



• Boot Up NumLock Status	<i>Disabled</i> <i>On</i> <i>Off</i>	Skips drive seeking to speed up system booting. Keypad is used as number keys. Keypad is used as arrow keys.
• Boot Up system speed	<i>high</i> <i>low</i>	Speed switching for EISA system.
• Memory Parity check	<i>Enabled</i>	Enables the Error Checking & Correction if ECC memory is used.
• Typermatic Rate Setting	<i>Disabled</i>	Disables the ECC function.
	<i>Enabled</i>	Enables typermatic rate and typermatic programming.
	<i>Disabled</i>	Disables typermatic rate and typermatic programming. The system BIOS will use the default value of these two items.
• Typermatic Rate (chars/sec)	<i>6-30</i>	Sets the speed of the typermatic rate (characters per second).
• Typermatic Delay (Msec)	<i>250-1000</i>	Sets the time of the typermatic delay.
• Security Option	<i>System</i>	The system will not boot and access to Setup will be denied if the correct password is not entered when prompted.
	<i>Setup</i>	The system will boot up, but access to Setup will be denied if the correct password is not entered when prompted.
• PCI/VGA Palette Snoop	<i>Enabled</i>	Non-standard VGA cards such as graphics accelerators or MPEG video cards may not display colors properly. Setting Enable can resolve this problem.
	<i>Disabled</i>	
• OS Select For DRAM>64MB	<i>Non-OS2</i>	If your operating system is not OS/2, please select this item.
	<i>OS2</i>	If system DRAM is more than 64MB and the operating system is OS/2, please select this item.
• Report NO FDD for WIN 95	<i>Yes</i>	Reports NO Floppy Disk Drive for WIN 95 to release IRQ6.
	<i>No</i>	Does not report No Floppy Disk Drive for WIN 95.
• Video BIOS Shadow	<i>Enabled</i>	Video BIOS will be copied to RAM. Video Shadow will increase the video speed.
	<i>Disabled</i>	Video shadow is disabled.
• C8000~CBFFF Shadow: DC000-DFFFF Shadow:	<i>Enabled</i>	Optional ROM will be copied to RAM by 16K bytes per unit.
• Show Bootup Logo	<i>Disabled</i>	The shadow function is disabled.
	<i>Enabled</i> <i>Disabled</i>	Enables Logo when system boots up. Logo will not be shown when system boots up.



BIOS Description

- Flash Write Protect

Enabled

Does not allow you to upgrade the BIOS.

Note: Enabling this item can protect the system BIOS from being attacked by severe virus such as CIH. Therefore disable this item only when wanting to flash BIOS, afterwards set this item as Enabled (default).

Disabled

Disabling this item allows you to upgrade the BIOS.



Chipset Features Setup



Figure-5 Chipset Features Setup Menu

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

<u>Item</u>	<u>Option</u>	<u>Description</u>
• Ref/Act Command Delay	5T~8T	Refresh Command to Refresh/Active Command Delay. This Register controls the characteristic of DRAM Refresh operation.
• RAS Precharge Time	3	DRAM RAS# Precharge time=3x system clocks.
• RAS To CAS Delay	4	DRAM RAS# Precharge time=4x system clocks.
• ISA Bus Clock Frequency	2	Adds a delay time between the assertion of RAS# and CAS#.
• DRAM performance Control	3	Without additional delay time.
• NA# Enable	PCIClk/4	Chooses the ISA bus clock.
• L2 Cache-hit Burst NA#	1T, 3T, 5T	Default setting is suggested.
• IO Cycle NA#	Enabled Disabled	Default setting is suggested.
• BRDY Timing L2 Cache Hit	Normal	Default setting is suggested.
• Asyn/Sync Mode CPU/DRAM	Enabled Disabled	Default setting is suggested.
	Asynchronous Synchronous	Default setting is suggested.



BIOS Description

• SDRAM CAS Latency	2	Defines the CLT timing parameter of SDRAM. Latency Time= 2X system Clocks.
	3	Latency Time= 3X system Clocks.
• SDRAM WR Retire Rate	x-1-1-1	Controls the timing in which SiS530 writes data into SDRAM during burst cycles.
• Timing of Writing L2	X-2-2-2	Default setting is suggested.
	X-3-3-3	
• PCI Peer Concurrency	Enabled	When the setting is enabled, CPU to L2/DRAM accesses are allowed to perform concurrently with PCI-to-PCI accesses.
	Disabled	
• Read Prefetch Memory RD	Enabled	Controls whether or not sis530 fetch data for memory read command. Please note that memory Read multiple and memory read line commands always prefetch
	Disabled	
• Assert TRDY After Prefetch	2 QWS	Assert TRDY# after prefetching IQ ws
	1 QWS	Assert TRDY# after prefetching IQ ws
• Addr. Decode Time Control	1 CPU clk	Controls the decoding time for deciding whether the PCI transaction is assigned to the system memory or not.
	2 CPU clk	
• Improved Snoop Ctrl WR	Enabled	Controls whether or not the PCI target bridge does improves snoop function for write cycles.
	Disabled	
• DMA Request Control	After CPU	Sets the effective size of Graphics Aperture to be used in the particular PAC Configuration.
	After PCI	
• CPU to PCI Burst Mem. WR	Enabled	Controls whether or not the host bridge generates memory burst cycles.
	Disabled	
• CPU to PCI Post Write	Enabled	When the setting is enabled, all CPU to PCI memory write cycles are posted.
	Disabled	
• L2 Cache Update Mode	Wr Back	Specifies the coherence policy for L2 cache and system DRAM.
	Wr Through	
• Linear Mode SRAM Support	Enabled	Specifies the addressing mode
	Disabled	
• AGP Aperture Size	4-256MB	Sets the effective size of Graphics Aperture to be used in particular PAC Configuration.
• System BIOS Cacheable	Enabled	Beside conventional memory, system BIOS area is also cacheable.
	Disabled	System BIOS area is not cacheable.
• Video BIOS Cacheable	Enabled	Beside conventional memory, video BIOS area is also cacheable.
	Disabled	Video BIOS area is not cacheable.
• Memory hole at 15M-16M	Enabled	Memory hole at 15-16M is reserved for expanded ISA card.
	Disabled	Does not set this memory hole.
• Auto Detect DIMM/PCIClk	Enabled	Close empty DIMM/PCI clock to reduce EMI.
	Disabled	Does no close DIMM/PCI clock.



- Spread Spectrum

Enabled

Enables Spread Spectrum Modulated to reduce EMI.

Disabled

Disabled Spread Spectrum Modulated.



Power Management Setup

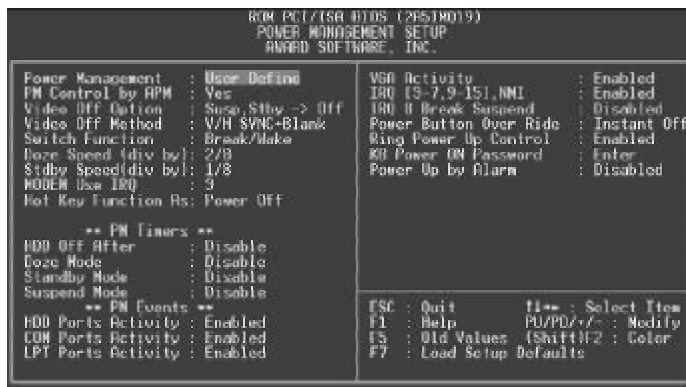


Figure-6 Power Management Setup Menu

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

<u>Item</u>	<u>Option</u>	<u>Description</u>
• Power Management	<i>Disabled</i>	Global Power Management (PM) will be disabled.
	<i>User Define</i>	Users can configure their own Power Management Timer.
	<i>Min Saving</i>	Pre - defined timer values are used. All timers are in their MAX values.
	<i>Max Saving</i>	Pre - defined timer values are used. All timers are in their MIN values.
• PM Control by APM	<i>No</i>	System BIOS will ignore APM when Power Management is enabled.
	<i>Yes</i>	System BIOS will wait for APM' s prompt before it enters any PM mode e.g. Standby or suspend.
• Video Off Option	<i>Suspend off</i>	Screen blanks after the system enters suspend mode.
	<i>Susp, Stby Off</i>	Screen blanks after the system enters either standby mode or suspend mode.
	<i>All mode off</i>	Screen blanks after the system enters all mode.
	<i>Always On</i>	Screen is always on.
• Video Off Method	<i>Blank Screen</i>	The system BIOS will only blank off the screen when disabling video.
	<i>V / H SYNC + Blank</i>	In addition to Blank Screen, BIOS will also turn off the V-SYNC & H - SYNC signals from VGA cards to monitor.
	<i>DPMS</i>	This function is enabled only for VGA cards supporting DPMS.



			Note: When the green monitor does not detect the V/H-SYNC signals, the electron gun will be turned off.
• Switch Function	<i>Break/Wake Disabled</i>		Sleep Button Enable.
• Doze Speed (div by)	<i>1/8 ~ 8/8</i>		Selects the throttling duty cycle 12.5%, 25%..... 87.5%, 100% to slow down the processor speed when the system is in doze mode.
• Stdby Speed	<i>1/8 ~ 8/8</i>		Selects the throttling duty cycle 12.5%, 25%..... 87.5%, 100% to slow down the processor speed when the system is in standby mode.
• MODEM Use IRQ (div by)	<i>3,4, 5, 7, 9, 10, 11 NA</i>		Special wake-up event for Modem.
• Hot Key Function As	<i>Disabled Suspend Power Off</i>		Disables hot key. Set hot key (CTRL+ALT+Backspace) as suspend/ power off key.
• HDD Off After	<i>1 ~ 15min</i>		Defines the continuous HDD idle time before the HDD enters the power saving mode(motor off). HDD' s motor will not be off.
• Doze mode	<i>Disabled Disabled 1Min ~ 1 Hr</i>		The system never enters Doze mode. Defines the continuous idle time before the system enters Doze mode. If any items defined in "PM Events" are On and activated, the system will be woken up.
• Standby Mode	<i>Disabled Min ~ 1Hr</i>		The system never enters Standby mode. Defines the continuous idle time before the system enters Standby mode. If any items defined in "PM Events" are On and activated, the system will be woken up.
• Suspend Mode	<i>Disabled Min ~ 1Hr</i>		The system never enters Suspend mode. Defines the continuous idle time before the system enters Suspend mode. If any items defined in "PM Events" are On and activated, the system will be woken up.
• HDD Ports Activity	<i>Enabled Disabled</i>		HDD ports activity will wake up the system from Doze/Standby/Suspend mode. HDD ports activity will not wake up the system from Doze/Standby/Suspend mode.
• COM Ports Activity	<i>Enabled Disabled</i>		COM ports activity will wake up the system from Doze/Standby/Suspend mode. COM ports activity will not wake up the system.



BIOS Description

- | Item | Setting | Description |
|--------------------------|--------------------|---|
| • LPT Ports Activity | <i>Enabled</i> | LPT port activity will wake up the system from Doze/Standby/Suspend mode. |
| | <i>Disabled</i> | LPT port activity will not wake up the system. |
| • VGA Activity | <i>Enabled</i> | VGA activity reloads global timer. |
| | <i>Disabled</i> | VGA activity has no influence to global timer. |
| • IRQ [3-7, 9-15], NMI | <i>Enabled</i> | Enables the events which can reload global timer. |
| | <i>Disabled</i> | Does not influence the global timer. |
| • IRQ8 Break suspend | <i>Enabled</i> | Generates a clock event. |
| | <i>Disabled</i> | Does not generate a clock event. |
| • Power Button Over Ride | <i>Instant Off</i> | The system will power off immediately once the the power button is pressed. |
| | <i>Delay 4 Sec</i> | The system will not power off until the power button is pressed continuously for more than 4 seconds. |
| • Ring Power Up Control | <i>Enabled</i> | Allow the system to be powered on when a Ring indicator signal comes up to UART1 or UART2 from external modem (to LAN Wake-up Header from LAN adapter or to modem Ring on Header from internal modem card) |
| | <i>Disabled</i> | Does not allow Ring Power-on. |
| • KB Power On Password | <i>Enter</i> | Set keyboard power on password. |
| • Power up by Alarm | <i>Enabled</i> | RTC alarm can be used to generate a wake event to power up the system. Set any date or time to power up the system. |
| | <i>Disabled</i> | RTC has no alarm function. |



PNP/PCI Configuration Setup

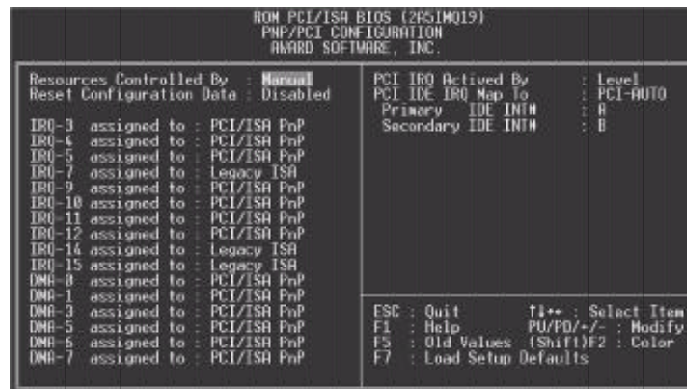


Figure-7 PNP/PCI Configuration Setup Menu

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

<u>Item</u>	<u>Option</u>	<u>Description</u>
• Resources Controlled By	<i>Manual</i>	Assigns the system resources (IRQ and DMA) manually .
	<i>Auto</i>	Assigns system resources (IRQ and DMA) automatically by BIOS.
• Reset Configuration Data	<i>Enabled</i>	The system BIOS will reset configuration data once, then automatically set this item as Disabled.
	<i>Disabled</i>	Disables the configuration data function.
• PCI IRQ Activated By	<i>level</i>	Select PCI IRQ Active mode.
	<i>Edge</i>	
• PCI IDE IRQ Map to	<i>PCI-Auto</i>	Automatically assign PCI IRQ INTA~D to PCI IDE.
	<i>ISA</i>	Specifically assign ISA IRQ to PCI IDE.
• Primary IDE INT#	<i>A~D</i>	Select IDE PCI IRQ.
Secondary IDE INT#		



Integrated Peripherals



Figure-8 Integrated Peripherals Menu

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

Item	Option	Description
• Internal PCI/IDE	<i>Both</i>	Enables both primary and secondary IDE ports.
	<i>Disabled</i>	Disables both primary and secondary IDE ports.
	<i>Primary</i>	Enables the primary IDE port only.
	<i>Secondary</i>	Enables the secondary IDE port only.
• IDE	<i>Mode 0 - 4</i>	Defines the IDE primary/secondary master/ slave PIO mode.
Primary/ Secondary Master/Slave PIO	<i>Auto</i>	The IDE PIO mode is defined by auto -detection.
• IDE	<i>Auto</i>	Ultra DMA mode will be enabled if Ultra DMA device is detected.
Primary/ Secondary Master/Slave UDMA	<i>Disabled</i>	Disables this function.
• IDE Burst Mode	<i>Enabled</i>	Default setting is suggested.
	<i>Disabled</i>	
• IDE HDD Block Mode	<i>Enabled</i>	Allows IDE HDD to read/write several sectors at once.
	<i>Disabled</i>	IDE HDD only reads/writes a sector once.
• Onboard FDC Controller	<i>Enabled</i>	Onboard floppy disk controller is enabled.
	<i>Disabled</i>	Onboard floppy disk controller is disabled.
• Onboard Serial Port 1/2	<i>3F8/IRQ4,</i>	Defines the onboard serial port address and required interrupt number.
	<i>2F8/IRQ3,</i>	
	<i>3E8/IRQ4,</i>	
	<i>2E8/IRQ3,</i>	
	<i>Auto</i>	Onboard serial port address and IRQ are automatically assigned.
	<i>Disabled</i>	Onboard serial port is disabled.



• IR Address Select	<i>Disabled</i> <i>2 E8H - 3E8F</i> <i>2F8H - 3F8H</i>	Defines the IrDA addresses, IRQ and IR mode.
• Onboard Parallel Port	<i>378/IRQ7,</i> <i>278/IRQ5,</i> <i>3BC/IRQ7</i>	Defines onboard parallel port address and IRQ channel.
• Parallel Port Mode	<i>Disabled</i> <i>SPP</i> <i>EPP</i> <i>ECP</i> <i>ECP+EPP</i>	Onboard parallel port is disabled. Defines the parallel port mode as standard Parallel Port(SPP), Enhanced Parallel Port(EPP), or Extended Capabilities Port(ECP).
• PS/2 mouse Function	<i>Enabled</i> <i>Disabled</i>	Enables PS/2 mouse function when using PS/2 mouse. If PS/2 mouse is not used, disabling this option can release the resource.
• USB Controller	<i>Enabled</i> <i>Disabled</i>	Enables onchip USB controller. Disables onchip USB controller.
• USB Keyboard Support	<i>Enabled</i> <i>Disabled</i>	USB keyboard support is enabled. USB keyboard support is disabled.
• Init Display First	<i>PCI SLOT</i> <i>On chip</i>	Initializes the PCI VGA first. Initializes the AGP first. For PCI VGA or AGP, the one initialized first functions.
• Current CPU Temperature	<i>39°C/102°F</i>	The temperature near the CPU.
• Current CPUFAN Speed		RPM(Revolution Per Minute) speed of fan connected to the fan header CPUFAN/CHSFAN. Fan speed value is based on an assumption that tachometer signal is two pulses per revolution; in other cases, you should regard it relatively.
• Current SYSFAN Speed		
• +12(V) 3.3(V) +5 (V) VOC (V)		Displays current voltage values including the significant voltages of the mainboard. +12V, +5V is the voltage from the ATX power supply. +3.3V from onboard regulator. Voc(V) is the CPU core voltage from the onboard switching power supply.



Password Setting

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

ENTER PASSWORD

Type the password, up to eight characters, and press <Enter>. The password typed now will clear any previously entered password from CMOS memory. You will be asked to confirm the password. Type the password again and press <Enter>. You may also press <Esc> to abort the selection.

To disable password, just press <Enter> when you are prompted to enter password. A message will confirm the password being disabled. Once the password is disabled, the system will boot and you can enter BIOS Setup freely.

PASSWORD DISABLED

If you have selected “**System**” in “Password Setting” of “BIOS Features Setup” menu, you will be prompted for the password every time the system reboots or any time you try to enter BIOS Setup.

If you have selected “**Setup**” at “Password Setting” from “BIOS Features Setup” menu, you will be prompted for the password only when you enter BIOS Setup.

Supervisor Password has higher priority than User Password. You can use Supervisor Password when booting the system or entering BIOS Setup to modify all settings. Also you can use User Password when booting the system or entering BIOS Setup but can not modify any setting if Supervisor Password is enabled.



IDE HDD Auto Detection

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

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

Figure-11 IDE HDD Auto Detection Menu

1. Setup Changes

With auto-detection

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

With Standard CMOS Setup

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

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



2. HDD Modes

The Award BIOS supports 3 HDD modes: NORMAL, LBA and LARGE.

NORMAL

Generic access mode in which neither the BIOS nor the IDE controller will make any transformation during accessing. The maximum number of cylinders, heads and sectors for NORMAL mode are 1024,16 and 63.

If the user sets his HDD to NORMAL mode, the maximum accessible HDD size will be 528 megabytes even though its physical size may be greater than that.

LBA (Logical Block Addressing) mode

A new HDD accessing method to overcome the 528 Megabyte bottleneck. The number of cylinders, heads and sectors shown in setup may not be the number physically contained in the HDD.

During HDD accessing, the IDE controller will transform the logical address described by sector, head and cylinder number into its own physical address inside the HDD. The maximum HDD size supported by LBA mode is 8.4 Gigabytes.

LARGE mode

Some IDE HDDs contain more than 1024 cylinder without LBA support (in some cases, users do not want LBA). The Award BIOS provides another alternative to support these kinds of HDD.

BIOS tricks DOS (or other OS) into devising the number of cylinders are less than 1024 by dividing it by 2. At the same time, the number of heads is multiplied by 2. A reverse transformation process will be made inside INT13h in order to access the right HDD address.

If using Auto detect, the BIOS will automatically detect the IDE hard disk mode and set it as one of the three modes.

3. Remark

To support LBA or LARGE mode of HDDs, there must be some softwares involved which are located in Award HDD Service Routine(INT13h).It may fail to access a HDD with LBA (LARGE) mode selected if you are running under an Operating System which replaces the whole INT 13h.

Boot with BIOS defaults

If you have made all the changes to CMOS values and the system can not boot with the CMOS values selected in setup, clear CMOS after power-down, then power on again. System will boot with BIOS default settings.