



Electronic Emission Notices

Federal Communications Commission (FCC) Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with instructions contained in this manual, may cause harmful interference to radio and television communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- REORIENT OR RELOCATE THE RECEIVING ANTENNA
- INCREASE THE SEPARATION BETWEEN THE EQUIPMENT AND THE RECEIVER
- CONNECT THE EQUIPMENT INTO AN OUTLET ON A CIRCUIT DIFFERENT FROM THAT OF THE RECEIVER
- CONSULT THE DEALER OR AN EXPERIENCED AUDIO/TELEVISION TECHNICIAN

NOTE: Connecting this device to peripheral devices that do not comply with Class B requirements, or using an unshielded peripheral data cable, could also result in harmful interference to radio or television reception.

The user is cautioned that any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

To ensure that the use of this product does not contribute to interference, it is necessary to use shielded I/O cables.

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HARDWARE CONFIGURATION

Introduction :

The SIS5598 Pentium PCI Motherboard provides the best cost-effective solution with an integrated high-performance DRAM-based Graphics/Video Accelerator. The main board supports a wide variety of memory configuration. The other features on board include VGA controller, Super-I/O, PCI bus master IDE with Ultra DMA protocol, PCI ver.2.1 compliant, USB, LM79/75 system monitoring (Optional) .

Motherboard PCB :

- 4-layer, Baby-AT type design.
- PCB dimensions : 220mm x 235mm (to be revised).
- Utilization of SMD components on chipset, discrete components and logic IC's.

The CPU :

- Support Intel Pentium Processors at 75, 90, 100, 120, 133, 150, 166,180, 200 and 233 Mhz.
- Support Intel P55C (MMX).
- Support Cyrix 6X86, 6X86L, 6X86MX and AMD K5,K6 processors.
- Selective CPU bus speeds of 50 / 55 / 60 / 66 / 75 MHz.
- Design with Intel Socket 7 for CPU upgradability.
- Split power-plane design for CPU (One switching regulator for core plane; One linear regulator for I/O plane).

Optional External Cache :

- Direct mapped L2 write back cache.
- 256KB or 512KB on-board Synchronous Pipelined Burst cache.

Cache Size	Data RAM	Tag RAM	Cacheable Fast Size
256 KB on-board	2 pcs of 32 K x 32	8K x 8	64 MB
512 KB on-board	2 pcs of 64 K x 32 or 1 pcs of 64 K x 64	16/32 K x 8	128MB

The System Memory :

- 64-bit DRAM with total size range from 4MB to 384MB.
 - A total of four 72-pin SIMM sockets and two 168-pin DIMM sockets.
 - Different banks can use different types of DRAM.
 - Parity check is not supported.
 - Support for Auto Detection of Memory Type.
1. *SIMMs*
 - Support both single and double sided 256K, 512K, 1M, 2M, 4M, 8M and 16M x32 SIMMs
 - Support symmetrical and asymmetrical type DRAM.
 - Support 5V Page Mode and Extended Data Output(EDO) DRAM types at 60ns or 70ns speeds
 - Support half populated bank(32-bit).

2. DIMMs

- Support both single and double sided 1M, 2M, 4M, 8M, 16M and 32Mx64 DIMMs.
- Support SDRAM or EDO DRAM types.
- Support 3.3V or 5V DRAM voltage by jumpers

On-Board I/O :

- Two enhanced IDE channels supporting up to four ATA, ATA2 and Ultra DMA-33 IDE devices including IDE HDDs, CD ROMs, ZIP drives and LS-120 drives as boot drive.
- Bus mastering Ultra DMA-33 IDE function enhances multitasking performance.
- One FDD connector supporting two 360KB, 720KB, 1.2MB or 1.44MB or 2.88MB FDD's.
- Two 16550 compatible UART serial ports.
- One ECP/EPP Bi-directional parallel port.
- One IrDA/ASKIR infrared interface.
- PS/2 mouse interface is provided by a 5-pin header.
- Factory option to have one standard AT keyboard port or one PS/2 keyboard port (not both).
- A 4x2 pins USB header for installation of USB cable assembly.
- One 8X2 pins header for VGA port connector.

Built-in VGA Controller :

1. Interface

- Support 32-bit PCI revision 2.1.
- support direct access to video memory to speed up GUI performance and the video playback frame rate.

2. Memory

- Shared System Memory Area 0.5MB, 1MB, 1.5MB, 2MB, 2.5MB, 3MB, 3.5MB, 4MB. User configurable in BIOS setup.

3. Graphic Acceleration

- Support **Turbo Queue** (Software Command Queue in off-screen memory) architecture to achieve extra-high performance.
- Built-in an enhanced 64-bit BITBLT graphics engine.
- Support Memory-mapped I/O.

4. Video Acceleration

- Support full motion video playback up to 1024x768 256 colors in 1MB DRAM configuration.
- Support graphics/video overlay function.
- Support YUV-to-RGB color space conversion.
- Support DCI and Direct Draw Drivers.
- Built-in 64x16 video capture FIFOs to support video capture.

5. Power Management

- Support VESA DPMS (Display Power Management Signaling) .
- Meet ACPI requirements.
- Support DDC1 and DDC2B specifications.

6. Others

- Follows the plug & play specification for display controller.
- Support virtual screen up to 2048X2048.

- Support high resolution graphic modes:
 - 640X480 16/256/32K/64K/16M colors NI
 - 800X600 16/256/32K/64K/16M colors NI
 - 1024X768 16/256/32K/64K/16M colors NI
 - 1280X1024 16/256 colors NI, 32K/64K colors interlace only

System BIOS :

- The BIOS is integrated in 1M flash EEPROM.
- 2M flash EEPROM is supported for future upgrade.
- Jumper selection for 5V or 12V EEPROM programming voltage.
- Support LBA hard disks with capacities up to 8.4GB.
- Support plug and play and power management (described in other sections).
- DMI support.
- Easy to upgrade BIOS by end-user.

Plug and Play :

- Support PnP specification 1.1.
- PC97-compliant.
- PnP for DOS, Windows 3.x as well as Windows 95.
- Full steerable PCI interrupts.

Power Management :

- Support SMM, APM and ACPI.
- Support auto display off and hard disk standby mode.
- Activity monitoring for non-APM power management.
- Support external suspend/resume push-button.
- Comply to the Energy Star “Green PC” program.
- Support Wake up to Modem Ring-in and Wake-on-LAN.
- Support ATX power supply via a transfer wire (Optional).
- Support Thermal Detection(Optional).

Expansion Slots :

- Three PCI slots, all supporting bus master PCI cards.
- Three ISA slots.

PC 97

- PC97 ready.

System monitoring (optional)

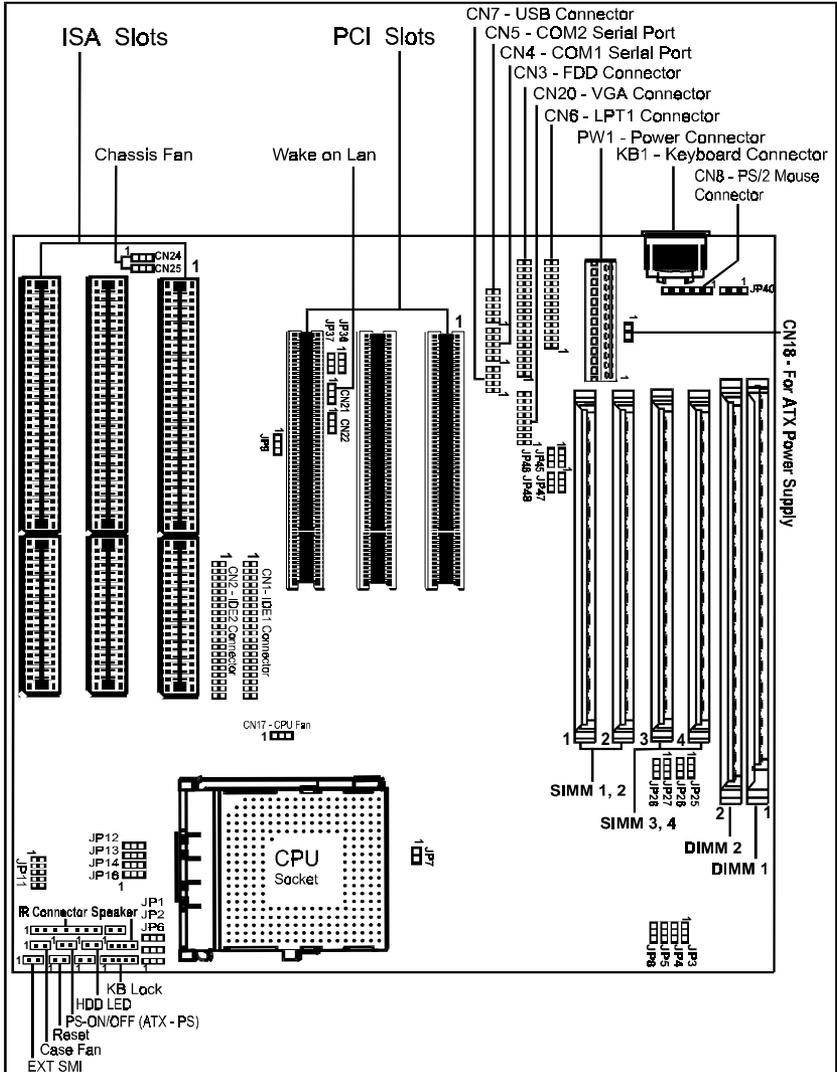
- LM79/75 hardware monitoring circuitry is supported, provides voltages, temperature, fan speeds etc. monitoring.

Other Performance Enhancements

- Support CPU address pipelining to speed up memory transactions.
- Allow burst memory read/write on CPU and PCI buses.
- Full transaction concurrency between CPU and PCI buses.
- Integrated post-write buffers and read-prefetch buffers at CPU/DRAM, CPU/PCI, PCI/DRAM interface.
- Support I²C serial bus.

Motherboard Layout (Model Code No. - 35881100)

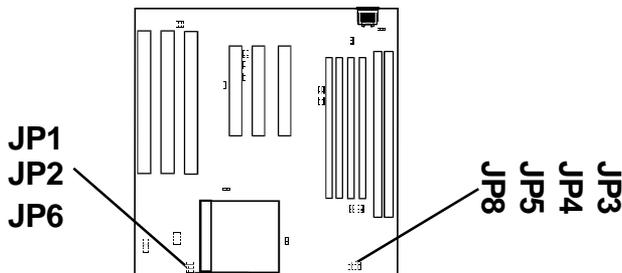
The following diagram shows the relative positions of the jumpers, connectors, major components and banks on the motherboard.



Jumper Settings

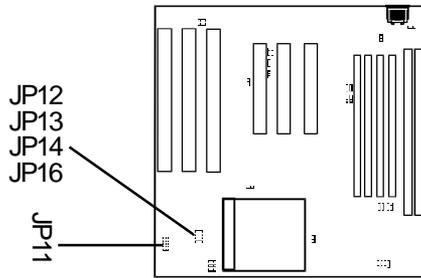
This section explains how to configure the motherboard's hardware. Before using your computer, make sure all jumpers and DRAM modules are set correctly. Refer to this chapter whenever in doubt.

JP1, JP2, JP3, JP4, JP5, JP6, JP8 - CPU Type Selection



CPU Type & Speed	CPU Bus Clock & Jumper				CPU Type Jumper		
		JP3	JP4	JP5	JP8	JP1	JP2
Intel Pentium-75	50MHz	2-3	2-3	2-3	1-2	1-2	1-2
Intel Pentium-90	60MHz	1-2	2-3	2-3	1-2	1-2	1-2
Intel Pentium-100	66MHz	2-3	1-2	2-3	1-2	1-2	1-2
Intel Pentium-120	60MHz	1-2	2-3	2-3	1-2	1-2	2-3
Intel Pentium-133	66MHz	2-3	1-2	2-3	1-2	1-2	2-3
Intel Pentium-150	60MHz	1-2	2-3	2-3	1-2	2-3	2-3
Intel Pentium-166*	66MHz	2-3*	1-2*	2-3*	1-2*	2-3*	2-3*
Intel Pentium-180	60MHz	1-2	2-3	2-3	1-2	2-3	1-2
Intel Pentium-200	66MHz	2-3	1-2	2-3	1-2	2-3	1-2
Intel Pentium-233	66MHz	2-3	1-2	2-3	1-2	1-2	1-2
Cyrix 6x86-P120+	50MHz	2-3	2-3	2-3	1-2	1-2	2-3
Cyrix 6x86-P133+	55MHz	2-3	2-3	1-2	1-2	1-2	2-3
Cyrix 6x86-P150+	60MHz	1-2	2-3	2-3	1-2	1-2	2-3
Cyrix 6x86-P166+	66MHz	2-3	1-2	2-3	1-2	1-2	2-3
Cyrix 6x86MX-PR166	60MHz	1-2	2-3	2-3	1-2	2-3	2-3
Cyrix 6x86MX-PR200	66MHz	2-3	1-2	2-3	1-2	2-3	2-3
Cyrix 6x86-P200+	50MHz	2-3	2-3	2-3	1-2	1-2	1-2
Cyrix 6x86-P200+	75MHz	1-2	2-3	1-2	2-3	1-2	2-3
AMD-K5-PR75	50MHz	2-3	2-3	2-3	1-2	1-2	1-2
AMD-K5-PR90	60MHz	1-2	2-3	2-3	1-2	1-2	1-2
AMD-K5-PR100	66MHz	2-3	1-2	2-3	1-2	1-2	1-2
AMD-K5-PR120	60MHz	1-2	2-3	2-3	1-2	1-2	1-2
AMD-K5-PR133	66MHz	2-3	1-2	2-3	1-2	1-2	1-2
AMD-K5-PR166	66MHz	2-3	1-2	2-3	1-2	2-3	2-3
AMD-K5-PR200	66MHz	2-3	1-2	2-3	1-2	2-3	1-2
AMD-K6-PR2-166	66MHz	2-3	1-2	2-3	1-2	2-3	2-3
AMD-K6-PR2-200	66MHz	2-3	1-2	2-3	1-2	2-3	1-2
AMD-K6-PR2-233	66MHz	2-3	1-2	2-3	1-2	1-2	1-2

- **JP6 is reserved for future AMD K6 processors. Simply leave JP6 OPEN for all existing Intel, Cyrix, AMD K5 and AMD K6 processors.**
- **This motherboard is compatible with Cyrix 6x86 CPU, which must be Revision 2.7 or newer. Please contact your CPU supplier for details on identification of Cyrix 6x86 CPU revisions**
- **This motherboard can be run with Cyrix 6x86-P200+ CPU specifications of all add on cards. If system does not behave reliably at 75MHz Bus Clock, you should set the Bus Clock to 50MHz (JP3 set "2-3", JP4 set "2-3", JP5 set "2-3").**
- **JP8 set "1-2" means Synchronous CPU Clock/PCI Clock. JP8 set "2-3" means ASynchronous CPU Clock/PCI Clock (always 32MHz).**
- *** = Default setting.**



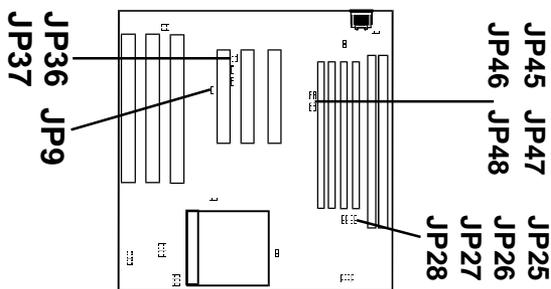
JP11, JP12, JP13, JP14, JP16 - Power Selection for the CPU Core Voltage, Bus Section and Bus Voltage

CoreVoltage JP11	BUS Section JP12, JP13, JP14	BUS Voltage JP16	CPU Examples
1 (1.8V)	2-3	2-3 (3.3V)	for further CPUs
1 (2.1V)	2-3	2-3 (3.3V)	AMD® K6 (266Mhz or above)
1 (2.5V)	2-3	2-3 (3.3V)	AMD K5 (“K” marking)
1 (2.7V)	2-3	2-3 (3.3V)	AMD K5 (“J” marking)
1 (2.8V)	2-3	1-2* (3.5V)	Intel® Pentium Processors with MMX Technology
1 (2.8V)	2-3	2-3 (3.3V)	Cyrix 6x86L (Core 2.8V I/O 3.3V)
1 (2.9V)	2-3	2-3 (3.3V)	IBM®, Cyrix® 6x86MX, AMD K5 (“H” marking)
1 (2.9V)	2-3	1-2* (3.5V)	AMD K6 PR2-166
1 (2.9V)	2-3	1-2* (3.5V)	AMD K6 PR2-200
1 (3.2V)	2-3	1-2* (3.5V)	AMD K6 PR2-233
1 (2.2V)	2-3	2-3 (3.3V)	AMD® K6 (266Mhz or above)
1 (3.3V)	1-2*	1-2* (3.5V)	AMD K5 (“B”, “C” or “F” marking)
1 (3.5V)	1-2*	1-2* (3.5V)	Intel P54C
1 (3.5V)	1-2*	1-2* (3.5V)	Cyrix 6x86

Remark: Example of AMD marking : “AMD-K5-PR100ABQ”

In the above tables, the AMD marking refers to the 2nd character - (B in the example) after P-rating (PR100 in the example).

Open Close



JP25, JP26, JP27, JP28 - DIMM Voltage Selection

DIMM 1 (JP25, JP26)	DIMM 2 (JP27, JP28)	DIMM Voltage
1-2*	1-2*	3.3V
2-3	2-3	5V

For maximum system reliability it is recommended that DIMMs of the same voltage are used for DIMM1 and DIMM2.

JP9 - CMOS Clear

JP9	CMOS
1-2*	Normal operation
2-3	Clear

JP36, JP37 - Reserved Jumpers

Reserved jumpers are pre-installed in the factory. They should NOT be altered by the users.

* = Default setting.

JP45, JP46, JP47 - VGA Port Select

Function	JP45	JP46	JP47
Enable VGA	2-3*	1-2*	1-2*
Disable VGA	1-2	2-3	2-3

Note: If you use your own add-on VGA Card, you should disable the built in VGA.

Memory Configuration

Table 1 and 2 show the possible memory combinations. The motherboard will support both Fast Page DRAM or EDO DRAM SIMMs and SDRAM DIMMs

Warning

Don't mix the Fast Page DRAM and EDO DRAM within the same memory bank. If Fast Page DRAM and EDO DRAM SIMMs are installed in separate banks, each bank will be optimized for maximum performance.

**Table 1
(SIMM Configurations)**

SIMM1 (Bank 0)	SIMM2 (Bank 0)	SIMM3 (Bank 2)	SIMM4 (Bank 2)	Total
4MB	4MB	Empty	Empty	8MB
8MB	8MB	Empty	Empty	16MB
16MB	16MB	Empty	Empty	32MB
32MB	32MB	Empty	Empty	64MB
64MB	64MB	Empty	Empty	128MB
4MB	4MB	4MB	4MB	16MB
4MB	4MB	8MB	8MB	24MB
4MB	4MB	16MB	16MB	40MB
4MB	4MB	32MB	32MB	72MB
4MB	4MB	64MB	64MB	136MB
8MB	8MB	4MB	4MB	24MB
8MB	8MB	8MB	8MB	32MB
8MB	8MB	16MB	16MB	48MB
8MB	8MB	32MB	32MB	80MB
8MB	8MB	64MB	64MB	144MB
16MB	16MB	4MB	4MB	40MB
16MB	16MB	8MB	8MB	48MB
16MB	16MB	16MB	16MB	64MB
16MB	16MB	32MB	32MB	96MB
16MB	16MB	64MB	64MB	160MB
32MB	32MB	4MB	4MB	72MB
32MB	32MB	8MB	8MB	80MB
32MB	32MB	16MB	16MB	96MB
32MB	32MB	32MB	32MB	128MB
32MB	32MB	64MB	64MB	192MB
64MB	64MB	4MB	4MB	136MB
64MB	64MB	8MB	8MB	144MB
64MB	64MB	16MB	16MB	160MB
64MB	64MB	32MB	32MB	192MB
64MB	64MB	64MB	64MB	256MB

**Table 2
(DIMM Configurations)**

DIMM1 (Bank 0)	DIMM2 (Bank 1)	Total
8MB	None	8MB
16MB	None	16MB
32MB	None	32MB
64MB	None	64MB
128MB	None	128MB
8MB	8MB	16MB
8MB	16MB	24MB
8MB	32MB	40MB
8MB	64MB	72MB
8MB	128MB	136MB
16MB	8MB	24MB
16MB	16MB	32MB
16MB	32MB	48MB
16MB	64MB	80MB
16MB	128MB	144MB
32MB	8MB	40MB
32MB	16MB	48MB
32MB	32MB	64MB
32MB	64MB	96MB
32MB	128MB	160MB
64MB	8MB	72MB
64MB	16MB	80MB
64MB	32MB	96MB
64MB	64MB	128MB
64MB	128MB	192MB
128MB	None	128MB
128MB	16MB	144MB
128MB	32MB	160MB
128MB	64MB	192MB
128MB	128MB	256MB

IMPORTANT : If using built in VGA, you should fill SIMM 1&2 or DIMM 1 Sockets first.

Installation

Installing a DRAM Module

To install a DRAM module,

- Determine the desired amount of memory and acquire the necessary DRAM modules.
- Note that a DRAM module has a polarity notch at one end so that it fits into a socket only one way. Hold the module by the edges. Do not touch the shiny contacts.
- Align the DRAM module edge connector with the slot at the center of the socket.
- Position the DRAM module to the left of the socket and press the DRAM module edge connector firmly into the socket.

If you have misaligned or only partially seated the module, remove the DRAM module gently and reinstall it.

Installing the Processor

For easy installation of the CPU, it is recommended that you remove all Cards in PCI slots first.

- Unpack the CPU and identify the pin 1 corner of the CPU.
- Match pin 1 of the CPU with pin 1 of the CPU socket. The pin 1 corner of the CPU socket is designated by a small triangle printed on the motherboard.
- Carefully insert the CPU into the CPU socket and move the metal arm downward to replace it in its original position. Change any jumper settings as detailed in the manual.

The small circle marked on the top of the CPU designates the pin 1 corner. If a heat sink is attached and covers the top of the CPU, identify the pin 1 corner by turning the CPU over. Locate the small gold finger that extends from one corner of the large central square portion of the CPU. The gold finger points towards pin 1, which is also uniquely identified by a square pad.

Positioning the CPU incorrectly in the socket can permanently damage the CPU and the computer when you turn on the system.

BIOS SETUP

This chapter discusses Award's Setup Program built into the ROM BIOS. The Setup Program allows users to modify the basic system configuration. This special information is then stored in battery-backed RAM, which retains the setup information when the power is turned off.

Starting Setup

The Award BIOS is immediately activated when you turn on the computer. The BIOS reads the system information contained in the CMOS and begins the process of checking out the system and configuring it. When it finishes, the BIOS will seek an operating system on one of the disks and then launch and turn control over to the operating system .

While the BIOS is in control, the Setup Program can be activated :

1. By pressing immediately after switching the system on, or
2. By pressing the key when the following message appears briefly at the bottom of the screen during the POST (Power On Self Test)

Press DEL to enter SETUP

If the message disappears before you can respond and you still wish to enter Setup, restart the system to try again by turning it OFF then ON or pressing the "RESET" button on the system case. You may also restart by simultaneously pressing the <Ctrl>, <Alt>, and <Delete> keys . If you do not press the keys at the correct time and the system does not reset, an error message will be displayed and you will again be asked to ...

PRESS F1 TO CONTINUE, DEL TO ENTER SETUP

Getting Help

Press F1 to pop up a small help window that describes the appropriate keys to use and the possible selections for the highlighted item. To exit the Help Window press <Esc> or the F1 key again.

In Case of Problems

If, after making and saving system changes with the Setup Program, you discover that your computer does not reset, use the Award BIOS defaults to override the CMOS settings.

Main Menu

Once you enter the Award BIOS CMOS Setup Utility, the Main Menu will appear on the screen. The Main Menu allows you to select from various 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.

ROM PCI/ISA BIOS
CMOS SETUP UTILITY
AWARD SOFTWARE, INC.

STANDARD CMOS SETUP BIOS FEATURES SETUP CHIPSET FEATURES SETUP POWER MANAGEMENT SETUP PNP/PCI CONFIGURATION SETUP LOAD BIOS DEFAULTS LOAD SETUP DEFAULTS	INTEGRATED PERIPHERALS SUPERVISOR PASSWORD USER PASSWORD IDE HDD AUTO DETECTION HDD LOW LEVEL FORMAT SAVE & EXIT SETUP EXIT WITHOUT SAVING
Esc : Quit F10 : Save & Exit Setup	↑↓→← : Select Item (Shift) F2 : Change Color
Time. Date. Hard Disk Type	

(Note : The figures of BIOS Setup Menu included here only show a typical case, and may not be exactly the same as the one on your unit.)

Note that a brief description of each highlighted item will appear at the bottom of the screen.

Standard CMOS Setup This setup page includes all the items of Award™ special standard features.

BIOS Features Setup This setup page includes all the items of Award special enhanced features.

Chipset Features Setup This setup page includes all the items of chipset special features.

Power Management Setup This entry only appears if your system supports Power Management "Green PC" standards.

PNP / PCI Configuration Setup This entry appears if your system supports PNP/PCI.

Load BIOS Defaults The BIOS defaults have been set by the manufacturer and represent settings which provide the minimum requirements for your system to operate.

Load Setup Defaults The chipset defaults are settings which provide for maximum system performance. While Award has designed the custom BIOS to maximize performance, the manufacturer has the right to change these defaults to meet its needs.

Integrated Peripherals This section page includes all the items of IDE hard drive and Programmed Input / Output features.

Supervisor / User Password Setting Changes, sets, or disables password. It allows you to limit access to the system and the Setup Program.

IDE HDD Auto Detection Automatically detects and configures the hard disk parameters. The Award BIOS includes this ability in the event you are uncertain of your hard disk's parameters.

HDD Low Level Format If supported by your system, this provides a hard disk low level format utility.

Save & Exit Setup Saves value changes to CMOS and exits setup.

Exit Without Save Abandons all CMOS value changes and exits setup.

Standard CMOS Setup

The items in Standard CMOS Setup Menu are divided into 10 categories. Each category includes, one or more setup items. Use the arrow keys to highlight the item and then use the <PgUp> or <PgDn> key to select the desired value in each item.

ROM PCI/ISA BIOS
STANDARD CMOS SETUP
AWARD SOFTWARE, INC.

Date (mm:dd:yy) : Mon, 01 Jan 1990							
Time (hh:mm:ss) : 00:00:00							
HARD DISKS	TYPE	SIZE	CYLS.	HEADS	PRECOMPLANDZ	SECTORS	Mode
Primary Master	: None	0	0	0	0	0	---
Primary Slave	: None	0	0	0	0	0	---
Secondary Master	: None	0	0	0	0	0	---
Secondary Slave	: None	0	0	0	0	0	---
Drive A :	1.2M, 5.25"				Base Memory :	640K	
Drive B :	None				Extended Memory :	15360K	
Video :	EGA/VGA				Other Memory :	384K	
Halt on :	No Errors				Total Memory :	16384K	
Esc : Quit	↑↓←: Select Item			PU/PD+/- : Modify			
F1 : Help	(Shift) F2 : Change Color						

(Note : The figures of BIOS Setup Menu included here only show a typical case, and may not be exactly the same as the one on your unit.)

Date The date format is <day-of-the-week>. <day> <month> <year>. Press <F3> to display the calendar.

Time The time format is <hour> <Minute> <second> displayed in 24-hour military-time clock. For example, 1 p. m. is displayed as 13:00:00.

Primary Master/Primary Slave/Secondary Master/Secondary Slave These categories identify the types of the two channels that have been installed in the computer. There are 45 predefined types and four user definable types are BIOS. Type 1 to Type 45 are predefined. Type "user" is user-definable.

Press PgUp or PgDn to select a numbered hard disk type or type the number and press <Enter>. Note that the specifications of your drive must match with those of the drive table. The hard disk will not work properly if your enter improper information for this category. If your hard disk drive type is not matched or listed, you can select Type "User" to define your own drive type manually.

If you select Type "User", you will need to know the information listed below. Enter the information directly from the keyboard and press <Enter>. This information should be included in the documentation from your hard disk vendor or the system manufacturer.

If the controller of the HDD interface is ESDI, the selection shall be "Type1".

If the controller of the HDD interface is SCSI, the selection shall be "None".

If you select Type "Auto", the BIOS will auto-detect the HDD and CD-ROM drive at the POST stage and show the IDE for the HDD and CD-ROM drive.

TYPE	-Drive type
CYLS	-Number of cylinders
HEADS	-Number of heads
PRECOMP	-Write precom
LANDZONE	-Landing zone
SECTORS	-Number of sectors
MODE	-Mode type

If a hard disk has not been installed, select, NONE and press <Enter> .

Drive A Type /

Drive B Type

Video

This category identifies the types of floppy disk drive A or drive B that has been installed in the computer.

This category selects the type of video adapter used for the primary system monitor. Although secondary monitors are supported, you do not have to select them in Setup.

BIOS Features Setup

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.

Chipset Features Setup

The Chipset Features Setup option is used to change the values of the chipset registers. These registers control most of the system options in the computer.

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 must be stated that these items should not be altered. The default settings have been chosen because they provide the best operating conditions for your system.

Integrated Peripherals

The Integrate Peripherals Setup allows the user to configure the onboard IDE controller, floppy disk controller, the printer port and the serial ports.

Supervisor/User Password Setting

You can set either supervisor or user password, or both of them. The differences between are:

Supervisor Password : You can enter the Setup Program and change the options of the setup menus.

User Password : You can enter the Setup Program but cannot change the options of the setup menus.

When you select this function, the following message will appear at the center of the screen to assist you in creating a password.

ENTER PASSWORD:

Type the password, up to eight characters in length, and press<Enter>. The new password will clear the previously entered password from the 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 and operate without a password.

To disable a password, just press <Enter> when you are prompted to enter the password. A message will be displayed to confirm that the password is disabled.

PASSWORD DISABLED.

Once the password is disabled, the system will reset and you can enter the Setup Program freely.

When a password is enabled, you will be prompted to enter it every time you try to enter setup. This prevents an unauthorized person from changing any setting of your system configuration.

In addition, when a password is enabled, you can require the BIOS to request a password every time your system is rebooted. This would further prevent unauthorized use of your computer.

The password requirement is defined by the Security Option of the BIOS Features Setup Menu. If the Security Option is set to "System", the password will be required both at resetting and at entering setup. If the option is set to "Setup", the prompt only appears when you try to enter setup.

Power Management Setup

The Power Management Setup Menu allows you to configure you system save most energy while operating in a manner consistent with your own style of computer use.

PNP/PCI Configuration Setup

This section describes how to configure the PCI bus system. This section covers some very technical items and it is recommended that only experienced users should make any changes to the default settings.

Flash Update Procedure

A program AWDFLASH.EXE is included in the utility diskette. The user is recommended to follow the procedure below to update the flash BIOS.

1. Create a DOS-bootable floppy diskette. Copy the new BIOS file (just obtained or downloaded) and the utility program AWDFLASH.EXE to the diskette.
2. Allow the PC system to boot from the DOS diskette.
3. At the DOS prompt, key in

AWDFLASH

and hit <ENTER>

4. Enter the file name of the new BIOS.
5. The question: "Do you want to save file?" is displayed.

Key in "N" if there is no need to save the existing BIOS content..

Key in "Y" if a backup copy of the existing BIOS is needed.

(A file name has to be assigned to the existing BIOS binary file.)

6. The question : "Are you sure to program?" is displayed.

Key in "Y"

7. Wait until the flash-update is completed.
8. Power down the PC system.
9. Restart the PC.