
XPC User Guide

For the : SD30

Shuttle XPC EMI Test Statement

Shuttle XPC have been through EMI tests according to the following series of regulations: EN55022/CISPR22/AS/NZS3548 Class B, EN55024 (1998/AS/NZS), EN4252.1 (1994), EN61000, ANSI C63.4 (1992), CFR47 Part 15 Subpart B, and CNS13438 (1997). The items tested are illustrated as follows:

(A) Voltage: AC 100V/60HZ & AC 240V/50HZ

(B) Tested Product Information:

Product Name: XPC

Status: Sample

Model Name: SD30

S/N: N/A

CPU:

Core2 Extreme X6800 Convoy 2.93G FSB 1066 4M L2 Cache B1

Serial Port: one port with 9 pins

VGA Port: one port with 15 pins

Keyboard Port: one port with 6 pins

Mouse Port: one port with 6 pins

USB 2.0 Port: six ports with 6 pins respectively

1394 Port: one port with 4 pins and one port with 6 pins respectively

LAN Port: one port with 8 pins (10Mbps/100Mbps/1000Mbps)

Line-Out Ports: four ports

Front-Out Port: one port

Mic-In & Earphone Ports: one port of each

Line-In Port: one port

Clear CMOS button: one port

DIMM Memory (optional): DDR2 1GB *2

Power Cable: Detachable and Shielded (with a GND pin)

Monitor: CRT

Maximum Resolution: 1600 X 1200 V: 85Hz

All CPUs have completely been tested, and values offered by the worst EMI combination of CPU external frequency are listed as follows:

Test Mode	External Frequency	CPU	CPU Open/Close
1	133MHz	P4 2.8 GHz	Close
2	133MHz	P4 2.8 GHz	Open
3	266MHz	P4 2.93 GHz	Close
4	266MHz	P4 2.93 GHz	Open

5	266MHz	P4 3.73 GHz	Close
6	266MHz	P4 3.73 GHz	Open

(C) Remedy for the Tested Product & Its EMI Interference:

Remedy: N/A

EMI Interference:

Crystal : 14.318MHz(X2)/ 25MHz(X5)/ 24.576MHz(X4)

Clock Generator: U6

(D) Supported Host Peripherals:

Component	Brand	Model No. / Spec.
HDD	Maxtor	6H400F0, 400GB
CD-ROM	Shuttle	CR40
Power	Hipro	HP-V200EF3

(E) Notices for Assembling Computers:

1. An I/O shielding should be contacted with I/O metallic parts of a mainboard.
2. Cables should appropriately be arranged and fixed in a case. Follow instructions:
 - Leave IDE cables not crossed upon CPU and SDRAM;
 - Leave power cables minimum in length, and not crossed upon a mainboard;
 - Leave CPU fan cables minimum in length, and not near CPU;
 - Leave cables on panels and other spare cables tied in a computer case.
3. Make sure an EMI shielding attached to a case has been properly installed.
4. Make sure a 5.25" drive and screws are fastened to the case (EMI shielding).
5. Make sure the case is in contact with EMI connection points.
6. Make sure there is no cleft in the case.
7. Make sure a PCI door is bound to a case.
8. Make sure cables of other devices (fans or some others) are fixed in a case.

Shuttle®

XPC Installation Guide

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This device complies with Part 15 of the FCC Rules, Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

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General Notice

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Safety Information

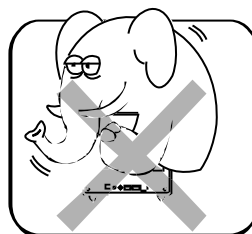
Read the following precautions before setting up a Shuttle XPC.

CAUTION

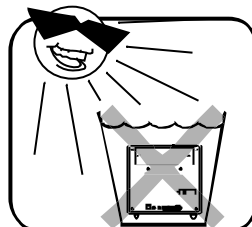
Incorrectly replacing the battery may damage this computer. Replace only with the same or equivalent as recommended by Shuttle. Dispose of used batteries according to the manufacturer's instructions.

Installation Notices

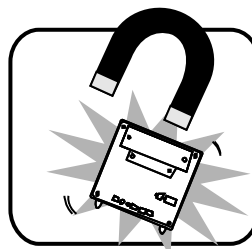
Do not place this device underneath heavy loads or in an unstable position.



Do not expose this device to high levels of direct sunlight, high-humidity or wet conditions.



Do not use or expose this device around magnetic fields as magnetic interference may affect the performance of the device.



Do not block the air vents to this device or impede the airflow in any way.

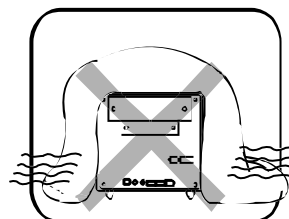


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1 Driver and Software Installation

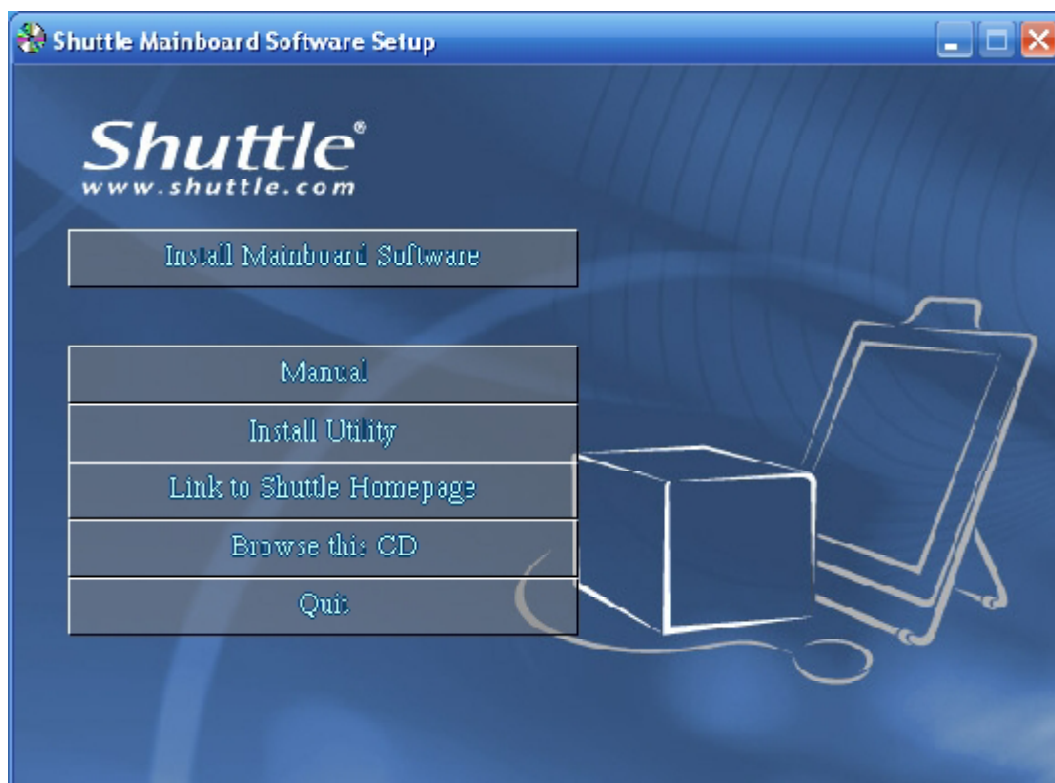
■ 1.1 Mainboard Driver CD

Note : The CD contents attached in SD30 mainboard are subject to change without notice.

The Mainboard Driver CD contains all the motherboard driver necessary to optimize the performance of this XPC in a Windows(R) OS. Install these drivers after installing Microsoft(R) Windows(R).

Navigation Bar Description :

- ☞ Install Mainboard Software - Install Intel Chipset Driver, Intel VGA Driver, Intel Matrix Storage Driver, Marvell Giga LAN Driver, Intel High Definition Audio Driver, DirectX9 Utility.
- ☞ Manual - SD30 manual in PDF format.
- ☞ Install Utility - Install Acrobat Reader, WinFlash Utility.
- ☞ Link to Shuttle Homepage - Link to shuttle website homepage.
- ☞ Browse this CD - Allows you to see contents of this CD.
- ☞ Quit - Close this CD.

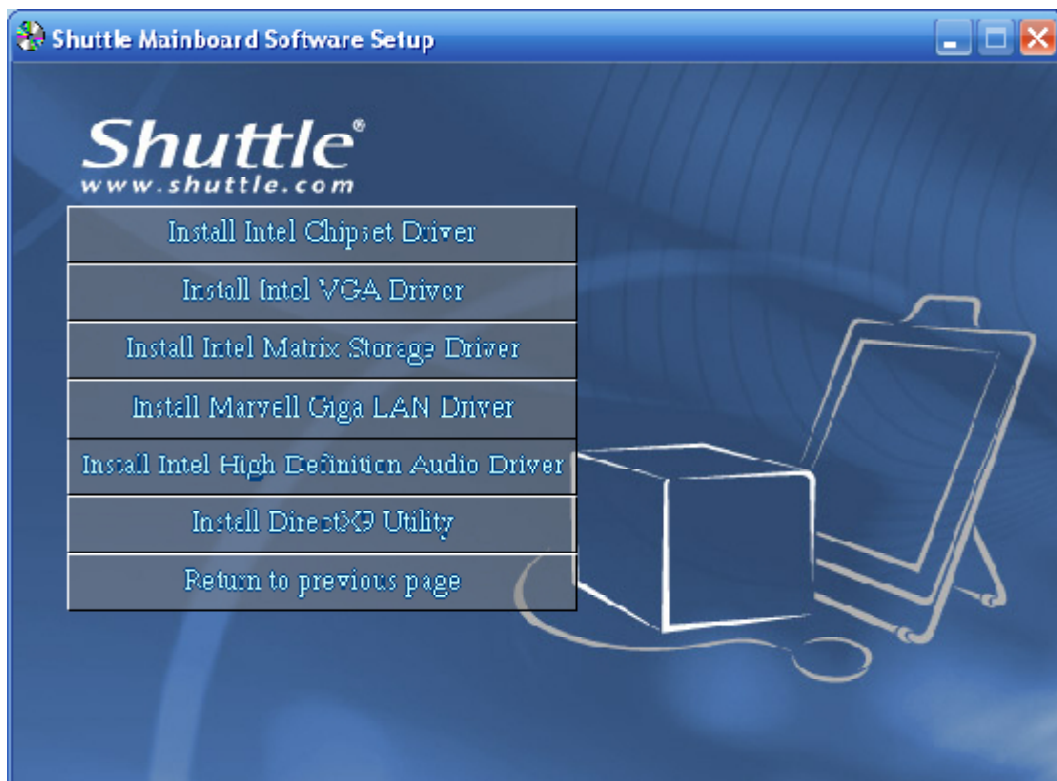


■ 1.1.1 Install Mainboard Software

Insert the attached CD into your CD-ROM drive. The CD AutoRun screen should appear. If the AutoRun screen does not appear, double click on Autorun icon in My Computer to bring up Shuttle Mainboard Software Setup screen.

Click the "Install Main-board Software" bar. Individually install the following drivers.

- ☞ Install Intel Chipset Driver
- ☞ Install Intel VGA Driver
- ☞ Install Intel Matrix Storage Driver
- ☞ Install Marvell Giga LAN Driver
- ☞ Install Intel High Definition Audio Driver
- ☞ Install DirectX9 Utility



BIOS Settings

The SD30 BIOS ROM has a built-in Setup program that allows users to modify basic system configuration. This information is stored in battery-backed RAM so that it retains Setup information even if the system power is turned off.

The system BIOS manages and executes a variety of hardware related functions including:

System date and time

Hardware execution sequence

Power management functions

Allocation of system resources

Enter the BIOS

To enter the BIOS (Basic Input / Output System) utility, follow these steps:

- Step1. Power on the computer. The system will perform its POST (Power-On Self Test) routine checks.
- Step2. Press the key immediately, or at the following message:
Press DEL to enter SETUP, or simultaneously press <Ctrl> , <Alt> , <Esc> keys

Note 1. If you miss trains of words mentioned in step2 (the message disappears before you can respond) and you still wish to enter BIOS Setup, restart the system and try again by turning the computer OFF and ON again or by pressing the <RESET> switch located at the computer's front-panel. You may also reboot by simultaneously pressing the <Ctrl> , <Alt> , keys simultaneously.

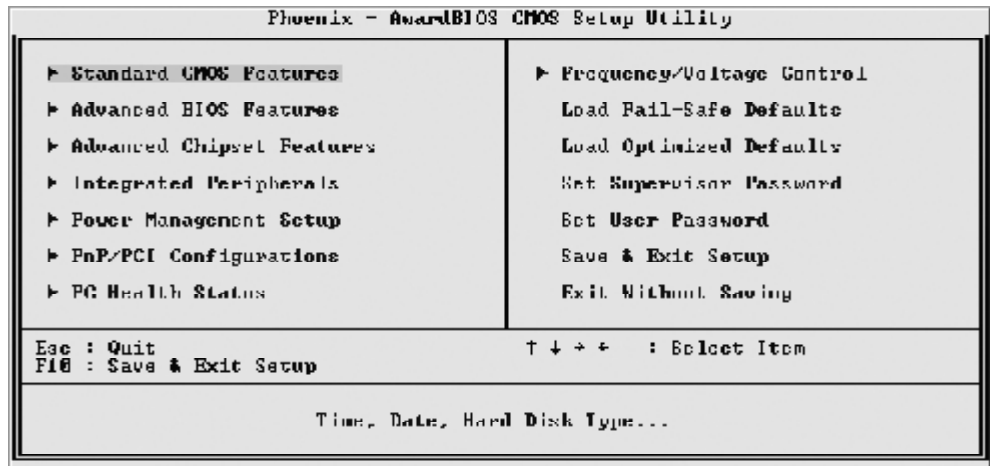
Note 2. If you do not press the keys in time and system does not boot, the screen will prompt an error message, and you will be given the following options:

"Press F1 to Continue, DEL to Enter Setup"

- Step3. When you enter the BIOS program, the CMOS Setup Utility will display the Main Menu, as shown in the next section.

The Main Menu

Once you enter the AwardBIOS(tm) CMOS Setup Utility, the Main Menu will appear on the screen. The Main Menu allows you to select from several setup functions and two exit choices. Use the arrow keys to select among the items and press <Enter> to accept and enter the sub-menu.



Note that a brief description of each highlighted selection appears at the bottom of the screen.

Setup Items

The main menu includes the following main setup categories. Recall that some systems may not include all entries.

Standard CMOS Features

Use this menu for basic system configuration.

Advanced BIOS Features

Use this menu to set the Advanced Features available on your system.

Advanced Chipset Features

Use this menu to change the values in the chipset registers and optimize your system's performance.

Integrated Peripherals

Use this menu to specify your settings for integrated peripherals.

Power Management Setup

Use this menu to specify your power management settings.

PnP / PCI Configurations

This entry appears if your system supports PnP / PCI.

PC Health Status

This entry displays the current system temperature, Voltage, and FAN settings.

Frequency/Voltage Control

Use this menu to specify your settings for frequency/voltage control.

Load Fail-Safe Defaults

Use this menu to load the BIOS default values for the minimal/stable performance of your system to operate.

Load Optimized Defaults

Use this menu to load the BIOS default values that are factory-set for optimal system operation. While Award has designed the custom BIOS to maximize performance, the factory has the right to change these defaults to meet users' needs.

Set Supervisor / User Password

Use this menu to change, set, or disable password protection. This allows you to limit access to the system and Setup, or only to Setup.

Save & Exit Setup

Save CMOS value changes in CMOS and exit from setup.

Exit Without Saving

Abandon all CMOS value changes and exit from setup.



Standard CMOS Features

The items in the Standard CMOS Setup Menu are divided into several categories. Each category includes none, one or more than one setup items. 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.

Phoenix - AwardBIOS CMOS Setup Utility Standard CMOS Features		
Date (mm:dd:yy)	Tue. Apr 27 1999	Item Help Menu Level ▶ Change the day, month, year and century
Time (hh:mm:ss)	10 : 46 : 17	
▶ IDE Channel Master	[None]	
▶ IDE Channel Slave	[None]	
▶ IDE Channel 1 Master	[None]	
▶ IDE Channel 1 Slave	[None]	
Drive A	[1.44M, 3.5 in.]	
Video	[EGA/VGA]	
Halt On	[All Errors]	
Base Memory	1.44M	
Extended Memory	1K	
Total Memory	1024K	
F1: Move Enter: Select F2: Previous Values F3: Fail-Safe Defaults F4: Optimized Defaults F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults		

Date

<Month> <DD> <YYYY>

Set the system date. Note that the 'Day' automatically changes when you set the date.

Time

<HH : MM : SS>

The time is converted based on the 24-hour military-time clock.

For example, 5 p.m. is 17:00:00.

IDEChannel/IDEChannel1Master/Slave

Options are in its sub-menu.

Press <Enter> to enter the sub-menu of detailed options.

DriveA

Select the type of floppy disk drive installed in your system.

- The choice: None, 360K, 5.25 in, 1.2M, 5.25 in, 720K, 3.5 in, 1.44M, 3.5 in, or 2.88M, 3.5 in.

Video

Select the default video device.

- The choice: EGA/VGA, CGA 40, CGA 80, or MONO.

HaltOn

Select the situation in which you want the BIOS to stop the POST process and notify you.

- The choice: All Errors, No Errors, All, But Keyboard, or All, But Diskette, All, But Disk/Key.

BaseMemory

Displays the amount of conventional memory detected during boot up.

- The choice: N/A.

ExtendedMemory

Displays the amount of extended memory detected during boot up.

- The choice: N/A.

TotalMemory

Displays the total memory available in the system.

- The choice: N/A.

IDE Adapters

The IDE adapters control the hard disk drive. Use a separate sub-menu to configure each hard disk drive.

IDE HDD Auto-Detection

Press <Enter> to auto-detect HDD on this channel. If detection is successful, it fills the remaining fields on this menu.

- Press Enter

IDE Channel/IDE Channel 1 Master/Slave

Selecting 'manual' lets you set the remaining fields on this screen and select the type of fixed disk. "User Type" will let you select the number of cylinders, heads, etc., Note: PRECOMP = 65535 means NONE !

- The choice: None, Auto, or Manual.

Access Mode

Choose the access mode for this hard disk.

- The choice: CHS, LBA, Large, or Auto.

Capacity

Disk drive capacity (Approximated). Note that this size is usually slightly greater than the size of a formatted disk given by a disk checking program.

- Auto-Display your disk drive size.

The following options are selectable only if the 'IDE Primary Master' item is set to 'Manual', and Access mode set to CHS.

Cylinder

Set the number of cylinders for this hard disk.

- Min = 0, Max = 65535

Head

Set the number of read/write heads.

- Min = 0, Max = 255

Precomp

Warning: Setting a value of 65535 means no hard disk.

- Min = 0, Max = 65535

Landing zone

Set the Landing zone size.

- Min = 0, Max = 65535

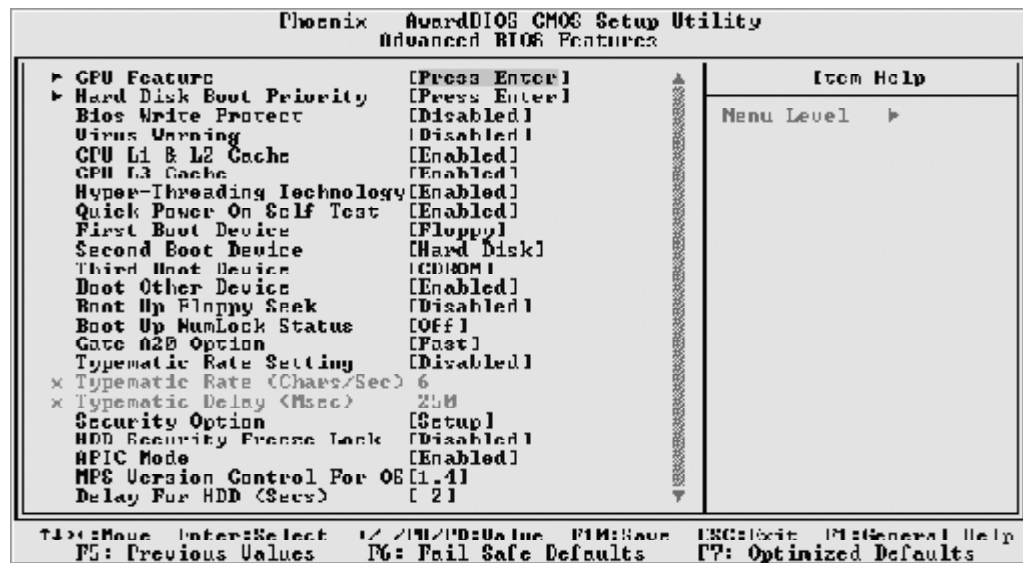
Sector

Number of sector per track.

- Min = 0, Max = 255

Advanced BIOS Features

This section allows you to configure your system for basic operation. You have the opportunity to select the system's default speed, boot-up sequence, keyboard operation, shadowing, and security.



CPUFeature

Options are in its sub-menu.

Press <Enter> to enter the sub-menu of detailed options.

Delay Prior to Thermal

This item is select Delay Prior to Thermal.

- The Choice: 4Min, 8Min, 16Min or 32 Min.

ThermalManagement

This item is select Thermal Management . Thermal Monitor 1 (On die throttling). Thermal Monitor 2 Ratio & VID transition).

- The Choice: Thermal Monitor 1 or Thermal Monitor 2.

TM2 Bus Ratio

Represents the frequency (bus ratio of the throttled performance state that will be initiated when the on-die sensor goes from not hot to hot.

- The Choice: Min = 0 Max = 255.

Note: CPU support TM2, item appear.

TM2 Bus VID

Represents the voltage of the throttled performance state that will be initiated when the on die sensor goes from not hot to hot.

➤ The Choice: 0.8375V ~ 1.6000V.

Note: CPU support TM2, item appear.

Limit CPUID MaxVal

Set Limit CPUID MaxVal to 3, Should Be "Disabled" for WinXp.

➤ The Choice: Disabled or Enabled.

Note: Some older O.S.'s (Win98, WinMe..) cannot handle a CPUID MaxVal greater than 3. Please choose "Enabled" if you use one of those O.S. If your O.S. is WinXP or Win2000, we suggest you "Disabled" the item.

C1E Function

When disabled, processor can't transition to a lower core frequency and voltage.

➤ The Choice: Auto or Disabled.

Note: CPU support, item appear.

Execute Disable Bit

When disabled, forces the XD feature flag to always return 0.

➤ The Choice: Enabled or Disabled.

Note: CPU support, item appear.

Virtualization Technology

When enabled, a VMM can utilize the additional hardware capabilities provided by Vanderpool Technology.

➤ The Choice: Enabled or Disabled.

Note: CPU support, item appear.

Hard Disk Boot Priority

This item allows you to select Hard Disk Boot Device Priority.

Bios Write Protect

This item allows you to enable or disable the Bios Write Protect. If you want to flash BIOS, you must set it [Disabled].

- The choice: Enabled or Disabled.

Virus Warning

Allows you to choose the VIRUS Warning feature for IDE Hard Disk boot sector protection. If this function is enabled and someone attempts to write data into this area, BIOS will show a warning message on screen, and an alarm beep.

Enabled Activates automatically when the system boots up, causing a warning message to appear when anything attempts to access the boot sector or hard disk partition table.

Disabled No warning message will appear when anything attempts to access the boot sector or hard disk partition table.

- The choice: Enabled or Disabled.

CPU L1 & L2 & L3 Cache

All processors that can be installed in this mainboard use internal level 1 (L1), external 2 (L2) and (L3) cache memory to improve performance.

Leave this item at the default value for better performance.

- The choice: Enabled or Disabled.

Note : CPU support, L3 item appear.

Hyper-Threading Technology

The latest Intel application defines a high-speed calculating ability to optimize your system by two CPUs supported (one virtual, one physical) in a multi-task environment. "Enabled" for Windows XP and Linux 2.4.x (OS optimized for Hyper Threading Technology and "Disable" for other OS (OS not optimized for Hyper Threading Technology)

- The choice: Enabled, or Disabled.

Quick Power On Self Test

This item speeds up Power-On Self Test (POST) after you power on the computer. If it is set to enabled, BIOS will shorten or skip some check items during POST.

- The choice: Enabled, or Disabled.

First/Second/Third Boot Device

The BIOS attempts to load the operating system from the devices in the

sequence selected in these items.

- The Choice: LS120, Hard Disk, CDROM, ZIP100, USB-FDD, USB-ZIP, USB-CDROM, LAN, Disabled or Floppy.

BootOther Device

If BIOS can't load O.S. from First/Second/Third boot device you select above, BIOS will search other devices and attempt to load O.S..

- The choice: Enabled or Disabled.

BootUpFloppy Seek

Enabled tests floppy drives to determine whether they have 40 or 80 tracks

- The choice: Enabled or Disabled.

BootUpNumLock Status

Selects power on state for NumLock.

- The choice: Off or On.

GateA20 Option

This entry allows you to select how the Gate A20 is handled. The gate A20 is a device used for above 1MByte of address memory. Initially, the gate A20 was handled via a pin on the keyboard. Today, while a keyboard still provides this support, it is more common and much faster in setting to fast for the system chipset to provide support for gate A20.

- The choice: Normal or Fast.

TypematicRateSetting

Keystrokes repeat at a rate determined by the keyboard controller. When this controller enabled, the typematic rate and typematic delay can be selected.

- The choice: Enabled or Disabled.

TypematicRate(Chars/Sec)

This item sets how many times the keystroke will be repeat in a second when you hold the key down.

- The choice: 6, 8, 10, 12, 15, 20, 24, or 30.

TypematicDelay(Msec)

Sets the delay time after the key is held down before it begins to repeat the keystroke.

- The choice: 250, 500, 750, or 1000.

Security Option

Select whether the password is required every time the system boots or only when you enter setup.

System The system will not boot and access to Setup will be denied if the correct password is not entered promptly.

Setup The system will boot, but access to Setup will be denied if the correct password is not entered promptly.

➤ The choice: System or Setup.

Note : To disabled security, select PASSWORD SETTING at Main Menu, and then you will be asked to enter password. Don't type anything and just press <Enter> ; it will disable security. Once the security is disabled, the system will boot, and you can enter Setup freely.

HDD Security Freeze Lock

This item allows you to enable/disable the HDD Security Freeze Lock. Enabled - prevents any external application from locking Hard drive except for BIOS.

➤ The choice: Enabled or Disabled.

APIC Mode

Via the routing, I/O APIC support a total of 24 interrupts. We recommend to choose [Enabled] for Windows XP and Windows 2000.

➤ The choice: Enabled or Disabled.

MPS Version Control For OS

Selects the operating system multiprocessor support version.

➤ The choice: 1.1 or 1.4

Delay For HDD < Secs >

This item allows you to set delay for HDD < secs > .

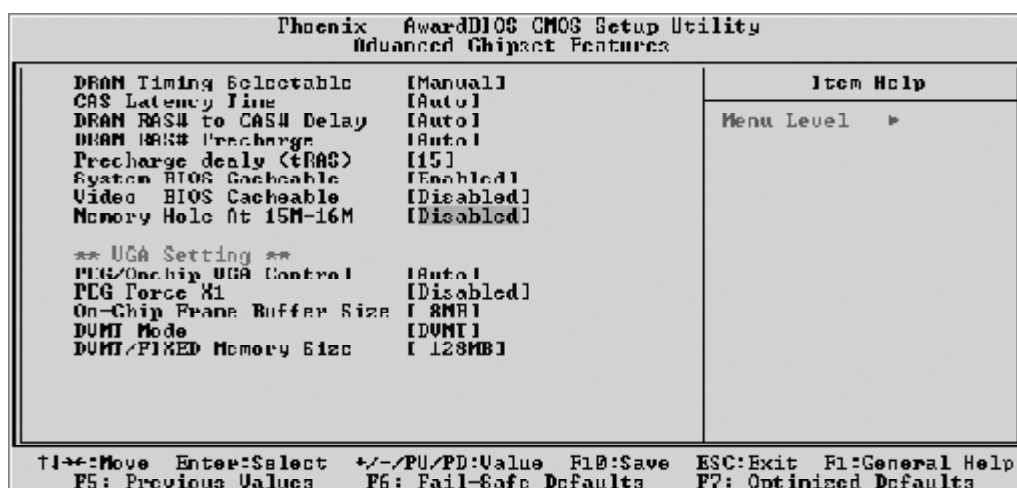
➤ The choice: 0 ~ 15.



Advanced Chipset Features

This section allows you to configure the system based on the specific features of the installed chipset. This chipset manages bus speeds and access to system memory resources, such as DRAM and the external cache. It also coordinates communications between the conventional ISA bus and the PCI bus. It states that these items should never need to be altered.

The default settings have been chosen because they provide the best operating conditions for your system. If you discovered that data was being lost while using your system, you might consider making any changes.



DRAM Timing Selectable

This item allows you to select the value in this field, depending on whether the board using which kind of DDR DRAM.

- The Choice: By SPD or Manual.

CAS Latency Time

When synchronous DRAM is installed, the number of clock cycles of CAS latency depends on the DRAM timing. Don't change this field from the default value specified by the system designer.

- The Choice: Auto, 3, 4, 5 or 6.

DRAM RAS# to CAS# Delay

This field lets you insert a timing delay between the CAS and RAS strobe signals, and you can use it when DRAM is written to, read from, or refreshed. Faster performance is gained in high speed, more stable performance, in low speed.

This field is applied only when synchronous DRAM is installed in the system.

- The Choice: Auto,2,3,4,5 or 6.

DRAM RAS# Precharge

If an insufficient number of cycles is allowed for the RAS to accumulate its charge before DRAM refresh, the refresh may be-incompleted, and the DRAM may fail to retain data. Fast gives faster performance; and Slow gives more stable performance. This field is applied only when synchronous DRAM is installed in the system.

- The Choice: Auto,2,3,4,5 or 6.

Precharge dealy (tRAS)

The precharge time is the number of cycles it takes for DRAM to accumulate its charge before refresh.

- The Choice: Auto or 4 ~ 15.

System BIOS Cacheable

Selecting Enabled allows caching of the system BIOS ROM at F0000h ~ FFFFFh, resulting in better system performance. However, if any program is written to this memory area, a system error may result.

- The Choice: Enabled or Disabled.

Video BIOS Cacheable

Selecting Enabled allows caching of the video BIOS, resulting in better system performance. However, if any program is written to this memory area, a system error may result.

- The Choice: Enabled or Disabled.

Memory Hole At 15M-16M

You can reserve this area of system memory for ISA adapter ROM. When this area is reserved, it can't be cached. The user information of peripherals that need to use this area of system memory usually discusses their memory requirements.

- The Choice: Enabled or Disabled.

** VGA Setting **

PEG/Onchip VGA Control

This item allows you to decide to activate whether PEG slot or Onchip VGA first.

- The choice: Auto, Onchip VGA or PEG Port .

PEGForce X1

This item allows you to force PEG link X1.

- The Choice: Enabled, or Disabled.

Note : When install the pcie card, PEG Force X1 item appear.

On-Chip Frame Buffer Size

This item allows you to set the onboard VGA share memory size.

- The Choice: 1MB or 8MB.

Note: When use On-chip VGA, On-Chip Frame Buffer Size item appear.

DVMTMode

This item allows you to set the DVMT Version.

- The Choice: DVMT, BOTH or Fixed.

Note: When use On-chip VGA, DVMT Mode item appear.

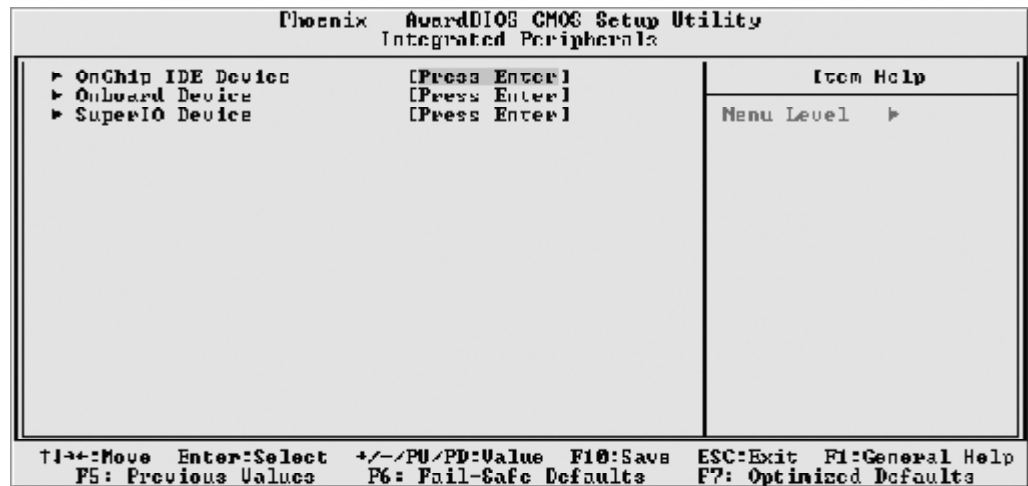
DVMT/FIXED Memory Size

This item allows you to set the DVMT/FIXED Memory Size.

- The Choice: 64MB, 128MB or 224MB.

Note: When use On-chip VGA, DVMT/FIXED Memory Size item appear.

Integrated Peripherals



On-Chip IDE Device

Options are in its sub-menu.

Press <Enter> to enter the sub-menu of detailed options.

IDE HDD Block Mode

If your IDE hard disk drive supports block mode (most new drives do), select Enabled to automatically detect the optimal number of block read and writes per sector that the drive can support and improves the speed of access to IDE devices.

- The choice: Enabled, or Disabled.

On-Chip Primary PCI IDE

Use these items to enable or disable the PCI IDE channels that are integrated on the mainboard.

- The choice: Enabled or Disabled.

IDE Primary Master/Slave PIO

Each IDE channel supports a master device and a slave device. These four items let you assign which kind of PIO (Programmed Input / Output) is used by IDE devices. Choose Auto to let the system auto detect which PIO mode is best or select a PIO mode from 0-4.

- The choice: Auto, Mode 0, Mode 1, Mode 2, Mode 3, or Mode 4.

IDE Primary Master/Slave UDMA

Each IDE channel supports a master device and a slave device. This mainboard supports UltraDMA technology, which provides faster access to IDE devices.

If you install a device that supports UltraDMA, change the appropriate item on this list to Auto. You may have to install the UltraDMA driver supplied with this mainboard in order to use an UltraDMA device.

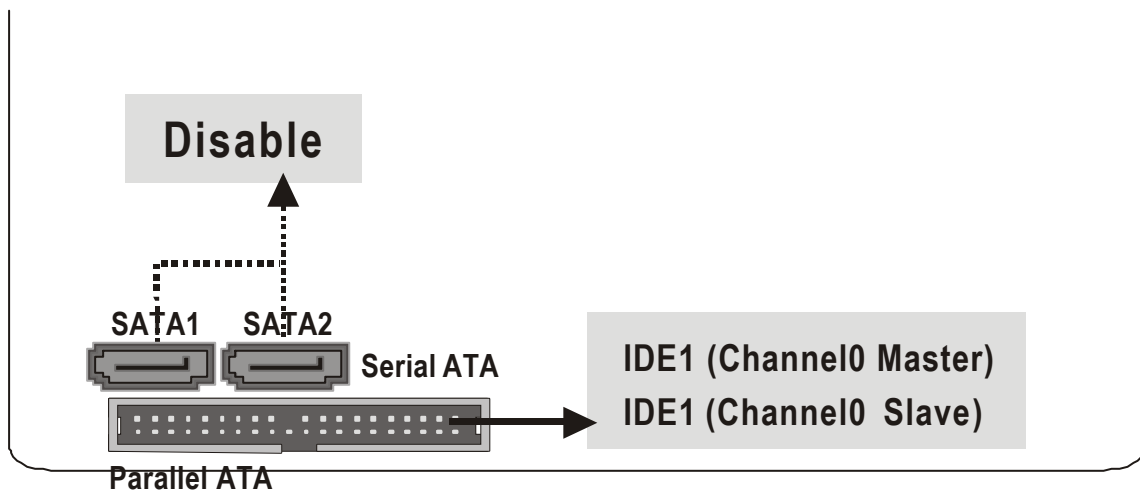
➤ The Choice: Auto or Disabled.

***** On -Chip Serial ATA Setting *****

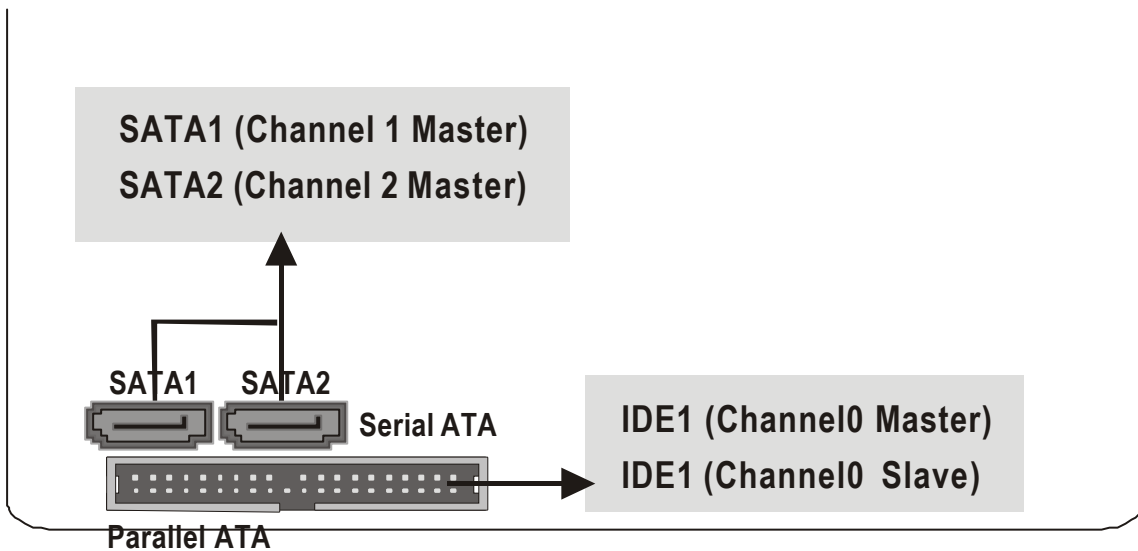
On-Chip Serial ATA

➤ The Choice: Disabled, Enhanced Mode or SATA Only.

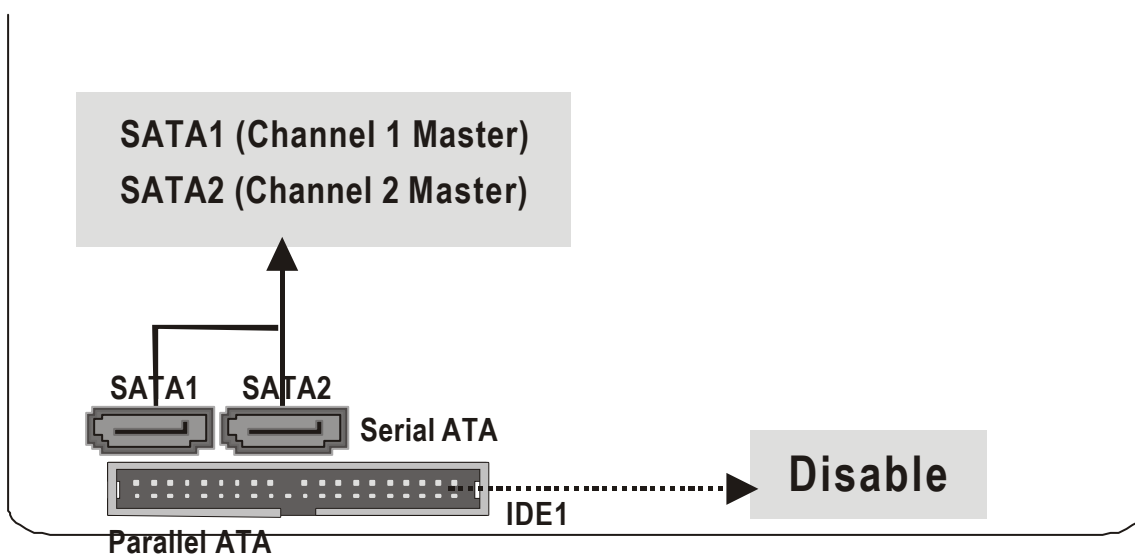
Disabled : Disabled SATA Controller.



Enhanced Mode: Enables both SATA and PATA. Max. 2 ATA drives are supported. Some current operating systems (WinXP, Windows NET Server, Windows 2000) support Enhanced mode.



SATA-Only: SATA operates in legacy mode.



SATA PORT Speed Settings

This item allows you to set the SATA PORT Speed.

- The choice: Disabled, Force GEN I, or Force GEN II.

Onboard Device

Options are in its sub-menu.

Press <Enter> to enter the sub-menu of detailed options.

USB Controller

Select Enabled if your system contains a Universal Serial Bus (USB) port on this mainboard.

- The choice: Enabled or Disabled.

USB 2.0 Controller

Select Enabled if your system contains a Universal Serial Bus (USB) 2.0 controller and you have USB peripherals.

- The choice: Enabled or Disabled.

High Definition Audio

This item allows you to set the High Definition Audio.

- The choice: Enabled or Disabled.

SuperIO Device

Options are in its sub-menu.

Press <Enter> to enter the sub-menu of detailed options.

Onboard FDC Controller

This item specifies onboard floppy disk drive controller. This setting allows you to connect your floppy disk drives to the onboard floppy connector.

- The choice: Enabled or Disabled.

Onboard Serial Port 1

This option is used to assign the I/O address and interrupt request (IRQ) for the onboard serial port 1 (COM1).

- The choice: Disabled, 3F8/IRQ4, 2F8/IRQ3, 3E8/IRQ4, 2E8/IRQ3, or Auto.

Onboard Parallel Port

This item allows you to determine onboard parallel port controller I/O address and interrupt request (IRQ).

- The choice: 378/IRQ7, 278/IRQ5, 3BC/IRQ7, or Disabled.

Parallel Port Mode

Select an operating mode for the onboard parallel (printer) port. Select Normal, Compatible, or SPP unless you are certain your hardware and software both support one of the other available modes.

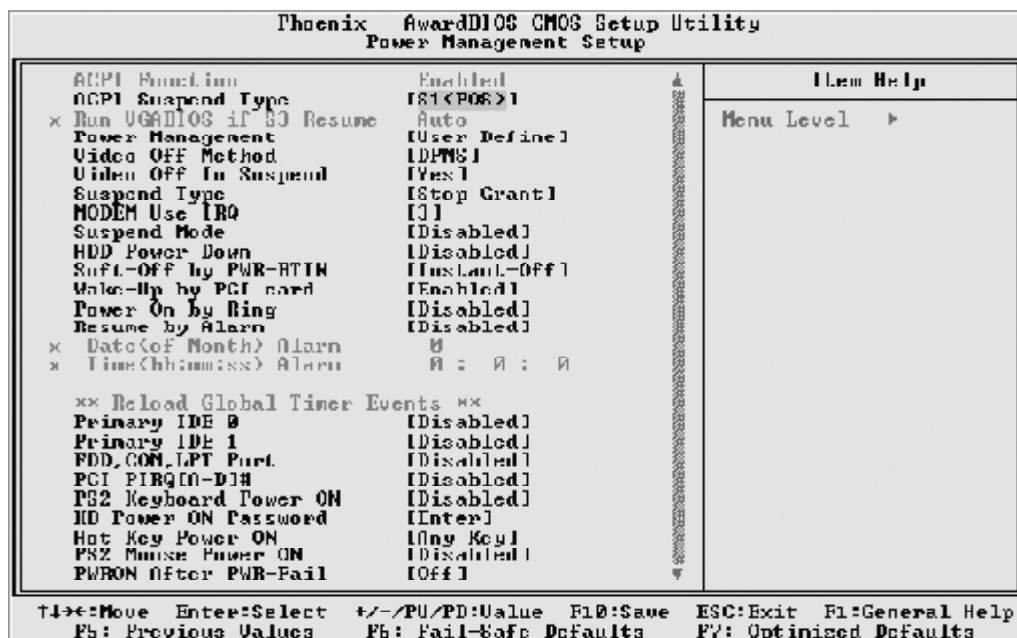
- The choice: SPP, EPP, ECP, or ECP + EPP.

ECP Mode Use DMA

When the onboard parallel is set to ECP mode, the parallel port can use DMA3 or DMA1.

- The choice: 1 or 3.

Power Management Setup



The Power Management Setup allows you to configure your system to most effectively save energy while operating in a manner consistent with your computer usage.

ACPIFunction

This item allows you to enable/disable the Advanced Configuration and Power Management (ACPI).

- Always "Enabled".

ACPI Suspend Type

This item allows you to select sleep state when suspend.

- The choice: S1(POS) or S3(STR).

Run VGABIOS if S3 Resume(Auto)

This item allows the system to initialize the VGA BIOS from S3(Suspend to RAM) sleep state.

- The choice: Auto, Yes or No.

Power Management

This item allows you to decide the timing to enter suspend mode.

- The choice: User Define, Min Saving, Max Saving.

Video Off Method

This determines the manner in which the monitor is blanked.

- | | |
|-----------------|--|
| V/HSYNC + Blank | This selection will cause the system to turn off the vertical and horizontal synchronization ports and write blanks to the video buffer. |
| BlankScreen | This option only writes blanks to the video buffer. |
| DPMS | Initial display power management signaling. |
- The choice: V/H SYNC + Blank, Blank Screen, or DPMS.

Video OffIn Suspend

- This item determines the manner in which the monitor is blanked.
- The choice: Yes or No.

SuspendType

- This item allows you to select the Suspend Type.
- The choice: Stop Grant or PwrOn suspend.

MODEMUse IRQ

- This determines the IRQ which the MODEM can use.
- The choice: 3, 4, 5, 7, 9, 10, 11, or NA.

SuspendMode

- When this item enabled and after the set up time of system inactivity, all devices except the CPU will be shut off.
- The choice: Disabled, 1Min, 2Min, 4Min, 8Min, 12Min, 20Min, 30Min, 40Min, or 1Hour.

HDDPower Down

- When this item enabled and after the set up time of system inactivity, the hard disk drive will be powered down while all other devices remain active.
- The choice: Disabled or 1 Min ~ 15 Min.

Soft-OffbyPWR-BTTN

- Under ACPI you can create a software power down. In a software power down, the system can be resumed by Wake UP Alarms. This item lets you install a software power down that is controlled by the power button on your system. If the item is set to Instant-Off, then the power button causes a software power down. If the item is set to Delay4 Sec. then you have to hold the power button down for 4 seconds to cause a software power down.
- The choice: Instant-Off or Delay 4 Sec.

Wake-Up by PCI card

This item allows you to set the Wake-Up by PCI card.

- The choice: Enabled or Disabled.

Power On by Ring

This item determine the system will resume by activating of modem ring.

- The choice: Enabled or Disabled.

Resume by Alarm

When this item enabled, your can set the date (day of the month) and time to turn on your system.

- The choice: Disabled or Enabled.

Date(of Month) Alarm

This item selects the alarm Date (day of the month).

- Key in a DEC number: Min = 0, Max = 31.

Time(hh : mm : ss) Alarm

This item selects the alarm Time.

- [hh] ➤ Key in a DEC number: Min = 0, Max = 23.

- [mm/ss] ➤ Key in a DEC number: Min = 0, Max = 59.

*** Reload Global Timer Events ***

Global Timer (power management) events are I/O events whose occurrence can prevent the system from entering a power saving mode or can awaken the system from such as a mode. In effect, the system remains alert for anything that occurs to a device that is configured as Enabled, even when the system is in a power-down mode.

Primary IDE 0/1

When these items are enabled, the system will restart the power-saving time out counters when any activity is detected on any of the drives or devices on the primary or secondary IDE channels.

- The choice: Disabled or Enabled.

FDD, COM, LPT Port

When this item is enabled, the system will restart the power-saving timeout counters when any activity is detected on the floppy disk drive, serial ports, or the parallel port.

- The choice: Disabled or Enabled.

PCI PIRQ [A-D]

When this item is disabled, any PCI device set as the Master will not power on the system.

- The choice: Disabled or Enabled.

PS2 Keyboard Power ON

This item allows you to set the PS2 Keyboard Power On function.

- The choice: Disabled, Password, or Hot Key.

KB Power ON Password

This item allows you to set the KB Power On Password.

- Press" Enter" to set Password.

Hot Key Power On

This item allows you to set the Hot Key Power On.

- The choice: Any Key, Ctrl-F1 ~ Ctrl-F12.

PS2 Mouse Power ON

This item allows you to enable or disable the PS2 Mouse Power On.

- The choice: Disabled or Enabled.

Pwron After PWR-Fail

This item defines if the system will be rebooted after the power fails.

- The choice: Off, On, Former-Sts.

PnP/PCI Configurations

Phoenix AwardBIOS CMOS Setup Utility PnP/PCI Configurations		
Reset Configuration Data	[Disabled]	Item Help
Resources Controlled By	[Auto(ESCD)] Press Enter	Menu Level ▶
× IRQ Resources		
PCI/UGM Palette Snoop	[Disabled]	
INT Pin 1 Assignment	[Auto]	
INT Pin 2 Assignment	[Auto]	
INT Pin 3 Assignment	[Auto]	
INT Pin 4 Assignment	[Auto]	
INT Pin 5 Assignment	[Auto]	
INT Pin 6 Assignment	[Auto]	
INT Pin 7 Assignment	[Auto]	
INT Pin 8 Assignment	[Auto]	
*** PCI Express relative items ***		
Maximum Payload Size	[4096]	
↑↓←→: Move Enter: Select +/~/PU/PD: Value F10: Save ESC: Exit F1: General Help F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults		

This section describes the configuration of PCI bus system. PCI or Personal Computer Interconnection is a system which allows I/O devices to operate at the speed CPU itself keeps when CPU communicating with its own special components.

This section covers some very technical items, and it is strongly recommended that only experienced users should make any changes to the default settings.

Reset Configuration Data

Normally, you leave this field Disabled. Select Enabled to reset Extended System Configuration Data (ESCD) when you exit from Setup if you have installed a new device or software and the system reconfiguration has caused such a serious conflict that the operating system can not boot.

- The choice: Enabled or Disabled .

Resource controlled By

The Award Plug-and-Play BIOS has the capacity to automatically configure all of the boot and Plug-and-Play compatible devices. However, this capability means absolutely nothing unless you are using a Plug-and-Play operating system such as Windows 95.

If you set this field to "manual" , choose specific resources by going into each of the sub-menu that follows this field (a sub-menu is proceeded by a ">").

- The choice: Auto(ESCD) or Manual.

IRQResources

When resources are controlled manually, assign each system interrupt a type, depending on the type of device using the interrupt.

IRQ3/4/5/7/10/11/12/14/15 assigned

This item allows you to determine the IRQ assigned to the ISA bus and is not available to any PCI slot. Legacy ISA for devices is compliant with the original PC AT bus specification; PCI/ISA PnP for devices is compliant with the Plug-and-Play standard whether designed for PCI or ISA bus architecture.

- The choice: PCI Device or Reserved.

PCI/VGA PaletteSnoop

It determines whether the MPEG ISA/VESA VGA Cards can work with PCI/VGA or not. If you have MPEG ISA/VESA VGA Cards and PCI/VGA Card worked, Enable this field. Otherwise, please Disable it.

- The choice: Enabled or Disabled.

INTPin1 ~ 8 Assignment

Names the interrupt request(IRQ) line assigned to a device connected to the PCI interface on your system.

- The choice: Auto, 3, 4, 5, 7, 9, 10, 11, 12, 14, 15.

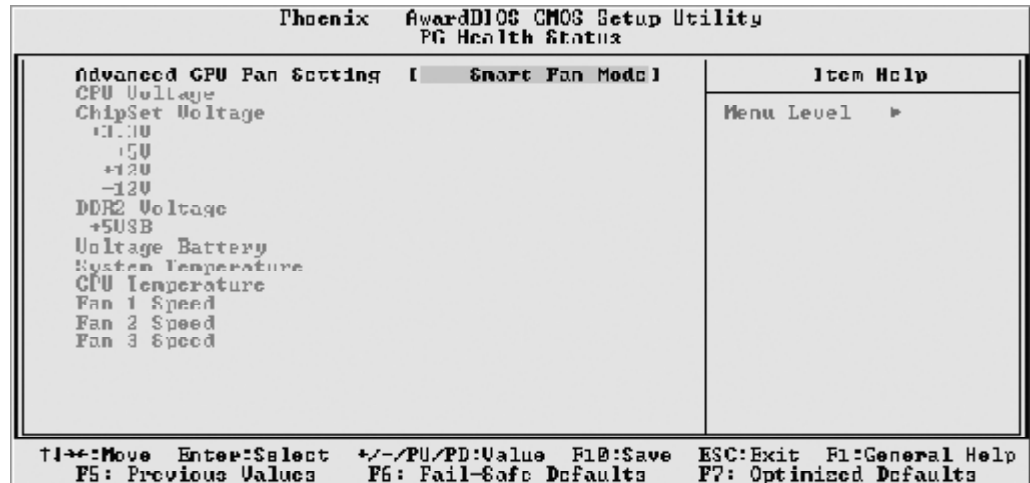
***** PCI Express relative items *****

MaximumPayloadSize

Set maximum TLP payload size for the PCI Express devices. The unit is byte.

- The choice: 4096, 2048, 1024, 512, 256 or 128.

PC Health Status



Advanced CPU Fan Setting

Here you can set the CPU Fan Speed.

- The choice: Smart Fan Mode, Ultra-Low Fan Speed, Low Fan Speed, Mid Fan Speed, Full Fan Speed or Extreme PC Mode.

Note : Before manually modifying the CPU fan setting, please make sure fan connectors are plugged into the correct fan connector on the mainboard.

CPU Voltage

ChipSet Voltage

+ 3.3V

+ 5V

+ 12V

-12V

DDR2 Voltage

+ 5VSB

Voltage Battery

System Temperature

CPU Temperature

Fan 1 Speed

Fan 2 Speed

Fan 3 Speed

Warning: It is Strongly recommended to disable 'Smart Fan' if you use an alternative fan to the default.

Frequency/Voltage Control

Phoenix AwardBIOS CMOS Setup Utility Frequency/Voltage Control		
Spread Spectrum	[Enabled]	Item Help
***** Clock *****		
CPU Clock Ratio	[H X]	Menu Level ▶
CPU Clock	[200MHz]	
***** Voltage *****		
CPU Voltage set	[Auto]	
DDR2 Voltage set	[Auto]	
↑↓←→: Move Enter: Select +/-: PU/PD: Value F10: Save ESC: Exit F1: General Help F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults		

Spread Spectrum

This item allows you to enable or disable the spread spectrum modulation.

- The choice: Disabled or Enabled.

***** Clock *****

CPU Clock Ratio

This item allows the user to adjust CPU Clock Ratio.
If CPU is unlocked, item appear.

- The Choice: 8X ~ 50X.

CPU Clock

This item allows the user to adjust CPU Host Clock.
Min: 133 Max: 355

- Key in a DEC number: (Between Min and Max.)

***** Voltage *****

CPU Voltage

This item allows you to set CPU Voltage.

- The choice: +25mV ~ +800mV or Auto.

DDR2 Voltage

This item allows you to set DDR2 Voltage.

- The choice: Auto, 1.9V, 2.0V or 2.1V.

**Load Fail-Safe Defaults**

When you press <Enter> on this item, you will get a confirmation dialog box with a message similar to:

Load Fail-Safe Defaults (Y/N) ? N

Pressing 'Y' loads the BIOS default values for the most stable, minimal system performance.

**Load Optimized Defaults**

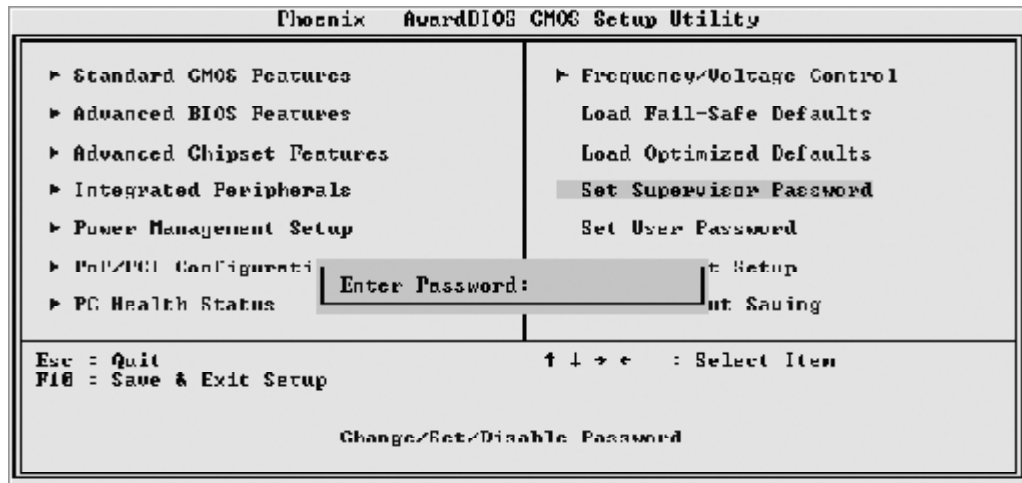
When you press <Enter> on this item, you will get a confirmation dialog box with a message similar to:

Load Optimized Defaults (Y/N) ? N

Pressing 'Y' loads the default values that are factory-set for optimal system performance.



Set Password



This item is to set a supervisor password. Please follow below steps.

New Password Setting:

1. Press the <Enter> key. A dialog box appears to ask you to "Enter password: ".
2. Key in a new password.
The password can not be over eight characters or numbers.
3. The system will then request you to confirm the new password by asking you to key in the new password again.
4. Once the confirmation is completed, new code is in effect.

No Password Setting:

5. If you want to delete the password, just press the <Enter> key instead of typing a new password. Follow the procedure as above.

If You Forget Password:

6. If you forget your password, you must turn off the system and clear CMOS.
Please refer to the tech notes at the end of section two for more information.



Save & Exit Setup

Press <Enter> on this item to save your changes. The system will ask for confirmation : system

Save to CMOS and EXIT (Y/N)? Y

Pressing "Y" stores the selections made in the menus of CMOS - a special section of memory that stays on after you turn your system off. The next time you boot your computer, the BIOS configures your system according to the Setup selections stored in CMOS. After saving the values the system will restart.



Exit Without Saving

Press <Enter> on this item to exit without saving changes. The system will ask for confirmation:

Quit without saving (Y/N)? Y

This allows you to exit from Setup without storing in CMOS any change. The previous selections remain in effect. This exits from the Setup utility and restarts your computer.