Chapter 3

Award BIOS

This chapter tells you how to configure the system parameters. You may update your BIOS via AWARD Flash Utility.

Important: *Because the BIOS code is the most often changed part of the mainboard design, the BIOS information contained in this chapter (especially the Chipset Setup parameters) may be a little different compared to the actual BIOS that came with your mainboard. These changes are implemented to further enhance system performance.*

3.1 Entering the Award BIOS Setup Menu

The BIOS setup utility is a segment of codes/routines residing in the BIOS Flash ROM. This routine allows you to configure the system parameters and save the configuration into the 128 byte CMOS area, (normally in the RTC chip or directly in the main chipset). To enter the BIOS Setup, press DEL during POST (Power-On Self Test). The BIOS Setup Main Menu appears as follows.

***Tip**: Choose "Load Setup Defaults" for recommended optimal performance. Choose "Load Turbo Defaults" for best performance with light system loading.*

The section at the bottom of the screen tells how to control the screen. Use the arrow keys to move between items, [redacted] F2 to color scheme of the display, [redacted] to exit, and F10 to save the changes before exit. Another section at the bottom of the screen displays a brief description of the highlighted item.

After selecting an item, press [redacted] to select or enter a submenu.

3.2 Standard CMOS Setup

The "Standard CMOS Setup" sets the basic system parameters such as the date, time, and the hard disk type. Use the arrow keys to highlight an item and [redacted] or PGDN to select the value for each item.

Standard CMOS à Date

To set the date, highlight the Date parameter. Press [redacted] or [redacted] to set the current date. The date format is month, date, and year.

Standard CMOS à Time

To set the time, highlight the Time parameter. Press [redacted] or [redacted] to set the current time in hour, minute, and second format. The time is based on the 24 hour military clock.

Standard CMOS à **Primary Master** à **Type**
Standard CMOS à **Primary Slave** à **Type**
Standard CMOS à **Secondary Master** à **Type**
Standard CMOS à **Secondary Slave** à **Type**

Type
Auto
User
None
1
2
...
45

This item lets you select the IDE hard disk parameters that your system supports. These parameters are Size, Number of Cylinder, Number of Head, Start Cylinder for Pre-compensation, Cylinder number of Head Landing Zone and Number of Sector per Track. The default setting is **Auto,** which enables BIOS to automatically detect the parameters of installed HDD at POST (Power-On Self Test). If you prefer to enter HDD parameters manually, select User. Select None if no HDD is connected to the system.

The IDE CDROM is always automatically detected.

Tip: *For an IDE hard disk, we recommend that you use the "IDE HDD Auto Detection" to enter the drive specifications automatically. See the section "IDE HDD Auto Detection".*

Standard CMOS à **Primary Master** à **Mode**
Standard CMOS à **Primary Slave** à **Mode**
Standard CMOS à **Secondary Master** à **Mode**
Standard CMOS à **Secondary Slave** à **Mode**

Mode
Auto
Normal
LBA
Large

The enhanced IDE feature allows the system to use a hard disk with a capacity of more than 528MB. This is made possible through the Logical Block Address (LBA) mode translation. The LBA is now considered as a standard feature of current IDE hard disk on the market because of its capability to support capacity larger than 528MB. Note that if HDD is formatted with LBA On, it will not be able to boot with LBA Off.

Standard CMOS à Drive A
Standard CMOS à Drive B

Drive A
None
360KB 5.25"
1.2MB 5.25"
720KB 3.5"
1.44MB 3.5"
2.88MB 3.5"

These items select floppy drive type. The available settings and types supported by the mainboard are listed on the left.

Standard CMOS à Video

Video
EGA/VGA
CGA40
CGA80
Mono

This item specifies the type of video card in use. The default setting is VGA/EGA. Since current PCs use VGA only, this function is almost useless and may be disregarded in the future.

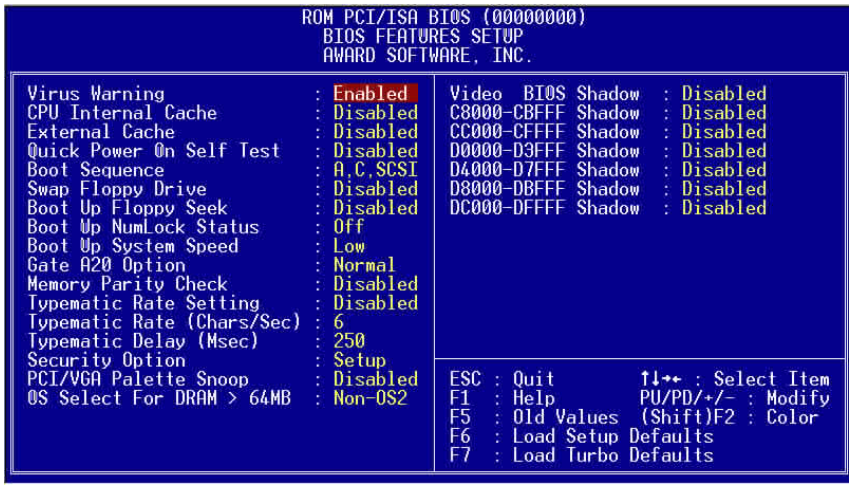
Standard CMOS à Halt On

Halt On
No Errors
All Errors
All, But Keyboard
All, But Diskette
All, But Disk/Key

This parameter enables you to control the system stops in case of Power-On Self Test (POST) error.

3.3 BIOS Features Setup

This screen appears when you select the option "BIOS Features Setup" from the main menu.



BIOS Features à Virus Warning

Virus Warning Enabled Disabled	Set this parameter to Enabled to activate the warning message. This feature protects the boot sector and partition table of your hard disk from virus intrusion. Any attempt during boot up to write to the boot sector of the hard disk drive stops the system and the following warning message appears on the screen. Run an anti-virus program to locate the problem.

```
! WARNING !
Disk Boot Sector is to be modified
Type "Y" to accept write, or "N" to abort write
Award Software, Inc.
```

BIOS Features à External Cache

External Cache
Enabled
Disabled

Enabling this parameter activates the secondary cache (currently, PBSRAM cache). Disabling the parameter slows down the system. Therefore, we recommend that you leave it enabled unless you are troubleshooting a problem.

BIOS Features à Power-On Self-Test

Quick Power-on Self-test
Enable
Disabled

This parameter speeds up POST by skipping some items that are normally checked.

BIOS Features à Boot Sequence

Boot Sequence
A,C,SCSI
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

This parameter allows you to specify the system boot up search sequence. The hard disk ID are listed below:

C: Primary master

D: Primary slave

E: Secondary master

F: Secondary slave

LS: LS120

Zip: IOMEGA ZIP Drive

BIOS Features à Swap Floppy Drive

Swap Floppy Drive
Enabled
Disabled

This item allows you to swap floppy drives. For example, if you have two floppy drives (A and B), you can assign the first drive as drive B and the second drive as drive A or vice-versa.

BIOS Features à Boot Up Floppy Seek

Boot Up Floppy Seek
Enabled
Disabled

When enabled, the BIOS issues the seek command to the floppy drive during POST to move floppy drive head forward and backward.

BIOS Features à Boot Up NumLock Status

Boot Up NumLock Status
On
Off

Setting this parameter to On enables the numeric function of the numeric keypad. Set this parameter to Off to disregard the function. Disabling the numeric function allows you to use the numeric keypad for cursor control.

BIOS Features à Boot Up System Speed

Boot Up System Speed
High
Low

Select High or Low system speed after boot.

BIOS Features à Gate A20 Option

Gate A20 Option
Normal
Fast

This item is used to select Gate A20 Option.

BIOS Features à Memory Parity Check

Memory Parity Check
Disabled
Enabled

This item is used to enable or disable DRAM parity check function.

BIOS Features à Typematic Rate Setting

Typematic Rate Setting
Enabled
Disabled

Set this parameter to Enable/Disable the keyboard repeat function. When enabled, continually holding down a key on the keyboard will generate repeatedly keystrokes.

BIOS Features à Typematic Rate (Chars/Sec)

Typematic Rate
6
8
10
12
15
20
24
30

This item allows you to control the speed of repeated keystrokes. The default is 30 characters/sec.

BIOS Features à Typematic Delay (Msec)

Typematic Delay
250
500
750
1000

This parameter allows you to control the delay time between the first and the second keystroke (where the repeated keystrokes begin). The typematic delay settings are 250, 500, 750, and 1000 msec.

BIOS Features à Security Option

Security Option
Setup
System

The **System** option limits access to both the System boot and BIOS setup. A prompt asking you to enter your password appears on the screen every time you boot the system.

The **Setup** option limits access only to BIOS setup.

To disable the security option, select Password Setting from the main menu, don't type anything and just press <Enter>.

BIOS Features à PCI/VGA Palette Snoop

PCI/VGA Palette Snoop
Enabled
Disabled

Enabling this item informs the PCI VGA card to keep silent (and to prevent conflict) when palette register is updated (i.e., accepts data without responding any communication signals). This is useful only when two display cards use the same palette address and plugged in the PCI bus at the same time (such as MPEQ or Video capture). In such case, PCI VGA is silent while MPEQ/Video capture is set to function normally.

BIOS Features à OS Select for DRAM > 64MB

OS Select for DRAM > 64MB
OS/2
Non-OS/2

Set to OS/2 if your system is utilizing an OS/2 operating system and has a memory size of more than 64 MB.

BIOS Features à Video BIOS Shadow

Video BIOS Shadow
Enabled
Disabled

VGA BIOS Shadowing means to copy video display card BIOS into the DRAM area. This enhances system performance because DRAM access time is faster than ROM.

BIOS Features à C800-CBFF Shadow
BIOS Features à CC00-CFFF Shadow
BIOS Features à D000-D3FF Shadow
BIOS Features à D400-D7FF Shadow
BIOS Features à D800-DBFF Shadow
BIOS Features à DC00-DFFF Shadow

C8000-CBFFF Shadow
Enabled
Disabled

These six items are for shadowing ROM code on other expansion cards. Before you set these parameters, you need to know the specific addresses of that ROM code. If you do not know this information, enable all the ROM shadow settings. Note that the F000 and E000 segments are always shadowed because BIOS code occupies these areas.

3.4 Chipset Features Setup

The "Chipset Features Setup" includes settings for the chipset dependent features. These features are related to system performance.

Caution: *Make sure you fully understand the items contained in this menu before you try to change anything. You may change the parameter settings to improve system performance . However, it may cause system unstable if the setting are not correct for your system configuration.*

Chipset Features à EDO/FPM DRAM Control

EDO/FPM Timing Control
Fast
Normal

This item is used to control EDO/FPM timing. If you find system unstable, please try to set this item to Normal.

Chipset Features à SDRAM Control

SDRAM Timing Control
Fast
Normal

This item is used to control SDRAM timing. If you find system unstable, please try to set this item to Normal.

Chipset Features à Refresh Cycle Time (us)

Refresh Cycle Time (us)
15.6
62.4
124.8
187.2

This option lets you set the cycle time for the chipset to refresh DRAM to avoid losing data. The unit is micro second (us).

Chipset Features à RAMW# Assertion Timing

RAMW# Assertion Timing
2T
3T

This parameter specifies the number of clocks required to assert the DRAM write control signal when read cycle followed by write cycle.

Chipset Features à SDRAM CAS Latency

SDRAM CAS Latency
2T
3T

This parameter specifies the number of clocks of SDRAM CAS Latency. This is very important parameter affects SDRAM performance. If your SDRAM has unstable problem, set to 3T.

Chipset Features à SDRAM Wait State Control

SDRAM Wait State Control
0WS
1WS

This parameter specifies the number of clocks of SDRAM Wait State Control during Precharge.

0WS: zero wait state.
1WS: one wait state.

Chipset Features à Read Prefetch Memory RD

Read Prefetch Memory RD
Enabled
Disabled

This item lets you control the Read Prefetch of the memory read of PCI bus command. When enabled, Memory Read Multiple and Memory Read Line of PCI commands always do prefetch.

Chipset Features à CPU to PCI Post Write

CPU to PCI Post Write
3T
4T
Disabled

This parameter specifies the number of clocks for CPU to PCI Post Write cycle.

Chipset Features à CPU to PCI Burst Mem. WR

CPU to PCI Burst Mem. WR
Enabled
Disabled

This item lets you control the CPU to PCI Burst Memory Write.

Chipset Features à ISA Bus Clock Frequency

ISA Bus Clock Frequency
PCICLK/3
PCICLK/4
7.159MHz

This item lets you select the ISA bus clock. Normally, the PCI bus clock is the CPU bus (external) clock divided by 2, PCICLK=CPUCLK/2. For example, CPUCLK=66MHz, PCICLK=66/2=33MHz, ISA bus CLK=33/4=8.25MHz.

Chipset Features à System BIOS Cacheable

System BIOS Cacheable
Enabled
Disabled

Enabling this item allows you to cache the system BIOS to further enhance system performance.

Chipset Features à Video BIOS Cacheable

Video BIOS Cacheable
Enabled
Disabled

Allows the video BIOS to be cached to allow faster video performance.

Chipset Features à Memory Hole At 15M-16M

Memory Hole At 15M-16M
Enabled
Disabled

This option lets you reserve system memory area for special ISA cards. The chipset accesses code/data of these areas from the ISA bus directly. Normally, these areas are reserved for memory mapped I/O card.

Chipset Features à VGA Shared Memory Size

VGA Shared Memory Size
0.5MB
1MB
1.5MB
2MB
2.5MB
3MB
3.5MB
4MB

The onboard VGA need to share a memory size with the system memory. You may set a larger size for getting better performance. The shared memory size is up to 4MB.

Chipset Features à VGA Memory Clock (MHz)

VGA Memory Clock
55
60
66

This item is used to set the VGA memory clock. You can get the best performance by setting this item to 66.

3.5 Power Management Setup

The Power Management Setup screen enables you to control the mainboard's green features. See the following screen.

Power Management à Power Management

Power Management
Max Saving
Mix Saving
User Defined
Disabled

This function allows you to set the default parameters of power-saving modes. Set to **Disable** to turn off power management function. Set to User Defined to choose your own parameters.

Mode	Doze	Standby	Suspend
Min Saving	40 min	40 min	40 min
Max Saving	20 sec	20 sec	20 sec

Power Management à PM Controlled by APM

PM Controlled by APM
Yes
No

If "Max Saving" is selected, you can turn on this item, transfer power management control to APM (Advanced Power Management) and enhance power saving function. For example, stop CPU internal clock.

Power Management à Video Off Option

Video Off Option
Always On
All Modes à Off
Suspend à Off
Susp, Standby à Off

To turn off video monitor at which power down mode.

Power Management à Video Off Method

Video Off Method
Blank Screen
V/H SYNC+Blank
DPMS

This determines the way that monitor is off. Blank Screen writes blanks to video buffer. V/H SYNC+Blank allows BIOS to control VSYNC and HSYNC signals. This function applies only for DPMS (Display Power Management Standard) monitor. The DPMS mode uses DPMS function provided by VGA card.

Power Management à Doze Speed (div by)
Power Management à Stdby Speed (div by)

Doze Speed (div by)
1
2
3
4
5
6
7
8

These items let you set the system speed divisor to specify the rate at which the system speed will slow down once it enters the **Doze Mode** or **Standby Mode**. The options are from 1 to 8. To determine the exact rate of the system in Doze mode, take 2 as the divisor and 133MHz as the normal system speed. 133MHz/2 = 66MHz - this is the system speed in Doze mode.

Power Management à Modem Use IRQ

Modem Use IRQ
NA
3
4
5
6
7
9
10
11

This item tells BIOS/Chipset the IRQ of your modem. This allows BIOS/Chipset to monitor the activities of the modem connected to your system.

Power Management à HDD Power Down

HDD Power Down
Disabled
1 Min
.....
15 Min

This option lets you specify the IDE HDD idle time before the device enters the power down state. This item is independent from the power states described in this section (Standby and Suspend).

Power Management à Doze Mode

Doze Mode
Disabled
20 Sec
1 Min
5 Min
10 Min
15 Min
20 Min
30 Min
40 Min

This item lets you set the period of time after which the system enters into Doze mode. In this mode, the CPU clock slows down. The ratio is specified in the "Throttle Duty Cycle". Any activity detected returns the system to full power. The system activity (or event) is detected by monitoring the IRQ signals.

Power Management à Standby Mode

Standby Mode
Disabled
20 Sec
1 Min
5 Min
10 Min
15 Min
20 Min
30 Min
40 Min

This item lets you set the period of time after which the system enters into Standby mode. In this mode, CPU clock slows down, hard disk will be shut off and the monitor power-saving feature activates. Any activity detected returns the system to full power. The system activity (or event) is detected by monitoring the IRQ signals.

Power Management à Suspend Mode

Suspend Mode
Disabled
20 Sec
1 Min
5 Min
10 Min
15 Min
20 Min
30 Min
40 Min

This item lets you set the period of time after which the system enters into Suspend mode. In this mode, CPU clock stops, all other devices will be shut off. Any activity detected returns the system to full power. The system activity(or event) is detected by monitoring the IRQ signals.

Power Management à COM Ports Activity
Power Management à LPT Ports Activity
Power Management à HDD Ports Activity
Power Management à VGA Activity

COM Ports Activity
Enabled
Disabled

To enable or disable the detection of COM port, LPT, HDD, VGA activities for power down state transition.

Power Management à **IRQ3 (COM2)**
Power Management à **IRQ4 (COM1)**
Power Management à **IRQ5 (LPT2)**
Power Management à **IRQ6 (Floppy Disk)**
Power Management à **IRQ8 (RTC Alarm)**
Power Management à **IRQ9 (IRQ2 Redir)**
Power Management à **IRQ10 (Reserved)**
Power Management à **IRQ11 (Reserved)**
Power Management à **IRQ12 (PS/2 Mouse)**
Power Management à **IRQ13 (Coprocessor)**
Power Management à **IRQ14 (Hard Disk)**
Power Management à **IRQ15 (Reserved)**

IRQ2 (COM2)
Enabled
Disabled

To enable or disable the detection of IRQ event for power down state transition. Note that OS2 has periodically IRQ8 (RTC) interruptions, If IRQ8 is not set to **Disabled**, OS/2 may fail to go into Doze/Standby/Suspend mode.

3.6 PNP/PCI Configuration Setup

The PNP/PCI Configuration Setup allows you to configure the ISA and PCI devices installed in your system. The following screen appears if you select the option "PNP/PCI Configuration Setup" from the main menu.

PNP/PCI Configuration à PnP OS Installed

PnP OS Installed
Yes
No

Normally, the PnP resources are allocated by BIOS during POST (Power-On Self Test). If you are using a PnP operating system (such as Windows 95), set this item to Yes to inform BIOS to configure only the resources needed for booting (VGA/IDE or SCSI). The rest of system resources will be allocated by PnP operating system.

PNP/PCI Configuration à Resources Controlled By

Resources Controlled by
Auto
Manual

Setting this option to Manual allows you to individually assign the IRQs and DMAs to the ISA and PCI devices. Set this to **Auto** to enable the auto-configuration function.

PNP/PCI Configuration à Reset Configuration Data

Reset Configuration Data
Enabled
Disabled

In case conflict occurs after you assign the IRQs or after you configure your system, you can enable this function, allow your system to automatically reset your configuration and reassign the IRQs.

PNP/PCI Configuration à **IRQ3** (COM2) **assigned to**
PNP/PCI Configuration à **IRQ4** (COM1) **assigned to**
PNP/PCI Configuration à **IRQ5** (Network/Sound) **assigned to**
PNP/PCI Configuration à **IRQ7** (Printer or Others) **assigned to**
PNP/PCI Configuration à **IRQ9** (Video or Others) **assigned to**
PNP/PCI Configuration à **IRQ10** (SCSI or Others) **assigned to**
PNP/PCI Configuration à **IRQ11** (SCSI or Others) **assigned to**
PNP/PCI Configuration à **IRQ12** (PS/2 Mouse) **assigned to**
PNP/PCI Configuration à **IRQ14** (IDE1) **assigned to**
PNP/PCI Configuration à **IRQ15** (IDE2) **assigned to**

IRQ 3 assigned to
Legacy ISA
PCI/ISA PnP

If your ISA card is not PnP compatible and requires a special IRQ to support its function, set the selected IRQ to **Legacy ISA**. This setting informs the PnP BIOS to reserve the selected IRQ for the installed legacy ISA card. The default is **PCI/ISA PnP**. Take note that PCI cards are always PnP compatible (except old PCI IDE card).

PNP/PCI Configuration à **DMA 0 assigned to**
PNP/PCI Configuration à **DMA 1 assigned to**
PNP/PCI Configuration à **DMA 3 assigned to**
PNP/PCI Configuration à **DMA 5 assigned to**
PNP/PCI Configuration à **DMA 6 assigned to**
PNP/PCI Configuration à **DMA 7 assigned to**

DMA 0 assigned to
Legacy ISA
PCI/ISA PnP

If your ISA card is not PnP compatible and requires a special DMA channel to support its function, set the selected DMA channel to **Legacy ISA**. This setting informs the PnP BIOS to reserve the selected DMA channel for the installed legacy ISA card. The default is **PCI/ISA PnP**. Take note that PCI card does not require DMA channel.

Power Management à **PCI IDE 2nd Channel**

PCI IDE 2nd Channel
Disabled
Enabled

This item is used to enable or disable the 2nd IDE channel.

PNP/PCI Configuration à **PCI IDE IRQ Map To**

PCI IDE IRQ Map To
ISA
PCI-Slot1
PCI-Slot2
PCI-Slot3
PCI-Slot4
PCI-Auto

Some old PCI IDE add-on cards are not fully PnP compatible. These cards require you to specify the slot in use to enable BIOS to properly configure the PnP resources. This function allows you to select the PCI slot for any PCI IDE add-on card present in your system. Set this item to **Auto** to allow BIOS to automatically configure the installed PCI IDE card(s).

PNP/PCI Configuration à **Primary IDE INT#**
PNP/PCI Configuration à **Secondary IDE INT#**

Primary IDE INT#
A
B
C
D

These two items, in conjunction with item "PCI IDE IRQ Map To", specify the IRQ routing of the primary or secondary channel of the PCI IDE add-on card (not the onboard IDE). Each PCI slot has four PCI interrupts aligned as listed in the table below. You must specify the slot in the "PCI IDE IRQ Map To", and set the PCI interrupt (INTx) here according to the interrupt connection on the card.

PCI Slot	Location 1 (pin A6)	Location 2 (pin B7)	Location 3 (pin A7)	Location 4 (pin B8)
Slot 1	INTA	INTB	INTC	INTD
Slot 2	INTB	INTC	INTD	INTA
Slot 3	INTC	INTD	INTA	INTB
Slot 4	INTD	INTA	INTB	INTC
Slot 5 (if any)	INTD	INTA	INTB	INTC

PNP/PCI Configuration à Used MEM Base Addr

Used MEM base addr
N/A
C800
CC00
D000
D400
D800
DC00

This item, in conjunction with the "Used MEM Length", lets you set a memory space for non-PnP compatible ISA card. This item specifies the memory base (start address) of the reserved memory space. The memory size is specified in the "Used MEM Length".

PNP/PCI Configuration à Used MEM Length

Used MEM Length
8K
16K
32K
64K

If your ISA card is not PnP compatible and requires special memory space to support its function, specify the memory size in this parameter to inform the PnP BIOS to reserve the specified memory space for installed legacy ISA card.

3.7 Load Setup Defaults

The "Load Setup Defaults" option loads optimized settings for optimum system performance. Optimal settings are relatively safer than the Turbo settings. We recommend you to use the Optimal settings if your system has large memory size and fully loaded with add-on card (for example, a file server using double-sided 8MB SIMM x4 and SCSI plus Network card occupying the PCI and ISA slots).

Optimal is not the slowest setting for this mainboard. If you need to verify a unstable problem, you may manually set the parameter in the "BIOS Features Setup" and "Chipset Features Setup" to get slowest and safer setting.

3.8 Load Turbo Defaults

The "Load Turbo Defaults" option gives better performance than Optimal values. However, Turbo values may not be the best setting of this mainboard but these values are qualified by the AOpen RD and QA department as the reliable settings especially if you have limited loading of add-on card and memory size (for example, a system that contains only a VGA/Sound card and two SIMMs).

To attain the best system performance, you may manually set the parameters in the "Chipset Features Setup" to get proprietary setting. Make sure that you know and understand the functions of every item in Chipset Setup menu. The performance difference of Turbo from Optimal is normally around 3% to 10%, depending on the chipset and the application.

3.9 Integrated Peripherals

The following screen appears if you select the option "Integrated Peripherals" from the main menu. This option allows you to configure the I/O features.

Integrated Peripherals à **Internal PCI/IDE**

Internal PCI IDE
Disabled
Primary
Secondary
Both

This parameter lets you enable or disable the on-chip primary or secondary IDE device.

Integrated Peripherals à **IDE Primary Master PIO**
Integrated Peripherals à **IDE Primary Slave PIO**
Integrated Peripherals à **IDE Secondary Master PIO**
Integrated Peripherals à **IDE Secondary Slave PIO**

IDE Primary Master PIO
Auto
Mode 0
Mode 1
Mode 2
Mode 3
Mode 4

Setting this item to **Auto** activates the HDD speed auto-detect function. The PIO mode specifies the data transfer rate of HDD. For example: mode 0 data transfer rate is 3.3MB/s, mode 1 is 5.2MB/s, mode 2 is 8.3MB/s, mode 3 is 11.1MB/s and mode 4 is 16.6MB/s. If your hard disk performance becomes unstable, you may manually try the slower mode.

Caution: *It is recommended that you connect the first IDE device of each channel to the endmost connector of the IDE cable. Refer to section 2.3 "Connectors" for details on how to connect IDE device(s).*

Integrated Peripherals à **Primary Master UDMA**
Integrated Peripherals à **Primary Slave UDMA**
Integrated Peripherals à **Secondary Master UDMA**
Integrated Peripherals à **Secondary Slave UDMA**

Primary Master UDMA
Auto
Disabled

This item allows you to set the Ultra DMA/33 mode supported by the hard disk drive connected to your primary IDE connector.

Integrated Peripherals à **IDE Burst Mode**

IDE Burst Mode
Enabled
Disabled

This item lets you control the bottom address of the ISA address hole.

Integrated Peripherals à **IDE Data Port Post Write**

IDE Data Port Post Write
Enabled
Disabled

This item lets you control the IDE Data Port Write function.

Integrated Peripherals à IDE HDD Block Mode

IDE HDD Block Mode
Enabled
Disabled

This feature enhances disk performance by allowing multisector data transfers and eliminates the interrupt handling time for each sector. Most IDE drives, except with old designs, can support this feature.

Integrated Peripherals à Onboard FDD Controller

Onboard FDD Controller
Enabled
Disabled

Setting this parameter to **Enabled** allows you to connect your floppy disk drives to the onboard floppy disk connector instead of a separate controller card. Change the setting to Disabled if you want to use a separate controller card.

Integrated Peripherals à Onboard Serial Port 1
Integrated Peripherals à Onboard Serial Port 2

Onboard Serial Port 1
Auto
3F8/IRQ4
2F8/IRQ3
3E8/IRQ4
2E8/IRQ3
Disabled

This item allow you to assign address and interrupt for the board serial port. Default is **Auto**.

Note: *If you are using an network card, make sure that the interrupt does not conflict.*

Integrated Peripherals à UART 2 Mode

UART 2 Mode
Standard
HPSIR
ASKIR

This item is configurable only if the "Onboard UART 2" is enabled. This allows you to specify the mode of serial port2. The available mode selections are:

- **Standard -** Sets serial port 2 to operate in normal mode. This is the default setting.

- **HPSIR -** Select this setting if you installed an Infrared module in your system via IrDA connector (refer to section 2.3 "Connectors"). This setting allows infrared serial communication at a maximum baud rate of 115K baud.
- **ASKIR -** Select this setting if you installed an Infrared module via IrDA connector (refer to section 2.3 "Connectors"). This setting allows infrared serial communication at a maximum baud rate of 19.2K baud.

Integrated Peripherals à IR Function Duplex

IR Function Duplex
Full
Half

This item lets you set the duplex mode for the IR communication. Full - Allows IR communication in bidirectional mode. Half - Allows IR communication in single direction only.

Note: *This option appears only if the IR function is activated and the Onboard UART 2 Mode parameter is NOT set to Standard.*

Integrated Peripherals à Onboard Parallel Port

Onboard Parallel Port
3BC/IRQ7
378/IRQ7
278/IRQ7
Disabled

This item controls the onboard parallel port address and interrupt.

Note: *If you are using an I/O card with a parallel port, make sure that the addresses and IRQ do not conflict.*

Integrated Peripherals à Onboard Parallel Mode

Onboard Parallel Mode
Normal
EPP
ECP
ECP + EPP

This item lets you set the parallel port mode. The mode options are **Normal** (Standard and Bidirection Parallel Port), EPP (Enhanced Parallel Port) and ECP (Extended Parallel Port). Normal is the IBM AT and PS/2 compatible mode. EPP enhances the parallel port throughput by directly writing/reading data to/from parallel port without latch. ECP supports DMA and RLE (Run Length Encoded) compression and decompression.

Integrated Peripherals à ECP Mode Use DMA

ECP Mode Use DMA
3
1

This item lets you set the DMA channel of ECP mode.

Integrated Peripherals à Parallel Port EPP Type

Parallel Port EPP Type
EPP1.7
EPP1.9

This item is used to select EPP type.

Integrated Peripherals à PS/2 mouse function

PS/2 mouse function
Disabled
Enabled

This item is used to enable or disable PS/2 mouse function.

Integrated Peripherals à USB Controller

USB Controller
Enabled
Disabled

USB device is default to use PCI INTD#, the same as PCI slot4. If you installed PCI card on slot4 and require to use INTD#, set this item to Disabled. The USB device will then be disabled.

Note: *Normally, PCI VGA does not need PCI interrupt, you may put PCI VGA on slot4.*

Integrated Peripherals à USB Keyboard Support

USB Legacy Support
Enabled
Disabled

This item lets you enable or disable the USB keyboard driver within the onboard BIOS. The keyboard driver simulates legacy keyboard command and let you use USB keyboard during POST or after boot if you don't have USB driver in the operating system.

***Caution**: You can not use both USB driver and USB legacy keyboard at the same time. Disable "USB Legacy Support" if you have USB driver in the operating system.*

Integrated Peripherals à Power Button Over Ride

Power Button Over Ride
Enabled
Disabled

This is a specification of ACPI and supported by hardware. When **Enabled**, the soft power switch on the front panel can be used to control power On, Suspend and Off. If the switch is pressed less than 4 sec during power On, the system will go into Suspend mode. If the switch is pressed longer than 4 sec, the system will be turned Off. The default setting is **Disabled**, soft power switch is only used to control On and Off, there is no need to press 4 sec, and there is no Suspend.

3.10 Password Setting

Password prevents unauthorized use of your computer. If you set a password, the system prompts for the correct password before boot or access to Setup.

To set a password:

1. At the prompt, type your password. Your password can be up to 8 alphanumeric characters. When you type the characters, they appear as asterisks on the password screen box.
2. After typing the password, press.
3. At the next prompt, re-type your password and press again to confirm the new password. After the password entry, the screen automatically reverts to the main screen.

To disable the password, press when prompted to enter the password. The screen displays a message confirming that the password has been disabled.

3.11 IDE HDD Auto Detection

If your system has an IDE hard drive, you can use this function to detect its parameters and enter them into the "Standard CMOS Setup" automatically.

This routine only detects one set of parameters for your IDE hard drive. Some IDE drives can use more than one set of parameters. If your hard disk is formatted using different parameters than those detected, you have to enter the parameters manually. If the parameters listed do not match the ones used to format the disk, the information on that disk will not be accessible. If the auto-detected parameters displayed do not match those that used for your drive, ignore them. Type N to reject the values and enter the correct ones manually from the Standard CMOS Setup screen.

3.12 Save & Exit Setup

This function automatically saves all CMOS values before leaving Setup.

3.13 Exit without Saving

Use this function to exit Setup without saving the CMOS value changes. Do not use this option if you want to save the new configuration.

3.14 NCR SCSI BIOS and Drivers

The NCR 53C810 SCSI BIOS resides in the same flash memory chip as the system BIOS. The onboard NCR SCSI BIOS is used to support NCR 53C810 SCSI control card without BIOS code. The NCR SCSI BIOS directly supports DOS, Windows 3.1 and OS/2. For better system performance, you may use the drivers that come with the NCR SCSI card or with your operating system. For details, refer to the installation manual of your NCR 53C810 SCSI card.

3.15 BIOS Flash Utility

The BIOS Flash utility allows you to upgrade the system BIOS. To get the AOpen Flash utility and the upgrade BIOS file, contact your local distributor or visit our homepage at **http://www.aopen.com.tw**. Please make sure that you have the correct BIOS ready, the BIOS filename is normally like MX58R110.BIN, which means model MX58 BIOS revision 1.10.

There are two useful programs, Checksum utility CHECKSUM.EXE and AOpen Flash utility AOFLASH.EXE. Follow the procedures below to upgrade your BIOS.

[CHECKSUM.EXE]

This utility will help you to determine if the BIOS has been downloaded correctly or not.

1. Execute
   C:> CHECKSUM Biosfile.bin
   Biosfile.bin is the filename of the BIOS code. (for example, MX58R110.BIN)
2. The utility will show "Checksum is ssss".

3. Compare the "ssss" with original checksum posted on Web or BBS. If they are different, please do not proceed any further and try to download the BIOS again.

[AOFLASH.EXE]

This utility will try to check the mainboard model, BIOS version and Super/Ultra IO chip model. To ensure the correct BIOS file for the correct mainboard and IO chip. This utility will permanently replace your original BIOS content after flashing.

1. Bootup DOS from floppy without loading any memory manager (HIMEM, EMM386, QEMM386, ...).
2. Execute

   C:> AOFLASH Biosfile.bin

   Biosfile.bin is the filename of the BIOS code. (for example, MX58R110.BIN)
3. After loading the new BIOS code, the utility will prompt you to save original BIOS code into your HDD or floppy. Please press "Y" to store it as "BIOS.OLD".
4. After the old BIOS has been successfully saved, press "Y" to replace BIOS.
5. DO NOT turn off the power during "FLASHING".
6. Reboot the system by turn off the power after "FLASHING".
7. Press "DEL" key to enter BIOS setup during POST.
8. Reload the "BIOS SETUP DEFAULT" and reconfigure other items as previous set.
9. Save & Exit. Done!

Warning: *DO NOT turn off the power during "FLASHING". If the BIOS programming is not successfully finished, the system will not be boot again, and you may need to physically replace the BIOS chip.*

Tip: *You may load back original BIOS "BIOS.OLD" by the same procedure.*