I330 Motherboard

3.5” Fan/Fanless SBC w/Intel Socket M CPU, VGA, LCD, Giga Ethernet, RAID and Mini-PCI Interface.

USER MANUAL Version 1.3

IMPORTANT NOTICE : The Euro CLS I330 motherboard can be used for a large range of panel PC's from 8.4" to 42".
In order to know the complete range of products we propose, please clic this link :

http://www.eurocls.com/product/PC_Box/

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 int erference 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 c ommunications. 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 hi m own expense.

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Warranty

We warrant that each of its products will be free from material and workmanship defects for a period of one year from the invoice date. If the customer discovers a defect, We will, at its option, repair or replace the defective product at no charge to the customer, provided it is returned during the warranty period of one year, with transportation charges prepaid. The returned product must be properly packaged in its original packaging to obtain warranty service.

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：

- I330 Motherboard
- User Manual
- HDD IDE Cable
- User's Manual & Driver CD
- RS232 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：First, visit the website at to find the update information about the product. Second, 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.

7 *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 pluggable 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 -20° C (-4°F) or above 60° C (140° F). It may damage the equipment.

Revision History

Version	Date	Note	Author
0.1	2007.08.01	Initial Draft	Aladin Huang
0.2	2007.09.13	Add Driver/BIOS	Aladin Huang
1.0	2007.09.17	Double Check Spec.	Aladin Huang
1.1	2007.10.01	I330_110 Spec	Aladin Huang
1.2	2007.10.02	H/W double check	Ted Lin
	2007.11.07	Add 2.5.13	Aladin Huang
	2008.01.14	Revise 2.5	Aladin Huang

Contents

CHAPTER 1

General Information

This chapter includes the I330 Motherboard background information.

Sections include:

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

Chapter 1 General Information

1.1 Introduction

The I330 SBC is equipped with Intel 945GME North Bridge and Intel ICH7M South Bridge which are designed for use with Intel's mobile platform, Intel® Centrino® Duo mobile technology. Comparing to previous generation chipset, the 945GME chipset's low power design enables up to 28% less average power consumption and the chipset delivers up to 2x improvement in graphics performance and enables up to 25% higher data transfer bus speed rate.

In peripheral connectivity, I330 SBC features Mini-PCI I/O ports, two Serial ATA connectors, and eight Hi-Speed USB 2.0 connectors. Additionally, I330 SBC build-in a 12V DC-IN power adapter.

Thus, the I330 SBC is designed to satisfy most of the applications in the industrial computer market, such as Gaming, POS, KIOSK, Industrial Automation, and Programmable Control System. It is a compact design to meet the demanding performance requirements of today's business and industrial applications.

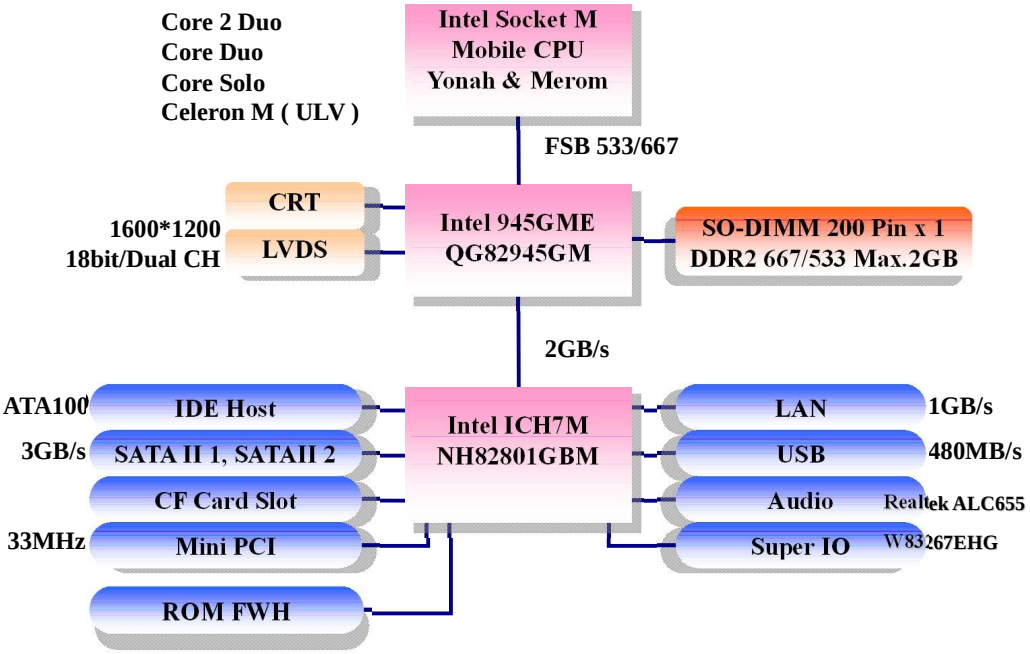
1.2 Feature

- 3.5-inch Form Factor (146mm x 101mm)
- Supports Socket M Intel® Core™ 2 Duo/ Core Duo/Solo/Celeron M/ULV processors
- System memory up to 2GB SO-DIMM 400/533/667 1xSO-DIMM
- Integrated Intel 945GME + ICH7M Chipset
- Intel® GMA950 Integrated Graphics Engine.
- Dual Gigabit Ethernet
- 1 x Mini PCI, 2 X COM, 4 x USB2.0, 2 x SATA, 1 x PATA and CF Card Type I/II

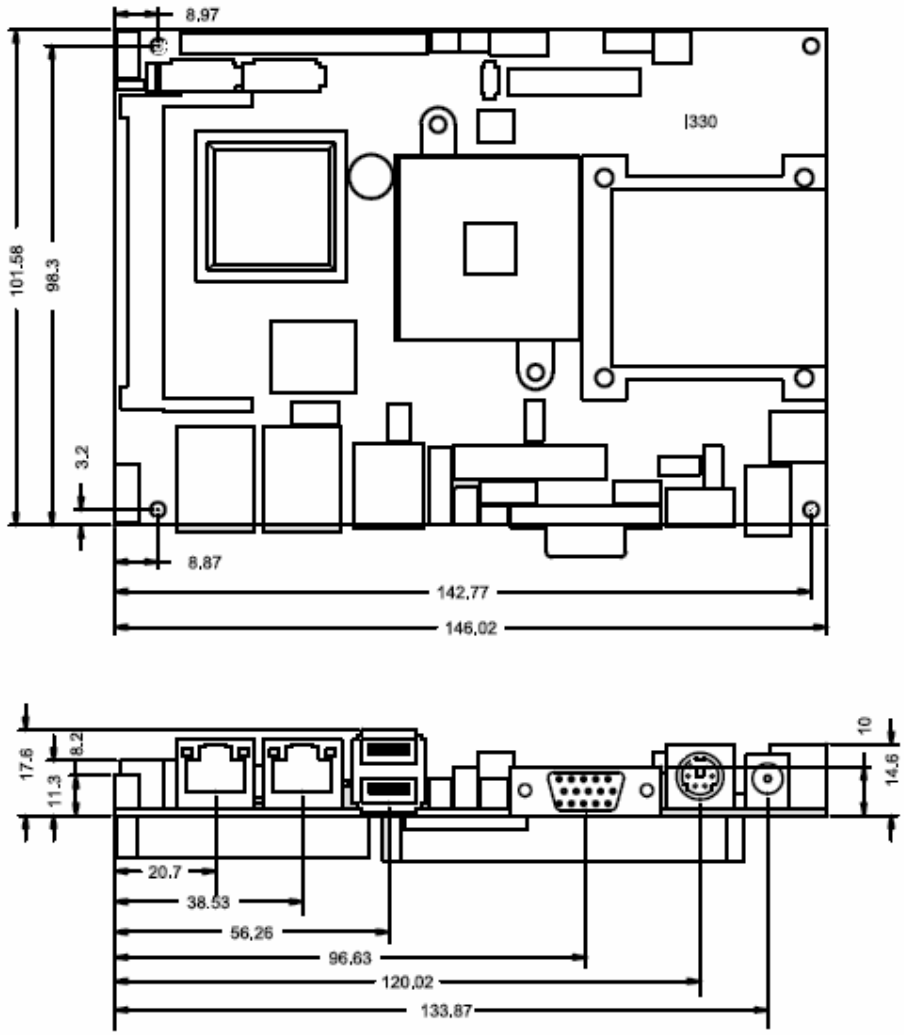
1.3 Motherboard Specifications

CPU Type	Intel Core2 Duo, Core Duo, Core Solo, Celeron M ULV Processor
CPU Speed	Intel® Core™ 2 Duo mobile processor /LV/ULV
CPU FSB	533MHz/667MHz
CPU Socket	Intel Socket M
Chipset	Intel 945GME / ICH7M
BIOS	Award 4 bit Flash
VGA	Intel® GMA950 Integrated Graphics Engine Up to 224MB shared with system memory
LVDS	Intel® GMA Integrated Graphics Engine built-in, single- or dual-channel panel support up to UXGA panel resolution.
LAN	2 x Giga LAN (Realtek RTL8111B + Realtek RTL8111B Giga LAN Controller)
Memory Type	1 x SO-DIMM socket, supports up to 2GB SO-DIMM 400/533/667 SDRAM
LPC I/O	Winbond W83627EHG integrated hardware monitoring
Keyboard/Mouse	1 x PS/2 Keyboard/Mouse connectors
IDE Interface	One channels; supports Ultra DMA 33/66/100
Sound	Realtek ALC655 5.1 channel (Line-out, Line-in & Mic in)
USB	4 ports, USB 2.0 (2 x USB Connector, 2 x USB pin-header)
Edge Connectors	1 x DC-IN Jack 1 x PS/2 connector for keyboard/mouse 1 x VGA out connector 2 x 1Gigabit LAN RJ-45 1 x dual USB stack connector
On Board Pin-Header Connectors	1 x 44 pins box-header 2 x SATA connector for SATAI/II 3.0 Gb/s 1 x 10pins pin-header for Front Panel(2x5) 1 x 8pins pin-header for 5V/12V external power 1 x 3pins pin-header for CPU Fan 1 x 3pins pin-header for NB Fan 1 x 2pins pin-header for 5V external power 1 x 2pins pin-header for 12V external power 1 x 10pins pin-header for Front Audio(2x5) 2 x 8pins pin-header for USB 3/4(2X4) 1 x 10pins Digital I/O(2x5) 2 x 10pins pin-header for COM 1(RS232) (2X5) 1 x 4pins ATX 12V connector 1 x 40pins DF13 Connector for LVDS 1 x 3pins digital panel backlight brightness controller 1 x 7pins digital panel inverter
Power Connector	Input: 4-pin ATX 12V Power input
Expansion Slots	1 x Mini-PCI, 1 x CF Card Type I/II
Form Factor	3.5 inch
Dimensions	146mm x 101mm
Mechanical & environmental	Operating temperature: 0 deg. C to 60 deg. C Operating Humidity: 10 ~ 90% Relative humidity, non-condensing Shock: Operating 15G, 11ms duration Vibration: Operating 5 Hz~500Hz / 1Grms / 3 Axis Certification: CE, FCC, RoHS

1.4 Function Block



1.5 Board dimensions



CHAPTER 2

Installations

This chapter provides information on how to use the jumps and connectors on the I330 Motherboard. The Sections include:

- Memory Module Installation
- I / O Equipment Installation
- Setting the Jumpers
- Connectors on I330 Motherboard

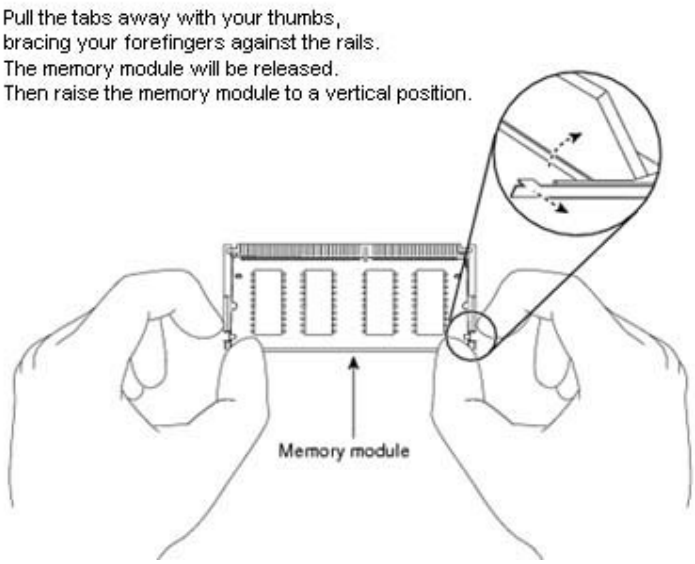
Chapter 2 Installations

2.1 Memory Module（SODIMM）Installation

The I330 Motherboard provides one 200-pin SODIMM slot. The socket supports up to 2GB DDR2 400 SDRAM. When installing the Memory device, please follow the steps below：

Step.1. Firmly insert the SODIMM at an angle into its slot. Align the SODIMM on the slot such that the notch on the SODIMM matches the break on the slot.

Step.2. Press downwards on SODIMM until the retaining clips at both ends fully snap back in place and the SODIMM is properly seated.



- Caution!

The SODIMM only fits in one correct orientation. It will cause permanent damage to the development board and the SODIMM if the SODIMM is forced into the slot at the incorrect orientation.

2.2 I/O Equipment Installation

2.2.1 12V DC-IN

The Motherboard allows plugging 12V DC-IN jack on the board without another power module converter under power consumption by Intel Socket M processor in 945GME with ICH7M chipset.

2.2.2 PS/2 Keyboard or PS/2 Mouse

The Motherboard provides two Mini-DIN connector supports PS/2 interface. Mini-DIN connector supports Keyboard or Mouse. 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.

2.2.3 Serial COM ports

Two RS-232 connectors build in the rear I/O. Three optional COM ports support RS-232. When an optional touch-screen is ordered with PPC, serial com port can connect to a serial or an optional touch-screen.

2.2.4 External VGA

The 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.

2.2.5 Ethernet interface

The Motherboard is equipped with Realtek RTL8111B + Realtek RTL8111B 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 s provide two standard RJ-45 jacks.

2.2.6 USB ports

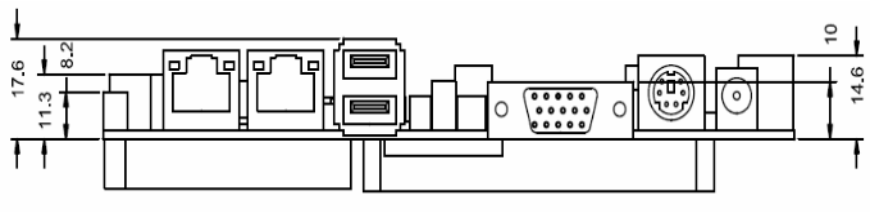
Six USB devices (four with pin headers) may be connected to the system though an adapter cable. Various adapters may come with USB po rts. USB usually connect the external system to the system. The USB ports support hot plug-in connection. Whatever, you should install the device driver before you use the device.

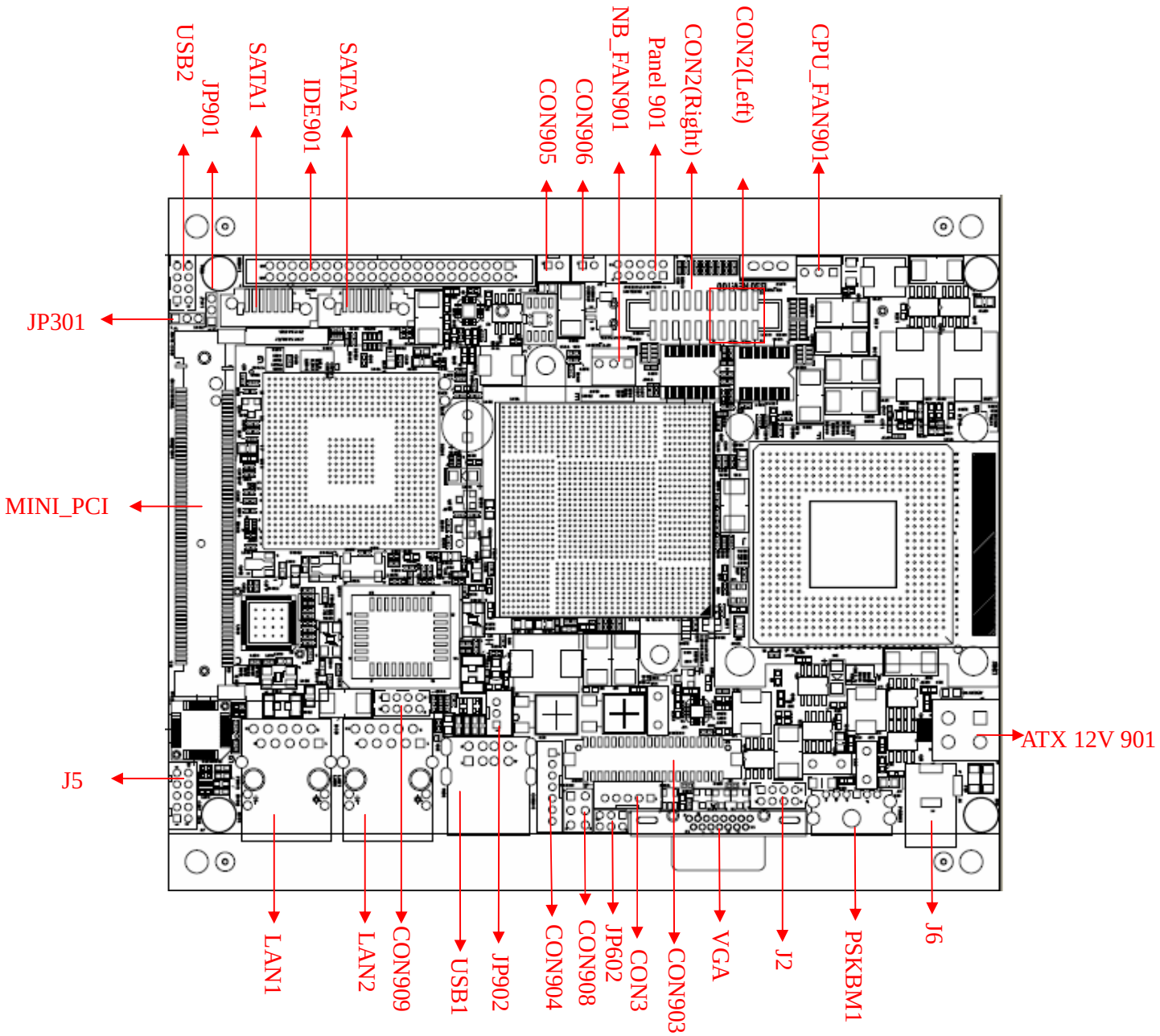
2.2.7 Audio function

The Audio 5.1 channel capabilities are provided by a Realtek ALC655 chipset supporting digital audio outputs. The audio interface includes two jacks: line-in and line-out.

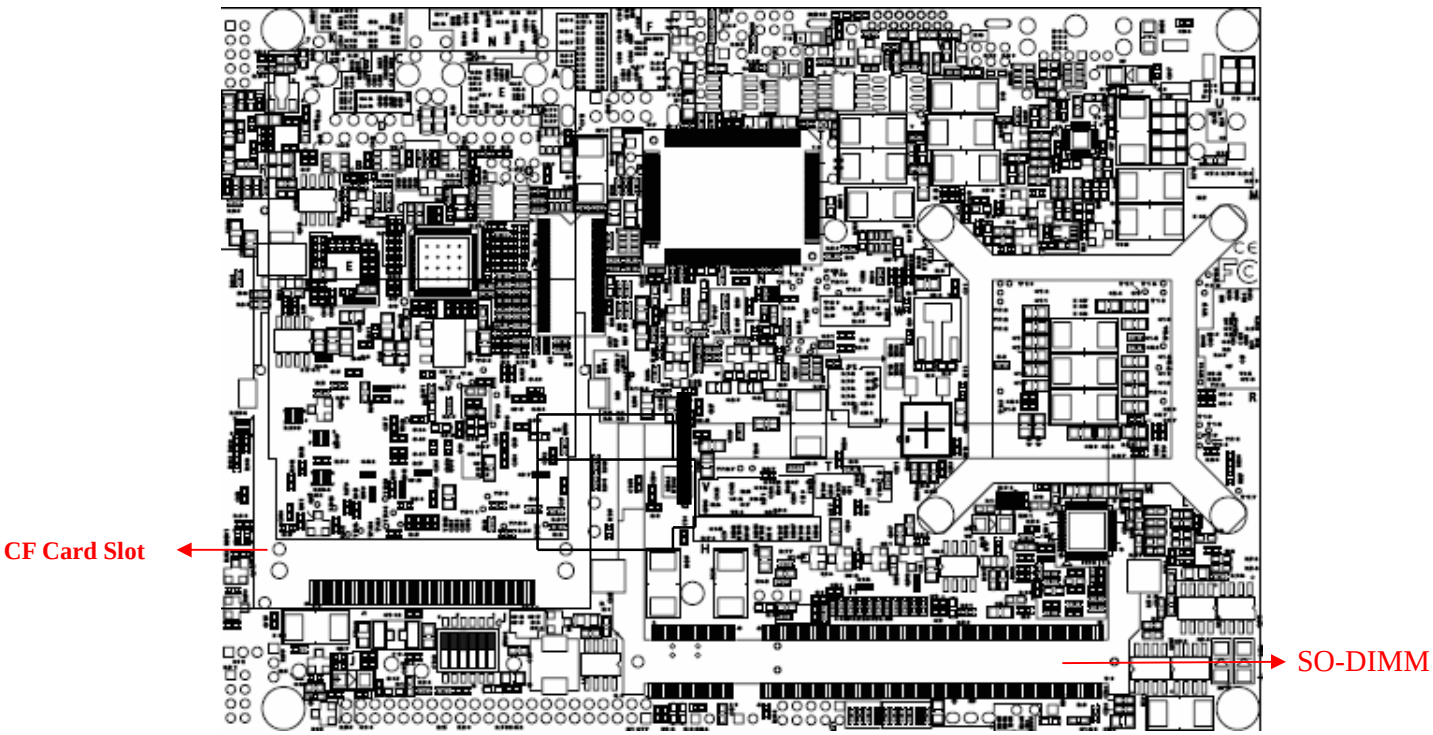
2.3 Jumpers and Connectors

TOP





BOTTOM

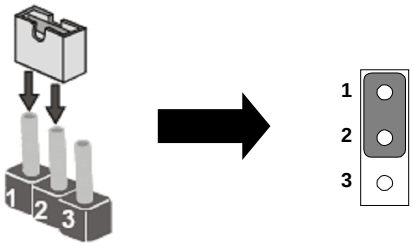


Locating Jumpers and Connectors (rear side)

2.4 Jumper Setting

A pair of needle-nose pliers may be helpful when working with jumpers. If you have any doubts about the best hardware configuration for your application, contact your local distributor or sales representative before you make any changes. Generally, you simply need a standard cable to make most connections.

The jumper setting diagram is as below. If a jumper shorts pin 1 and pin 2, the setting diagram is shown as the right one.

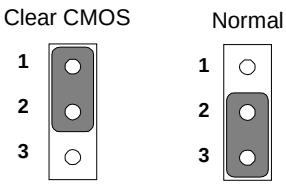


The following tables list the function of each of the board's jumpers.

Label	Function	Note
JP301	Clear CMOS	3x1 header , pitch 2.0mm
JP602	RS232 / RS422 / RS485 Selector	2x3 header , pitch 2.0mm
JP901	CF CARD PRIORITY	3x1 header , pitch 2.0mm
CON908	LVDS VOLTAGE	2x3 header , pitch 2.0mm

2.4.1 JP301: Clear CMOS

User must make sure the power supply to turn off the power supply before setting Clear CMOS. Users remember to setting jumper back to Normal before turning on the power supply. Default: 2short3.

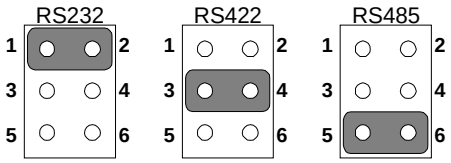


Pin No.	Functions
1 Short 2	Clear CMOS
2 Short 3	Normal

2.4.2 JP602: RS232 / RS422 / RS485 Selector

The jumper can be configured to operate COM1 in RS-232/422/485 mode. And the

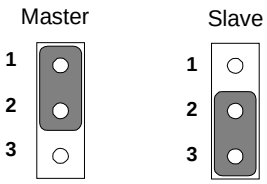
setting must be cooperated with the 2.4.3 settings.



Pin No.	Functions
1 Short 2	RS232
3 Short 4	RS422
5 Short 6	RS485

2.4.3 JP901: CF Card Priority

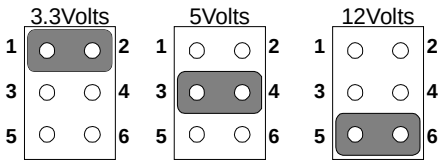
JP901 can be configured to operate CF Card Priority in Master/Slave mode.



Pin No.	Functions
1 Short 2	Master
2 Short 3	Slave

2.4.4 CON908: LCD Panel Voltage Select

CON908 can be configured to operate in 3.3Volts / 5Volts / 12Volts mode.



Pin No.	Functions
1 Short 2	3.3Volts Selected
2 Short 3	5Volts Selected
5 Short 6	12Volts Selected

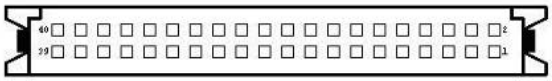
2.5 Connectors and Pin Assignment

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

Label	Function	Note
CON903	LVDS LCD Output Connector	DF13-40DP-1.25V
JP902	Digital Panel Backlight Brightness Control	3x1 header, pitch 2.54mm
CON904	Digital Panel Backlight Inverter Power	7x1 header, pitch 2.54mm
PSKBM1	PS2 Keyboard/Mouse Connector	Mini-DIN
VGA	VGA Output	15pin VGA
CON2(Left)	COM1 for RS232	2x5 header
CON2(Right)	COM2 for RS232	2x5 header
CON3	COM1 for RS422/485	1x5 header
J5	Audio Jack	3 Audio I/O
IDE901	IDE Connector	44Pin IDE Conn.
USB2	USB PIN HEADER	4x2 Pin Header
NB_FAN901	FAN CONNECTOR	3x1 Pin Header
CPU_FAN901	FAN CONNECTOR	3x1 Pin Header
PANEL901	System Function Connector	5x2 header ,pitch 2.0mm
CON905	12V External Power	2x1 header, pitch 2.0mm
CON906	5V External Power	2x1 header, pitch 2.0mm
J2	12V External Power	4x2 header ,pitch 2.54mm
ATX 12V 901	12V DC Jack	4 Pin Jack
J6	12V DC Connector	4 Pin Connecter
CON909	Digital I/O	2x5 Pin header

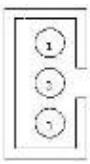
* Not Default Connector

2.5.1 CON903: LVDS Connector



Pin No.	SYMBOL	Pin No.	SYMBOL
1	LCDVDD	2	LVDS_LTX0-
3	LCDVDD	4	LVDS_LTX0+
5	LCDVDD	6	LVDS_LTX1-
7	GND	8	LVDS_LTX1+
9	GND	10	LVDS_LTX2-
11	GND	12	LVDS_LTX2+
13	GND	14	LVDS_LCLK-
15	GND	16	LCDS_LCLK
17	GND	18	NC
19	GND	20	NC
21	GND	22	LVDS_UTX0-
23	GND	24	LVDS_UTX0+
25	GND	26	LVDS_UTX1-
27	GND	28	LVDS_UTX1+
29	GND	30	LVDS_UTX2-
31	GND	32	LVDS_UTX2+
33	GND	34	LVDS_UCLK-
35	GND	36	LVDS_UCLK
37	GND	38	NC
39	GND	40	NC

2.5.2 JP902: Digital Panel Backlight Brightness Control



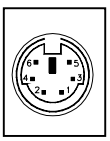
Pin No.	SYMBOL
1	VCC
2	Black Light Control
3	GND

2.5.3 CON904: Digital Panel Backlight Inverter Power

Pin No.	SYMBOL
1	+12V
2	+12V
3	+12V
4	GND
5	Black Light Control
6	GND
7	Black Light EN 5V

2.5.4 PSKBM1: PS2 K/B Mouse Connector

6-pin Mini Din

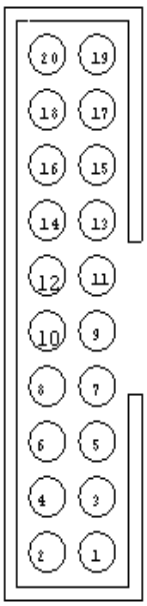


Signal Name	Keyboard	Mouse	Signal Name
Keyboard data	1	1	Mouse data
N.C.	2	2	N.C.
GND	3	3	GND
5V	4	4	5V
Keyboard clock	5	5	Mouse clock
N.C.	6	6	N.C.

2.5.5 CON2: D-SUB Dual Output

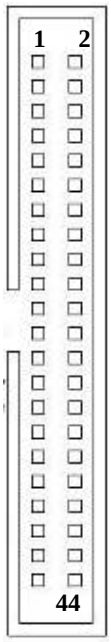
The serial port CON2, which is option 1 for RS232 / RS422 / RS485(from 11 pin to 20 pin) , is the Winbond I/O serial port.

10x2 header, pitch 2.0mm



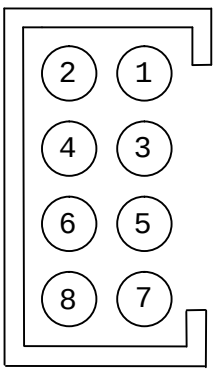
Pin No.	SYMBOL	Pin No.	SYMBOL
20	GND	19	GND
18	FK NRI2	17	FK NDTR2
16	FK NCTS2	15	FK NSOUT2
14	FK NRTS2	13	FK NSIN2
12	FK NDSR2	11	FK NDCD2
10	GND	9	GND
8	FK NRI1	7	FK NDTR1
6	FK NCTS1	5	FK NSOUT1
4	FK NRTS1	3	FK NSIN1
2	FK NDSR1	1	FK NDCD1

2.5.6 IDE901: IDE Connector



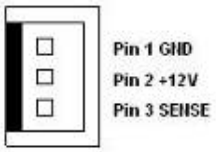
Pin No.	SYMBOL	Pin No.	SYMBOL
1	RESET	2	GND3
3	DD7	4	DD8
5	DD6	6	DD9
7	DD5	8	DD10
9	DD4	10	DD11
11	DD3	12	DD12
13	DD2	14	DD13
15	DD1	16	DD14
17	DD0	18	DD15
19	GND1	20	NC
21	DREQ	22	GND4
23	DIOW#	24	GND5
25	DIOR#	26	GND6
27	IO_RDYD	28	CSEL
29	DACK#	30	GND7
31	IRQ	32	IOCS16#
33	DA1	34	CBL_ID#
35	DA0	36	DA2
37	DCS#1	38	DCS#3
39	DASP#	40	GND8
41	+5V1	42	+5V2
43	GND	44	NC

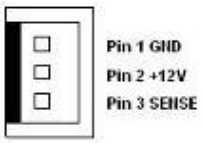
2.5.7 USB2: USB PIN HEADER



USB2			
Pin	SYMBOL	Pin	SYMBOL
2	USBVCC	1	USBVCC
4	USB_P6-	3	USB_P7-
6	USB_P6+	5	USB_P7+
8	GND	7	GND

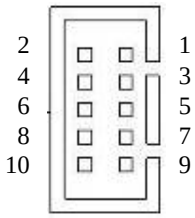
2.5.8 NB_FAN901/CPU_FAN901: FAN CONNECTOR





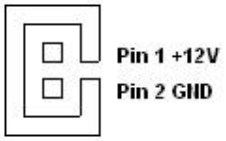
NB_FAN901 **CPU_FAN901**

2.5.9 PANEL901: Front Panel System Function Connector

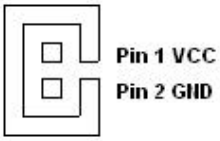


Pin	SYMBOL	Pin	SYMBOL
2	HD_LED+	1	PW_LED+
4	HD_LED-	3	PW_LED-
6	RT_BT1	5	PW_BT1
8	RT_BT2	7	PW_BT2
10	5VSB	9	RSEV

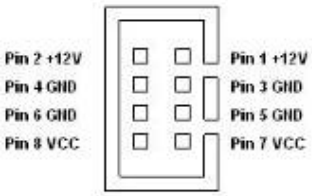
2.5.10 CON905/CON906/J2: External Power



CON905

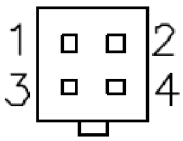


CON906



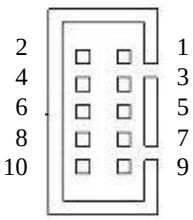
J2

2.5.11 ATX12V901: 12V DC Connector



Pin	SYMBOL
1	Ground
2	Ground
3	+12V
4	+12V

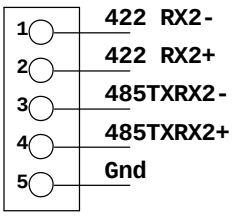
2.5.12 Digital: Digital I/O Connector



Pin	SYMBOL	Pin	SYMBOL
2	Vcc	1	GND
4	Out1	3	Out3
6	Out0	5	Out2
8	IN1	7	IN3
10	IN0	9	IN2

2.5.13 CON3: RS-422 / RS-485 Header

Pls note that our I330 the COM1: RS232 transfer RS422/RS485 are using different socket and different cable



Pin No.	SYMBOL
1	422 RX2-
2	422 RX2+
3	485 TXRX2-
4	485TXRX2+
5	Gnd

CHAPTER 3

Graphic Driver Installation

This chapter offers information on the chipset software Installation utility

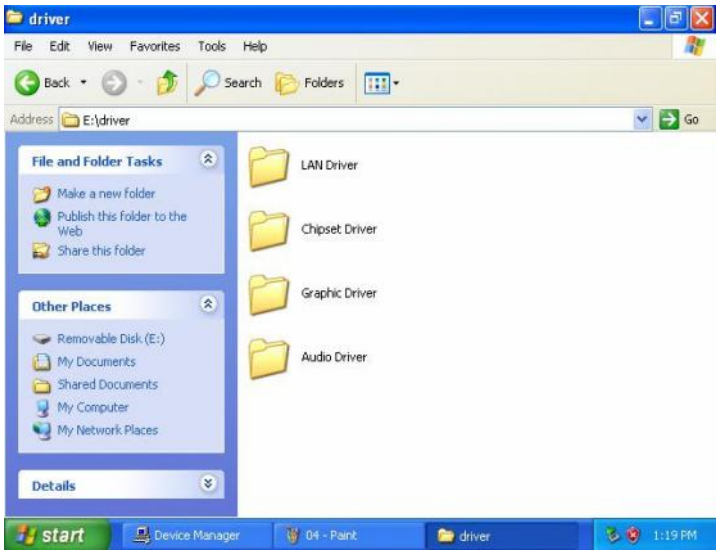
- Installation of Graphic Driver
- Panel Resolution Setting

Chapter 3 Graphic Driver Installation

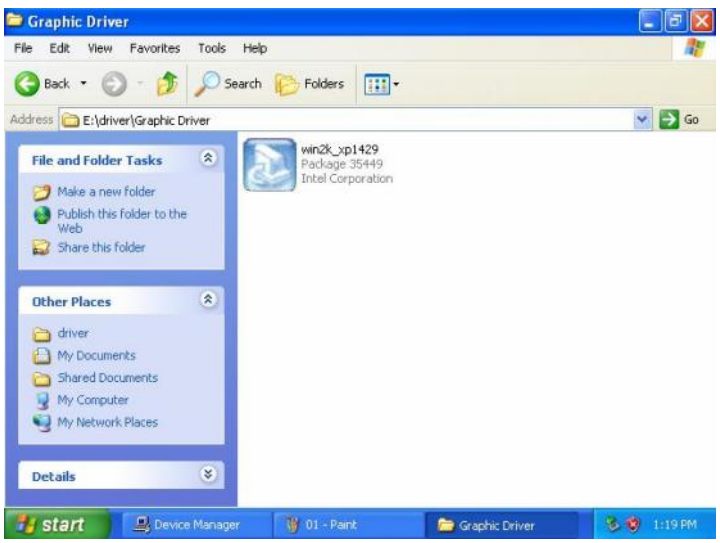
3.1 Standard CMOS Feature

I330 Motherboard is equipped with Intel 945GME / ICH7M Companion Device. The Intel Graphic Drivers should be installed first, and it will enable "Video Controller (VGA compatible). Follow the instructions below to complete the installation. You will quickly complete the installation.

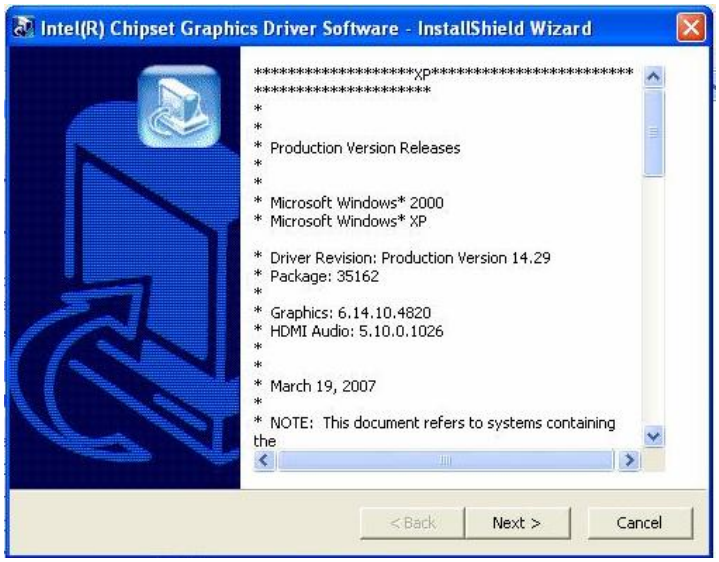
Step.1. Insert the CD that comes with the Motherboard. Open the file document "Graphic Driver ".



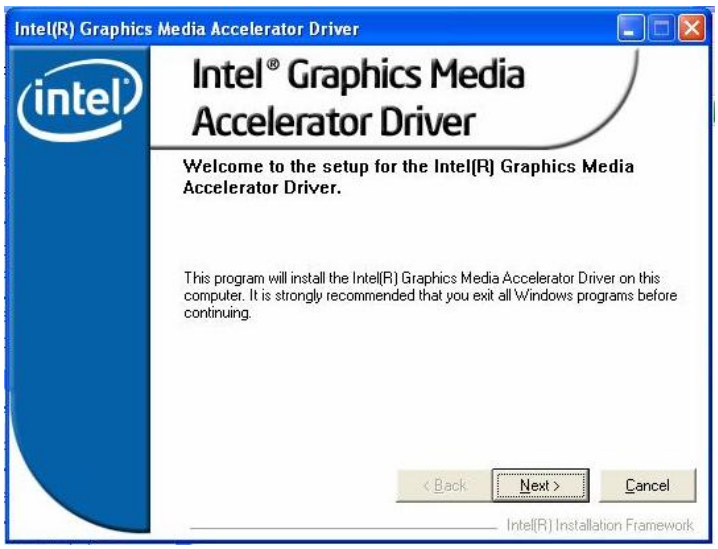
Step.2. Click on "win2K_xp1429" to execute the setup.



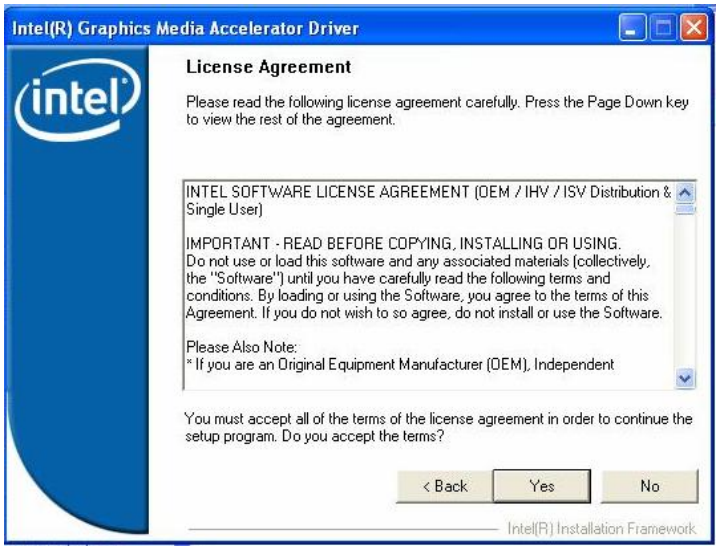
Step.3. Click on “Next “ to install Driver.



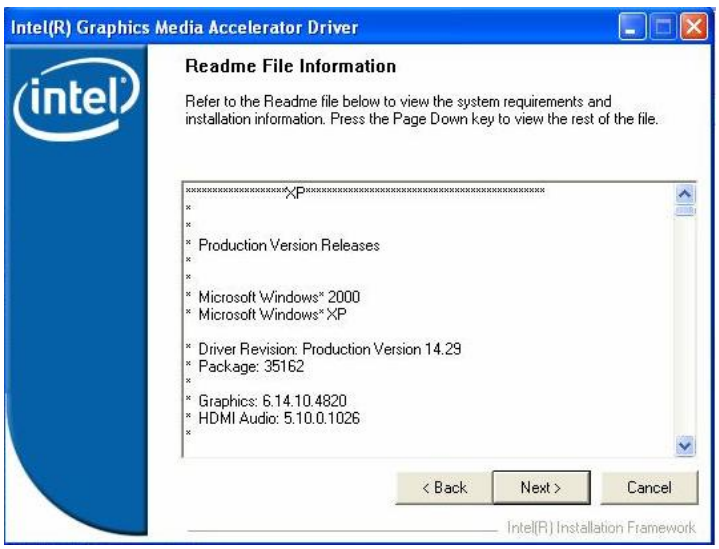
Step.4. Click on “Next “ to install Driver.



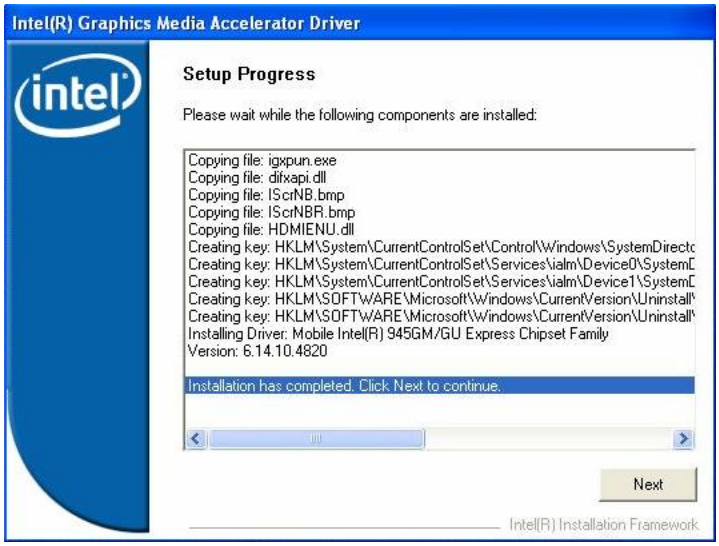
Step.5. Click on “Yes “ to agree License.



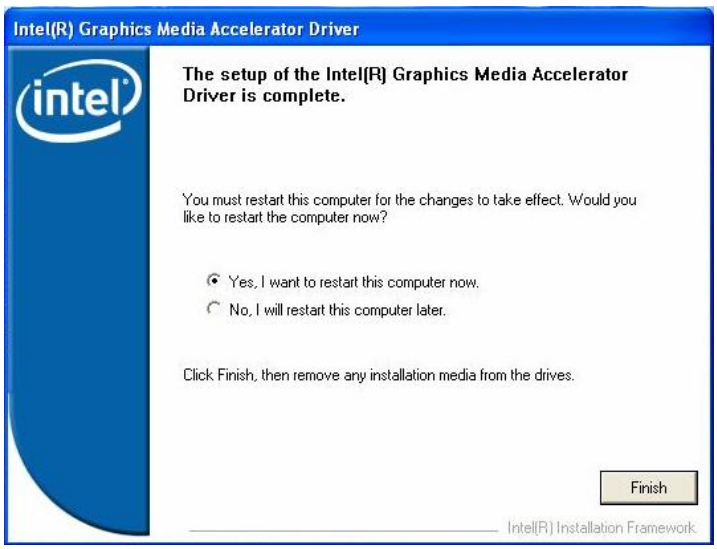
Step.6. Click on “Next “ to install Driver.



Step.7. Click on “Next “ to install Driver.



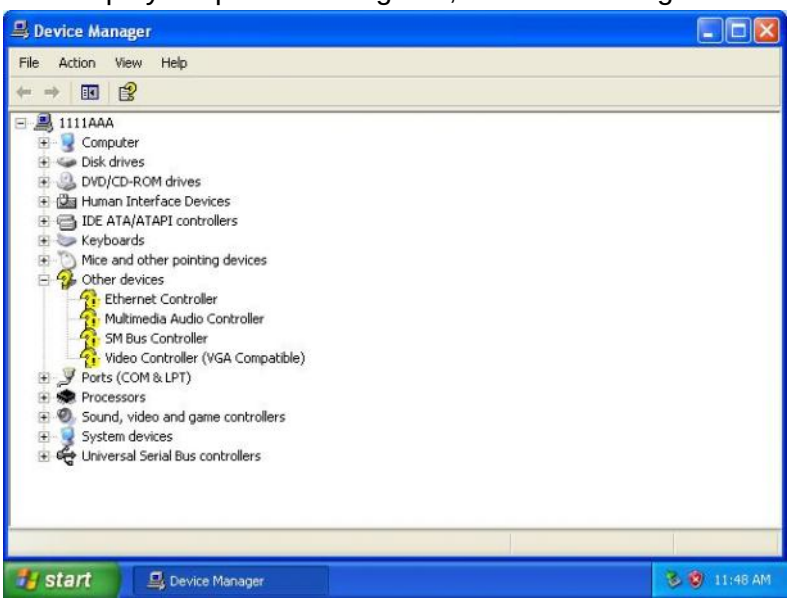
Step.8. Click on “Yes, I want to restart this computer now “ to go on.



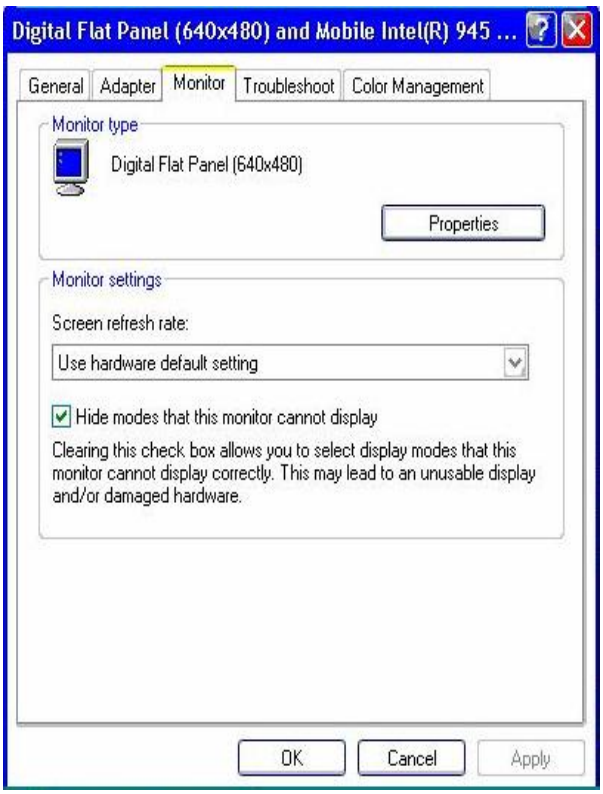
3.2 Panel Resolution Setting

Step.1. Right-click the desktop, and then click Properties.

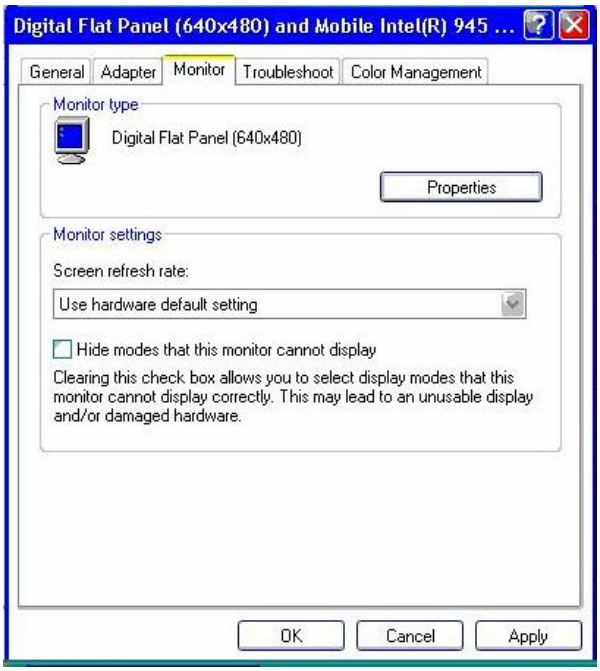
Step.2. In the Display Properties dialog box, click the Settings tab.



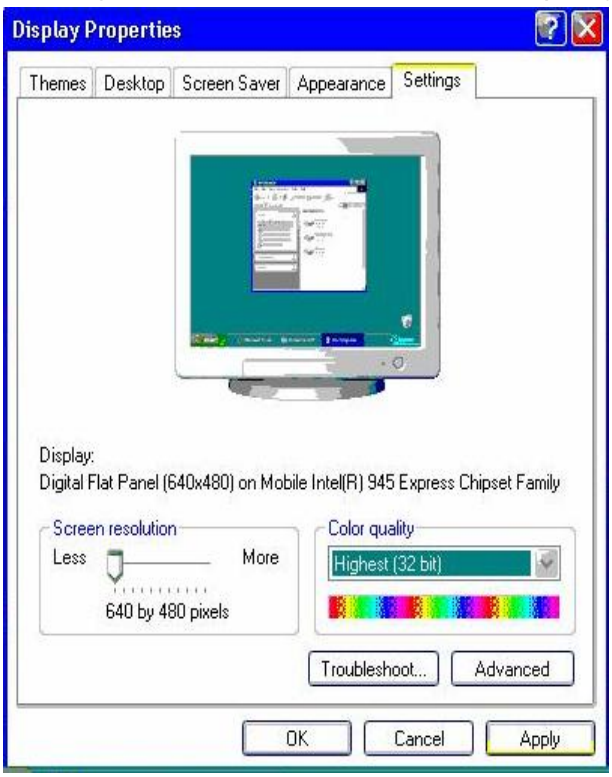
Step.3. Click on “Monitor”.



Step.4. Click on “Hide modes that this monitor cannot display ” to remove this option.



Step.5. Click on “Setting”, then could choose 32bit color qualify.



CHAPTER 4

Chipset Driver Installation

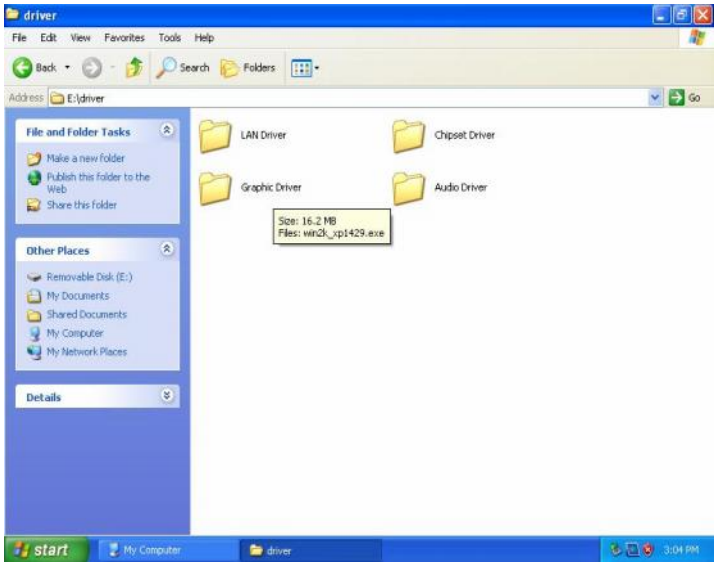
This chapter offers information on the chipset software Installation utility

- Installation of Chipset Driver
- Further information

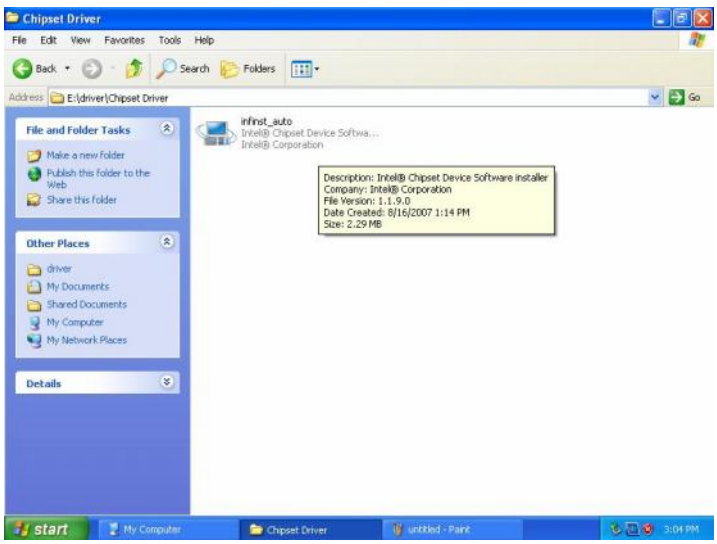
Chapter 4 Chipset Driver Installation

4.1 Standard CMOS Features

Setp.1. Insert the CD that comes with the motherboard. Open the file documen t “Chipset Driver”.



Setp.2. Click on “infinst_auto.exe“ to install driver.



Setp.3. Click on “Next“ to install driver.

Setp.4. Click on “Yes “ to agree License

Setp.5. Click on “Next“ to install driver.

Setp.6. Click on “Next“ to install driver.

Step.7. Click on “Yes, I want to restart this computer now“ to go on.

CHAPTER 5

Ethernet Driver Installation

This chapter offers information on the Ethernet software installation utility.
Sections include:

- Introduction
- Installation of Ethernet Driver

Chapter 5 Ethernet Driver Installation

5.1 Introduction

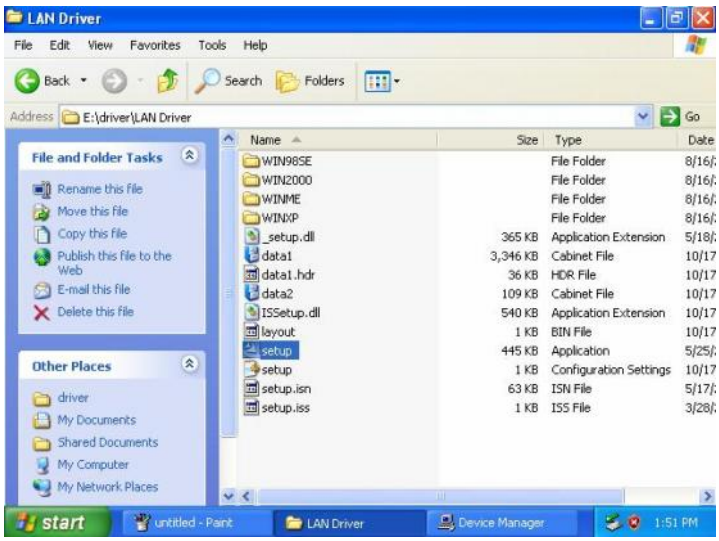
I330 Motherboard is equipped with the Realtek RTL8111 B Gigabit Ethernet controller combines a triple-speed IEEE 802.3 compliant Media Access Contr oller (MAC) with a triple-speed Ethernet transceiver, PCI Express bus controller, and embedded memory. With state-of-the-art DSP technology and mixed-mode signal technology, it offers high-speed transmission over CAT 5 UTP cable 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 device supports the PCI Express 1.0a bus interface for host communications with power management and is compliant with the IEEE 802.3u specification for 10/100Mbps Ethernet and the IEEE 802.3ab specification for 1000Mbps Ethernet . It also supports an auxiliary power auto-detect function, and will auto-configure related bits of the PCI power management registers in PCI configuration space.

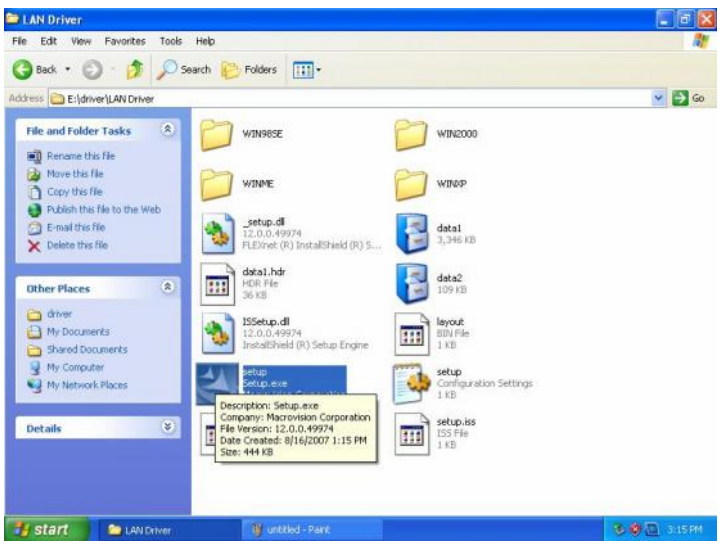
5.2 Installation of Ethernet Driver

The Users must make sure which operating system you are using in the I330 Motherboard before installing the Ethernet drivers. Follow the steps below to complete the installation of the Realtek RTL8111B LAN drivers. You will quickly complete the installation.

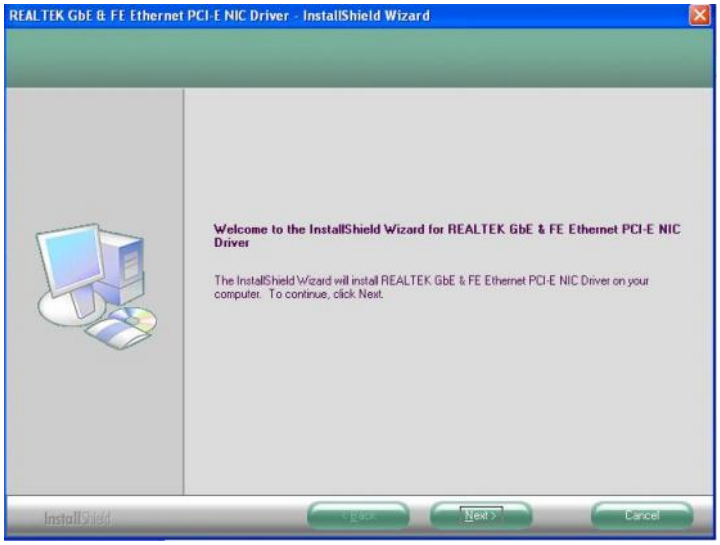
Step.1. Insert the CD that comes with the motherboard. Open the file document “LAN Driver”.



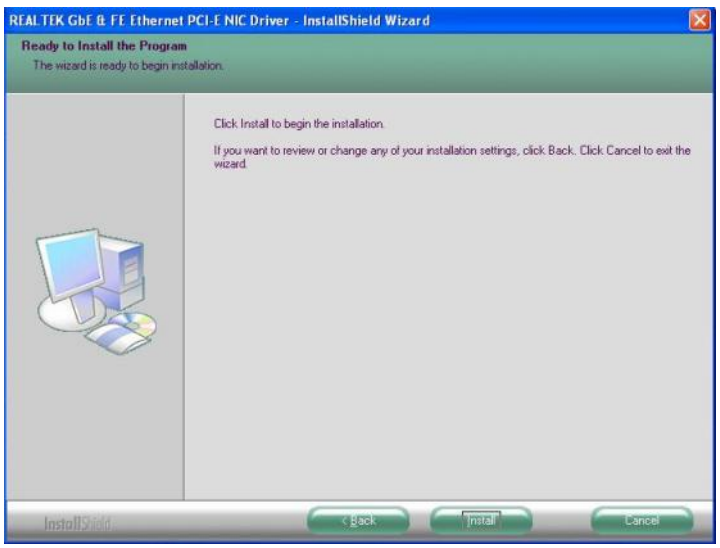
Step.2 Click on “Setup” to execute the setup.



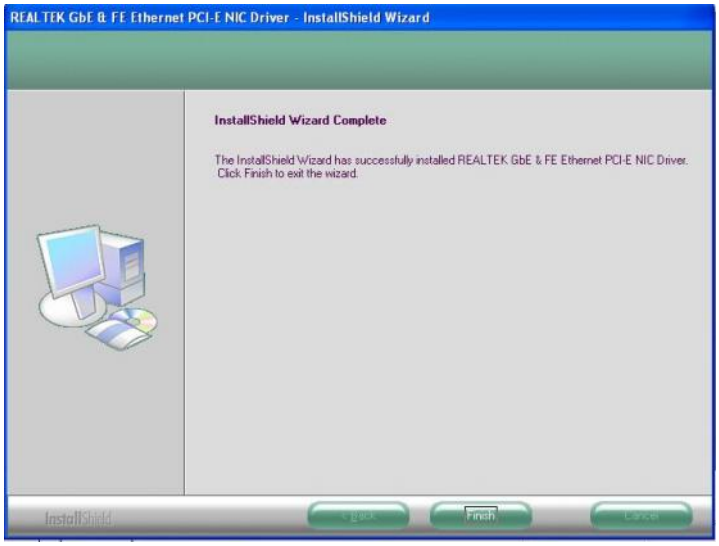
Step.4. Click on “Next“ to install driver.



Step.5. Click on “Install“ to install driver.



Setp.6. Click on “Finish“ and go on.



CHAPTER 6

Audio Driver Installation

This chapter offers information on the Audio software installation utility.
Sections include:

- Introduction
- Installation of Audio Driver

Chapter 6 Audio Driver Installation

6.1 Introduction

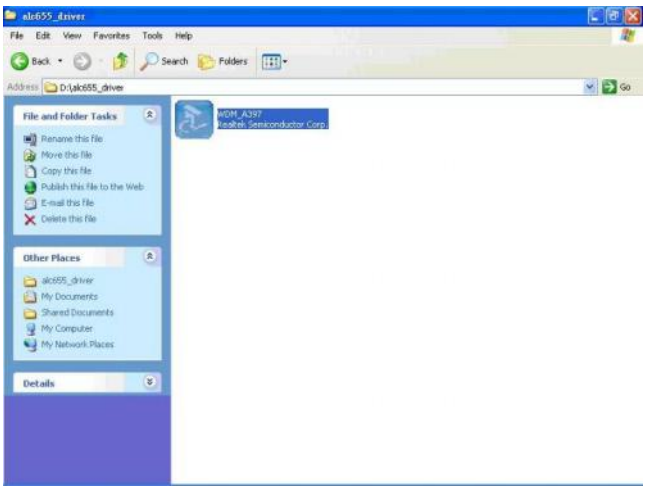
The I330 Motherboard is equipped with the ALC655 is a 16-bit, full-duplex AC'97 Rev. 2.3 compatible six-channel audio CODEC designed for PC multimedia systems, including host/soft audio and AMR/CNR-based designs..

The ALC655 CODEC provides three pairs of stereo outputs wit h 5-bit volume control, a mono output, and multiple stereo and mono inputs, along with flexible mixing, gain, and mute functions to provide a complete integrated audio solution for PCs.

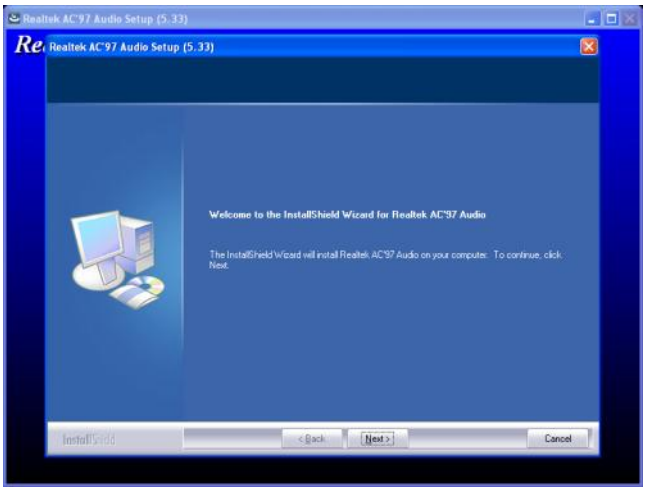
6.2 Installation of Audio Driver

The users must make sure which operatin g system you are using in the I330 Motherboard before installing the Audio drivers. Follow the steps below to complete the installation of the Realtek ALC 655 Audio drivers. You will quickly complete the installation.

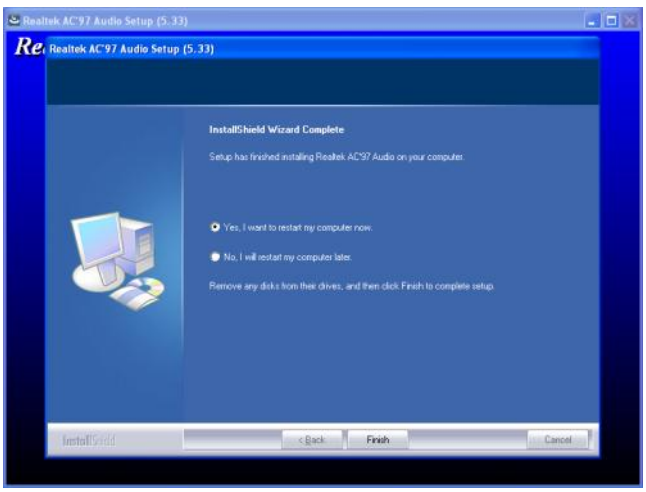
Step.1. Insert the CD that comes with the motherboard. Open the file document "alc655_driver" and click on "Setup.exe" to execute the setup.



Step.2. Click on “Next“ to install driver.



Step.3. Click on “Yes, I want to restart my computer now” to finish installation.



CHAPTER 7

Award BIOS Installation

This chapter describes the different settings available in the Award BIOS that comes with the board. This chapter offers information on the Award BIOS installation utility. Sections include:

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

Chapter 7 Award BIOS Installation

7.1 BIOS Introduction

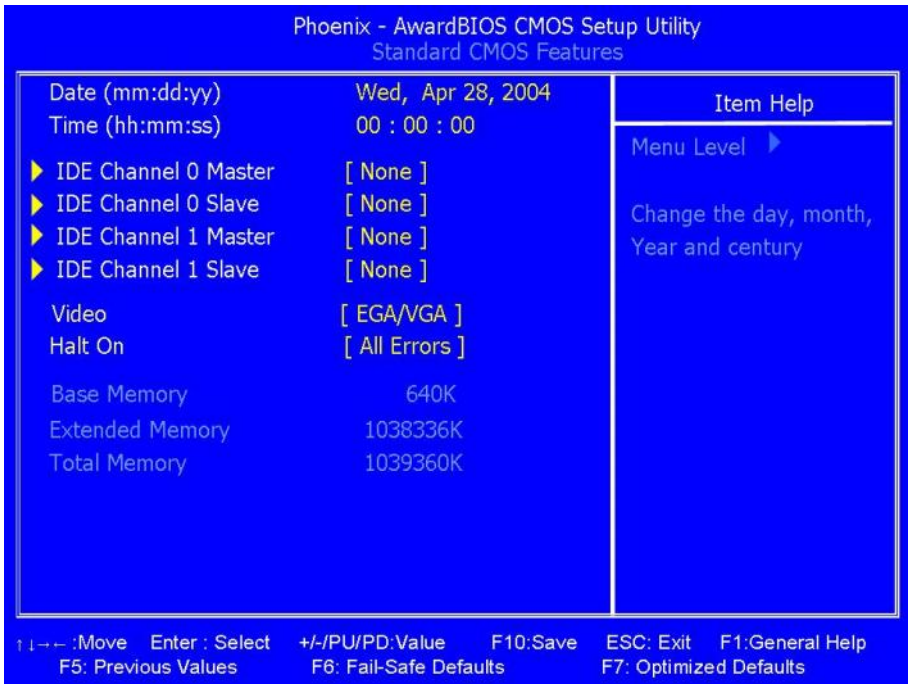
Award BIOS (Basic Input/Output System) installed in your computer system's ROM supports Intel processors. The BIOS provides critical low-level support for a standard device such as disk drives, serial ports and parallel ports. It also adds virus and password protection as well as special support for detailed fine-tuning of the chipset controlling the entire system.

7.2 BIOS Setup

The Award BIOS provides a Setup utility program for specifying the system configurations and settings. The BIOS ROM of the system stores the Setup utility. As you turn on the computer, the Award BIOS is immediately activated. Pressing the <Del> key immediately allows you to enter the Setup utility. If you are a little bit late pressing the <Del> key, POST (Power On Self Test) will continue with its test routines, thus preventing you from invoking the Setup. If you still wish to enter Setup, restart the system by pressing the "Reset" button or simultaneously pressing the <Ctrl>, <Alt> and <Delete> keys. You can also restart by turning the system Off and back On again. The following message will appear on the screen:

7.3 Standard CMOS Setup

Standard CMOS Setup" choice allows you to record some basic hardware configurations in your computer system and set the system clock and error handling. If the motherboard is already installed in a working system, you will not need to select this option. You will need to run the Standard CMOS option, however, if you change your system hardware configurations, the onboard battery fails, or the configuration stored in the CMOS memory was lost or damaged.



The following describes each item of this menu.

Date (mm : dd : yy)
The date format is:
Day : Sun to Sat
Month : 1 to 12
Date : 1 to 31
Year : 1999 to 2099

To set the date, highlight the "Date" field and use the PageUp/ PageDown or +/- keys to set the current time.

Time
The time format is: Hour : 00 to 23
Minute : 00 to 59
Second : 00 to 59
To set the time, highlight the "Time" field and use the <PgUp>/ <PgDn> or +/ -

keys to set the current time.

IDE Channel Master/Slave
The onboard PCI-IDE connector provides one channel for connecting up to one IDE hard disks or other IDE device.

Press <Enter> to configure the hard disk. The selections include None, Auto, and Manual. Select 'Manual' to define the drive information manually. You will be asked to enter the following items.

Cylinder :	Number of cylinders
Head :	Number of read/write heads
Precomp :	Write precompensation
Landing Zone :	Landing zone
Sector :	Number of sectors

Video
This field selects the type of video display card installed in your system. You can choose the following video display cards:

EGA/VGA	For EGA, VGA, SEGA, SVGA or PGA monitor adapters. (default)
CGA 40	Power up in 40 column mode.
CGA 80	Power up in 80 column mode.
MONO	For Hercules or MDA adapters.

Halt On
This field determines whether or not the system will halt if an error is detected during power up.

No errors
The system boot will not be halted for any error that may be detected.

All errors
Whenever the BIOS detects a non-fatal error, the system will stop and you will be prompted.

All, But Keyboard
The system boot will not be halted for a keyboard error; it will stop for all other errors

7.4 Advance BIOS Feature

This section allows you to configure and improve your system and allows you to set up some system features according to your preference.

CPU Feature

Press Enter to configure the settings relevant to CPU Feature.

Hard Disk Boot Priority

With the field, there is the option to choose, aside from the hard disks connected, "Bootable add-in Cards" which refers to other external devices.

Virus Warning

If this option is enabled, an alarm message will be displayed when try ing to write on the boot sector or on the partition table on the disk, which is typical of the virus.

CPU L1 and L2 Cache

Cache memory is additional memory that is faster than conventional DRAM (system memory). CPUs from 486-type on up contain internal cache memory, and most, but not all, modern PCs have additional (external) cache memory. When the CPU requests data, the system transfers the requested data from the main DRAM into cache memory, for even faster access by the CPU. These allow you to enable (speed up memory access) or disable the cache function.

Quick Power On Self Test

When enabled, this field speeds up the Power On Self Test (POST) after the system is turned on. If it is set to Enabled, BIOS will skip some items.

First Boot Device
These fields determine the drive that the system searches first for an operating system. The option available include Floppy, LS120, Hard Disk, CDROM, ZIP100, USB-Floppy, USB-ZIP, USB-CDROM, LAN and Disable.

Boot Other Device
These fields allow the system to search for an OS from other devices other than the ones selected in the First/Second/Third Boot Device.

Boot Up Floppy Seek
This feature controls whether the BIOS checks for a floppy drive while booting up. If it cannot detect one (either due to improper configuration or its absence), it will flash an error message.

Boot Up NumLock Status
This allows you to activate the NumLock function after you power up the system.

Gate A20 Option
This field allows you to select how Gate A20 is worked. Gate A20 is a device used to address memory above 1 MB.

Typematic Rate Setting
When disabled, continually holding down a key on your keyboard will generate only one instance. When enabled, you can set the two typematic controls listed next. By default, this field is set to Disabled.

Typematic Rate (Chars/Sec)
When the typematic rate is enabled, the system registers repeated keystrokes speeds. Settings are from 6 to 30 characters per second.

Typematic Delay (Msec)
When the typematic rate is enabled, this item allows you to set the time interval for displaying the first and second characters. By default, this item is set to 250msec.

Security Option
This field allows you to limit access to the System and Setup. The default value is Setup. When you select System, the system prompts for the User Password every time you boot up. When you select Setup, the system always boots up and prompts for the Supervisor Password only when the Setup utility is called up.

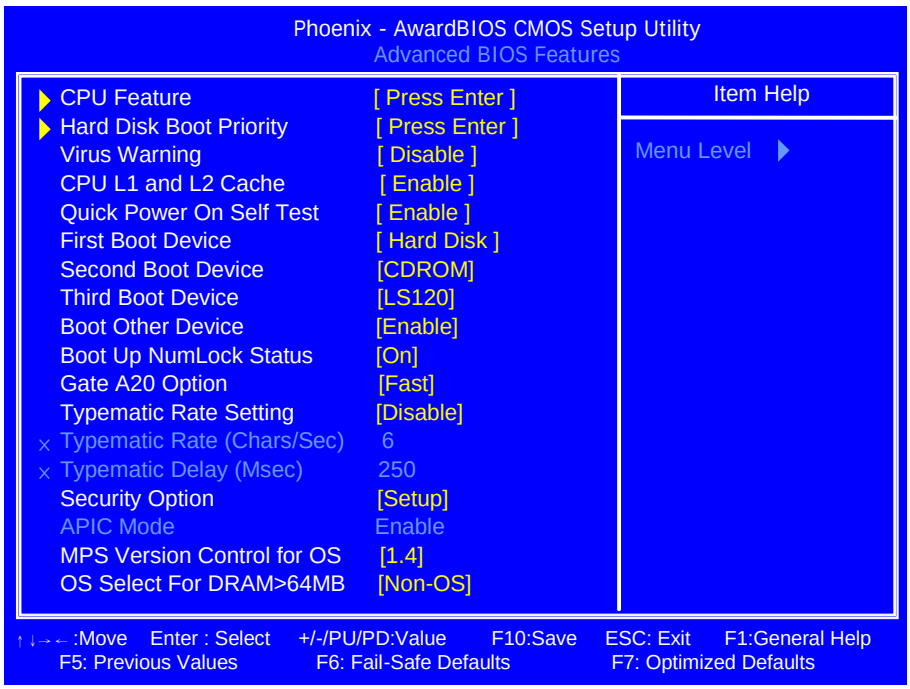
APIC Mode
APIC stands for Advanced Programmable Interrupt Controller. The default setting is Enabled.

MPS Version Control for OS
This option is specifies the MPS (Multiprocessor Specification) version for your operating system. MPS version 1.4 added extended configuration tables to improve support for multiple PCI bus configurations and improve future expandability. The default setting is 1.4.

OS Select for DRAM > 64MB
This option allows the system to access greater than 64MB of DRAM memory when used with OS/2 that depends on certain BIOS calls to access memory. The default setting is Non-OS/2.

7.5 Advanced BIOS Feature

This Setup menu controls the configuration of the chipset.



CPU Feature

Press Enter to configure the settings relevant to CPU Feature.

Hard Disk Boot Priority

With the field, there is the option to choose, aside from the hard disks connected, “Bootable add-in Cards” which refers to other external devices.

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Boot Up NumLock Status
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Gate A20 Option
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Typematic Rate Setting
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Typematic Rate (Chars/Sec)
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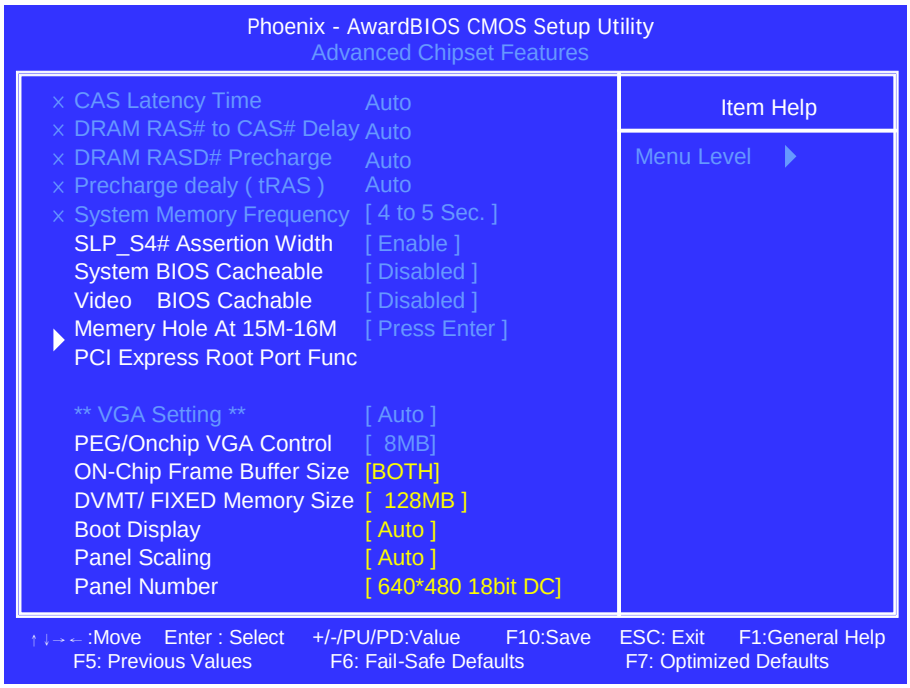
7.6 Advanced Chipset Feature

This Setup menu controls the configuration of the chipset.



CAS Latency Time

You can configure CAS latency time in HCLKs as 2 or 2.5 or 3. The system board designer should set the values in this field, depending on the DRAM installed. Do not change the values in this field unless you change specifications of the installed DRAM or the installed CPU.

DRAM RAS# to CAS# Delay

This option allows you to insert a delay between the RAS (Row Address Strobe) and CAS (Column Address Strobe) signals. This delay occurs when the SDRAM is written to, read from or refreshed. Reducing the delay improves the performance of the SDRAM.

DRAM RASD# Precharge

This option sets the number of cycles required for the RAS to accumulate its charge before the SDRAM refreshes. The default setting for the Active to Precharge Delay is 4.

Precharge Delay (tRAS)

The default setting for the Precharge Delay is 12.

System Memory Frequency

The default setting is 533MHz.

SLP_S4# Assertion Width
The default setting is 1 to 2 Sec.

System BIOS Cacheable
The setting of Enabled allows caching of the system BIOS ROM at F000h-FFFFFh, resulting in better system performance. However, if any program writes to this memory area, a system error may result.

Video BIOS Cacheable
The Setting Enabled allows caching of the video BIOS ROM at C0000h-F7FFFh, resulting in better video performance. However, if any program writes to this memory area, a system error m ay result.

Memory Hole At 15M-16M
In order to improve performance, certain space in memory can be reserved for ISA cards. This memory must be mapped into the memory space below 16 MB. The choices are Enabled and Disabled.
On-Chip VGA Setting
The fields under the On-Chip VGA Setting and their default settings are:

PEG/On Chip VGA Control: Auto

On-Chip Frame Buffer Size: 8MB

DVMT/Fixed Memory Size: 128MB

Boot Display: Auto

Panel Scaling: Auto

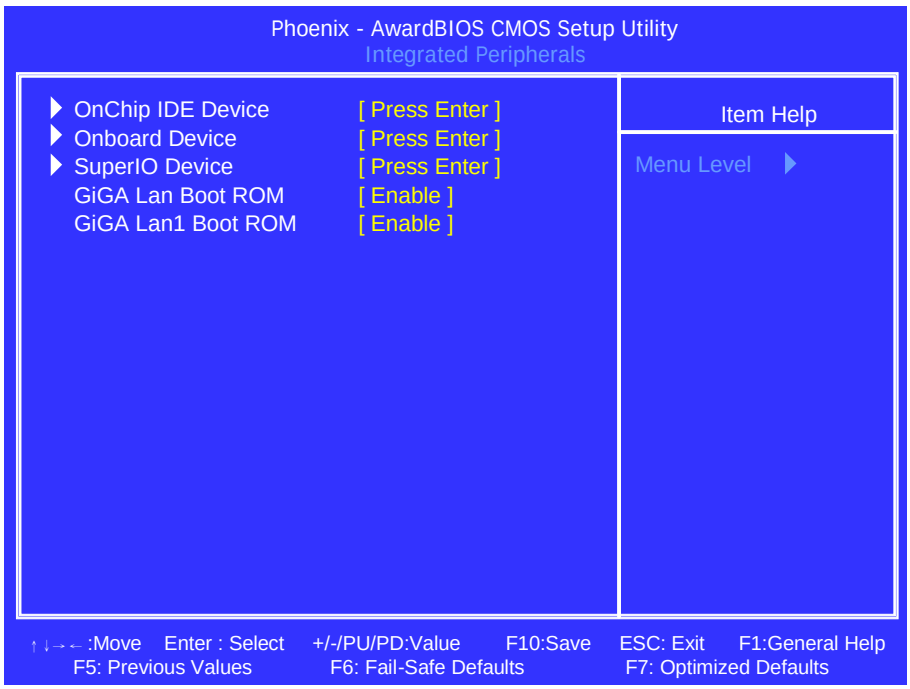
Panel Number

These fields allow you to select the LCD Panel type. The default values for these ports are 640x480

640x480	18bit	SC
800x600	18bit	SC
1024x768	18bit	SC
1280x800	18bit	SC
800x480	18bit	SC

7.7 Integrated Peripherals

This section sets configurations for your hard disk and other integrat ed peripherals. The first screen shows three main items for user to select. Once an item selected, a submenu appears. Details follow.



On Chip IDE Device / On Chip Primary / Secondary PCI IDE
The integrated peripheral controller contai ns an IDE interface with support for two IDE channels. Select Enabled to activate each channel separately.

On Chip IDE Device /IDE Primary/Secondary Master/Slave PIO
These fields allow your system hard disk controller to work faster. Rather than have the BIOS issue a series of commands that transfer to or from the disk drive, PIO (Programmed Input/Output) allows the BIOS to communicate with the controller and CPU directly.

The system supports five modes, numbered from 0 (default) to 4, which primarily differ in timing. When Auto is selected, the BIOS will select the best available mode.

On Chip IDE Device / IDE Primary/Secondary Master/Slave UDMA
These fields allow your system to improve disk I/O throughput to 33Mb/sec with the Ultra DMA/33 feature. The options are Auto and Disabled.

Onboard Device/ USB Controller
The options for this field are Enabled and Disabled. By default, this field is set to Enabled.

Onboard Device/USB 2.0 Controller
The options for this field are Enabled and Disabled. By defa ult, this field is set to Enabled. In order to use USB 2.0, necessary OS drivers must be installed first. Please update your system to Windows 2000 SP4 or Windows XP SP1.

Onboard Device/USB Keyboard Support
The options for this field are Enabled and Disab led. By default, this field is set to Disabled.

Onboard Device/AC97 Audio
The default setting of the AC97 Audio is Auto.

Onboard LAN/LAN1 Devices
The default setting is Enable.

SuperIO Device / Onboard Serial Port1 (Port2)
These fields allow you to sel ect the onboard serial and parallel ports and their addresses. The default values for these ports are:

Serial Port 1	3F8/IRQ4
Serial Port 2	2F8/IRQ3

SuperIO Device / UART Mode Select
This field determines the UART 2 mode in your computer. The default value is Normal. Other options include IrDA and ASKIR.

Super IO Device / Power On After Fail
The setting configures the system power on status when power is restored to the system after a power failure occurrence. The default setting is Off.

GiGA Lan (Lan1) Boot ROM
The function is boot from LAN, and the default setting is disable.

7.8 Power Management Setup

This section sets configurations for your Power Management function setting. The screen shows some items for user to select. Once an item selected, a submenu appears. Details follow.

ACPI Function

Enable this function to support ACPI (Advance Configuration and Power Interface).

Power Management

This field allows you to select the type of power saving management mod es. There are two selections for Power Management.

Min. Saving Minimum power management

Max. Saving Maximum power management.

User Define Each of the ranges is from 1 min. to 1hr. Except for HDD Power Down which ranges from 1 min. to 15 min.

Video Off Method

This field defines the Video Off features. There are three options.

V/H SYNC + Blank	Default setting, blank the screen and turn off vertical and horizontal scanning.
DPMS	Allows BIOS to control the video display.
Blank Screen	Writes blanks to the video buffer.

Video Off In Suspend

When enabled, the video is off in suspend mode. The default setting is Yes.

Suspend Type

The default setting for the Suspend Type field is Stop Grant.

Suspend Mode

When enabled, and after the set time of system inactivity, all devices except the CPU will be shut off.

HDD Power Down

When enabled, and after the set time of system inactivity, the hard disk drive will be powered down while all other devices remain active.

Soft-Off by PWRBTN

This field defines the power-off mode when using an power supply. The Instant Off mode allows powering off immediately upon pressing the power button. In the Delay 4 Sec mode, the system powers off when the power button is pressed for more than four seconds or enters the suspend mode when pressed for less than 4 seconds.

Wake up by PCI Card

By default, this field is disabled.

Power On by Ring

This field enables or disables the power on of the system through the modem connected to the serial port or LAN.

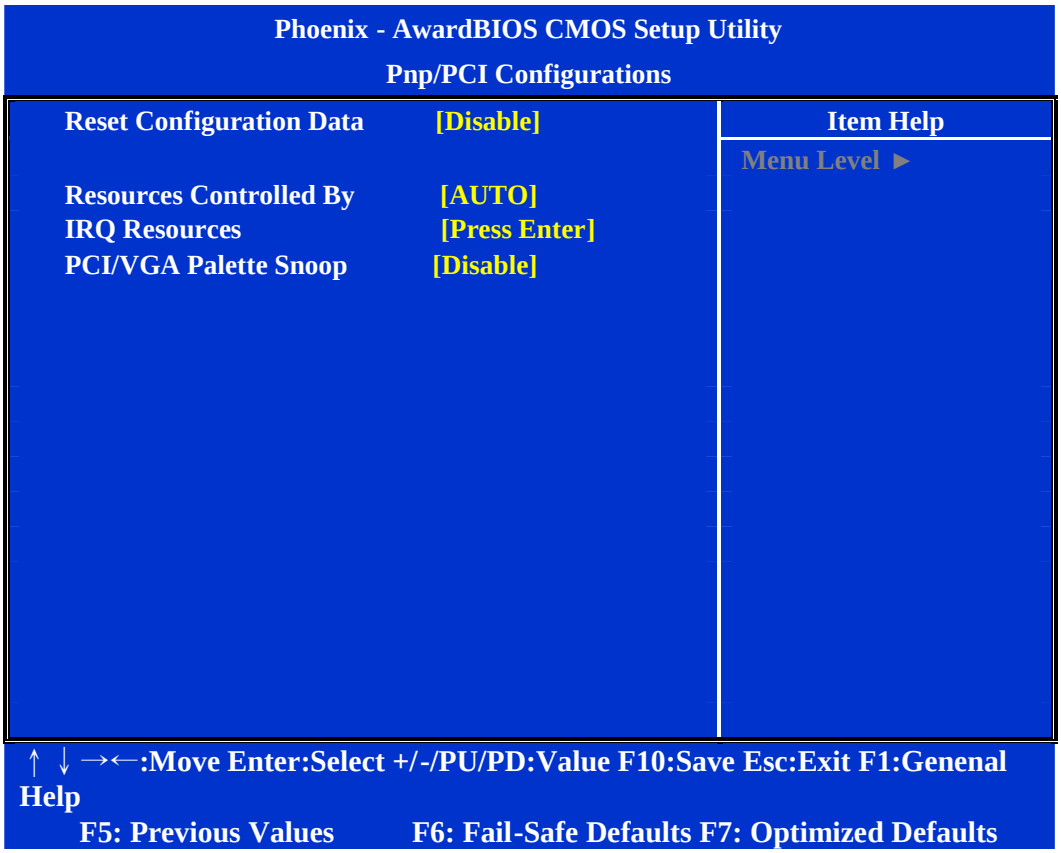
Resume by Alarm

This field enables or disables the resumption of the system operation. When enabled,

the user is allowed to set the Date and Time.

7.9 PnP / PCI Configuration

This option configures the PCI bus system. All PCI bus systems on the system use INT#, thus all installed PCI cards must be set to this value.



Reset Configuration Data

This field allows you to determine whether to reset the configuration data or not. The default value is Disabled.

Resources Controlled by

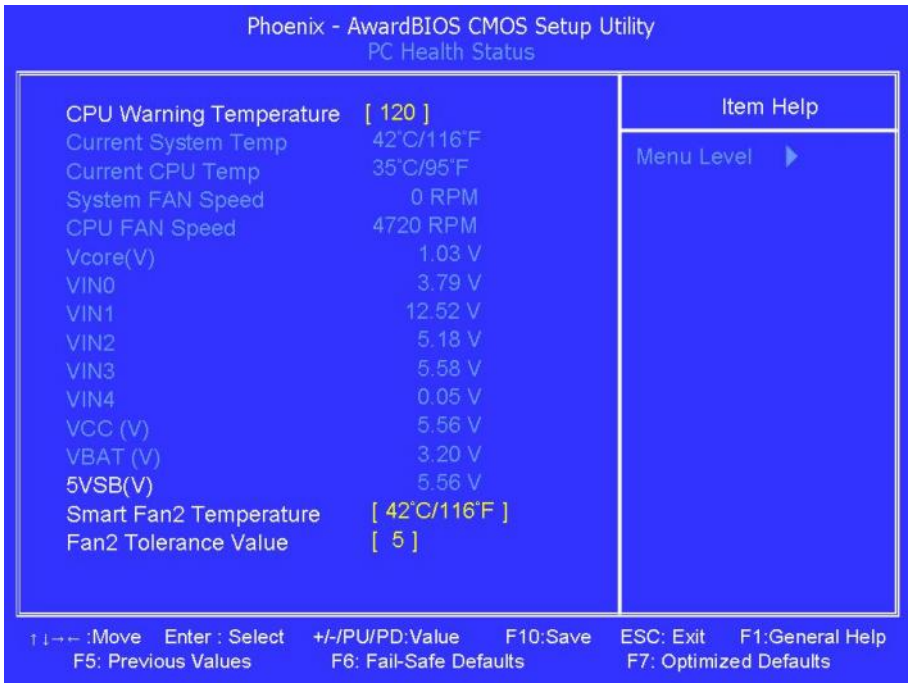
This PnP BIOS can configure all of the boot and compatible devices automatically with the use of a use a PnP operating system such as Windows 95.

PCI/VGA Palette Snoop

Some non-standard VGA display cards may not show colors properly. This field allows you to set whether or not MPEG ISA/VESA V GA cards can work with PCI/VGA. When this field is enabled, a PCI/VGA can work with an MPEG ISA/VESA VGA card. When this field is disabled, a PCI/VGA cannot work with an MPEG ISA/VESA card.

7.10 PC Health Status

This section shows the parameters in dete rmining the PC Health Status. These parameters include temperatures, fan speeds and voltages.



CPU Warning Temperature

This field allows the user to set the temperature so that when the temperature is reached, the system sounds a warning. This function can help prevent damage to the system that is caused by overheating.

Temperatures/Voltages

These fields are the parameters of the hardware monitoring function feature of the motherboard. The values are read-only values as monitored by the system and show the PC health status.

Shutdown Temperature

This field allows the user to set the temperature by which the system automatically shuts down once the threshold temperature is reached. This function can help prevent damage to the system that is caused by overheating.

Smart Fan2 Temperature

This field enables or disables the smart fan feature. At a certain temperature, the fan

starts turning. Once the temperature drops to a certain level, it stops turning again.

Smart Fan Tolerance Value
The default value is 5.

7.11 Load Fail-Safe Defaults

This option allows you to load the troubleshooting default values permanently stored in the BIOS ROM. These default settings are non-optimal and disable all high-performance features.

7.12 Load Optimized Defaults

This option allows you to load the default values to your system configuration. These default settings are optimal and enable all high performance features.

7.13 Set Supervisor Password

These two options set the system password. Supervisor Password sets a password that will be used to protect the system and Setup utility. User Password sets a password that will be used exclusively on the system. To specify a password, highlight the type you want and press <Enter>. The Enter Password: message prompts on the screen. Type the password, up to eight characters in length, and press <Enter>. The system confirms your password by asking you to type it again. After setting a password, the screen automatically returns to the main screen.

To disable a password, just press the <Enter> key when you are prompted to enter the password. A message will confirm the password to be disabled. Once the password is disabled, the system will boot and you can enter Setup freely.

7.14 Save & Exit Setup

This option allows you to determine whether or not to accept the modifications. If you type “Y”, you will quit the setup utility and save all changes into the CMOS memory. If you type “N”, you will return to Setup utility.

7.15 Exit Without Saving

Select this option to exit the Setup utility without saving the changes you have made in this session. Typing “Y” will quit the Setup utility without saving the modifications. Typing “N” will return you to Se