

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 7A

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 SYSTEMHANDEL GMBH

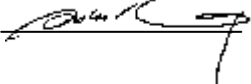
QDI COMPUTER (NETHERLANDS) B.V.

QDI COMPUTER (FRANCE) SARL

QDI COMPUTER HANDELSGMBH

QDI COMPUTER (ESPANA) S.A.

QDI COMPUTER (SWEDEN) AB

Signature :  . Place / Date : HONG KONG/2000

Printed Name : Anders Cheung Position/ Title : President

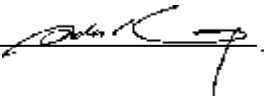
Declaration of conformity



Trade Name:	QDI Computer (U . S . A .) Inc.
Model Name:	KinetiZ 7A
Responsible Party:	QDI Computer (U . S . A .) Inc.
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Equipment Classification:	FCC Class B Subassembly
Type of Product:	Mainboard
Manufacturer:	Quantum Designs (HK) Inc.
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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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Installation de la carte mère KinetiZ 7A

1. Assurez-vous que votre ensemble est complet: carte mère, câbles IDE et FLOPPY, notice d' utilisation et CD-ROM d' installation.
2. Vérifiez que l' alimentation est débranchée et reliez-vous à la terre par une courroie à votre poignet. A défaut, maintenez le contact de vos deux mains avec un objet lui-même relié à la terre, ou une partie en métal de votre système.
3. Fixez la carte mère dans le boî tier grâce aux vis fournies avec celui-ci.
4. Insérez le processeur dans son logement avec son ventilateur que vous brancherez au connecteur «CPUFAN».
5. Insérez la/les barrette(s) mémoire dans les slots DIMM.
6. Installez vos éventuelles cartes PCI et AMR dans les slots prévus à cet effet (voir page centrale du manuel).
7. Branchez vos périphériques IDE et FLOPPY sur les connecteurs prévus à cet effet grâce aux nappes fournies avec la carte. Vérifiez que le sens de branchement est correct (liseré rouge du câble sur la broche 1 du connecteur).
8. Reliez les câbles du boî tier aux connecteurs prévus à cet effet (Connecteur d' alimentation, LED de marche/arrêt, disque dur, haut-parleur...). Refermez le boî tier.
9. Branchez les périphériques externes sur les sorties du fond de panier: clavier, souris PS/2, périphériques USB, moniteur, imprimante...
10. Lorsque tous les éléments du système sont installés physiquement, rebranchez l' unité centrale.





1. Chipset:

Les pilotes des chipsets VIA du répertoire \ChipDrv\Via peuvent être utilisés sur cette carte mère.

Insérez le CD-ROM dans votre lecteur et cliquez sur « Chipset Driver » pour installer les pilotes

2. Logiciel PC-cillin 98:

Pour Windows 95/98, version anglaise, dans le répertoire \Pccillin\Win9X. Lancez setup.exe pour l'installation.

Pour Windows NT version anglaise, il se trouve dans le répertoire \Pccillin\Winnt40, lancez setup.exe.

Numéro de série: PNEF-9991-6558-5857-5535.

3. QDI ManageEasy:

Lancez le setup.exe du répertoire \QME pour installer le ManageEasy. Pour des informations détaillées sur le ManageEasy, référez-vous au manuel ManageEasy du répertoire \Doc.

N'oubliez pas de redémarrer votre système pour que les changements soient pris en compte.

4. RecoveryEasy

RecoveryEasy™, la dernière innovation de QDI, permet de protéger le système des destructions en créant une «partition miroir» de la partition courante du disque dur et en sauvegardant toutes les données dans ce «miroir».

Cette utilitaire fournit partition du disque, récupération/sauvegarde des données, récupération/sauvegarde des réglages du CMOS et fonctions multi-boot.

RecoveryEasy permet également la protection du système contre les divers types de virus de boot tels que CIH. Dans le cas où le système est perdu soit par erreur, soit à cause d'un virus, il peut être récupéré depuis la partition miroir. Cette innovation utilise la technologie du Bios intégré qui n'occupe ni l'espace disque, ni la mémoire du système. C'est la solution idéale pour l'utilisateur.

Il faut presser les touches Ctrl + Bksp et F12 pour entrer dans les interfaces «Recovery» et «Partition» durant le démarrage du Bios.

ATTENTION : lisez attentivement le manuel du RecoveryEasy traduit sur le CD-ROM QDI avant d'installer cette fonction.

Très important : n'oubliez pas votre mot de passe, faute de quoi vous n'auriez plus accès au RecoveryEasy, même après avoir effectué un Clear CMOS.





Chapter 1

Introduction

Overview

The KinetiZ 7A green mainboard utilizes the VIA Apollo KX-133 chipset, providing a cost-effective PC/ATX platform with perfect capability and high performance to support AMD Slot A Athlon processors. The VIA® VT8371 chipset and VIA® VT82C686A chipset provide some new features such as AGP 4X mode and UltraDMA66. Equipped with three memory modules sockets, PC133MHz SDRAM and 768MB PC133 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 x 210mm.

Microprocessor

- Supports AMD Slot A Athlon processors at 500/550/600/650/700/750/800/850MHz and future processors.
- Supports 200MHz host bus.
- On-board VDDQ (for AGP), VSRAM (for L1 Cache), 2.5V regulators and 3.3V switching power supply.
- Mutiphase power from 1.30 - 2.05V for Athlon Processors.

Chipset

- Apollo KX-133 chipset: VT8371, VT82C686A.

System memory

- Provides three 168 pin DIMM sockets, supports 768MB PC100/133 ECC or non-ECC SDRAM DIMMS, VCM and SDRAM.
- Minimum memory size is 8MB, maximum memory size is 1.5G MB.
- 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

- Build in VIA® 82C686A
- 16-bit Stereo Codec

AGP SLOT

- Supports 4X mode & AGP 2.0 compliant.

Advanced features

- PCI 2.2 Specification compliant.
- 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.
- Provides on-board 3.3V regulator to support ATX power supply without 3.3V output.
- 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 bootup.

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 and 1 AMR.





Introduction to New Features

BIOS-ProtectEasy

The BIOS of the mainboard is contained inside the FlashROM. 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 improve 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 7A 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 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 SuspendType" 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.





Chapter 2

Installation Instructions

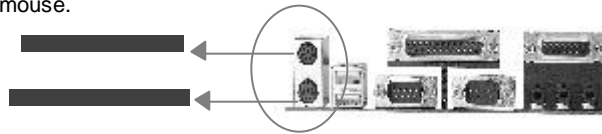
This section covers External Connectors and Jumper Settings. Refer to the mainboard layout chart for locations of all jumpers, external connectors, slots and I/O ports. Furthermore, this section lists all necessary connector pin assignments for your reference. The particular state of the jumpers, connectors 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.



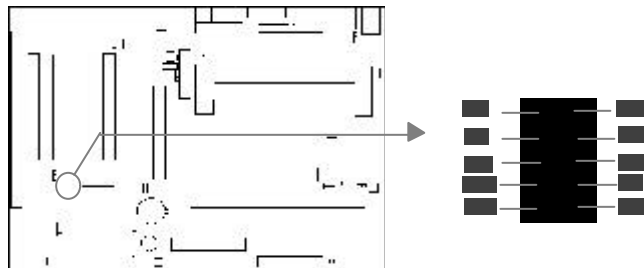
USB1, USB2

Two USB ports are available for connecting USB devices.



USB3, USB4

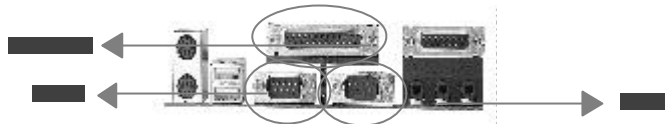
Two USB ports are not available on the back panel. Therefore, we provide a 10-pin ribbon cable with bracket to connect Built-in on-board USB header. (manufacturing option)





Parallel Port Connector and Serial Port Connector (UART1, UART2)

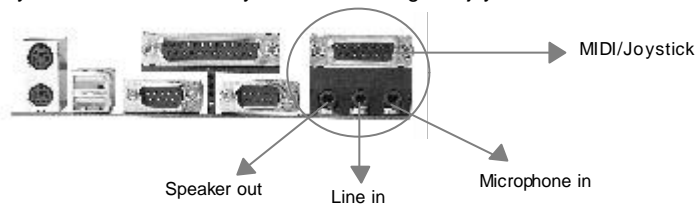
The parallel port connector can be connected to a parallel device such as a printer, while the serial port connector can be connected to a serial port device such as a serial port mouse. You can enable/disable them and choose the IRQ or I/O address in "Integrated Peripherals" from AWARD BIOS SETUP.



Line-in jack, Microphone-in jack, Speaker-out jack and MIDI/Joystick connector

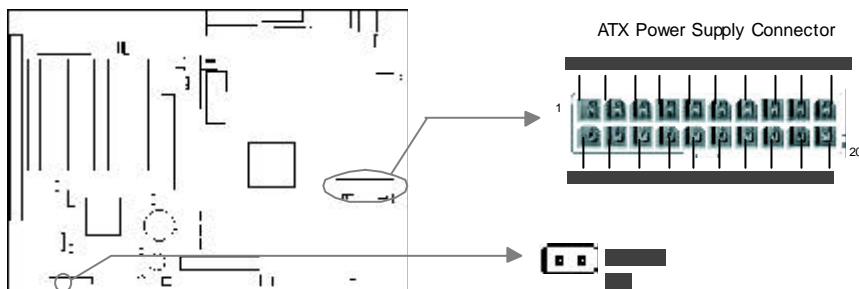
The Line-in jack can be connected to devices such as a cassette or minidisc player for playback or recording. The Microphone-in jack can be connected to a microphone for voice input. The Speaker-out jack allows you to connect speakers or headphones for audio output from the internal amplifier.

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.

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.

ACPI LED Connector (ACPI_LED)(Reserved)

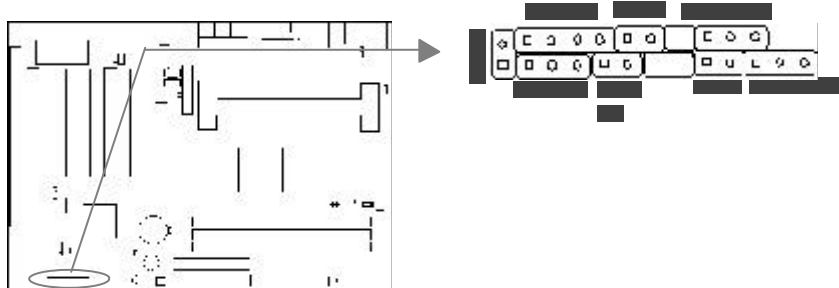
The ACPI LED is double-color lights with three pins. Pin1&Pin2 drive different color lights. If Pin1 drives the yellow light, Pin2 drives the green light, the following status will come out. When the system is in power up status, the LED is green on. When the system is in suspend status, the LED is green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

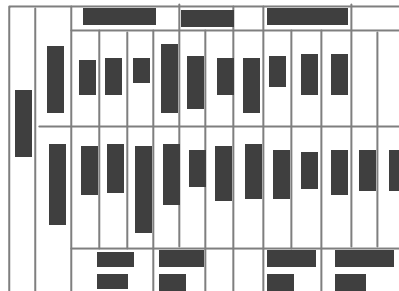
GREEN LED Connector (GREEN_LED)

The GREEN LED has four 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.

Hardware Green Connector (SLEEP)

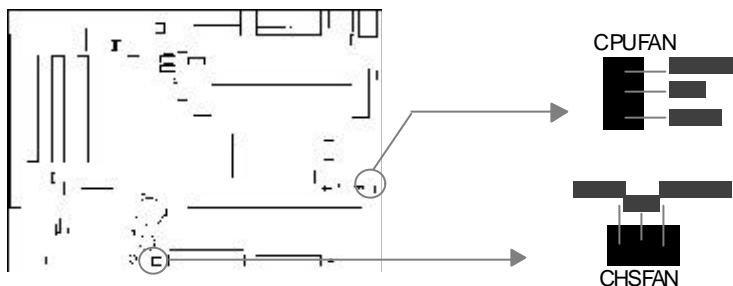
Push once the switch connected to this header, the system enters suspend mode.





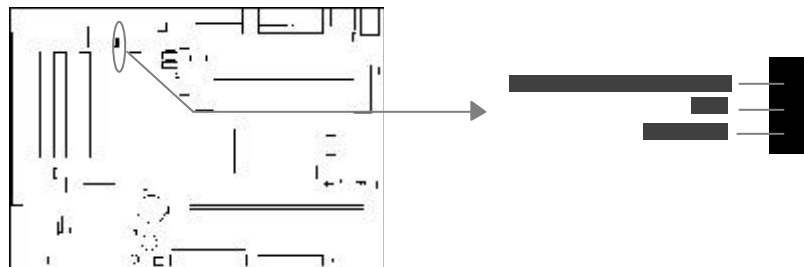
Fan Connector (CPUFAN, CHSFAN)

The fanspeed of these two fans 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.



Wake-Up On LAN (WOL)

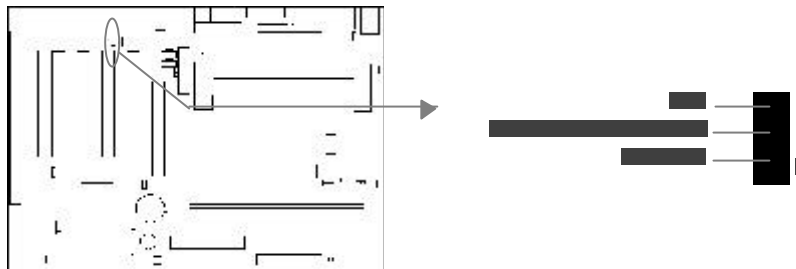
Through the Wake-Up On LAN function, a wake event occurring from the network can wake up the system. If this function is to be used, please be sure an ATX 2.01 power supply of which 5VSB line is capable of delivering 720mA, and a LAN adapter which supports this function are used. Then connect this header to the relevant connector on the LAN adapter, set “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.





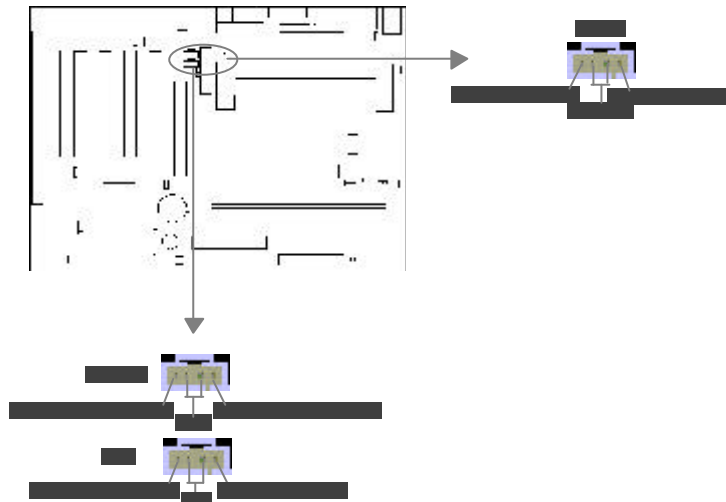
Wake-Up On Internal Modem (WOM)

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.



Internal Audio Connectors (AUX, CDLIN, MODEM)

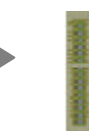
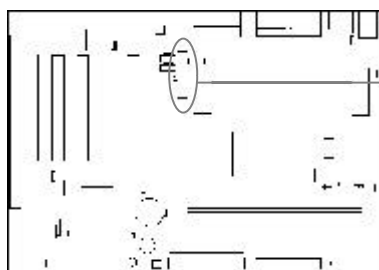
AUX and CDLIN connectors allow you to receive stereo audio input from such sound sources as a CD-ROM, TV tuner, or MPEG card. The MODEM connector allows the onboard audio to interface with a voice modem card with a similar connector. It also allows the sharing of mono_in (such as a phone) and mono_out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





Audio/Modem Riser Interface Connector (AMR)

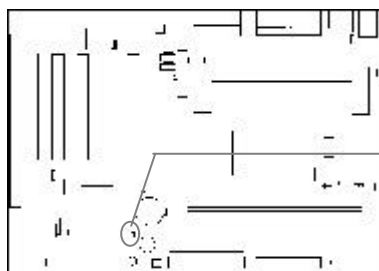
The AMR Interface Connector is the interface between the mainboard and the Audio/Modem Riser card. The connector provides all necessary signals which supports several different configurations of audio and modem in the system, such as audio and modem on the Riser, audio on the mainboard and modem on the 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.



AMR Interface Connector

Chassis Security Switch (CHSSEC)

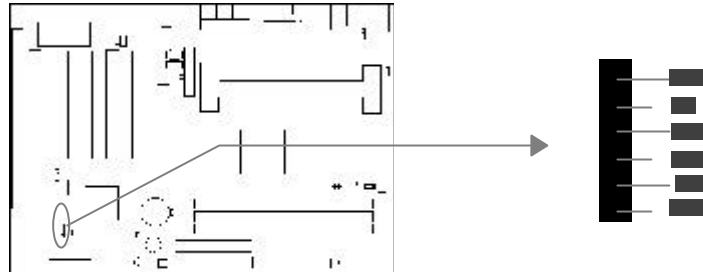
The connector connects to the chassis security switch on the case. The system can detect the chassis intrusion through the status of this connector. If the connector has been closed once, the system will record the status and indicate the chassis has been opened. You can receive this information from QDI ManageEasy software.



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
PCI 1	First PCI slot.
PCI 2	Second PCI slot.
PCI 3	Third PCI slot.
PCI 4	Fourth PCI slot.
PCI 5	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 (J13)

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.





Disable STR

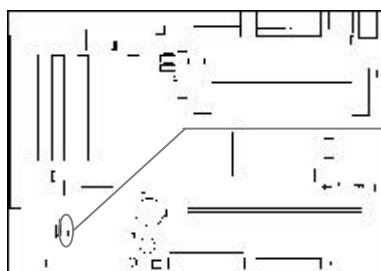


EnableSTR



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.



Flash Write Enabled



Flash Write Disabled



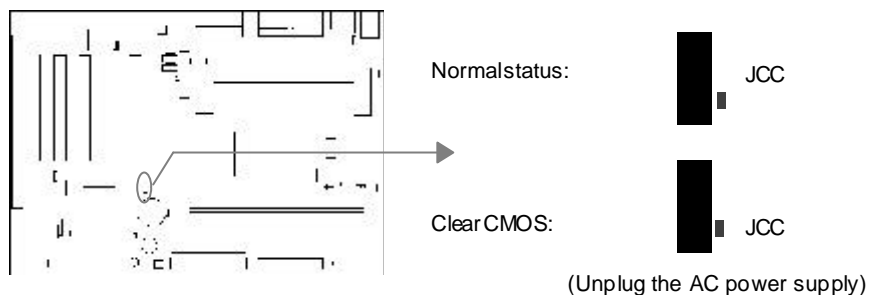
Setting the jumper JAV as open (default), meanwhile disabling the "BIOS_ProtectEasy" item from "Advanced BIOS Features" in AWARD BIOS CMOS Setup, allows you to flash the BIOS to the Flash ROM.

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.

Clear CMOS (JCC)

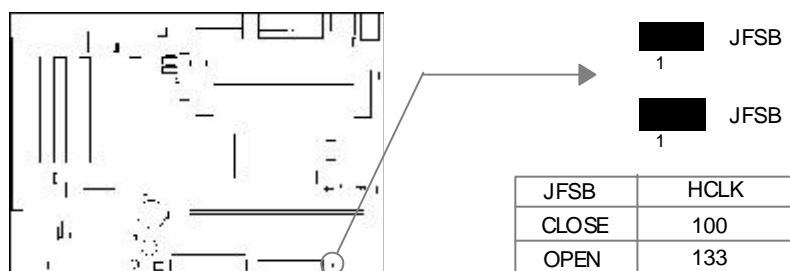
If you want to clear CMOS, unplug the AC power supply first, close JCC (pin1 & pin2) once, set JCC back to the normal status with pin2 & pin3 connected, then power on the system.





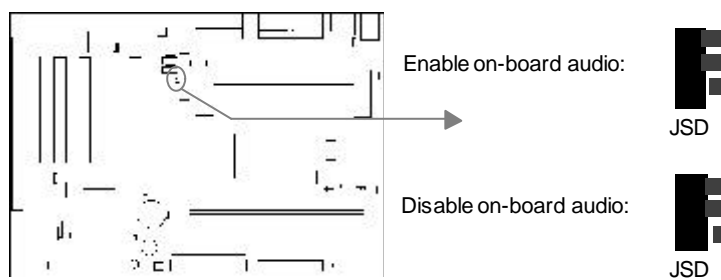
Overclocking Jumper Setting (JFSB)

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.



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.





Installation Instruction

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Manual for KinetiZ 7A



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 closed and disable the "BIOS_ProtectEasy" 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.



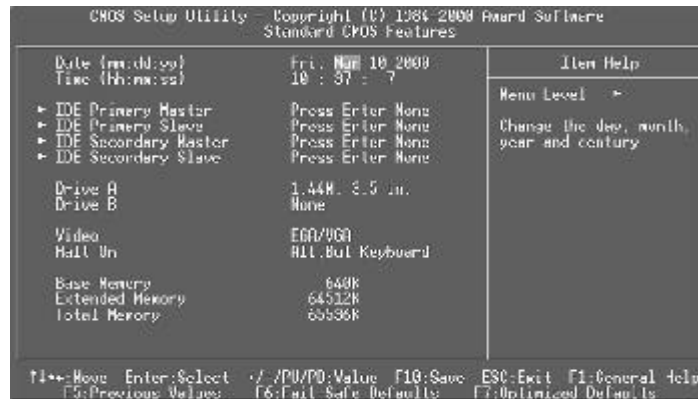


Figure-2 Standard CMOS Setup Menu

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

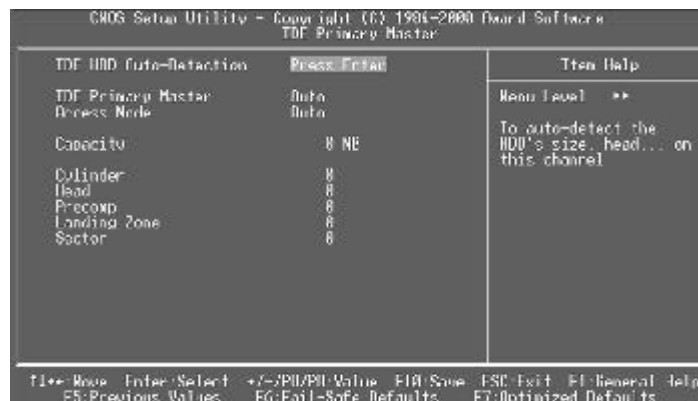


Figure-2-1 IDE Primary Master Setup Menu

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

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.

BaseMemory	The POST of the BIOS will determine the amount of base (or conventional) memory installed in the system.
ExtendedMemory	The BIOS determines how much extended memory is presented during the POST.
TotalMemory	Total memory of the system equals the sum of the above memory.

