

Contents

chapter 1:Package contents	1
chapter 2:Product Introduction	2
2.1 Features & Mainboard Diagram.....	2
2.2 Connector configuration.....	14
chapter 3:Setup quickly	19
3.1 How to identify the product's mode.....	19
3.2 Set the jumper.....	20
3.3 How to setup BIOS quickly.....	22
3.4 How to install mainboard driver.....	22
3.5 How to enable 4ch or 5.1ch output.....	25
3.6 How to identify that the 4ch or 5.1ch is enabled.....	26
3.7 How to set Super password and user password.....	30
chapter 4:BIOS Setting	31
4.1 Award BIOS Description.....	31
4.2 Standard CMOS Features Setup	33
4.3 Advanced BIOS Features Setup	34
4.4 Advanced Chipset Features Setup	36
4.5 Integrated Peripherals.....	38
4.6 Power Management Setup.....	41
4.7 PNP/PCI Configuration Setup.....	42
4.8 PC Health Status.....	43
4.9 Frequency Control.....	44
4.10 Load Fail-safe Defaults	45
4.11 Load Optimized Defaults	45
4.12 Set Supervisor/User Password.....	46
4.13 Save & Exit Setup.....	47
4.14 Exit Without Saving.....	47
chapter 5: Hardware Installation	48

chapter 1:Package Contents

Remove the items from the box and make sure you have the following items before beginning. If any of the items below are missing, please contact the representative for part replacement.

Standard Item

- 1) Mainboard
- 2) Driver CD
- 3) User Manual
- 4) IDE Hard Drive Ribbon Cable
- 5) Floppy Drive Ribbon Cable

Package contents

Chapter 2:Product Introduction

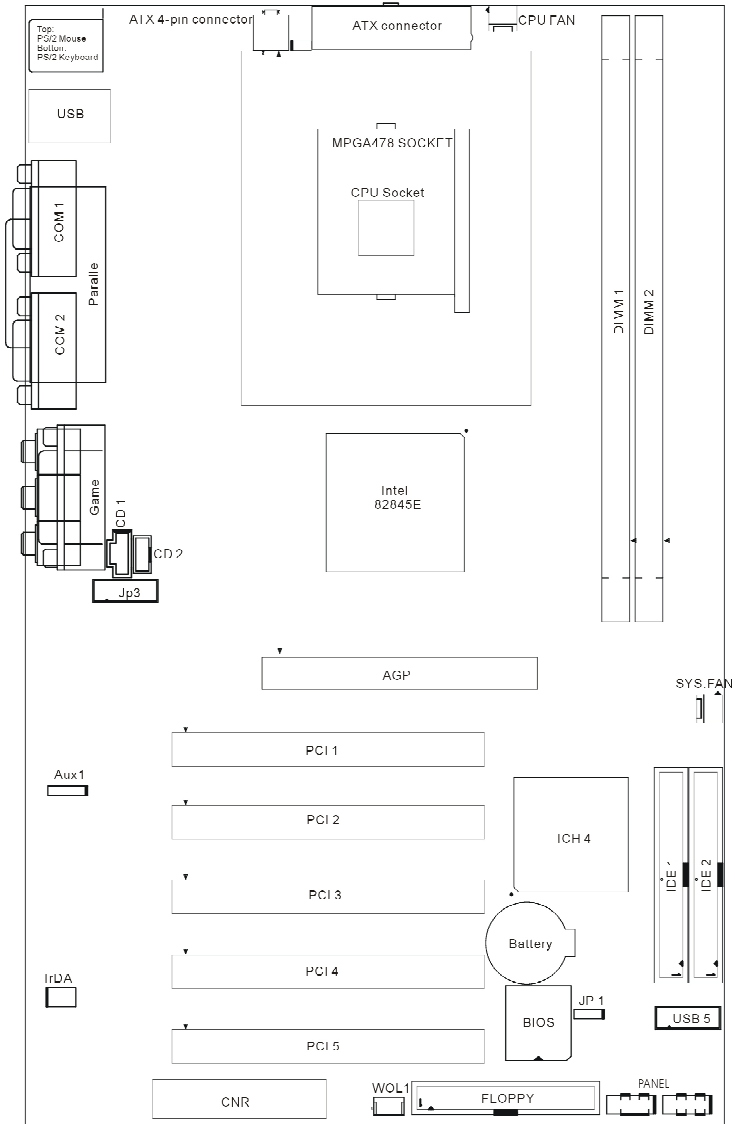
Thank You for purchasing the 845 series Mainboard. There are some product specification for the relation models as following.

A845E mainboard

- * Support Intel 478pin Pentium4 FC-PGA 2(Willamette/Northwood)
- * Support 400MHz and 533MHz Processor System Bus
- * Intel 845E + ICH4 Chipset
- * Two 184pin DDR DIMM slots support up to 2G Memory Capacity
- * Support PC1600 and PC2100 DDR DIMM(DDR200/DDR266)
- * Auto Jumper
- * 5 x PCI slots, 1 x CNR slot
- * 1 x 4X AGP expansion slot
- * 6 x USB2.0 ports(2xUSB2.0 in the front panel,3xUSB2.0 in the Rear panel,1xUSB2.0 in the CNR slot) , 1 x IrDA port header
- * 1 x double FDD port, 1 x LPT port with ESD/EMI protection, 2 x COM ports
- * Support Temperature ,Fan speed, Voltages Hardware monitoring
- * overheat protection over CPU
- * Dual IDE Channels support Four Ultra-DMA33/66/100 IDE Devices
- * Integrated AC97 Audio Onboard(supply 2ch,4ch or 5.1ch)(optional)
- * AC97 2.1(or AC972.2) Compliant Codec with 3D Stereo Enhancement
- * 1 x Line-out, 1 x Line-in, 1 x Mic-in
- * Support to stereo muti channel output(Front Speaker,Rear Speaker, Center/Sub-woofer speaker)
- * 1xstandard Audio Front panel header
- * 1 x CD-in, 1 x AUX-in, 1 x Game Port
- * overcurrent protection over Keyboard & PS/2 Mouse
- * Support Suspend-to-RAM(STR)
- * Award BIOS PC99/ACPI/DMI Compliant
- * ATX Power Supply Interface
- * ATX form factor 305mm x 190mm

chapter 2:Product Introduction

A845E mainboard diagram



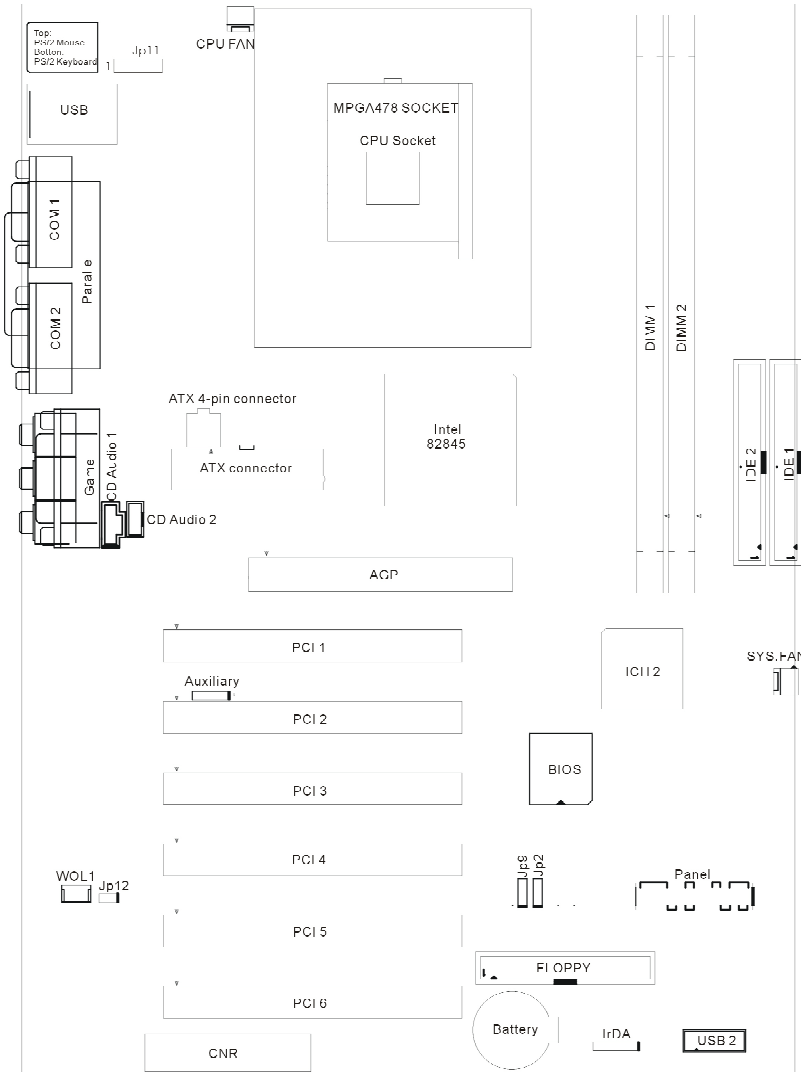
chapter 2 Product Introduction

A845DD mainboard

- * Support Intel 478pin Pentium4 FC-PGA
- * Support 400MHz System Bus
- * Intel 845 + ICH2 Chipset
- * Two 184pin DDR DIMM slots support up to 2G Memory Capacity
- * Support PC1600 and PC2100 DIMM(DDR200/DDR266)
- * 6 x PCI slots, 1 x CNR slot
- * 1 x 4X AGP expansion slot
- * 4 x USB ports (2xRear USB, 2xFront) , 1 x IrDA port header
- * 1 x FDD port, 1 x Parallel port with ESD/EMI protection, 2 x COM ports
- * Dual IDE Channels support Four Ultra-DMA33/66/100 IDE Devices
- * Temperature, Fan speed and Voltage Hardware Monitor Support
- * Modem Ring Wakeup for External Modem
- * WAKEUP-LINK Header to Support Wake-On-LAN
- * Integrated AC97 Audio Onboard
- * AC97 2.1 Compliant Codec with 3D Stereo Enhancement
- * 1 x Line-out, 1 x Line-in, 1 x Mic-in
- * 1 x CD-in, 1 x AUX-in, 1 x Game Port
- * Overcurrent protection over Keyboard & Mouse
- * Coloured Connectors : FDD, IDE, COMs etc.
- * Keyboard & PS/2 Mouse Wakeup
- * Suspend-to-RAM (STR) Technology to support Instant ON (Optional)
- * Phoenix BIOS PC99/ACPI/DMI Compliant
- * ATX Power Supply Interface
- * ATX form factor 305mm x 220mm

chapter 2:Product Introduction

A845DD mainboard diagram



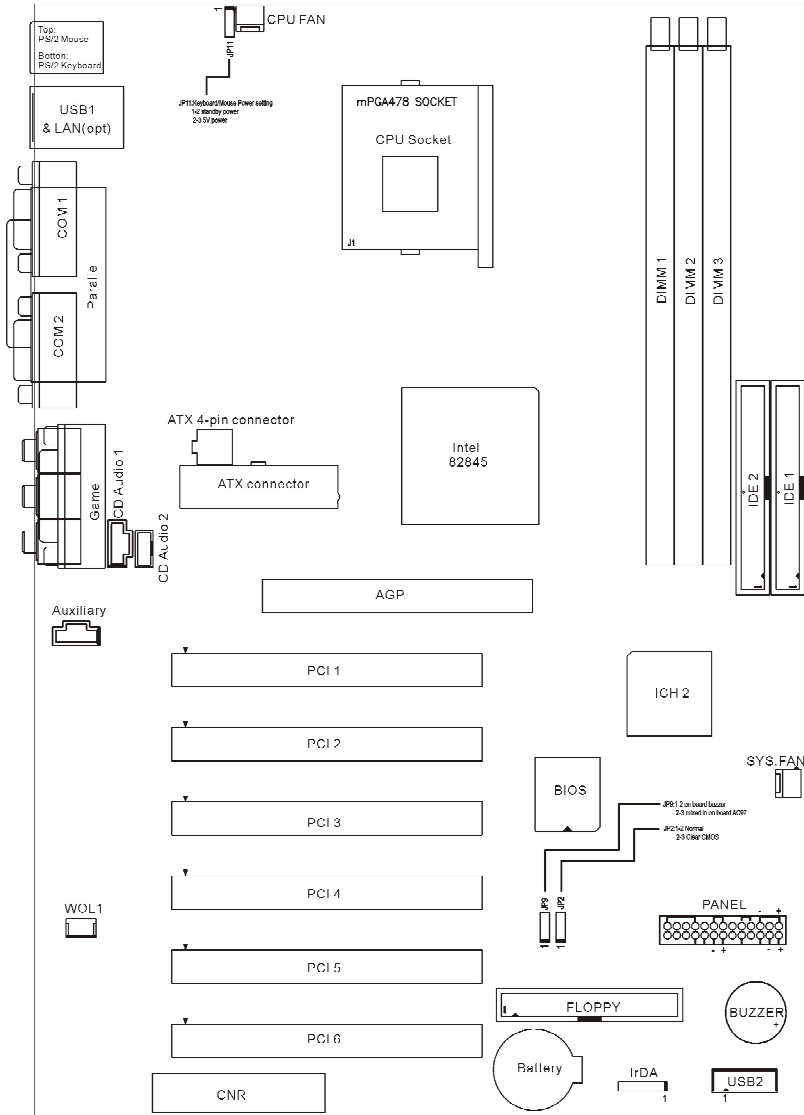
chapter 2:Product Introduction

A845SD mainboard

- * Support Intel 478pin Pentium4 FC-PGA2 (Willamette/Northwood)
- * Support 400MHz Bus
- * Intel 845 + ICH2 Chipset
- * Suspend-to-RAM (STR) Technology to support Instant ON
- * Three DIMM slots support up to 3G Memory Capacity
- * Support 133MHz SDRAM DIMM
- * Jumperless for CPU Frequency setting
- * 6x PCI slots, 1 x CNR slot
- * 1 x 4X AGP expansion slot
- * 4 x USB ports , 1 x IrDA port header
- * 1 x FDD port, 1 x Parallel port with ESD/EMI protection, 2 x COM ports
- * Dual IDE Channels support Four Ultra-DMA33/66/100 IDE Devices
- * Temperature, Fan speed and Voltage Hardware Monitor Support
- * Modem Ring Wakeup for External Modem
- * WAKEUP-LINK Header to Support Wake-On-LAN
- * Integrated AC97 Audio Onboard
- * AC97 2.1 Compliant Codec with 3D Stereo Enhancement
- * 1 x Line-out, 1 x Line-in, 1 x Mic-in
- * 1 x CD-in, 1 x AUX-in, 1 x Game Port
- * Overcurrent protection over Keyboard & Mouse
- * Coloured Connectors : FDD, IDE, COMs etc.
- * Keyboard & PS/2 Mouse Wakeup
- * Phoenix BIOS PC99/ACPI/DMI Compliant
- * ATX Power Supply Interface
- * ATX form factor 305mm x 210mm

chapter 2:Product Introduction

A845SD mainboard diagram



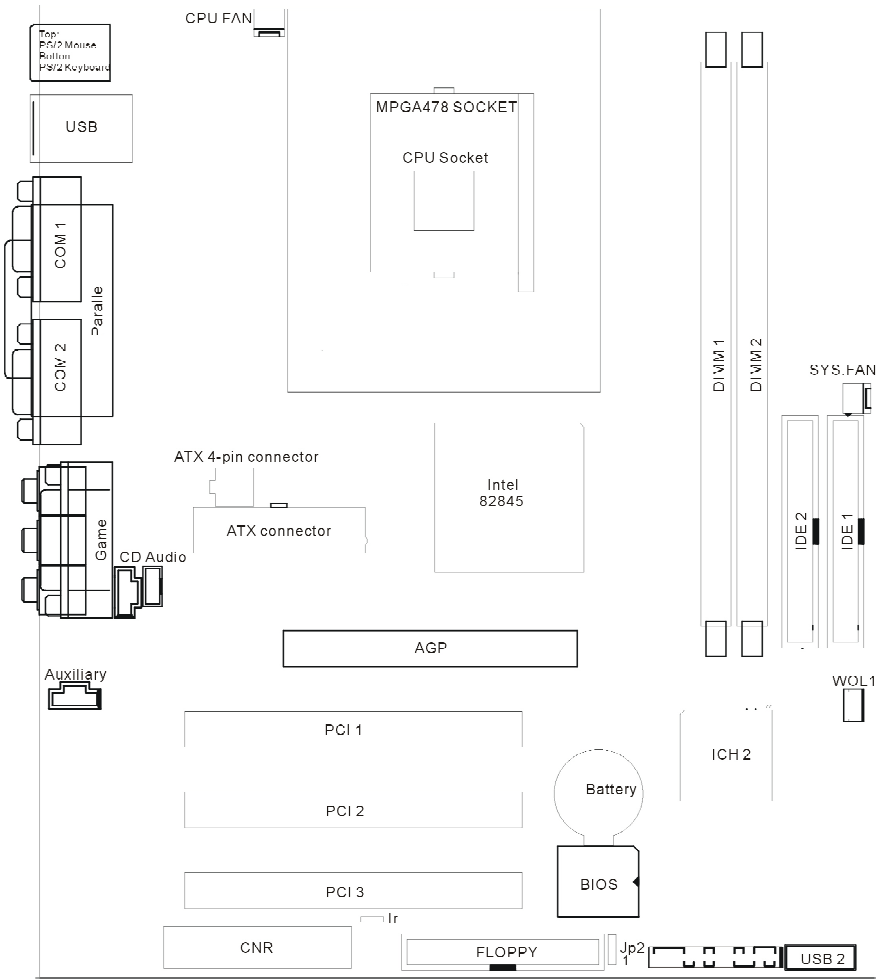
chapter 2:Product Introduction

P845SD mainboard

- * Support Intel 478pin Pentium4 FC-PGA2
- * Support 400MHz Bus
- * Intel 845 + ICH2 Chipset
- * Suspend-to-RAM (STR) Technology to support Instant ON
- * Two DIMM slots support up to 2G Memory Capacity
- * Support 133MHz SDRAM DIMM
- * Jumperless for CPU Frequency setting
- * 3x PCI slots, 1 x CNR slot
- * 1 x 4X AGP expansion slot
- * 4 x USB ports , 1 x IrDA port header
- * 1 x FDD port, 1 x Parallel port with ESD/EMI protection, 2 x COM ports
- * Dual IDE Channels support Four Ultra-DMA33/66/100 IDE Devices
- * Temperature, Fan speed and Voltage Hardware Monitor Support
- * Modem Ring Wakeup for External Modem
- * WAKEUP-LINK Header to Support Wake-On-LAN
- * Integrated AC97 Audio Onboard
- * AC97 2.1 Compliant Codec with 3D Stereo Enhancement
- * 1 x Line-out, 1 x Line-in, 1 x Mic-in
- * 1 x CD-in, 1 x AUX-in, 1 x Game Port
- * Overcurrent protection over Keyboard & Mouse
- * Coloured Connectors : FDD, IDE, COMs etc.
- * Keyboard & PS/2 Mouse Wakeup
- * Phoenix BIOS PC99/ACPI/DMI Compliant
- * ATX Power Supply Interface
- * Micro ATX form factor 245mm x 211mm

chapter 2:Product Introduction

P845SD mainboard diagram



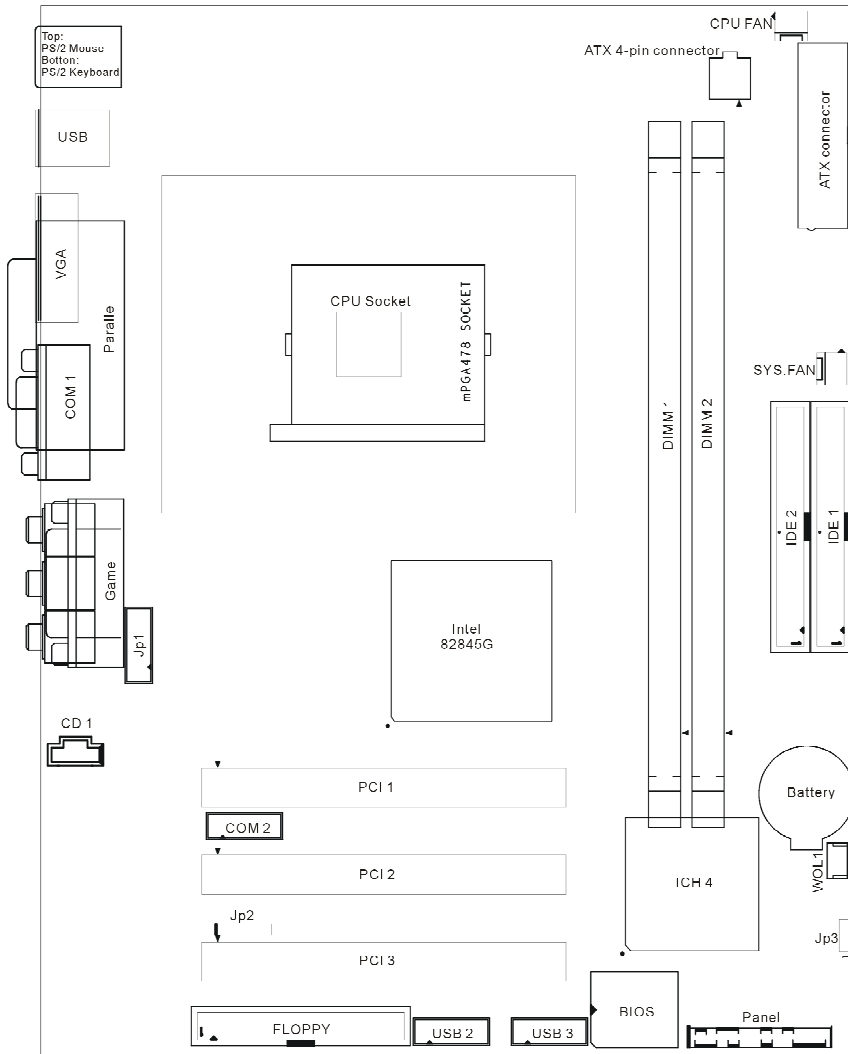
chapter 2:Product Introduction

P845GL mainboard

- * Support Intel 478pin Pentium4 FC-PGA2 (Willamette/Northwood)
- * Support 400MHz Bus
- * Intel 845GL + ICH4 Chipset
- * Two DIMM slots support up to 2G Memory Capacity
- * Support PC1600 and PC2100 DDR DIMM(DDR200/DDR266)
- * Jumperless for CPU Frequency setting
- * 3x PCI slots
- * 6x USB2.0 ports (4xUSB2.0 in the Front panel,2xUSB2.0 in the rear panel) , 1x IrDA port header
- * 1 x FDD port, 1 x Parallel port with ESD/EMI protection, 2 x COM ports
- * Dual IDE Channels support Four Ultra-DMA33/66/100 IDE Devices
- * WAKEUP-LINK Header to Support Wake-On-LAN
- * Integrated 2D&3D Graphic Accelerate Port
- * Integrated AC97 Audio Onboard(Select 2ch,4ch,5.1ch)(optional)
- * AC97 2.1(or AC97 2.2) Compliant Codec with 3D Stereo Enhancement
- * 1 xSpeaker(Front speaker), 1 x Mic-in(Center and Sub-woofer), 1 x Line-in(Rear-speaker)
- * 1 x CD-in, 1 x Game Port
- * 1xstandard Audio Front Panel Header
- * Overcurrent protection over Keyboard & Mouse
- * Coloured Connectors : FDD, IDE, COMs etc.
- * Phoenix BIOS PC99/ACPI/DMI Compliant
- * ATX Power Supply Interface
- * Micro ATX form factor 245mm x 190mm

chapter 2:Product Introduction

P845GL mainboard diagram



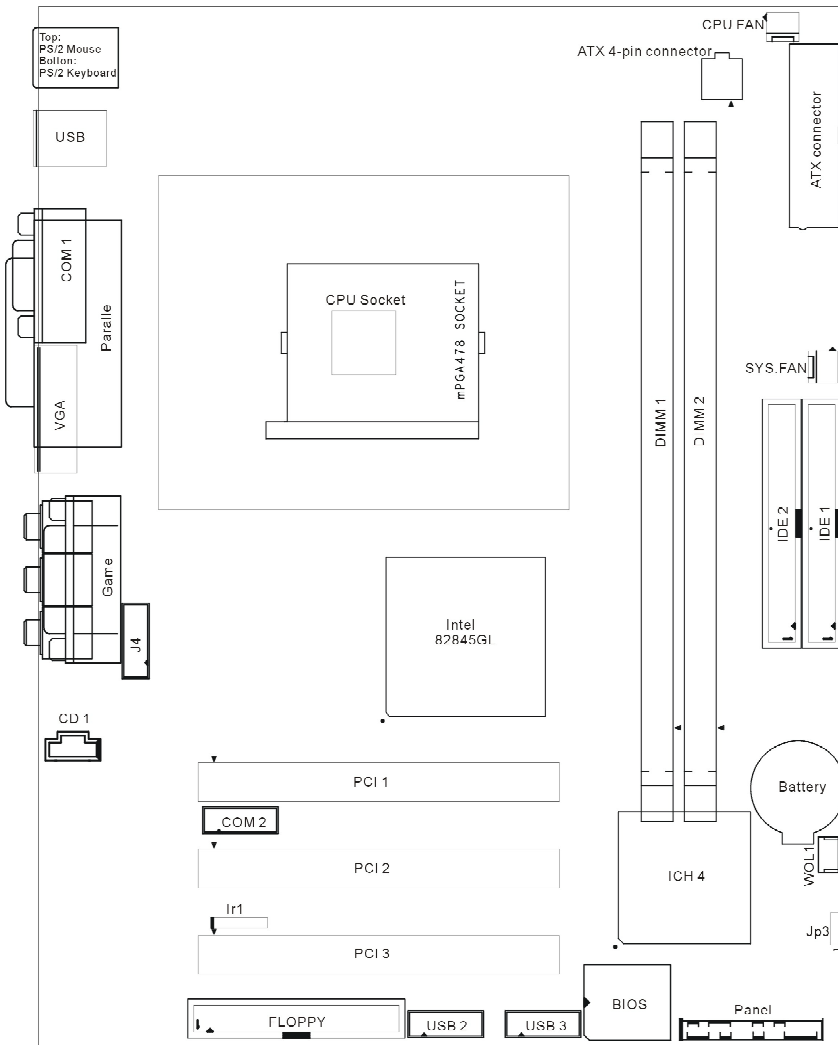
chapter 2:Product Introduction

P845GLP mainboard

- * Support Intel 478pin Pentium4 FC-PGA2 (Willamette/Northwood)
- * Support 400MHz Bus
- * Intel 845GL + ICH4 Chipset
- * Two DIMM slots support up to 2G Memory Capacity
- * Support PC1600 and PC2100 DDR DIMM(DDR200/DDR266)
- * Jumperless for CPU Frequency setting
- * 3x PCI slots
- * 6x USB2.0 ports (4xUSB2.0 in the Front panel,2xUSB2.0 in the rear panel) , 1x IrDA port header
- * 1 x FDD port, 1 x Parallel port with ESD/EMI protection, 2 x COM ports
- * Dual IDE Channels support Four Ultra-DMA33/66/100 IDE Devices
- * WAKEUP-LINK Header to Support Wake-On-LAN
- * Integrated 2D&3D Graphic Accelerate Port
- * Integrated AC97 Audio Onboard(Select 2ch,4ch,5.1ch)(optional)
- * AC97 2.1(or AC97 2.2) Compliant Codec with 3D Stereo Enhancement
- * 1 xSpeaker(Front speaker), 1 x Mic-in(Center and Sub-woofer), 1 x Line-in(Rear-speaker)
- * 1 x CD-in, 1 x Game Port
- * 1xstandard Audio Front Panel Header
- * Overcurrent protection over Keyboard & Mouse
- * Coloured Connectors : FDD, IDE, COMs etc.
- * Phoenix BIOS PC99/ACPI/DMI Compliant
- * ATX Power Supply Interface
- * DIP mPGA 478 CPU Socket
- * Micro ATX form factor 245mm x 190mm

chapter 2:Product Introduction

P845GLP mainboard diagram

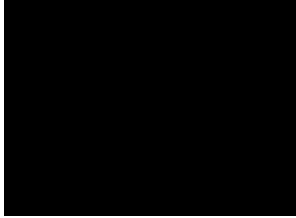


chapter 2:Product Introduction

2.1 Connection Configuration

PS/2 Keyboard and Mouse connector

The Connector for the PS/2 Mouse & PS/2 Keyboard



USB Bus Connector

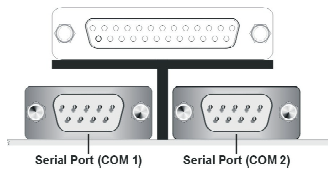
A845E,P845GL,P845GS mainboard provide usb connector,support pnp function accord with spec of 2.0. Its data transmission rate support up to 480Mb/s.

A845DD,A845SD,P845SD mainboard provide usb connector,support pnp function accord with spec of 1.1. Its data transmission rate support up to 12Mb/s.



COM 1& COM 2 Connector

The COM Connector for the COM Devices.

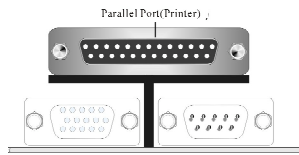


Caution : COM2 in P845GL and P845GLP is a 9pin header.

chapter 2:Product Introduction

Parallel Port

The port mainly use for Printer.



Line-in, Microphone-in, Speaker-out MIDI/Joystick

Line-in(Rear-speaker):

It is the input that the audio port of tape or small recorder replay or record in 2ch stereo;but it is the output of rear-speaker(surround-out)when 4ch or 5.1ch Audio format is adopted on mainboard.

Microphone-in(center and sub-woofer):

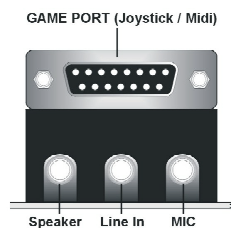
It is the input of microphone in 2ch stereo;but it's the output of Bass sound box (or Center-out) when 5.1ch Audio format is adopted on mainboard.

Speaker(Front-speaker):

It is the output of Two channel Audio.When 4ch or 5.1ch Audio format is adopted on mainboard,it's the output of Front speaker.

MIDI/Joystick :

It's connected a joystick or a MIDI device.



Note: CS4299/ALC201 support 2ch audio format;

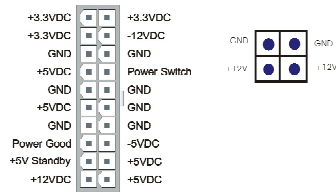
CMI9738 support 4ch audio format;

CMI9739 support 5.1ch audio format.

Chapter 2:Product Introduction

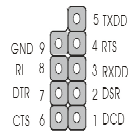
P4 Power Connector

This is a simply diagram of P4 Power connector,which supply 5V and 12V standard Voltage and so on.



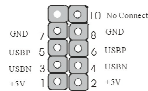
COM2 header

COM cable to connect with it.The red line of cable correspond with pin1 of the header.



USB header

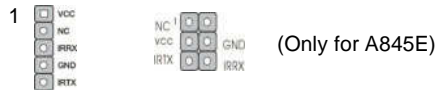
use cable to connect with it. It support two usb port.The red line of cable correspond with pin1 of the header.



IRDA connector

The header pin-out is as follows

- | Pin | Signal Name |
|-----|--------------------------|
| 1 | VCC,power source |
| 2 | No Connection |
| 3 | IRRX, infra-red receive |
| 4 | Ground |
| 5 | IRTX, infra-red transmit |



WOL Header

The Wakeup-Link header used to connect an add-in NIC(Network Interface card) which has Wake-on-Lan capability.

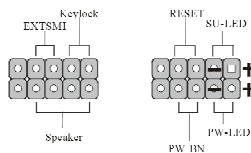
chapter 2:Production Introduction

Front Panel Function Header

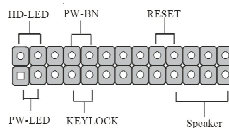
The mainboard PANEL header has a standard set of switch and indicator connectors that are commonly found on ATX system cases. Use the illustration below to make the correct connections to the case switches and indicators. Front Panel Function Header include connections the following features:

Function	Connector Pin-Out Label
System Reset	RESET
Power LED	PW-LED
Hard Drive Activity LED	HD-LED
Soft-Touch Button Power On/Off	PW-BN
External Speaker	Speaker

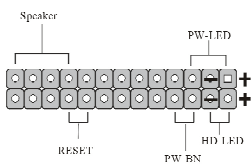
A845E Front Panel:



P845GL/P845GLP Front Panel:

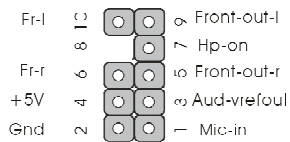


A845DD/A845SD/P845SD Front Panel:



Audio Front Panel Header

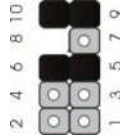
It provides the earphone output and microphone input in the Front panel of computer box.



chapter 2:Product Introduction

The header pin-out is as follows

Pin	Signal Name
1	mic-in
2	Gnd
3	Audio Vref-out
4	+5V
5	right channel output
6	right channel return
7	Hp-on
9	left channel output
10	left channel return



Please add two jumper in 5-6 & 9-10 according to the picture when you don't need install Front Audio panel.

CPU&System FAN

Mainboard supply three FAN header with measure FAN speed function, which can be watched in BIOS.

Caution • Assure CPU FAN run in work state,or CPU will damage for overheat.

CNR(Communication Audio Modem Riser)

Support the CNR card with Audio/Modem/Lan function.

Only for A845E / A845DD / A845SD / P845SD

CD Audio connector

It's connected to CD-ROM by a CD cable.

AUX-IN Audio header

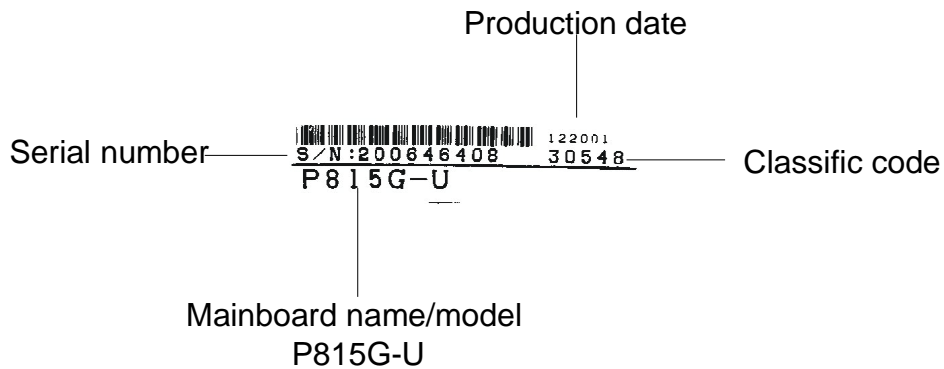
It receive audio output from CD-ROM,TV or MPEG card.

chapter 3: Setup Quickly

Before you use this M/B, Please check chapter follow as below!

3.1 How to identify then product's mode?

There is a bar-code that had adhibited on our product's box and mainboard. The bar-code follow as below (include serial number, production date, classific -code, product's name and model).

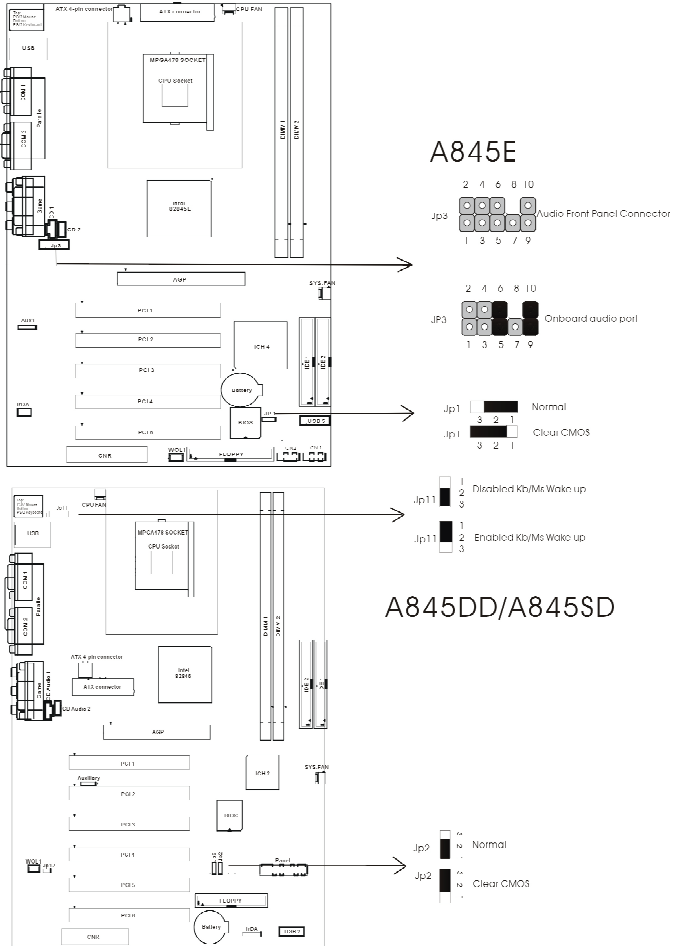


chapter 3: Setup Quickly

3.2 Set the jumper

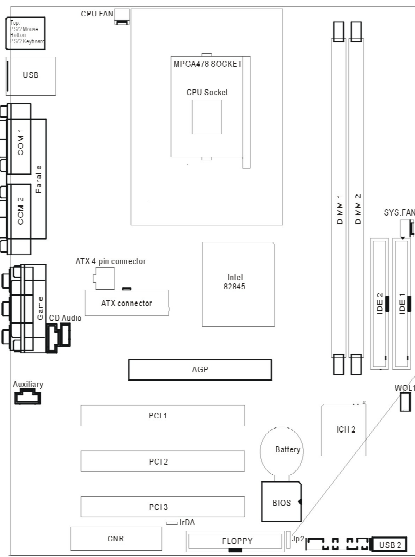
A845E } A845DD } A845SD jumper setting

Notice: You must turn off the power of computer before you set the jumper or install hardware.

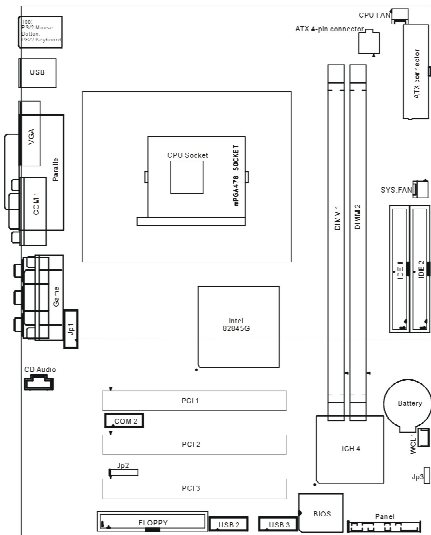
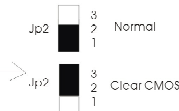


chapter 3: Setup Quickly

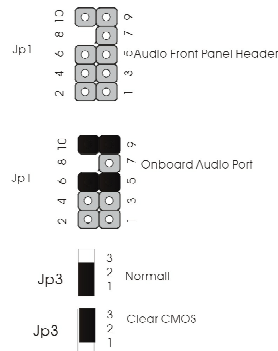
P845SD | P845GL | P845GLP jumper setting



P845SD



P845GL/P845GLP



chapter 3: Setup Quickly

3.3 How to setup BIOS quickly?

1. Press "DEL" key inter BIOS setup when boot-start.
2. Select "Load Optimized Defaults", press "Y", then "enter".
3. Enter "Advanced BIOS Feature""First Boot Device" to setup start-up order.
4. Enter "Save&Exit Setup", select "Y", then reboot.



3.4 How to install mainboard driver ↘

Our driver CD supports Windows 98/98SE/ME/NT4.0/2000/XP OS. It's support Autoseup and Manualsetup model.

A: Place the driver CD in your CD-ROM when you have installed the OS. And the CD will load device information, the opening screen of CD appears.



chapter 3: Setup Quickly

After a while, appear following menu. (According to different mainboard the menu is different) etc: M/B: P845GL, with onboard sound (CMI9738, Four channel Audio).

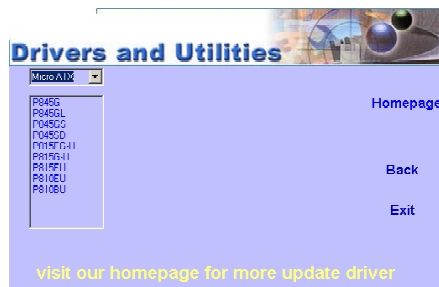
Click highlight item and complete the driver install with the prompt



Notice: If window appear introduction "You need not install this drive in Winxx" that means the OS has included the device driver and you don't need to install it.

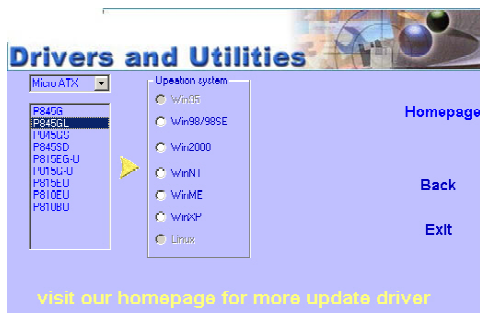
B: When you need to Manualsetup, please follow the list:

First: You need to select the type of M/B which you purchased. We provide 3 types in our CD: ATX, MICRO-ATX, BABY-AT



chapter 3: Setup Quickly

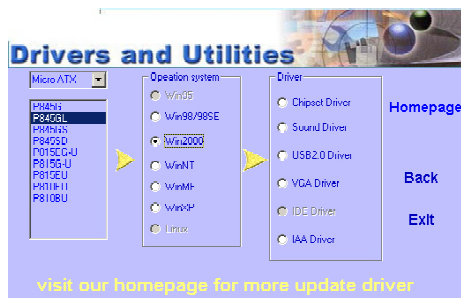
Second: You need to select the OS type which you have installed.



Third: Select the install item, shows as below:

1. Chipset driver: Outline the OS how the chipset components shall be configured.
2. Modem: If the M/B which you purchased integrated the Modem, you need to select this item to install the Modem driver..
3. Sound chip drive: Our M/B integrated the onboard sound codec (AC97). If you want to use this onboard sound codec, you need to select the IC type which show as below, and install the driver.
4. UATA Driver: Intel Ultra ATA optimize program, increase the efficiency of IDE .(Option install)

At the end of the installation of drive, we recommend to restart your computer and assure program setting.



chapter 3:Setup Quickly

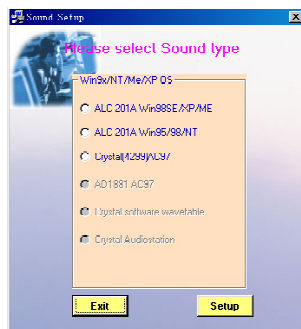
THE SOUND CODEC IC (AC97) INTEGRATED ON YOU M/B

ALC201A

CS4299

CMI9738

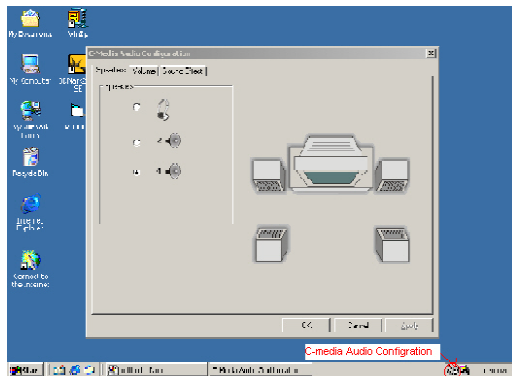
CMI9739



3.5 How to enable 4ch or 5.1ch output \

This question will be explain by CMI9738 in Win2000.

- 1) Please select the logo,which shows"C-media Audio Configuration",click the mouse left button,and soon the dialog box will be shown.



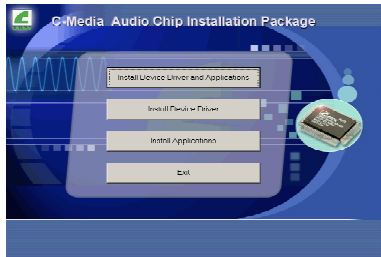
- 2) In the dialog box ,select the item of "4",which is the selection of four channel output.Click "ok",and four channel output is enabled.

chapter 3: Setup Quickly

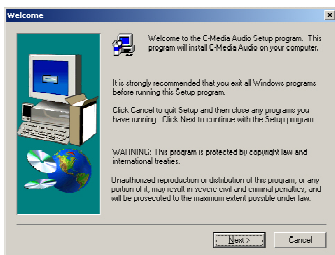
3.6 How to identify that Four channel output or 5.1 channel output is enabled?

It's still explain by CMI9738.

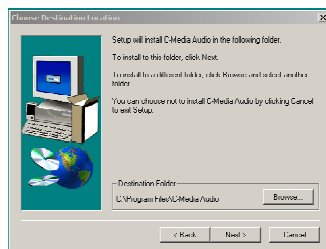
- 1 ㄅ First :install CMI9738 Four channel Audio driver and applications:
 - a. Select the CMI9738 Audio installation in the Mainboard CD, and the dialog box will be shown:



- b. Select "Install Device Driver and Applications", The dialog boxes will be shown one by one in the list. Please click the "next" in picture 1--picture 5.

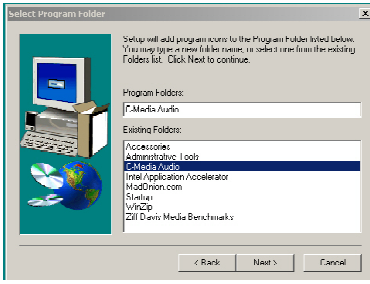


Picture 1

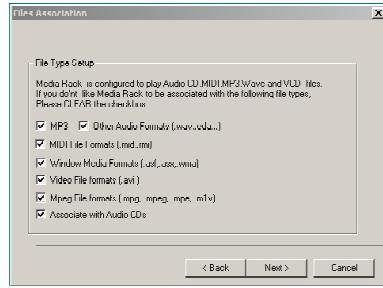


Picture 2

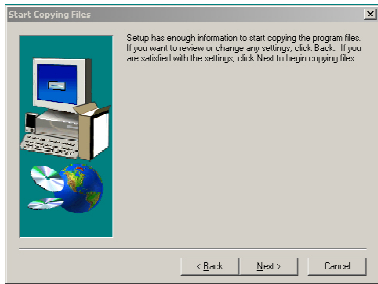
chapter 3: Setup Quickly



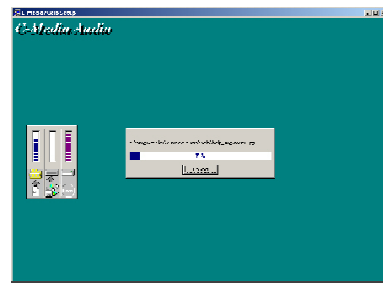
Picture 3



Picture 4



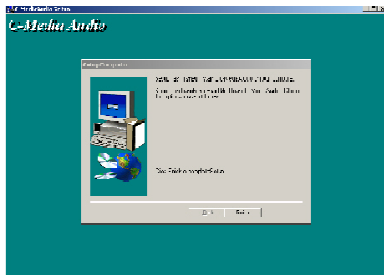
Picture 5



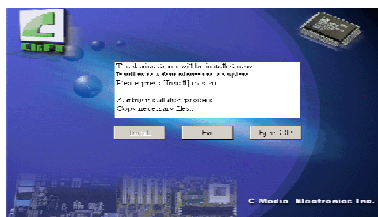
Picture 6

chapter 3: Setup Quickly

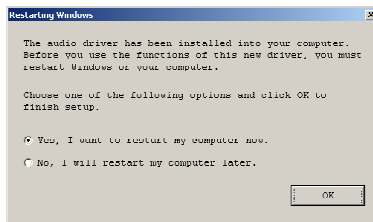
c. At last the diagram will be shown. Click "Finish", and the installation of Audio Applications is over.



d. Install Audio Driver. when the picture 2 is shown, click "ok", and restart your computer. The whole installation is over.



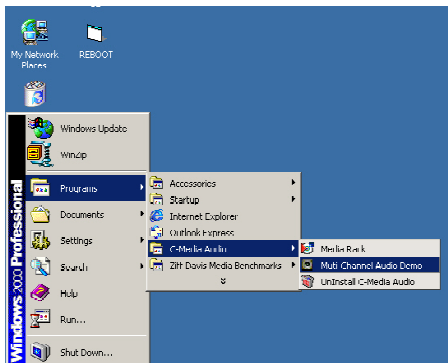
picture 1



picture 2

Chapter 3: Setup Quickly

2 ㄅ Open the application of "Multi-channel audio demo" in the menu of "C-media Audio".



3 ㄅ Next diagram.



4 ㄅ Click "Demo1" or "Demo2" ㄅ and Audio output should happen in the Front speaker and Rear speaker.

chapter 3: Setup Quickly

3.7 How to set Super password and User password ^

Please follow the steps as below to set the Super password and user password;

- 1) Press "DEL" key enter bios setup when boot-start;
- 2) In "Set Supervisor Password" set super password. Please enter according to the introduction.
- 3) In "Set User Password" set user password. Please enter according to the introduction.
- 4) After you finish the setting of password, you should set the option "Security Option", which lies in ※ Advanced BIOS Features § item. If "System" is chosen, a user password prompt appears every time the computer is turned on. If "Setup" is chosen, the password prompt appears when you try to enter setup .
- 5) After finished your setting, please don't forget to save it and enable it effective.
- 6) When you forget your password for some reason, you can open your computer, clear CMOS in Power-off. (refer 3.2)

chapter 4:BIOS Setting

4.1 AWARD BIOS Description

The BIOS (Basic Input/Output system) provides the low-level support for the standard devices such as disk drives, serial and parallel ports. It contains codes for advanced features found on the system board such as virus and password protection.

It is very important to configure the BIOS correctly; otherwise the system board may not work properly. There are three situations for the user to configure the BIOS.

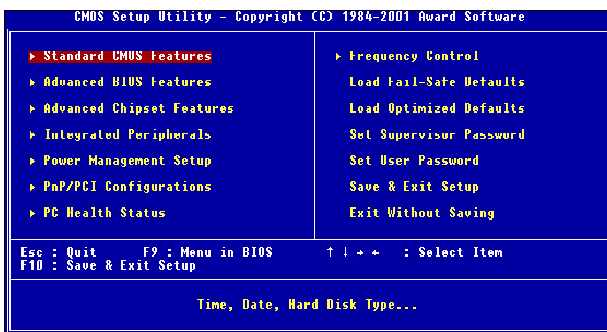
- * The hardware configuration data stored in the BIOS need to be changed according to the new hardware installed.
- * To configure the provided special feature of the BIOS.
- * The CMOS RAM has lost the content due to out of battery.

Starting AWARD BIOS setup

The BIOS reads the system information contained in the CMOS and begins the process of checking out the system and configuring it. After the POST (Power On Self Test) has finished, it'll appear the following message on the screen:

"Press DEL to enter SETUP"

Press the key to call up the Setup. When you invoke Setup, the CMOS SETUP main menu appears the following options. (Its option may have little difference for different model).



chapter 4:BIOS Setting

Award BIOS Setup

Standard CMOS Feature	Set time & date, hard disk drive type, type of floppy drive, Monitor type.
Advanced CMOS Feature	Select system boot sequence, floppy control, CPU cache settings, Shadow RAM.
Advanced Chipset Feature	Configure chipset specific options and features
Integrated Peripherals	Configure onboard I/O device addresses and operating modes.
Power Management Setup	Select various power saving options.
PnP/PCI Configurations	Set PCI Plug and Play device options.
PC health Status	Report system / CPU temperature and cooling fans status.
Frequency/Voltage Control	Select CPU' s Front Side Bus (FSB) frequency and core/bus frequency ratio.
Load Fail-Safe Defaults	Load settings that are more likely to configure a workable computer when something is wrong. If you cannot boot the computer successfully, select the Fail-Safe option and try to diagnose the problem after the computer boots. These settings do not provide optional performance.
Load Optional Defaults	Load settings that provide best performance characteristic. (Default factory settings)
Setup Supervisor Password	Change / Add / Remove supervisor password.
Setup User Password	Change / Add / Remove user password.

chapter 4:BIOS Setting

4.2 Standard CMOS Features



Time / Date

These fields provide you with the current date and time. Note that the hour is displayed as a 24-hour clock. For example, 1:00 PM is 13:00:00.

Floppy Drive A,

Floppy Drive B(A845DD,A845SD,A845E,P845SD)

This option selects the type of floppy drives installed.

Primary Master,

Primary Slave,

Secondary Master,

Secondary Slave

These options enter another menu for hard disk detection by click "Enter" key.

Video

This field allows you to select monitor type .Options are:" MONO", " CGA40", " CGA80" and " EGA/VGA".

Halt on

Allow the system to halt during BIOS boot up when error occurs.

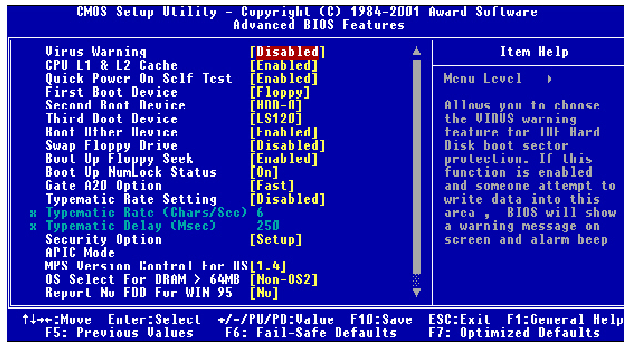
Options are " All,But keyboard", " All,But Diskette", " All,But Disk/Key", " No errors", " All Errors".

Base Memory,Extended Memory,Total Memory

Display the current size of memory installed.

chapter 4:BIOS Setting

4.3 Advanced BIOS Features



Virus Warning

Enabled / Disabled Virus Warning function. Default setting is "Disabled".

CPU L1&L2 Cache

Enables processor on-chip L1 and L2 cache memory. Default is "Enabled".

Quick Power on Self Test

When Enabled, BIOS will skip certain power-on self-test (POST) procedures (such as memory test above 1MB) to speed up the boot process. Default setting is "Disabled".

First / Second / Third Boot Device

Assign the priority of each storage device to be the boot-up drive. Supported devices are HDD, Floppy, LS-120, ATAPI ZIP, CDROM, SCSI, NETWORK. Default boot sequence is Floppy -> HDD-0 -> CDROM.

Boot Other Devices

Specifies whether BIOS to boot from other device not listed in the 1st/2nd/3rd Boot Device options when BIOS fail to boot from those devices. Default setting is "YES".

Swap Floppy Drive

Set this option to "Enabled" to permit drives A: and B: to be swapped. Default is "Disabled".

chapter 4:BIOS Setting

Boot Up Floppy Seek

Specify whether floppy drive A: will perform a Seek operation at system boot. Default setting is "Disabled".

Boot Up NumLock Status

Set this option to "OFF" to turn the Num Lock key off when the computer is booted so you can use the arrow keys on both the numeric keypad and the keyboard. Default is "ON".

Gate A20 Option

Sets "Fast", lets chipset control Gate A20; Sets "Normal", lets a pin in the keyboard controller control Gate A20. Default setting is "Fast".

Typematic Rate setting

Enabled / Disabled Typematic Rate setting, when enabled, the typematic rate and typematic delay can be selected. Default setting is "Disabled".

Security Option

Enables password checking every time the computer is powered on or every time BIOS Setup is executed. If System is chosen, a user password prompt appears every time the computer is turned on. If "Setup" is chosen, the password prompt appears if BIOS Setup is executed. Default is "Setup".

APIC Mode

Enables advance program interrupt control

MPS Version Control For OS

Options are 1.1 and 1.4. Default is "1.4".

OS Select For Dram > 64MB

Set to "Enabled" if running OS/2 operating system and using more than 64MB system memory. Default is "Disabled".

Report No FDD For Win95

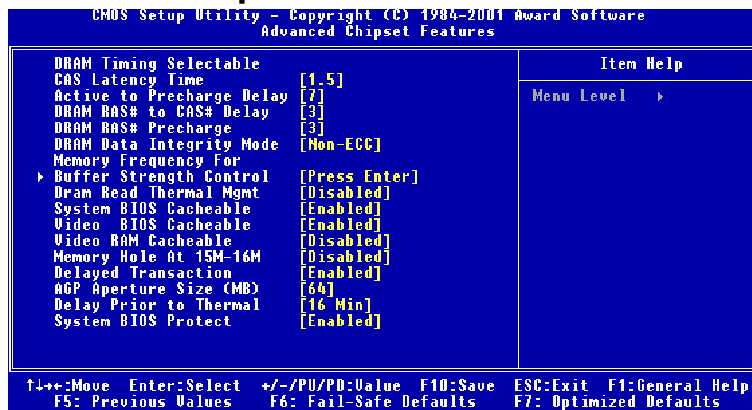
Selects "YES" when the system is running Win95 and no FDD is installed. Default is "NO".

Small logo(EPA) Show

Enable/Disable EPA logo to be shown during bootup.

chapter 4:BIOS Setting

4.4 Advanced Chipset Features



DRAM Timing Selectable

Manual/By SPD. Select "By SPD" to allow BIOS to get the optimized timing data from the data stored on the DIMM modules. Otherwise, select "Manual" to configure the following timing constraints.

CAS Latency Time

Specifies the number of SCLKs between the time when the read command is sampled by DRAM and the Whitney Sample reads data from DRAM. Available settings are 1.5, 2, 2.5.

Active to Precharge Delay

Specifies the active to precharge delay. The setting is 7, 6, 5.

DRAM RAS-to-CAS Delay

Specifies the length of the delay inserted between the RAS and CAS signals of the DRAM system memory access cycle. The settings are 2 SCLKs or 3 SCLKs. Default setting is "3".

DRAM RAS Precharge

Specifies the length of the RAS precharge part of the DRAM system memory access. Available settings: 2 SCLKs, or 3 SCLKs. Default setting is "3".

DRAM DATA Integrity Mode

Display integrity mode of the DIMM modules. Options are Non-ECC/ECC. Default setting is "Non-ECC".

chapter 4:BIOS Setting

Memory Frequency For

Set frequency of DIMM memory.Default is "AUTO".

CPU Latency Timer

Enables CPU BIST. Default is "Disabled".

Buffer Strength Control

This option allows the experience user to fine tune the DRAM control setting. Leave this setting as default will have more safe & stability performance.

DRAM Read Thermal Mgmt

Select "Enable" to allow Dram Read Thermal Mgmt to manage DRAM speed according to it's temperature.Once the DRAM temperature increase to a specific level,Thermal Mgmt will slow down DRAM speed for a certain period of time(can be specific in "Delay Prior to Thermal")in order to cool down the DRAM temperature to determine whether to change DRAM speed back to its normal operation speed or not. Default is"Disabled".

System BIOS Cacheable

Enabled/Disabled System BIOS catch.Default setting is "Disabled".

Video Bios cacheable

Enabled/Disabled Video BIOS catch.Default setting is "Enabled".

Video RAM cacheable

Enabled/Disabled S-Video RAM catch.Default setting is "Disabled".

Memory Hole At 15M-16M

Enabled/Disabled Memory Hole at 15M-16M.Default is "Disabled".

Delayed Transaction

Enabled/Disabled ICH(I/O Controller Hub) delayed transactions for internal register,firmware Hub(FWH) and Low Pin Count(LPC)interface access.default is "Disabled".

AGP Aperture Size

Set maximam memory aperture for onboard AGP port.Available settings are 4MB,8MB,16MB,64MB,128MB and 256MB.Default is "128MB".

Delay Prior to Thermal

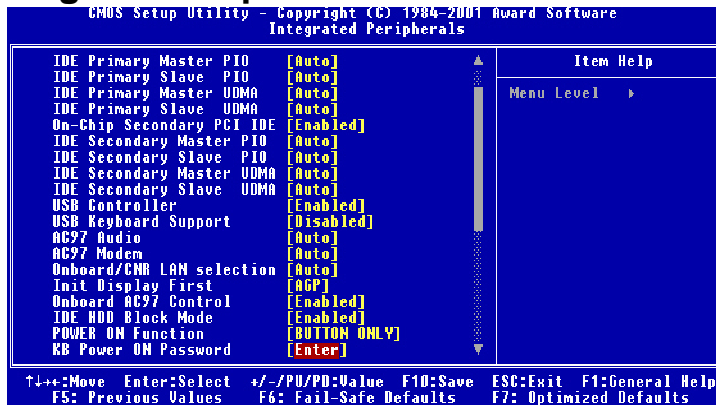
You must have "Dram Read Thermal Mgmt" option enabled in order for this option tobe meaningful.This option sets the time between each DRAM Thermal detection once the Thermal activities.Options are 4min/8min/16min/32min. Default is "16min".

System BIOS Protect

Enabled to protect system BIOS from overwritten.

chapter 4:BIOS Setting

4.5 Integrated Peripherals



On-Chip Primary PCI IDE

Enabled / Disabled on-chip primary PCI IDE. Default setting is "Enabled".

On-Chip Secondary PCI IDE

Enabled / Disabled on-chip Secondary PCI IDE. Default setting is "Enabled".

IDE Primary Master / Slave PIO

IDE Secondary Master / Slave PIO

Specify the IDE mode for the system.

IDE Primary Master / Slave UDMA

IDE Secondary Master / Slave UDMA

Auto / Disabled IDE UDMA function feature. Default setting is "Auto", which lets BIOS determine.

USB Controller

Enabled / Disabled USB Controller. Default setting is "Enabled".

USB Keyboard Support

Enabled / Disabled USB Keyboard Support in DOS. Default setting is "Disabled"

AC97 Audio

Default setting is "Auto", BIOS will automatically detect onboard AC97 Audio.

AC97 Modem

Default setting is "Auto", BIOS will automatically detect onboard AC97 Modem.

chapter 4:BIOS Setting

Onboard /CNR LAN selection

Select "onboard" to enable the optional onboard LAN function.Selects "Ext.CNR" to disable onboard LAN function and uses LAN function on CNR card.

Init Display First

Default setting is "PCI Slot", sets Init Display First to PCI Slot.

Onboard AC97 Control IDE HDD Block Mode

Enabled / Disabled IDE HDD Block Mode. Default setting is "Enabled".

Power On Function

Specifies the keyboard hot key, mouse button, power button to wakeup the computer from S3-S5 state. Available options are Button only: Password, Hot key, Mouse left, Mouse right, Any key, keyboard 98. Default setting is Button only.

KB Power On Password

Sets Keyboard Power on Password.

Hot Key Power On

Sets power on Hot key. Default setting is "Ctrl-F1".

On-board FDC Controller

Enabled / Disabled on-board FDC controller. Default setting is "Enabled".

Onboard Serial Port 1 & 2

Specify the I/O port addresses of serial port 1 and 2. Available settings are Auto, Disabled, 3F8h, 2F8h, 3E8h and 2E8h. Default setting is "Auto".

UART Mode Select

Specifies the operation mode of onboard Serial Port 2. The onboard Serial Port 2 can be configured as an Infrared(IR) port or an ordinary RS-232 serial port. Available settings are Normal, IrDA and ASKIR. Default is "Normal".

RxD,TxD Active

Options are "Hi,Hi", "Hi,Lo", "Lo,Lo", "Lo,Hi".

IR Transmission Delay

Enabled / Disabled IR Transmission Delay.

UR2 Duplex Mode

This option is not available when UART is set to "Normal". Available options are Half Duplex and Full Duplex. Default setting is "Half Duplex"

chapter 4:BIOS Setting

Use IR pins

Setting IR mode.Default is IR_Rx2Tx2.

Onboard Parallel Port

Specifies the I/O port address of the onboard parallel port. Available settings are Auto, Disable, 378h, 278h and 3BCh. Default is "Auto".

Parallel Port Mode

Specifies the onboard parallel port mode. Available options are Normal, Bi-Dir, ECP and EPP. Default is "ECP".

EPP Mode Select

Specifies the Enhanced Parallel Port specification version number. This option only appears if the Parallel Port Mode is set to "EPP". The settings are 1.7 or 1.9. Default is N/A because the default setting for the Parallel Port Mode option is not EPP.

ECP Mode USE DMA

This option only appears if the Parallel Port Mode option is set to ECP. It assigns a DMA channel to the onboard parallel port. Available settings are 1, 3. Default is "3".

Game Port Address

Specifies the Onboard Game Port I/O address. Available settings are 201, 209, and Disabled. Default is "201".

Midi Port Address

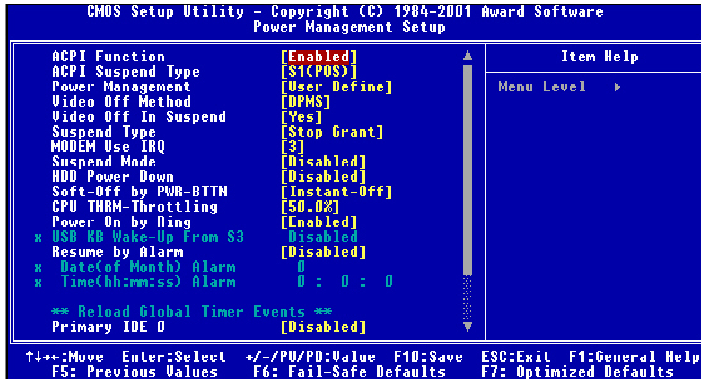
Specifies the I/O address of the MIDI interface on the Onboard Game Port. Available options are 300, 330 ,290 and Disabled. Default is "330".

Midi Port IRQ

Assigns the IRQ line to the MIDI interface. Available options are 5 and 10. Default setting is "10". This option is not available if the Onboard Midi Port is disabled S-232 serial port.

chapter 4:BIOS Setting

4.6 Power Management Setup



ACPI Function

Enabled/disabled ACPI Function. Default setting is "Disabled".

ACPI Suspend Type

Specifies ACPI Suspend type. Default setting is "S1(POS)"

Power Management

Specifies Power Management Mode. Default setting is "User Define".

Video Off Method

Specifies Video off Method. Default setting is "DPMS".

Video Off In Suspend

Specifies Video off in Suspend.

Suspend Type

Specifies Suspend Type. Default setting is "Stop Grant".

Suspend Mode

Specifies Suspend Mode. Default setting is "Disabled".

HDD Power Down

Specifies HDD Power Down Mode. Default setting is "Disabled".

Soft Off by PWR_BTTN

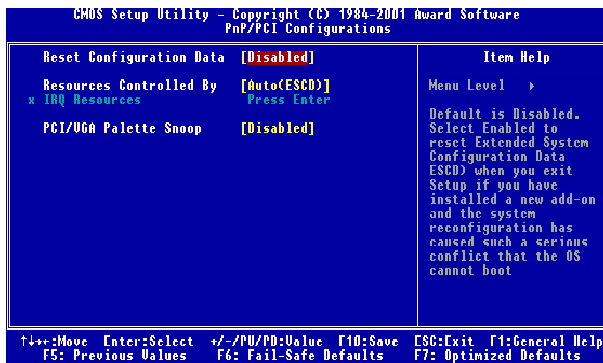
Sets Power Down Mode by PWR_BTTN. Default setting is "Instant-off".

CPU THRM-Throttling

Monitor CPU Temperature, slow down CPU Speed.

chapter 4:BIOS Setting

4.7 PnP/PCI Configurations



Reset configuration Data

Enabled \ Disabled Reset configuration Data. Default setting is "Disabled".

Resources Controlled by

Sets the allocation of PCI resources. Available options are Manual and Auto (ESCD). Default setting is "Auto"(ESCD). BIOS automatically assigns resources.

IRQ Resources

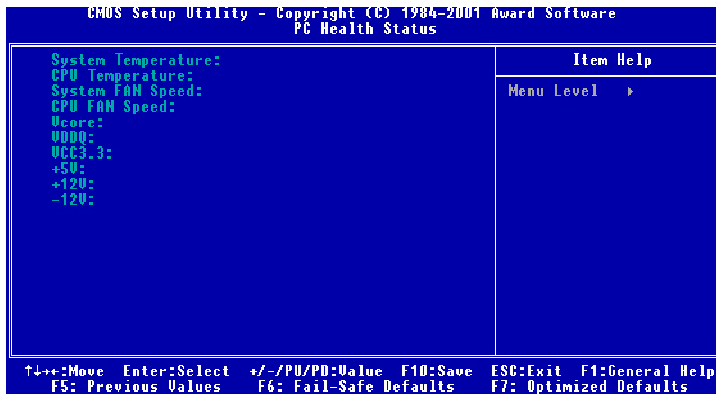
When resources are controlled manually, assign each system interrupt a type, depending on the type of device using the interrupt.

PCI/VGA Palette Snoop

Enabled / Disabled PCI / VGA Palette Snoop, sets Enabled for having Video card on ISA Bus and VGA card on PCI Base, sets "Disabled" for VGA card only.

chapter 4:BIOS Setting

4.8 PC Health Status



Current System Temperature

Current CPU Temperature

Detect System and CPU temperature automatically.

System Fan Speed

CPU Fan Speed

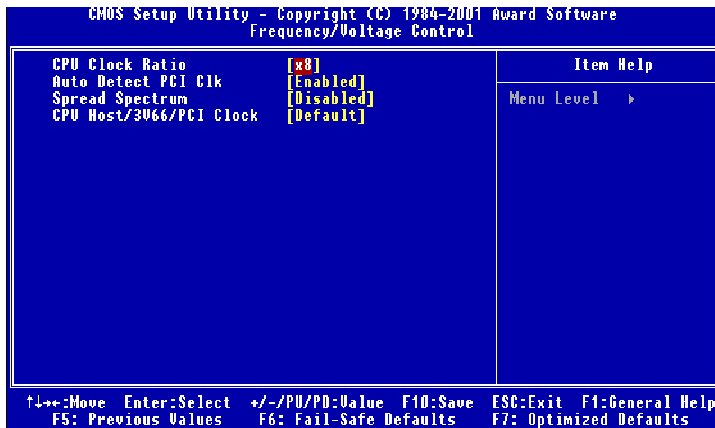
Detect Fan Speed Status automatically.

Vcore/VDDQ/VCC3-3/+5V/+12V/-12V

Detect System Voltage status automatically.

chapter 4:BIOS Setting

4.9 Frequency Control



CPU Clock Ratio

Select CPU core/bus frequency ratio. This setting has no effect on processors with frequency ratio locked.

Auto Detect PCI CLK

Enabled \ Disabled Auto detect PCI CLOCK. Default setting is "Enabled".

Spread Spectrum

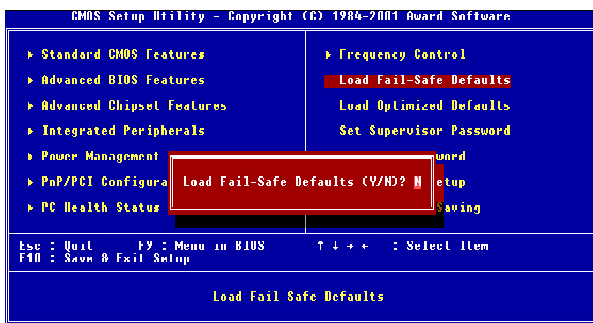
This option turns on/off the Spread Spectrum feature of clock generator to reduce Electromagnetic Interference (EMI) generated by high speed clock signals. Default setting is "Disabled".

CPU Host/3V66/PCI Clock

Select the clock generator of Front Side Bus frequency for CPU over-clocking. Default setting is "Default".

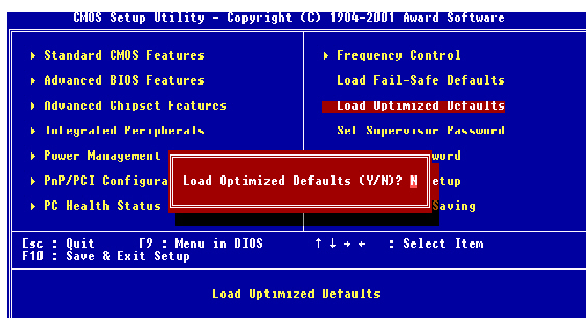
chapter 4:BIOS Setting

4.10 Load Fail-safe Defaults



Fail-safe defaults contain the most appropriate values of the system parameters that allow minimum system performance.

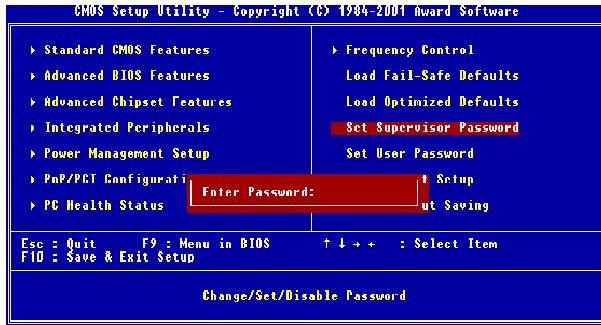
4.11 Load Optimized Defaults



Selecting this field loads the factory defaults for BIOS and Chipset Features which the system automatically detects.

chapter 4:BIOS Setting

4.12 Set Supervisor / User password



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

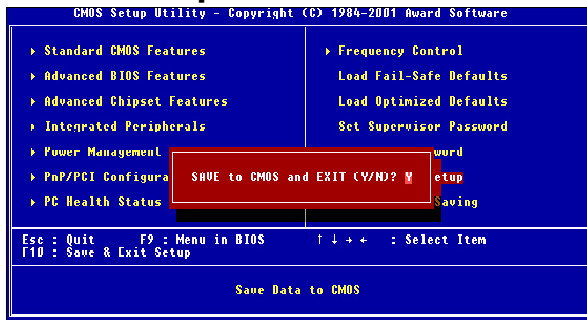
Type the password, up to eight characters and press<Enter>. The new password will clear the previously entered password from CMOS Memory, you will be asked to confirm the Password. Type the password again and press < Enter>.

To disable password,just press <Enter> when you are prompted to enter password.A Message <<PASSWORD DISABLED!!!>>will appear to confirm the password being disabled.Once the password is disabled.the system will boot and you can enter setup freely.

If you select "System" at "Security Option" in "Advanced BIOS Features" Menu, you will be prompted for the password every time.if you select "Setup" at " Security option" in"Advanced BIOS Feature" Menu,you will be prompted only when you try to enter Setup .

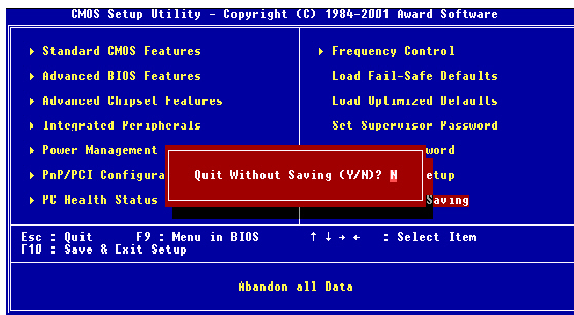
chapter 4:BIOS Setting

4.13 Save & Exit Setup



Type "Y" will quit the Setup Utility and Save the user setup value to RTC CMOS.
Type "N" will return to Setup Utility.

4.14 Exit Without Saving



Type "Y" will quit the Setup Utility and Without Saving the User setup Value.
Type "N" will return to Setup Utility.

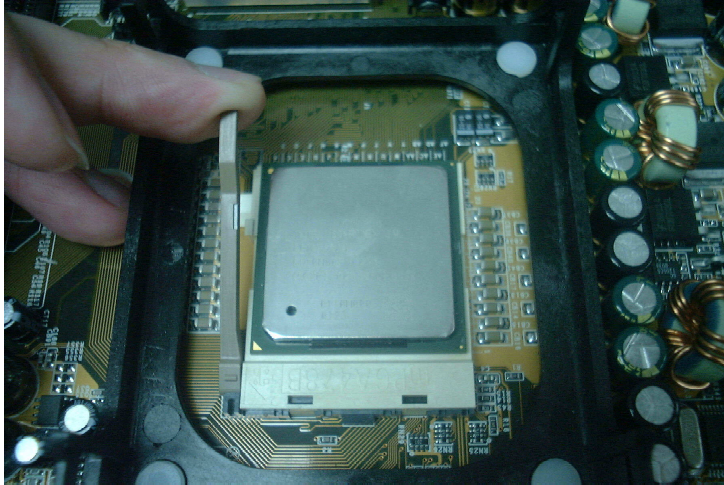
chapter 5:Hardware Installation

Please follow these steps in order to assure that your series of mainboard installation is successful. Please refer to the back chapters for further information regarding boot-up and configurations. An anti-static wrist band is recommended when handling electronic components, be sure your work area is static free before you begin this section.

1.Reference User Manual,Check the setting of mainboard accord with describe.

2.Installing the Central Processing Unit

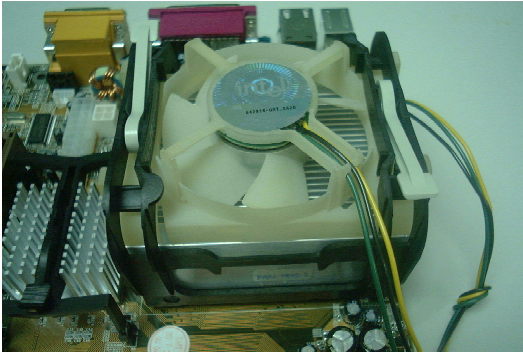
The mainboard provides a 478 pins, CPU Socket. Simply disengage the lever from the locking latch, lift it to its vertical position. Match the triangle markings on both the CPU and the Socket478, Carefully drop the CPU into the socket such that all the CPU pins entered the holes in the socket. Apply slight pressure if necessary. Make sure the CPU is level with the surface of the socket. Maintain a slight pressure on the CPU and rotate the lever back to its horizontal (or locking) position, and snap the lever back to the locking latch.



chapter 5:Hardware Installation

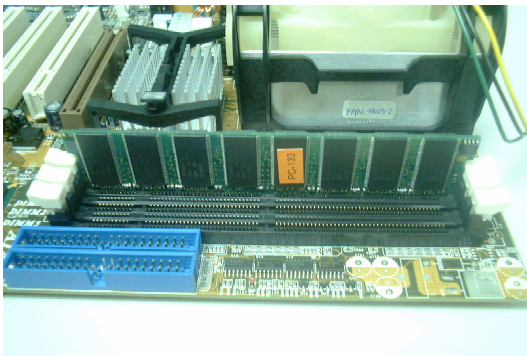
3.Installing the CPU Fan

The CPU should have a fan attached to prevent overheating. If a fan is not present, user should purchase a fan prior to turning on the system. The recommended heatsink for the Socket 370 processor are those with three-pin fans that can be connected to the fan connectors on the mainboard. It provides the +12 Volts DC for your CPU cooling fan.



4.Installing the Memory

Memory is installed in DIMM Sockets as follows :



After you have set the DIMM firmly into its socket, snap the white clip holders up to lock in the DIMM.

chapter 5:Hardware Installation

5. Install Extended card.
6. Connect with FDD cable,Harddisk cable,control signal line and so on.
7. Clear CMOS
8. Power is connected to Power supply(Only support P4 ATX power).
9. Finish the setting of BIOS.