



Chipset Features Setup

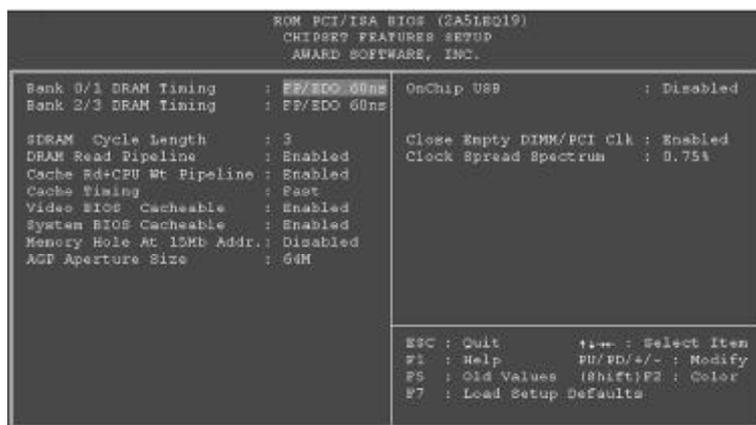


Figure-5 Chipset Features Setup Menu

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

<u>Item</u>	<u>Option</u>	<u>Description</u>
• Bank 0/1, 2/3, DRAM Timing	60ns 70ns	These items are of selected EDO DRAM read/write timing. You must ensure that your DIMMs are as fast as 60ns, otherwise you have to select 70ns.
• SDRAM Cycle Length	3	Define the CLT timing parameter of SDRAM expressed in 66MHz clocks, Latency Time = 2 clocks Latency Time = 3 clocks
• DRAM Read Pipeline	Enabled Disabled	Enables DRAM Read Pipeline. Disables DRAM Read Pipeline.
• Cache Rd+CPU wt pipeline	Enabled Disabled	Enables Read Around Write. Disables Read Around Write.
• Cache Timing	Fast Fastest	This item is used to select Cache Read/W write speed, "Fast" is the optimize selection.
• Video BIOS Cacheable	Enabled Disabled	Besides conventional memory, video BIOS area is also cacheable. Video BIOS area is not cacheable.
• System BIOS Cacheable	Enabled Disabled	Besides conventional memory, the system BIOS area is also cacheable. The system BIOS area is not cacheable.
• Memory Hole At 15Mb Addr	Enabled Disabled	Memory Hole at 15-16M is reserved for expanded PCI card. Do not set this memory hole.



BIOS Description

- | | | |
|-----------------------------|---|--|
| • AGP Aperture Size (4-256) | <i>64M</i> | Sets the effective size of the Graphics Aperture to be used in the particular PAC Configuration. |
| • Onchip USB | <i>Enabled</i>
<i>Disabled</i> | This item is used to enable or disable onchip USB Controller. |
| • Close Empty DIMM/PCI Clk | <i>Enabled</i>
<i>Disabled</i> | Closes empty DIMM clock or PCI clock to reduce EMI.
Does not close empty DIMM or PCI clock. |
| • Clock Spread Spectrum | <i>0.75%</i> ,
<i>0.50%</i>
<i>0.25%</i>
<i>Disabled</i> | Enables Clock Spread Spectrum to reduce EMI.
Disables Clock Spread Spectrum. |



Power Management Setup

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ROM PCI/ISA BIOS (2AS1EQ19)
POWER MANAGEMENT SETUP
AWARD SOFTWARE, INC.

Power Management : User Define
PM Control by APM : Yes
Video Off Option : Suspend -> Off
Video Off Method : V/H SYNC+Blank
MODEM Use IRQ : NA
Soft-Off by SWRSTN : Instant-Off
** PM Timers **
HDD Power Down : Disable
Dome Mode : Disable
Suspend Mode : Disable
** PM Events **
VGA : OFF
LPT & COM : LPT/COM
HDD & FDD : ON
DMA/Master : OFF
Wake Up On Ring/Lan: Disabled
RTC Alarm Resume : Disabled

Primary INTR : ON
IRQ3 (COM 2) : Primary
IRQ4 (COM 1) : Primary
IRQ5 (LPT 2) : Primary
IRQ6 (Floppy Disk) : Primary
IRQ7 (LPT 1) : Primary
IRQ8 (RTC Alarm) : Disabled
IRQ9 (IRQ2 Redir) : Secondary
IRQ10 (Reserved) : Secondary
IRQ11 (Reserved) : Secondary
IRQ12 (PS/2 Mouse) : Primary
IRQ13 (Coprocessor) : Primary
IRQ14 (Hard Disk) : Primary
IRQ15 (Reserved) : Disabled

ESC : Quit +I- : Select Item
F1 : Help PU/PD/+/- : Modify
F5 : Old Values (Shift)F2 : Color
F7 : Load Setup Defaults
  
```

Figure-6 Power Management Setup Menu

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

<u>Item</u>	<u>Option</u>	<u>Description</u>
• Power Management	<i>Disabled</i>	Global Power Management (PM) will be disabled.
	<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 only blank off the screen when disabling video.
	<i>All modes → Off</i>	
	<i>Always On</i>	
• Video Off Method	<i>Blank Screen</i>	The system BIOS will only blank off the screen when disabling video.
	<i>V / H SYNC +</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	<i>N/A</i> <i>IRQ "X"</i>	Select IRQ "X" used by modems.
• Soft-Off by PWRBTN	<i>Instant-off</i> <i>Delay 4 secs</i>	The system will power off immediately once the power button is pressed. The system will not power off immediately once the power button is pressed.
• HDD Power Down	<i>Disabled</i> <i>1 ~15 Min</i>	HDD' s motor will not be off. Defines the continuous HDD idle time before the HDD enters the power saving mode (motor off).
• Doze mode	<i>Disabled</i> <i>1Min ~ 1 Hr</i>	The system never enters Doze mode. Defines the continuous idle time before the system enters Doze mode. If any items defined in "Reload Global Timer Events" are On and activated, the system will be woken up.
• Suspend Mode	<i>Disabled</i> <i>Min ~ 1Hr</i>	The system will never enter Suspend mode. Defines the continuous idle time before the system enters the Suspend mode. If any item defined in "Reload Global Timer Events" is On and activated, the system will be waken up.
• VGA	<i>On</i> <i>Off</i>	VGA active reloads global timer. VGA active has no influence to global timer.
• LPT&COM HDD&FDD DMA/master	<i>ON</i> <i>OFF</i>	Any operation of the items Reload global timer. The operation of the items have no influence to global timer.
• Wake Up On Ring/LAN	<i>Enabled</i>	Allow the system to be powered on when a Ring indicator signal comes up to UART1 or UART2 from external modem (to LAN Wake-up Header from LAN adapter or to modem Ring on Header from internal modem card).
• RTC Alarm Resume	<i>Disabled</i> <i>Enabled</i>	Do not allow Ring Power-on. 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, any time to power up the system.
• IRQ (3-15)	<i>Disabled</i> <i>Primary</i> <i>Secondary</i> <i>Disabled</i>	RTC has no alarm function. Reload global timer. No influence to global timer, only finish an operation that IRQ "X" requests. No influence to global timer.



PNP/PCI Configuration Setup

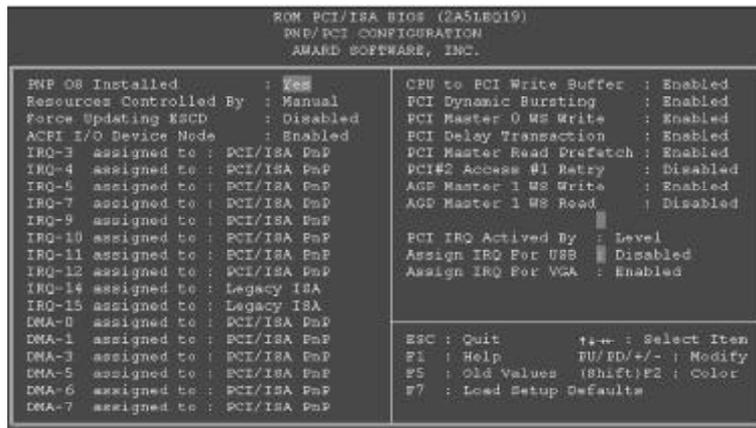


Figure-7 PNP/PCI Configuration Setup Menu

The following indicates the options of 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. Remark: It is strongly recommended that you choose "Yes" when using PnP OS, i.e. Windows 95.
● Resources Controlled by	Manual	Assigns the system resources (IRQ and DMA) manually .
	Auto	Assigns system resources (IRQ and DMA) automatically by BIOS.
● Force Updating ESCD	Enabled	The system BIOS will force updating ESCD once, then automatically set this item as Disabled.
	Disabled	Disables the forced update ESCD function.
● ACPI I/O Device Node	Enabled	The configuration data will be reset to default setting.
	Disabled	The configuration data will not be reset.
● IRQ-3~IRQ-15 assigned to	Legacy ISA	The specified IRQ-x will be assigned to ISA only.
	PCI/ISA PnP	The specified IRQ-x will be assigned to ISA or PCI.
● DMA-0~DMA-7 assigned to	Legacy ISA	The specified DMA-x will be assigned to ISA only.
	PCI/ISA PnP	The specified DMA-x will be assigned to ISA or PCI.



• CPU to PCI Write Buffer	<i>Enabled</i> <i>Disabled</i>	Enables CPU to PCI Write Buffer. Disables CPU to PCI Write Buffer.
• PCI Dynamic Bursting	<i>Enabled</i> <i>Disabled</i>	Enables PCI Dynamic Bursting. Disables PCI Dynamic Bursting.
• PCI Master 0 ws Write	<i>Enabled</i> <i>Disabled</i>	Enables PCI Master ws Write. Disables PCI Master ws Write.
• PCI Delay Transaction	<i>Enabled</i> <i>Disabled</i>	Enables PCI Delay Transaction. Disables PCI Delay Transaction.
• PCI Master Read Prefetch	<i>Enabled</i> <i>Disabled</i>	Enables PCI Master Read Prefetch Disables PCI Master Read Prefetch
• PCI #2 Access #1 Retry	<i>Enabled</i> <i>Disabled</i>	Enables PCI #2 Access #1Retry. Disables PCI #2 Access #1Retry.
• 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 Actived 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, enable this item. Does not assign an IRQ for USB. If USB device isn' t 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.



Integrated Peripherals

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ROM PCI/ISA BIOS (2A51EQ19)
INTEGRATED PERIPHERALS
AWARD SOFTWARE, INC.

OnChip IDE First Channel : Enabled
OnChip IDE Second Channel : Enabled
IDE Prefetch Mode : Enabled
IDE HDD Block Mode : Enabled
IDE Primary Master PIO : Auto
IDE Primary Slave PIO : Auto
IDE Secondary Master PIO : Auto
IDE Secondary Slave PIO : Auto
IDE Primary Master UDMA : Auto
IDE Primary Slave UDMA : Auto
IDE Secondary Master UDMA : Auto
IDE Secondary Slave UDMA : Auto
Init Display First : PCI Slot

Onboard Parallel Port : 378/IRQ7
Parallel Port Mode : SPP

Onboard FDC Controller : Enabled
Onboard Serial Port 1 : 3F8/IRQ4
Onboard Serial Port 2 : 2F8/IRQ3
IR Address Select : Disable

ESC : Quit          +, - : Select Item
F1 : Help          F10/FD/+/- : Modify
F5 : Old Values   (Shift)F2 : Color
F7 : Load Setup Defaults
  
```

Figure-8 Integrated Peripherals Menu

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

<u>Item</u>	<u>Option</u>	<u>Description</u>
• On Chip IDE First/ Second Channel	<i>Enabled</i> <i>Disabled</i>	Enables on chip IDE First/Second Channel. Disables on chip IDE First/Second Channel.
• IDE Prefetch Mode	<i>Enabled</i> <i>Disabled</i>	Enables IDE Prefetch Model. Disables IDE Prefetch Model.
• IDE HDD Block Mode	<i>Enabled</i> <i>Disabled</i>	Allows IDE HDD to read/write several sectors at once. IDE HDD only reads/writes 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 ultra DMA device is detected. Disables this function.
• Init Display First	<i>PCI Slot</i> <i>AGP</i>	Initializes PCI VGA first. Initializes AGP VGA first.
• Onboard FDC Controller	<i>Enabled</i> <i>Disabled</i>	Onboard floppy disk controller is enabled. Onboard floppy disk controller is disabled.
• Onboard Serial 1/2	<i>3F8/IRQ4,</i> <i>2F8/IRQ3,</i> <i>3E8/IRQ4,</i> <i>2E8/IRQ3,</i> <i>Disabled</i>	Defines the onboard serial port address and required interrupt number. Onboard serial port is disabled.



• IR Address Select	<i>Disabled</i> <i>3F8H</i> <i>2F8H</i> <i>3E8H</i>	This item is used to configure IR Address.
• IR Mode	<i>HP SIR</i> <i>ASKIR</i>	This item is used to configure IR Mode.
• IR IRQ Select	<i>IRQ3</i> <i>IRQ4</i> <i>IRQ10</i> <i>IRQ11</i>	This item is used to configure IR IRQ.
• Onboard Parallel Port	<i>1.7</i> <i>1.9</i>	Defines EPP version.
• Parallel Port Mode	<i>SPP</i> <i>ECP</i>	Selects parallel port mode.



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 CMOS Setup freely.

PASSWORD DISABLED

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

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

Supervisor Password has higher priority than *User Password*. You can use *Supervisor Password* when booting system or entering "CMOS Setup" to modify all settings. Also you can use *User Password* when booting 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 in "user" type, 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, also Auto detect.

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.

Auto detect

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 defaults setting.



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Appendix A

QDI Motherboard Utility CD-ROM

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

Contents:

1. Chipset Dispatches:
VIA chipset drivers included in the directory \ChipDrv\VIA\MVP3 are used for this motherboard.
2. PC-cillin Anti-Virus software:
Windows 95 English version is located in the directory \Pccillin\Win95.
Windows NT English version is located in the directory \Pccillin\WinNT4.0.
S/N is PNEF-9991-6558-5857-5535.
3. Motherboard Utility
The utilities located in the directory \Utility are:
FLASH.EXE
LFEXE

Installation Guide:

- a. Installing VIA Chipset drivers under Windows 95
Running \ChipDrv\VIA\MVP3\Aautorun.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 Win95 or WinNT, 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 Win95 only.
 - (3) VxD Driver
Installed on Win95 only 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 Win95 only.
- b. Under Windows 98, the IRQ Routing Program should be installed from \ChipDrv\VIA\MVP3\Drivers\Win98\IRQ, running setup.exe in this directory. Do not install the drivers for Win95 on Windows 98.

For detailed information on each driver, please refer to the readme file in relevant driver directory.



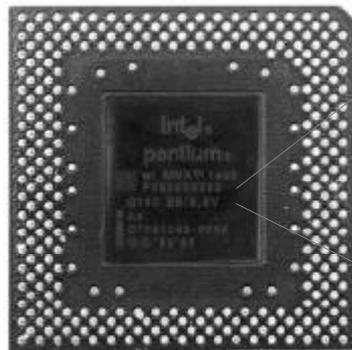
Appendix B

Introducing Intel Pentium® with MMX™ Technology CPU



(Front view)

Intel Pentium® with MMX™



(Back view)

Internal CPU Frequency: 233 MHz

CPU Core Voltage: 2.8V



Appendix C

Introducing AMD K6™-2 CPU

CPU brand

Internal CPU Frequency:350MHz



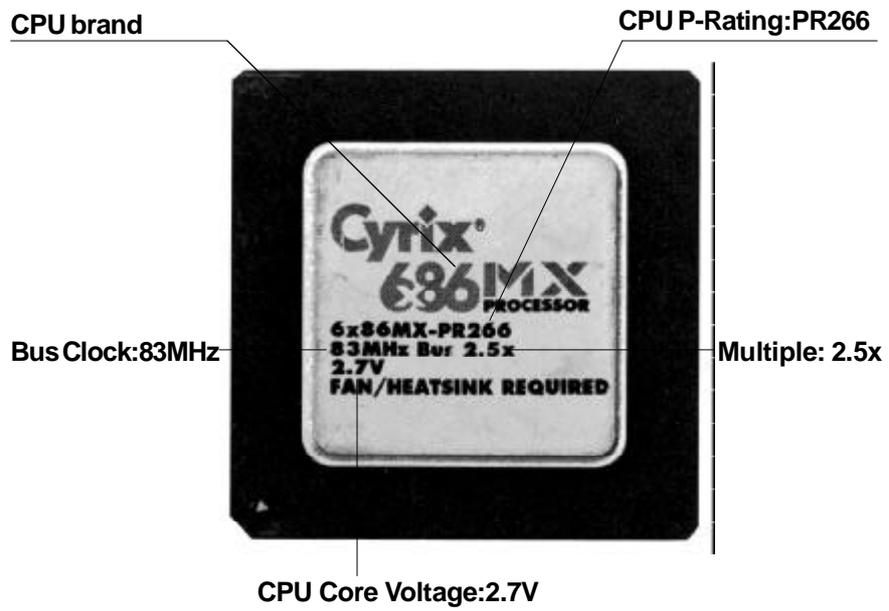
CPU Core Voltage: 2.2V

CPU I/O Voltage:3.3V



Appendix D

Introducing Cyrix 6x86MX CPU





Appendix E

Introducing idt Winchip™ C6™ CPU

CPU brand



CPU Voltage:
3.52V

Bus Clock: 66MHz

Internal CPU Frequency:200MHz



Appendix F

Boot Logo

When you power on or reset your system, the picture listed below will be shown 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 Motherboard 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.**

P/N :430-01014-601-00
Manual P5MVP3/A3 Ver 1.0

**Board Layout of
P5MVP3/A3 V1.0**