



Chapter 3

BIOS Description

Utility Support:

FLASH.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 encountering problems.**
- **Before upgrading your BIOS, review the description below to avoid making mistakes, resulting in a destroyed BIOS and a non-working system.**

When you are encountering problems, for example, you find your system doesn't support the new CPU which is released after our current mainboard, you may therefore upgrade the BIOS.

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. Copy FLASH.EXE from the directory \Utility on the QDI Mainboard Utility CD 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. Uncompress the file download, copy the BIOS file (xx.bin) onto the bootable diskette, and write down the checksum of this BIOS which is included in readme file.
5. Reboot the system from the bootable diskette which you have created.
6. Then run the FLASH utility at the **A:** prompt. During the process, the system will prompt : ' Do you want to save the BIOS(Y/N)' . If you type ' Y' , the system will prompt for the BIOS name. The system will also display the checksum which should be exactly the same as the checksum you copied from the readme file. Don't turn off power or reset the system until the BIOS upgrade has been completed.

Concerning how to run the FLASH utility, please refer to the following descriptions:

Usage: FLASH [BIOSfile] [/c[<command...>]][/h]

FLASH [BIOSfile] [/g]

/c: Flashing memory will clear previous settings. Default allows settings to remain.

<command> function definition:

c: clear CMOS;

p: clear PnP;

d: clear DMI.



/n: programs BIOS without prompting. If this option is chosen:

Be sure your new BIOS is compatible with your mainboard. If not, the system will be damaged.

/g: Retrieves BIOS file from BIOS ROM.

Examples:

A:\FLASH.EXE BIOSfile.bin

A:\FLASH.EXE BIOSfile.bin /cdpc/n

A:\FLASH.EXE BIOSfile.bin /g

Note: FLASH utility runs incorrectly at Windows DOS prompt.



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

Note:The “System Monitor” item will not be displayed if there is no system monitor hardware on the mainboard.

Load Setup Defaults

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

Standard CMOS Setup

The basic CMOS settings included in “Standard CMOS Setup” 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 you want in each item.

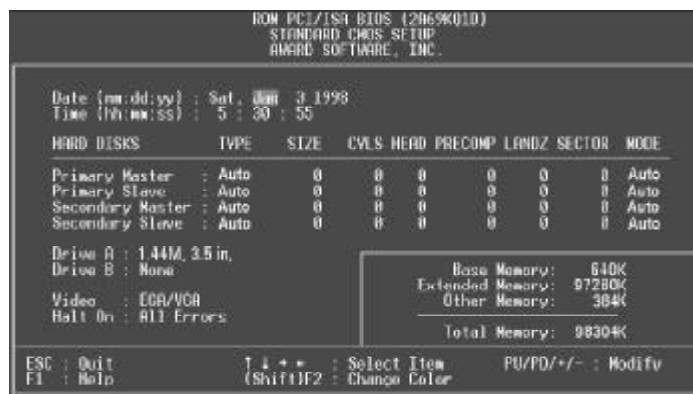


Figure-2 Standard CMOS Setup Menu

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

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 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.
Other Memory	This is the memory that can be used for different applications. Shadow RAM is most used in this area.
Total Memory	Total memory of the system equals the sum of the above memory.



SpeedEasy CPU Setup



Figure-3 SpeedEasy CPU Setup

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

Item	Option	Description
• CPU Model		BIOS automatically detects the CPU model, therefore this item is shown only. It could be Pentium(R)II, Intel (R) Celeron(TM) or Pentium III(R) depending on the processor chosen.
• CPU Speed	SpeedEasy	CPU frequency should be set according to the CPU type. For Celeron™ or Pentium®II (66MHz front-side bus) processors, you can choose from 200MHz (66X3), 233MHz(66X3.5), 266MHz (66x4), 300MHz(66X4.5), 333MHz (66X5), 366MHz(66x5.5) 400MHz(66x6), 433MHz(66x6.5), For Pentium®II or Pentium®III processors with 100MHz front-side bus, you can select from 300MHz(100X3), 350MHz (100X3.5), 400MHz (100X4), 450MHz(100X4.5), 500MHz(100X5), 550MHz(100x5.5) or 600MHz(100x6).
	Jumper Emulation	This item is only for users who understand all the CPU parameters, i.e. System Bus Frequency '100MHz / 66MHz' and multiplication of Processor Core Frequency to System Bus frequency "x2, x2.5, x3, x3.5, x4, x4.5, x5, x5.5, x6, x6.5, x7, x7.5, x8".

Warning:

Do not set CPU frequency higher than its working frequency. If you do, we will not be responsible for any damages caused.



BIOS Features Setup



Figure-4 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>
• ChipAway Virus On Guard	<i>Enabled</i>	Guards against boot Virus threats early in the boot cycle, before they have a chance to load into your system, ensuring your computer boots to a clean operating system.
	<i>Disabled</i>	Invalidates this function.
• CPU L1/L2 Cache	<i>Enabled</i>	Enables CPU internal Level1/Level2 cache.
	<i>Disabled</i>	Disables CPU internal Level1/Level2 cache.
• CPU L2 Cache ECC	<i>Enabled</i>	Enables CPU L2 Cache ECC (Error Checking and Correction) function.
	<i>Disabled</i>	Disables CPU L2 Cache ECC function.
• Quick Power On Self Test	<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.
• Boot from LAN first	<i>Enabled</i>	Boot from LAN is ahead of any boot sequence selection (LAN adapter must support this function).
	<i>Disabled</i>	Does not boot from LAN first.
• Boot Sequence	<i>C,A,SCSI,...</i> <i>C,CDROM,A</i> <i>LS/ZIP, C</i>	Any search sequency can be chosen for booting.
• Swap Floppy Drive	<i>Enabled</i>	Exchanges the assignment of A&B floppy drives.
	<i>Disabled</i>	The assignment of A&B floppy drives are normal.



• Boot Up Numlock Status	<i>On</i>	Keypad is used as number keys.
	<i>Off</i>	Keypad is used as arrow keys.
• Gate A20 Option	<i>Normal</i>	The A20 signal is controlled by the keyboard controller or chipset hardware.
	<i>Fast</i>	Default setting. The A20 signal is controlled by Port 92 or the chipset specific method.
• Memory Parity/ECC Check	<i>Enabled</i>	Enables the Error Checking & Correction if ECC memory is used.
	<i>Disabled</i>	Disables the ECC function.
• Password Setting	<i>System</i>	The system will not boot and access to BIOS Setup will be denied if the correct password is not entered when prompted.
	<i>Setup</i>	The system will boot up, but access to BIOS Setup will be denied if the correct password is not entered when prompted.
• IDE Second Channel Control	<i>Enabled</i>	Enables the second IDE channel.
	<i>Disabled</i>	Disables the second IDE channel and releases the IRQ.
• OS Select For DRAM>64MB	<i>Non-OS2</i>	If your operating system is not OS/2, please select this item.
	<i>OS2</i>	If system DRAM is more than 64MB and the operating system is OS/2, please select this item.
• HDD S.M.A.R.T Capability	<i>Enabled</i>	Enables S.M.A.R.T hard disk support.
• Video BIOS Shadow	<i>Disabled</i>	Invalidates this feature.
	<i>Enabled</i>	Video BIOS will be copied to RAM. Video Shadow will increase the video speed.
• C8000~CBFFF Shadow: DC000-DFFFF Shadow:	<i>Disabled</i>	Video shadow is disabled.
	<i>Enabled</i>	Optional ROM will be copied to RAM by 16K bytes per unit.
• Delay For HDD 0~15 (Secs):	<i>Disabled</i>	The shadow function is disabled.
• Show Bootup Logo	<i>0~15</i>	Sets the pre-delay time for hard disk to be accessed by the system.
	<i>Disabled</i>	Enables the logo when system boots up.
	<i>Enabled</i>	Logo will not be shown when system boots up.



Chipset Features Setup



Figure-5 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>EDO 50ns</i> <i>EDO 60ns</i> <i>Normal</i> <i>Medium</i> <i>Fast</i> <i>Turbo</i>	These items are of selected EDO DRAM read/write timing. Ensure your DIMMs are as fast as 50ns, otherwise select 60ns. The faster you choose, the higher performance you receive.
• SDRAM Cycle Length	<i>2/3</i>	Define the CLT timing parameter of SDRAM expressed in 66MHz clocks. Latency Time = 2 clocks Latency Time = 3 clocks
• Memory Hole	<i>Enabled</i> <i>Disabled</i>	Memory Hole at 15-16M is reserved for expanded ISA card. Do not set this memory hole.
• Read Around Write	<i>Enabled</i> <i>Disabled</i>	Enables read around Write. Disables read around write.
• Concurrent PCI/ HOST	<i>Enabled</i> <i>Disabled</i>	Enables concurrent PCI/Host. Disables concurrent PCI/Host.
• Video RAM Cacheable	<i>Enabled</i> <i>Disabled</i>	Besides conventional memory, video RAM is also cacheable. Video RAM area is not cacheable.
• AGP Aperture Size (MB)	<i>4-256</i>	Sets the effective size of the Graphics Aperture to be used in the particular PAC Configuration.
• AGP-2X Mode	<i>Enabled</i> <i>Disabled</i>	Supports 133MHz 2X mode. Does not support 133MHz 2X mode.
• Onchip USB	<i>Enabled</i> <i>Disabled</i>	Enables the onchip USB controller. Disables the onchip USB controller.



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|----------------------------|-----------------|---|
| • USB Keyboard Support | <i>Enabled</i> | USB keyboard support is enabled. |
| | <i>Disabled</i> | USB keyboard support is disabled. |
| • Close Empty DIMM/PCI Clk | <i>Enabled</i> | Closes empty DIMM or PCI clock to reduce EMI. |
| | <i>Disabled</i> | Does not close empty DIMM or PCI clock. |
| • Clock Spread Spectrum | <i>Enabled</i> | Enables Clock Spread Spectrum to reduce EMI. |
| | <i>Disabled</i> | Disables Clock Spread Spectrum. |



Power Management Setup



Figure-6 Power Management Setup Menu

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

Item	Option	Description
• 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.
• PM Control by APM	No	System BIOS will ignore APM when Power Management is enabled.
	Yes	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>	The system BIOS will disable the video when entering suspend mode.
	<i>All Modes-off</i>	The system BIOS will disable the video when entering all power-saving mode.
	<i>Always On</i>	The video remains 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 Support</i>	This function is enabled only for the VGA card supporting DPMS.
• Soft-off by PWRBTN	<i>Instant-off</i>	The system will power off immediately once the power button is pressed.
	<i>Delay 4 Sec</i>	The system will not power off until the power



• CPU Fan In Suspend	<i>On</i>	button has been pressed continuously for more than 4 seconds. CPU fan remains on when the system enters suspend mode.
	<i>Off</i>	CPU fan will be automatically turned off when the system enters suspend mode.
• HDD Power Down	<i>Disabled</i>	Disables HDD Power Down Timer.
	<i>1 ~ 15 Min</i>	Defines the continuous HDD idle time before the HDD enters power saving mode (motor off).
• Doze mode	<i>Disabled</i>	The system never enters Doze mode.
	<i>10Sec ~ 1 Hr</i>	Defines the continuous idle time before the system enters Doze mode. If any items defined in "PM Events" are on and activated, the system will be woken up.
• Suspend Mode	<i>Disabled</i>	The system never enters Suspend mode.
	<i>10Sec~ 1Hr</i>	Defines the continuous idle time before the system enters Suspend mode. If any items defined in "PM Events" are on and activated, the system will be woken up.
• VGA	<i>On</i>	VGA active reloads global timer.
	<i>Off</i>	VGA active has no influence to global timer.
• LPT&COM HDD&FDD DMA/master	<i>LPT/COM</i>	Set the options of these items to reload global timer.
	<i>OFF/ON</i>	
• Wake Up On LAN	<i>ON/OFF</i>	Allows the system to be powered on when a remote wake up signal comes up to the WOL header from LAN adapter, or when a ring indicator signal comes up to UART1/UART2 from an external modem or comes up to WOM header from an internal modem card.
	<i>Enabled</i>	
• Modem Ring Resume	<i>Disabled</i>	Does not allow wake up on LAN.
	<i>Enabled</i>	Allows the system to be powered up 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.
• RTC Alarm Resume	<i>Disabled</i>	Does not allow Ring Power-on.
	<i>Enabled</i>	RTC alarm can be used to generate a wake event to power up the system which is in soft power-down status. You can set any date or any time to power up the system.
• Primary INTR IRQ (3-15)	<i>Disabled</i>	RTC has no alarm function.
	<i>Primary</i>	Reload global timer.
• HDD Down In Suspend	<i>Secondary</i>	No influence to global timer, except finishing an operation that IRQ "X" requests.
	<i>Disabled</i>	No influence to global timer.
	<i>Enabled</i>	HDD's motor will be off when the system enters suspend mode.
	<i>Disabled</i>	HDD's motor remains on.



PNP/PCI Configuration Setup

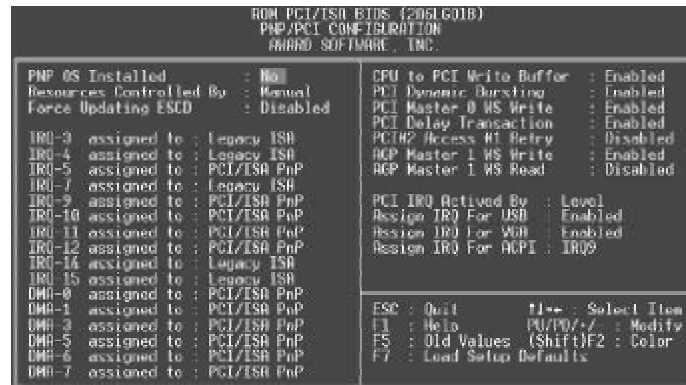


Figure-7 PNP/PCI Configuration Setup Menu

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

Item	Option	Description
• PNP OS Installed	Yes No	Device resources assigned by PnP OS. Device resources assigned by BIOS.
• Resources Controlled By	Manual Auto	Assigns the system resources (IRQ and DMA) manually . Assigns system resources (IRQ and DMA) automatically by BIOS.
• Force Updating ESCD	Enabled Disabled	The system BIOS will force updating ESCD once, the automatically set this item as disabled.
• IRQ-3~IRQ-15 assigned to	Legacy ISA PCI/ISA PnP	The specified IRQ-x will be assigned to ISA only. The specified IRQ-x will be assigned to ISA or PCI.
• DMA-0~DMA-7 assigned to	Legacy ISA PCI/ISA PnP	The specified DMA-x will be assigned to ISA only. The specified DMA-x will be assigned to ISA or PCI.
• CPU to PCI Write Buffer	Enabled Disabled	Enables CPU to PCI Write Buffer. Disables CPU to PCI Write Buffer.
• PCI Dynamic Bursting	Enabled Disabled	Enables PCI Dynamic Bursting. Disables PCI Dynamic Bursting.
• PCI Master 0 ws Write	Enabled Disabled	Enables PCI Master ws Write. Disables PCI Master ws Write.
• PCI Delay Transaction	Enabled Disabled	Enables PCI Delay Transaction. Disables PCI Delay Transaction.



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|--------------------------|-----------------------------------|--|
| • PCI #2 Access #1 Retry | <i>Enabled</i>
<i>Disabled</i> | Enables PCI #2 Access #1 Retry.
Disables PCI #2 Access #1 Retry. |
| • AGP Master 1 ws Write | <i>Enabled</i>
<i>Disabled</i> | Enables AGP Master 1 ws Write.
Disables AGP Master 1 ws Write. |
| • AGP Master 1 ws Read | <i>Enabled</i>
<i>Disabled</i> | Enables AGP Master 1 ws Read.
Disables AGP Master 1 ws Read. |
| • PCI IRQ Activated By | <i>Level</i>
<i>Edge</i> | Select PCI IRQ Active mode. |
| • Assign IRQ for USB | <i>Enabled</i>
<i>Disabled</i> | Assigns an IRQ for USB. If an USB device is used, enables this item.
Does not assign an IRQ for USB. If no USB device is used, disabling this item can release the IRQ. |
| • Assign IRQ for VGA | <i>Enabled</i>
<i>Disabled</i> | Assigns the needed IRQ for the VGA Card.
Does not assign an IRQ for the VGA card, in order to release the IRQ. |
| • Assign IRQ for | <i>IRQ9~IRQ11</i> | Assigns the IRQ for ACPI. |



Integrated Peripherals

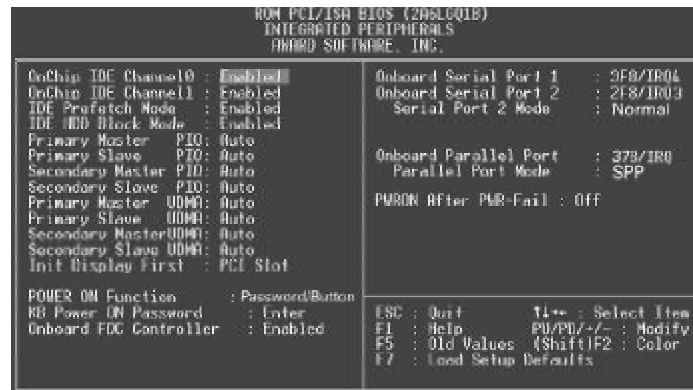


Figure-8 Integrated Peripherals Menu

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 HDD Block Mode	<i>Enabled</i> <i>Disabled</i>	Allows IDE HDD to read/write several sectors at once. IDE HDD only read/write a sector once.
• IDE Primary/ Secondary Master/Slave PIO	<i>Mode 0 - 4</i> <i>Auto</i>	Defines the IDE primary/secondary master/ slave PIO mode. The IDE PIO mode is defined by auto -detection.
• IDE Primary/ Secondary Master/Slave UDMA	<i>Auto</i> <i>Disabled</i>	Ultra DMA mode will be enabled if an ultra DMA device is detected. Disables this function.
• Init Display First	<i>PCI SLOT</i> <i>AGP</i>	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.
• POWER ON FUNCTION	<i>Password</i> <i>/Button</i>	Either the power button or the keyboard password can be used to power up the system. Other than choosing this option, the password should be set to implement the keyboard password power-on function.



	<i>Password</i>	Enables the keyboard password power-on function and disables the power button's power-on function. Other than choosing this option, the password should be set to implement this function. Note: 1. If the option(Password) is chosen, the jumper JKB must be set as pin1&pin2 closed, or you will be unable to power up the system. 2. The keyboard password must be set no more than 5 characters and can only use the numbers and alphabetic letters. The password will always remain unless you clear CMOS or reset it.
• Onboard FDC 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>	Defines the onboard serial port address and required interrupt number. Onboard serial port address and IRQ are automatically assigned
• Serial Port 2 Mode	<i>Disabled</i> <i>Standard</i> <i>Sharp IR</i> <i>IrDA SIR</i>	Onboard serial port is disabled. Defines Serial Port 2 as standard serial port. Supports SHARP ASK-IR protocol with maximum baud rate up to 57600bps. Supports IrDA version1.0 SIR protocol with maximum baud rate up to 115.2Kbps.
• 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.
• Parallel Port Mode	<i>SPP</i> <i>EPP</i> <i>ECP,</i> <i>ECP+EPP</i>	Onboard parallel port is disabled. Defines the parallel port mode as Standard Parallel Port (SPP), Enhanced Parallel Port (EPP), or Extended Capabilities Port (ECP).
• PWRON After PWR-Fail	<i>Off</i> <i>On</i> <i>Former-Sts</i>	The system remains OFF when the AC Power supply resumes. The system will be powered up when the AC power supply resumes. Whatever the system status is, before the AC power supply cuts off, the system resumes in the previous status (ON/OFF) when the AC power supply resumes.



System Monitor

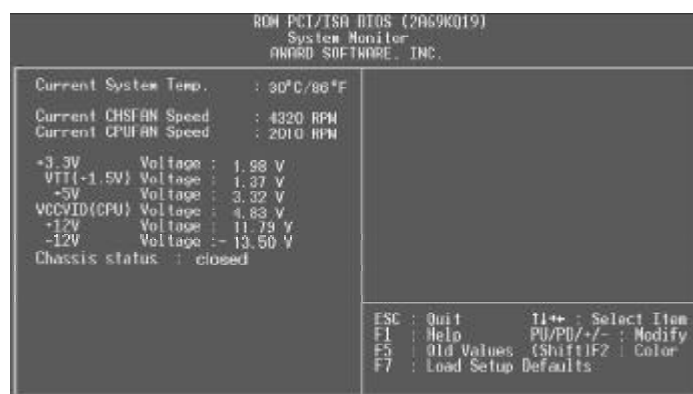


Figure-9 System Monitor Menu

The following describes the meaning of each item.

<u>Item</u>	<u>Current Data Shown</u>	<u>Description</u>
• Current System Temp.	30°C/ 86°F	The temperature inside the chassis connected to the fan header CPUFAN/ CHSFAN/BAKFAN. RPM(Revolution Per Minute) speed of fan. 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	2010RPM	
Current CPUFAN Speed	4320RPM	
• +3.3V Voltage	3.32V	Displays current Voltage values including all significant voltages of the mainboard. +3.3V, +5V, +12V, -12V, are voltages from the ATX power supply, VTT (+1.5) Voltage is GTL Termination Voltage from the on-board regulator, and VCCVID (CPU) Voltage is the CPU core voltage from the on board switching power supply.
VTT(+1.5V) Voltage,	1.37V	
+ 5V	4.84V	
VCCVID(CPU) Voltage	1.98V	
+12V	11.79V	
-12V	-12.03V	
• Chassis Status Closed	Closed	Indicates status of chassis is closed.
	Opened	Indicates status of chassis is opened.

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

PASSWORD DISABLED

If you have selected “**Setup**” at “Password Setting” 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.



IDE HDD Auto Detection

The Enhanced IDE features are included in all Award BIOS. Below is a brief description of these features.

ROM PCI/ISA BIOS (2A69KQ10) CMOS SETUP UTILITY AWARD SOFTWARE, INC.								
HARD DISKS	TYPE	SIZE	CYLS	HEAD	PRECOMP	LANDZ	SECTOR	MODE
Primary Master:								
Select Primary Master Option (N=Skip): N								
OPTION	SIZE	CYLS	HEAD	PRECOMP	LANDZ	SECTOR	MODE	
2(Y)	541	525	32	0	1049	67	LBA	
1	541	1050	16	65535	1049	63	NORMAL	
3	541	525	32	65535	1049	63	LARG	
Note: Some OSes (like SCO-UNIX) must use "NORMAL" for installation								
ESC: Skip								

Figure-11 IDE HDD Auto Detection Menu

1. Setup Changes

With auto-detection

- BIOS setup will display all possible modes supported by the HDD including NORMAL, LBA and LARGE.
- If HDD does not support LBA modes, no "LBA" option will be shown.
- If number of physical cylinder is less than or equal to 1024, "LARGE" option may not be shown.
- Users can select their appropriate mode .

With Standard CMOS Setup

	CYLS	HEADS	PRECOMP	LAND	SECTOR	MODE
				ZONE		
Drive C: User(516MB)	1120	16	65535	1119	59	Normal
Drive D: None(203MB)	684	16	65535	685	38	-----

When HDD type is set as "user", the "MODE" option will be available for users to select their own HDD mode.



2. HDD Modes

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. The maximum HDD size supported by LBA mode is 8.4 Gigabytes.

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 recognizing 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.

3. 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.

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 Mainboard Utility CD-ROM

A QDI Mainboard Utility CD-ROM is supplied with each mainboard. The contents used for this Mainboard are:

1. Chipset Dispatches:

Via Chipset Drivers included in the directory \ChipDrv\Via can be used for this mainboard. Run \ChipDrv\Via\Autorun.exe, installing the drivers below one by one.

(1) IDE Driver

This is Via Bus Master PCI IDE Driver which can be installed on either Windows 95 or Windows NT system, for supporting Ultra DMA/33MB. It also can remove the yellow question mark in the Device Manager of Windows 95 after installation.

(2) IRQ Routing Program

Installed on Windows 95 or Windows 98.

(3) VxD Driver

Installed on Windows 95/98 for supporting AGP. For all AGP feature benefits, you need to upgrade your Windows 95 OSR2.0 to OSR2.1 by installing USB supplement provided by Microsoft, also DirectX 5.0 from Microsoft.

(4) ACPI Patch Program

Installed on Windows 95 or Windows 98.

2. PC-cillin Anti-Virus software:

For Windows 95/98 English version, located in the directory \Pccillin\Win9x. Run Setup.exe for installation.

For Windows NT English version, located in the directory \Pccillin\WinNT4.0. Run Setup.exe for installation. S/N is PNEF-9991-6558-5857-5535.

3. QDI ManageEasy:

Run Setup.exe from the directory \QME to install the ManageEasy. For detailed information about QDI ManageEasy, refer to the ManageEasy Manual included in the directory \Doc. Please note, hardware is a manufacturing option.

4. QDI Mainboard Utility:

The utilities located in the directory \Utility are:

FLASH.EXE
CBLOGO.EXE
LFEXE

Refer to the online help for information on how to use these utilities.

5. Documents for QDI Mainboard:

The files included in the directory \Doc are:

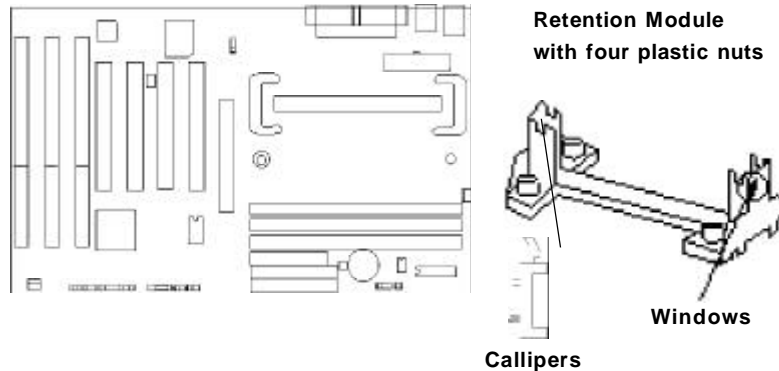
Adobe Acrobat Reader V3.0 —ar32e301.exe
ManageEasy Manuals —QMEV12.PDF.



Appendix B.

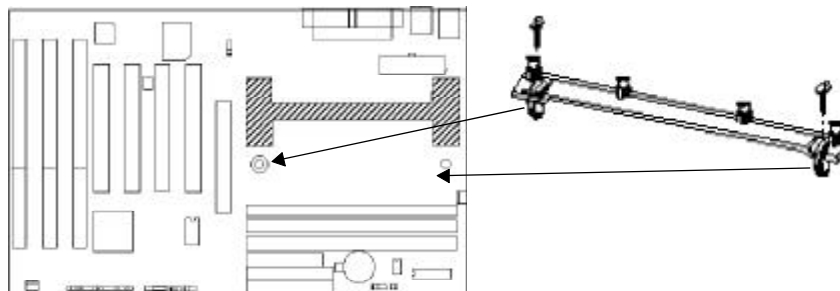
Retention Mechanism & Pentium® II/Pentium® III/ Celeron™ Processor Installation Procedures

1. Place the retention module with four plastic nuts on the mainboard and place the four plastic stoppers onto the plastic nuts to secure them.



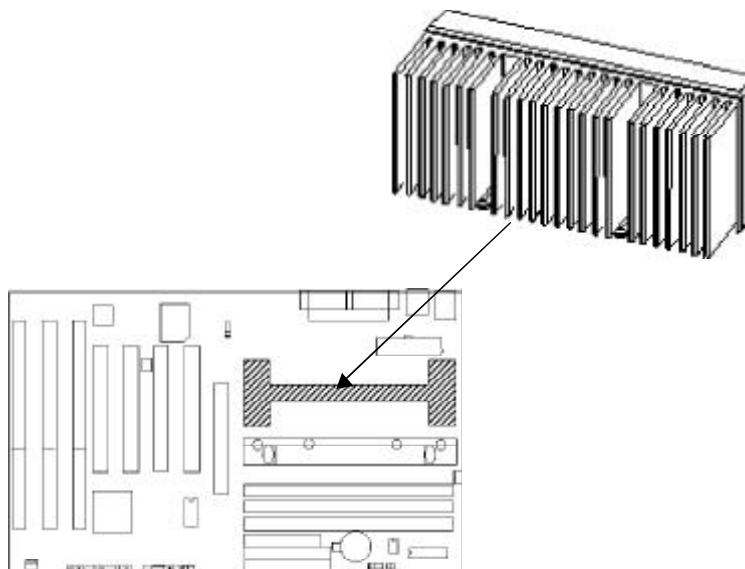
- Note:
1. If choosing to use Celeron™ Processor, snap-on Callipers onto the retention module.
 2. If choosing to use Intel Celeron™ PPGA 370 processor, other than placing the callipers, the socket 370 card with CPU and CPU fan should be installed.
 3. Please note the retention module has one orientation. If one way doesn't fit, change the direction to the other way. Do not forcefully press the retention module onto the mainboard.

2. Install HSSBASE (Heatsink Support Base) on mainboard, then insert the two plastic pins through the HSSBASE securing it to the mainboard.

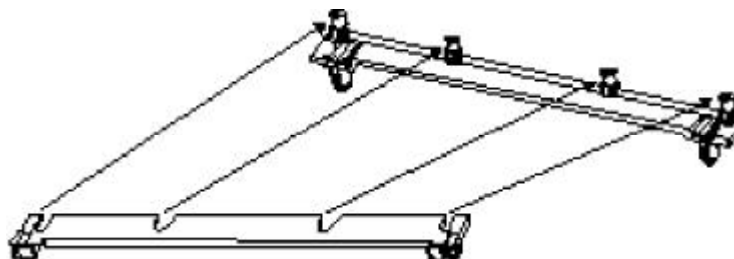




3. Insert Pentium® II/ Pentium® III/ Celeron™ Processor in Slot1.

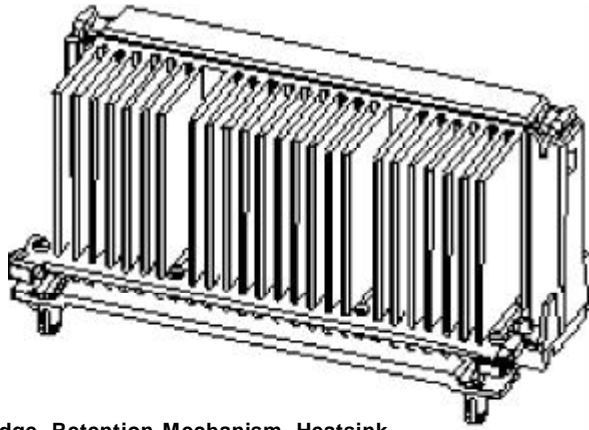


4. Clip Plastic Bar onto the HSSBASE through the fins on the processors' heatsink.





5. The Retention Mechanism installation procedure is completed as shown below.



**S.E.C Cartridge, Retention Mechanism, Heatsink support, and ATX Form Factor Heatsink Isometric View
Not To Scale**

Remark:

Please skip step2 and step4 for Boxed Pentium® II Processor and refer to relevant details concerning this type of processor for your installation.



Appendix C.

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.**

Item Checklist

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

- ☒ Advance 5 mainboard
- ☒ QDI Mainboard Utility CD-ROM
- ☒ Retention Module
- ☒ I/O shield
- ☒ 1 IDE ribbon cable
- ☒ 1 floppy ribbon cable
- ☒ 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 Advance 5 V1.0