

Declaration of conformity



QUANTUM DESIGNS(HK) LTD.
5/F Somerset House, TaiKoo Place 979 Kings Road,
Quarry Bay, Hong Kong

declares that the product

Mainboard
KinetiZ 7T

is in conformity with

(reference to the specification under which conformity is declared in
accordance with 89/336 EEC-EMC Directive)

- EN 55022 Limits and methods of measurements of radio disturbance characteristics of information technology equipment
- EN 50081-1 Generic emission standard Part 1:
Residential, commercial and light industry
- EN 50082-1 Generic immunity standard Part 1:
Residential, commercial and light industry

European Representative:

QDI COMPUTER (UK) LTD

QDI COMPUTER (SCANDINAVIA) A/S

QDI SYSTEM HANDEL GMBH

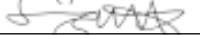
QDI COMPUTER (NETHERLANDS) B. V.

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QDI COMPUTER HANDELS GMBH

QDI COMPUTER (ESPANA) S.A.

QDI COMPUTER (SWEDEN) AB

Signature : 

Place / Date : HONG KONG/2000

Printed Name : Anders Cheung

Position/ Title : President

Declaration of conformity

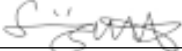


Trade Name: QDI Computer (U . S . A .) Inc.
Model Name: KinetiZ 7T
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Equipment Classification: FCC Class B Subassembly
Type of Product: Mainboard
Manufacturer: Quantum Designs (HK) Inc.
Address: 5/F, Somerset House, TaiKoo Place
979 Kings Road, Quarry Bay, HONG
KONG

Supplementary Information:

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

Signature :  _____

Date : _____ 2000 _____



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 **Caution**

1. Be sure to add some Silicone Grease between the Socket A processor and FAN to keep them fully contact, meanwhile to meet the heat sink requirement.
2. because the processor could overheat and damage both the processor and the motherboard, we recommend that you should have an AMD authorized fan to prevent overheating.
3. The AC power status of the system is indicated by the red LED under the three DIMM sockets. If the LED is on , adding or removing device like SDRAM memory is porhibited.







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Chapter 1

Introduction

Overview

The KinetiZ 7T green mainboard utilizes the VIA Apollo KT-133 chipset, providing a cost-effective PC/ATX platform with perfect capability and high performance to support Socket A AMD®Duron™/Athlon™ processors. The VIA®VT686A chipset integrates software configurable AC'97 audio gives customers an advanced, multimedia solution at an extremely low price, also the KinetiZ K7T mainboard integrates Creative CT5880 PCI hardware sound(Optional) to provide high quality 3D surrounding sound effect. The VIA®KT-133 chipset provide some new features such as AGP 4X mode and Ultra-Fast 200MHz FSB. Equipped with three memory module sockets, 1.5GB PC66/100/133MHz SDRAM and PC100/133 ECC or non-ECC SDRAM DIMMs can be supported. It also provides advanced features such as wake-up on LAN and wake-up on internal/external modem function. Suspend to RAM, the optimal implementation of the Advanced Configuration and Power Interface(ACPI) specification, makes the PC's power consumption drop to the lowest possible level and enable quick wakeup. ManageEasy, our system management application is also supplied to enable remote monitoring and configuration of the system.

Key Features

Form factor

- ATX form factor of 305mm x225mm.

Microprocessor

- Supports AMD Socket A Athlon™ processors at 700/750/800/850/900/950MHz/1GHz and further processors.
- Supports AMD Sokcet A Duron™ processors at 600/650/700MHz and further processors.
- Supports 200MHz FSB
- On-board VDDQ(for AGP), 2.5V regulators and 3.3V switching power supply.
- Three channel power regulators for AMD Socket A Athlon™/Duron™ Processors.

Chipset

- Apollo KT-133 chipset: VT8363, VT82C686A.

System memory

- Provides three 3.3V 168 pin DIMM sockets, supports 1.5G PC66/100/133 ECC or non-ECCSDRAMDIMMS, VCM SDRAM.
- Minimum memory size is 8MB, maximum memory size is 1.5GB.
- SDRAM 64 bit data interface with ECC support.

On-board IDE

- Supports two PCI PIO and Bus Master IDE ports.
- Two fast IDE interfaces supporting four IDE devices including IDE hard disks and CD-ROM drives.



- Supports “Ultra DMA/33” Synchronous DMA mode transferring up to 33 Mbytes/sec.
- Supports “Ultra DMA/66” Synchronous DMA mode transferring up to 66 Mbytes/sec.
- Integrated 16x32bit buffer for IDE PCI Burst Transfers.

On-chip I/O

- One floppy port supporting up to two 3.5” or 5.25” floppy drives with 360K/720K/1.2M/1.44M/2.88M format.
- Two high speed 16550 fast compatible UARTs (COM1/COM2/COM3/COM4 selective) with 16-byte send/receive FIFOs.
- One enabled parallel port at the I/O address 378H/278H/3BCH with additional bi-direction I/O capability and multi-mode as SPP/EPP/ECP (IEEE 1284 compliant).
- Circuit protection provided, preventing damage to the parallel port when a connected printer is powered up or operated at a high voltage.
- Supports LS-120 floppy disk drive and Zip drive.
- All I/O ports can be enabled/disabled in the BIOS setup.

On-chip Audio

- Built in VT82C686A
- Direct Sound AC97 Audio
- AC97 2.1 Compliant

***Creative® CT5880 PCI Hardware Sound(Manufacturing Option)**

- PCI 2.2 compliant
- 3D audio effects.
- 32-voice XG wavetable synthesizer
- Direct Sound/Music Hardware Accelerator
- Full-Duplex stereo
- Supports four speakers output based on Speaker-out jack and Line-in jack.

AGP SLOT

- Supports 4X mode & AGP 2.0 compliant.

Advanced features

- PCI 2.2 Specification compliant.
- Supports 3.3V/5V PCI bus interface.
- Provides Trend ChipAwayVirus® On Guard and PC-Cillin software with killing virus function.
- Provides four USB ports, on-board PS/2 mouse and PS/2 keyboard ports.
- Provides infrared interface.
- Support PC99 color-coding connector Specification.
- Supports Windows 98/Windows 2000 software power-down.
- Supports wake-up on LAN and wake-up on internal/external modem.
- Supports auto fan off when the system enters suspend mode.



- supports system monitoring (monitors system temperature, CPU temperature, voltages, chassis intrusion and fan speed).
- Provides management application such as ManageEasy.
- Protects the system BIOS from being attacked by severe virus such as CIH, by enabling “BIOS-ProtectEasy” in CMOS setup or closing the Jumper “JAV”.

BIOS

- Licensed advanced AWARD BIOS, supports flash ROM with 2M bit memory size, plug and play ready.
- Supports IDE CD-ROM or SCSI boot up.

Green function

- Supports ACPI (Advanced Configuration and Power Interface) and ODPM (OS Directed Power Management).
- Supports three green modes: Doze, Standby and Suspend.
- Supports ACPI power status: S0, S1, S3(STR), S5(Soft-off).

Expansion slots

- 1 ISA slot
- 5 PCI slots
- 1 AGP
- 1 AMR



Introduction to New Features

BIOS-ProtectEasy

The BIOS of the mainboard is contained inside the Flash ROM. Severe viruses such as CIH virus are so dangerous that it may overwrite the BIOS of the mainboard. If the BIOS has been damaged, the system will be unable to boot. We provide the following solution which protects the system BIOS from being attacked by such viruses.

There are two choices which can implement this function.

1. Set the jumper (JAV) as closed, the BIOS can not be overwritten.
2. Set the jumper (JAV) as open, meanwhile set "BIOS-ProtectEasy" as Enabled in AWARD BIOS CMOS Setup. In this way, the BIOS can not be overwritten, but the DMI information can be updated.

Refer to page 14 for detailed information on jumper setting, and page 22 for related BIOS setting.

Ultra ATA/66

According to the previous ATA/IDE hard drive data transfer protocol, the signaling way to send data was in synchronous strobe mode by using the rising edge of the strobe signal. The Ultra ATA/33 protocol doubles the burst transfer rate from 16.6MB/s to 33.3MB/s, by using both the rising and falling edges of the strobe signal, this time Ultra ATA/66 doubles the Ultra ATA burst transfer rate once again (from 33.3MB/s to 66.6MB/s) by reducing setup times and increasing the strobe rate. The faster strobe rate increases EMI, which cannot be eliminated by the standard 40-pin cable used by ATA and Ultra ATA. To eliminate this increase in EMI, a new 40-pin, 80-conductor cable is needed. This cable adds 40 additional ground lines between each of the original 40 ground and signal lines. The additional 40 lines help shield the signal from EMI, reduce crosstalk and improves signal integrity.

Ultra ATA/33 introduced CRC (Cyclical Redundancy Check), a new feature of IDE that provides data integrity and reliability. Ultra ATA/66 uses the same process. The CRC value is calculated by both the host and the hard drive. After the host-request data is sent, the host sends its CRC to the hard drive, and the hard drive compares it to its own CRC value. If the hard drive reports errors to the host, then the host retries the command containing the CRC error.

Ultra ATA/66 technology increases both performance and data integrity. However there are basically five requirements for your system to run in Ultra ATA/66 mode:

1. The system board must have a special Ultra ATA/66 detect circuit, such as KinetiZ 7T mainboard.
2. The system BIOS must also support Ultra ATA/66.
3. The operating system must be capable of DMA transfers. Win95 (OSR2), Win98 and WindowsNT are capable.
4. An Ultra ATA/66 capable, 40-pin, 80-conductor cable is required.
5. Ultra ATA/66 compatible IDE device such as a hard drive or CD-ROM drive.



PC-133 Memory

PC133 SDRAM Unbuffered DIMM defines the electrical and mechanical requirements for 168-pin, 3.3 Volt, 133MHz, 64/72-bit wide, Unbuffered Synchronous DRAM Dual In-Line Memory Modules (SDRAM DIMMs). Relatively, the peak bandwidth of PC-133 memory is the 33% higher than PC-100 memory. These latest SDRAMs are necessary to meet the enhanced 133MHz bus speed requirement.

Suspend to RAM

Suspend to RAM is a cost-effective, optimal implementation of the Advanced Configuration and Power Interface (ACPI) 1.0 specification, which makes a PC's power consumption drop to the lowest possible level and enables quick wakeup. When the system is in Suspend-to-RAM status, the system context is maintained in system memory, the system consumes only a small fraction of the power used for full operation. Instead of shutting down the system to save power when not in use and then having to reboot later, Suspend-to-RAM solution enables the system to quickly wake up, restoring all applications and features, enabling operation in a few seconds.

To implement this function, the following requirements are essential:

1. Power supply requirements: The current of 5VSB line of the power supply should be more than 0.75A.
2. Set the Jumper J13 with pin1&pin2 closed. Refer to page 13 for detailed information.
3. The BIOS option "ACPI function" should be enabled, and "ACPI Suspend Type" should be set as S3 in AWARD BIOS CMOS setup. Refer to page 28 for detailed information.
4. An ACPI-enabled operating system such as Windows 98 or Windows 2000 family is needed. Navigate to the CD-ROM drive from the MS-DOS Command Prompt and enter the following from the Win98 directory on the CD:

```
D:\SETUP /P J
```

(This manual assumes that your CD-ROM device driver letter is D:)

Windows 98 will be installed with ACPI enabled.

For Windows 98 SE and Windows 2000, just install them directly.

5. Three ways to enter Suspend-to-RAM status under ACPI-enabled Windows 98:
 - Click Start -> Shut down -> Standby to enable the system to enter Suspend-to-RAM status.
 - Click Start -> Setup -> Control Panel -> Power Management -> Advanced and choose Standby item, the system will enter Suspend-to-RAM status when you press power button.
 - From Power Management Properties in Control Panel, set the latency time in System Standby, the system will enter Suspend-to-RAM status when time out.

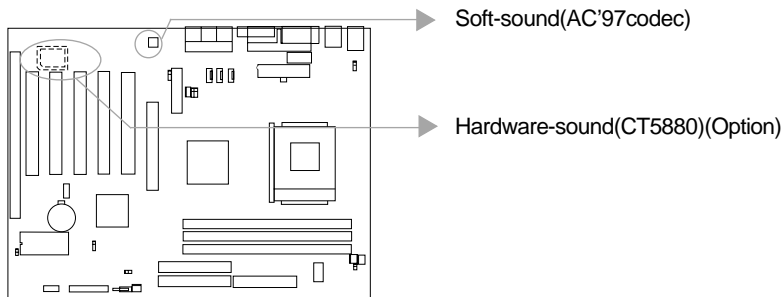
The same ways used to power up the system can be used to wake up the system from Suspend-to-RAM status. For example, pushing the power button, through the Wake-on-LAN, Wake-on-Modem function or RTC Alarm.



Creative CT5880 chipset

The CT5880 provides high-quality audio performance and low CPU utilization for you. Featuring 128-voice wave-table synthesis with very high sample rate converters. In addition, CT5880 supports localized three-dimensional sound immersion in headphone and four-speaker environments. The four-speaker based on speaker-out and line-in jack. the CT5880 also supports multiple algorithm levels of reverb and chorus effects on the wave-table sounds as well as spatial sound enhancement on MIDI and wave sounds in two speakers. Full duplex operation also allows simultaneous audio recording and playback.

The KinetiZ 7T mainboard has two solution for on-board sound.

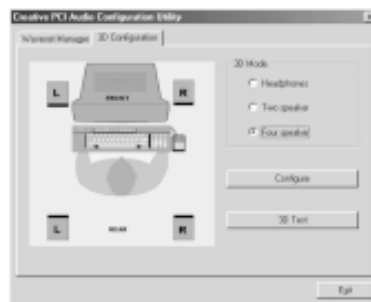


Note: If Creative® CT5880 chip is onboard, the slave card must be installed in the first PCI slot.

Installation of CT5880 driver

Before you install CT5880 chipset driver, please make sure that CT5880 chipset is onboard.

1. If CT5880 chipset is onboard, the CD2000 will detected it and the option “PCI Sound Driver” will appear on screen, you click this option to install CT5880 chipset driver .
2. If CT5880 is not onboard, the CD 2000 will detected AC97codec and the option “ Audio Codec Driver” will appear on screen, you click this option to complete the installation



Note : After installation of CT5880driver, you can select four speaker output function



Chapter 2

Installation Instructions

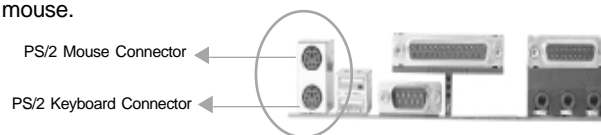
This section covers External Connectors and Jumper Settings. Refer to the mainboard layout chart for locations of all jumpers, external connectors, slots and I/O ports. Furthermore, this section lists all necessary connector pin assignments for your reference. The particular state of the jumpers, connectors and ports are illustrated in the following figures. Before setting the jumpers or inserting these connectors, please pay attention to the directions.

Be sure to unplug the AC power supply before adding or removing expansion cards or other system peripherals, otherwise your mainboard and expansion cards might be seriously damaged.

External Connectors

PS/2 Keyboard Connector, PS/2 Mouse Connector

PS/2 keyboard connector is for the usage of PS/2 keyboard. If using a standard AT size keyboard, an adapter should be used to fit this connector. PS/2 mouse connector is for the usage of PS/2 mouse.



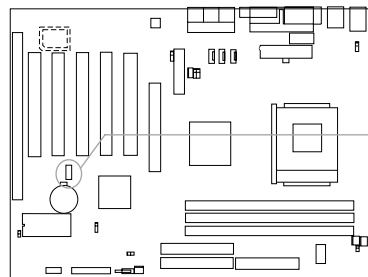
USB1, USB2

Two USB ports are available for connecting USB devices.



USB3, USB4

Two USB ports are not available on the back panel. Therefore, we provide a 10-pin ribbon cable with bracket to connect Built-in on-board USB header. (manufacturing option)

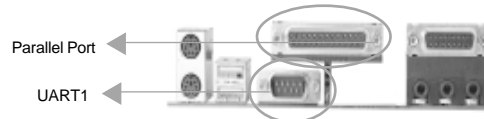


+5v	□	□	GND
T1-	□	□	GND
T1+	□	□	T0+
GND	□	□	T0-
GND	□	□	+5v



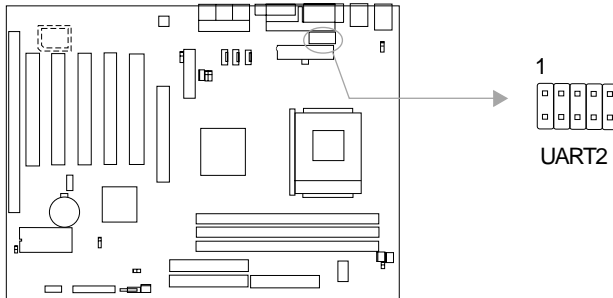
Parallel Port Connector and Serial Port Connector (UART1)

The parallel port connector can be connected to a parallel device such as a printer, while the serial port connector can be connected to a serial port device such as a serial port mouse. You can enable/disable them and choose the IRQ or I/O address in "Integrated Peripherals" from AWARD BIOS SETUP.



UART2

The serial port UART2 is not available on the back panel. Therefore, we provide a 9-pin ribbon cable with bracket for UART2 port. (manufacturing option)



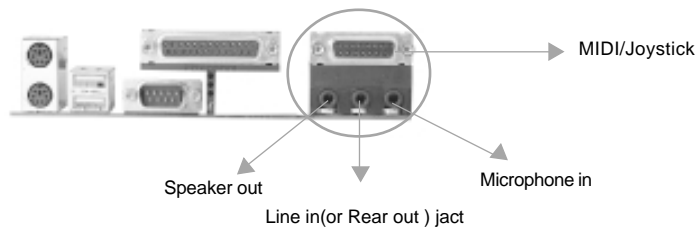
Line-in jack(or Rear out jack), Microphone-in jack, Speaker-out jack and

MIDI/Joystick connector

The Line-in jack can be connected to devices such as a cassette or minidisc player for playback or recording. The Microphone-in jack can be connected to a microphone for voice input. The Speaker-out jack allows you to connect speakers or headphones for audio output from the internal amplifier.

Note: if you choose four speaker output in CT5880 configuration, the Rear out jack replaces Line-in jack to connect powered speakers for audio output.

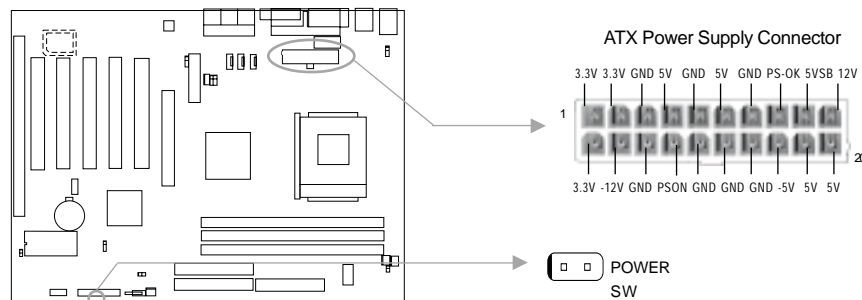
The MIDI/Joystick connector allows you to connect a game joystick or a MIDI device.





ATX Power Supply Connector & Power Switch (POWER SW)

Be sure to connect the power supply plug to this connector in its proper orientation. The power switch (POWER SW) should be connected to a momentary switch (power button). When powering up your system, first turn on the mechanical switch of the power supply (if one is provided), then push once the power button. When powering off the system, you needn't turn off the mechanical switch, just ***Push once*** the power button.



Note: * If you change “soft-off by PWR-BTTN” from default “Instant-off” to “Delay 4 Secs” in the “POWER MANAGEMENT SETUP” section of the BIOS, the power button should be pressed for more than 4 seconds before the system powers down.

Hard Disk LED Connector (HD LED)

The connector connects to the case's IDE indicator LED indicating the activity status of IDE hard disk. The connector has an orientation. If one way doesn't work, try the other way.

Reset Switch (RESET)

The connector connects to the case's reset switch. Press the switch once, the system resets.

Speaker Connector (SPEAKER)

The connector can be connected to the speaker on the case.

ACPI LED Connector (ACPI_LED)(Reserved)

The ACPI LED is double-color lights with three pins. Pin1&Pin2 drive different color lights. If Pin1 drives the yellow light, Pin2 drives the green light, the following status will come out. When the system is in power up status, the LED is green on. When the system is in suspend status, the LED is green blink. When the system is in suspend to RAM status, the LED is orange on. When the system is in soft-off status, the LED is off.

GREEN LED Connector (GREEN_LED)

The GREEN LED has five status. When the system is in three status (including power up, suspend, soft-off), the LED is off. When the system is in suspend to RAM status, the LED is on. When the system is in APM(advanced power management), the LED is on.

Hardware Green Connector (SLEEP)

Push once the switch connected to this header, the system enters suspend mode.

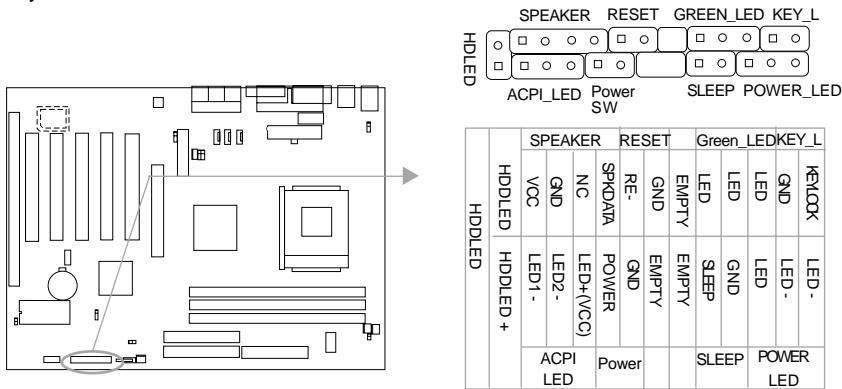


Power LED Connector (PWRLED)

The power LED has four status. When the system is in power up status, the LED is on. When the system is in suspend status, the LED is blink. When the system is in Suspend to RAM, the LED is off. When the system is in Soft-Off status, the LED is off. The connector has an orientation.

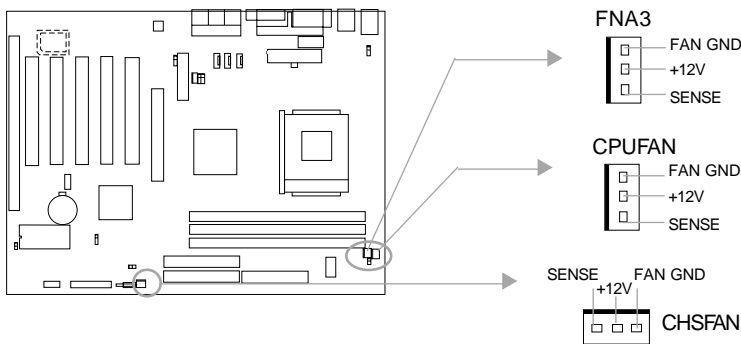
Key-Lock Connector(KEY_L)

The connector can be connected to the keyboard lock switch on the case for locking the keyboard.



Fan Connector (CPUFAN, CHSFAN, FAN3)

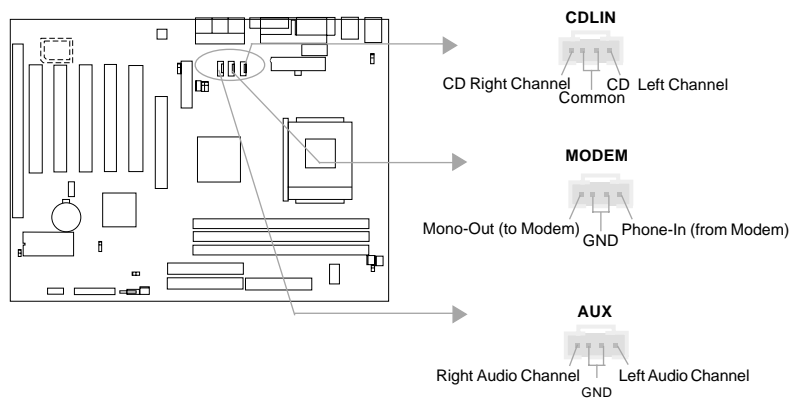
These connectors support cooling fans of 35ma or less. Besides speed of the FAN3, The speeds of the CPU fan and chassis fan can be detected and viewed in "PC Health Status" section of the BIOS, . They will be automatically turned off after the system enters suspend mode.





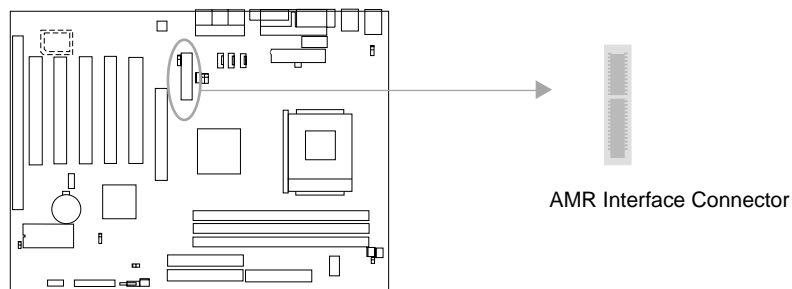
Internal Audio Connectors (AUX, CDLIN, MODEM)

AUX and CDLIN connectors allow you to receive stereo audio input from such sound sources as a CD-ROM, TV tuner, or MPEG card. The MODEM connector allows the onboard audio to interface with a voice modem card with a similar connector. It also allows the sharing of mono_in (such as a phone) and mono_out (such as a speaker) between the onboard audio and the voice modem card.



Audio/Modem Riser Interface Connector (AMR)

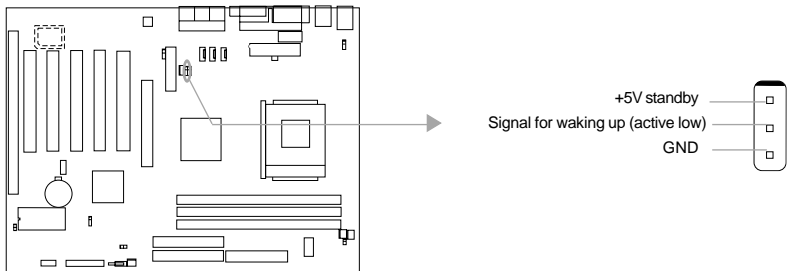
The AMR Interface Connector is the interface between the mainboard and the Audio/Modem Riser card. The connector provides all necessary signals which supports several different configurations of audio and modem in the system, such as audio and modem on the Riser, audio on the mainboard and modem on the Riser, or no audio with modem on the Riser. KinetiZ 7A mainboard provides you with audio onboard solution, onboard audio can be enabled/disabled. Either AMR (Audio/Modem Riser) card or MR (Modem Riser) card can be used on this system. This software configurable AC'97 audio and modem system gives customers an advanced, multimedia solution at an extremely low price. The AC'97 audio and modem system can be enabled/disabled in "Integrated Peripherals" in AWARD BIOS CMOS Setup.





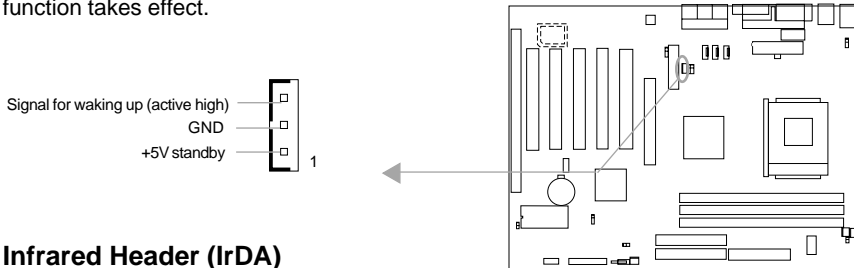
Wake-Up On Internal Modem (WOM)

Through the Wake-Up On Internal Modem function, the system which is in the power-off status can be powered on by a ring signal received from the internal modem. If this function is to be used, be sure an internal modem card which supports the function is used. Then connect this header to the relevant connector on the modem card, set "Wake Up On LAN/Ring" as Enabled in the "POWER MANAGEMENT SETUP" section of the BIOS. Save & exit, then boot the operating system once to make sure this function takes effect.



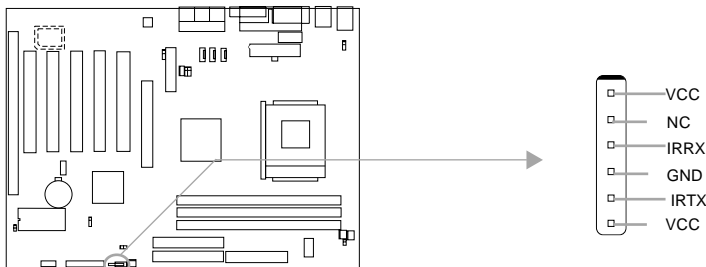
Wake-Up On LAN (WOL)

Through the Wake-Up On LAN function, a wake event occurring from the network can wake up the system. If this function is to be used, please be sure an ATX 2.01 power supply of which 5VSB line is capable of delivering 720mA, and a LAN adapter which supports this function are used. Then connect this header to the relevant connector on the LAN adapter, set "PowerOn by Ring/LAN" as Enabled in the "POWER MANAGEMENT SETUP" section of the BIOS. Save & exit, then boot the operating system once to make sure this function takes effect.



Infrared Header (IrDA)

This connector supports wireless transmitting and receiving. If using this function, set "UART 2 Mode" to HPSIR or ASKIR and configure the settings from the "INTEGRATED PERIPHERALS" section of the BIOS.








Expansion Slots & I/O Ports description

Slot / Port	Description
PCI1	First PCI slot.
PCI2	Second PCI slot.
PCI3	Third PCI slot.
PCI4	Fourth PCI slot.
PCI5	Fifth PCI slot.
DIMM1	First DIMM slot.
DIMM2	Second DIMM slot.
DIMM3	Third DIMM slot.
IDE 1	Primary IDE port.
IDE 2	Secondary IDE port.
AMR	AMR slot.
AGP	AGP slot.
FLOPPY	Floppy Drive Port.

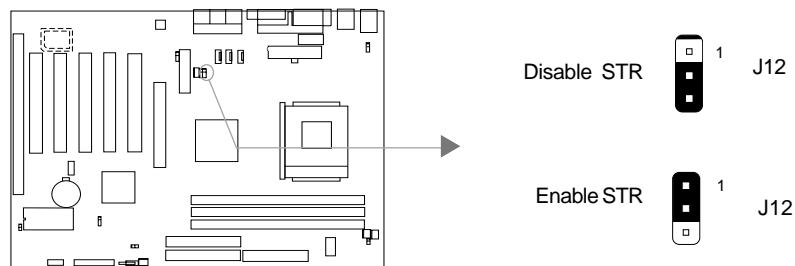
Jumper Settings

Jumpers are located on the mainboard. Pin 1 for all jumpers are located on the side with a thick white line (Pin1→ ), refer to the mainboard's silkscreen . Jumpers with three pins will be shown as  to represent pin1 & pin2 connected and  to represent pin2 & pin3 connected.

Suspend to RAM Switch (J12)

If you want to Disable Suspend to RAM function, set J13 with pin2&pin3 closed, meanwhile, set "ACPI Suspend Type" to S1 in "Power Management Setup" section of the BIOS. Otherwise, set J13 with pin1&pin2 closed for implementing this function.

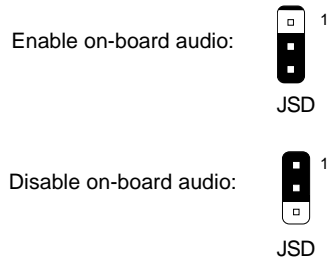
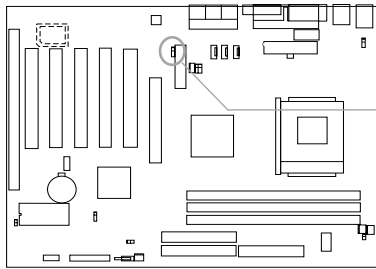
Warning: If you set J13 with pin2&pin3 closed and set "ACPI Suspend Type" to S3 in "Power Management Setup" section of the BIOS, the blank screen will come out, in this case, just clear CMOS and boot up the system once again.





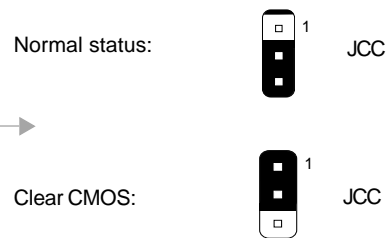
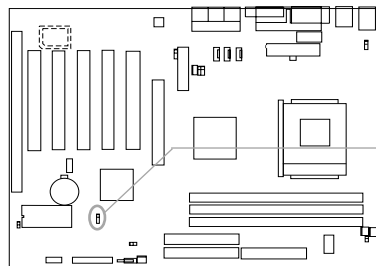
Enable/Disable on-board audio(JSD)

If you want to use the on-board audio, set JSD with pin2 & pin3 closed (default).
Otherwise, set JSD with pin1 & pin2 closed for disabling this function.



Clear CMOS (JCC)

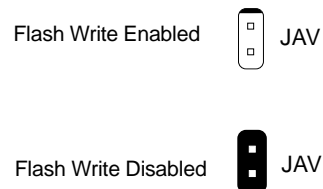
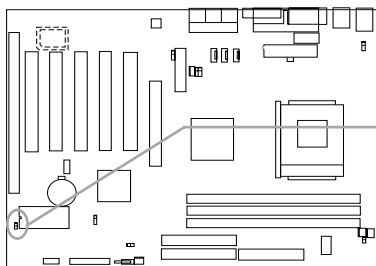
If you want to clear CMOS, unplug the AC power supply first, close JCC (pin1 & pin2) once, set JCC back to the normal status with pin2 & pin3 connected, then power on the system.



(Unplug the AC power supply)

BIOS-ProtectEasy Jumper (JAV)

The BIOS of the mainboard is contained inside the Flash ROM. If the jumper JAV is set as closed, you will be unable to flash the BIOS to the mainboard. However in this status, the system BIOS is protected from being attacked by serious virus such as CIH virus.



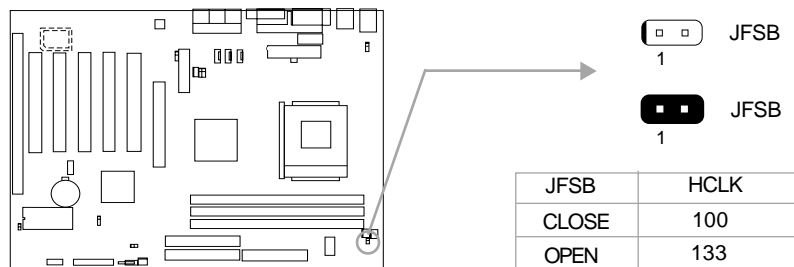


Setting the jumper JAV as open(default), meanwhile disabling the “BIOS_ProtectEasy” item from “Advanced BIOS Features” in AWARD BIOS CMOS Setup, allows you to flash the BIOS to the Flash ROM.

The DMI (Desktop Management Interface) system information such as the CPU type/speed, memory size, and expansion cards will be detected by the onboard BIOS and stored in the flash ROM. Whenever the system hardware configuration is changed, DMI information will be updated automatically. However, setting jumper JAV as closed makes flashing BIOS and updating DMI information impossible. Therefore, set JAV as closed when changing the system hardware configuration, or the error message “Unkown Flash Type” will be displayed on the screen, and DMI information update will be fail.

Overclocking Jumper Setting (JFSB)

Jumpers labeled JFSB is located on the mainboard providing users with CPU overclocking feature. The host bus speed can be set as 100/133MHz. Refer to the chart below for the location of these jumpers, and the table for information on how to set them.



AMD Athlon™ CPU FSB is 100MHz, but delivering twice the throughput of 100MHz Pentium III-based systems(Ultra -Fast 200MHz). So setting up to 133MHz FSB is also supported. However, whether or not your system can be overclocked depends on your processor's capability. Whether the processor is bus ratio locked or unlocked should also be taken into account. **We do not guarantee the overclocking system to be stable.**



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Chapter 3

BIOS Description

Utility Support:

AWDFLASH.EXE

This is a flash memory write/read utility used for the purpose of upgrading your BIOS when necessary. Before doing so, please note:

- **We strongly recommend you only upgrade BIOS when encounter problems.**
- **Before upgrading your BIOS, review the description below to avoid making mistakes, destroying the BIOS and resulting in a non-working system.**

When you encounter problems, for example, you find your system does not support the latest CPU released on our current mainboard, you may therefore upgrade the BIOS, please don't forget to set JAV as open and disable the "Flash Write Protect" item in AWARD BIOS CMOS Setup first .

Follow the steps exactly for a successful upgrade.

1. Create a bootable system floppy diskette by typing Format A:/s from the DOS prompt under DOS6.xx or Windows 9x environment.
2. Click "Browse CD" option under QDI Driver CD 2000, copy Awdflash.exe (version>7.36) from the directory \Utility onto your new bootable diskette.
3. Download the updated BIOS file from the Website (<http://www.qdigrp.com>). Please be sure to download the suitable BIOS file for your mainboard.
4. Decompress the file downloaded, copy the BIOS file (xx.bin) onto the bootable diskette, and note the checksum of this BIOS which is located in readme file.
5. Reboot the system from the bootable diskette created.
6. Then run the Awdflash utility at the **A:** prompt as shown below:

```
A:\Awdflash xxxx.bin
```

Follow the instruction through the process. Don't turn off power or reset the system until the BIOS upgrade has been completed.

If you require more detailed information concerning Awdflash Utility, for example, the different usage of parameters, please type `A:\>Awdflash /?`

Note: There's a shortcut to update your BIOS by pressing "Alt+F2" in POST and inserting the floppy which contains the updated file. The system will automatically update it.



AWARD BIOS Description

Entering Setup

Power on the computer, when the following message briefly appears at the bottom of the screen during the POST (Power On Self Test), press key or simultaneously press the <Ctrl> + <Alt> + <Esc> keys, to enter the AWARD BIOS CMOS Setup Utility.

Press to enter SETUP

Once you have entered, the Main Menu (Figure 1) appears on the screen. The main menu allows you to select from twelve setup functions and two exit choices. Use the arrow keys to select among the items and press the <Enter> key to accept or enter the sub-menu.

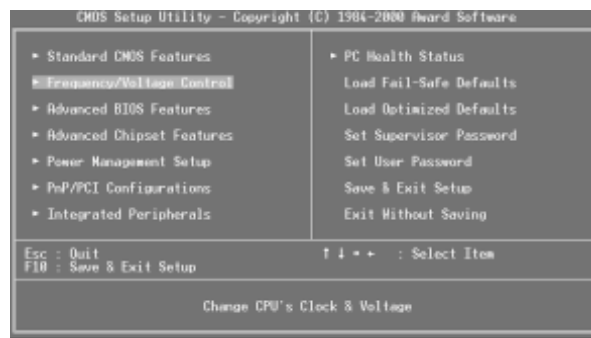


Figure-1 Main Menu

Load Fail-Safe Defaults

The Fail-Safe Defaults are secure and useful for system. It is recommended that users load the Fail -Safe Defaults when the system is in trouble.

Load Optimized Defaults

The Optimized Defaults are common and efficient. It is recommended that users load the optimized defaults first, then modify the needed configuration settings.

Standard CMOS Features Setup

The basic CMOS settings included in "Standard CMOS Features" are Date, Time, Hard Disk Drive Types, Floppy Disk Drive Types, and VGA etc. Use the arrow keys to highlight the item, then use the <PgUp> or <PgDn> keys to select the value desired in each item.



Figure-2 Standard CMOS Setup Menu

For the items marked, press enter, a window will pop up as shown below. You can view detailed information or make modifications.



Figure-2-1 IDE Primary Master Setup Menu

Hard Disk

Primary Master/Primary Slave/Secondary Master/Secondary Slave

These categories identify the HDD types of 2 IDE channels installed in the computer system. There are three choices provided for the Enhanced IDE BIOS: None, Auto, and User. 'None' means no HDD is installed or set; 'Auto' means the system can auto-detect the hard disk when booting up; by choosing 'user', the related information should be entered regarding the following items. Enter the information directly from the keyboard and press < Enter>:

CYLS	number of cylinders	HEAD	number of heads
PRECOMP	write pre-compensation	LANDZ	landing zone
SECTOR	number of sectors	MODE	HDD access mode



The Award BIOS supports 3 HDD modes: NORMAL, LBA and LARGE.

NORMAL

Generic access mode in which neither the BIOS nor the IDE controller will make any transformation during accessing. The maximum number of cylinders, heads and sectors for NORMAL mode are 1024,16 and 63.

If the user sets his HDD to NORMAL mode, the maximum accessible HDD size will be 528 megabytes even though its physical size may be greater than that.

LBA (Logical Block Addressing) mode

A new HDD accessing method to overcome the 528 Megabyte bottleneck. The number of cylinders, heads and sectors shown in setup may not be the number physically contained in the HDD.

During HDD accessing, the IDE controller will transform the logical address described by sector, head and cylinder number into its own physical address inside the HDD.

LARGE mode

Some IDE HDDs contain more than 1024 cylinder without LBA support (in some cases, users do not want LBA). The Award BIOS provides another alternative to support these kinds of HDD.

BIOS tricks DOS (or other OS) into dividing the number of cylinders is less than 1024 by dividing it by 2. At the same time, the number of heads is multiplied by 2. A reverse transformation process will be made inside INT13h in order to access the right HDD address.

If using Auto detect, the BIOS will automatically detect the IDE hard disk mode and set it as one of the three modes.

Remark

To support LBA or LARGE mode of HDDs, there must be some softwares involved which are located in Award HDD Service Routine(INT13h).It may fail to access a HDD with LBA (LARGE) mode selected if you are running under an Operating System which replaces the whole INT 13h.



Video

Set this field to the type of video display card installed in your system.

EGA/ VGA	Enhanced Graphics Adapter / Video Graphic Array. For EGA, VGA, SEGA, SVGA, or PGA monitor adapters.
CGA 40	Color Graphic Adapter, powering up in 40 column mode.
CGA 80	Color Graphic Adapter, powering up in 80 column mode.
MONO	Monochrome adapter, including high resolution monochrome adapters.

Halt On

This category determines whether or not the computer will stop if an error is detected during powering up.

No errors	The system boot will not stop for any errors that may be detected.
All errors	Whenever the BIOS detects a non-fatal error, the system will stop and you will be prompted.
All, But Keyboard	The system boot will not stop for a keyboard error; but it will stop for all other errors.
All, But Diskette	The system boot will not stop for a disk error; but it will stop for all other errors.
All, But Disk/Key	The system boot will not stop for a keyboard or disk error, but it will stop for all other errors.

Memory

This is a Display-Only Category, 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.
Extended Memory	The BIOS determines how much extended memory is presented during the POST.
Total Memory	Total memory of the system equals the sum of the above memory.



Frequency/Voltage Control

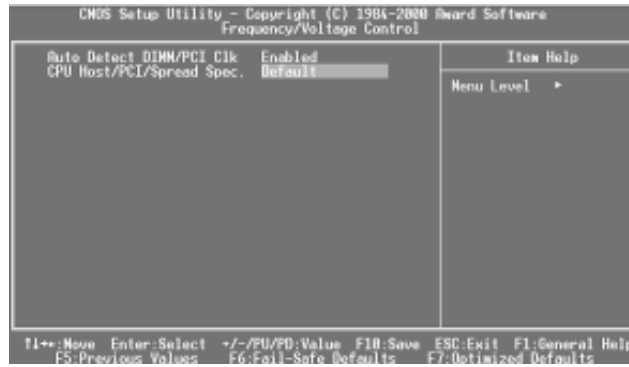


Figure-9 Frequency/Voltage Control Menu

The following indicates the options for each item and describes their meaning.

<u>Item</u>	<u>Option</u>	<u>Description</u>
• Auto Detect DIMM/PCI Clk	<i>Enabled</i> <i>Disabled</i>	Closes the CLK signal if no PCI or DIMM plug in.
• CPU Host/PCI/sread spec.	<i>Default</i> <i>100/33Mhz/-0.5%</i> <i>100/33Mhz/± 0.25%</i> <i>100/33Mhz/± 0.5%</i> <i>102/34Mhz/off</i> <i>.....</i> <i>133/33Mhz/-0.5%</i> <i>133/33Mhz/± 0.25%</i> <i>100/33Mhz/± 0.5%</i>	These items are of selected CPU FSB and PCI clock.Default setting is recommended. ± 0.5%, ± 0.25%,-0.5% means enable clock Spread Spectrum to reduce EMI ± 0.5%, ± 0.25%,-0.5%. Off means disable clock spread spectrum to reduce EMI.



Advanced BIOS Features Setup

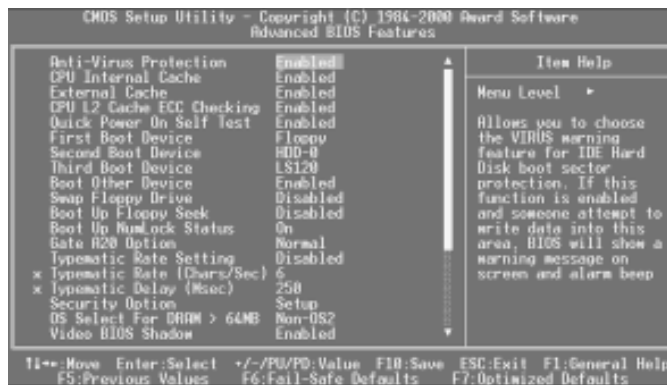


Figure-3 Advanced BIOS Features Setup Menu

The following indicates the options for each item and describes their meaning.

<u>Item</u>	<u>Option</u>	<u>Description</u>
• Anti-Virus Protection	<i>Enabled</i>	Allows you to choose the VIRUS warning feature for IDE Hard Disk boot sector protection. If this function is enabled and someone attempt to write data into this area, BIOS will show a warning message on screen and alarm beep.
	<i>Disabled</i>	Invalidates this function.
• CPU Internal Cache	<i>Enabled</i>	Enables CPU internal Level1/Level2 cache.
• External Cache	<i>Disabled</i>	Disables CPU internal Level1/Level2 cache.
	<i>Enabled</i>	Enables external L2 cache. this allows better performance.
	<i>Disabled</i>	Disable external cache.
• CPU L2 Cache ECC Checking	<i>Enabled</i>	Enables CPU L2 Cache ECC function.
• Quick Power On Self Test	<i>Disabled</i>	Disables CPU L2 Cache ECC function.
	<i>Enabled</i>	Enables quick POST. BIOS will shorten or skip some check items during POST to speed up POST after you power on the computer.
	<i>Disabled</i>	Normal POST.
• First (Second, Third) Boot Device	<i>Disabled</i>	Selects your Boot Device Priority. It could be Disabled, Floppy, LS/ZIP, HDD-0, HDD-1, HDD-2, HDD-3, SCSI, CDROM, LAN.
• Swap Floppy Drive	<i>Floppy</i>	
	<i>Enabled</i>	Exchanges the assignment of A&B floppy drives.
	<i>Disabled</i>	The assignment of A&B floppy drives are normal.



BIOS Description

• Boot Up Floppy Seek	<i>Enabled</i> <i>Disabled</i>	Tests floppy drives to determine whether they have 40 or 80 tracks.
• Boot Up Numlock Status	<i>On</i> <i>Off</i>	Keypad is used as number keys. Keypad is used as arrow keys.
• Gate A20 Option	<i>Normal</i> <i>Fast</i>	The A20 signal is controlled by the keyboard controller or chipset hardware. Default setting. The A20 signal is controlled by Port 92 or the chipset specific method.
• Typematic Rate Setting	<i>Enabled</i> <i>Disabled</i>	Keystrokes repeat at a rate determined by the keyboard controller - when enabled, the typematic rate and typematic delay can be selected.
• Typematic Rate (Chars/Sec)	6-30	The rate at which character repeats when you hold down a key.
• Typematic Delay (Msec)	250-1000	The delay before keystrokes begin to repeat.
• Security Option	<i>System</i> <i>Setup</i>	Selects whether the password is required every time the system boots or only when you enter setup.
• OS Select For DRAM>64MB	<i>Non-OS2</i> <i>OS2</i>	If your operating system is not OS/2, please select this item. If system DRAM is more than 64MB and the operating system is OS/2, please select this item.
• Video BIOS Shadow	<i>Enabled</i> <i>Disabled</i>	Video BIOS will be copied to RAM. Video Shadow will increase the video speed. Video shadow is disabled.
• C8000~CBFFF Shadow:	<i>Enabled</i>	Optional ROM will be copied to RAM by 16K bytes per unit.
... ..		
DC000-DFFFF Shadow:	<i>Disabled</i>	The shadow function is disabled.
• Flash Write Protect	<i>Enabled</i> <i>Disabled</i>	Does not allow you to upgrade the BIOS. Note: Enabling this item can protect the system BIOS from being attacked by severe virus such as CIH. Therefore disable this item only when wanting to flash BIOS, afterwards set this item as Enabled (default). Disabling this item allows you to upgrade the BIOS.
• Show Bootup Logo	<i>Enabled</i> <i>Disabled</i>	Enables the logo when system boots up. Logo will not be shown when system boots up.



Advanced Chipset Features Setup



Figure-4 Advanced Chipset Features Setup Menu

The following indicates the options for each item and describes their meaning.

<u>Item</u>	<u>Option</u>	<u>Description</u>
• Bank 0/1, 2/3, 4/5 DRAM Timing	<i>SDRAM 8/10ns</i> <i>Normal</i> <i>Medium</i> <i>Fast</i> <i>Turbo</i>	These items are of selected SDRAM read/write timing. Ensure your DIMMs are as fast as 8ns, otherwise select 10ns. The faster you choose, the higher performance you can receive.
• SDRAM Cycle Length	<i>Auto/2/3</i>	Defines the CLT timing parameter of SDRAM expressed in 66MHz clocks. Latency Time = Auto, according to SDRAM SPD. Latency Time = 2 clocks. Latency Time = 3 clocks.
• DRAM clock	<i>Host CLK</i> <i>HCLK+33M</i>	DRAM frequency is the same as CPU FSB. DRAM frequency is faster than CPU FSB by 33Mhz.
• Memory Hole	<i>Enabled</i> <i>Disabled</i>	Memory Hole at 15-16M is reserved for expanded ISA card. Does not set this memory hole.
• PCI master Pipeline Req	<i>Enabled</i> <i>Disabled</i>	
• P2C/C2P Concurrency	<i>Enabled</i> <i>Disabled</i>	Enables P2C/C2P concurrency. Disables P2C/C2P concurrency. P2C means PCI to CPU, C2P means CPU to PCI.
• Fast R-W Turn Around	<i>Enabled</i> <i>Disabled</i>	Enables Fast R-W Turn Around. Disables Fast R-W Turn Around. R-W means Read to Write.



• System BIOS Cacheable	<i>Enabled</i>	Besides conventional memory, system BIOS area is also cacheable.
	<i>Disabled</i>	System BIOS area is not cacheable.
• Video RAM Cacheable	<i>Enabled</i>	Besides conventional memory, video RAM is also cacheable.
	<i>Disabled</i>	Video RAM area is not cacheable.
• AGP Aperture Size (MB)	<i>4~128</i>	Sets the effective size of the Graphics Aperture to be used in the particular GART Configuration.
• AGP-4X Mode	<i>Enabled</i>	Supports 4X mode.
	<i>Disabled</i>	Does not support 4X mode.
• AGP Driving Control	<i>Auto</i>	The default setting is suggested.
	<i>manual</i>	
• AGP Driving Value	<i>00 - FF</i>	Sets the AGP Driving Value when AGP Driving Control is set as manual.
• K7 CLK_CTL Select	<i>Optimal</i>	Default setting is recommended.
	<i>Default</i>	
• Onchip USB	<i>Enabled</i>	Enables the onchip USB controller.
	<i>Disabled</i>	Disables the onchip USB controller.
• USB Keyboard Support	<i>Enabled</i>	Legacy USB keyboard support is enabled.
	<i>Disabled</i>	Legacy USB keyboard support is disabled.
• Onchip Sound*	<i>Auto</i>	Enables AC97 function.
	<i>Disabled</i>	Disables AC97 function.
• Onchip Modem*	<i>Auto</i>	Enables MC97 function.
	<i>Disabled</i>	Disables MC97 function.
• CPU to PCI Write Buffer	<i>Enabled</i>	Enables CPU to PCI Write Buffer.
	<i>Disabled</i>	Disables CPU to PCI Write Buffer.
• PCI Dynamic Bursting	<i>Enabled</i>	Enables PCI Dynamci Bursting.
	<i>Disabled</i>	Disables PCI Dynamci Bursting.
• PCI Master 0 WS Write	<i>Enabled</i>	Enables PCI Master 0 WS Write.
	<i>Disabled</i>	Disables PCI Master0 WS Write.
• PCI Delay Transaction	<i>Enabled</i>	Enables PCI Delay Transaction.
	<i>Disabled</i>	Disables PCI Delay Transaction.
• PCI#2 Access #1 Retry	<i>Enabled</i>	Enables PCI#2 Access #1 Retry.
	<i>Disabled</i>	Disables PCI#2 Access #1 Retry.
• AGP Master 1 WS Write	<i>Enabled</i>	Enables AGP Master 1 WS Write.
	<i>Disabled</i>	Disables AGP Master 1 WS Write.
• AGP Master 1 WS Read	<i>Enabled</i>	Enables AGP Master 1 WS Read.
	<i>Disabled</i>	Disables AGP Master 1 WS Read.
• Memory Parity/ECC Check	<i>Enabled</i>	Enables the Error Checking&Correction if ECC memory is used.
	<i>Disabled</i>	Disables the ECC function.

Note: If Creative Ct5880 chipset is onboard, the item marked “*” will not appear.



Integrated Peripherals



Figure-5 Integrated Peripherals Menu

The following indicates the options for each item and describes their meaning.

<u>Item</u>	<u>Option</u>	<u>Description</u>
• OnChip IDE channel 0/1	<i>Enabled</i> <i>Disabled</i>	Enables OnChip IDE First/Second Channel. Disables OnChip IDE First/Second Channel.
• IDE Prefetch Mode	<i>Enabled</i> <i>Disabled</i>	Enables IDE Prefetch Mode. Disables IDE Prefetch Mode.
• IDE Primary/ Secondary Master/Slave PIO	<i>Mode 0 - 4</i>	Defines the IDE primary/secondary master/ slave PIO mode.
• IDE Primary/ Secondary Master/Slave UDMA	<i>Auto</i> <i>Auto</i>	The IDE PIO mode is defined by auto -detection. Ultra DMA mode will be enabled if an ultra DMA device is detected.
• Init Display First	<i>Disabled</i> <i>PCI SLOT</i> <i>AGP</i>	Disables this function. Initializes the PCI VGA first. If a PCI VGA card and an AGP card are installed together in the system, the one initialized first functions. Initializes the AGP first.
• IDE HDD Block Mode	<i>Enabled</i>	Allows IDE HDD to read/write several sectors at once.
• Onboard FDD Controller	<i>Enabled</i> <i>Disabled</i>	Onboard floppy disk controller is enabled. Onboard floppy disk controller is disabled.
• Onboard Serial Port 1/2	<i>3F8/IRQ4,</i> <i>2F8/IRQ3,</i> <i>3E8/IRQ4,</i> <i>2E8/IRQ3,</i> <i>Auto</i> <i>Disabled</i>	Defines the onboard serial port address and required interrupt number. Onboard serial port address and IRQ are automatically assigned Onboard serial port is disabled.



BIOS Description

<ul style="list-style-type: none"> • UART 2 Mode 	<i>Standard</i> <i>HPSIR</i> <i>ASKIR</i>	Defines Serial Port 2 as standard serial port. Supports IRD mode. Supports SHARP ASK-IR protocol with maximum baud rate up to 57600bps.
<ul style="list-style-type: none"> • Onboard Parallel Port 	<i>378/IRQ7,</i> <i>278/IRQ5,</i> <i>3BC/IRQ7</i> <i>Disabled</i>	Defines onboard parallel port address and IRQ channel. Onboard parallel port is disabled.
<ul style="list-style-type: none"> • ECP mode use DMA 	<i>1. 3</i>	
<ul style="list-style-type: none"> • Parallel Port Mode 	<i>SPP</i> <i>EPP</i> <i>ECP,</i> <i>ECP+EPP</i>	Defines the parallel port mode as Standard Parallel Port (SPP), Enhanced Parallel Port (EPP), or Extended Capabilities Port (ECP).

Note: If Creative CT5880 chipset is onboard, the following item will not appear.

<ul style="list-style-type: none"> • Onboard Legacy Audio 	<i>Enabled</i> <i>Disabled</i>	Enables onboard legacy audio. Disables onboard legacy audio.
<ul style="list-style-type: none"> • Sound Blaster 	<i>Enabled</i> <i>Disabled</i>	Enables Sound Blaster. Disables Sound Blaster.
<ul style="list-style-type: none"> • SB I/O Base Address 	<i>220H/240H</i> <i>260H/280H</i>	Defines SB I/O Base Address.
<ul style="list-style-type: none"> • SB IRQ Select 	<i>IRQ5~10</i>	Selects SB IRQ.
<ul style="list-style-type: none"> • SB DMA Select 	<i>DMA0~DMA3</i>	Selects SB DMA .
<ul style="list-style-type: none"> • MPU-401 	<i>Enabled</i> <i>Disabled</i>	Enables MPU-401 Disables MPU-401
<ul style="list-style-type: none"> • MPU-401 I/O Address 	<i>300/303H~</i> <i>330-333H</i>	Defines MPU-401 I/O address.
<ul style="list-style-type: none"> • Game port (200-207H) 	<i>Enabled</i> <i>Disabled</i>	Enables game port. Disables game port.



Power Management Setup



Figure-6 Power Management Setup Menu

The following indicates the options for each item and describes their meaning.

<u>Item</u>	<u>Option</u>	<u>Description</u>
• ACPI function	<i>Enabled</i>	Validates ACPI function.
	<i>Disabled</i>	Invalidates ACPI function.
• Power Management	<i>User Define</i>	Users can configure their own Power Management Timer.
	<i>Min Saving</i>	Pre - defined timer values are used. All timers are in their MAX values.
	<i>Max Saving</i>	Pre - defined timer values are used. All timers are in their MIN values.
• ACPI Suspend Type	<i>S1</i> <i>S3</i>	Selects the suspend type.
• PM Control by APM	<i>NO</i>	System BIOS will ignore APM when Power Management is enabled.
	<i>Yes</i>	System BIOS will wait for APM's prompt before entering any PM mode e.g. Standby or Suspend.
• Video Off Option	<i>Suspend -> Off</i>	Screen blanks after the system enters either standby mode or suspend mode.
	<i>All Modes -> Off</i>	Screen blanks after the system enters all modes.
	<i>Always On</i>	Screen is always on.
• Video Off Method	<i>Blank Screen</i>	The system BIOS will only blank off the screen when disabling video.
	<i>V / H SYNC + Blank</i>	In addition to Blank Screen, BIOS will also turn off the V-SYNC & H - SYNC signals from VGA cards to monitor.
	<i>DPMS</i>	This function is enabled only for the VGA card supporting DPMS.



• Modem Use IRQ	3,5,7,9,10,11 NA	Special Wake-up event for Modem.
• Soft-off by PWRBTN	Instant-off	The system will power off immediately once the power button is pressed.
	Delay 4 Sec	The system will not power off until the power button has been pressed continuously for more than 4 seconds.
• State After power failure	On OFF	
• Wake Up Events	Press Enter	sets the following items.
• VGA	On	VGA active reloads global timer.
	Off	VGA active has no influence to global timer.
• LPT&COM	NONE	Default setting is recommended.
	LPT	
	COM	
	LPT/COM	
• HDD&FDD	ON	Default setting is recommended.
	OFF	
• PCI Master	ON	Default setting is recommended.
	OFF	
• PowerOn by PCI Card	Disable	Disables power-on by PCI card.
	Enable	Enables power-on by PCI card.
• Modem Ring Resume	Enabled	Allows the system to be powered on when a ring indicator signal comes up to UART1 or UART2 from an external modem or comes up to WOM header from an internal modem card, or when a remote wake up signal comes up to the WOL header from LAN adapter.
	Disabled	Does not allow wake up on LAN or wake up from internal/external modem.
• RTC Alarm Resume	Enabled	RTC alarm can be used to generate a wake event to power up the system which is in power-off status. You can set any date or any time to power up the system.
	Disabled	RTC has no alarm function.
• Primary INTR	On	Allows wake up from IRQ.
	Off	Does not Allows wake up from IRQ.
• IRQs Activity Monitoring	Press Enter	Reloads global timer.



PnP/PCI Configurations Setup

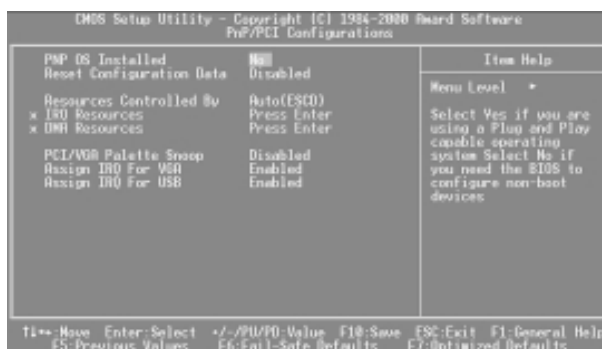


Figure-7 PnP/PCI Configurations Setup Menu

The following indicates the options for each item and describes their meaning.

<u>Item</u>	<u>Option</u>	<u>Description</u>
● PNP OS Installed	Yes	Device resources assigned by PnP OS.
	No	Device resources assigned by BIOS.
● Reset Configuration Data	Enabled	The system BIOS will reset configuration data once then automatically set this item as disabled.
	Disabled	Disables the configuration data function.
● Resources Controlled By	Manual	Assigns the system resources (IRQ and DMA) manually .
	Auto	Assigns system resources (IRQ and DMA) automatically by BIOS.
	* IRQ Resources	* IRQ Resources
● PCI/VGA Palette Snoop	Enabled	Enables PCI/VGA Palette Snoop.
	Disabled	Disables PCI/VGA Palette Snoop.
● Assign IRQ For VGA	Enabled	Assigns the needed IRQ for the VGA card.
	Disabled	Does not assign an IRQ for the VGA card, in order to release the IRQ.
● Assign IRQ For USB	Enabled	Assigns an IRQ for USB. If an USB device is used enables this item.
	Disabled	Does not assign an IRQ for USB.



PC Health Status

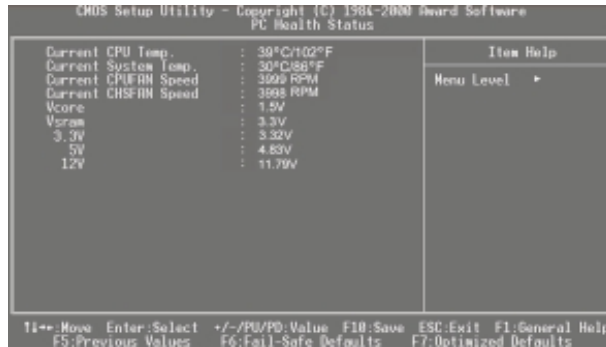


Figure-8 PC Health Status Menu

The following describes the meaning of each item.

<u>Item</u>	<u>Current Data Shown</u>	<u>Description</u>
• Current CPU Temp	39°C/102°F	Temperature of the CPU core.
• Current System Temp.	30°C/ 86°F	Temperature inside the chassis.
• Current CPUFAN Speed	3999RPM	RPM(Revolution Per Minute) speed of fan connected to the fan header CPUFAN/ CHSFAN. Fan speed value is based on an assumption that tachometer signal is two pulses per revolution; In other cases, you should regard it relatively.
• Current CHSFAN Speed	3998RPM	
• Vcore	1.5V	Displays current Voltage values including all significant voltages of the mainboard. Vcore Voltage is the CPU core voltage from the on board switching power supply. Vsram is the Northbridge voltage from the onboard switching power supply. 3.3V, 5V and 12V are voltages from the ATX power supply.
• 2.5V	2.4V	
• 3.3V	3.32V	
• 5V	4.83V	
• 12V	11.79V	



Set Supervisor/ User Password

When this function is selected, the following message appears at the center of the screen to assist you in creating a password.

ENTER PASSWORD

Type the password, up to eight characters, and press <Enter>. The password typed now will clear any previously entered password from CMOS memory. You will be asked to confirm the password. Type the password again and press <Enter>. You may also press <Esc> to abort the selection.

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

PASSWORD DISABLED

If you have selected "**System**" in "Security Option" of "BIOS Features Setup" menu, you will be prompted for the password every time the system reboots or any time you try to enter BIOS Setup.

If you have selected "**Setup**" at "Security Option" from "BIOS Features Setup" menu, you will be prompted for the password only when you enter BIOS Setup.

Supervisor Password has higher priority than User Password. You can use Supervisor Password when booting the system or entering "CMOS Setup" to modify all settings. Also you can use User Password when booting the system or entering "CMOS Setup" but can not modify any setting if Supervisor Password is enabled.

Boot with BIOS defaults

If you have made all the changes to CMOS values and the system can not boot with the CMOS values selected in setup, clear CMOS after power-down, then power on again. System will boot with BIOS default settings.



Appendix A

QDI Driver CD 2000

A QDI Driver CD 2000 is supplied with this mainboard. Insert CD 2000 that came with your mainboard into your CD-ROM drive to bring up the screen, click the options to install. The contents contained in it are showed as below:

1. Express Install

It's recommended for most users that program will be installed with the most common options.

- A. Chipset Driver
- B. Audio Codec Driver
- C. PCI sound Driver

Note: If CT5880 chipset is onboard, the CD2000 will detected it and the option "PCI Sound Driver" will appear on screen, you click this option to install Sound Blaster PCI 128 driver for CT5880. If only AC97 code is onboard, the CD 2000 will detected it and the option "Audio Codec Driver" will appear on screen, you click this option to complete the installation

2. Accessory

The softwares contained in this directory are:

- A. DirectX 7.0
- B. QDI ManageEasy
- C. PC-cillin

3. Browse CD

You could read all the contents contained in this CD, including Utility and Documents.

The files included in **Utility** are:

- A. Awdflash.exe
- B. Lf.exe

The files included in **Documents** are:

- A. Adobe Acrobat Reader V3.0 - Ar32e301.exe
- B. French Manual - K7A FR.doc, ect.

PC-cillin 98

New viruses are appearing frequently; the chance of your PC being infected increases; antivirus softwares are becoming a must. PC-cillin 98 offers you full-time active virus protection as well as manual scans, plus virus clean capability. Keeping up to date on the latest threats and updating significant files are crucial in keeping antivirus software effective. PC-cillin 98 provides Free Virus Pattern File Updates from the Trend Micro Website:

<http://www.trend.com/download/pattern.htm> or

<http://www.antivirus.com/download/pattern.htm>.

**QDI ManageEasy V2.0**

It is well known that guaranteeing the computer's security and reliability is essential. Especially today, effectively managing and monitoring the computer's hardware is even more important; because processing and exchanging critical data through computer and network are happening everyday.

Moving with the computer's development, the system of the computer will become more and more complex; at the same time, the control computer's hardware will be strengthened. Today, it is possible to monitor and manage your complex hardware from Windows 9X and Windows NT. QDI ManageEasy is a system tool, a bridge between the complex hardware and OS, used to access hardware status and to execute control functions. It supports stronger functions for Windows 9X and Windows NT. These functions enables you to view more than one hundred of the basic information about the system and monitor some key reference data concerning computer health in real time. QDI ManageEasy also helps you to use remote access and control computers in your local area network. With QDI ManageEasy, you can improve your management level.



Appendix B. Boot Logo

When you power on or reset your system, the picture shown below will be displayed on the screen.



If you press <Esc>, it switches to the booting message screen. Otherwise, it enters operating system directly. You can use “**cblogo.exe**” (included on the QDI Mainboard Utility CD) to replace it by any other logo which you prefer. Regarding the method of using **cblogo.exe** utility, please refer to it’s online help. If you don’t prefer the logo displayed on the screen during boot up, set the “Show Bootup Logo” option as Disabled in the “BIOS FEATURES SETUP” section of the BIOS.

*** We reserve the right of modifying the default full-logo of QDI without further notification.**

RecoveryEasy

Introduction:

RecoveryEasy™, the latest QDI innovation, is able to protect the system from being destroyed, by creating a so-called “mirror partition” for a current hard disk partition and backing up all the data to the mirror area. This ideal utility provides disk partition, disk data backup/recovery, CMOS settings backup/recovery and multi-boot functions. RecoveryEasy is also able to prevent the system from being attacked by different kinds of boot virus or other severe virus such as CIH. In case the system is ruined either by mistake or virus, the system can be recovered from the mirror partition. It applies the build-in BIOS technology that does not occupy either the hard disk space or the system memory. It's the best choice for both corporations and PC users.

Operation Process:

There are two hotkeys – Ctrl+Bksp and F12 for RecoveryEasy to enter “Partition” and “Recovery” user interfaces accordingly during BIOS booting up. If two or more hard disks are installed, use F5 key to choose the hard disk.

1. Partition Interface (see figure-1)

Users can create and delete partitions/mirror partitions, activate partitions, and uninstall RecoveryEasy in Partition User Interface.

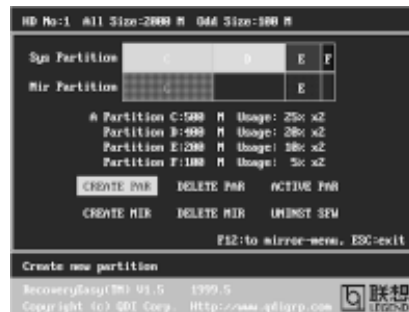


figure-1 Partition Interface

1.0 Install RecoveryEasy for the first time

- a. The utility checks the previous disk partition at first, and displays the status of the first four partitions. If there are more than four disk partitions, users will be asked to delete the redundant disk partitions, since only four partitions that can be activated are allowed to exist. However, if there're only four or fewer partitions, users can follow the system prompt and choose to install RecoveryEasy based on the previous disk partitions. In this way, the original extension partitions will be changed to normal ones, and probably the sequence of the partitions will be changed also, but the contents contained in each partition will remain the same.



- b. If choosing to install RecoveryEasy on an absolutely clear disk, the utility will delete all the previous partitions.
- c. The password is set as default setting “qdiqdi” after installing RecoveryEasy.

1.1 CREATE PAR

Function : Creates a new partition.

Limitation : When no disk space remains or 4 partitions already exist, this button is disabled.

Steps : After pressing the “CREATE PAR” button.

- a. The system will prompt whether users want to create a mirror partition for it or not.
- b. If answering “Y”, input the new partition size in Megabyte. Notice that the maximum partition size that can be assigned is half of the left disk space, which is also displayed in the status line. Another half is for the mirror partition. If answering “N”, the whole disk space left can be assigned. See figure-2.

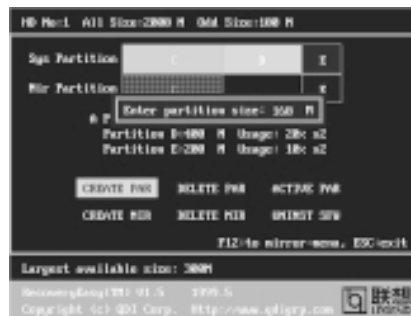


figure-2 Create Partition

Note:

- a. The system will prompt “Insert system floppy, then reset” when the first partition on the first hard disk is created.
- b. After using DOS6.xx boot disk to format C partition, the system should be reset in order to access the partition.
- c. In Windows system 1,048,576 bytes equal 1 Megabyte, while in RecoveryEasy 1,000,000 bytes equal 1 Megabyte, therefore a smaller size will be displayed in Windows system compared with the size displayed in RecoveryEasy.

1.2 DELETE PAR

Function : Deletes the last partition and its mirror partition.

Limitation : When no partition exists, this button is disabled.

Steps : After choosing this function, only the final partition can be deleted in order to keep the continuous disk space. If the warning message is confirmed, the partition will be deleted. By pressing “N” or “ESC” key, the system quits.



1.3 ACTIVE PAR

Function : Implements multi-boot function by activating one of the partitions.

Limitation : When no partition exists, this button is disabled.

Steps : If there're two or more partitions, choose one of them by pressing F5 key.

Note : After setting active partition, a letter "A" will be shown in front of this partition.

1.4 CREATE MIR

Function : Adds mirror partition for the disk partition that has no mirror.

Limitation : This function should be performed by order, for example, from partition 1 to 4. If no disk space remains or the last partition has its mirror partition already, this button is disabled.

Steps : After pressing the "CREATE MIR" button, use F5 key to choose the partition to create mirror. The partition of which the size is bigger than the left disk space will be ignored.

1.5 DELETE MIR

Function : Deletes the mirror partition.

Limitation : If there is no mirror partition, this button is disabled. This function should be performed in reverse order, for example, from partition 4 to 1.

Steps : After pressing the "DELETE MIR" button, only the final mirror partition can be deleted in order to keep the continuous disk space. If the warning message is confirmed, the mirror partition will be deleted. By pressing "N" or "ESC" key, the system quits.

1.6 UNINST SFW

Function : Uninstall RecoveryEasy.

Limitation : None.

Steps : After pressing the "UNINST SFW" button and the warning message is confirmed, RecoveryEasy will be uninstalled. By answering "N", the system quits.

Note : After RecoveryEasy is uninstalled, all the mirror areas have been disconnected with the relate partitions. If no partition is deleted or changed in size, or no other partition is created, users have chance to "Recover existing RecoveryEasy settings" when next time entering RecoveryEasy partition interface, meanwhile the password will be set as default setting "qdiqdi".

1.7 OTHERS

F12 : Switches to Recovery User Interface.

ESC : Exits from the Partition User Interface. If users made some mistakes, for example, wrongly delete a partition, do not press the "ESC" key, press the reset button on your system at once, in this way users can save their system.



F5:

- a. When two or more than two hard disks are installed on the system, use F5 key to choose the hard disk. Every time users use F5 key to switch the hard disk, the operation result for the previous hard disk is saved. When processing a certain hard disk, F5 key can be used to choose the partition.
- b. In addition, when two or more than two hard disks are installed, the sign of partitions will be changed from C, D, E, F to 1, 2, 3, 4 accordingly.

2. Recovery Interface (see figure-3)

Users can backup the partition to its mirror area, and recover the partition from its mirror area from Recovery User Interface. This interface also provides users with CMOS settings backup or recovery, and changing password functions.

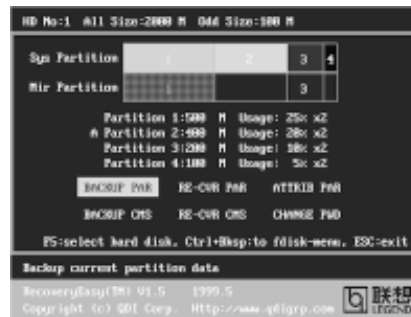


figure-3 Recovery User Interface

2.1 BACKUP PAR

Function : Backups the content of the partition to its mirror area.

Limitation : If no mirror partition exists, this button is disabled.

Steps:

- a. Use F5 key to choose the partition with mirror area existed.
- b. If the partition chosen has been backedup before, a warning message will be shown, and the time when last backup was done will be displayed in the status line. After confirming the warning message, the system performs the backup. By pressing "N" or "ESC" key, the system quits.

2.2 RE-CVR PAR

Function : Recovers the content from the mirror area to the relate partition.

Limitation : If users didn't backup any partitions before, this button is disabled.

Steps:

- a. Use F5 key to choose the backedup partition.
- b. The time when the latest backup was done will be displayed in the status line. After confirming the warning message, the system performs the content recovery. By pressing "N" or "ESC" key, the system quits.

**Note:**

- a. During the process of partition backup or recovery, a gauge will be shown as below, the backup or recovery speed is about 4-5Mbyte/s. See figure-4.

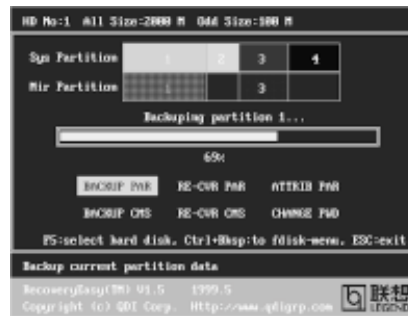


figure-4 Backup Partition

- b. If a disk I/O error occurs during the process of partition backup or recovery, this means there's physical damage on the hard disk, however users can ignore it and continue the process.

2.3 ATTRIB PAR

Function : Allows users to modify the properties of the partition (eg. FAT16 -> FAT32) after entering OS.

Limitation : None.

Steps : After pressing this button, turn on/off the switch.

Note:

- a. The switch resets to the default setting "disable" every time the system reboots.
 b. In order to implement this function, users need to enable the switch when installing the OS or modifying the partition properties. Please note: Do not create or delete partitions or change the partition size when modifying the partition properties.

2.4 BACKUP CMS

Function : Backups all CMOS settings.

Limitation : None.

Steps : After choosing this function, the current CMOS settings will be saved.

2.5 RE-CVR CMS

Function : Recovers all CMOS settings.

Limitation : None.

Steps : After choosing this function, the latest backup of the CMOS settings will be recovered. The system needs reboot in order to validate the new CMOS settings.

Note : If users have never backed up the CMOS settings, a wrong message will be shown after choosing this function.



2.6 CHANGE PWD

Function : Changes the password to enter RecoveryEasy Partition or Recovery User Interface.

Limitation : None.

Steps : Follow the system prompt, input the password no more than 6 characters twice. To delete the password, follow the system prompt and press the "Enter" key twice.

Note:

- a. The password should be no more than 6 characters, only digital and alphabetic letters are valid.
- b. Once the password is enabled, users will be asked to input the password every time they try to enter the RecoveryEasy user interfaces, and up to 3 times try is permitted.

2.7 Others

Ctrl+Bksp : Switches to Partition User Interface.

ESC : Exits from the Partition User Interface.

F5 : When two or more than two hard disks are installed on the system, use F5 key to choose the hard disk. When processing a certain hard disk, F5 key can be used to choose the partition.

FAQ:

1. What does RecoveryEasy do?

RecoveryEasy creates a so-called "mirror partition" with same size for the hard disk partition on the same hard disk, and then completely backups all the data sector by sector to the mirror area. This mirror partition is reserved to OS. When the OS ruins either by mistakes or virus, users can recover the partition from its mirror.

2. Does RecoveryEasy occupy the system resources?

Although some hard disk data protection applications can automatically protect the disk data in runtime, it lowers the system performance. Unlike these applications, RecoveryEasy need users to backup or restore data manually when needed, but it DOES NOT lower the system performance when the system is running. It does not occupy either hard disk space or system memory, additional floppy disk or ISA/PCI cards are unnecessary.

3. RecoveryEasy utilizes Build-in BIOS skill, what is build-in BIOS?

RecoveryEasy build-in BIOS means all functions of RecoveryEasy including creating partition, backuping and restoring partition are built in BIOS. Users just need to download the latest BIOS from our Website (<http://www.qdigrp.com>) when wanting to upgrade (It's free!).



- 4. Are there any hard disk limitations of RecoveryEasy?**
RecoveryEasy supports all kinds of current IDE hard disks and has no limitation on the hard disk capacity. RecoveryEasy can not provide its function for some special hard disk types such as SCSI, but it will not affect their usage.
- 5. Are there any OS limitations of RecoveryEasy?**
RecoveryEasy supports current operating systems such as DOS, Windows 95/98. However in Windows NT, Windows 2000, Unix and OS2 systems, users should notice that the disk tools bundled in the OS could change the mirror partition. On the other hand, since users can create partition with RecoveryEasy, it is unnecessary to use other disk tools.
- 6. Why does the system halt when HDD access mode is changed (eg. LBA->LARGE)?**
This is a way to protect the system from the errors of data accessing caused by changing HDD access mode. When RecoveryEasy detects such things, the system will be locked, users could reboot the system and set the HDD access mode as the original one in BIOS SETUP.
- 7. Why does the remainder size plus partitions size not match the total size shown in RecoveryEasy sometimes?**
When the location of partitions is not continuous, the above problem exists.
- 8. Are there any other disk partition tools that can modify the partition table made by RecoveryEasy?**
RecoveryEasy provides a write-protect function, so the disk tools such as Fdisk, Partition Magic, BootMenu, SmartDisk and BootStar can not modify the partition table created by RecoveryEasy. Some of the applications even terminate during operation. However the disk tools bundled in the OS such as Windows NT, Windows 2000, Unix and OS2 could change the mirror partition.
- 9. Why does it happen that a prompt “*installation can not continue*” pops up when installing Windows98 or a yellow exclamation mark shown beside IDE device in system properties?**
During Windows 98 installation, the installation program will write to MBR (Master Boot Record) which is protected by RecoveryEasy, therefore the installation will be terminated. To avoid this problem, a “ATTRIB PAR” button is provided in Recovery User Interface. Enable this switch before installing Windows 98, then the installation will be successfully completed. In order to remove the yellow question mark before IDE devices in Device Manager, enable this switch once more after system reboot.
- 10. Why does the converting of FAT16->FAT32 in PQ Magic go wrong?**
MBR will be accessed when converting FAT16 to FAT32 with PQ Magic, which is protected by RecoveryEasy, therefore the conversion will be invalidate. Enabling the “ATTRIB PAR” switch from Recovery User Interface



before converting can avoid this problem. It's the same situation as "FAT32 Converter" provided in Windows98.

11. What if partitions be wrongly deleted in RecoveryEasy?

If users delete a partition in RecoveryEasy by mistake, they can save it by pressing the Reset button on their system at once. Do not press the "ESC" key to quit RecoveryEasy, this will save the change. Do not try to create the partition again, since creating partition will clear all the content of the partition.

12. What is multi-boot?

RecoveryEasy can implement the multi-boot function by activating different partition. For example on the hard disk, partition C contains DOS, partition D contains Windows 95 version, partition E contains Windows 98 version, when activating partition C in RecoveryEasy, the system enters DOS, when activating partition E, the system enters Windows 98 version. At the same time, the sequence of the partitions is adjusted accordingly, partition E becomes C:, partition C becomes D: and partition D becomes E:. This function is the same as that of fdisk.exe, but the system needs reboot in order to make the change validate for fdisk.exe.

13. What if computer accidentally power off when backuping (recovering)?

The partition should be completely backuped or recovered. If the computer accidentally powers off, the partition should be backuped or recovered once again.

14. What if users lose the password?

To make sure the security, the password is saved in the hard disk. **It's very important for users to remember the password.** If forgetting the password, contact us, clearing CMOS is useless.

15. Does RecoveryEasy protect hard disk against CIH?

RecoveryEasy can strongly protect the hard disk from boot-virus, as well as the attack of CIH. If the system is attacked by CIH, RecoveryEasy will automatically recover the MBR and each partition boot record before system boots up, and try to recover the FAT. In this way the system can basically boot up, then users can use some anti-virus application to kill the virus. However this depends on how CIH virus affects the system. CIH normally outbreaks on 26th every month, if the system cannot boot up that day, power off the computer instantly, and use the second safe way to recover the system, that is, recover the partition from its mirror area from Recovery User Interface. Remember to create a mirror partition and backup before virus attacks the system.

Item Checklist

Completely check your package. If you discover damaged or missing items, contact your retailer.

- KinetiZ 7T mainboard
- QDI Driver CD 2000
- I/O shield
- 1 IDE ribbon cable
- 1 floppy ribbon cable
- 1 10-pin ribbon cable with bracket for USB3 and USB4(manufacturing option)
- User's manual

Notice

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If you need any further information, please visit our web-site: "www.qdigrp.com".

Board Layout of KinetiZ 7T V1.0

**P/N: 430-01021-801-00
Manual for KinetiZ 7T Ver 1.0**