8VT800-RZ / 8VT800-RZ-C

Intel® Pentium® 4 Processor Motherboard

User's Manual

Rev. 1002

12ME-8VT800RZ-1002

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Notice

Please do not remove any labels on motherboard, this may void the warranty of this motherboard.

Due to rapid change in technology, some of the specifications might be out of date before publication of this booklet.

The author assumes no responsibility for any errors or omissions that may appear in this document nor does the author make a commitment to update the information contained herein.

Declaration of Conformity We Menuracture/financest

G.B.T Technology Trading GMbH Ausechlager Weg 41, 1F 20537 Hamburg, Gemany

Decision of the apparatus, system, installation to which it releas)

Mother Board 8VT800-RZ

is in conformity with (reference to the specification under which conformly is declared; in accomparise with 199030 EEC CIMC Directive.

□ EN 55011	Limits and methods of measurement	≥ EN 61000-3-2	Disturbances in supply systems caused
	of radio disturbance the actor size of industrial, scientific and medical (ISM-high frequency objupment)	E EN 61000-3-3	Distributions in supply systems caused by nationed appliances and smilar electrical equipment "Vollege it officials in
□ EN 55013	Limits and methods of measurement of radio disturbance planarisms as of broadcast mostaces and associated equipment.	2 EN 55024	Information Technology equipment immunity characteristics I imms and methods of measurement
□ EN 68014-1	Limits and methods of measurement of radio statutions of sociarcose of bousehold electrical applicables.	E EN 60082-1	Generit immunity standard Part 1: Positical, commonse and light industry
	portable tools and aim far electrical appendities	EN 50082-2	Density immunity standard Part 2: Industrial environment
□ EN 55015	Limits and methods of measurement of radio distintionable diseases of fluorescent terms and furnitianes	□ EN 55014-Z	Immunty requirements for household appliances force and similar apparatus.
□ EN 65020	Immunity from radio interference of broadcast receivers and associated equipment.	□ EN 60091: 2	EMC requirements for uninterrupt bla power systems (UPS)

DECLARATION OF CONFORMITY

Per FCC Part 2 Section 2.1077(a)



Responsible Party Name: G.B.T. LNC. (U.S.A.)

Address: 17358 Railroad Street

City of Industry, CA 91748

Phone/Fax No: (818) 854-9338/ (818) 854-9339

hereby declares that the product

Product Name: Motherboard

Model Number: 8VT800-RZ

Conforms to the following specifications:

FCC Part 15, Subpart B, Section 15.107(a) and Section 15.109

(z), Class B Digital Device

Supplementary Information:

□ DIN VDE 0051 Cabled distribution systems; Equipment □ part 10 for remaining and/or distribution from sound one blockston agricial

™ EN 55022

I mits and methods of measurement of radio disturbance sharesters as at information technology equipment

河 CE marking

The manufacturer also declares the conformity of above mentioned product with the actual required safety standards in accordance with LVO 7323 EEC

(EC conformity marking)

FIN BURBO EN 60091-1

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

Representative Person's Name: ERIC LU

Signature: Eric Lu

Date: May. 07,2004

Manufacturer/importer Signature:

Simmy Muang

General and Safety requirements for uninterruptable power systems (UPIs). analy or maximum reciningly equipment

(Stamp)

□ EN 60336 THEN BRIDGE

Safety of household and smillar experient appliances satety requirements for mains operated electronic and religied apparents for household end similar general use.

Date.

May. 07, 2004

Name .

Timmy Huang

Preparing Your Computer

Computer motherboards and expansion cards contain very delicate Integrated Circuit (IC) chips. To protect them against damage from static electricity, you should followsome precautions whenever you work on your computer.

- 1. Unplug your computer when working on the inside.
- Use a grounded wrist strap before handling computer components. If you do not have one, touch both of your hands to a safely grounded object or to a metal object, such as the power supply case.
- Hold components by the edges and try not touch the IC chips, leads or connectors, or other components.
- 4. Place components on a grounded antistatic pad or on the bag that came with the components whenever the components are separated from the system.
- Ensure that the ATX power supply is switched off before you plug in or remove the ATX power connector on the motherboard.



Installing the motherboard to the chassis

If the motherboard has mounting holes, but they don't line up with the holes on the base and there are no slots to attach the spacers, do not become alarmed you can still attach the spacers to the mounting holes. Just cut the bottom portion of the spacers (the spacer may be a little hard to cut off, so be careful of your hands). In this way you can still attach the motherboard to the base without worrying about short circuits. Sometimes you may need to use the plastic springs to isolate the screw from the motherboard PCB surface, because the circuit wire may be near by the hole. Be careful, don't let the screw contact any printed circuit write or parts on the PCB that are near the fixing hole, otherwise it may damage the board or cause board malfunctioning.

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Chapter 1 Introduction

Features Summary

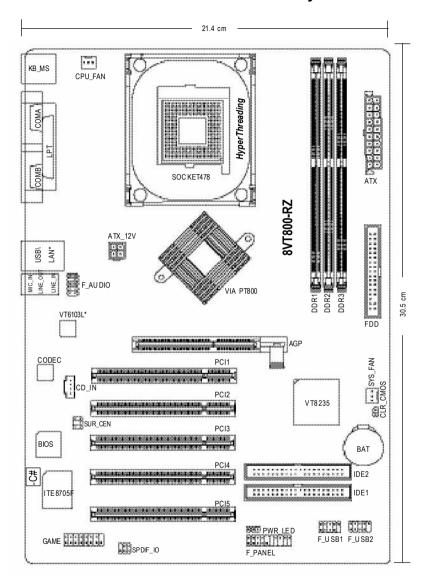
CPU	Socket 478 for Intel® Micro FC-PGA2 Pentium® 4 processor
	 Support Intel® Pentium® 4 Processor^(Note1) with HT Technology
	 Support Intel® Pentium® 4 (Northwood) processor
	 Intel Pentium[®]4 800^(Note2)/533/400 MHz FSB
	2nd cache depends on CPU
Chipset	North Bridge: VIA PT800
	South Bridge: VIA VT8235
Memory	3 184-pin DDR DIMM sockets
	 Supports 128MB/256MB/512MB/1GB unbuffered DRAM
	 Supports up to 3GB DRAM (Max)
Slots	1 AGP slot 8X/4X (1.5V) device support
	• 5 PCI slots
On-Board IDE	2 IDE controller provide IDE HDD/CD-ROM(IDE1, IDE2) with PIO, Bus
	Master (Ultra DMA33/ATA66/ATA100/ATA133) operation modes
	Can connect up to 4 IDE devices
On-Board Floppy	1 Floppy port
On-Board Peripherals	1 Parallel port
	 2 Serial ports (COMA and COMB)
	 6 USB 2.0/1.1 ports (2 x Rear, 4 x Front by cable)
	1 Front Audio connector
	 1 PS/2 Keyboard
	• 1 PS/2 Mouse
On-Board LAN *	Builit-in VIA VT6103L *
	• 1 RJ45 port *
On-Board Sound	VIA VTI617 CODEC
	Support 2/4/6 channel
	 Line Out / Line In / Mic In
	SPDIF Out
	CD In / Game connector
BIOS	Licensed AWARD BIOS
	 Supports Q-Flash™
I/O Control	• ITE8705F
Hardware Monitor	CPU / System Fan Fail warning
	CPU / System Fan Speed detect
	CPU tem perature detect
	System Voltage Detect
Additional Features	 Supports @BIOS™
	Supports EasyTune
Overclocking	Over Voltage (AGP/DDR) by BIOS
-	Over Clock (AGP/DDR/PCI) by BIOS
Form Factor	ATX size form factor, 30.5cm x 21.4cm

[&]quot;*" For 8VT 800-RZ only.

(Note1): The $\,8VT800\text{-RZ}$ and $\,8VT800\text{-RZ-C}$ motherboards support a Prescott processor.

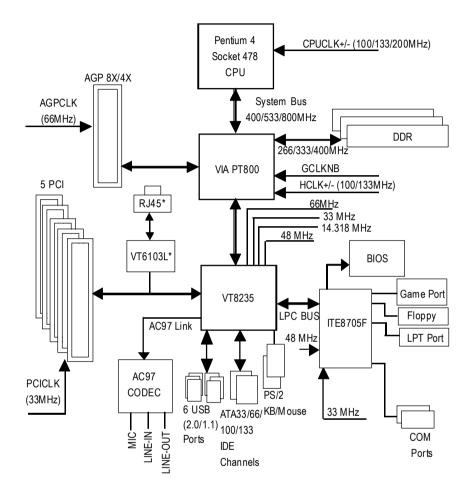
(Note2): The 8VT800-RZ and 8VT800-RZ-C motherboards support Northwood 800MHz processor.

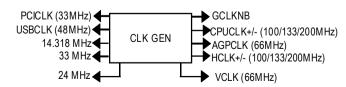
8VT800-RZ/8VT800-RZ-C Motherboard Layout



[&]quot;*" For 8VT 800-RZ only.
"#" For 8VT 800-RZ-C only.

Block Diagram



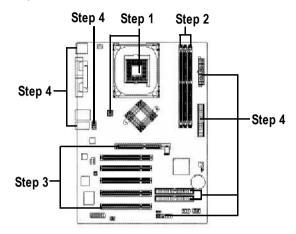


[&]quot;*" For 8VT800-RZ only.

Hardware Installation Process

To set up your computer, you must complete the following steps:

- Step 1- Install the Central Processing Unit (CPU)
- Step 2- Install memory modules
- Step 3- Install expansion cards
- Step 4- Install I/O Peripherals Cables



Step 1: Install the Central Processing Unit (CPU)



Before installing the processor, adhere to the following warning:

- 1. Please make sure the CPU type is supported by the motherboard.
- The processor will overheat without the heatsink and/or fan, resulting in permanent irreparable damage.
- If you do not match the CPU socket Pin 1 and CPU cut edge well, it will cause improper installation. Please change the insert orientation.
- 4. Apply thermal grease between the processor and cooling fan.
- Never run the processor without the heatsink properly and firmly attached. Permanent damage will result.
- 6. Please set the CPU host frequency in accordance with your processor's specifications. We don't recommend you to set the system bus frequency over the CPU's specification because these specific bus frequencies are not the standard specifications for CPU, chipset and most of the peripherals. Whether your system can run under these specific bus frequencies properly will depend on your hardware configurations, including CPU, Memory, Cards...etc.



HT functionality requirement content:

Enabling the functionality of Hyper-Threading Technology for your computer system requires all of the following platform components:

- CPU: An Intel® Pentium 4 Processor with HT Technology
- Chipset: An VIA Chipset that supports HT Technology
- BIOS: A BIOS that supports HT Technology and has it enabled
- OS: An operation system that has optimizations for HT Technology

Step 1-1: CPU Installation

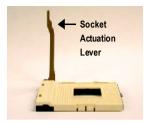


Figure 1. Pull the rod to the 90-degree directly.

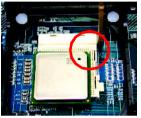


Figure 2.

Locate Pin 1 in the socket and look for a (golden) cut edge on the CPU upper corner. Insert the CPU into the socket. (Do not force the CPU into the socket.) Then move the socket lever to the locked position while holding pressure on the center of the CPU.

Step 1-2: CPU Cooling Fan Installation



Figure 1.

Apply the thermal tape(or grease) to provide better heat conduction between your CPU and cooling fan.



Figure 2.

Fasten the cooling fan supporting-base onto the CPU socket on the motherboard.

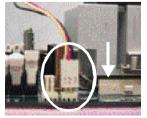


Figure 3.

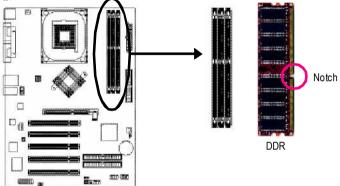
Make sure the CPU fan is plugged to the CPU fan connector, than install complete.

Step 2: Install Memory Modules



Before installing the memory modules, adhere to the following warning:
Please note that the DIMM module can only fit in one direction due to the one notch.
Wrong orientation will cause improper installation. Please change the insert orientation.

The motherboard has 3 dual inline memory module (DIMM) sockets. The BIOS will automatically detects memory type and size. To install the memory module, just push it vertically into the DIMM socket. The DIMM module can only fit in one direction due to the notch. Memory size can vary between sockets.





The DIMM socket has a notch, so the DIMM memory module can only fit in one direction.



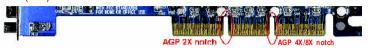
Insert the DIMM memory module vertically into the DIMM socket. Then push it down.



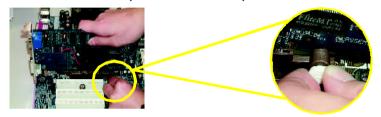
 Close the plastic clip at both edges of the DIMM sockets to lock the DIMM module.
 Reverse the installation steps when you wish to remove the DIMM module.

Step 3: Install AGP Card

- 1. Read the relateAGP card's instruction document before install the AGP card into the computer.
- If your AGP card has "AGP 4X/8X(1.5V) notch" (show below), please make sure your AGP card is AGP 4X/8X(1.5V).

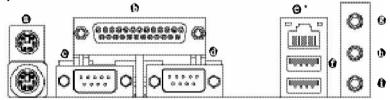


3. Please carefully pull out the small white- drawable bar at the end of the AGP slot when you try to install/ Uninstall the AGP card. Please align the AGP card to the onboard AGP slot and press firmly down on the slot .Make sure your AGP card is locked by the small white- drawable bar.



Step 4: Install I/O Peripherals Cables

Step 4-1: I/O Back Panel Introduction



PS/2 Keyboard and PS/2 Mouse connector

This connector supports standard PS/2 keyboard and PS/2 mouse.

Parallel port (LPT)

Device like printer can be connected to Parallel port.

Mouse and modem etc. can be connected to Serial port.

LAN port *

LAN is fast Ethernet with 10/100M bps speed.

USB port

Before you connect your device(s) into USB connector(s), please make sure your device(s) such as USB keyboard, mouse, scanner, zip, speaker...etc. Have a standard USB interface. Also make sure your OS supports USB controller. If your OS does not support USB controller, please contact OS vendor for possible patch or driver upgrade. For more information please contact your OS ordevice(s) vendors.

[&]quot;*" For 8VT 800-RZ only.

Line In jack

Devices like CD-ROM, walkman etc. can be connected to Line In jack.

Line Out jack

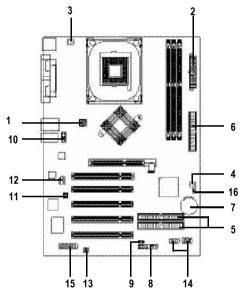
Connect the stereo speakers or earphone to this connector.

MIC In jack

Microphone can be connect to MIC In jack.

After installation of the audio driver, you are able to use 2/4/6-channel audio feature by software selection. You can connect "Front speaker" to "Line Out" jack, Connect "Rear speaker" to "Line In" jack and connect "Center/Subwoofer" to "MIC In" jack.

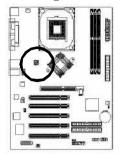
Step 4-2: Connectors Introduction



1) ATX_12V	9) PWR_LED
2) ATX	10) F_AUDIO
3) CPU_FAN	11) SUR_CEN
4) SYS_FAN	12) CD_IN
5) IDE1 / IDE2	13) SPDIF_IO
6) FDD	14) F_USB1/F_USB2
7) BAT	15) GAME
8) F_PANEL	16) CLR_CMOS

1) ATX_12V (+12V Power Connector)

This connector (ATX_12V) supplies the CPU operation voltage (Vcore). If this "ATX_12V connector" is not connected, system cannot boot.

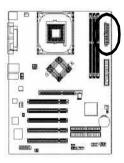


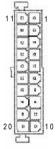


	Pin No.	Definition
	1	GND
	2	GND
	3	+12V
ſ	4	+12V

2) ATX (ATX Power)

AC power cord should only be connected to your power supply unit after ATX power cable and other related devices are firmly connected to the mainboard.

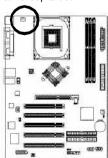




Pin No.	Definition	Pin No.	Definition
1	3.3V	11	3.3V
2	3.3V	12	-12V
3	GND	13	GND
4	VCC	14	PS_ON(softon/off)
5	GND	15	GND
6	VCC	16	GND
7	GND	17	GND
8	PowerGood	18	-5V
9	5VSB (stand by +5V)	19	VCC
10	+12V	20	VCC

3) CPU_FAN (CPU Fan Connector)

Please note, a proper installation of the CPU cooler is essential to prevent the CPU from running under abnormal condition or damaged by overheating. The CPU fan connector supports Max. current up to $600\,\mathrm{m\,A}$.

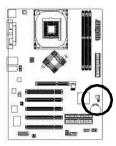




Pin No.	Definition
1	GND
2	+12V
3	Sense

4) SYS FAN (System FAN Connector)

This connector allows you to link with the cooling fan on the system case to lower the system temperature.

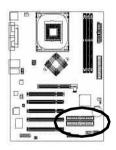


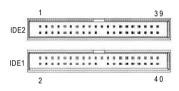


Pin No.	Definition
1	GND
2	+12V
3	Sense

5) IDE1 / IDE2 (IDE1 / IDE2 Connector)

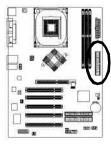
Important Notice: Please connect first hard disk to IDE1 and connect CD-ROM to IDE2. The red stripe of the ribbon cable must be the same side with the Pin1.

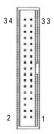




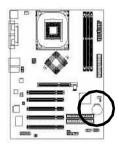
6) FDD (Floppy Connector)

Please connect the floppy drive ribbon cables to FDD. It supports 360K,720K,1.2M,1.44M and 2.88M bytes floppy disk types. The red stripe of the ribbon cable must be the same side with the Pin1.





7) BAT (BATTERY)





CAUTION

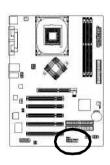
- Danger of explosion if battery is incorrectly replaced.
- Replace only with the same or equivalent type recommended by the manufacturer.
- Dispose of used batteries according to the manufacturer's instructions.

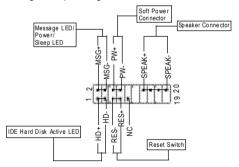
If you want to erase CMOS...

- 1. Turn OFF the computerand unplugthe power cord.
- 2. Remove the battery, wait for 30 second.
- 3. Re-install the battery.
- 4. Plug the power cord and turn ON the computer.

8) F_PANEL (2 x 10 pins Connector)

Please connect the power LED, PC speaker, reset switch and power switch etc of your chassisfront panel to the F_PANEL connector according to the pin assignment below.

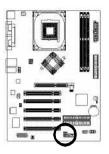




HD (IDE Hard Disk Active LED)	Pin 1:LED anode(+)
	Pin2:LEDcathode(-)
SPK(SpeakerConnector)	Pin1:VCC(+)
	Pin 2-Pin 3: NC
	Pin4: Data(-)
RES(Reset Switch)	Open:Normal Operation
	Close:ResetHardware System
PW (SoftPower Connector)	Open:NormalOperation
	Close:Power On/Off
MSG (Message LED/Power/Sleep LED)	Pin 1:LED anode(+)
	Pin2:LEDcathode(-)
NC	NC

9) PWR LED

PWR_LED is connect with the system power indicator to indicate whether the system is on/off. It will blink when the system enters suspend mode. If you use dual color LED, power LED will turn to another color.

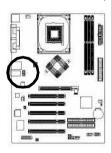




Pin No.	Definition
1	MPD+
2	MPD-
3	MPD-

10) F AUDIO (Front Audio Connector)

In order to utilize the front audio header, your chassis must have front audio connector. Also please make sure the pin assigment on the cable is the same as the pin assigment on the MB header. To find out if the chassis you are buying support front audio connector, please contact your dealer. Please note, you can have the alternative of using front audio connector or of using rear audio connector to play sound.

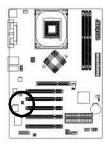




Pin No.	Definition
1	MIC
2	GND
3	MIC_BIAS
4	Power
5	FrontAudio (R)
6	RearAudio (R)
7	Reserved
8	No Pin
9	FrontAudio (L)
10	RearAudio (L)

11) SUR_CEN (Surround Center Connector)

Please contact your nearest dealer for optional SUR_CEN cable.

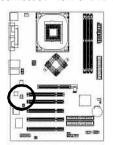




Pin No.	Definition
1	SUROUTL
2	SUROUTR
3	GND
4	No Pin
5	CENTER_OUT
6	BASS_OUT

12) CD_IN (CD In Connector)

Connect CD-ROM or DVD-ROM audio out to the connector.

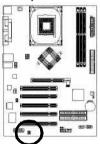




Pin No.	Definition
1	CD-L
2	GND
3	GND
4	CD-R

13) SPDIF IO (SPDIF Out Connector)

The SPDIF output is capable of providing digital audio to external speakers or compressed AC3 data to an external Dolby Digital Decoder. Use this feature only when your stereo system has digital input and output function. Use SPDIF in feature only when your device has digital output function. Be careful with the polarity of the SPDIF_IO connector. Check the pin assignment carefully while you connect the SPDIF cable, incorrect connection between the cable and connector will make the device unable to work or even damage it. For optional SPDIF cable, please contact your local dealer.

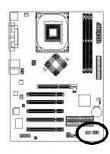




Pin No.	Definition
1	VCC
2	No Pin
3	SPDIF
4	SPDIFI
5	GND
6	GND

14) F_USB1/F_USB2 (Front USB Connector)

Be careful with the polarity of the front USB connector. Check the pin assignment carefully while you connect the front USB cable, incorrect connection between the cable and connector will make the device unable to work or even damage it. For optional front USB cable, please contact your local dealer.

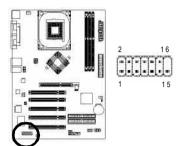




Pin No.	Definition	
1	Power	
2	Power	
3	USBDX-	
4	USB Dy-	
5	USBDX+	
6	USB Dy+	
7	GND	
8	GND	
9	No Pin	
10	NC	

15) GAME(Game Connector)

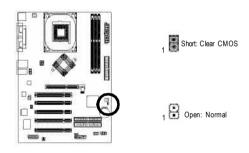
This connector supports joystick, MIDI keyboard and other relate audio devices. Check the pin assignment while you connect the game cables. Please contact your nearest dealer for optional game cables.



Pin No.	Definition	Pin No.	Definition
1	VCC	9	GPSA1
2	GRX1_R	10	GND
3	GND	11	GPY1_R
4	GPSA2	12	VCC
5	VCC	13	GPSB1
6	GPX2_R	14	MSO_R
7	GPY2_R	15	GPSB2
8	MSI_R	16	No Pin

16) CLR CMOS (Clear CMOS)

You may clear the CMOS data to its default values by this jumper. To clear CMOS, temporarily short 1-2 pin. Default doesn't include the "Shunter" to prevent from improper use this jumper.



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-	

Chapter 2 BIOS Setup

BIOS Setup is an overview of the BIOS Setup Program. The program that allows users to modify the basic system configuration. This type of information is stored in battery-backed CMOS RAM so that it retains the Setup information when the power is turned off.

ENTERING SETUP

Powering ON the computer and pressing immediately will allow you to enter Setup. If you require more advanced BIOS settings, please go to "Advanced BIOS" setting menu. To enter Advanced BIOS setting menu, press "Ctrl+F1" key on the BIOS screen.

CONTROL KEYS

<↑><↓><←><→>	Move to select item
<enter></enter>	Select Item
<esc></esc>	Main Menu - Quit and not save changes into CMOS Status Page Setup Menu
	and Option Page Setup Menu - Exit current page and return to Main Menu
<+/PgUp>	Increase the numeric value or make changes
<-/PgDn>	Decrease the numeric value or make changes
<f1></f1>	General help, only for Status Page Setup Menu and Option Page Setup Menu
<f2></f2>	Item Help
<f5></f5>	Restore the previous CMOS value from CMOS, only for Option Page Setup Menu
<f6></f6>	Load the file-safe default CMOS value from BIOS default table
<f7></f7>	Load the Optimized Defaults
<f8></f8>	Q-Flash utility
<f9></f9>	System Information
<f10></f10>	Save all the CMOS changes, only for Main Menu

Main Menu

The on-line description of the highlighted setup function is displayed at the bottom of the screen.

Status Page Setup Menu / Option Page Setup Menu

Press F1 to pop up a small help window that describes the appropriate keys to use and the possible selections for the highlighted item. To exit the Help Window press <Esc>.

The Main Menu (For example: BIOS Ver. : E3)

Once you enter Award BIOS CMOS Setup Utility, the Main Menu (as figure below) will appear on the screen. The Main Menu allows you to select from eight setup functions and two exit choices. Use arrow keys to select among the items and press <Enter> to accept or enter the sub-menu.

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▶ Standard CMOS Features	Load Fail-Safe Defaults	
Advanced BIOS Features	Load Optimized Defaults	
▶ Integrated Peripherals	Set Supervisor Password	
▶ Power Management Setup	Set User Password	
▶ PnP/PCI Configurations	Save & Exit Setup	
▶ PC Health Status	Exit Without Saving	
▶ Frequency/Voltage Control	1	
ESC: Quit	↑↓→←: Select Item	
F8: Q-Flash	F10: Save & Exit Setup	
Time, Date, Hard Disk Type		

BIOS Setup



If you can't find the setting you want, please press "Ctrl+F1" to search the advanced option hidden.

· Standard CMOS Features

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

· Advanced BIOS Features

This setup page includes all the items of Award special enhanced features.

• Integrated Peripherals

This setup page includes all onboard peripherals.

Power Management Setup

This setup page includes all the items of Green function features.

• PnP/PCI Configuration

This setup page includes all the configurations of PCI & PnP ISA resources.

PC Health Status

This setup page is the System auto detect Temperature, voltage, fan, speed.

• Frequency/Voltage Control

This setup page is control CPU clock and frequency ratio.

· Load Fail-Safe Defaults

Fail-Safe Defaults indicates the value of the system parameters which the system would be in safe configuration.

· Load Optimized Defaults

Optimized Defaults indicates the value of the system parameters which the system would be in best performance configuration.

· Set Supervisor Password

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

Set User Password

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

Save & Exit Setup

Save CMOS value settings to CMOS and exit setup.

· Exit Without Saving

Abandon all CMOS value changes and exit setup.

Standard CMOS Features

CMOS Setup Utility-Copyright (C) 1984-2004 Award Software Standard CMOS Features

Date (mm:dd:yy)	Fri, Jan 9 2004	Item Help
Time (hh:mm:ss)	22:31:24	Menu Leve1▶
		Change the day, month,
▶ IDE Primary Master	[None]	year
▶ IDE Primary Slave	[None]	
▶ IDE Secondary Master	[None]	<week></week>
▶ IDE Secondary Slave	[None]	Sun. to Sat.
Drive A	[1.44M, 3.5"]	<month></month>
Drive B	[None]	Jan. to Dec.
Floppy 3 Mode Suport	[Disabled]	
		<day></day>
Holt On	[All, But Keyboard]	1 to 31 (or maximum
		allowed in the month)
Base Memory	640K	
Extended Memory	127M	<year></year>
Total Memory	128M	1999 to 2098
↑↓→←: Move Enter: Select F5: Previous Values	+/-/PU/PD: Value F10: Save F6: Fail-Save Default	ESC: Exit F1: General Hel F7: Optimized Defaults

→ Date

The date format is <week>, <month>, <day>, <year>.

Week The week, from Sun to Sat, determined by the BIOS and is display only

➤ Month The month, Jan. Through Dec.

Day The day, from 1 to 31 (or the maximum allowed in the month)

>> Year The year, from 1999 through 2098

→ Time

The times format in <hour> <minute> <second>. The time is calculated base on the 24-hour military-time clock. For example, 1 p.m. is 13:00:00.

□ IDE Primary Master, Slave / IDE Secondary Master, Slave

The category identifies the types of hard disk from drive C to F that has been installed in the computer. There are two types: auto type, and manual type. Manual type is user-definable; Auto type which will automatically detect HDD type.

Note that the specifications of your drive must match with the drive table. The hard disk will not work properly if you enter improper information for this category.

If you select User Type, related information will be asked to enter to the following items. Enter the information directly from the keyboard and press <Enter>. Such information should be provided in the documentation form your hard disk vendor or the system manufacturer.

Cylinder
 Head
 Precomp
 Landing Zone
 Sector
 Number of cylinders
 Number of heads
 Write precomp
 Landing zone
 Number of sectors

If a hard disk has not been installed, select NONE and press <Enter>.

Drive A / Drive B

The category identifies the types of floppy disk drive A or drive B that has been installed in the computer.

None No floppy drive installed

→ 360K, 5.25"
→ 1.2M, 5.25"
5.25 inch PC-type standard drive; 360K byte capacity.
→ 1.2M, 5.25"
5.25 inch AT-type high-density drive; 1.2M byte capacity

(3.5 inch when 3 Mode is Enabled).

720K, 3.5"
1.44M, 3.5"
2.88M, 3.5"
3.5 inch double-sided drive; 1.44M byte capacity.
2.88M, 3.5"
3.5 inch double-sided drive; 2.88M byte capacity.

Floppy 3 Mode Support (for Japan Area)

Disabled Normal Floppy Drive. (Default value)
 Drive A Drive A is 3 mode Floppy Drive.
 Drive B Drive B is 3 mode Floppy Drive.
 Both Drive A & B are 3 mode Floppy Drives.

→ Halt on

The category determines whether the computer will stop if an error is detected during power up.

➤ No Errors The system boot will not stop for any error that may be detected and you

will be prompted.

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

errors. (Default value)

** All, But Diskette The system boot will not stop for a disk error; it will stop for all other errors.

All, But Disk/Key The system boot will not stop for a keyboard or disk error; it will stop for all other errors.

The category is display-only which is determined by POST (Power On Self Test) of the BIOS.

→ Base Memory

The POST of the BIOS will determine the amount of base (or conventional) memory installed in the system.

The value of the base memory is typically 512K for systems with 512K memory installed on the motherboard, or 640K for systems with 640K or more memory installed on the motherboard.

→ Extended Memory

The BIOS determines how much extended memory is present during the POST.

This is the amount of memory located above 1 MB in the CPU's memory address map.

Advanced BIOS Features

CMOS Setup Utility-Copyright (C) 1984-2004 Award Software Advanced BIOS Features

First Boot Device Second Boot Device Third Boot Device Password Check CPU Hyper-Threading *	[Floppy] [HDD-0] [CDROM] [Setup] [Enabled]	Item Help Menu Level Select Boot Device priority [Floppy] Boot from floppy
		[LS120] Boot from LS120 [HDD-0] Boot from First HDD
↑↓→←: Move Enter: Select F5: Previous Values	+/-/PU/PD: Value F10: Save F6: Fail-Save Default	[HDD-1] Boot from Second HDD ESC: Exit F1: General Help F7: Optimized Defaults



" # " System will detect automatically and show up when you install the Intel® Pentium® 4 processor with HT Technology.

First / Second / Third Boot Device

→ Floppy	Select your boot device priority by Floppy.
→ LS120	Select your boot device priority by LS120.
→ HDD-0~3	Select your boot device priority by HDD-0~3.
→ SCSI	Select your boot device priority by SCSI.
➤ CDROM	Select your boot device priority by CDROM.
→ ZIP	Select your boot device priority by ZIP.
⇒ USB-FDD	Select your boot device priority by USB-FDD.
⇒ USB-ZIP	Select your boot device priority by USB-ZIP.
▶ USB-CDROM	Select your boot device priority by USB-CDROM.
▶ USB-HDD	Select your boot device priority by USB-HDD.
▶ LAN	Select your boot device priority by LAN.
→ Disabled	Select your boot device priority by Disabled.

Password Check

➤ System The system can not boot and can not access to Setup page will be denied if the

correct password is not entered at the prompt.

➤ Setup The system will boot, but access to Setup will be denied if the correct password

is not entered at the prompt. (Default value)

☐ CPU Hyper-Threading

▶ Enabled Enables CPU Hyper Threading Feature. Please note that this feature is only working

for operating system with multi processors mode supported. (Default value)

▶ Disabled Disables CPU Hyper Threading.

Integrated Peripherals

CMOS Setup Utility-Copyright (C) 1984-2004 Award Software
Integrated Peripherals

	integrated relipherars	
OnChip IDE ChannelO	[Enabled]	Item Help
OnChip IDE Channel1	[Enabled]	Menu Level▶
AC97 Audio	[Auto]	
VIA onboard LAN *	[Enabled]	[Auto]
USB 1.1 Controller	[Enabled]	Auto-detect IDE
USB 2.0 Controller	[Enabled]	cable type
USB Keyboard Support	[Disabled]	
USB Mouse Support	[Disabled]	[ATA66/100/133]
Onboard LAN Boot ROM *	[Disabled]	Set Conductor cable
Onboard Serial Port 1	[3F8/IRQ4]	to ATA66/100/133(80
Onboard Serial Port 2	[2F8/IRQ3]	-pins)
UART Mode Select	[Normal]	
xUR2 Dup1ex Mode	Half	[ATA33]
Onboard Parallel Port	[378/IRQ7]	Set Conductor cable
Parallel Port Mode	[SPP]	to ATA33(40-pins)
Game Port Address	[201]	
Midi Port Address	[Disabled]	
Midi Port IRQ	10	
↑↓→←: Move Enter: Select F5: Previous Values	+/-/PU/PD: Value F10: Save F6: Fail-Save Default	ESC: Exit F1: General Help F7: Optimized Defaults
10. Tievious values	10. Tall bare belault	11. Optimized Delaults

→ OnChip IDE Channel0

When enabled, allows you to use the onboard primary PCI IDE. If a hard disk controller card is used, set at Disabled.

➤ Enabled Enable onboard 1st channel IDE port. (Default value)

➤ Disabled Disable onboard 1st channel IDE port.

OnChip IDE Channel1

When enabled, allows you to use the onboard secondary PCI IDE. If a hard disk controller card is used, set at Disabled.

▶ Enabled Enable onboard 2nd channel IDE port. (Default value)

→ Disabled Disable onboard 2nd channel IDE port.

→ AC97 Audio

➤ Auto Enable onboard AC'97 audio function. (Default value)

▶ Disabled Disable this function.

→ VIA onboard LAN *

➤ Enable Enable onboard LAN function.(Default value)

▶ Disable Disable onboard LAN function.

□ USB 1.1 Controller

Disable this option if you are not using the onboard USB feature.

➤ Enabled Enable USB1.1 Controller. (Default value)

▶ Disabled Disable USB1.1 Controller.

Disable this option if you are not using the onboard USB 2.0 feature.

➤ Enabled Enable USB 2.0 Controller. (Default value)

▶ Disabled Disable USB 2.0 Controller.

[&]quot;*" For 8VT800-RZ only.

USB Keyboard Support

➤ Enabled Enable USB keyboard support.

▶ Disabled Disable USB keyboard support. (Default value)

USB Mouse Support

➤ Enabled Enable USB mouse support.

▶ Disabled Disable USB mouse support. (Default value)

Onboard LAN Boot ROM *

This function decide whether to invoke the boot ROM of the onboard LAN chip.

→ Disabled Disable this function. (Default Value)

➤ Enabled Enable this function.

Onboard Serial Port 1

→ Auto BIOS will automatically setup the port 1 address.

▶ 3F8/IRQ4 Enable onboard Serial port 1 and address is 3F8. (Default value)

2F8/IRQ3 Enable onboard Serial port 1 and address is 2F8.
 3E8/IRQ4 Enable onboard Serial port 1 and address is 3E8.
 2E8/IRQ3 Enable onboard Serial port 1 and address is 2E8.

▶ Disabled Disable onboard Serial port 1.

Onboard Serial Port 2

Auto BIOS will automatically setup the port 2 address.
 3F8/IRQ4 Enable onboard Serial port 2 and address is 3F8.

▶ 2F8/IRQ3 Enable onboard Serial port 2 and address is 2F8. (Default value)

→ 3E8/IRQ4 Enable onboard Serial port 2 and address is 3E8.
 → 2E8/IRQ3 Enable onboard Serial port 2 and address is 2E8.

▶ Disabled Disable onboard Serial port 2.

→ UART Mode Select

This item allows you to determine which Infra Red(IR) function of Onboard I/O chip.

▶ Normal Set onboard I/O chip UART to Normal Mode. (Default Value)

▶ IrDA
 Set onboard I/O chip UART to IrDA Mode.
 ▶ ASKIR
 Set onboard I/O chip UART to ASKIR Mode.

□ UR2 Duplex Mode

This feature allows you to seclect IR mode.

This function will available when "UART Mode Select" doesn't set at "Normal" nor "SCR".

→ Half IR Function Duplex Half. (Default Value)

➤ Full IR Function Duplex Full.

Onboard Parallel port

→ 378/IRQ7 Enable onboard LPT port and address is 378/IRQ7. (Default value)

▶ 278/IRQ5 Enable onboard LPT port and address is 278/IRQ5.

→ Disabled Disable onboard LPT port.

▶ 3BC/IRQ7 Enable onboard LPT port and address is 3BC/IRQ7.

Parallel Port Mode

▶ SPP Using Parallel port as Standard Parallel Port. (Default value)

- 27 -

EPP Using Parallel port as Enhanced Parallel Port.
 ECP Using Parallel port as Extended Capabilities Port.
 ECP+EPP Using Parallel port as ECP & EPP mode.

BIOS Setup

[&]quot;*" For 8VT800-RZ only.

→ Game Port Address

→ 201 Set Game Port Address to 201. (Default Value)

➤ 209 Set Game Port Address to 209.

▶ Disabled Disable this function.

→ 300 Set Midi Port Address to 300.

→ 330 Set Midi Port Address to 330.

▶ Disabled Disable this function.(Default Value)

∽Midi Port IRQ

▶ 5 Set Midi Port IRQ to 5.

→ 10 Set Midi Port IRQ to 10. (Default Value)

Power Management Setup

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Power Management Setup

		rower management Setup	
	ACPI Suspend Type	[S1 (P0S)]	Item Help
X	USB Device Wake-Up From S3	Disabled	Menu Level▶
	Soft-Off by PWR-BTTN	[Instant-Off]	[S1]
	AC Back Function	[Soft-Off]	Set suspend type to
	Keyboard Power On	[Disabled]	Power On Suspend under
	Mouse Power On	[Disabled]	ACPI OS
	PME Event Wake Up	[Enabled]	
	Resume by Alarm	[Disabled]	[S3]
X	Date (of Month) Alarm	Everyday	Set suspend type to
X	Time (hh:mm:ss) Alarm	0:0:0	Suspend to RAM under ACPI OS
↑↓	→←: Move Enter: Select F5: Previous Values		C: Exit F1: General Help : Optimized Defaults

ACPI Suspend Type

→ S1(POS) Set ACPI suspend type to S1. (Default value)

S3(STR) Set ACPI suspend type to S3.

USB Device Wakeup From S3(When ACPI Suspend Type is set [S3/STR])

USB device wakeup From S3 can be set when ACPI standby state set to S3/STR.

▶ Enabled USB Device can wakeup system from S3.

▶ Disabled USB Device can't wakeup system from S3. (Default value)

☐ Soft-off by PWR-BTTN

▶ Instant-off
Press power button then Power off instantly. (Default value)

▶ Delay 4 Sec. Press power button 4 sec to Power off. Enter suspend if button is pressed

less than 4 sec.

AC Back Function

▶ Soft-Off
 ▶ Memory
 Always in Off state when AC back. (Default value)
 ▶ Memory
 System power on depends on the status before AC lost.

➤ Full-On Always power on the system when AC back.

Keyboard Power On

This feature allows you to set the method for powering-on the system.

The option "Password" allows you to set up to 8 alphanumeric characters to power-on the system.

The option "Keyboard 98" allows you to use the standard keyboard 98 to power on the system.

Password Enter from 1 to 8 characters to set the keyboard power on password.

→ Disabled Disabled this function. (Default value)

➤ Keyboard 98
If your keyboard have "POWER Key" button, you can press the key to

power on your system.

→ Mouse Power On

→ Disabled Can't Power on system by Mouse Event. (Default value)

➤ Enabled Can Power on system by Mouse Event.

→ PME Event Wake Up

When set at Enabled, any PCI-PM event awakes the system from a PCI-PM controlled state.

This feature requires an ATX power supply that provides at least 1A on the +5VSB lead.

▶ Disabled Disable this function.

➤ Enabled Enable PME as wake up event. (Default value)

□ Resume by Alarm

You can set "Resume by Alarm" item to enabled and key in Data/time to power on system.

▶ Disabled Disable this function. (Default Value)

➤ Enabled Enable alarm function to POWER ON system.

If RTC Alarm Lead To Power On is Enabled.

Date (of Month) Alarm : Everyday, 1-31 Time (hh: mm: ss) Alarm : (0-23) : (0-59) : (0-59)

PnP/PCI Configurations

CMOS Setup Utility-Copyright (C) 1984-2004 Award Software $$\operatorname{PnP/PCI}$$ Configurations

PCI 1/5 IRQ Assignment PCI 2 IRQ Assignment PCI 3 IRQ Assignment PCI 4 IRQ Assignment	[Auto] [Auto] [Auto] [Auto]	Item Help Menu Level Device(s) using this INT: Display Cntrlr -Bus 1 Dev 0 Func 0
↑↓→←: Move Enter: Select	+/-/PU/PD: Value F10: Save	ESC: Exit F1: General Help
F5: Previous Values	F6: Fail-Save Default	F7: Optimized Defaults

PCI 1/5 IRQ Assignment

→ Auto Auto assign IRQ to PCI 1/5. (Default value)
 → 3,4,5,7,9,10,11,12,14,15 to PCI 1/5.
 Set IRQ 3,4,5,7,9,10,11,12,14,15 to PCI 1/5.

PCI 2 IRQ Assignment

→ Auto Auto assign IRQ to PCI 2. (Default value)
 → 3,4,5,7,9,10,11,12,14,15 to PCI 2.

→ PCI 3 IRQ Assignment

→ Auto
 → 3,4,5,7,9,10,11,12,14,15
 Auto assign IRQ to PCI 3. (Default value)
 → 3,4,5,7,9,10,11,12,14,15 to PCI 3.

→ PCI 4 IRQ Assignment

▶ Auto Auto assign IRQ to PCI 4. (Default value)
 ▶ 3,4,5,7,9,10,11,12,14,15 to PCI 4.

PC Health Status

CMOS Setup Utility-Copyright (C) 1984-2004 Award Software PC Health Status

OK	Item Help
OK	Menu Level▶
OK	
OK	Don't reset case
26° C	open status
Temperature 26° C FAN Speed 4440 RPM	
O RPM	Clear case open
[Disabled]	status at next boot
Fail Warning [Disabled]	
+/-/PU/PD: Value F10: Save F6: Fail-Save Default	ESC: Exit F1: General Help F7: Optimized Defaults
	OK OK OK OK 26° C 4440 RPM O RPM [Disabled] [Disabled]

>> Detect system's voltage status automatically.

□ Current CPU Temperature

▶ Detect CPU temperature automatically.

→ Detect CPU / SYSTEM Fan speed status automatically.

➤ Disabled Fan warning function disable. (Default value)

➤ Enabled Fan warning function enable.

Frequency/Voltage Control

CMOS Setup Utility-Copyright (C) 1984-2004 Award Software Frequency/Voltage Control

CPU Clock Ratio	[15X]	Item Help	
Auto Detect PCI/DIMM C1k	[Enabled]	Menu Leve1▶	
Spread Spectrum	[Enabled]		
CPU Host Clock Control	[Disabled]		
CPU Clock 100MHz			
DRAM Clock	[By SPD]		
AGP OverVoltage Control	[Auto]		
DIMM OverVoltage Control	[Auto]		
↑↓→←: Move Enter: Select			
F5: Previous Values	F6: Fail-Save Default	F7: Optimized Defaults	

* This item will be available when "CPU Host Clock Control" is set to Enabled.

CPU Clock Ratio

This option will not be shown or not be available if you are using a CPU with the locked ratio. This setup option will automatically assign by CPU detection.

For C-Stepping P4: 8X,10X~24X default: 15X For Northwood CPU: 12X~24X default: 16X

The option will display "Locked" and read only if the CPU ratio is not changeable.

→ Auto Detect PCI/DIMM CIk

▶ Disabled Disable auto detect PCI/DIMM Clk.

➤ Enabled Enable auto detect PCI/DIMM Clk. (Default value)

□ Spread Spectrum

▶ Disabled Disable spread spectrum.

➤ Enabled Enable spread spectrum. (Default value)

CPU Host Clock Control

Note: Please note that if your system is overclocked and cannot restart, please wait 20secs. for automatic system restart or clear the CMOS setup data and perform a safe restart.

→ Disabled Disable CPU Host Clock Control. (Default value)

➤ Enabled Enable CPU Host Clock Control.

→ CPU Clock

Incorrect using it may cause your system broken. For power End-User use only!

N 100~166
 For 100MHz CPU:Set CPU Clock to 100MHz~166MHz.
 N 133~199
 For 133MHz CPU:Set CPU Clock to 133MHz~199MHz.
 N 200~250
 For 200MHz CPU:Set CPU Clock to 200MHz~250MHz.

→ DRAM Clock (MHz)

Please set DRAM Clock according to your requirement.

Incorrect using it may cause your system broken. For power End-User use only!

100-DDR200 If you use DDR200 DRAM module, please set "100-DDR200".

133-DDR266 If you use DDR266 DRAM module, please set "133-DDR266".

16 you use DDR333 DRAM module, please set "166-DDR333".

200-DDR400 If you use DDR400 DRAM module, please set "200-DDR400".

By SPD Set Memory frequency by DRAM SPD data. (Default value)

AGP OverVoltage Control

★*Increase AGP voltage may get stable for Over_Clock. But it may damage to AGP Card when enable this feature.

➤ Auto Supply voltage as AGP Card required. (Default value)

→ +0.1V Set AGP OverVoltage Control to +0.1V.
 → +0.2V Set AGP OverVoltage Control to +0.2V.
 → +0.3V Set AGP OverVoltage Control to +0.3V.

→ DIMM OverVoltage Control

*Increase DRAM voltage may get stable for Over_Clock. But it may damage to DRAM module when enable this feature.

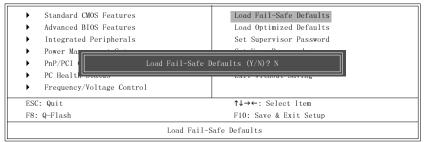
➤ Auto Supply voltage as DRAM module reguired. (Default value)

→ +0.1V
 → +0.2V
 → +0.2V
 → +0.3V
 Set DIMM OverVoltage Control to +0.2V.
 → +0.3V
 Set DIMM OverVoltage Control to +0.3V.

- 33 - BIOS Setup

Load Fail-Safe Defaults

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

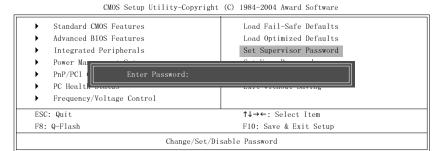
Load Optimized Defaults

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

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>. You will be asked to confirm the password. Type the password again and press <Enter>. You may also press <Esc> to abort the selection and not enter a password.

To disable 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.

The BIOS Setup program allows you to specify two separate passwords:

SUPERVISOR PASSWORD and a USER PASSWORD. When disabled, anyone may access all BIOS Setup program function. When enabled, the Supervisor password is required for entering the BIOS Setup program and having full configuration fields, the User password is required to access only basic items

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

Save & Exit Setup

Power Man PnP/PCI (PC Health

Frequency/Voltage Control

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Standard CMOS Features
Advanced BIOS Features
Integrated Peripherals

Set Supervisor Password

Power Manual Color of the Company of the Company of the Color of the Col

ESC: Quit

F8: Q-Flash

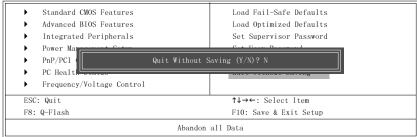
F10: Save & Exit Setup

Save Data to CMOS

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

Exit Without Saving

CMOS Setup Utility-Copyright (C) 1984-2004 Award Software



Type "Y" will quit the Setup Utility without saving to RTC CMOS.

Type "N" will return to Setup Utility.

Chapter 3 Install Drivers

Install Drivers



Pictures below are shown in Windows XP

Insert the driver CD-title that came with your motherboard into your CD-ROM drive, the driver CD-title will auto start and show the installation guide. If not, please double click the CD-ROM device icon in "My computer", and execute the setup.exe.

INSTALL CHIPSET DRIVER

This page shows the drivers that need to be installed for the system. Click each item to install the driver manually or switch to the to install the drivers automatically.



The "Xpress Install" uses the "Click and Go" technology to install the drivers automatically. Just select the drivers you want then click the "GO" button. The will execute the installation for you by itself.





Driver install finished!! you have to reboot system!!

Item Description

- VIA 4IN1 Driver For INF, AGP, IDE and DMA Driver
- USB Path for WinXPThis patch driver can help you to resolve the USB device wake up S3 hang up issue in XP
- VIA LAN Driver *
 VIA 10/100 LAN driver
- VIA AC97 Audio Driver
 Audio driver for AC97 codec chipset
- VIA USB 2.0 Controller
 USB 2.0 Driver information for XP



For USB2.0 driver support under Windows XP operating system, please use Windows Service Pack. After install Windows Service Pack, it will show a question mark "?" in "Universal Serial Bus controller" under "Device Manager". Please remove the question mark and restart the system (System will auto-detect the right USB2.0 driver).

"*" For 8VT800-RZ only.

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