

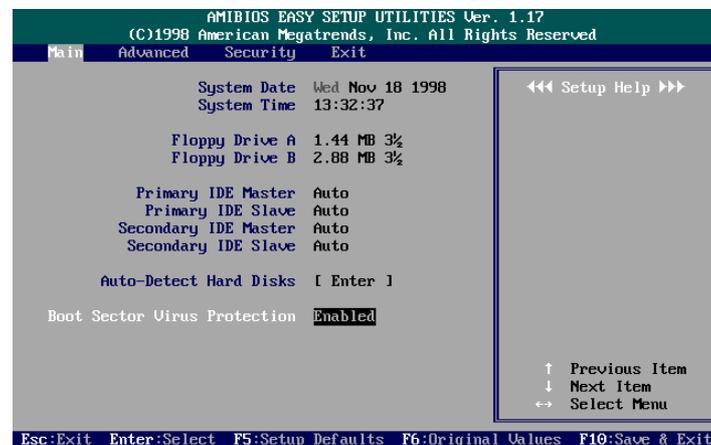
BIOS Setup

This chapter introduces the BIOS setup for both AMI BIOS and Award BIOS. If your mainboard came with an Award BIOS, please read from Page 61 to 97.

AMI BIOS Setup

The mainboard comes with an AMI BIOS chip that contains the ROM Setup information of your system. This chip serves as an interface between the processor and the rest of the mainboard's components. This chapter explains the information contained in the Setup program and tells you how to modify the settings according to your system configuration.

Main Setup



The Main Setup screen is displayed above. Each item may have one or more option settings. It allows you to change the system Date and Time, IDE hard disk, floppy disk drive types for drive A: and B:.

Auto-Detect Hard Disks

Allows the system BIOS to detect all hard disk parameters automatically.

Boot Sector Virus Protection

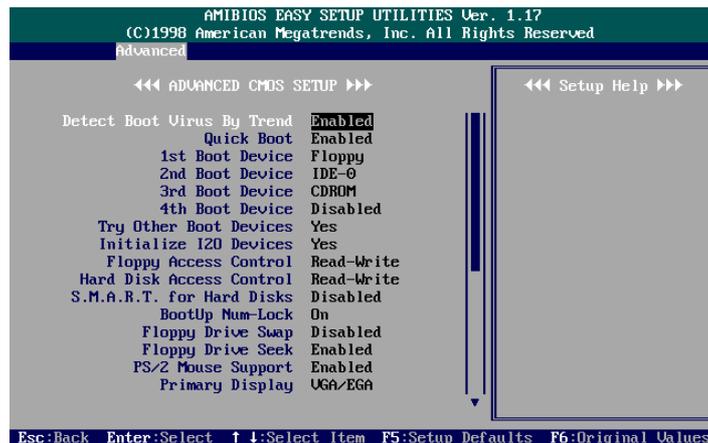
When Enabled, a warning will be given when any program or virus sends a Disk Format command or tries to write to the boot sector of a hard disk drive.

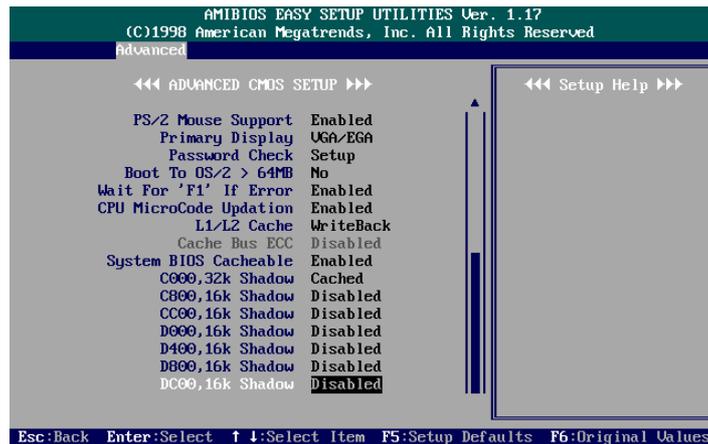
Advanced Setup



Advanced Setup options are displayed by choosing item from the AMI BIOS Setup main menu. All Advanced Setup options are described in this section.

Advanced CMOS Setup





Detect Boot Virus By Trend

This feature starts the virus scan tool to detect if boot virus in boot sector of the first hard disk. The options are: Enabled (Default), Disabled.

Quick Boot

Set this option to Enabled to instruct AMI BIOS to boot quickly when the computer is powered on. This option replaces the old 1MB Memory Test Advanced Setup option. The settings are Disabled or Enabled (Default).

1st Boot Device

This item allows you to select the first drive for booting up the system. The settings are Disabled, IDE-0, IDE-1, IDE-2, IDE-3, FLOPPY (Default), FLOPTICAL, CDROM, SCSI, or NETWORK.

2nd Boot Device

This item allows you to select the second drive for booting up the system. The settings are Disabled, IDE-0 (Default), or FLOPTICAL.

3rd Boot Device

This item allows you to select the third drive for booting up the system. The settings are Disabled, FLOPTICAL, CDROM (Default).

4th Boot Device

This item allows you to select the fourth drive for booting up the system. The settings are Disabled (Default) or FLOPTICAL.

Try Other Boot Devices

If you select Yes, the BIOS boots up the system from other boot devices if all selected boot devices failed to boot. If No selected, the BIOS boots up the system from only the selected devices. The settings are Yes (Default) or No.

Initialize I2O Device

If set at Yes, the BIOS will initialize I2O processors, I2O storage devices, and provide INT13 support for I2O storage device. The settings are Yes (Default), No.

Floppy Access Control

It is effective only if the floppy diskette drive is accessed through BIOS INT40H function. The settings are Read-Write (Default) or Read-Only.

Hard Disk Access Control

It is effective only if the floppy diskette drive is accessed through BIOS INT40H function. The settings are Read-Write (Default) or Read-Only.

S.M.A.R.T. for Hard Disks

“S.M.A.R.T” stands for “Self-Monitoring, Analysis and Reporting Technology”. To enable it will assist you in preventing some (but not all) system down time due to hard disk drive failure. The settings are Disabled (Default) or Enabled.

BootUp Num-Lock

Set this option to Off to turn the Num Lock key off when the computer is booted so you can use the arrow keys on both the numeric keypad and the keyboard. The settings are On (Default) or Off.

Floppy Drive Swap

Set this option to Enabled to permit drives A: and B: to be swapped. The settings are Disabled (Default) or Enabled.

Floppy Drive Seek

Set this option to Enabled to specify that floppy drive A: will perform a Seek operation at system boot.

The settings are Disabled or Enabled (Default).

PS/2 Mouse Support

When this option is set to Enabled, AMI BIOS supports a PS/2-type mouse.

The settings are Enabled (Default) or Disabled.

Primary Display

This option specifies the type of display monitor and adapter in the computer.

The settings are Absent, VGA/EGA (Default), CGA40x25, CGA80x25, or Mono.

Password Check

This option enables password checking every time the computer is powered on or every time AMI BIOS Setup is executed. If Always is chosen, a user password prompt appears every time the computer is turned on. If Setup is chosen, the password prompt appears if AMI BIOS is executed.

The settings are Setup (Default) or Always.

Boot To OS/2 > 64MB

This item allows you to enable the system BIOS to run with the IBM OS/2 operating system. The settings are Yes or No (Default).

Wait For 1' If Error

When set at Enabled, the BIOS will prompt F1 to wait for users if the keyboard or floppy drive/s error occurs.

The settings are Enabled (Default) or Disabled.

CPU MicroCode Updation

This feature allows technicians to update CPU MicroCode by dedicated utility set at Enabled. The settings are Disabled or Enabled (Default).

L1/L2 Cache

This feature allows users to select the cache policy. WriteThrough means that memory is updated with data held in the cache whenever the CPU issues a write cycle. On the other hand, WriteBack causes memory to be updated only under certain conditions, such as read requests to the memory whose contents are currently in the cache. WriteBack allows the CPU to operate with fewer interruptions, increasing its efficiency.

The settings are: WriteBack (Default) or WriteThrough.

Cache Bus ECC

This feature is for enabling the cache ECC function.

The settings are Disabled or Enabled (Default).

System BIOS Cacheable

Enable it to allow the contents of the F0000h system memory segment to be read from or written to the L2 cache memory. The contents of the F0000h memory segment are always copied from the BIOS ROM to system RAM for faster execution.

The settings are Disabled or Enabled (Default).

C000,32K Shadow; C800,16K Shadow; CC00,16K Shadow; D000,16K Shadow; D400,16K Shadow; D800,16K Shadow; DC00,16K Shadow

These options control the location of the contents of the ROM beginning at the specified memory location. If no adapter ROM is using the named ROM area, this area is made available to the local bus.

[Disabled] The video ROM is not copied to RAM. The contents of the video ROM cannot be read from or written to cache memory.

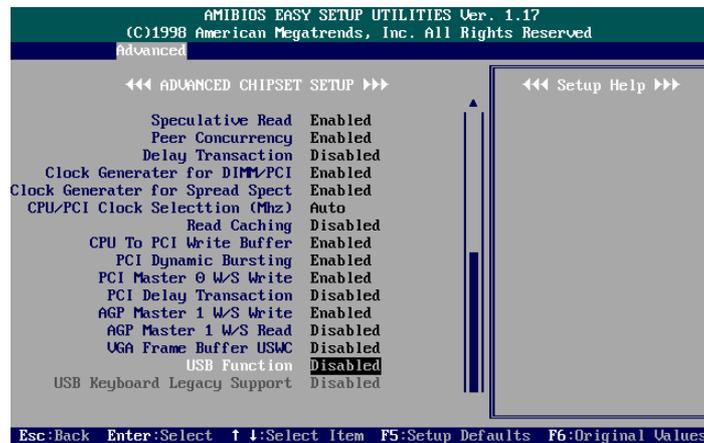
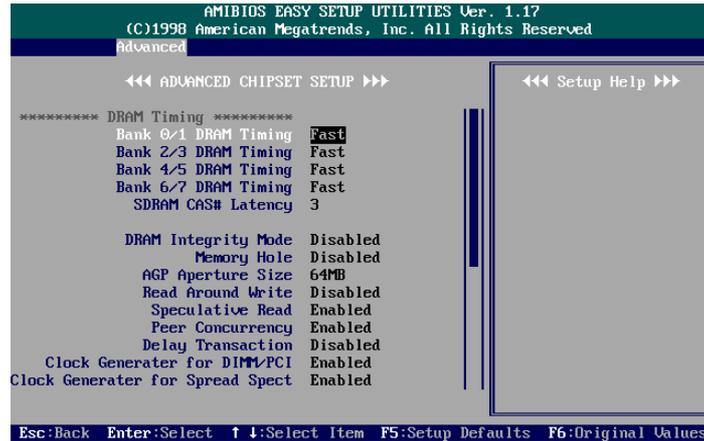
[Enabled] The contents of C0000h - DC00h are written to the same address in system memory (RAM) for faster execution.

[Cached] The contents of the named ROM area are written to the same address in system memory (RAM) for faster execution, if an adapter ROM will be using the named ROM area. Also, the contents of the RAM area can be read from and written to cache memory.

The settings are Disabled, Enabled, Cached.

The default setting of "C000, 32K Shadow; C400, 16K Shadow" is Cached; the others are Disabled.

Advanced Chipset Setup



Bank 0/1 DRAM Timing; Bank 2/3 DRAM Timing;
Bank 4/5 DRAM Timing; Bank 6/7 DRAM Timing;

This feature allows you to select the DRAM read/write speed.
The settings are: Normal, Fast (Default), Turbo.

SDRAM CAS# Latency

If any DIMM is installed, this feature allows you to select the CAS Latency.
The settings are 2 or 3 (Default).

DRAM Integrity Mode

This feature provides software configurability of selecting between ECC (ECC generation and checking/correction) mode, or disable non-ECC mode of operation of the DRAM interface.

The settings are Disabled (Default), ECC.

Memory Hole

When enabled, the memory hole at 15MB address will be relocated to the 15~16MB address range of the ISA cycle when the processor accesses the 15~16MB address area. When Disabled, the memory hole at the 15MB address will be treated as a DRAM cycle when the processor accesses the 15~16MB address area. The settings are Disabled (Default), 512KB-640KB, or 15MB-16MB.

AGP Aperture Size

It allows you to select the main memory frame size for AGP use.

The options are 4, 8, 16, 32, 64 (Default), 128, 256MB.

Read Around Write

This feature speeds up data read performance when it stays at Enabled. The settings are: Disabled (Default), Enabled.

Speculative Read

If a sequential data read occurs, the chipset will generate a speculative read cycle to pre-read data before the CPU request.

The settings are: Enabled (Default), Disabled.

Peer Concurrency

Peer concurrency means: if not the same bus, the system can activate different bus master cycles at the same time.

The settings are: Enabled (Default), Disabled.

Delayed Transaction

Enable this feature to force the current PCI bus master to retry the current PCI bus master cycle and to accept the new PCI master request, it reaccepts the original PCI bus master and returns the PCI data to the original PCI master. It will enhance the system performance. The options are Disabled (Default) or Enabled.

Clock Generator for DIMM/PCI

When no DIMM/PCI adapter card on the slot, the clock of the slot will be stopped if this feature set at Enabled.

The options are: Enabled (Default), Disabled.

Clock Generator for Spread Spect

Set at Enable for allowing spread spectrum in order to solve the EMI solution of the clock generator.

The options are: Enabled (Default), Disabled.

CPU/PCI Clcok Selection (Mhz)

This feature allows you to set the ratio of CPU external clock to PCI bus clock. When CPU external frequency is at 66MHz. The options are: Auto (Default), 75/37.5, 83.3/41.6, 66.8/33.4. When CPU external frequency is at 100MHz. The options are: Auto (Default), 124/41.33, 112/37.3, 133.3/44.43, 100/33.3.

Read Caching

This feature is for cache read performance better.

The settings are: Disabled (Default), Enabled.

CPU To PCI Write Buffer

When enabled, it allows data and address access to the internal buffer of the South Bridge so that the CPU can be released from the waiting state. The settings are: Enabled (Default), Disabled.

PCI Dynamic Bursting

When set at Enabled, the PCI controller allows bursting PCI transfer if the consecutive PCI cycles come with the address falling in the same 1KB space. The settings are: Enabled (Default), Disabled.

PCI Master 0 W/S Write

When set at Enabled, it allows a zero-wait-state-cycle delay if the PCI master drive writes data to DRAM.

The settings are: Enabled (Default), Disabled.

PCI Delay Transaction

Enabling this feature will abort the current PCI master cycle and will accept a new PCI master request, it reaccepts the original PCI master and returns the PCI data phase to the original PCI master.

The settings are: Enabled, Disabled (Default).

AGP Master 1 W/S Write

When set at Enabled, it allows a one-wait-state-cycle delay if the AGP master drive writes data to DRAM.

The settings are: Enabled (Default), Disabled.

AGP Master 1 W/S Read

When set at Enabled, it allows a one-wait-state-cycle delay if the AGP master drive reads data from DRAM.

The settings are: Disabled (Default), Enabled.

VGA Frame Buffer USWC

When set at Enabled, it enables CPU write to video frame buffer using USWC (Unspeculative Write-Combined) way. Stay with the default setting, Disabled, when installed some older VGA card drivers. The settings are: Disabled (Default), Enabled.

USB Function

This option allows users to enable the Universal Serial Bus (USB) feature.

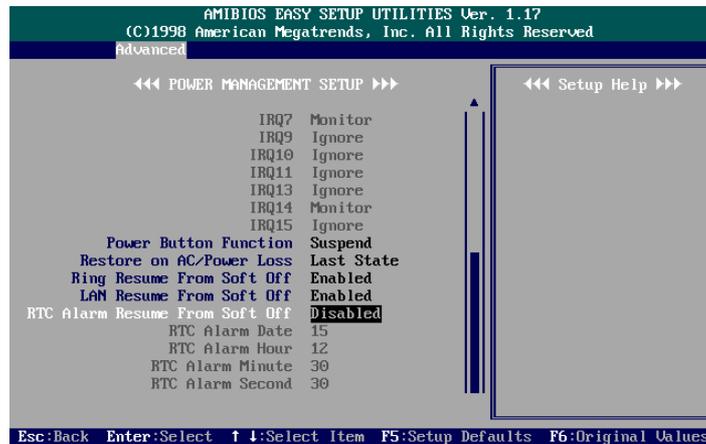
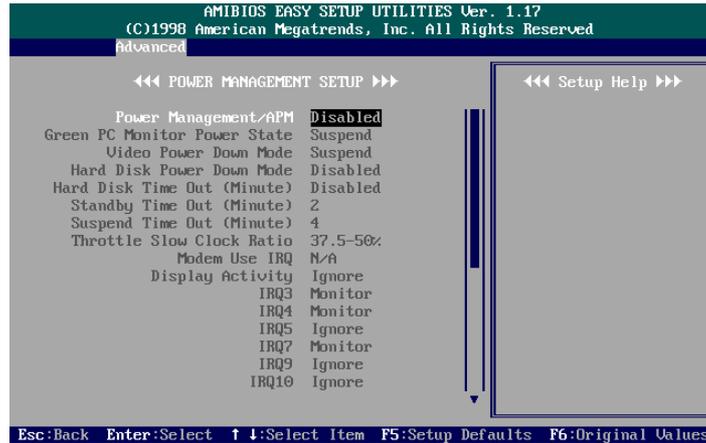
The options are Disabled (Default) or Enabled.

USB Keyboard/Mouse Support

If you use a USB keyboard/mouse, set at Enabled. Otherwise, keep it disabled. When enabled, allows the BIOS to detect and initiate the USB keyboard/mouse for making the keyfunctions of POST to work.

The options are Disabled (Default) or Enabled.

Power Management Setup



Power Management/APM

Set this option to Enabled to enable the power management and APM (Advanced Power Management) features.

The settings are Enabled or Disabled (Default)

Green PC Monitor Power State

Specifies the power management state that the Green PC-compliant video monitor enters after the specified period of system inactivity has expired. The settings are Suspend (Default), Off, Blank, or Standby.

Video Power Down Mode

This option specifies the power management state that the video subsystem enters after the specified period of system inactivity has expired.

The settings are Disabled, Standby, or Suspend (Default).

Hard Disk Power Down Mode

This option specifies the power management state that the hard disk drive enters after the specified period of system inactivity has expired.

The settings are Disabled (Default), Standby, or Suspend.

Hard Disk Time Out (Minute)

This option specifies the length of a period of hard disk inactivity. When this period expires, the hard disk drive enters the power-conserving mode specified in the Hard Disk Power Down Mode option described above.

The settings are Disabled, 1 Min (minutes), and all one minute intervals up to and including 15 Min.

The default setting is Disabled.

Standby Time Out (Minute)

This option specifies the length of the period of system inactivity when the computer is in Full-On mode before the computer is placed in Standby mode. In Standby mode, some power use is curtailed.

The settings are Disabled, 1 Min, 2 Min, and all one minute intervals up to and including 15 Min. The default setting is 2 Min.

Suspend Time Out (Minute)

This option specifies the length of the period of system inactivity when the computer is already in Standby mode before the computer is placed in Suspend mode. In Suspend mode, nearly all power use is curtailed.

The settings are Disabled, 1 Min, 2 Min, and all one minute intervals up to and including 15 Min. The default setting is 4 Min.

Throttle Slow Clock Ratio

This option specifies the speed at which the system clock runs in power saving modes. The settings are expressed as a ratio between the normal clock speed and the power down clock speed.

The settings are 0-12.5 %, 12.5 - 25 %, 25-37.5 %, 37.5-50 %, 50-62.5 %, 62.5 - 75%, 75-87.5 %. The default setting is 37.5-50 %.

Modem Use IRQ

This feature allows you to select the IRQ# of the system that is the same IRQ# as the modem use.

The options are: N/A (Default), 3, 4, 5, 7, 9, 10, 11.

Display Acitivity, IRQ3/4/5/7/9/10/11/13/14/15

The devices that connected to the system via these channels or ports can be set at Monitor for waking up the system when the system in Suspend mode.

The settings are Ignore or Monitor.

The default setting of Display Activity, IRQ5/9/10/11/13/15 is Ignore.

The default setting of is IRQ3/4/7/14 is Monitor.

Power Button Function

This allows you to set Power Button usage. If you select ON/OFF, pressing the Power Button will turn the system power on or off. If you select Suspend, pressing the Power Button will put the system into Suspend mode. Keeping the button pressed for 4 seconds will then put the system into Power Off mode. The settings are On/Off, Suspend (Default).

Restore on AC/Power Loss

When the system is shut down owing to the power failure, the system will not be back to power on by itself. This feature allows you to set the system back to which power status of the system when the system power is resumed. The options are: Last State (Default), Power on, Stay off.

Ring Resume From Soft Off

An input signal on the serial Ring Indicator (RI) line (in other words, an incoming call on the modem) awakens the system from a soft off state.

The options are Disabled or Enabled (Default).

LAN Resume From Soft Off

An input signal from the LAN card (via WOL connector) awakens the system from a soft off state.

The options are Disabled or Enabled (Default).

RTC Alarm Resume From Soft Off

When set at Enabled, it allows you to set the time when the system to be turned on from the system power-off status.

The settings are Disabled or Enabled. The default setting is Disabled.

RTC Alarm Data

This feature allows you to set the day of the alarm starts when the RTC Alarm Resume From Soft Off is set to be Enabled.
The settings are Every Day, 1, 2, 3, ..., 31 day.
The default setting is 15.

RTC Alarm Hour

This feature allows you to set the hour of the alarm starts when the RTC Alarm Resume From Soft Off is set to be Enabled.
The settings are 0, 1, 2, ..., 23 hours. The default setting is 12.

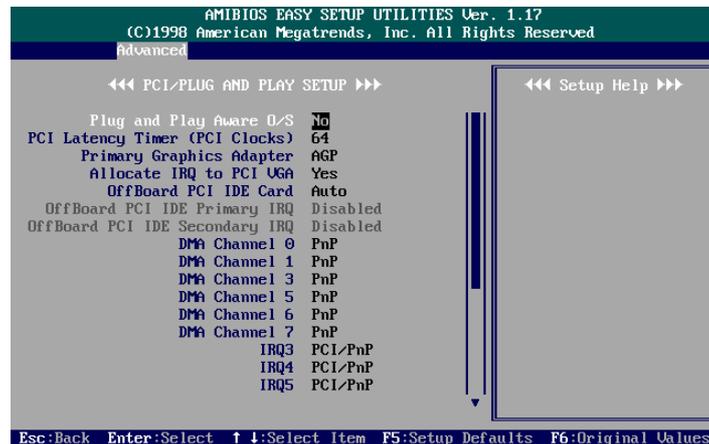
RTC Alarm Minute

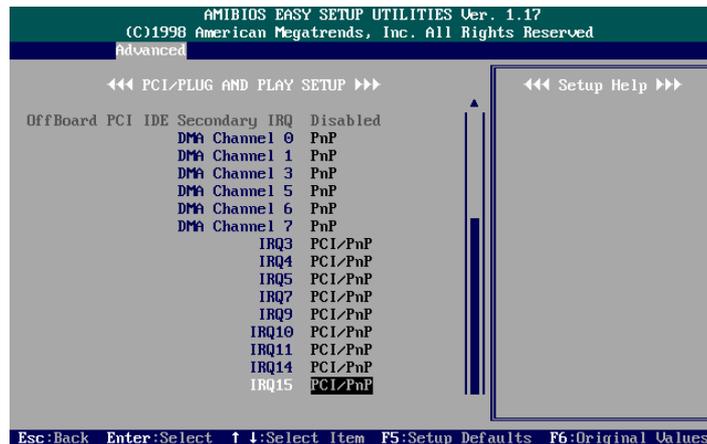
This feature allows you to set the minute of the alarm starts when the RTC Alarm Resume From Soft Off is set to be Enabled.
The settings are 0, 1, 2, ..., 59 minutes. The default setting is 30.

RTC Alarm Second

This feature allows you to set the minute of the alarm starts when the RTC Alarm Resume From Soft Off is set to be Enabled.
The settings are 0, 1, 2, ..., 59 seconds. The default setting is 30.

PCI/Plug and Play Setup





Plug and Play Aware O/S

Set this option to Yes if the operating system installed in the computer is Plug and Play-aware. AMI BIOS only detects and enables PnP ISA adapter cards that are required for system boot. The Windows 95 operating system detects and enables all other PnP-aware adapter cards. Windows 95 is PnP-aware. Set this option to No if the operating system (such as DOS, OS/2, Windows 3.x) does not support PnP. You must set this option correctly or PnP-aware adapter cards installed in your computer will not be configured properly. The settings are No (Default) or Yes.

PCI Latency Timer (PCI Clocks)

This option sets latency of all PCI devices on the PCI bus. The settings are in units equal to PCI clocks.

The settings are 32, 64 (Default), 96, 128, 160, 192, 224, or 248.

Primary Graphics Adapter

When an AGP VGA and PCI VGA card installed at the same time. They will be selected to be the primary display by this feature.

The settings are PCI or AGP (Default).

Allocate IRQ to PCI VGA

When set at Yes, allows users to assign IRQs for PCI/AGP VGA cards.

The settings are No or Yes (Default).

OffBoard PCI IDE Card

The option specifies if an offboard PCI IDE controller adapter card is used. You must also specify the PCI slot where the card is installed. If an offboard PCI IDE controller is used, the onboard IDE controller is disabled. The settings are Auto (Default), Slot1, Slot2, Slot3, Slot5, Slot6.

OffBoard PCI IDE Primary IRQ

This options allow you to select the IRQ if you use an offboard primary PCI IDE card. The settings are Disabled, INTA, INTB, INTC, INTD, Hardwired. The default setting is Disabled.

OffBoard PCI IDE Secondary IRQ

This options allow you to select the IRQ if you use an offboard secondary PCI IDE card. The settings are Disabled, INTA, INTB, INTC, INTD, Hardwired. The default setting is Disabled.

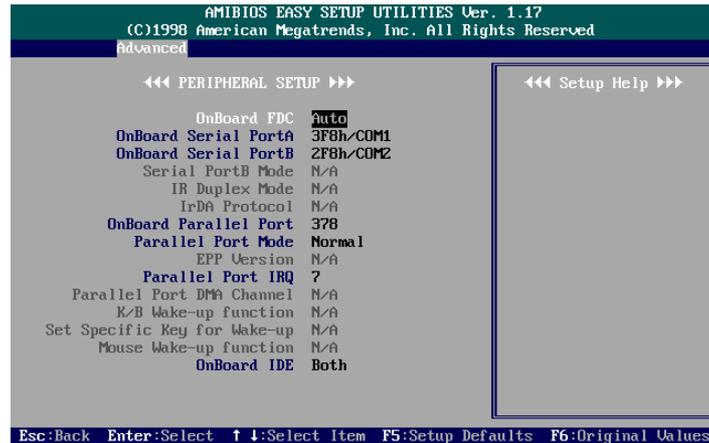
DMA Channel 0, 1, 3, 5, 6, 7

This option allows you to specify the bus type that the named DMA channels are used on. The settings are PnP or ISA/EISA . The default setting is PnP.

IRQ3, 4, 5, 7, 9, 10, 11, 14, 15

These options specify the bus that the named interrupt request lines (IRQs) are used on. These options allow you to specify IRQs for use by legacy ISA adapter cards. These options determine if AMI BIOS should remove an IRQ from the pool of available IRQs passed to BIOS configurable devices. The available IRQ pool is determined by reading the ESCD NVRAM. If more IRQs must be removed from the pool, the end user can use these PCI/PnP Setup options to remove the IRQ by assigning the option to the ISA/EISA setting. Onboard I/O is configurable by AMI BIOS. The IRQs used by onboard I/O are configured as PCI/PnP. The settings are PCI/PnP or ISA/EISA. The default setting is PCI/PnP.

Peripheral Setup



Onboard FDC

This option enables the floppy drive controller on the mainboard. The settings are Auto, Enabled, or Disabled. The default setting is Auto.

Onboard Serial PortA

This option enables serial port 1 on the mainboard and specifies the base I/O port address for serial port 1. The settings are Auto, Disabled, 3F8h/COM1, 2F8h/COM2, 3E8h/COM3, 2E8h/COM4. The default setting is 3F8h/COM1.

Onboard Serial PortB

This option enables serial port 2 on the mainboard and specifies the base I/O port address for serial port 2.

The settings are Auto, Disabled, 3F8h/COM1, 2F8h/COM2, 3E8h/COM3, 2E8h/COM4. The default setting is 2F8h/COM2.

Serial PortB Mode

Select an operating mode for the second serial port. Stay with the default setting, Normal, if you use COM2 as the serial port as the serial port, instead as an IR port.

The options are: Normal (Default), IrDA, ASK IR.

IR Duplex Mode

When the option IrDA of the above feature selected, this feature appears on the display to allow users to select the duplex mode.

The options are: Full Duplex, Half Duplex (Default).

IrDA Protocol

When the option IrDA or ASK IR of the feature Serial PortB Mode selected, this field allows users to select the protocol of IrDA.

The options are: 1.6 micro second, 3/16 (Default).

Onboard Parallel Port

This option enables the parallel port on the mainboard and specifies the parallel port base I/O port address.

The settings are 378 (Default), 278, 3BC, Auto, or Disabled.

Parallel Port Mode

This option allows you to select the mode of the parallel port. The settings are Normal (Default), Bi-Dir, EPP, or ECP.

EPP Version

This option allows you to select the EPP version.

The settings are 1.9 (Default), 1.7.

Parallel Port IRQ

This option allows you to select the IRQ of the parallel port.

The settings are 5 or 7 (Default).

Parallel Port DMA Channel

This option allows you to select the DMA channel of the parallel port.

The settings are 1 or 3 (Default).

K/B Wake-up function

This feature allows users to wake up the system by keyboards from the soft-off status. If set at Password, the power button will not be able to power-on the system.

The options are: Disable (Default), Specific key, Any key, Password.

Set Sepecific Key for Wake-up

When the feature of K/B Wake-up function set at Specific key, this field allows you to select a set of specific key to power on your computer.

The options are: Ctrl-F1 (Default), Ctrl-F2, Ctrl-F3, Ctrl-F4, Ctrl-F5, Ctrl-F6, Ctrl-F7, Ctrl-F8, Ctrl-F9, Ctrl-F10, Ctrl-F2, Ctrl-F11, Ctrl-F12.

Mouse Wake-up function

This feature allows you to select mouse to power on the computer system by double clicking either on the left button or right button of your mouse.

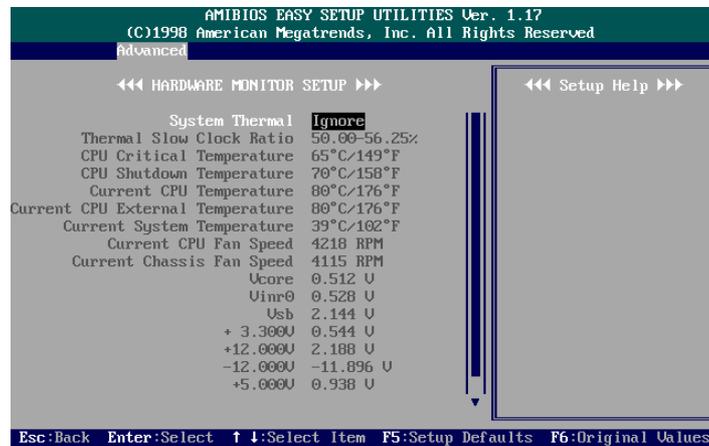
The options are: Disable (Default), Left-button, Right-button.

OnBoard IDE

Set this option to Enabled to specify that the IDE controller on the PCI local bus has bus mastering capability.

The settings are Disabled, Primary, Secondary, Both (Default).

Hardware Monitor Setup



This feature allows end users and technicians to monitor the data provided by the LDCM function of this board.

System Thermal, Thermal Slow Clock Ratio, CPU Critical Temperature, CPU Shutdown Temperature

When System Thermal set at Monitor, the system will slow down the CPU clock by the setting of Thermal Slow Clock Ratio when the system temperature approaches the setting of CPU Critical Temperature. The CPU will be shut down when the CPU Shutdown Temperature arrives.

The options of System Thermal are: Ignore (Default), Monitor.

The options of Thermal Slow Clock Ratio are: 0-6.25%, 6.25-12.5%, 12.5-18.75%; 18.75-25%; 25-31.25%; 31.25-37.5%; 37.5-43.75%; 43.75-50%; 50-56.25%; 56.25-62.5%; 62.5-68.75%; 68.75-75%.

The options of CPU Critical Temperature are: Disabled, 50°C/122°F, 55°C/131°F, 60°C/140°F, 65°C/149°F (Default), 70°C/158°F, 75°C/167°F.

The options of CPU Shutdown Temperature are: Disabled, 55°C/131°F, 60°C/140°F, 70°C/158°F (Default), 75°C/167°F.

Security Setup

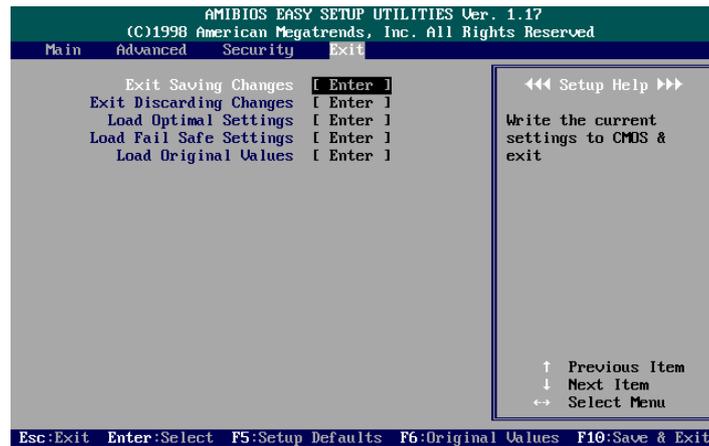
Set Supervisor and User Passwords: You can set either a Supervisor password or a User password. If you do not use a password, Just press **Enter** when the password prompt appears. The password check option is enabled in Advanced Setup by choosing either Always (the password prompt appears every time the system is powered on) or Setup (the password prompt appears only when AMI BIOS is run). You can enter a password by typing the password on the keyboard. When you select Supervisor or User, AMI BIOS prompts for a password. You must set the Supervisor password before you can set the User password. Enter a 1 to 6 character password. The password does not appear when typed.

Changing a Password: Enter the password and press **Enter**. After the new password is entered, retype the new password as prompted and press **Enter**. If the password confirmation is incorrect, an error message appears. If the new password is entered without error, press to return to the AMI BIOS Main Menu.

Set Keyboard Wake Up Password:

It allows When set at Password, it allows you to set a password to power the system. Press the Enter key when you are prompted to set the power-on password. Type it up to five characters and press the Enter key; then confirm it by typing the password again and pressing the Enter key to complete the setting procedures. To disable the power-on password, press the Enter key when it is disabled. When the power-on password is set, the system can not be powered on by power button. Once the power-on password is set, you can power on the system simply by entering the password. This feature offers the security on your computer system.

Exit Setup



Exit Saving Changes allows you to write the current settings to CMOS and exit.

Exit Discarding Changes allows you to exit without writing the current settings to CMOS.

Load Optimal Settings is selected for settings which provide the best system performance.

Load Fail Safe Settings is for settings that provide a more efficient computer. If the computer will not boot, select this option and try to diagnose the problem after the computer boots. These settings do not give optimal performance.

Load Original Values recalls your last set of previous settings. This option is convenient if you change settings and decide you wish to return to the previous settings.

AMI BIOS Flash Software

The mainboard package provides BIOS flash software tool in the software utility CD-ROM. This software feature is provided for upgrading BIOS use. Play the CD-ROM, click on *Browse CD*, select *Flash*, then choose the BIOS vendor that provided the BIOS this board came with. Please print the relating README file and read it first. For more information about, please visit FIC Online at www.fic.com.tw.

Downloading BIOS File

Format a bootable system diskette, visit the FIC website at www.fic.com.tw. Click *BIOS/Drivers Update* item under **BIOS** group, then select the BIOS file you need. Download it to your bootable diskette.

Upgrading BIOS File

Place the bootable diskette containing the BIOS file in the diskette drive (Assume the diskette drive is A.), and reboot the system by A drive. At the A: > prompt, execute the BIOS upgrading procedure by entering the Flash BIOS utility and the BIOS file with its extension.

Command: {flash tool file}{space}{downloaded BIOS file} <Enter>

The other parameters are listed in the relating README file, please read it if need.

After press *Enter* key, type Y to the message **Press ” to Continue, ” to Reboot**. Press *Enter* key. When the message **Press Any Key to Reboot**, the procedure is completed. Press any key to reboot.



CAUTION: If Do not turn off or reset the computer during the flash process.

Loading New BIOS Defaults

Once the BIOS has been flashed successfully,

1. remove the diskette and reboot the system.
2. Press *Delete* key while system booting-up to enter **Load Optimal Settings** menu
3. Select **Exit Saving Changes** to complete the whole process.

Award BIOS Setup

Your mainboard may come with an Award BIOS chip that contains the ROM Setup information of your system. This chip serves as an interface between the processor and the rest of the mainboard's components. The following sections explained the information contained in the Setup program and told you how to modify the settings according to your system configuration. If you use VB-601 mainboard, some of the setup introductions were listed from Page 82 to 97.

CMOS Setup Utility

ROM PCI/ISA BIOS (2A6LFF0A) CMOS SETUP UTILITY AWARD SOFTWARE, INC.	
STANDARD CMOS SETUP BIOS FEATURES SETUP CHIPSET FEATURES SETUP POWER MANAGEMENT SETUP PNP/PCI CONFIGURATION LOAD BIOS DEFAULTS LOAD SETUP DEFAULTS	INTEGRATED PERIPHERALS SUPERVISOR PASSWORD USER PASSWORD IDE HDD AUTO DETECTION SAVE & EXIT SETUP EXIT WITHOUT SAVING
Esc : Quit F5 : Menu in BIOS ↑ ↓ → ← : Select Item F10 : Save & Exit Setup (Shift)F2 : Change Color	

A Setup program, built into the system BIOS, is stored in the CMOS RAM. This Setup utility program allows changes to the mainboard configuration settings. It is executed when the user changes system configuration; user changes system backup battery; or the system detects a configuration error and asks the user to run the Setup program. Use the arrow keys to select and press Enter to run the selected program.

Standard CMOS Setup

ROM PCI/ISA BIOS (2A6LFF0A)								
STANDARD CMOS SETUP								
AWARD SOFTWARE, INC.								
Date (mm:dd:yy) : Wed, Oct 15 1998								
Time (hh:mm:ss) : 15 : 37 : 55								
HARD DISKS	TYPE	SIZE	CYLS	HEAD	PRECOMP	LANDZ	SECTOR	MODE
Primary Master	: Auto	0	0	0	0	0	0	Auto
Primary Slave	: Auto	0	0	0	0	0	0	Auto
Secondary Master	: Auto	0	0	0	0	0	0	Auto
Secondary Slave	: Auto	0	0	0	0	0	0	Auto
Drive A : None								
Drive B : None								
Video : EGA/VGA					Base Memroy: 640K			
Halt On : All Errors					Extended Meory: 31744K			
					Other Memory: 384K			
					Total Memory: 32768K			
Esc : Quit			↑ → ← : Select Item			PU/PD/+/- : Modify		
F1 : Save & Exit Setup			(Shift)F2 : Change Color					

The Standard CMOS Setup screen is displayed above. Each item may have one or more option settings. The system BIOS automatically detects memory size, thus no changes are necessary. Use the arrow keys to highlight the item and then use the PgUp or PgDn keys to select the value you want in each item.

Hard Disk Configurations

TYPE: Select User to fill the remaining fields. Select Auto to detect the HDD type automatically (recommended).

SIZE: The hard disk size. The unit is Mega Bytes.

CYLS: The cylinder number of the hard disk.

HEAD: The read/write head number of hard disk.

PRECOMP: The cylinder number at which the disk drive changes the write current.

LANDZ: The cylinder number that the disk drive heads (read/write) are seated when the disk drive is parked.

SECTOR: The sector number of each track defined on the hard disk.

MODE: Select Auto to detect the mode type automatically. If your hard disk supports the LBA mode, select LBA or Large. However, if your hard disk cylinder is more than 1024 and does not support the LBA function, set at Large. Select Normal if your hard disk supporting cylinders is below 1024.

Software Turbo Speed

The BIOS supports Software Turbo Speed feature. Instead of pressing the Turbo Speed Button on the front panel, simply press the **Alt, Ctrl, and +** keys at the same time to enable the Turbo Speed feature; and press the **Alt, Ctrl, and -** keys at the same time to disable the feature.



NOTE: If your mainboard is a VB-601, please read from Page 82 to 97 for its BIOS setup.

BIOS Features Setup

ROM PCI/ISA BIOS (2A6LFF0A)			
BIOS FEATURES SETUP			
AWARD SOFTWARE, INC.			
Anti-Virus Protection	: Enabled	Video BIOS Shadow	: Enabled
CPU Internal Cache	: Enabled	C8000 - CBFFF Shadow	: Disabled
External Cache	: Enabled	CC000 - CFFFF Shadow	: Disabled
CPU L2 Cache ECC Checking	: Enabled	D0000 - D3FFF Shadow	: Disabled
Quick Power On Self Test	: Enabled	D4000 - D7FFF Shadow	: Disabled
Boot From LAN First	: Enabled	D8000 - DBFFF Shadow	: Disabled
Boot Sequence	: A, C, SCSI	DC000 - DFFFF Shadow	: Disabled
Swap Floppy Drive	: Disabled		
Boot Up Floppy Seek	: Enabled		
Boot Up Num.Lock Status	: On		
Gate A20 Option	: Fast		
Memory Parity/ECC Check	: Disabled		
Typematic Rate Setting	: Disabled		
Typematic Rate (Chars/Sec)	: 6		
Typematic Delay (Msec)	: 250		
Security Option	: Setup		
IDE Second Channel Control	: Enabled	Esc: Quit	↑↓←→: Select Item
PCI/VGA Palette Snoop	: Disabled	F1: Help	PU/PD/+-: Modify
OS Select For DRAM > 64MB	: Non-OS2	F5: Old Values (Shift)F2	: Color
Report No FDD For WIN 95	: Yes	F6: Load BIOS Defaults	
		F7: Load Setup Defaults	

Anti-Virus Protection

This feature starts the virus scan tool to detect if boot virus in boot sector of the first hard disk drive when booting up.

The options are: Enabled (Default), Disabled.

CPU Internal Cache

When enabled, improves the system performance. Disable this item when testing or trouble-shooting.

The options are: Enabled (Default), Disabled.

External Cache

When enabled, supports an optional cache SRAM. This feature allows you to disable the cache function when the system performance is unstable to run some software. The options are: Enabled (Default), Disabled.

CPU L2 Cache ECC Checking

This feature allows users to activate the CPU Level 2 cache error check and correction function. The options are: Enabled (Default), Disabled.

Quick Power On Self Test

When enabled, allows the BIOS to bypass the extensive memory test.

The options are: Enabled (Default), Disabled.

Boot From LAN First

This feature makes the system bootable by the remote server via LAN.

The options are: Enabled (Default), Disabled.

Boot Sequence

Allows the system BIOS to first try to boot the operating system from the selected disk drive. The options are: A, C, SCSI (Default); C, A, SCSI; C, CDROM, A; CDROM, C, A; D, A, SCSI; E, A, SCSI; F, A, SCSI; SCSI, A, C; SCSI, C, A; C Only; LS/ZIP, C.

Swap Floppy Drive

Allows you to switch the order in which the operating system accesses the floppy drives during boot up. The options are: Enabled, Disabled (Default).

Boot Up Floppy Seek

When enabled, assigns the BIOS to perform floppy diskette drive tests by issuing the time-consuming seek commands. The options are: Enabled (Default), Disabled.

Boot Up Numlock Status

When set to On, allows the BIOS to automatically enable the Num Lock Function when the system boots up. The options are: On (Default), Off.

Gate A20 Option

When set at Fast, allows a faster access response under Protected mode. The options are: Fast (Default), Normal.

Memory Parity/ECC Check

This feature enables BIOS to perform automatic memory checking upon detection of ECC or parity DRAM. The options are: Enabled (Default), Disabled.

Typematic Rate Setting

The term typematic means that when a keyboard key is held down, the character is repeatedly entered until the key is released. The options are: Disabled (Default), Enabled.

Typematic Rate (Chars/Sec)

This feature is available only if the above item, Typematic Rate Setting, is set at Enabled. Sets the rate of a character repeat when the key is held down. The options are: 6 (Default), 8, 10, 12, 15, 20, 24, 30.

Typematic Delay (Msec)

This feature is available only if the item, Typematic Rate Setting, is set at Enabled. Sets the delay time before a character is repeated. The options are: 250 (Default), 500, 750, 1000 millisecond.

Security Option

Allows you to set the security level of the system. The options are: Setup (Default), System.

IDE Secondar Channel Control

The chipset includes a PCI IDE interface with support for two IDE channels. Select Enabled to activate the secondary onchip IDE interface. Select Disabled to deactivate this feature if you install a secondary add-on IDE interface. The options are: Enabled (Default), Disabled.

PCI/VGA Palette Snoop

Set this feature to be enabled if any ISA adapter card installed in the system requires the VGA palette snoop function.
The options are: Disabled (Default), Enabled.

OS Select For DRAM > 64MB

If your operating system (OS) is OS/2, select the option OS2. Otherwise, stay with the default setting Non-OS2.
The options are: Non-OS2 (Default), OS2.

Report No FDD For WIN 95

When the field under the Standard CMOS Setup Menu for Drive A and/or Drive B is set at None, users must set this field is set at Yes for it to function properly. Otherwise, set at No, even if field for Drive A and/or Drive B is set at None, system will still detect and recognize of a floppy drive(s).
The options are: Yes (Default), Enabled.

Video BIOS Shadow

Allows the BIOS to copy the video ROM code of the add-on video card to the system memory for faster access.
The options are: Enabled (Default), Disabled.

C8000-CBFFF to DC000-DFFFF Shadow

These fields are sued for showing other expansion card ROMs. If users install other expansion cards with ROMs on them, users will need which addresses the ROMs use to shadow them specifically. Shadowing a ROM reduces the memory available between 640KB and 1024KB by the amount used by this purpose. The options are: Disabled (Default), Eanbled.

Chipset Features Setup

ROM PCI/ISA BIOS (2A6LFF0A) CMOS SETUP UTILITY CHIPSET FEATURES SETUP	
SDRAM Controlled by : SPD	Auto Detect DIMM/PCI Clk : Enabled Spread Spectrum Modulated : Enabled CPU Host/PCI Clock : Default
Memory Hole At 15Mb Addr. : Disabled Read Around write : Disabled Concurrent PCI/Host : Enabled Video RAM Cacheable : Disabled AGP Aperture Size : 64M AGP-2X Mode : Enabled C2D Post-Write Buffer : 4-Level Read DRAM Prefetch Buf : 4-Level DRAM Read Request Rate : 3T OnChip USB : Disabled	Esc : Quit ←→ : Select Item F1 : Help PUPD+/- : Modify F5 : Old Values (Shift)F2 : Color F8 : Load BIOS Defaults F7 : Load Setup Defaults

SDRAM Controlled by

If the SDRAM you are using supports Serial Presence Detect (SPD), the BIOS can recognize its specificity. Then, do automatic timer setting by SPD data. The options are: SPD (Default), Manual.

Bank 0/1 DRAM Timing; Bank 2/3 DRAM Timing; Bank 4/5 DRAM Timing; Bank 6/7 DRAM Timing;

This feature allows you to select the DRAM read/write speed when the above feature set at Manual. The options are: Absent 10ns (Default), Absent 8ns.

Memory Hole At 15M Addr.

When you install a Legacy ISA card, this feature allows you to select the memory hole address range of the ISA cycle when the processor accesses the selected address area. Please read your card manual for detail information. When disabled, the memory hole at the 14MB (or 15MB) address will be treated as a DRAM cycle when the processor accesses the 14~16MB (or 15~16MB) address area.

The options are: 15M-16M, 14M-16M, Disabled (Default).

Read Around Write

This feature speeds up data read performance when it stays Enabled.

The options are: Enabled, Disabled (Default).

Concurrent PCI/Host

If each bus master cycle does not take the same path, it allows for multiple bus master cycles to be activated at the same time.

The options are: Disabled (Default), Enabled.

Video RAM Cacheable

Selecting Enabled allows caching of the video BIOS ROM at C0000h to C7FFFh, resulting in better video performance. However, if any program writes to this memory area, a system error may result.

The options are: Enabled (Default), Disabled.

AGP Aperture Size

It allows you to select the main memory frame size for AGP use.

The options are 4, 8, 16, 32, 64M (Default).

AGP-2X Mode Support

This feature allows user to select the AGP mode be to 1x or 2x when an AGP add-in card installed. However, when set at Enabled and the AGP card only support 1x mode, the system will fall back 1x mode automatically.

The options are: Enabled (Default), Disabled.

C2D Post-Write Buffer

When CPU write to DRAM will keep in the chipset buffer first. The cycle is quick than direct write to DRAM. The 4-Level will get more buffer than the 1-Level does. The options are: 4-Level (Default), 1-Level.

Read DRAM Prefetch Buf

The chipset will give different priority for DRAM blocks. If the access is more frequently. The chipset will prefetch the DRAM data automatically. The 4-Level will get more buffer than the 1-Level does.

The options are: 4-Level (Default), 1-Level.

DRAM Read Request Rate

When the CPU asserts a cycle to the chipset, the chipset will delay 2T or 3T to assert to DRAMs. The options are: 3T (Default), 2T.

OnChip USB

When enabled, this feature allows you to use the onboard USB feature.

The options are: Disabled (Default), Enabled.

USB Keyboard Support

This feature will appear only if the above item Onchip USB is set at Enabled. Set this feature to Enabled to use a USB keyboard with your system. The options are: Disabled (Default), Enabled.

Auto Detect DIMM/PCI Clk

Set this field at Enabled to allow auto detection of DIMM clock speed.

The options are: Enabled (Default), Disabled.

Spread Spectrum Modulated

This feature is used to set the spread Spectrum to be center spread type or down spread type. The options are: Disabled (Default), Enabled.

CPU Host/PCI Clock

This feature allows you to set the CPU/PCI clock frequency. The default setting, Default, will detect your CPU/PCI clock frequency automatically. The recommended CPU clock frequencies are 66 and 100MHz. The other options may effect the system performance. If you set a unappropriate option which leads to a booting problem, keep pressing the Insert key until the display appears will solve it.

The options are: Default (Default), 68/34 MHz, 75/37 MHz, 83/41 MHz, 66/33 MHz, 103/34 MHz, 112/33 MHz, 133/44 MHz, 100/33 MHz.

Power Management Setup

ROM PCI/ISA BIOS (2A8LFF0A) POWER MANAGEMENT SETUP AWARD SOFTWARE, INC.			
Power Management	: User Define	Primary INTR	: ON
Video Off Method	: Suspend -> Off	IRQ3 (COM 2)	: Primary
Video Off After	: V/H SYNC+Blank	IRQ4 (COM 1)	: Primary
MODEM Use IRQ	: 3	IRQ5 (LPT 2)	: Primary
Soft-Off by PWR-BTTN	: Delay 4 Sec	IRQ6 (Floppy Disk)	: Primary
HDD Power Down	: Disable	IRQ7 (LPT 1)	: Primary
Doze Mode	: Disable	IRQ8 (RTC Alarm)	: Disabled
Suspend Mode	: Disable	IRQ9 (IRQ2 Radix)	: Secondary
PWRON After PWR-Fail	: Former-Sts	IRQ10 (Reserved)	: Secondary
VGA	: OFF	IRQ11 (Reserved)	: Secondary
LPT & COM	: LPT/COM	IRQ12 (PS/2 Mouse)	: Disabled
HDD & FDD	: ON	IRQ13 (Coprocesor)	: Primary
DMA/master	: OFF	IRQ14 (Hard Disk)	: Primary
Wake Up On LAN	: Enabled	IRQ15 (Reserved)	: Disabled
Modern Ring Resume	: Enabled		
RTC Alarm Resume	: Disabled		
		Esc: Quit	↑↓←→: Select Item
		F1: Help	Pu/PD+/-: Modify
		F5: Old Values	(Shift)F2: Color
		F8: Load BIOS Defaults	
		F7: Load Setup Defaults	

Power Management

This item allows you to adjust the power management features. Select Disable for disabling global power management features. Select User Define for configuring your own power management features. MIN Saving initiates all predefined timers in their minimum values. MAX Saving, on the other hand, initiates maximum values.

The options are: User Define (Default), Min Saving, Max Saving.

Video Off Option

This feature provides the selections of the video display power saving mode. The option Suspend - Off allows the video display to go blank if the system enters Suspend mode. The option All Modes - Off allows the video display to go blank if the system enters Doze mode or Suspend mode. The option Always On allows the video display to stay in Standby mode even when the system enters Doze or Suspend mode.

The options are: Suspend - Off (Default), All Modes -> Off, Always On.

Video Off Method

The option V/H SYNC+Blank allows the BIOS to blank off screen display by turning off the V-Sync and H-Sync signals sent from add-on VGA card. DPMS Support allows the BIOS to blank off screen display by your add-on VGA card which supports DPMS (Display Power Management Signaling function). Blank Screen allows the BIOS to blank off screen display by turning off the red-green-blue signals.

The options are: V/H SYNC+Blank (Default), DPMS Support, Blank Screen.

MODEM Use IRQ

This feature allows you to select the IRQ# to meet your modem's IRQ#.

The options are: 3 (Default), 4, 5, 7, 9, 10, 11.

HDD Power Down

The option lets the BIOS turn the HDD motor off when system is in Suspend mode. Selecting 1 Min..15 Min allows you define the HDD idle time before the HDD enters the Power Saving Mode.

The options 1 Min..15 Min will not work concurrently. When HDD is in the Power Saving Mode, any access to the HDD will wake the HDD up.

The options are: Disable (Default), 1 Min..15 Min.

Doze Mode

When disabled, the system will not enter Doze mode. The specified time option defines the idle time the system takes before it enters Doze mode.

The options are: Disabled (Default), 1, 2, 4, 8, 12, 20, 30, 40 Min, 1 Hr.

Suspend Mode

When disabled, the system will not enter Suspend mode. The specified time option defines the idle time the system takes before it enters Suspend mode.

The options are: Disabled (Default), 1, 2, 4, 8, 12, 20, 30, 40 Min, 1 Hr.

Soft-Off by PWR-BTTN

The selection Delay 4 Sec. will allow the system shut down after 4 seconds after the power button is pressed. The selection Instant-Off will allow the system shut down immediately once the power button is pressed.

The settings are: Delay 4 Sec. (Default), or Instant-Off.

VGA

ON enables the power management timers when a no activity events is detected in the VGA. *OFF* disables the PM timer even if a no activity event is detected. The options are: OFF (Default), ON.

LPT & COM

LPT/COM enables the power management timers when a no activity event is detected in the LPT and COM ports. *LPT (COM)* enables the power management timers when a no activity event is detected in the LPT (COM) ports. *NONE* to disable the PM timer even if a no activity event is detected. The options are: LPT/COM (Default), LPT, COM, NONE.

HDD & FDD

ON will enable the power management timers when no activity event is detected in the hard drive and floppy drive. *OFF* disables the PM timer even if no activity event is detected. The options are: OFF, ON (Default).

DMA/master

To set this feature at ON activates that Power Management feautre (PM) wake-up event for the DMA or bus master (of the LAN card or/and SCSI card). The options are: OFF (Default), ON.

Wake Up On LAN

When set at Enabled, an input signal comes from the other client/server on the LAN awakes the system from a soft off state if connected over LAN.

The options are Disabled or Enabled (Default).

Modem Ring Resume

An input signal on the serial Ring Indicator (RI) line (in other words, an incoming call on the modem) awakens the system from a soft off state.

The options are: Enabled, Disabled (Default).

RTC Alarm Resume

Enabled allows you to set the time the system will be turned on from the system power-off status. The options are: Enabled, Disabled (Default).

Primary INTR

When the Primary interrupt (the Primary option in the feature of IRQ# Activity) generates will make the Power Management feature (PM) wake-up event on. If set at OFF, all the primary interrupt will not wake-up the system. The options are: OFF, ON (Default).

IRQ# Activity

After the time period which you set at in Suspend Mode Feature, the system advances from Doze Mode to Suspend Mode in which the CPU clock stops and the screen display is off. At this moment, if the IRQ activity which is defined as Primary occurs, the system goes back to Full-on Mode directly.

If the IRQ activity which is defined as Secondary takes place, the system enters another low power state, Dream Mode, in which the system will act as Full-on Mode except that the screen display remains off until the corresponding IRQ handler finishes, then back to Suspend Mode.

The options of IRQ 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 14, 15 are: Primary, Secondary, Disabled.

The default values of IRQ 8, 15 are: Disabled.

The default value of IRQ 3, 4, 5, 6, 7, 12, 13, 14 are: Primary.

The options of IRQ 9, 10, 11 are: Secondary.

PNP/PCI Configuration

ROM PCI/ISA BIOS (2A6LFF0A)	
PNP/PCI CONFIGURATION	
AWARD SOFTWARE, INC.	
PNP OS Installed	: No
Resources Controlled By	: Auto
Reset Configuration Data	: Disabled
CPU to PCI Write Buffer	: Enabled
PCI Dynamic Bursting	: Enabled
PCI Master 0 WS Write	: Enabled
PCI Delay Transaction	: Disabled
PCI#2 Access #1 Retry	: Disabled
AGP Master 1 WS Write	: Enabled
AGP Master 1 WS Read	: Disabled
PCI IRQ Activated By	: Level
Assign IRQ For USB	: Enabled
Assign IRQ For VGA	: Enabled
Assign IRQ For ACPI	: IRQ10
Esc	: Quit ↑↓←→ : Select Item
F1	: Help PU/PD+/- : Modify
F5	: Old Values (Shift)F2 : Color
F6	: Load BIOS Defaults
F7	: Load Setup Defaults

PNP OS Installed

If your operating system is a Plug-and-Play one, such as Windows NT, Windows 95, select Yes. The options are: No (Default), Yes.

Resources Controlled By

If set at Auto, the BIOS arranges all system resources. If there exists conflict, select Manual. The options are: Auto (Default), Manual. The manual options of IRQ- / DMA- assigned to are: Legacy ISA, PCI/ISA PnP.

Reset Configuration Data

When enabled, allows the system to clear the last BIOS configuration data and reset with the default data. The options are: Enabled, Disabled (Default).

IRQ Sequence

This feature allows you to select the PCI IRQ sequence. The options are: 15, 11, 10, 9, 12, 14, 5, 7, 3, 4; 9, 10, 11, 5, 7, 4, 3, 12, 15, 14 (Default).

CPU to PCI Write Buffer

When enabled, allows data and address access to the internal buffer of the system controller; so the processor can be released from the waiting state. The options are: Enabled (Default), Disabled.

PCI Dynamic Bursting

When enabled, the PCI controller allows Bursting PCI transfer if the consecutive PCI cycles come with the address falling in same 1KB space. This improves the PCI bus throughput. The options are: Enabled (Default), Disabled.

PCI Master 0 WS Write

When enabled, allows a zero-wait-state-cycle delay when the PCI master drive writes data to DRAM. The options are: Enabled (Default), Disabled.

PCI Delay Transaction

Enable this feature to abort the current CPI master cycle and to accept the new PCI master request, it reaccepts the original PCI master and returns the PCI data phase to the original PCI master. The options are: Disabled, Enabled (Default).

PCI Master Read Prefetch

When set at Enabled, the memory controller will prefetches data DRAM if the PCI bus master reads data from DRAM.

The options are: Enabled, Disabled (Default).

CI#2 Master 1 WS Write

When set at Enabled, it allows a one-wait-state TRDY# response if PCI bus master writes data to target. The options are: Enabled (Default), Disabled.

PCI#2 Master 1 WS Read

When set at Enabled, it allows a one-wait-state TRDY# response if PCI bus master reads data from target. The options are: Enabled, Disabled (Default).

PCI IRQ Activated By

We suggest that you set this to its default configuration unless you are a qualified technician. The options are: Level (Default), Edge.

Init Primary Display

When you install an AGP VGA card and/or a PCI VGA card on the board, this feature allows you to select the initiation of the monitor display from which card. The options are: PCI (Default), AGP.

Assign IRQ For VGA

If your PCI VGA card does not need an IRQ, select Disabled; therefore, an IRQ can be released for the system use.

The options are: Enabled (Default), Disabled.

Load BIOS Defaults

BIOS defaults contain the most appropriate values of the system parameters that allow minimum system performance. The OEM manufacturer may change the defaults through MODBIN before the binary image burns into the ROM.

Load Setup Defaults

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

Integrated Peripherals

ROM PCI/ISA BIOS (2A6LFF09) INTEGRATED PERIPHERALS AWARD SOFTWARE, INC.	
OnChip IDE Channel0 : Enabled	Onboard Serial Port 2 : UART Mode Select : RxD , TxD Active : Hi, Lo IR Transmission delay : Enabled
OnChip IDE Channel1 : Enabled	Onboard Parallel Port : Parallel Port Mode : ECP Mode Use DMA : 3 EPP Mode Select : EPP1,7
IDE Prefetch Mode : Enabled	
IDE HDD Block Mode : Enabled	
Primary Master PIO : Auto	
Primary Slave PIO : Auto	
Secondary Master PIO : Auto	
Secondary Slave PIO : Auto	
Primary Master UDMA : Auto	
Primary Slave UDMA : Auto	
Secondary Master UDMA : Auto	
Secondary Slave UDMA : Auto	
Init Display First : PCI Slot	
POWER ON Function : KB Power ON Password : Enter Hot Key Power ON : Ctrl-F1 KBC input clock : 8 Mhz Onboard FDC Controller : Enabled Onboard Serial Port 1 : 3F8/IRQ4	Esc : Quit ↑↓←→ : Select Item F1 : Help PU/PD/+/ - : Modify F5 : Old Values (Shift)F2 : Color F6 : Load BIOS Defaults F7 : Load Setup Defaults

OnChip IDE Channel0

When enabled, allows you to use the onboard primary PCI IDE. If a hard disk controller card is used, set at Disabled.

The options are: Enabled (Default), Disabled.

OnChip IDE Channel1

When enabled, allows you to use the onboard secondary PCI IDE. If a hard disk controller card is used, set at Disabled.

The options are: Enabled (Default), Disabled.

IDE Prefetch Mode

When set at Enabled, it allows data to be posted to and prefetched from the primary IDE data ports. Data prefetching is initiated when a data port read occurs. The read prefetch eliminates latency to the IDE data ports and allows them to be performed back to back for the highest possible PIO data transfer rates. The first data port read of a sector is called the demand read. Subsequent data port reads from the sector are called prefetch reads. The demand read and all prefetch reads must be of the same size (16 or 32 bits).

The options are: Enabled (Default), Disabled.

IDE HDD Block Mode

When enabled, the system executes read/write requests to hard disk in block mode. The options are: Enabled (Default), Disabled.

Primary Master PIO

Allows an automatic or a manual configuration of the PCI primary IDE hard disk (master) mode.

The options are: Auto (Default), Mode 0, Mode 1, Mode 2, Mode 3, Mode 4.

Primary Slave PIO

Allows an automatic or a manual configuration of the PCI primary IDE hard disk (slave) mode.

The options are: Auto (Default), Mode 0, Mode 1, Mode 2, Mode 3, Mode 4.

Secondary Master PIO

Allows an automatic or a manual configuration of the PCI secondary IDE hard disk (master) mode.

The options are: Auto (Default), Mode 0, Mode 1, Mode 2, Mode 3, Mode 4.

Secondary Slave PIO

Allows an automatic or a manual configuration of the PCI secondary IDE hard disk (slave) mode.

The options are: Auto (Default), Mode 0, Mode 1, Mode 2, Mode 3, Mode 4.

Primary Master UDMA

Allows you to select the first PCI IDE channel of the first master hard disk mode or to detect it by the BIOS if the hard disk supports UDMA (Ultra DMA, faster than DMA).

The options are: Auto (Default), Disabled.

Primary Slave UDMA

Allows you to select the first PCI IDE channel of the first slave hard disk mode or to detect it by the BIOS if the hard disk supports UDMA (Ultra DMA, faster than DMA).

The options are: Auto (Default), Disabled.

Secondary Master UDMA

Allows you to select the second PCI IDE channel of the secondary master hard disk mode or to detect it by the BIOS if the hard disk supports UDMA (Ultra DMA, faster than DMA). The options are: Auto (Default), Disabled.

Secondary Slave UDMA

Allows you to select the second PCI IDE channel of the secondary slave hard disk mode or to detect it by the BIOS if the hard disk supports UDMA (Ultra DMA, faster than DMA). The options are: Auto (Default), Disabled.

Init Display First

When you install an AGP VGA card and/or a PCI VGA card on the board, this feature allows you to select the first initiation of the monitor display from which card. The options are: PCI Slot (Default), AGP.

POWER ON Function

This feature provides you with several ways to power on the system; they are: BUTTON ONLY (press the power button), Password (enter a password to power on the system), Mouse Right (click the mouse right button), Mouse Left (click the mouse left button), Hot Key (press the selected hot key). To use this feature, you have to set the jumper KB_PWN in Chapter 2 at Enable. The options are: BUTTON ONLY (Default), Password, Mouse Right, Mouse Left, Hot Key.

KB Power On Password

When set the POWER ON Function at Password, this feature will appear on the monitor. It allows you to set a password to power the system. Press the Enter key when you are prompted to set the power-on password. Type it up to five characters and press the Enter key; then confirm it by typing the password again and pressing the Enter key to complete the setting procedures. To disable the power-on password, press the Enter key when it is disabled. When the power-on password is set, the system can not be powered on by the power button, mouse, or hot key. Once the power-on password is set, you can power on the system simply by entering the password. This feature offers the security on your computer system.

Hot Key Power ON

When set POWER ON Function at Hot Key, this feature will appear on the monitor. It allows you to select a hot key to power on your computer.

The options are: Ctrl-F1 (Default), Ctrl-F2, Ctrl-F3, Ctrl-F4, Ctrl-F5, Ctrl-F6, Ctrl-F7, Ctrl-F8, Ctrl-F9, Ctrl-F10, Ctrl-F11, Ctrl-F12.

KBC input clock

This feature allows you to select different KBC input clocks which your keyboard actually supported. Please read your keyboard manual also for more information. The options are: 6, 8 (Default), 12, 16 MHz.

Onboard FDC Controller

When enabled, the floppy diskette drive (FDD) controller is activated. The options are: Enabled (Default), Disabled.

Onboard Serial Port 1

If the serial port 1 uses the onboard I/O controller, you can modify your serial port parameters. If an I/O card needs to be installed, COM3 and COM4 may be needed. The options are: 3F8/IRQ4 (Default), 3E8/IRQ4, 2F8/IRQ3, 2E8/IRQ3, Disabled.

Onboard Serial Port 2

If the serial port 2 uses the onboard I/O controller, you can modify your serial port parameters. If an I/O card needs to be installed, COM3 and COM4 may be needed. The options are: 2F8/IRQ3 (Default), 3E8/IRQ4, 2E8/IRQ3, 3F8/IRQ4, Disabled.

UART Mode Select

Allows you to select the IR modes if the serial port 2 is used as an IR port. Set at Normal, if you use COM2 as the serial port as the serial port, instead as an IR port. The options are: Normal (Default), IrDA, ASKIR.

RxD , TxD Active

This feature is available only if the item, UART 2 Mode, is set at ASKIR or HPSIR. The feature allows you to select the active signals of the reception end and the transmission end. This is for technician use only. The options are: Hi, Lo (Default); Hi, Hi; Lo, Hi; Lo, Lo.

IR Transmission Delay

When Enabled, the transmission delays 4 characters-time (40 bit-time) if SIR is changed from RX mode to TX mode. When Disabled, no transmission delay if SIR is changed from RX mode to TX mode. The options are: Enabled (Default), Disabled.

Onboard Parallel Port

Allows you to select from a given set of parameters if the parallel port uses the onboard I/O controller. The options are: 378/IRQ7 (Default), 278/IRQ5, 3BC/IRQ7, Disabled.

Parallel Port Mode

Allows you to connect with an advanced printer.

The options are: SPP (Default), EPP, ECP, ECP+EPP.

EPP Mode Select

If you select EPP or ECP+EPP in Parallel Port Mode, this feature allows you to select the EPP type version.

The options are: EPP1.9, EPP1.7 (Default).

ECP Mode Use DMA

If you select ECP or ECP+EPP in Parallel Port Mode, this feature allows you to select Direct Memory Access (DMA) channel.

The options are: 3 (Default), 1.

Supervisor/User Password

To enable the Supervisor/User passwords, select the item from the Standard CMOS Setup. You will be prompted to create your own password. Type your password up to eight characters and press Enter. You will be asked to confirm the password. Type the password again and press Enter. To disable password, press Enter twice when you are prompted to enter a password. A message appears, confirming the password is disabled. Under the BIOS Feature Setup, if System is selected under the Security Option field and the Supervisor Password is enabled, you will be prompted for the Supervisor Password every time you try to enter the CMOS Setup Utility. If System is selected and the User Password is enabled, you will be requested to enter the User Password every time you reboot the system. If Setup is selected under the Security Option field and the User Password is enabled, you will be prompted only when you reboot the system.

IDE HDD Auto Detection

The IDE Hard Disk Drive Auto Detection feature automatically configures your new hard disk. Use it for a quick configuration of new hard drives. This feature allows you to set the parameters of up to four IDE HDDs. The option with (Y) are recommended by the system BIOS. You may also keys in your own parameters instead of setting by the system BIOS. After all settings, press Esc key to return the main menu. For confirmation, enter the Standard CMOS Setup feature.

Save and Exit Setup

After you have made changes under Setup, press Esc to return to the main menu. Move cursor to Save and Exit Setup or press F10 and then press Y to change the CMOS Setup. If you did not change anything, press Esc again or move cursor to Exit Without Saving and press Y to retain the Setup settings. The following message will appear at the center of the screen to allow you to save data to CMOS and exit the setup utility: **SAVE to CMOS and EXIT (Y/N)?**

Exit without Saving

If you select this feature, the following message will appear at the center of the screen to allow you to exit the setup utility without saving CMOS modifications: **Quit Without Saving (Y/N)?**

Award BIOS Flash Software

The board package provides BIOS flash software tool in the software utilities. This software feature is provided for upgrading BIOS use. To start the program, click on *Browse CD* in the main menu, select *Flash*, then choose the BIOS vendor that provided the BIOS this board came with. Please print the relating README file and read it first. For more information about, please visit FIC Web Site [http:// www.fic.com.tw/](http://www.fic.com.tw/).



CAUTION: Do not turn off or reset the computer during the flash process.

Downloading BIOS File

Format a bootable system diskette by inserting an empty floppy disk into floppy disk drive and by typing **format a: /s**, visit the FIC Web Site [http:// www.fic.com.tw/](http://www.fic.com.tw/). Please visit *BIOS Update* page in FIC Technical Support section, then select the BIOS file you need. Download it to your bootable diskette. The next two sections introduce you two ways to flash your old version BIOS.

Method 1: Upgrading BIOS File under DOS

Place the bootable diskette containing the BIOS file in the diskette drive (Assume the diskette drive is A.), and reboot the system by A drive. At the A: > prompt, execute the BIOS upgrading procedure by entering the Flash BIOS utility and the BIOS file with its extension. Backup the old BIOS file.

Command: {flash tool file}{space}{downloaded BIOS file} / cc <Enter>

Parameter **CC** stands for **Clear CMOS**. It is most frequently used. The other parameters are listed in AWDFlash.txt file or Type {flash tool file}/?, please read it if need. After press *Enter* key, a FLASH MEMORY WRITER menu will appear. Enter the new BIOS file name with its extension file name into the text box after **File Name to Program** . If you want to save your old BIOS (this is recommend), select **Y** to **Do You Want To Save Bios**, then type the old BIOS name and the extension after **FILE NAME TO SAVE:**. Select **N** to **Do You Want To Save Bios**, if you do not want to save your old BIOS. After the decision on saving the old BIOS or not (saving the old BIOS file is strongly recommended), select **Y** to **Are you sure to program** when the next menu appears; wait until a message shows **Message: Power Off or Reset the system.**

Loading New BIOS Defaults

Once the BIOS has been flashed successfully,

1. remove the diskette and reboot the system.
 2. Press *Delete* key to enter **CMOS SETUP UTILITY** menu while booting.
 3. Select **LOAD SETUP DEFAULTS** and load the new BIOS default values.
- Finally execute **SAVE AND EXIT SETUP** to complete the whole process.

Method 2: Flash BIOS During POST

Place the diskette containing the flash tool AWDFlash.exe and the new version BIOS file (.bin file) in the diskette drive (assume the diskette drive is A.). Boot the system up, while the message "LT-F2" appears, to press ALT key and F2 at the same time will start flashing BIOS, instead of doing it under the DOS mode.

BIOS Features Setup (for VB-601 only)



NOTE: Please read Page 74 for Load BIOS Defaults and Load Setup Defaults; Page 79 for Supervisor and User Password setup; Page 79 for IDE HDD auto detection; Page 80 for Save & Exit setup; Page 80 for Exit without Saving; Page 80 for BIOS flash procedures.

ROM PCI/ISA BIOS (2A69KF09) CHIPSET FEATURES SETUP AWARD SOFTWARE, INC.			
Detect Boot Virus By Trend	: Enabled	Video BIOS Shadow	: Enabled
CPU Internal Cache	: Enabled		
External Cache	: Enabled		
CPU L2 Cache ECC Checking	: Enabled		
Quick Power On Self Test	: Enabled		
Boot From LAN First	: Enabled		
Boot Sequence(LS120/ZIP100)	: A, C, SCSI		
Swap Floppy Drive	: Disabled		
Boot Up NumLock Status	: On		
Typematic Rate Setting	: Disabled		
Typematic Rate (Chars/Sec)	: 6		
Typematic Delay (Msec)	: 250		
Security Option	: Setup		
PS/2 mouse function control	: Enabled		
OS Select For DRAM > 64MB	: Non-OS2		
		Esc: Quit	++ -- : Select Item
		F1 : Help	PU/PD/+/- : Modify
		F5 : Old Values (Shift)	F2 : Color
		F6 : Load BIOS Defaults	
		F7 : Load Setup Defaults	

Detect Boot Virus By Trend

This feature starts the virus scan tool to detect if boot virus in boot sector of the first hard disk drive when booting up.

The options are: Enabled (Default), Disabled.

CPU Internal Cache

When enabled, improves the system performance. Disable this item when testing or trouble-shooting. The options are: Enabled (Default), Disabled.

External Cache

When enabled, supports an optional cache SRAM.

The options are: Enabled (Default), Disabled.

CPU L2 Cache ECC Checking

This feature allows users to activate the CPU Level 2 cache error check and correction function.

The options are: Enabled (Default), Disabled.

Quick Power On Self Test

When enabled, allows the BIOS to bypass the extensive memory test.

The options are: Enabled (Default), Disabled.

Boot From LAN First

This feature makes the system bootable by the remote server via LAN.

The options are: Enabled (Default), Disabled.

Boot Sequence (LS120/ZIP100)

Allows the system BIOS to first try to boot the operating system from the selected disk drive.

The options are: A, C, SCSI (Default); C, A, SCSI; C, CDROM, A; CDROM, C, A; D, A, SCSI; E, A, SCSI; F, A, SCSI; SCSI, A, C; SCSI, C, A; C Only; LS/ZIP, C.

Swap Floppy Drive

Allows you to switch the order in which the operating system accesses the floppy drives during boot up.

The options are: Enabled, Disabled (Default).

Boot Up Floppy Seek

When enabled, assigns the BIOS to perform floppy diskette drive tests by issuing the time-consuming seek commands.

The options are: Enabled (Default), Disabled.

Boot Up NumLock Status

When set to On, allows the BIOS to automatically enable the Num Lock Function when the system boots up.

The options are: On (Default), Off.

Typematic Rate Setting

The term typematic means that when a keyboard key is held down, the character is repeatedly entered until the key is released. When this item is enabled, you may change the typematic repeat rate.

The options are: Disabled (Default), Enabled.

Typematic Rate (Chars/Sec)

Sets the rate of a character repeat when the key is held down.

The options are: 6 (Default), 8, 10, 12, 15, 20, 24, 30.

Typematic Delay (Msec)

Sets the delay time before a character is repeated.

The options are: 250 (Default), 500, 750, 1000 millisecond.

Security Option

Allows you to set the security level of the system.

The options are: Setup (Default), System.

PS/2 Mouse Function Control

When stay with the default, Enabled; the system will detect the PS/2 mouse and set IRQ12 service. When disabled, or no PS/2 mouse, the system will release IRQ12.

The options are: Enabled (Default), Disabled.

OS Select For DRAM > 64MB

If your operating system (OS) is OS/2, select the option OS2. Otherwise, stay with the default setting Non-OS2.

The options are: Non-OS2 (Default), OS2.

Video BIOS Shadow

Allows the BIOS to copy the video ROM code of the add-on video card to the system memory for faster access.

The options are: Enabled (Default), Disabled.

Chipset Features Setup

ROM PCI/ISA BIOS (2A69KF09) CHIPSET FEATURES SETUP AWARD SOFTWARE, INC.	
SDRAM CAS latency Time : 3	Spread Spectrum Modulated : Disabled
DRAM Data Integrity Mode : Non-ECC	CPU Clock Frequency : Default
System BIOS Cacheable : Enabled	CPU Warning Temperature : 70°C/158°F
Video RAM Cacheable : Disabled	Shutdown System Temp. : 80°C/176°F
8 Bit I/O Recovery Time : 1	Current CPU Temperature : 29°C/84°F
16 Bit I/O Recovery Time : 1	Current FAN1 Speed :
Memory Hole At 15M-16M : Disabled	Current FAN2 Speed :
Passive Release : Enabled	Vcore A: Vcore B :
Delayed Transaction : Disabled	+3.3V : +5V :
AGP Aperture Size (MB) : 64	+12V : -12V :-
	-5V :-
	Shutdown Temperature : 60°C/140°F
	Esc: Quit ++--: Select Item
	F1: Help PU/PD/+/-: Modify
	F5: Old Values (Shift)F2: Color
	F6: Load BIOS Defaults
	F7: Load Setup Defaults

SDRAM CAS latency Time

If any SDRAM DIMM is installed, this feature allows you to select the CAS Latency. The options are: 3 (Default), 2.

DRAM Data Integrity Mode

This feature provides software configurability of selecting between ECC (ECC generation and checking/correction) mode or non-ECC mode of operation of the DRAM interface. The options are: Non-ECC (Default), ECC.

System BIOS Cacheable

Select Enabled allows caching of the system BIOS ROM at F000h-FFFFh, resulting in better system performance. However, if any program writes to this memory area, a system error may result.

The options are: Disabled, Enabled (Default).

Video RAM Cacheable

Selecting Enabled allows caching of the video BIOS ROM at C0000h to C7FFFh, resulting in better video performance. However, if any program writes to this memory area, a system error may result.

The options are: Enabled (Default), Disabled.

8 Bit I/O Recovery Time

The recovery time is the length of time, measured in CPU clocks, which the system will delay after the completion of an input/output request. This delay takes place because the CPU is operating so much faster than the input/output bus that the CPU must be delayed to allow for the completion of the I/O. The options are: 1 (Default), 2, 3, 4, 5, 6, 7, 8, NA. Unit: Bus clock.

16 Bit I/O Recovery Time

This item allows you to determine the recovery time allowed for 16 bit I/O. The options are: 1 (Default), 2, 3, 4, NA. Unit: Bus clock.

Memory Hole At 15M-16M

For some special add-on cards, certain space in memory can be reserved for ISA cards. This memory must be mapped into the memory space below 16 MB. Selecting Enabled for memory hole supported, and Disabled for memory hole not supported. The options are: Enabled, Disabled (Default).

Passive Release

Set this option to Enabled to enable passive release for the Intel PIIX4E chip. The options are: Enabled (Default), Disabled.

Delayed Transaction

Set this option to Enabled to enable delayed transactions for the Intel PIIX4E chip. The options are: Enabled (Default), Disabled.

AGP Aperture Size (MB)

This option specifies the amount of system memory that can be used by the Accelerated Graphics Port (AGP). The options are: 4, 8, 16, 32, 64 (Default), 128, 256.

Spread Spectrum Modulated

This feature is used to set the spread Spectrum to be center spread type or down spread type. The options are: Enabled, Disabled (Default).

CPU Clock Frequency

This feature allows you to set the CPU clock frequency. The default setting, Default, will detect your CPU clock frequency automatically. The recommended CPU clock frequencies are 66 and 100MHz. The other options may effect the system performance. If you set a unappropriate option which leads to a booting problem, keep pressing the Insert key until the display appears will solve it.

The options are: Default (Default), 75, 83, 66, 103, 112, 133, 100MHz.

Shutdown System Temp.

When Windows 98 installed, this feature helps to shutdown the system when the system temperature is as high as the selected temperature to prevent from the overheat problem.

The options are: 80°C/176°F (Default), Disabled, 70°C/158°F, 75°C/167°F.

System Hardware Monitor -

(CPU Warning Temperature, Current System Temp., Current CPU Temperature, FAN1 Speed, Current FAN2 Speed, VCORE)

This feature allows end users and technicians to monitor the data provided by the LDCM function of this board.

Power Management Setup

ROM PCI/ISA BIOS (2A69KF09) POWER MANAGEMENT SETUP AWARD SOFTWARE, INC.	
Power Management : Disable	** Reload Global Timer Events **
PM Control by APM : Yes	IRQ[3-7, 9-15], NMI : Enabled
Video Off Method : DPMS	Primary IDE 0 : Disabled
Video Off After : Suspend	Primary IDE 1 : Disabled
MODEM Use IRQ : 3	Secondary IDE 0 : Disabled
Doze Mode : Disable	Secondary IDE 1 : Disabled
Standby Mode : Disable	Floppy Disk : Disabled
Suspend Mode : Disable	Serial Port : Enabled
HDD Power Down : Disable	Parallel Port : Disabled
Suspend Mode Option : PowerOn Suspend	
Throttle Duty Cycle : 62.5%	
VGA Active Monitor : Disabled	
Soft-Off by PWR-BTTN : Delay 4 Sec.	
PWRON After PWR-Fail : Former-Sts	
CPUFAN Off In Suspend : Enabled	
Resume by Ring : Enabled	Esc: Quit **-- : Select Item
Resume by LAN : Enabled	F1 : Help PU/PD+/- : Modify
Resume by Alarm : Disabled	F5 : Old Values (Shift)F2 : Color
IRQ 8 Break Suspend : Disabled	F6 : Load BIOS Defaults
	F7 : Load Setup Defaults

Power Management

This item allows you to adjust the power management features. Select Disable for disabling global power management features. Select User Defined for configuring your own power management features. MIN Saving initiates all predefined timers in their minimum values. MAX Saving, on the other hand, initiates maximum values. The options are: Disabled (Default), User Defined, MIN Saving, MAX Saving.

PM Control by APM

The option No allows the BIOS to ignore the APM (Advanced Power Management) specification. Selecting Yes will allow the BIOS wait for APM's prompt before it enters Doze mode, Standby mode, or Suspend mode. If the APM is installed, it will prompt the BIOS to set the system into power saving mode when all tasks are done. The options are: No, Yes (Default).

Video Off Method

The option V/H SYNC+Blank allows the BIOS to blank off screen display by turning off the V-Sync and H-Sync signals sent from add-on VGA card. DPMS Supported allows the BIOS to blank off screen display by your add-on VGA card which supports DPMS (Display Power Management Signaling function). Blank Screen allows the BIOS to blank off screen display by turning off the red-green-blue signals.

The options are: V/H SYNC+Blank, DPMS (Default), Blank Screen.

Video Off After

This feature allows you to select under which mode to power off your monitor. The options are: Standby, Doze, N/A, Suspend (Default).

MODEM Use IRQ

This feature allows you to select the IRQ# of the system that is the same IRQ# as the modem use. The options are: NA, 3 (Default), 4, 5, 7, 9, 10, 11.

Doze Mode

When disabled, the system will not enter Doze mode. The specified time option defines the idle time the system takes before it enters Doze mode.

The options are: Disable (Default), 1, 2, 4, 8, 12, 20, 30, 40 Min, 1 Hr.

Standby Mode

When disabled, the system will not enter the Standby mode. The specified time option defines the idle time before enters Standby mode.

The options are: Disable (Default), 1, 2, 4, 8, 12, 20, 30, 40 Min, 1 Hr.

Suspend Mode

When disabled, the system will not enter Suspend mode. The specified time option defines the idle time the system takes before it enters Suspend mode.

The options are: Disable (Default), 1, 2, 4, 8, 12, 20, 30, 40 Min, 1 Hr.

HDD Power Down

Selecting Disable will turn off the hard disk drive (HDD) motor. Selecting 1 Min..15 Min allows you define the HDD idle time before the HDD enters the Power Saving Mode. The option When Suspend lets the BIOS turn the HDD motor off when system is in Suspend mode. The options 1 Min..15 Min and When Suspend will not work concurrently. When HDD is in the Power Saving Mode, any access to the HDD will wake the HDD up.

The options are: Disable (Default), 1 Min..15 Min, When Suspend.

Suspend Mode Option

When an ATX power supply installed, this feature offers an advanced way to saving more power and prompt your system performance. If you stay with the default setting, PowerOn Suspend option, the system will enter the suspend mode (monitor off, CPU off) from full-on power status by press the power button. If set at Suspend to Disk, however, the status will directly back to the working stage of the system at the moment that is off. This can be done owing to the system saves all the configurations to the hard disk first (hard disk must have sufficient space to accomodate these data), then shut off.

For using this feature, a command (see the NOTE below) is needed to be excute while boot the system. The options are: PowerOn Suspend (Default), Suspend to Disk.

**CAUTION:**

1. If Windows 95 or DOS used, the command: *ZVHDD /c /file* is recommended. The hard disk available space must be larger than memory space plus 4MB.
2. If Windows NT or OS2 is used, *the command: ZVHDD /c /partition* is recommended. *It creates a new partition in the hard disk. To make sure that at least one partition is not used is important.*
3. Suspend_to_Disk feature may fail if you have improper add-on devices. For example, your PCI VGA adapter is non-VESA complaint or your sound card is not Sound Blaster compatible or does not have APM driver. It may lead to data corruption.

Please read the related README file in the CD (or floppy disk) that comes with this board for detail information before your operate this feature.

Throttle Duty Cycle

When the system enters Doze mode, the CPU clock runs only part of the time. You may select the percent of time that the clock runs.

The settings are 12.5 %, 25 %, 37.5 %, 50 %, 62.5 % (Default), 75%, 87.5%.

VGA Active Monitor

Enable this feature will cause any screen update to reload the global time.

The options are: Disabled (Default), Enabled.

Soft-Off by PWR-BTTN

This feature is designed for the case when you use an ATX power supply. The selection Delay 4 Sec. will allow the system shut down after 4 seconds after the power button is pressed. The selection Instant-Off will allow the system shut down immediately once the power button is pressed.

The settings are Delay 4 Sec. (Default) or Instant-Off.

PWRON After PWR-Fail

When the system is shut down owing to the power failure, the system will not be back to power on by itself. This feature allows you to set the system back to which power status of the system when the system power is resumed. The options are Former-Sts (Default), On, or Off.

CPUFAN Off In Suspend

Enabling this feature will allow the CPU fan stop running when the system enters Suspend mode. The options are Disabled or Enabled (Default).

Resume by Ring

An input signal on the serial Ring Indicator (RI) line (in other words, an incoming call on the modem) awakens the system from a soft off state. The options are Disabled or Enabled (Default).

Resume by LAN

When Enabled, this feature allows the system to resume normal operation if connected over LAN. The options are Disabled or Enabled (Default).

Resume by Alarm

When set at Enabled, it allows you to set the time when the system to be turned on from the system power-off status. The settings are Disabled (Default) or Enabled.

Date (of Month) Alarm

If Resume by Ring is set at Enabled , this feature allows you to set the day of the alarm starts when the RTC Alarm Resume From Soft Off is set to be Enabled. The options are: 0 (Default), 1..31.

Time (hh:mm:ss) Alarm

If Resume by Ring is set at Enabled , this feature allows you to set the time of the alarm starts when the RTC Alarm Resume From Soft Off is set to be Enabled. The options are: 7: 0: 0 (Default). hh (*hour*) - 0, 1, 2,..., 23; mm (*minute*) - 0, 1, 2,...,59; ss (*second*) - 0, 1, 2,...,59.

IRQ 8 Break Suspend

You can turn On or Off monitoring of IRQ8 (the Real Time Clock) so it does not awaken the system from Suspend mode. The settings are Disabled (Default) or Enabled.

IRQ [3-7,9-15], NMI

When Enabled, an event occurring on each device uses these resources to restart the global time for Standby mode. The settings are Disabled or Enabled. The default setting is Enabled.

Primary IDE 0, Primary IDE 1, Secondary IDE 0, Secondary IDE 1, Floppy Disk, Serial Port, Parallel Port

Enable this feature will keep the system restarting the global time when the selected device is active. The settings are Disabled or Enabled.

The default setting is Disabled, except Serial Port.

PNP/PCI Configuration

ROM PCI/ISA BIOS (2A69KF09) PNP/PCI CONFIGURATION AWARD SOFTWARE, INC.	
PNP OS Installed : No	Slot 1 Use IRQ No. : Auto
Resources Controlled By : Auto	Slot 2 Use IRQ No. : Auto
Reset Configuration Data : Disabled	Slot 3 Use IRQ No. : Auto
	Slot 4 Use IRQ No. : Auto
	PCI IRQ Activate By : Level
	Init Primary Display : PCI
	Assign IRQ For VGA : Enabled
Esc: Quit ++-- : Select Item F1 : Help PU/PD/+/- : Modify F5 : Old Values (Shift)F2 : Color F6 : Load BIOS Defaults F7 : Load Setup Defaults	

PNP OS Installed

If your operating system is a Plug-and-Play one, such as Windows 95, select Yes. The options are: No (Default), Yes.

Resources Controlled By

If set at Auto, the BIOS arranges all system resources. If there exists conflict, select Manual. The options are: Auto (default), Manual. The manual options of **IRQ- / DMA- assigned to** are: Legacy ISA, PCI/ISA PnP.

Reset Configuration Data

When enabled, allows the system to clear the last BIOS configuration data and reset with the default data. The options are: Enabled, Disabled (default).

Slot 1/2/3/4 Use IRQ No.

This feature allows you to assign the PCI IRQ numbers for PCI slots. Selecting the default, AUTO, allows the PCI controller to automatically allocate the IRQ numbers.

The options are: Auto (Default), 3, 4, 5, 7, 9, 10, 11, 12, 14, 15.

PCI IRQ Activate By

We suggest that you set this to its default configuration unless you are a qualified technician. The options are: Level (Default), Edge.

Init Primary Display

When you install an AGP VGA card and/or a PCI VGA card on the board, this feature allows you to select the initiation of the monitor display from which card. The options are: PCI (Default), AGP.

Assign IRQ For VGA

If your PCI VGA card does not need an IRQ, select Disabled to release an IRQ for system use. The options are: Enabled (Default), Disabled.

Integrated Peripherals

ROM PCI/ISA BIOS (2A69KF09)	
INTEGRATED PERIPHERALS	
AWARD SOFTWARE, INC.	
IDE HDD Block Mode	: Enabled
On-Chip Primary PCI IDE	: Enabled
On-Chip Secondary PCI IDE	: 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
HDD S.M.A.R.T. Capability	: Disabled
USB Controller	: Disabled
POWER ON Function	: BUTTON ONLY
KBC input clock	: 8 MHz
Onboard FDC Controller	: Enabled
Onboard Serial Port 1	: 3F8/IRQ4
Onboard Serial Port 2	: 2F8/IRQ3
UART Mode Select	: Normal
Onboard Parallel Port	: 378/IRQ7
Parallel Port Mode	: SPP
Esc: Quit	↑↓←→: Select Item
F1: Help	PU/PD/+/-: Modify
F5: Old Values	(Shift)F2: Color
F6: Load BIOS Defaults	
F7: Load Setup Defaults	

IDE HDD Block Mode

When enabled, the system executes read/write requests to hard disk in block mode. The options are: Enabled (Default), Disabled.

On-Chip Primary PCI IDE

When enabled, allows you to use the onboard primary PCI IDE.
The options are: Enabled (Default), Disabled.

On-Chip Secondary PCI IDE

When enabled, allows you to use the onboard secondary PCI IDE.
The options are: Enabled (Default), Disabled.

IDE Primary Master PIO

Allows an automatic or a manual configuration of the PCI primary IDE hard disk (master) mode.
The options are: Auto (Default), Mode 0, Mode 1, Mode 2, Mode 3, Mode 4.

IDE Primary Slave PIO

Allows an automatic or a manual configuration of the PCI primary IDE hard disk (slave) mode.
The options are: Auto (Default), Mode 0, Mode 1, Mode 2, Mode 3, Mode 4.

IDE Secondary Master PIO

Allows an automatic or a manual configuration of the PCI secondary IDE hard disk (master) mode.
The options are: Auto (Default), Mode 0, Mode 1, Mode 2, Mode 3, Mode 4.

IDE Secondary Slave PIO

Allows an automatic or a manual configuration of the PCI secondary IDE hard disk (slave) mode.
The options are: Auto (Default), Mode 0, Mode 1, Mode 2, Mode 3, Mode 4.

IDE Primary Master UDMA

Allows you to select the first PCI IDE channel of the first master hard disk mode or to detect it by the BIOS if the hard disk supports UDMA (Ultra DMA, faster than DMA). The options are: Auto (Default), Disabled.

IDE Primary Slave UDMA

Allows you to select the first PCI IDE channel of the first slave hard disk mode or to detect it by the BIOS if the hard disk supports UDMA (Ultra DMA, faster than DMA). The options are: Auto (Default), Disabled.

IDE Secondary Master UDMA

Allows you to select the second PCI IDE channel of the secondary master hard disk mode or to detect it by the BIOS if the hard disk supports UDMA (Ultra DMA, faster than DMA). The options are: Auto (Default), Disabled.

IDE Secondary Slave UDMA

Allows you to select the second PCI IDE channel of the secondary slave hard disk mode or to detect it by the BIOS if the hard disk supports UDMA (Ultra DMA, faster than DMA). The options are: Auto (Default), Disabled.

HDD S.M.A.R.T. Capability

“S.M.A.R.T.” is the abbreviation of “Self-Monitoring, Analysis and Reporting Technology”. To enable it will assist you in preventing some (but not all) system down time due to hard disk drive failure.

The options are: Enabled, Disabled (Default).

USB Controller

If you do not use the onboard USB feature, it allows you to disable it.

The options are: Enabled, Disabled (Default).

BIOS Support USB Keyboard

If Enabled is selected in the above feature, this feature will appear.

If your USB devices cannot be detected automatically by the system BIOS or some driver diskettes came with your USB devices, please set at DOS for allowing you to install the driver.

The options are: Setup (Default), DOS.

POWER ON Function

This feature provides you with several ways to power on the system; they are: BUTTON ONLY (press the power button), Password (enter a password to power on the system), Mouse Right (click the mouse right button), Mouse Left (click the mouse left button), Hot Key (press the selected hot key). To use this feature, you have to set the jumper KB_PWN in Chapter 2 at Enable. The options are: BUTTON ONLY (Default), Password, Mouse Right, Mouse Left, Hot Key.

KB Power On Password

When set the POWER ON Function at Password, this feature will appear on the monitor. It allows you to set a password to power the system. Press the Enter key when you are prompted to set the power-on password. Type it up to five characters and press the Enter key; then confirm it by typing the password again and pressing the Enter key to complete the setting procedures. To disable the power-on password, press the Enter key when it is disabled. When the power-on password is set, the system can not be powered on by the power button, mouse, or hot key. Once the power-on password is set, you can power on the system simply by entering the password. This feature offers the security on your computer system.

Hot Key Power ON

When set POWER ON Function at Hot Key, this feature will appear on the monitor. It allows you to select a hot key to power on your computer. The options are: Ctrl-F1 (Default), Ctrl-F2, Ctrl-F3, Ctrl-F4, Ctrl-F5, Ctrl-F6, Ctrl-F7, Ctrl-F8, Ctrl-F9, Ctrl-F10, Ctrl-F11, Ctrl-F12.

KBC input clock

This feature allows you to select different KBC input clocks which your keyboard actually supported. Please read your keyboard manual also for more information. The options are: 6, 8 (Default), 12, 16 MHz.

Onboard FDC Controller

When enabled, the floppy diskette drive (FDD) controller is activated. The options are: Enabled (Default), Disabled.

Onboard Serial Port 1

If the serial port 1 uses the onboard I/O controller, you can modify your serial port parameters. If an I/O card needs to be installed, COM3 and COM4 may be needed. The options are: 3F8/IRQ4 (Default), 3E8/IRQ4, 2F8/IRQ3, 2E8/IRQ3, Disabled.

Onboard Serial Port 2

If the serial port 2 uses the onboard I/O controller, you can modify your serial port parameters. If an I/O card needs to be installed, COM3 and COM4 may be needed. The options are: 2F8/IRQ3 (Default), 3E8/IRQ4, 2E8/IRQ3, 3F8/IRQ4, Disabled.

UART Mode Select

Allows you to select the IR modes if the serial port 2 is used as an IR port. Set at Normal, if you use COM2 as the serial port as the serial port, instead as an IR port. The options are: Normal (Default), IrDA, ASKIR.

RxD , TxD Active

The feature allows you to select the active signals of the reception end and the transmission end. This is for technician use only.
The options are: Hi, Hi (Default); Hi, Lo; Lo, Hi; Lo, Lo.

IR Transmission Delay

When Enabled, the transmission delays 4 characters-time (40 bit-time) if SIR is changed from RX mode to TX mode. When Disabled, no transmission delay if SIR is changed from RX mode to TX mode.
The options are: Enabled (Default), Disabled.

Onboard Parallel Port

Allows you to select from a given set of parameters if the parallel port uses the onboard I/O controller.
The options are: 378/IRQ7 (Default), 278/IRQ5, 3BC/IRQ7, Disabled.

Parallel Port Mode

Allows you to connect with an advanced printer.
The options are: SPP (Default), EPP, ECP, ECP+EPP.

EPP Mode Select

If your select EPP or ECP+EPP in Parallel Port Mode, this feature allows you to select the EPP type version.
The options are: EPP1.9, EPP1.7 (Default).

ECP Mode Use DMA

If your select ECP or ECP+EPP in Parallel Port Mode, this feature allows you to select Direct Memory Access (DMA) channel.
The options are: 3 (Default), 1.

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