7VT600-RZ / 7VT600-RZ-C

AMD Athlon[™]/ Athlon[™] XP / Duron[™] Socket A Processor Motherboard

User's Manual

Rev. 1003 12ME-7VT600RZ-1003

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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Due to rapid change in technology, some of the specifications might be out of date before publication of this booklet.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 authormake a commitment to update the information contained herein.

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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.
- 3. 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 connectoron 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 maybe 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 mayneed 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 A processor
	AMD Athlon TM Athlon TM XP/ Duron TM (K7)
	128K L1 & 512K/256K/64K L2 cache on die
	200/266/333/400MHz FSB
	Supports 1.4GHz and faster
Chipset	North Bridge: VIA KT600
	Sourth Bridge: VIA VT8235
Memory	• 3 184-pin DDR sockets
	 Supports DDR DRAM PC2100/PC2700/PC3200
	 Supports up to 3.0GB DDR (Max)
	Supports only 2.5V DDR DIMM
Slots	 1 AGP slot supports 8X/4X mode(1.5V)
	 5 PCI slots supports 33M Hz & PCI 2.2 compliant
On-Board IDE	2 IDE controllers provides IDE HDD/CD-ROM (IDE1, IDE2)
	with PIO, Bus Master (Ultra DMA33/ATA66/ATA100/ATA133)
	operation mode
On-Board Floppy	 Floppy port supports 2 FDD with 360K, 720K, 1.2M, 1.44M and 2.88M bytes
On-Board Peripherals	1 Parallel port supports Normal/EPP/ECP mode
	 2 Serial port (COMA & COMB)
	• 6 x USB 2.0/1.1 (4 by cable)
	 PS/2 Keyboard interface and PS/2 Mouse interface
On-Board LAN *	• VIA VT6103L
	 1 RJ45 port
On-Board Sound	Realtek ALC655 CODEC
	 Supports Jack Sensing function
	Line Out / 2 front speaker
	 Line In / 2 rear speaker(by s/w switch)
	 Mic In / center & subwoofer(by s/w switch)
	SPDIF Out /SPDIF In
	CD In / AUX In / Game Port
On-Board USB 2.0	Built in VIA VT8235 Chipset
BIOS	Licensed Award BIOS
	Supports Q-Flash
I/O Control	• IT8705
Hardware Monitor	CPU/System Fan Revolution detect
	CPU/System temperature detect
	System voltage detect
	CPU/System fan fail warning
	Thermal shutdown function

"* " Support 7VT600-RZ only.

English

Additional Features	 PS/2 Keyboard power on by password,
	 PS/2 Mouse power on by double click
	External Modem wake up
	 STR(Suspend-To-RAM)
	AC Recovery
	 Poly fuse for keyboard over-current protection
	 USB KB/M ouse wake up from S3
	Supports @BIOS
	Supports EasyTune 4
Overclocking	 Over Voltage (CPU/AGP/DDR/PCI) by BIOS
	Over Clock (CPU/AGP/DDR/PCI) by BIOS
Form Factor	• 30.5cm x 20.0cm ATX size form factor, 4 layers PCB.



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, chipse tand 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.

7VT600-RZ Series Motherboard Layout



" * " Support 7VT600-RZ only.

English

Block Diagram



" * " Support 7VT600-RZ only.

Hardware Installation Process

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

Step 1- Set System Jumper (JP1)

Step 2- Install the Central Processing Unit (CPU)

Step 3- Install memory modules

Step 4- Install expansion cards

Step 5- Install I/O Peripherals cables



Step 1: Set System Jumper (JP1)

The system bus frequency can be switched at 100/133/166/200M Hz by adjusting system jumper (JP1). (The internal frequency depend on CPU.)



Close: 100MHz (Defualt)

JP1	CPU CLO	СК
	100MHz	Auto
1-2	Close	Open

Auto : Support FSB 266/333/400 MHz CPU

The "JP1" must set to "Auto" when you are using FSB 266/333/400MHz CPU.

Step 2: 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.
- 2. 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 therm al grease between the processor and cooling fan.
- 5. 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.

Step 2-1: 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 2-2: 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 the install completely.

Step 3: Install Memory Modules



Before installing the memory modules, adhere to the following warning:

1. When DIMM LED is ON, do not install / remove DIMM from socket.

2. 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.



Support Unbuffered DDR DIMM Sizes type:

64 Mbit (2Mx8x4 banks)	64 Mbit(1Mx16x4 banks)	128 Mbit(4Mx8x4 banks)		
128Mbit(2Mx16x4banks)	256 Mbit(8Mx8x4 banks)	256Mbit(4Mx16x4banks)		
512Mbit(16Mx8x4banks)	512Mbit(8Mx16x4 banks)			
Total System Memory (Max3GB)				



- 1. 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 4: Install Expansion Cards

- 1. Read the related expansion card's instruction document before install the expansion card into the computer.
- 2. 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.



AGP Card

Step 5: Install I/O Peripherals Cables

Step 5-1: I/O Back Panel Introduction





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Line In jack

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

S 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 5-2: Connectors Introduction



1) CPU_FAN	10) SUR_CEN
2) SYS_FAN	11) CD_IN
3) ATX (ATX Power)	12) AUX_IN
4) IDE1 / IDE2	13) SPDIF_IO
5) FDD	14) F_USB1 / F_USB2
6) PWR_LED	15) GAME
7) F_PANEL	16) CI (Case Open)
8) BATTERY	17) CLR_CMOS
9) F_AUDIO	

1) 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 mA.



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

2) 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

3) ATX (ATX Power Connector)

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.

52	Pin No.	Definition	Pin No.	Definition
10 🖅 = 20	1	3.3V	11	3.3V
	2	3.3V	12	-12V
	3	GND	13	GND
XTAL.	4	VCC	14	PS_ON(soft on/off)
	5	GND	15	GND
·••	6	VCC	16	GND
<u>-</u>	7	GND	17	GND
	8	Power Good	18	-5V
	9	5V SB (stand by +5V)	19	VCC
Sumal	10	+12V	20	VCC

English

4) IDE1/ IDE2(IDE1/IDE2 Connector)

Please connect first harddisk to IDE1 and connect CDROM to IDE2. The red stripe of the ribbon cable must be the same side with the Pin1.





5) FDD (Floppy Connector)

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



6) 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.



1 ভিন্নত

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

7) F_PANEL (2 x 10 pins Connector)

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





HD (IDE Hard Disk Active LED)	Pin 1:LED anode(+)
	Pin 2:LED cathode(-)
SPK (SpeakerConnector)	Pin1:VCC(+)
	Pin2-Pin 3:NC
	Pin4:Data(-)
RST (ResetSwitch)	Open:NormalOperation
	Close:ResetHardwareSystem
PW(SoftPower Connector)	Open:NormalOperation
	Close:Power On/Off
MPD(MessageLED/Power/	Pin 1:LED anode(+)
SleepLED)	Pin 2: LED cathode(-)
NC	NC

8) BATTERY (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 computer and unplug the 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.

9) F_AUDIO (Front Audio Connector)

If you want to use Front Audio connector, you must remove 5-6, 9-10 Jumper. 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.



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

10) 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

11) 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

12) AUX_IN (AUX In Connector)

Connect other device (such as PCI TV Tunner audio out)to the connector.



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

13) SPDIF_IO (SPDIF In/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 F_USB connector. Check the pin assignment carefully while you connect the F_USB cable, incorrect connection between the cable and connector will make the device unable to work or even damage it. For optional F_USB cable, please contact your local dealer.



Pin No.	Definition
1	Power
2	Power
3	USB0DX-/USB2DX-
4	USB1 Dy-/USB3 Dy-
5	USB0DX+/USB2DX+
6	USB1Dy+/USB3Dy+
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.



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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) CI (Chassis Intrusion, Case Open)

This 2-pin connector allows your system to enable or disable the "case open" item in BIOS if the system case begin remove.



OO 1

Pin No.	Definition
1	Signal
2	GND

17) CLR_CMOS (Clear CMOS)

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



1 Shot: Clear CMOS

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 RE 15	
<↑><↓><←><→>	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 CM OS 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

CONTROL KEYS

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. : F4c)

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.

►	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		
ESC: Quit ↑↓→←: Select Item			
F8:	Q-Flash	F10: Save & Exit Setup	
Time, Date, Hard Disk Type			

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



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.
- **PowerManagement 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/VoltageControl

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

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General Help

@ Date

The date form at is <week>, <month>, <day>, <year>.

- Here 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 militarytime clock. For example, 1 p.m. is 13:00:00.

Contraction of the second and the second ary 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.

- ➤ Capacity: The hard disk size. The unit is Mega Bytes.
- ► Access Mode: The options are: Auto / Large / LBA / Normal.
- ➤Cylinder: The cylinder number of hard disk.
- ➡ Head The read / Write head number of hard disk.
- ▶ Precomp The cyliner number at which the disk driver changes the write current.
- ►Landing Zone The cylinder number that the disk driver heads(read/write) are seated when the disk drive is parked.
- SECTORS The sector number of each track define on the hard disk.
- If a hard disk has not been installed select NONE and press <Enter>.

Trive 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 ". 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 ". 3.5 inch double-sided drive; 720K 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	Enabled 3 mode function of Drive A.
►Drive B	Enabled 3 mode function of Drive B.
▶ Both	Drive A & B are 3 mode Floppy Drives.

@ Halt on

The category dete	rmines 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	Whenever the BIOS detects a non-fatal error the system will be stopped.
►All, But Keyboar	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.

Memory

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

BaseMemory

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 512 K for systems with 512 K memory installed on the motherboard, or 640 K for systems with 640 K or more memory installed on the motherboard.

ExtendedMemory

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 memory address map.

Advanced BIOS Features

First Boot Device Second Boot Device Third Boot Device Password Check	[Floppy] [HDD-0] [CDROM] [Setup]	Item Help Menu Level▶ Select Boot Device priority [Floppy] Boot from floppy [LS120] Boot from LS120 [HDD-0]
↑↓→←: Move Enter: Select F5: Previous Values		Boot from First HDD [HDD-1] Boot from Second HDD C: Exit F1: General Help : Optimized Defaults

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

Pirst / Second / Third Boot device

● This feature allows you to select the boot device priority.

➡ 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.
▶ LAN	Select your boot device priority by LAN.
► USB-CDROM	Select your boot device priority by USB-CDROM.
₩USB-ZIP	Select your boot device priority by USB-ZIP.
►USB-FDD	Select your boot device priority by USB-FDD.
► USB-HDD	Select your boot device priority by USB-HDD.
₩ZIP	Select your boot device priority by ZIP.
➡ Disabled	Disabled this function.

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 prom pt. (Default value)

Integrated Peripherals

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Integrated Peripherals

	Integrated Peripherals	
OnChip IDE Channel0 OnChip IDE Channel1 AC97 Audio VIA Onboard LAN * USB 1.1 Controller USB & Controller USB Mouse Support USB Mouse Support VIA LAN Boot ROM * Onboard Serial Port 1 Onboard Parallel Port UART Mode Select Parallel Port Mode Game Port Address Midi Port IRQ	[Enabled] [Enabled] [Auto] [Enabled] [Enabled] [Disabled] [Disabled] [Disabled] [3F8/IRQ4] [2F8/IRQ3] [378/IRQ7] [Norma1] [SPP] [201] [330] 10	Item Help Menu Level ▶
↑↓→←: Move Enter: Select F5: Previous Values		Exit F1: General Help otimized Defaults

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

Enabled BIOS will automatically detect onboard AC97 Audio. (Default value)
 Disabled AC97 Audio.

VIA Onboard LAN*

- Enabled Enable VIA Onboard LAN function. (Default value)
- Disabled Disable this function.

USB 1.1 Controller

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

- ➡ Enabled Enabled USB Controller. (Default value)
- Disabled Disabled USB Controller.

USB 2.0 Controller

Solution if you are not using the onboard USB 2.0 feature.

- ► Enabled Enabled USB 2.0 Controller. (Default value)
- Disabled Disabled USB 2.0 Controller.

" * " For 7VT600-RZ-C only.

USB Keyboard Support

● When a USB keyboard is installed, please set at Enabled.

- Enabled Enabled USB Keyboard Support.
- Disabled Disabled USB Keyboard Support. (Default value)

Contract Support

- ► Enabled Enabled USB Mouse Support.
- Disabled Disabled USB Mouse Support. (Default value)

VIA 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, Using IRQ4. (Default value)
▶2F8/IRQ3	Enable onboard Serial port 1 and address is 2F8, Using IRQ3.
➡ 3E8/IRQ4	Enable onboard Serial port 1 and address is 3E8, Using IRQ4.
▶2E8/IRQ3	Enable onboard Serial port 1 and address is 2E8, Using IRQ3.
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, Using IRQ4.
▶2F8/IRQ3	Enable onboard Serial port 2 and address is 2F8,Using IRQ3. (Default Value)
▶3E8/IRQ4	Enable onboard Serial port 2 and address is 3E8,Using IRQ4.
▶2E8/IRQ3	Enable onboard Serial port 2 and address is 2E8, Using IRQ3.

Disabled Disable onboard Serial port 2.

OnBoard Parallel port

● This feature allows you to select from a given set of parameters if the parallel port uses the onboard I/O controller.

- > 378/IRQ7Enable onboard LPT port and address is 378, Using IRQ7.(Default Value)> 278/IRQ5Enable onboard LPT port and address is 278, Using IRQ5.> 3BC/IRQ7Enable onboard LPT port and address is 3BC, Using IRQ7.
- Disabled Disable onboard parallel port.

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.
- SCR Set onboard I/O chip as Smart Card interface.

"* " For 7VT600-RZ-C only.

Parallel Port Mode

● This feature allows you to connect with an advanced print via the port mode it supports.

- SPP Using Parallel port as Standard Parallel Port using IRQ7. (Default Value)
- ▶EPP Using Parallel port as Enhanced Parallel Port IRQ5.
- ►ECP Using Parallel port as Extended Capabilities Port using IRQ7.
- ► ECP+EPP Using Parallel port as ECP & EPP mode.

Game Port Address

Disabled Disabled this function.
 Set Game PortAddress to 201. (Default Value)
 Set Game Port Address to 209.

Midi Port Address

- Disabled Disabled this function. (Default Value)
 ≫ 300 Set Midi Port Address to 300.
- ⇒ 330 Set Midi Port Address to 330.

🕗 Midi Port IRQ

▶5 Set 5 for Midi Port IRQ.
▶10 Set 10 for Midi Port IRQ.(Default value)

Power Management Setup

CMOS Setup Utility-Copyright (C) 1984-2003 Award Software Power Management Setup

	ACPI Suspend Type	[S1 (POS)]	Item Help
x x x	Power LED in S1 state Soft-Off by PWRBTN AC Back Function Keyboard Power On Mouse Power On PME Event Wake Up ModemRingOn/WakeOnLAN Resume by Alarm	Disabled [Blinking] [Instant-off] [Soft-Off] [Disabled] [Enabled] [Enabled] [Disabled] Everyday 0 : 0 : 0	Menu Level [S1] Set suspend type to Power On Suspend under ACPI OS [S3] Set suspend type to Suspend to RAM under ACPI OS
<u>↑</u>	l→←: Move Enter: Select F5: Previous Values		ESC: Exit F1: General Help F7: Optimized Defaults

ACPI Suspend Type

Suspend). (Default value)	
Suspend). (Delaut value)	

S3(STR) Set suspend type to Suspend To RAM under ACPLOS (Suspend To RAM).

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)

Power LED in S1 state

➡Blinking	In standby mode(S1), power LED will blink. (Default value)
Dual/Off	In standby m ode (S1):
	a. If use single color LED, power LED will turn off.

b. If use dual color LED, power LED will turn to another color.

Soft-off by PWRBTN

►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

▶Memory	System power on depends on the status before AC lost.
Soft-Off	Always in Off state when AC back. (Default value)
▶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 "Keyboar	d 98" allows	you to	use the standard	keyboard 98 t	o 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 Disabled PME Event Wake up function.
- ► Enabled Enabled PME Event Wake up function. (Default Value)

ModemRingOn/WakeOnLAN (When AC Back Function set to [Soft-Off])

You can enable wake on LAN feature by the "ModemRingOn/WakeOnLAN" or "PME Event Wake up" when the M/B has "WOL" onboard connector. Only enabled the feature by "PME Event Wake up". An incoming call via modem awakes the system from its soft-off mode. When set at Enabled, an input signal comes from the other client.

Server on the LAN awaks the system from a soft off state if connected over LAN.

Disabled Disabled Modem Ring On / Wake On LAN function.

► Enabled Enabled Modem Ring On / Wake On LAN function. (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

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PnP/PCI Configurations

PCI1/PC15 IRQ Assignment PCI2 IRQ Assignment PCI3 IRQ Assignment	[Auto] [Auto] [Auto]	Item Help Menu Leve∣►
PCI4 IRQ Assignment	[Auto]	
↑↓→←: Move Enter: Select F5: Previous Values	+/-/PU/PD: Value F10: Save F6: Fail-Save Default	ESC: Exit F1: General Help F7: Optimized Defaults

PCI1/PCI5 IRQ Assignment

▶ Auto	Auto assign IRQ to PCI 1/ PCI 5. (Default value)
▶ 3,4,5,7,9.,10,11,12,14,15	Set 3,4,5,7,9,10,11,12,14,15 to PCI1/ PCI5.

PCI2 IRQ Assignment

▶ Auto
 ▶ 3,4,5,7,9,.10,11,12,14,15
 ▶ 3,4,5,7,9,.10,11,12,14,15
 b PCI2.

PCI3 IRQ Assignment

 Auto
 Auto assign IRQ to PCI 3. (Default value)

 >>3,4,5,7,9.,10,11,12,14,15
 Set 3,4,5,7,9,10,11,12,14,15 to PCI3.

PCI4 IRQ Assignment

▶ Auto	Auto assign IRQ to PCI 4. (Default value
▶3,4,5,7,9.,10,11,12,14,15	Set 3,4,5,7,9,10,11,12,14,15 to PCI4.

PCI Health Status

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value)

PC	Health	Status	

Reset Case Open Status	[Disabled]	Item Help
Case Opened	No	
Vcore	1.810V	Menu Level 🕨
DDR Vtt	1.248V	[Disabled]
+3. 3V	3.280V	Don't reset case
+5V	4.919V	open status
+12V	11.968V	
5VSB	5.053V	[Enabled]
Current System Temperature	27°C	Clear case open
Current CPU Temperature	37°C	status at next boot
Current CPU FAN Speed	4687 RPM	
Current SYSTEM FAN Speed	0 RPM	
CPU FAN Fail Warning	[Disabled]	
SYSTEM FAN Fail Warning	[Disabled]	
	+/-/PU/PD: Value F10: Save ESC: F6: Fail-Save Default F7: 0	Exit F1: General Help ptimized Defaults

Reset CaseOpen Status

Case Opened

If the case is closed, "Case Opened" will show "No". If the case have been opened, "Case Opened" will show "Yes". If you want to reset "Case Opened" value, set "Reset Case Open Status" to "Enabled" and save CMOS, your computer will restart.

Current Voltage (V) Vcore / DDR Vtt / +3.3V/ +5V / +12V / 5VSB

Detect system's voltage status automatically.

Current System Temperature (°C)

Detect System Temp. automatically.

Current CPU Temperature (°C)

Detect CPU Temp. automatically.

Current CPU FAN / SYSTEM FAN Speed (RPM)

Detect Fan speed status automatically.

Fan Fail Warning (CPU / SYSTEM)

Disabled	Don't monitor current fan speed. (Default value)
➡ Enabled	Alarm when stops.

Frequency/Voltage Control

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Frequency/Voltage Control

Spread Spectrum Modulated	[Enabl		Item Help
CPU Host Clock Control *CPU Host Frequency(MHz) *PCI/AGP Frequency(MHz)	[Di sab 133 33/66	lej	Menu Level 🕨
DRAM Clock(MHz) CPU OverVoltage Control AGP OverVoltage Control	[Auto] [Auto] [Auto]		
DIMM OverVoltage Control	[Auto]		
	+/-/PU/PD: Value F10: Save F6: Fail-Save Default		

*Those items will be available when "CPU Host Clock Control" is set to Enabled.

Spread Spectrum Modulated

Disabled	Disable clock spread spectrum.
➡ Enabled	Enable clock spread spectrum.(Default value)

CPU Host Clock Control

Note: If system hangs up before enter CMOS setup utility, wait for 20 sec for times out reboot. When time out occur, system will reset and run at CPU default Host clock at next boot.

- Disable Disable CPU Host Clock Control. (Default value)
- ➡Enable Enable CPU Host Clock Control.

© CPU Host Frequency (MHz) (By switch SW1)

- ▶ 100 Set CPU Host Clock to 100MHz~132MHz.
- ▶ 133 Set CPU Host Clock to 133MHz~165MHz.
- ▶ 166 Set CPU Host Clock to 166MHz~200MHz.
- Description Set CPU Host Clock to 200MHz~254MHz.

PCI/AGP Frequency (MHz)

➡ The values depend on CPU Host Frequency(Mhz).

DRAM Clock (MHz)

➡Please set DRAM Clock according to your requirement. (Default value: Auto) If you use DDR266 DRAM module, please set "DRAM Clock(MHz)" to "133-DDR266". If you use DDR333 DRAM module, please set "DRAM Clock(MHz)" to "166-DDR333". If you use DDR400 DRAM module, please set "DRAM Clock(MHz)" to "200-DDR400".

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

CPU OverVoltage Control

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

►Auto Supply voltage as CPU reguired. (Default value)

►+5% / +7.5% / +10% Increase voltage range as user selected.

P 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 reguired. (Default value)
+0.1V ~ +0.3V	Set AGP voltage from 1.6V~1.8V.

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 ~ +0.3V	Set DIMM voltage from 2.6V~2.8V.

Load Fail-Safe Defaults

CMOS Setup Utility-Copyright (C) 1984-2004 Award Software Standard CMOS Features Load Fail-Safe Defaults • Advanced BIOS Features Load Optimized Defaults . Integrated Peripherals Set Supervisor Password Power Mag PnP/PCI PC Healt Frequency/Voltage Control ESC: Quit ↑↓→←: Select Item F8: Q-Flash F10: Save & Exit Setup Load Fail-Safe Defaults

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

Load Optimized Defaults

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

 Standard CMOS Features Advanced BIOS Features Integrated Peripherals Power Magnetic Components 	Load Fail-Safe Defaults Load Optimized Defaults Set Supervisor Password
	Defaults (Y/N)? N
ESC: Quit F8: Q-Flash Load Optimi	↑↓→←: Select Item F10: Save & Exit Setup ized Defaults

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

Set Supervisor/User Password

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

 Standard CMOS Features Advanced BIOS Features Integrated Peripherals Beauge Vector Action 	Load Fail-Safe Defaults Load Optimized Defaults Set Supervisor Password
Power Ma PnP/PCI PC Health Sectors PC Health Sectors	DATE OF DIG 0 CONTRA
 Frequency/Voltage Control ESC: Quit F8: Q-Flash 	↑↓→←: Select Item F10: Save & Exit Setup
Change/Set/Disable 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

CMOS Setup Utility-Copyright	(C) 1984-2004 Award Software
 Standard CMOS Features Advanced BIOS Features Integrated Peripherals Power Mage	Load Fail-Safe Defaults Load Optimized Defaults Set Supervisor Password
PnP/PCI Save to CMOS and EXIT (Y/N)? Y PC Healt	
► Frequency/Voltage Control	
ESC: Quit	↑↓→←: Select Item
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

 Standard CMOS Features Advanced BIOS Features Integrated Peripherals 	Load Fail-Safe Defaults Load Optimized Defaults Set Supervisor Password	
 Power Management Seture PnP/PCI PC Health orderas 	Quit Without Saving (V/N)? N Outrout	
 Frequency/Voltage Control ESC: Quit F8: Q-Flash 	↑↓→←: Select Item F10: Save & Exit Setup	
Abandon all Data		

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



Picture 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 **second** 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 Arrest will finish the installation for you automatically.







Driver install finished ! You have to reboot system !

Item Description

- VIA 4IN1 Driver For INF, AGP, IDE and DMA Driver
- USB Path for WinXP
 This 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 for VT6103L chips
- RealTek AC97 Audio Driver Audio driver for Realtek 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 7VT600-RZ-C Only.

CONTACT US

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