave**

  Press <Enter> to enter the sub-menu to detailed options.

- **Drive A/B**

  Set Drive A/B type choice

  The choice: “None”, “360K, 5.25 in.”, “1.2M 5.25 in.”, “720K, 3.5 in.”,

"2.88M, 3.5 in." or "1.44M, 3.5 in.".

- **Video**

  This item defines the video mode of the system. Leave this item at the default value.

  The choice: "EGA/VGA*", "CGA 40", "CGA 80", or "MONO".

  * default value

- **Halt On**

  This item defines the operation of the system POST (Power-On Self Test) routine. You can use this item to select which situation you want the BIOS to stop the POST process and notify you.

  The choice: "All errors", "No Errors", "All, but keyboard", "All, but Diskette", or "All, but Disk/Key".

- **Base Memory/Extended Memory/Total Memory**

  These items are automatically detected by the system at start up time. These are display-only fields. You can not make change to these fields.

Follow steps as IDE adapter below:

- **IDE HDD Auto-Detection**

  The IDE adapters control the hard disk drive. Use a separate sub-menu to configure each hard disk drive. Press <Enter> to auto-detect HDD on this channel. If detection is successful, it fills the remaining fields on this menu.

- **IDE Channel 0/1 Master/Slave**

  Selecting 'Manual' lets you set the remaining fields on this screen and select the type of fixed disk.

  The choice: None, Auto, or Manual

- **Access Mode**

  Choose the access mode for this hard disk.

  The choice: "CHS", "LBA", "Large", or "Auto".

- **Capacity**

  Note that the disk drive capacity (approx.) is usually slightly greater than the size of a formatted disk given by a disk checking program.

- **Cylinder**

  Set the number of cylinders for this hard disk.

  - Min = 0, Max = 65535

- **Head**

Set the number of read/write heads

- Min = 0, Max = 255

➢ **Precomp**

Warning: Setting a value of 65535 means no hard disk.

- Min = 0, Max =65535

➢ **Landing Zone**

Set the Landing Zone size.

- Min = 0, Max = 65535

➢ **Sector**

Number of sector per-track.

- Min = 0, Max = 255

3.4 Advanced BIOS Features

This section allows you to configure your system for basic operation. You have the opportunity to select the system's default speed, boot-up sequence, keyboard operation, shadowing and security.

- **Hard-Disk Boot Priority**

  This is for setting the priority of the hard disk boot order when the "Hard Disk" option is selected in the "[First/Second/Third] Boot Device" menu item. You can change the priority on the List.

- **Virus Warning**

  Allow you to choose the Virus Warning feature for IDE Hard Disk boot sector protection. Enable this item to prevent someone from writing data into this area.

  - The choice: Enabled or Disabled
  - Default: Disabled

- **CPU L1 & L2 Cache**

  All processors that can be installed in this motherboard use internal level of

L1 cache memory to improve performance. Leave this item at the default value for better performance.

- The choice: Enabled or Disabled
- Default: Enabled

➢ **CPU L2 Cache ECC Checking**

This feature enables or disables the L2 (Level 2 or Secondary) cache's ECC checking function.

- The choice: Enabled or Disabled
- Default: Enabled

➢ **Quick Power On Self Test**

Enable this item to shorten the power on testing (POST) and have your system start up faster. You might like to this item after you are confident that your system hardware is operating smoothly.

- The choice: Enabled or Disabled
- Default: Enabled

➢ **First/Second/Third Boot Device**

Set the boot device sequence as BIOS attempts to load the disk operating system.

- The choice: Floppy, LS120, Hard Disk, CDROM, ZIP100, USB-FDD, USB-ZIP or USB-CDROM.
- Default: Hard Disk (First) / CDROM (Second) / Removable (Third)

➢ **Boot Other Device**

If you enable this item, the system searches all other possible locations for and operating system if it fails to find one in the devices specified under the First, Second and the Third boot devices.

- The choice: Enabled or Disabled
- Default: Enabled

➢ **Swap Floppy Drive**

- The choice: Enabled or Disabled
- Default: Disabled

➢ **Boot Up NumLock Status**

This item defines if the keyboard NumLock key is active when your system

is started.

- The choice: On or Off
- Default: On

➢ **Typematic Rate Setting**

This Enables "Typematic Rate" and "Typematic Delay" functions.

- The choice: Enabled, Disabled
- Default: Disabled

➢ **Typematic Rate (Chars/Sec)**

This item sets the rate (characters/second) at which the system retrieves a signal from a depressed key.

- The choice: 6, 8, 10, 12, 15, 20, 24, 30
- Default: 6

➢ **Typematic Delay (Msec)**

This item sets the delay between when the key was first pressed and when the system begins to repeat the signal from the depressed key.

- The choice: 250, 500, 750, 1000
- Default: 250

➢ **Security Option**

If you have installed password protection, this item defines if the password is required at system start up, or if it is only required with a user tries to enter the Setup Utility.

- The choice: Setup or System
- Default: Setup

➢ **MPS Version Control For OS**

- The choice: 1.1 or 1.4
- Default: 1.4

➢ **OS Select For DRAM > 64MB**

Select OS2 only if you are running OS/2 operating system with greater than 64MB of RAM on the system.

- The choice: Non-OS2 or OS2
- Default: Non-OS2

- **Video BIOS Shadow**

  Enabled copies Video BIOS to shadow RAM Improves performance.

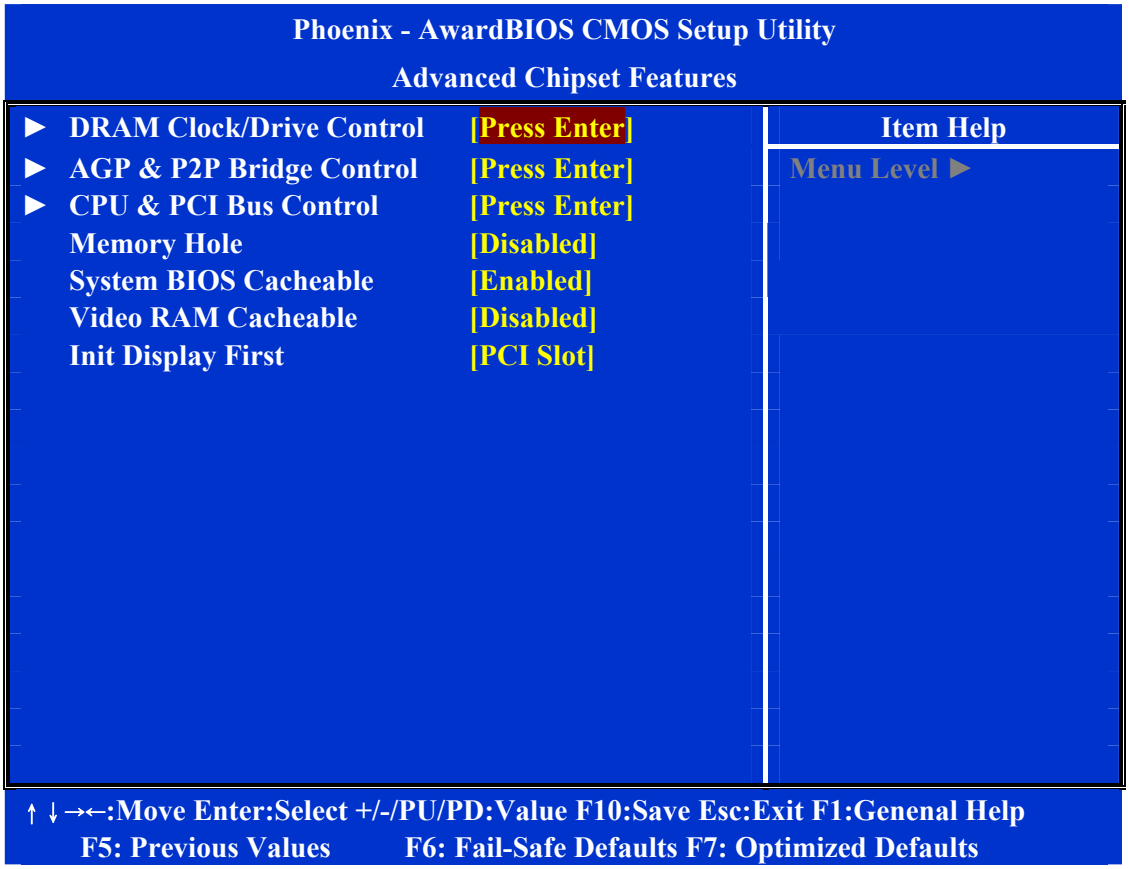
  - The choice: Enabled or Disabled
  - Default: Enabled

- **Small Logo (EPA) Show**

  - The choice: Enabled or Disabled
  - Default: Disabled

3.5 Advanced Chipset Features

These items define critical timing parameters of the motherboard. You should leave the items at their default values unless you are very familiar with the technical, specifications of your system hardware. If you change the values incorrectly, you may introduce fatal error or recurring instability into your system.



➢ DRAM Clock/Drive Control

► DRAM Clock

The chipset supports synchronous and asynchronous mode between host clock and DRAM clock frequency.

- The choice: By SPD, 200 MHz, 266MHz, 333MHz
- Default: By SPD

► DRAM Timing

The value in this field depends on the memory modules installed in your system. Changing the value from the factory setting is not recommended unless you install new memory that has a different performance rating than the original modules.

- The choice: Manual, Auto By SPD
- Default: Auto By SPD

► Read to Precharge (Trtp)
  - The choice: 2T, 3T
  - Default: 2T

► Write to Read CMD (Trtp)
  - The choice: 1T/2T, 2T/3T
  - Default: 1T/2T

► Write Recovery Time (Twr)
  - The choice: 2T, 3T, 4T, 5T
  - Default: 4T

► DRAM Command Rate
  - The choice: 2T Command, 1T Command
  - Default: 2T Command

➢ AGP & P2P Bridge Control

The sub menu is as below:

► VGA Share Memory Size
  - The choice: Settings: Disabled, 8M, 16M, 32M, 64M, 128M
  - Default: 64M

► Panel Type

This setting refers to the native resolution of the display being used with the system.
  - The choice: Key in a HEX number [Min = 0000, Max = 000F].
  - Default: 0A

Panel ID	Resolution	Channel	RGB-Color 18/24 bits
0	640x480	1	18 bits
1	800x600	1	18 bits
2	1024x768	1	18 bits
3	1280x768	1	18 bits
4	1280x1024	2	18 bits
5	1400x1050	2	18 bits
6	1600x1200	2	18 bits
7	1280x800	1	18 bits
8	800x480	1	18 bits
9	1024x768	2	18 bits

A	1024x768	1	24 bits
B	1024x768	2	24 bits
C	1280x768	1	24 bits
D	1280x1024	2	24 bits
E	1400x1050	2	24 bits
F	1600x1200	2	24 bits

- **CPU & PCI Bus Control**

  When enter into this sub menu, options are as below:

  - PCI Master 0 WS Write
    - The choice: Enabled, Disabled
    - Default: Enabled

  - PCI Delay Transaction
    - The choice: Enabled, Disabled
    - Default: Enabled

  - DRDY_Timing
    - The choice: Slowest, Default, Optimize
    - Default: Optimize

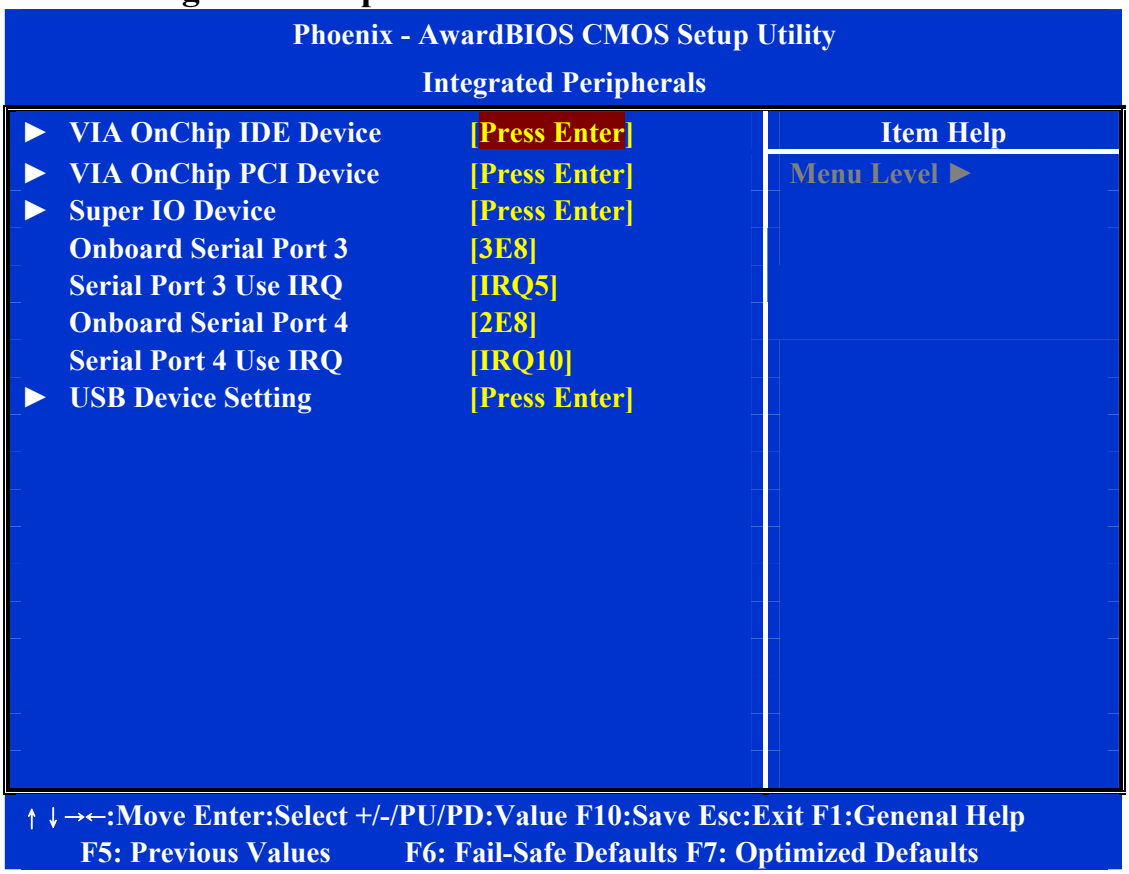
- **Memory Hole**
  - The choice: Disabled or 15-16M
  - Default: Disabled

- **System BIOS Cacheable**
  - The choice: Enabled or Disabled
  - Default: Enabled

- **Video RAM Cacheable**
  - The choice: Enabled or Disabled
  - Default: Disabled

- **Init Display First**
  - The choice: PCI Slot or AGP
  - Default: PCI Slot

3.6 Integrated Peripherals



➢ VIA OnChip IDE Device

► SATA Controller

- The choice: Enabled, Disabled
- Default: Enabled

► IDE DMA transfer access

- The choice: Enabled, Disabled
- Default: Enabled

► Secondary Master PIO

- The choice: Auto, Mode 0, Mode 1, Mode 2, Mode 3, Mode4
- Default: Auto

► Secondary Slave PIO

- The choice: Auto, Mode 0, Mode 1, Mode 2, Mode 3, Mode4
- Default: Auto

► Secondary Master UDMA

- The choice: Disabled, Auto
- Default: Auto

► Secondary Slave UDMA
- The choice: Disabled, Auto
- Default: Auto

► IDE HDD Block Mode
- The choice: Enabled, Disabled
- Default: Enabled

➢ **VIA OnChip PCI Device**

► Azalia HAD Controller
- The choice: Auto, Disabled
- Default: Auto

➢ **Super IO Device**

► Onboard FDC Controller
- The choice: Enabled, Disabled
- Default: Enabled

► Onboard Serial Port 1
- The choice: Disabled, 3F8/IRQ4, 2F8/IRQ3, 3E8/IRQ4, 2E8/IRQ3, Auto
- Default: 3F8/IRQ4

► Onboard Serial Port 2
- The choice: Disabled, 3F8/IRQ4, 2F8/IRQ3, 3E8/IRQ4, 2E8/IRQ3, Auto
- Default: 2F8/IRQ3

► UART Mode Select
- The choice: IrDA, ASKIR, Normal
- Default: Normal

► Onboard Parallel Port
- The choice: Disabled, 378/IRQ7, 278/IRQ5, 3BC/IRQ7
- Default: 378/IRQ7

► Parallel Port Mode
  - The choice: SPP, EPP, ECP, ECP/EPP, Normal
  - Default: SPP

➢ **Onboard Serial Port 3**

This option is used to assign the I/O address and Interrupt Request (IRQ) for the onboard Serial Port.

- The choice: Disabled, 3F8, 2F8, 3E8, 2E8
- Default: 3E8

➢ **Serial Port 3 Use IRQ**

- The choice: IRQ3, IRQ4, IRQ5, IRQ9, IRQ10, IRQ11
- Default: IRQ5

➢ **Onboard Serial Port 4**

This option is used to assign the I/O address and Interrupt Request (IRQ) for the onboard Serial Port.

- The choice: Disabled, 3F8, 2F8, 3E8, 2E8
- Default: 2E8

➢ **Serial Port 4 Use IRQ**

- The choice: IRQ3, IRQ4, IRQ5, IRQ9, IRQ10, IRQ11
- Default: IRQ10

➢ **USB Device Setting**

► USB 1.0 Controller

Enable or disable Universal Host Controller Interface for Universal Serial Bus.

- The choice: Enabled, Disabled
- Default: Disabled

► USB 2.0 Controller

Enable or disable Enhanced Host Controller Interface for Universal Serial Bus.

- The choice: Enabled, Disabled
- Default: Disabled

► USB Operation Mode

Auto decide USB device operation mode. If USB device was high speed device, then it operated on high speed mode. If USB device was full/low speed device, then it operated on full/low speed mode.

- The choice: High Speed, Full/Low Speed
- Default: High Speed

► USB Keyboard Function

Enable or disable Legacy support of USB Keyboard

- The choice: Enabled, Disabled
- Default: Enabled

► USB Mouse Function

Enable or disable Legacy support of USB Mouse

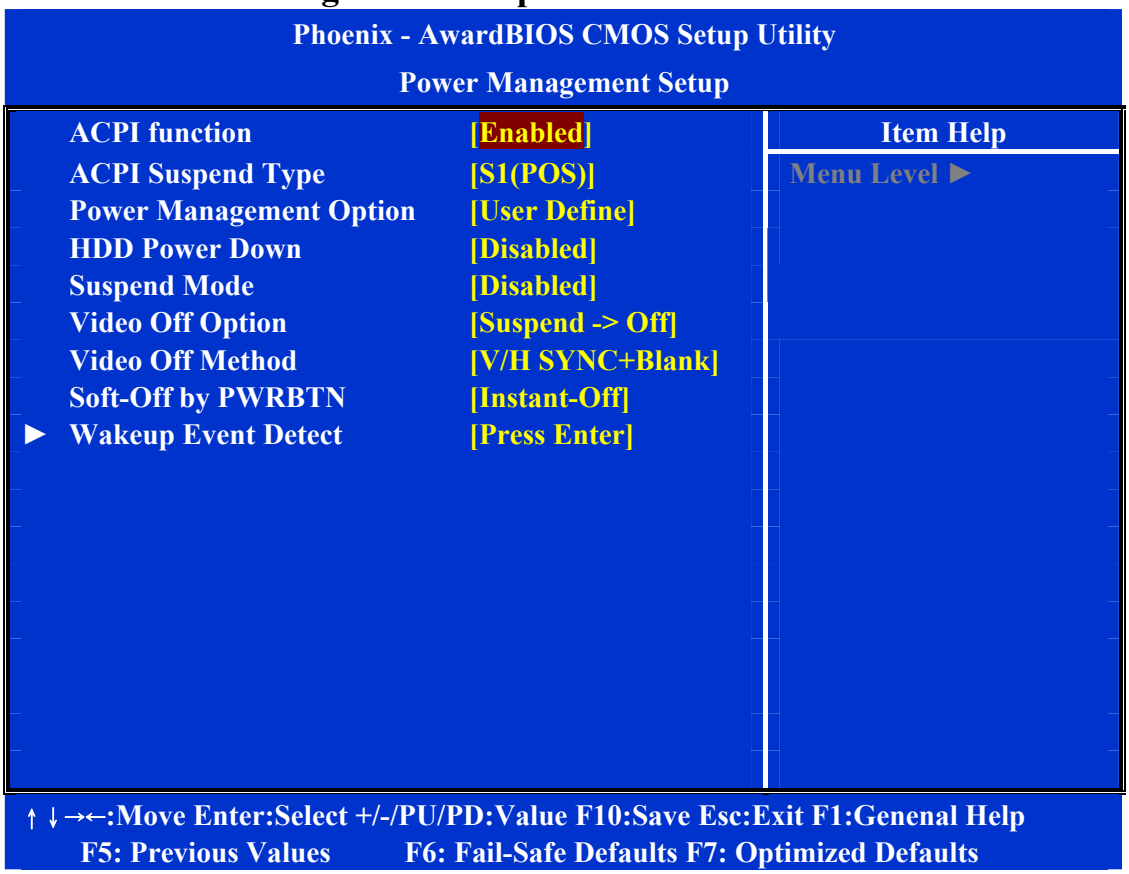
- The choice: Enabled, Disabled
- Default: Enabled

► USB Storage Function

Enable or disable Legacy support of USB Mass Storage

- The choice: Enabled, Disabled
- Default: Enabled

3.7 Power Management Setup



- **ACPI function**
  - The choice: Disabled, Enabled
  - Default: Enabled

- **ACPI Suspend Type**
  - The choice: S1 (POS), S3 (STR), S1 & S3
  - Default: S1 (POS)

  S1/Power On Suspend (POS) is a low power state. In this state, no system context (CPU or chipset) is lost and hardware maintains all system contexts. S3/Suspend To RAM (STR) is a power-down state. In this state, power is supplied only to essential components such as main memory and wakeup-capable devices. The system context is saved to main memory, and context is restored from the memory when a "wakeup" event occurs. The S1 & S3 option is depends on the OS to select S1 or S3.

- **Power Management Option**
  - The choice: User Define, Min Saving, Max Saving
  - Default: User Define
- **HDD Power Down**

Sets the length of time for a period of inactivity before powering down the hard disk.

- The choice: Disabled, 1~15(minutes)
- Default: Disabled

➢ Suspend Mode

- Settings: Disabled, 1 Min, 2 Min, 4 Min, 6 Min, 8 Min, 10 Min, 20 Min, 30 Min, 40 Min, 1 Hour
- Default: Disabled

➢ Video Off Option

Select whether or not to turn off the screen when system enters power saving mode, ACPI OS such as Windows XP will override this option.

- The choice: Always On, Suspend -> Off
- Default: Suspend -> Off

➢ Video Off Method

- The choice: Blank Screen, V/H SYNC+Blank, DPMS Support
- Default: V/H SYNC+Blank

➢ Soft-Off by PWRBTN

System is turned off if power button is pressed for more than four seconds, or Power button functions as a normal power-on/-off button.

- The choice: Delay 4 Sec, Instant-Off
- Default: Instant-Off

➢ Ac Loss Auto Restart

The field defines how the system will respond after an AC power loss during system operation.

- The choice: Off, On, Former-Sts
- Default: Former-Sts

➢ Wakeup Event Detect

► PS2KB Wakeup Select

When selecting Password, press Enter to change password. The maximum number of characters is eight.

- Settings: Hot Key, Password
- Default: Hot Key

► PS2KB Wakeup Key Select

Sets a Hot Key to restore the system from the power saving mode to an active state.

- Settings: Ctrl+F1, Ctrl+F2, Ctrl+F3, Ctrl+F4, Ctrl+F5, Ctrl+F6, Ctrl+F7, Ctrl+F8, Ctrl+F9, Ctrl+F10, Ctrl+F11, Ctrl+F12, Power, Wake, Any Key
- Default: Any Key

► PS2MS Wakeup Key Select

Enables any mouse activity to restore the system from the power saving mode to an active state.

- Settings: Any Button, Left Button, Right Button
- Default: Any Button

► PS2 Keyboard Power On

- Settings: Disabled, Enabled
- Default: Disabled

► PS2 Mouse Power On

- Settings: Disabled, Enabled
- Default: Disabled

► Modem Ring Resume

- Settings: Enabled, By OS
- Default: Enabled

► RTC Alarm Resume

Sets a scheduled time and/or date to automatically power on the system.

- Settings: Disabled, Enabled
- Default: Disabled

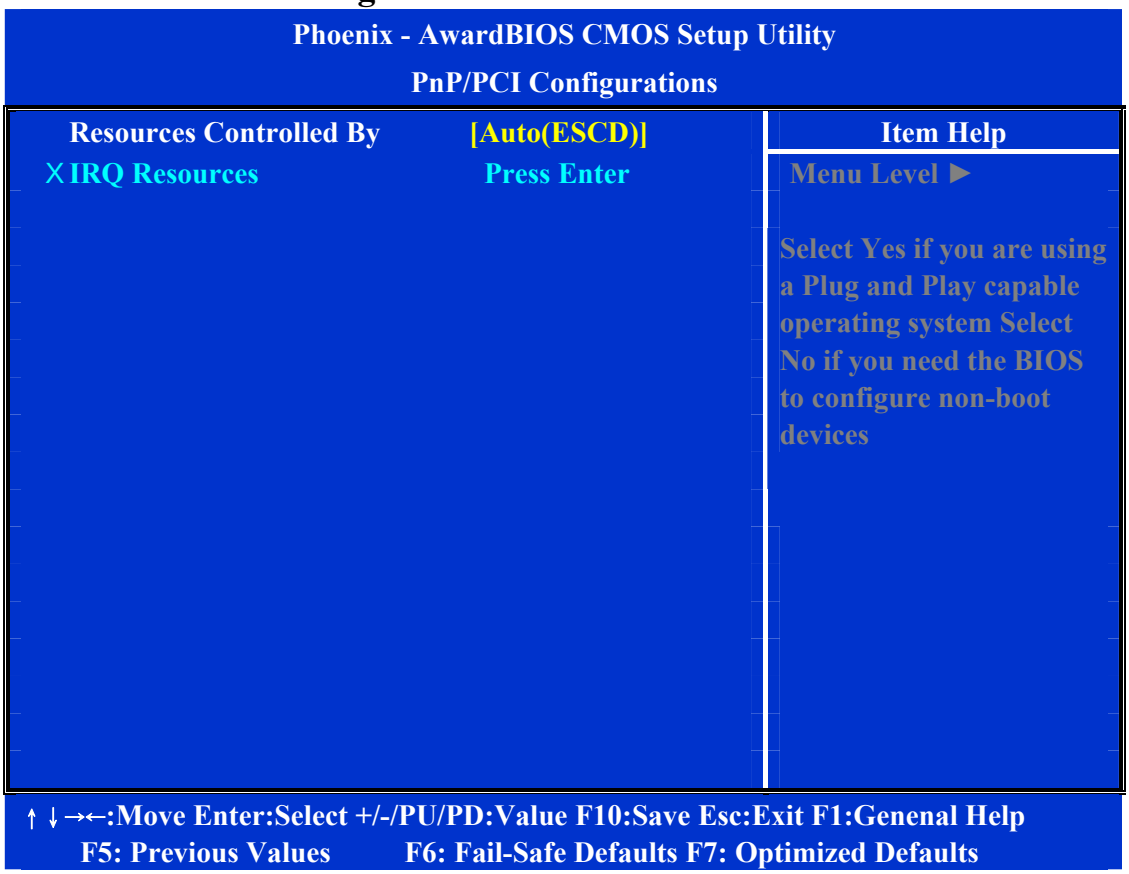
► Date (of Month)

The field specifies the date for “RTC Alarm Resume”.

► Resume Time (hh:mm:ss)

The field specifies the time for “RTC Alarm Resume”.

3.8 PnP/PCI Configurations

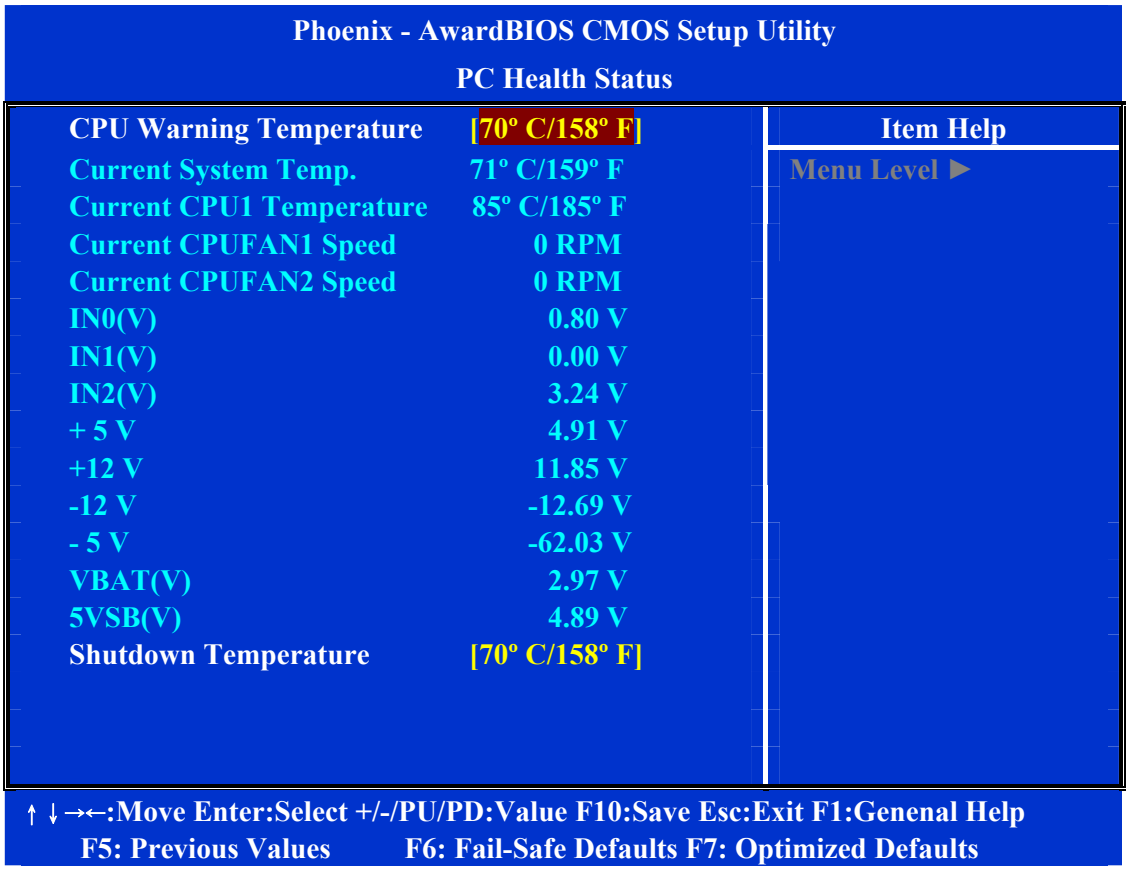


- **Resources Controlled By**

  Enables the BIOS to automatically configure all the Plug-and-Play compatible Devices, e.g. assign IRQ, DMA and memory base address fields. Or manually Unlocks "IRQ Resources" for manual configuration.

  - The choice: Auto (ESCD), Manual
  - Default: Auto (ESCD)

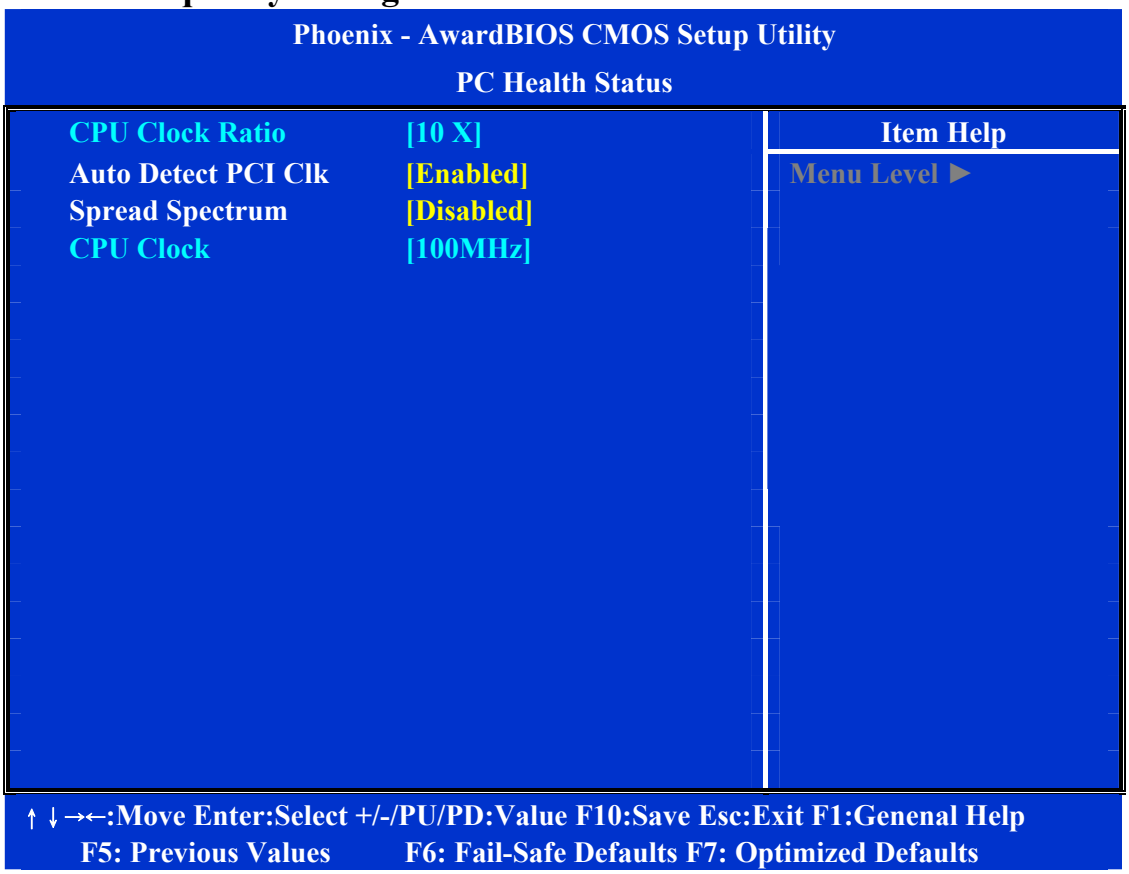
3.9 PC Health Status



- **CPU Warning Temperature**
  - The choice: Disabled, 50˚C/122˚F, 53˚C/127˚F, 56˚C/133˚F, 60˚C/140˚F, 63˚C/145˚F, 66˚C/151˚F, 70˚C/158˚F,
  - Default: Disabled
- **Shutdown Temperature**

  This item allows you to select the shutdown temperature. The system will automatically shutdown while the CPU temperature has reach to the value you have set.
  - The choice: 60˚C/140˚F, 65˚C/149˚F, 70˚C/158˚F, 75˚C/167˚F or Disabled
  - Default: Disabled

3.10 Frequency/Voltage Control



- **Auto Detect PCI Clk**
  - The choice: Disabled, Enabled
  - Default: Disabled

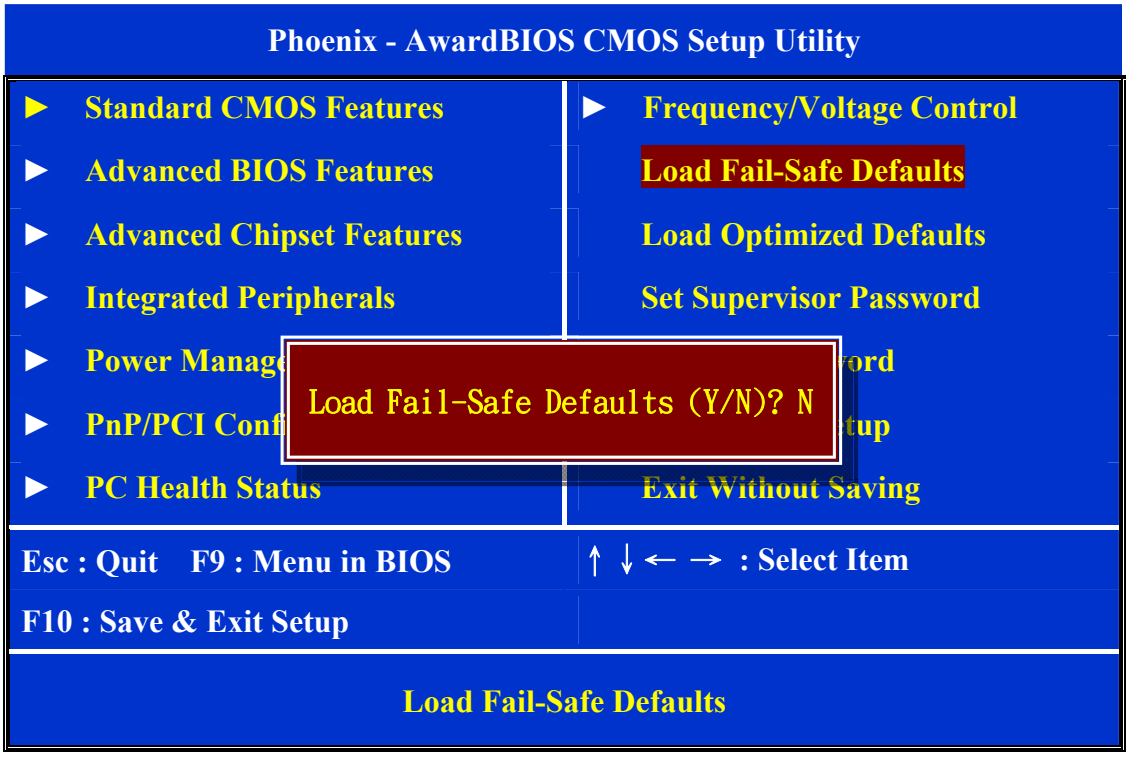
- **Spread Spectrum**

  When the motherboard's clock generator pulses, the extreme values (spikes) of the pulses create EMI (Electromagnetic Interference). The Spread Spectrum function reduces the EMI generated by modulating the pulses so that the spikes of the pulses are reduced to flatter curves.
  - The choice: Disabled, 0.20%, 0.25%, 0.35%
  - Default: Disabled

3.11 Load Fail-Safe Defaults

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

- Load Fail-Safe Defaults (Y/N)? N
- Pressing 'Y' loads the BIOS default values for the most stable, minimal performance system operations.

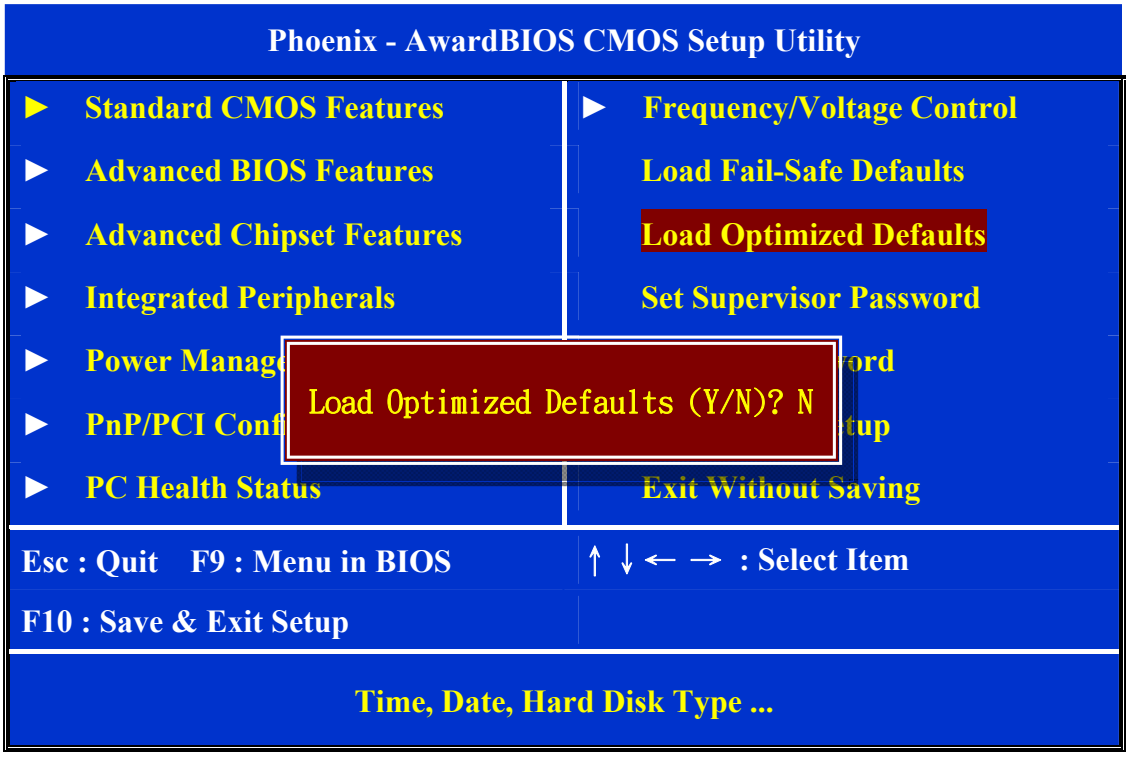


This option is for restoring all the default fail-safe BIOS settings. These values are set by the motherboard manufacturer to provide a stable system with basic performance.

3.12 Load Optimized Defaults

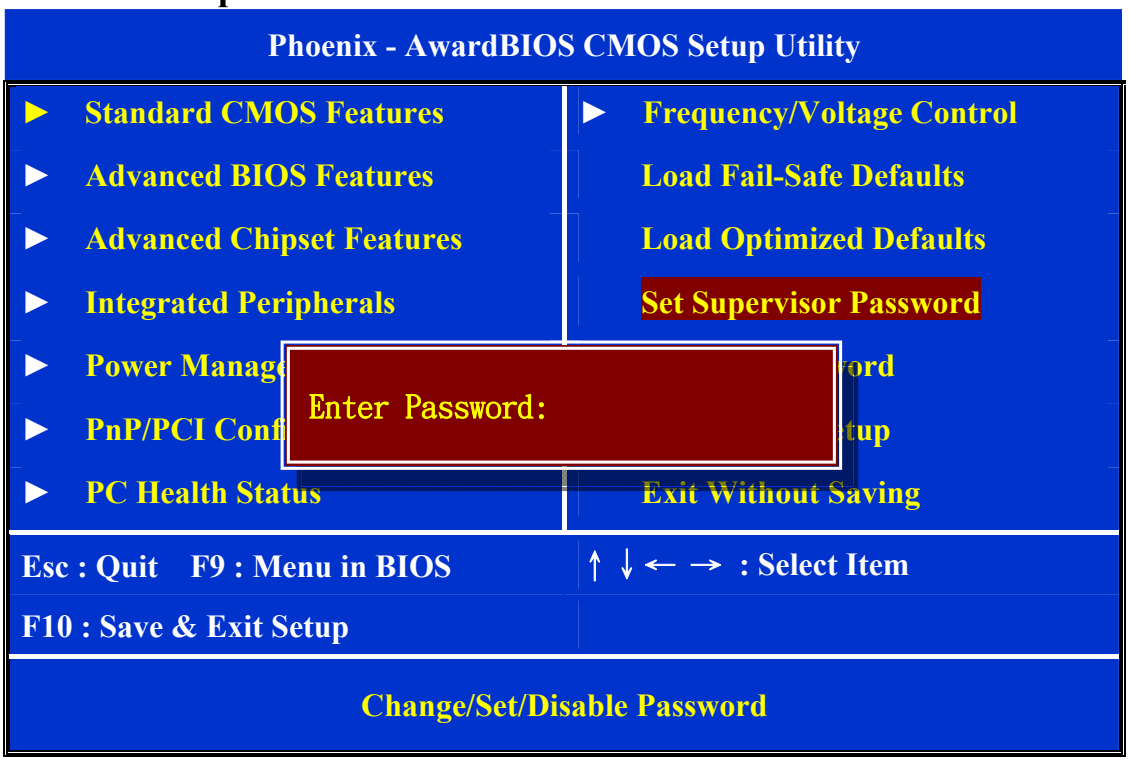
When you press <Enter> on this item, you will get confirmation dialog box with a message similar to:

- Load Optimized Defaults (Y/N)? N
- Pressing 'Y' loads the default values that are factory-set for optimal performance system operation.



This option is for restoring all the default optimized BIOS settings. The default optimized values are set by the motherboard manufacturer to provide a stable system with optimized performance.

3.13 Set Supervisor/User Password



Steps to set supervisor/user password are described as follows:

- **New password setting:**
  1. While pressing <Enter> to set a password, a dialog box appears to ask you enter a password.
  2. Key in a new password. The password can not exceed eight characters.

     Please Enter Your Password
  3. System will request you to confirm the new password again.

     Please Confirm Your Password
  4. When completed, new code takes effect.

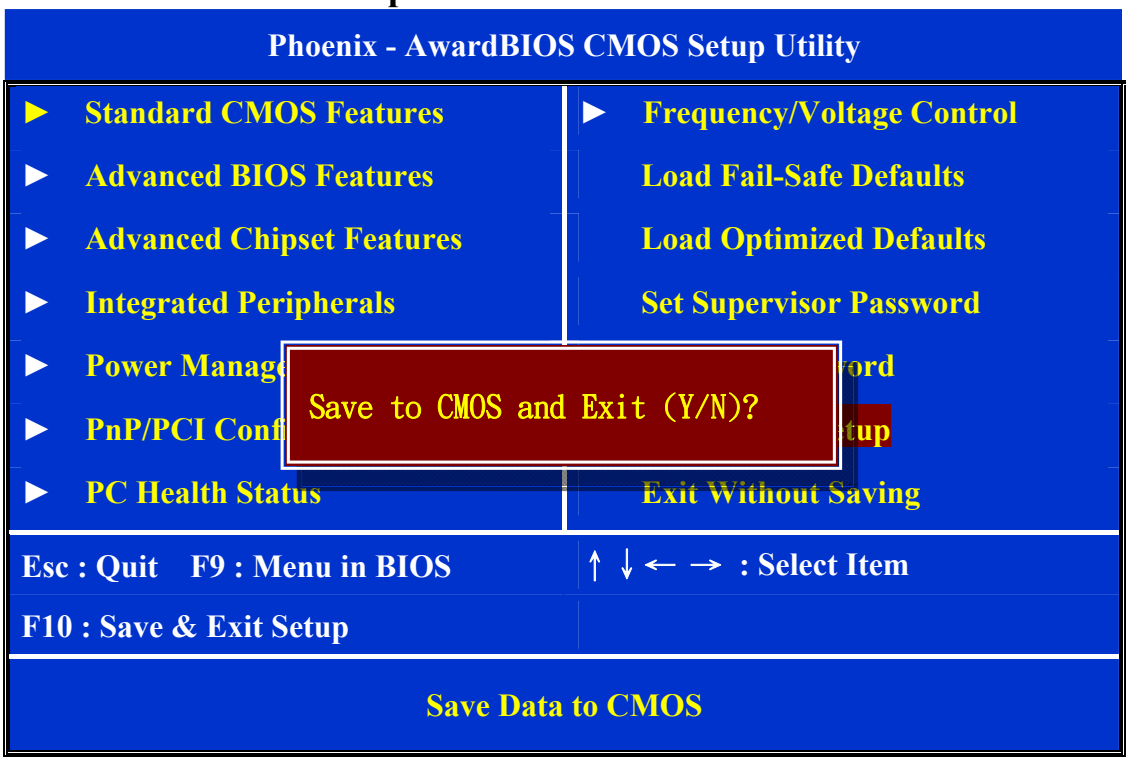
- **No Password Setting:**

If you wants to disable the password, just <Enter> as a password input is requested.

- **If you forget password:**

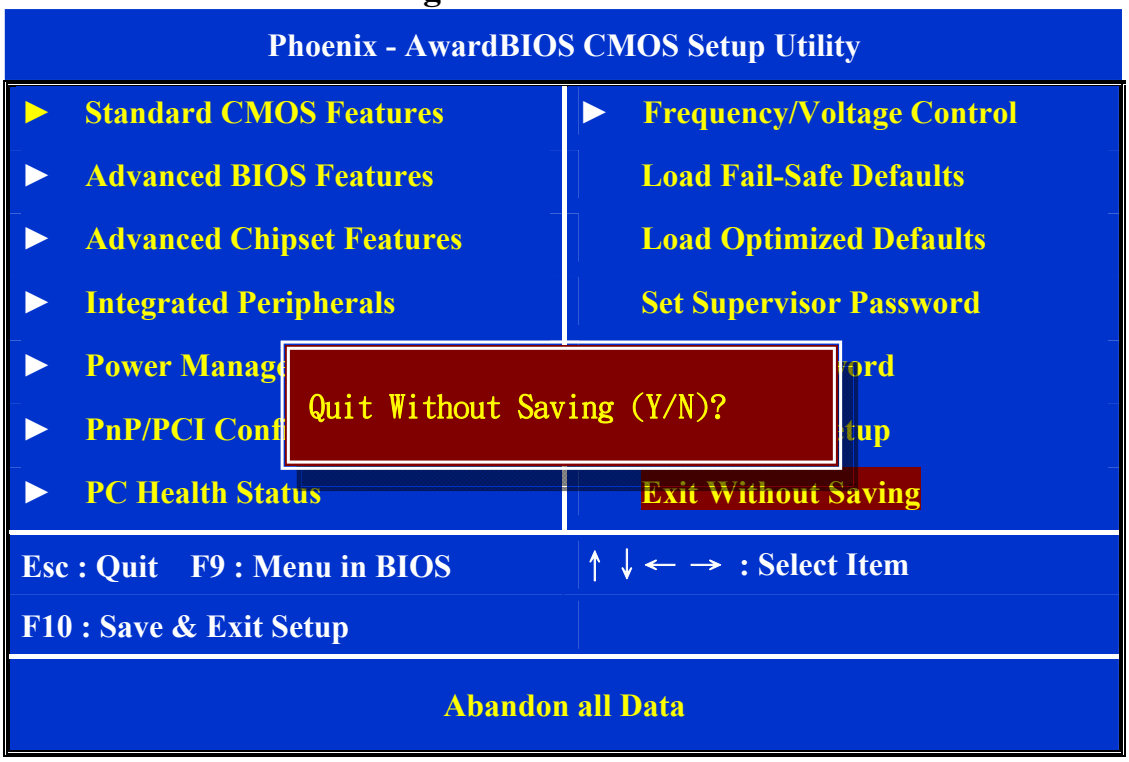
If you forget the password, the only way to access the system is to clear the CMOS memory. You may remove the battery from motherboard and put it back to clear the setting.

3.14 Save & Exit Setup



- **Pressing <Enter> on this item asks for confirmation:**
  - Save to CMOS and Exit (Y/N)? Y
  - Press 'Y' stores the selections made in the menus of CMOS – a special section of memory that recorded in after you turn your system off. The next time you turn on your computer, the BIOS configures your system according to the Setup selections recorded in he CMOS memory of the chipset. After saving the values the system is restarted again.

3.15 Exit Without Saving



- **Press <Enter> on this item asks for confirmation:**
  - Quit Without Saving (Y/N)? Y
  - This allows you to exit from Setup without storing in CMOS any change. The previous selections remain in effect. This exits from Setup utility and restarts your computer.

CHAPTER 4

Chipset Driver Installation

This chapter offers information on the chipset software installation utility.

Sections include:

- Introduction
- Installation of Chipset Utility
- Further Information

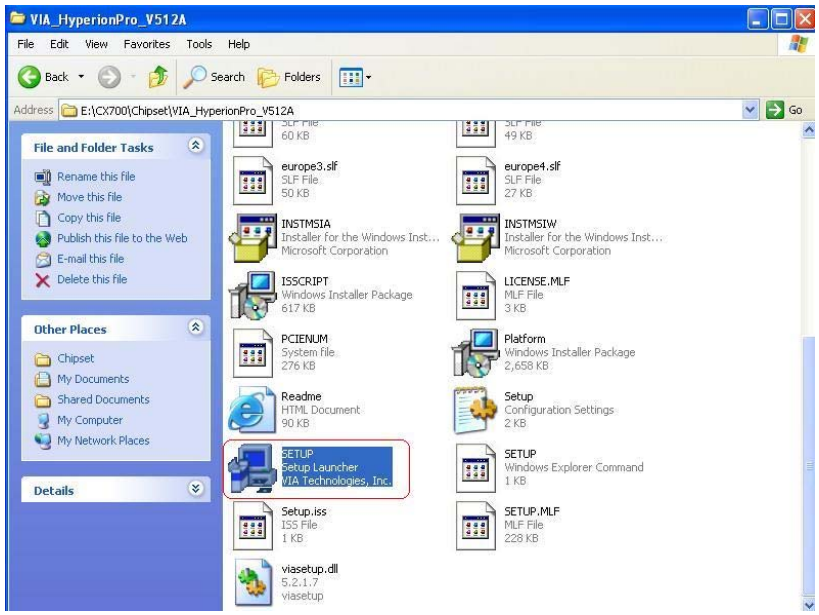
Chapter 4 Chipset Driver Installation

4.1 Introduction

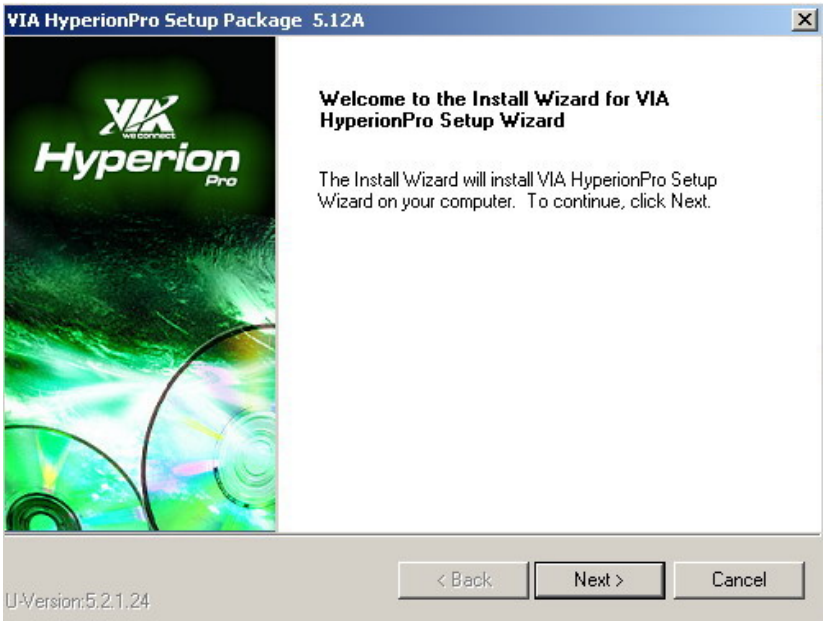
The V170 mainboard is equipped with VIA CX700 Companion Device. The VIA Chipset Drivers should be installed first before the software drivers to enable Plug & Play INF support for VIA chipset components. Follow the instructions below to complete the installation.

4.2 Installation of Ethernet Driver

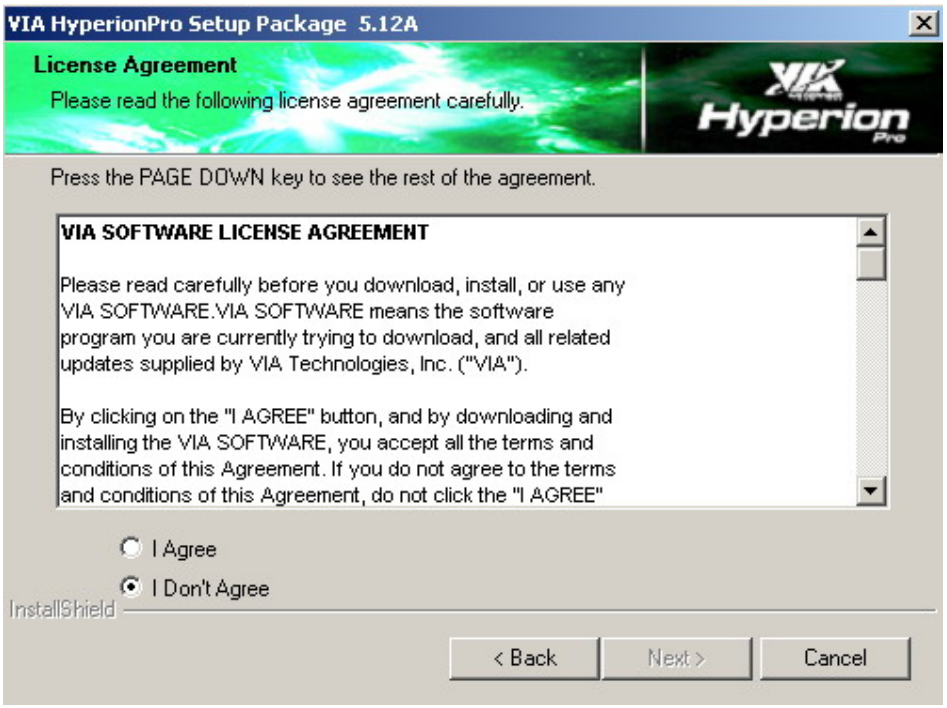
Step.1. After finishing the O.S. installation, insert the driver CD. Open the VIA_HyperionPro_V512A folder and double click the setup.exe file.



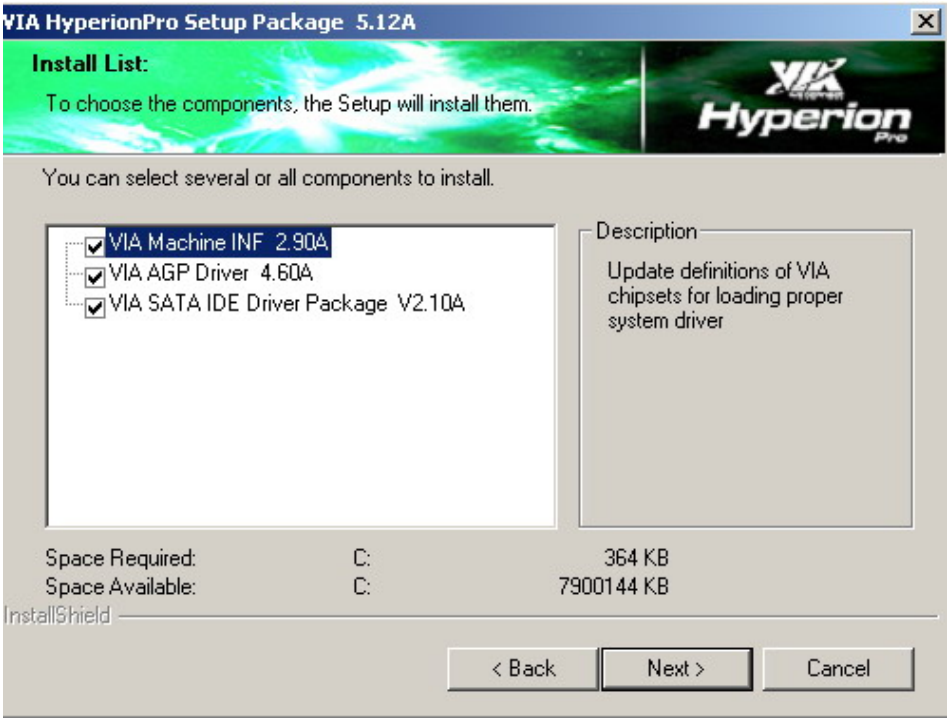
Step.2 When the install wizard startup, click the “Next” button to continue.



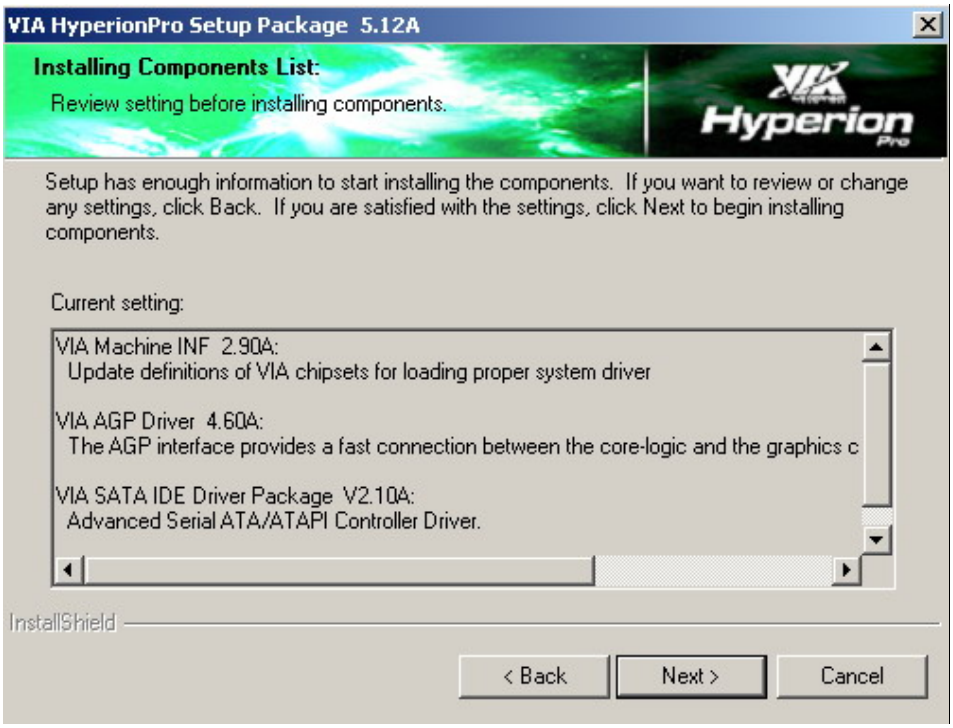
Step.3 Choose “I Agree” to confirm the License Agreement. And click the “Next” button to continue.



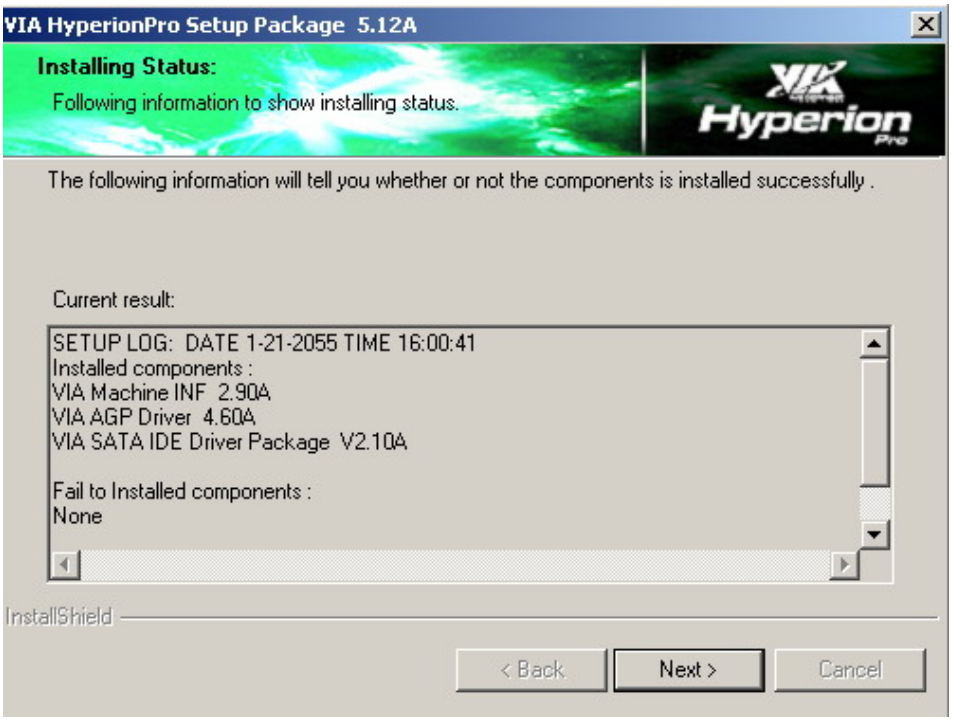
Step.4 Pick up the component you want to install in your system. And click the “Next” button to continue.



Step.5 Confirm the installation list and click the “Next” button to continue.



Step.6 Review the installation status that all component you want to install were well installed. And click the “Next” button to finish installation. You may have to restart your computer to let system configuration finish.



4.3 Further information

Winmate web site: http://www.winmate.com.tw

CHAPTER 5

Ethernet Driver Installation

This chapter offers information on the Ethernet. Sections include:

- Introduction
- Installation of Ethernet Driver
- Further Information

Chapter 5 Ethernet Driver Installation

5.1 Introduction

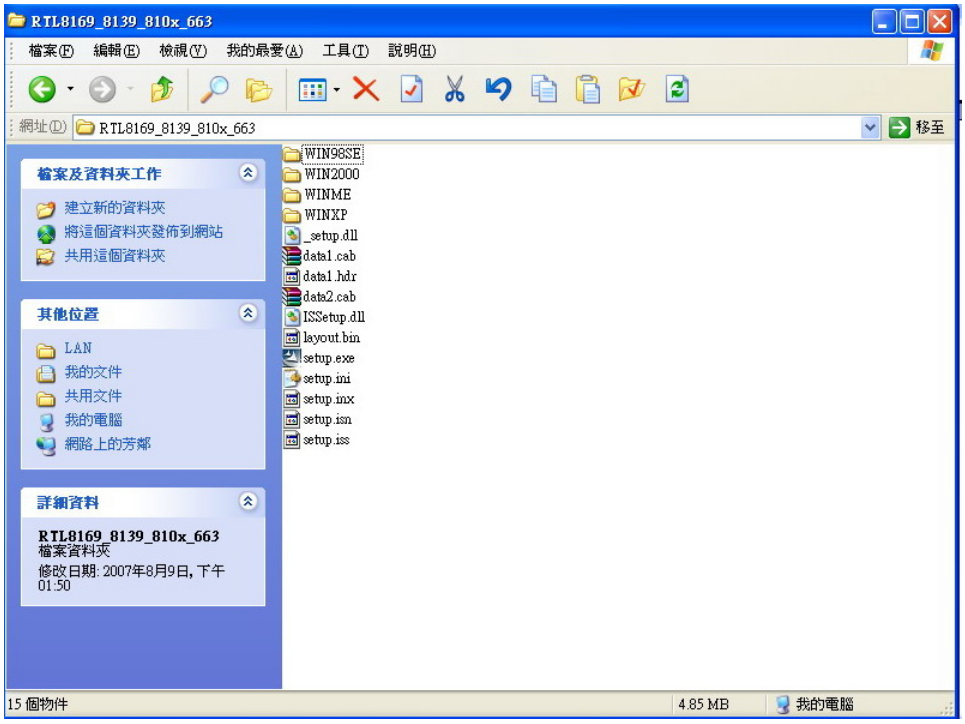
The V170 mainboard is equipped with the Realtek RTL8110SBL Ethernet controller combines a triple-speed IEEE 802.3 compliant Media Access Controller (MAC) with a triple-speed Ethernet transceiver, 32-bit PCI bus controller, and embedded memory. With state-of-the-art DSP technology and mixed-mode signal technology, it offers high-speed transmission over CAT 5 UTP or CAT 3 UTP (10Mbps only) cable. Functions such as Crossover Detection & Auto-Correction, polarity correction, adaptive equalization, cross-talk cancellation, echo cancellation, timing recovery, and error correction are implemented to provide robust transmission and reception capability at high speeds.

The Ethernet port provides an On-board standard RJ-45 connector. The device supports the PCI 10/100/1000Mbps Ethernet interface supports for host communications with power management, and is compliant with the IEEE 802.3 specification for 10/100/ 1000Mbps.

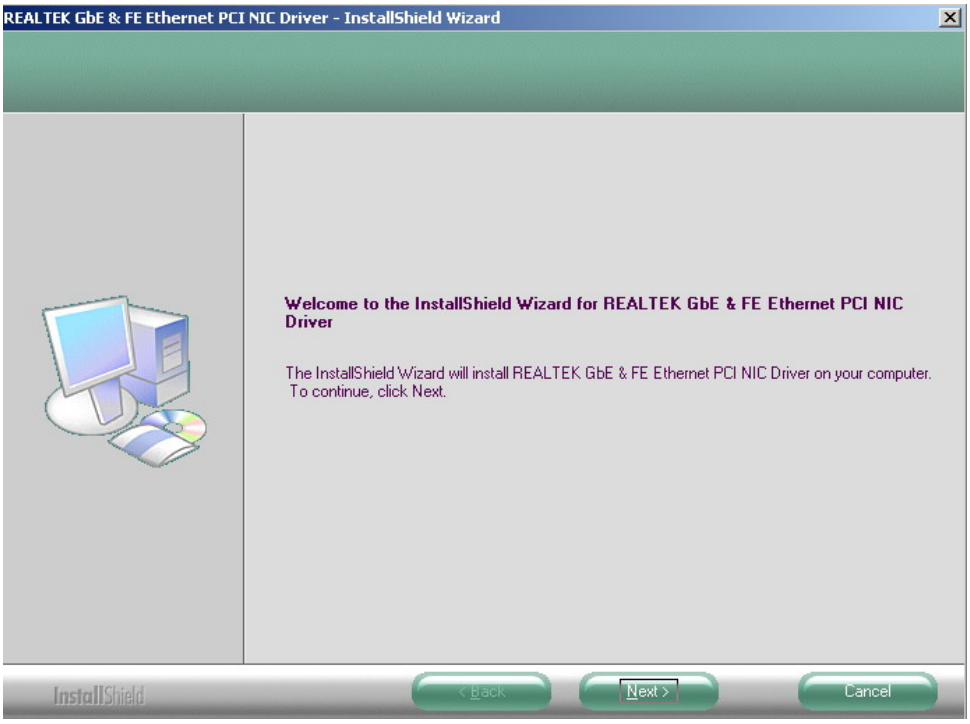
5.2 Installation of Ethernet Driver

The Users must make sure which operating system you are using in the V170 Mainboard before installing the Ethernet drivers. Follow the steps below to complete the installation of the Realtek RTL8110SBL LAN drivers. You will quickly complete the installation.

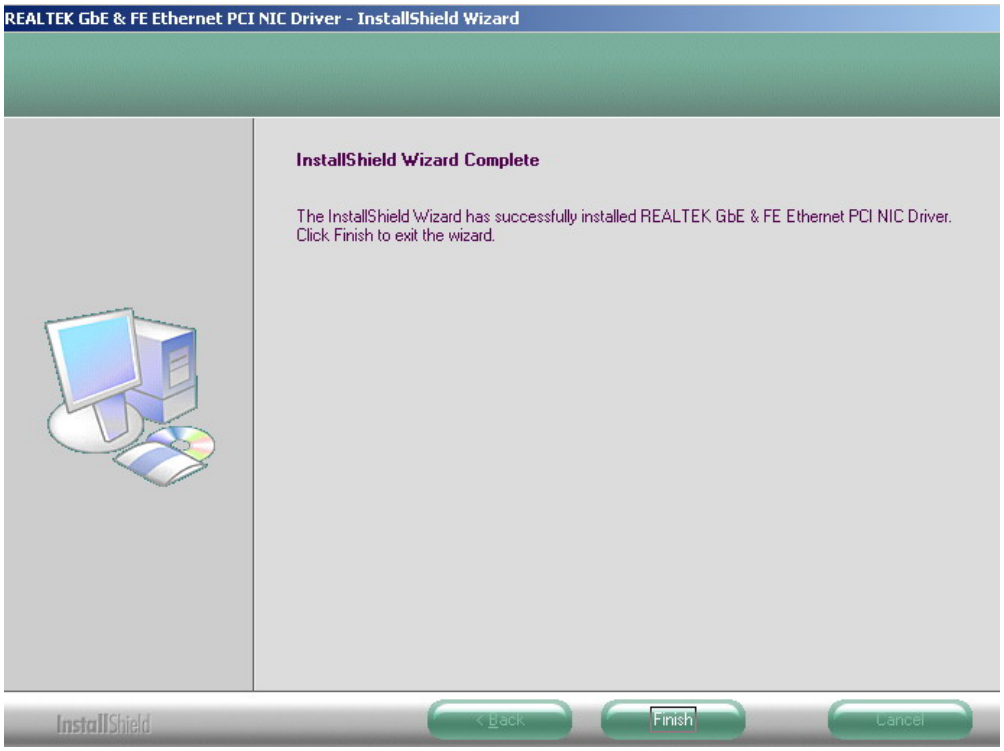
Setp.1. Insert the CD that comes with the motherboard. Open the file document "RTL8169_8139_810x_663" and click on "Setup.exe" to execute the setup.



Setp.2. Click on "Next" and "install" driver.



Setp.3. Click “Finish” and restart the computer for new settings to take effect.



5.3 Further information

Winmate web site: http://www.winmate.com.tw

CHAPTER 6

VGA Driver Installation

This chapter offers information on the VGA.
Sections include:

- Introduction
- Installation of VGA
- Further Information

Chapter 6 VGA Driver Installation

6.1 Introduction

The V170 Mainboard offers an integrated VGA/LCD Controller, 2D/3D GUI engine, sharing memory architecture up to 64 MB. The specifications and features are described as follows:

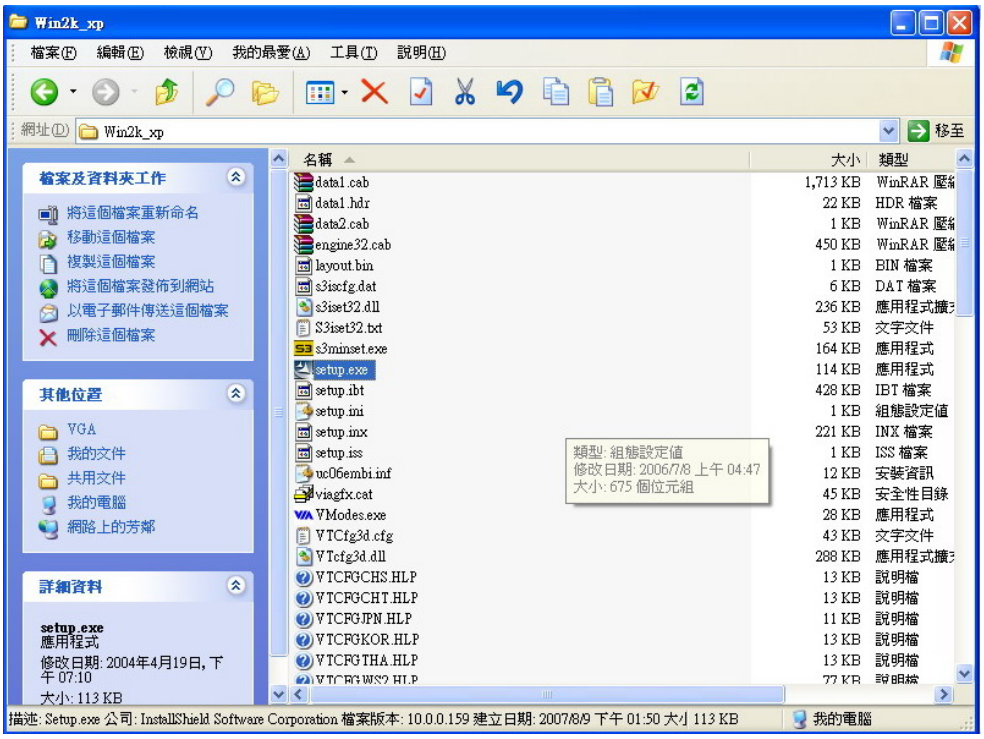
The V170 Mainboard supports CRT and TFT LCD displays. In addition, it also supports CRT and flat panel display mode simultaneously.

The V170 Mainboard can be set in one of three configurations: on a CRT, on a flat panel display, or on both simultaneously. The system is initially set to simultaneous display mode. The Panel resolution supports up to 1280 x 1024 @18bpp or 24bpp.

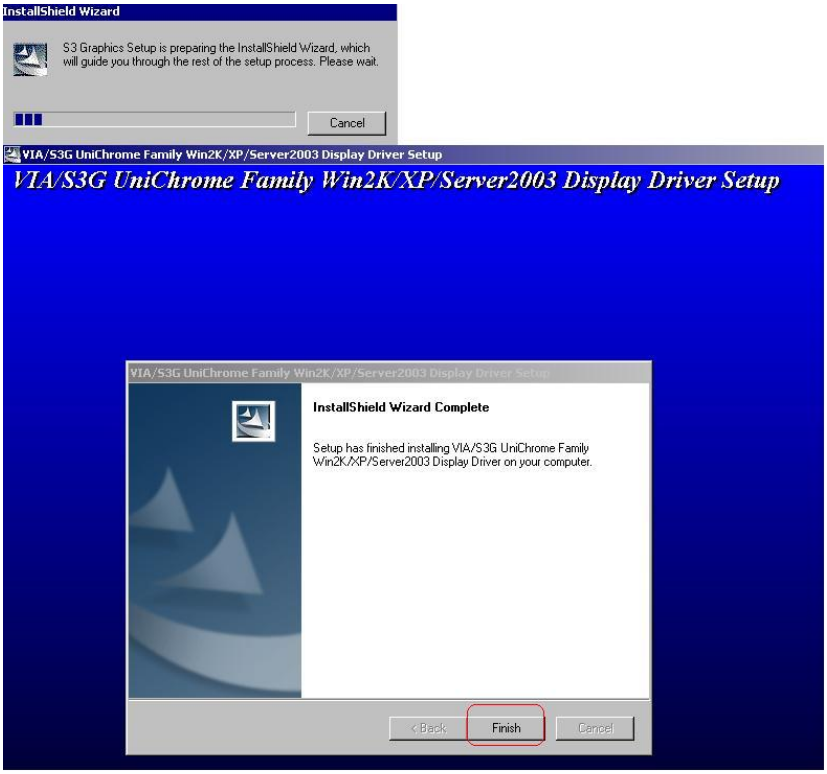
6.2 Installation of VGA Driver

To install the VGA drivers, follow the steps below to proceed with the installation.

Step.1. Enter the “Drivers\VGA\Win2k_xp“ folder in driver CD and double click “setup.exe“.



Step.2. Follow the installation steps and click the “Finish “to complete the process.



6.3 Further information

Winmate web site: http://www.winmate.com.tw

CHAPTER 7

AUDIO Driver Installation

This chapter offers information on the Audio.
Sections include:

- Introduction
- Installation of AUDIO
- Further Information

Chapter 7 AUDIO Driver Installation

7.1 Introduction

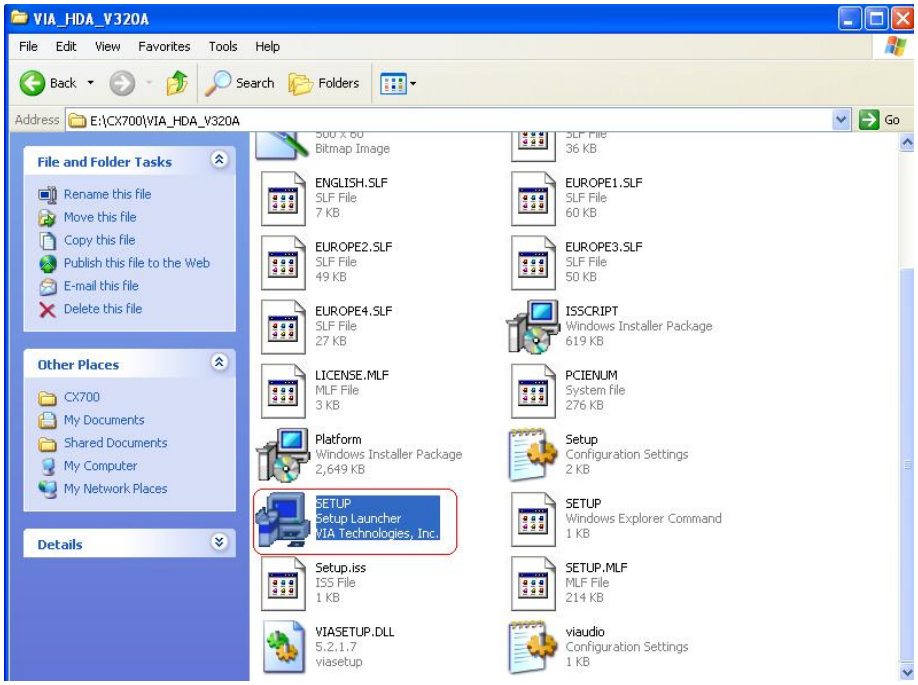
The V170 Mainboard is equipped with the VIA HD Codec VT1708A which is delivering top quality audio performance, supporting the latest 8-channel, 24-bit, 192KHz audio content for an all-round high fidelity experience.

Integrating stereo DACs with a 100dB S/N ratio and compliant with the Intel® High Definition Audio Rev. 1.0 specification, VIA HD Audio codecs include leading edge features such as a high quality headphone amplifier, enhanced recording support, and advanced power management features, making them ideal for mobile devices.

7.2 Installation of Audio Driver

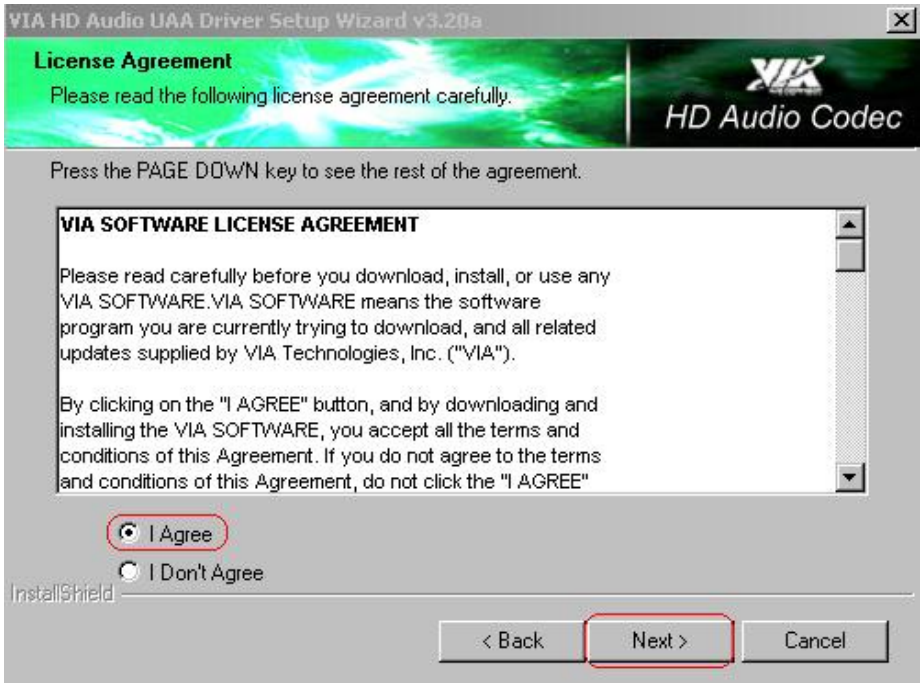
The users must make sure which operating system you are using in the V170 Mainboard before installing the Audio drivers. Follow the steps below to complete the installation of the VIA HD Codec VT1708A Audio drivers. You will quickly complete the installation. Follow the steps below to install the VIA HD Codec VT1708A Audio Drivers.

Step.1 Click “SETUP” on the “ VIA_HDA_V302A” window.

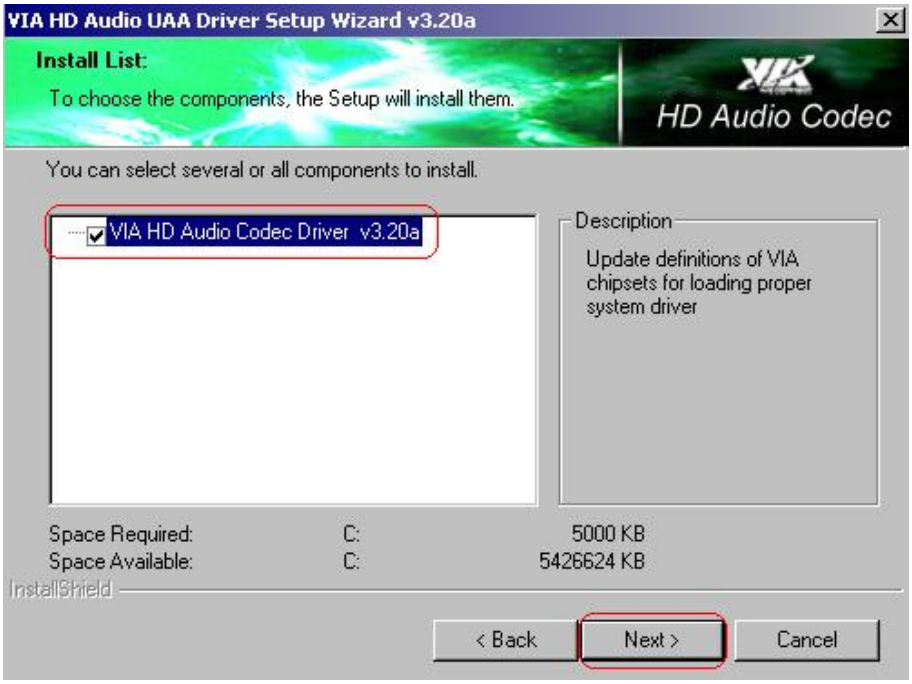


Step.2 Click the “Next “button on the Welcome window.

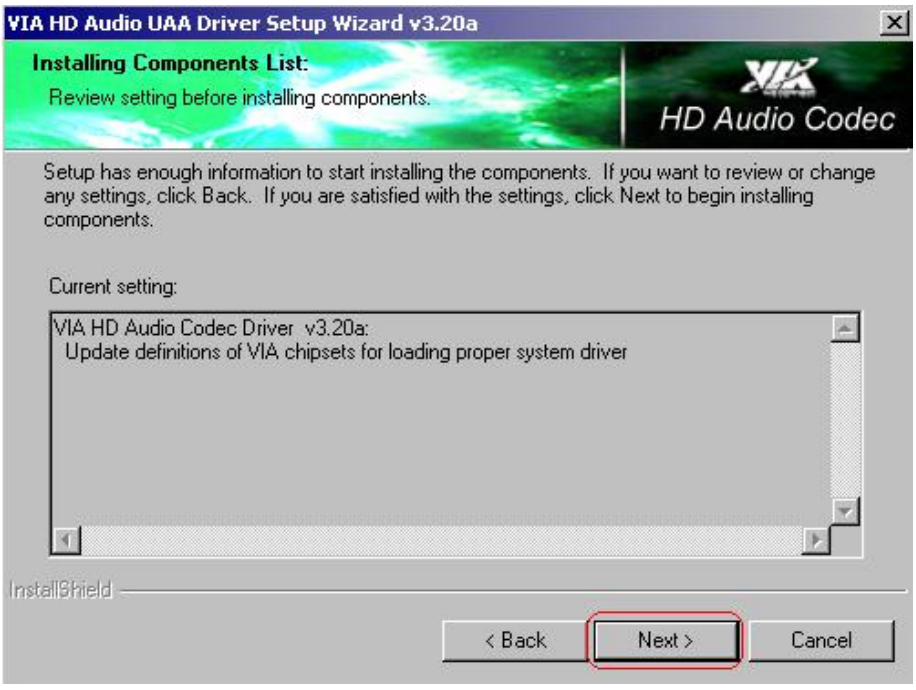
Step.3 Select “I Agree “and click the “Next “ button on the License Agreement window.



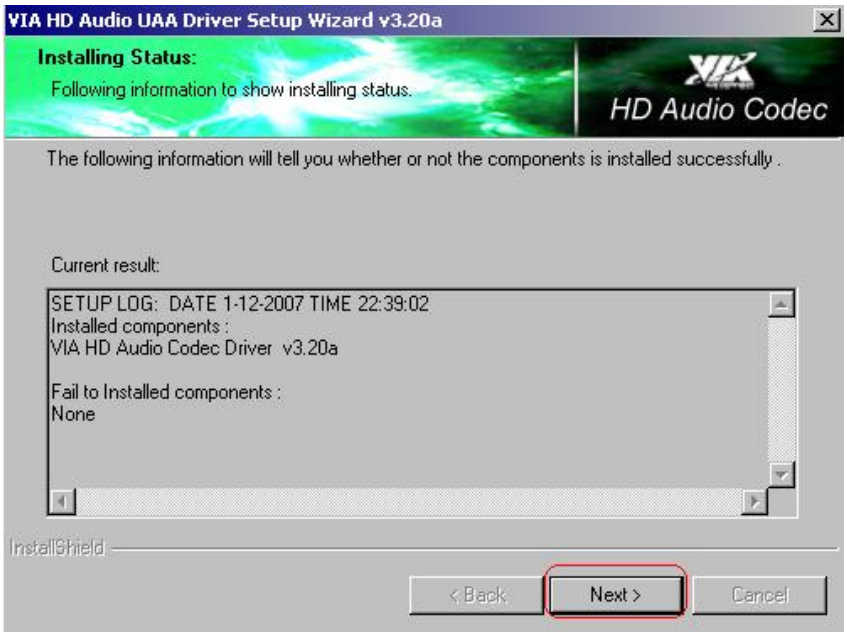
Step.4 Click the “Next “button on the Install List window.



Step.5 Click the “Next “button on the Installing Components List window.

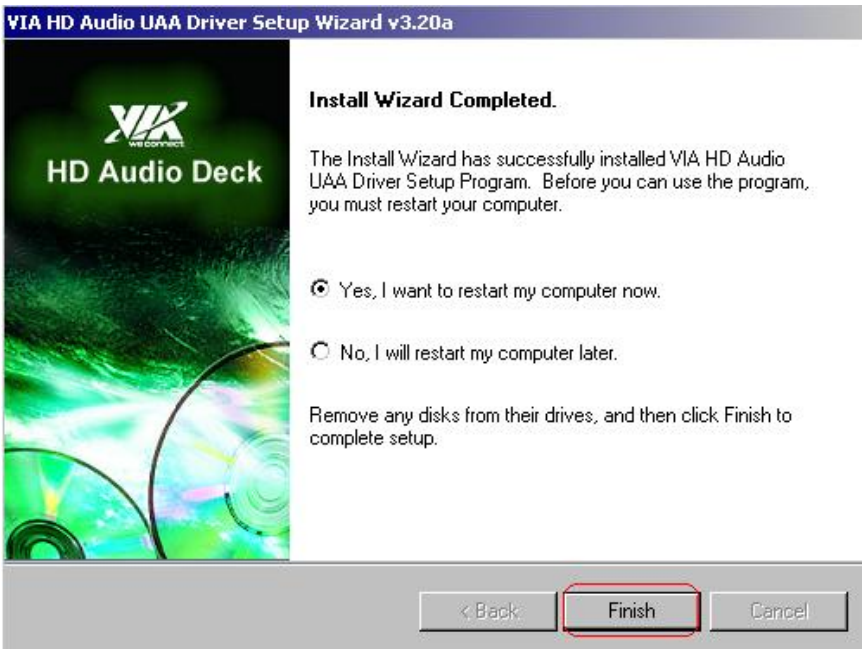


Step.7 Click the “Next “button on the Installing Status window.



Step.8 Click the “Next “button on the Welcome window.

Step.9 Click the “Finish “button and restart your system.



7.3 Further information

Winmate web site: http://www.winmate.com.tw