

CFI-S76

User's Manual Version 1.0

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Chapter

1

1.1 Introduction

The CFI-S76 motherboard is designed for using AMD Athlon and Duron Front Side Bus Frequency 200/266MHz CPU, which utilize the Socket-462 design and the memory size expandable to 2.0GB.

This motherboard use the latest SiS 740 IGUI chipset, applying 266MHz (Double Data Rate) Front Side Bus frequency and 266MHz memory interface delivers a clear upgrade path to the future generation of 266MHz processors, PC-1600/PC-2100 DDR DRAM. The CFI-S76 motherboard offers ULTRA ATA 100 to provide speedier HDD throughout that boosts overall system performance.

It is ideal for multi-tasking and fully supporting MS-DOS, Windows98, Windows ME, Windows XP, Windows 2000. This manual also explains how to install the mainboard for operation, and how to setup your CMOS configuration with the BIOS setup program.

1.2 Package Contents

- Flash Memory written for BIOS update.
- Fully Setup CD Driver built in utility.
- Manual.

1.3 Features

CPU Processor

- Support AMD Athlon™ 700MHz~Athlon XP 2100+ processor with 200/266MHz FSB.
- Support AMD Duron™ 600MHz~1.1GHz processor with 200MHz FSB.
- Support for AMD Athlon™XP Polamino processors.

Chipset

- SiS 740 IGUI North Bridge.
- SiS 961 MuTIOL Media I/O South Bridge.

DIMM SDRAM Memory

- Supports 64/128/256/512....MB DDR module socket.
- Supports Synchronous DRAM(2.5V)
- Supports a maximum memory size of 2GB with DDR SDRAM.

Bus Slots

- One 32-bit PCI bus.

Universal Serial Bus 2.0 Controller

- Supports two back Universal Serial Bus(USB)Ports and two front Universal serial Bus(USB)Ports.
- Compliant with Universal Serial Bus(USB) specification revision 1.1 & 2.0.
- S1 & S3 green mode wake up only supported by USB1/2.

TV-OUT

- Support PAL/NTSC system.
- Support composite, S-Video & Component R/G/B output signal.

1.3 Features

Fast Ethernet Controller

- Fast Ethernet Controller 10/100 Mbps.
- IEEE 802.3/802.3u compliant.

1394a OHCI Link Layer Controller

- Embedded 1394 link core with 32 bit CRC generator & checker for receive and transmit data.
- Compliant with 1394 open HCI specifications V1.0&V1.1.
- Compliant with PCI specification V2.2.
- Integrated 400 Mbit 3-Pro PHY.
- Fully Interoperable with IEEE Std 1394-1995 devices.

IDE Built-in On Board

- Supports four IDE devices.
- Supports PIO Mode 5, Master Mode, high performance hard disk drives.
- Support Ultra DMA 33/66/100 Bus Master Mode.
- Supports IDE interface with CD-ROM.
- Supports high capacity hard disk drives.
- Support LBA mode.

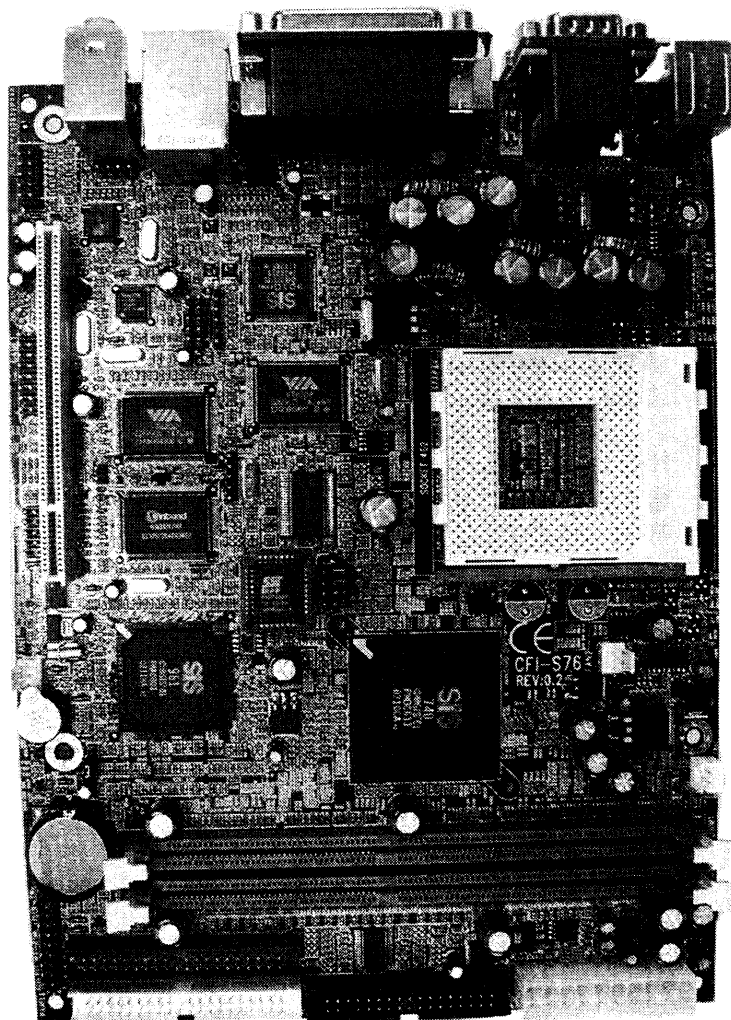
AC 97 Digital Audio Processor

- AC 97 2.2 interface.
- 6 channel slot selectable DAC output for multi-channel application.
- 3D Stereo enhancement.

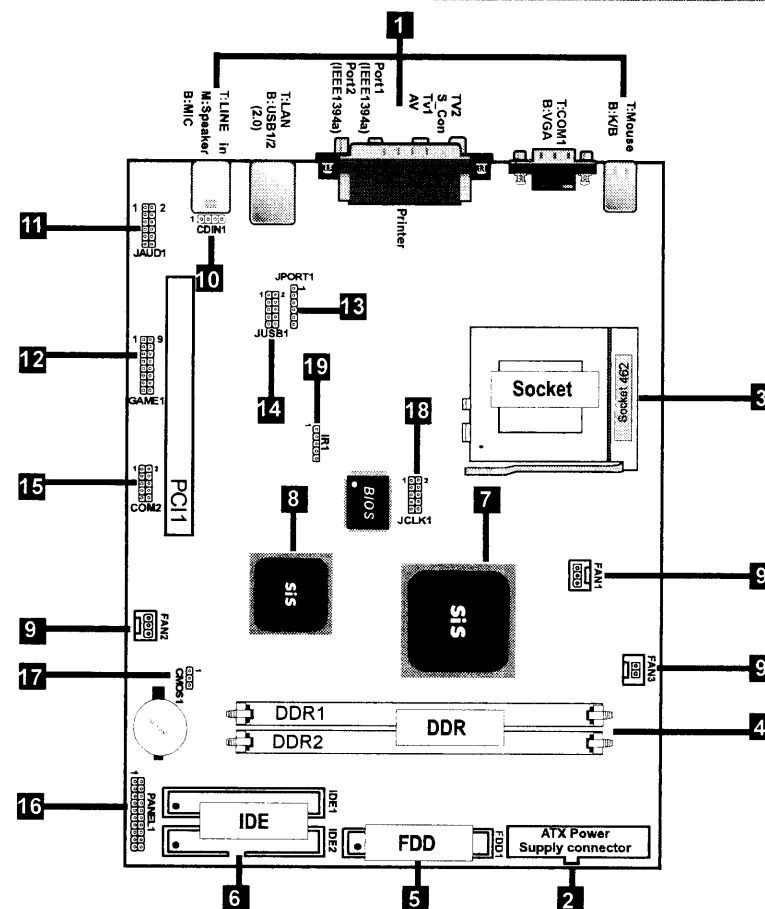
BIOS

- Support 2MB flash memory.
- Support ESCD Function.

1.4 CFI-S76 Motherboard Layout



1.4 CFI-S76 Layout



1. Back Panel I/O Connectors (Mouse, Keyboard, USB1, COM1, VGA, LAN, TV1, TV2, PORT1, PORT2, Printer, MIC in, Line in, Speaker out)
2. ATX Power Connectors (ATX)
3. CPU Processor (Socket 462)

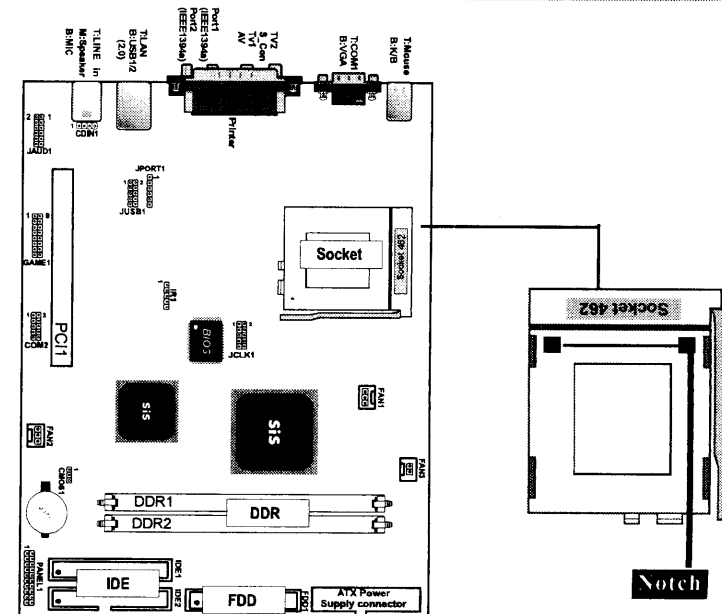
4. **DDR SDRAM Sockets (DIMM1/DIMM2)**
5. **Floppy Connector**
6. **IDE Connectors (IDE1/IDE2)**
7. **North Bridge (SiS 740 IGUI)**
8. **South Bridge (SiS 961)**
9. **Fan Connectors (FAN1/FAN2/FAN3)**
10. **CD Audio-In Connector (CDIN1)**
11. **Line-Out/Line-In/MIC header for Front Panel (JAUD1)**
12. **GAME/MIDI header for Front Panel (GAME1)**
13. **IEEE 1394a header for Front Panel (JPORT1)**
14. **Front USB 2.0 Port Connector (JUSB1)**
15. **Front COM2 Port Connector (COM2)**
16. **Front Panel Connector (PANEL1)**
17. **CMOS Function Selection (CMOS1)**
18. **CPU Clock Freq. Setting (JCLK1)**
19. **IR Connector (IR1)**

1.5 CPU Installtion

The motherboard operates with Socket 462 for AMD Athlon™ and Duron™ processor. The CPU should always have a Heat Sink and cooling fan attached to prevent overheating.

CPU Installation Procedures: Socket 462

1. Pull the lever sideways away from the socket then raise the lever to a 90-degree angle.
2. Locate Pin 1 in the socket and look for the white dot or cut edge in the CPU. Match Pin 1 with the white dot/cut edge then insert the CPU.
3. Press the lever down to complete the installation.
4. **Make sure the spec of the cooling fan is good enough.**
5. **Please lock the fan on CPU very carefully, or you will damage the resistor array even circuit line on the mainboard.**



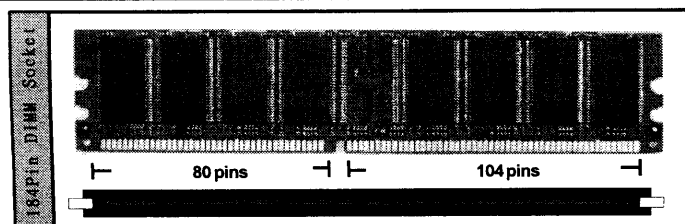
1.6 DDR SDRAM Installtion

The motherboard supports a maximized 2GB memory. It provides three 184-pin unbuffered DDR sockets. It supports 64MB to 1GB DDR memory module.

DDR SDRAM Installation Procedures:

1. The DDR socket has a "Plastic Safety Tab" and the DDR memory module has an asymmetrical notch", so the DDR memory module can only fit into the slot in one direction.
2. Push the tabs out. Insert the DDR memory modules into the socket at a 90-degree angle then push down vertically to fit onto place.
3. The Mounting Holes and plastic tabs should fit over the edge and hold the DDR memory modules in place.

Bank	Memory module
DDR 1	64MB, 128MB, 256MB, 512MB, 1GB
(Bank 0-1)	184 pin, 2.5V DDR SDRAM
DDR 2	64MB, 128MB, 256MB, 512MB, 1GB
(Bank 2-3)	184 pin , 2.5V DDR SDRAM
	Total System Memory (Max 2GB)



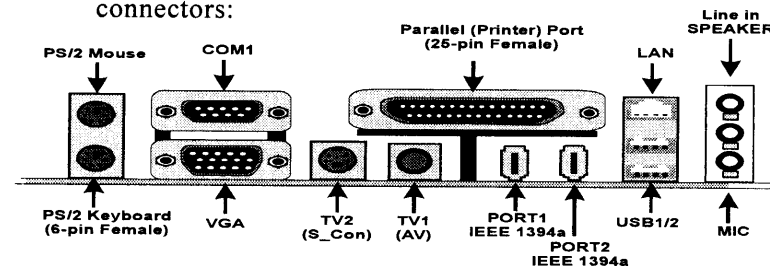
Note:

When you plug or unplug DDR module, you must check your power supply is OFF.

1.7 Connectors & Jumpers Setting

1.7.1 Back Panel I/O Connectors

The motherboard provides the following back panel connectors:



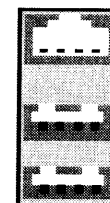
1.7.1.1 PS/2 Mouse / Keyboard CONN.

The motherboard provides a standard PS/2 mouse / Keyboard mini DIN connector for attaching a PS/2 mouse. You can plug a PS/2 mouse / Keyboard directly into this connector.

1.7.1.2 USB / LAN Port Connectors: USB1/2 & LAN

- The motherboard provides a OHCI(Universal Host Controller Interface) & EHCI (Enhance Host Controller Interface)Universal Serial Bus Roots for attaching USB devices such as a keyboard, mouse and other USB devices.
- The RJ-45 connector is located on top of the USB connectors. The connector allows the motherboard to connect to a Local Area Network (LAN) through a network hub .

RJ-45



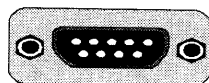
1 2 3 4
USB1/2

RJ-45	10/100M LAN Port
Pin	Signal
1	+5V_SB
2	USBP0-(USBP1-)
3	USBP0+(USBP1+)
4	GND

1.7.1.3 Serial Interface Port: COM1

The serial interface port is sometimes referred to as an RS-232 port or an asynchronous communication port. Mice, printers, modems and other peripheral devices can be connected to a serial port. The serial port can also be used to connect your computer system. If you like to transfer the contents of your hard disk to another system, it can be accomplished by serial port.

COM1



1.7.1.4 VGA Interface Connector: VGA(15 Pin)

This connector is for output to VGA-compatible devices.

VGA



1.7.1.5 Parallel Interface Port

Unlike serial ports, parallel interface ports have been standardized and should not present any difficulty interfacing peripherals to your system. Sometimes called a Centronics port, the parallel port is almost exclusively used with printers. The parallel port on your system has a 25-pin, DB 25 connector.

1.7.1.6 TV Connectors: TV1/2

You can connect a AV port or S_con port to these connector.

1.7.1.7 IEEE 1394a Connectors: Port1/2

Compliant with 1394 open HCI specifications V1.0&V1.1.

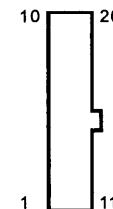
1.7.1.8 Audio Port Connectors

Speaker out is a connector for Speakers or Headphones. Line in is used for external CD player, Tape player, or other audio devices. Mic is a connector for the microphones.

1.7.2 ATX Power Connectors: ATX

This connector supports the power button on-board. Using the ATX power supply, functions such as Modem Ring Wake-Up and Soft Power Off are supported on this motherboard. This power connector supports instant power-on functionality, which means that the system will boot up instantly when the power connector is inserted on the board.

Pin ATX	Signal	Pin ATX	Signal
1	3.3V	11	3.3V
2	3.3V	12	-12V
3	GND	13	GND
4	5V	14	PS-ON
5	GND	15	GND
6	5V	16	GND
7	GND	17	GND
8	PW-OK	18	-5V
9	5V_SB	19	5V
10	12V	20	5V



Note:

1. Make sure that the ATX PIII power supply can take at least 1Amp load on the 5Volt standby lead (5VSB).

1.7.3 Floppy Disk Connector: FDD

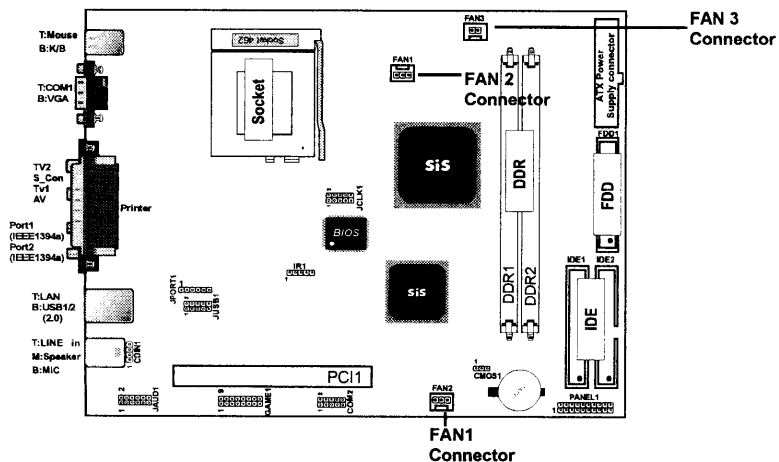
This connector supports the provided floppy drive ribbon cable. After connecting the single end to the board, connect the two plugs on the other end to the floppy drives.

1.7.4 Hard Disk Connectors: IDE1/IDE2

These connectors support the provided IDE hard disk ribbon cable. After connecting the single end to the board, connect the two plugs at the other end to your hard disk.

If you install two hard disks, you must configure the second drive to Slave mode by setting its jumper settings. BIOS now supports SCSI device or IDE CD-ROM boot up (see "HDD Sequence SCSI/IDE First" & "Boot Sequence" in the BIOS Features Setup of the BIOS SOFTWARE) (Pin 20 is removed to prevent inserting in the wrong orientation when using ribbon cables with pin 20 plugged).

1.7.5 Fan Connectors: FAN1/FAN2/FAN3



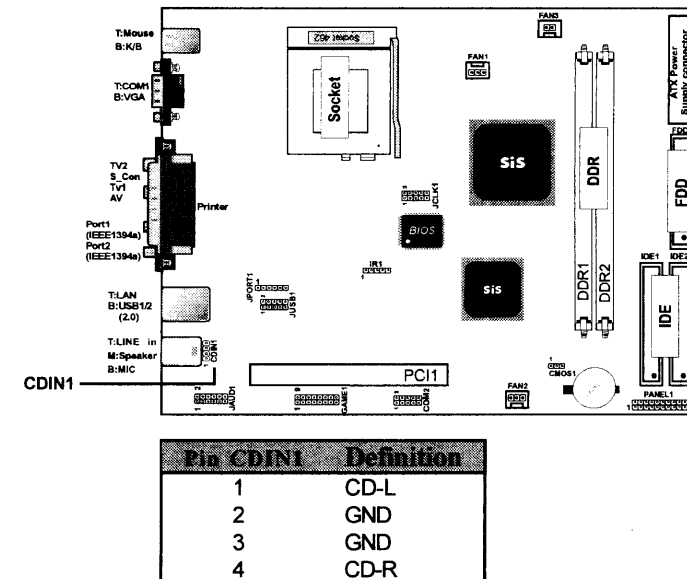
Pin Fan1/2	Definition
1	Ground
2	+12VDC
3	Signal

Pin Fan3	Definition
1	+12VDC
2	Ground

These connectors support cooling fans of 1Amp or less. Orientate the fans so that the heatsink fins allow airflow to go across the onboard heat sink(s) instead of the expansion slots. Depending on the fan manufacturer, the wiring and plug may be different. The red wire should be positive, while the black should be ground. Connect the fan's plug to the board taking into consideration the polarity of the this connector.

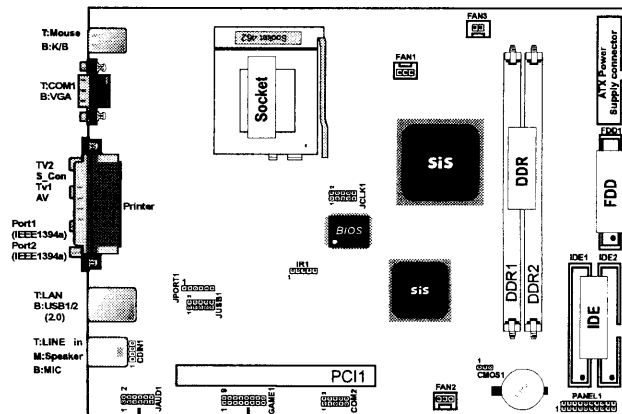
1.7.6 CD Audio-In Connector: CDIN1

CDIN1 is the connectors for CD-Audio Input signal. Please connect it to CD-ROM CD-Audio output connector.



Pin CDIN1	Definition
1	CD-L
2	GND
3	GND
4	CD-R

1.7.7 Line-Out/Line-In/MIC Connector: JAUD1

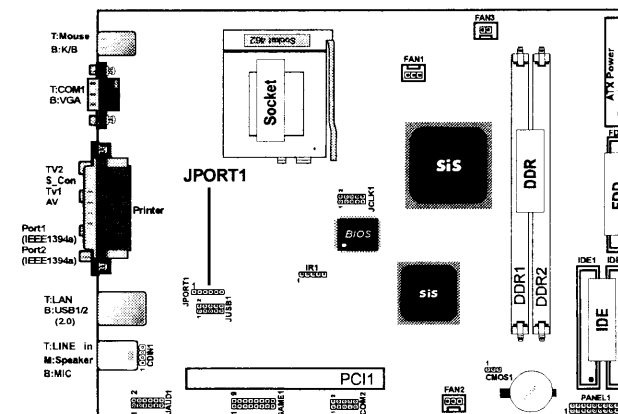


JAUD1				GAME1			
OUT_L	1	OUT_R	2	+5V	1	JBY	9
GND	3	GND	4	+5V	2	GND	10
MIC-in1	5	MIC-in2	6	JBB1	3	JBB2	11
GND	7	GND	8	JAB1	4	JAY	12
Line_L	9	Line_R	10	JBX	5	MIDI-in	13
GND	11	GND	12	JAX	6	JAB2	14
				MIDI-Out	7	+5V	15
				GND	8	+5V	16

1.7.8 GAME/MIDI Connector: GAME1

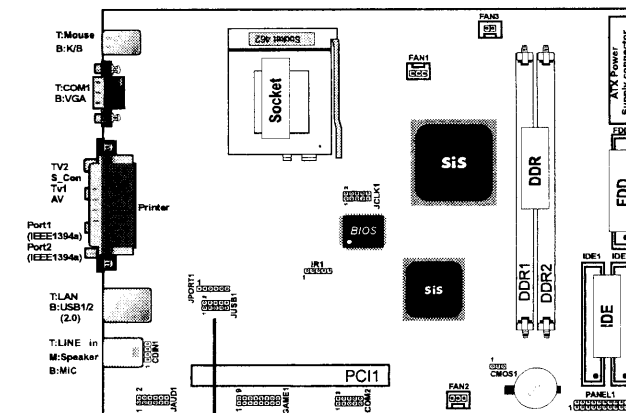
You can connect a joystick or game pad to this connector.

1.7.9 IEEE 1394a Connector: JPORT1



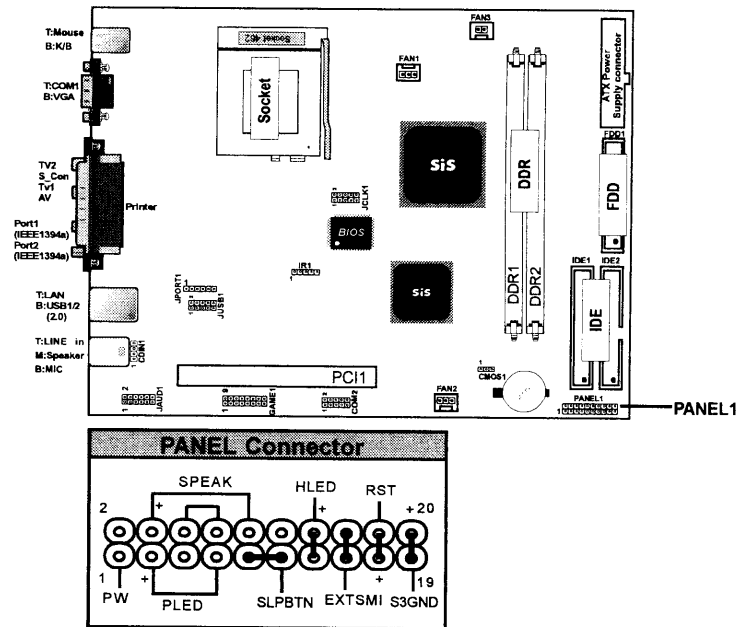
Pin	Assignment
1	+12V
2	GND
3	XTPB2M
4	XTPB2P
5	XTPA2M
6	XTPA2P

1.7.10 Front USB 2.0 Port Connector: JUSB1



VCC	1	GND	2
P3-	3	GND	4
P3+	5	P4+	6
GND	7	P4-	8
GND	9	VCC	10

1.7.11 Front Panel Connector: PANEL1



ATX Power Switch (PW)

The system power is controlled by a momentary switch connected to this lead. Pushing the button once will switch the system ON.

Power LED Lead (PLED)

The system power LED lights when the system power is on.

Speaker Connector (SPEAK)

The speaker (onboard or offboard) provides error beep code information during the Power Self-Test when the computer cannot use the video interface. The speaker is not connected to the audio subsystem and does not receive output from the audio subsystem.

S3_LED Lead (S3_LED)

The system S3_LED lights when the system suspend is on the S3 mode.

Hard Drive LED Connector (HLED)

This connector supplies power to the cabinet IDE activity LED. Read and write activity by devices connected to the Primary or Secondary IDE connectors will cause the LED to light up.

SMI Suspend Switch Lead (EXTSMI) (Disabled)

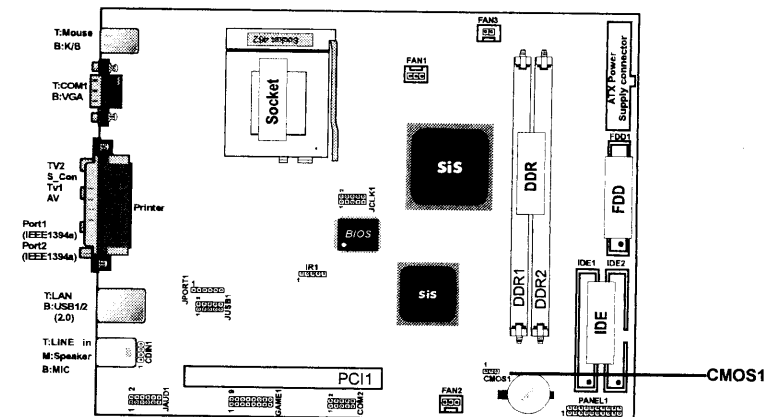
This allows the user to manually place the system into a suspend mode of Green mode. System activity will be instantly decreased to save electricity and expand the life of certain components when the system is not in use. This 2-pin connector (see the figure) connects to the case-mounted suspend switch. If you do not have a switch for the connector, you may use the "Turbo Switch" instead since it does not have a function. If you want to use this connector, the "Suspend Switch" in the Power Management Setup of the BIOS SOFTWARE section should be on the default setting of Enable.

Reset Switch Lead (RST)

The connector can be connected to a momentary SPST type switch that is normally open. When the switch is closed, the motherboard resets and runs the POST.

1.7.12 CMOS Function Selection: CMOS1



A battery be used to retain the mainboard configuration in CMOS RAM.



NOTE:

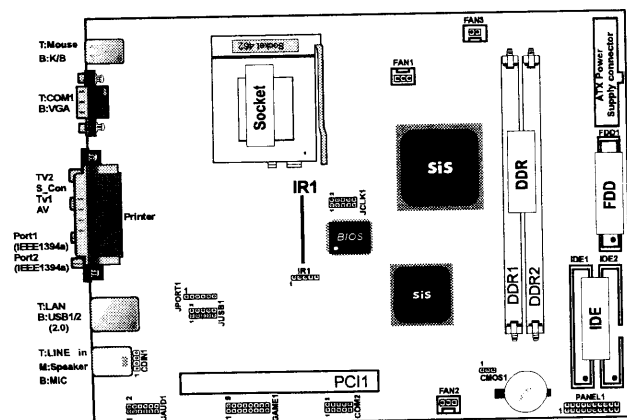
(Please follow the procedure below to clear CMOS data.)

- (1) Remove the AC power line.
- (2) CMOS1(1-2) Closed.
- (3) Wait five seconds.
- (4) CMOS1(2-3) Closed.
- (5) AC Power on.
- (6) Reset your desired password or clear CMOS data.

Pin CMOS1	Definition
1-2 	Clear CMOS
2-3 	Normal (Default)

1.7.13 IR infrared module: IR

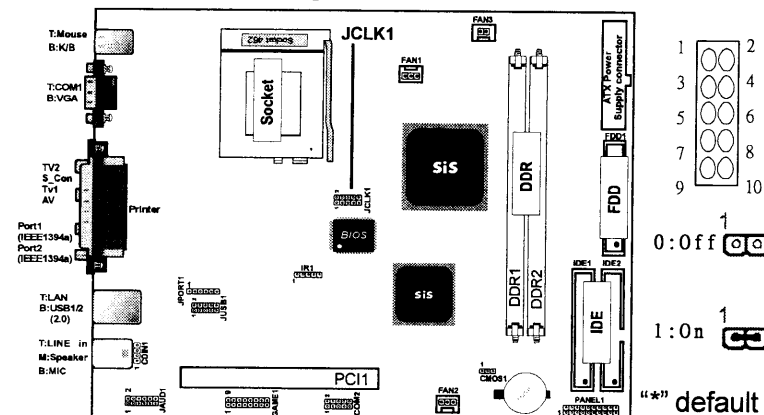
This connector supports the optional wireless transmitting and receiving infrared module. You must configure the setting through the BIOS setup to use the IR function.



Pin	Assignment
1	+5V
2	NC
3	IRRX
4	GND
5	IRTX

1.7.14 CPU Clock Frequency Setting: JCLK1

Overclocking is operating a CPU/Processor beyond its specified frequency. JCLK1 jumper is used for the CPU Front Side Bus Frequencies from 100MHz to 133MHz.



SiS 740 CLK(MHz)							AGPCLK(MHz)	
1-2	3-4	5-6	7-8	CPU	SDRAM	PCI	9-10=0	9-10=1
0	0	0	0	66.6	66.6	33.3	66.6	50
*1	*0	*0	*0	100	100	33.3	*66.6	55.6
0	1	0	0	166	166	31.3	62.5	55.6
1	1	0	0	133	133	33.3	66.6	50
0	0	1	0	66.6	100	33.3	66.6	50
1	0	1	0	100	66.6	33.3	66.6	50
0	1	1	0	100	133	33.3	66.6	50
1	1	1	0	133	100	33.3	66.6	50
0	0	0	1	112	112	33.6	67.2	56
1	0	0	1	124	124	31	62	46.5
0	1	0	1	138	138	34.5	69	51.8
1	1	0	1	150	150	30	60	50
0	0	1	1	66.6	133	33.3	66.6	50
1	0	1	1	133	150	30	60	50
0	1	1	1	150	100	30	60	50
1	1	1	1	160	120	30	60	48

Chapter

2

Introduction

This chapter discusses the Award Setup program built into the ROM BIOS. The Setup program allows the user to modify the basic system configuration. This special information is then stored in battery-backed RAM so that it retains the setup information when the power is turned off.

The Award BIOS installed in your computer system's ROM (Read Only Memory) is a custom version of an industry standard BIOS. This means that it supports AMD Athlon™ and Duron™ Processor. The BIOS provides critical low-level support for standard devices such as disk drives and serial and parallel ports.

The rest of this manual is intended to guide you through the process of configuring your system using Setup.

Plug and Play Support

This AWARD BIOS supports the Plug and Play Version 1.0A specification. ESCD(Extended System Configuration Data)write is supported.

EPA Green PC Support

This AWARD BIOS supports Version 1.03 of the EPA Green PC specification.

PCI Bus Support

This AWARD BIOS also supports Version 2.1 of the Intel PCI (Peripheral Component Interconnect) local bus specification.

APM Support

This AWARD BIOS supports Version 1.1&1.2 of the Advanced Power Management(APM) specification. Power management features are implemented via the System Management Interrupt(SMI). Sleep and Suspend power management modes are supported. Power to the hard disk drives and video monitors can be managed by this AWARD BIOS.

SDRAM Support

DDR SDRAM (Synchronous DRAM) are supported.

Support CPU

This AWARD BIOS supports the AMD Athlon™ and Duron™ Processor.

Using Setup

In general, you use the arrow keys to highlight items, press <Enter> to select, use the <PgUp> and <PgDn> keys to change entries, press <F1> for help and press <Esc> to quit. The following table provides more detail about how to navigate in the Setup program by using the keyboard.

Note:

(BIOS version 1.0 is for reference only. If there is a change in BIOS version, please use the actual version on the BIOS.)

Keystroke	Function
Up arrow	Move to previous item
Down arrow	Move to next item
Left arrow	Move to the item on the left(menu bar)
Right arrow	Move to the item on the right(menu bar)
Esc	Main Menu: Quit without saving changes Submenus: Exit Current page to the next higher level menu
Move Enter	Move to item you desired
PgUp key	Increase the numeric value or make changes
PgDn key	Decrease the numeric value or make changes
+Key	Increase the numeric value or make changes
-Key	Decrease the numeric value or make changes
Esc Key	Main menu-Quit and not save changes into CMOS Status Page Setup Menu and option Page Setup Menu-Exit Current page and return to Main Menu
F1 Key	General help on Setup navigation keys.
F5 Key	Load previous values from CMOS
F6 Key	Load the fail-safe defaults from BIOS default table
F7 Key	Load the optimized defaults
F10 Key	Save all the CMOS changes and exit

2.1 Main Menu

Once you enter AWARD BIOS CMOS Set up Utility, the Main Menu will appear on the screen. The Main Menu allows you to select from several setup function. Use the arrow keys to select among the items and press<Enter> to accept and enter the sub-menu.

"WARNING"

The information about BIOS defaults on manual (Figure 1,2,3,4,5,6,7,8,9,10,11,12,13,14) is just for reference, please refer to the BIOS installed on the board for updated information.

© Figure 1. Main Menu

CMOS Setup Utility-Copyright (C) 1984-2002 Award Software

Standard CMOS Features	Frequency/Voltage Control
Advanced BIOS Features	Load Fail-Safe Defaults
Advanced Chipset Features	Load Optimized Defaults
Integrated Peripherals	Set User Password
Power Management Setup	Save & Exit Setup
PNP/PCI Configurations	Exit Without Saving
PC Health Status	
Esc : Quit F9 : Menu in BIOS ←→↑↓: Select Item	
F10 : Save & Exit Setup	
Time , Date , Hard Disk Type ...	

Standard CMOS Features

This setup page includes all the items in standard compatible BIOS.

Advanced BIOS Features

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

Advanced Chipset Features

This setup page includes all the items of the Chipset special enhanced features.

Integrated Peripherals

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

Power Management Setup

This setup page includes all the items of the power management features.

PnP/PCI Configurations

This setup page includes the user defined or default IRQ Setting.

PC Health Status

This page shows the hardware Monitor information of the system.

Frequency / Voltage Control

This setup page controls the CPU's clock and frequency ratio.

Load Fail-Safe Defaults

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

Load Optimized Defaults

These settings are more likely to configure a workable computer when something is wrong. If you cannot boot the computer successfully, select the BIOS Setup options and try to diagnose the problem after the computer boots. These settings do not provide optional performance.

Set User Password

You can specify both a User and a Supervisor password. When you select either password option, you are prompted for a 1-6 character password. Enter the password and then retype the password when prompted.

Save & Exit Setup

Save CMOS value changes to CMOS and exit setup.

Exit Without Saving

Abandon all CMOS value changes and exit setup.

2.2 Standard CMOS Features

This item in the Standard CMOS Setup Menu is divided into 10 categories. Each category includes no, 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.

© Figure 2. Standard CMOS Features

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Standard CMOS Features

Date(mm:dd:yy)	Tue,Jun 6 2002	Item Help
Time (hh:mm:ss)	11:26:10	Menu Level
IDE Primary Master	None	Change the day, month, year and century.
IDE Primary Slave		
IDE Secondary Master		
IDE Secondary Master	None	
Drive A	1.44M,3.5 in	
Drive B	None	
Video	EGA/VGA	
Halt On	All, But Keyboard	
Base Memory	640K	
Extended Memory	65472K	
Total	1024K	

←→↑↓: Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit
F1:General Help F5:Previous Values F6:Fail-Safe Defaults
F7:Optimized Defaults

Main Menu Selections

This table shows the selections that you can make on the Main Menu.

Item	Options	Description
Date	Month DD YYYY	Set the system,date. Note that the 'Day' automatically changes when you set the data.
IDE Primary Master	Options are in its sub menu.	Press<Enter> to enter the sub menu of detailed.
IDE Primary Slave	Options are in its sub menu.	Press<Enter> to enter the sub menu of detailed.
IDE Secondary Master	Options are in its sub menu.	Press<Enter> to enter the sub menu of detailed.
IDE Secondary Slave	Options are in its sub menu.	Press<Enter> to enter the sub menu of detailed.
Drive A	None	Select the type of floppy disk drive installed in your system.
Drive B	360K,5.25in	
	1.2M,5.25in	
	720K,3.5in	
	1.44M,3.5in	
	2.88M,3.5in	
Video	EGA/VGA CGA 40 CGA 80 MONO	Select the default video device.

Item	Options	Description
Halt On	All Errors No Errors All, but Keyboard All, but Diskette All, but Disk/Key	Select the situation in which you want the BIOS to stop the POST process and notify.
Base Memory	N/A	Displays the amount of conventional memory detected during boot up.
Extended Memory	N/A	Displays the amount of conventional memory detected during boot up.
Total Memory	N/A	Displays the total memory available in the system.

CMOS Setup Utility-Copyright (C) 1984-2002 Award Software IDE

Primary Master

IDE HDD Auto-Detection	Press Enter	Item Help
IDE Primary Master Access Mode	Auto	Menu Level
Capacity	13022MB	
Cylinder	25232	
Head	16	
Precomp	0	
Landing Zone	25231	
Sector	61	

←→↑↓: Move Enter: Select +/-PU/PD: Value F10: Save ESC: Exit
 F1: General Help F5: Previous Values F6: Fail-Safe Defaults
 F7: Optimized Defaults

2.3 Advanced BIOS Features

© Figure 3. Advanced BIOS Features

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Advanced BIOS Features

Virus Warning	Disabled	Item Help
CPU Internal Cache	Enabled	Menu Level
External Cache	Enabled	
Processor Number Feature	Enabled	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 alarm beep.
Quick Power On Self Test	Enabled	
First Boot Device	Floppy	
Second Boot Device	HDD-0	
Third Boot Device	LS120	
Boot Other Device	Enabled	
Swap Floppy Drive	Disabled	
Boot Up NumLock Status	On	
Gate A20 Option	Fast	
Typematic Rate Setting	Disabled	
Typematic Rate (Chars/Sec)	6	
Typematic Delay (Msec)	250	
Security Option	Setup	
APIC Mode	Enabled	
MPS Version Control For OS	1.4	
OS Select For DRAM >64MB	Non-OS2	
HDD S.M.A.R.T. Capability	Disabled	
Report No FDD For WIN 95	Yes	
Video BIOS Shadow	Enabled	
Small Logo (EPA) Show	Disabled	

←→↑↓: Move Enter: Select +/-PU/PD: Value F10: Save ESC: Exit
 F1: General Help F5: Previous Values F6: Fail-Safe Defaults
 F7: Optimized Defaults

Virus Warning

This option 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 alarm beep.

The Choices: Disabled(default), Enabled.

CPU Internal Cache

These two categories speed up memory access. However, it depends on CPU/chipset design.

Enabled (default) Enabled cache.
Disabled Disabled cache.

External Cache

This fields allow you to Enable or Disable the CPU'S "Level 2" secondary cache. Caching allows better performance.

Enabled(default)	Enabled cache.
Disabled	Disabled cache.

Quick Power On Self Test

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

Enabled (default)	Enabled quick POST.
Disabled	Normal POST.

First/Secondary/Third Boot Device

This BIOS attempts to load the operating system from the devices in the sequence selected in these items.

The Choices: Floppy, LS120, HDD-0, SCSI, CDROM, HDD-1, HDD-2, HDD-3, ZIP100, LAN, Disabled.

Boot Other Device

The Choices: Enabled(default), Disabled.

Swap Floppy Drive

If the system has two floppy drives, you can swap the logical drive name assignments.

The Choices: Disabled(default), Enabled.

Boot Up NumLock Status

Select power on state for Numlock.

On (default)	Numpad is number keys.
Off	Numpad is arrow keys.

Gate A20 Option

Select if chipset or keyboard controller should control Gate A20.

Normal	A pin in the keyboard controller controls Gate A20.
Fast (default)	Lets chipset control Gate A20.

Typematic Rate Setting

Enabled	Enabled this option to adjust the keystroke repeat rate.
Disabled (default)	Disabled.

Typematic Rate (Char/Sec)

Range between 6(**default**) and 30 characters per second. This option controls the speed of repeating keystrokes.

Typematic Delay (Msec)

This option sets the time interval for displaying the first and the second characters.

The Choices: 250(**default**), 500, 750, 1000.

Security Option

This category allows you to limit access to the system and Setup, or just to Setup.

System	The system will not boot and access to Setup will be denied if the correct password is not entered in prompt.
Setup (default)	The system will boot, but access to Setup will be denied if the correct password is not entered in prompt.

APICMode

The Choices: Disabled(default), Enabled.

MPS Version Control For OS

The Choices: 1.4(default), 1.1.

OS Select For DRAM >64MB

Select the operating system that is running with greater than 64MB of RAM on the system.

The Choices: Non-OS2(default), OS2

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

Enabled	Enabled HDD S.M.A.R.T. Capability.
Disabled (default)	Disabled HDD S.M.A.R.T. Capability.

Report No FDD For Window 95

No	Assign IRQ6 For FDD.
Yes (default)	FDD Detect IRQ6 Automatically.

Video BIOS Shadow

Determines whether video BIOS will be copied to RAM for faster execution.

Enabled(default)	Optional ROM is enabled.
Disabled	Optional ROM is disabled.

Small Logo (EPA) Show

The Choices: Disabled(default), Enabled.

2.4 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 external cache. It also coordinates communications of the PCI bus. It must be stated 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. The only time you might consider making any changes would be if you discovered that data was lost while using your system.

©Figure 4. Advanced Chipset Features

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Advanced Chipset Features

Advanced DRAM System Control 1	Press Enter	Item Help
Advanced DRAM System Control 2	Press Enter	
System BIOS Cacheable	Enabled	Menu Level
Video RAM Cacheable	Enabled	
Memory Hole At 15M-16M	Disabled	
AGP Aperture Size	64MB	

←→↑↓: Move Enter:Select +/-PU/PD:Value F10:Save ESC:Exit
 F1:General Help F5:Previous Values F6:Fail-Safe Defaults
 F7:Optimized Defaults

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Advanced DRAM System Control 1

Auto Configuration	Normal Mode	Item Help
DDR SDRAM Latency	2.5T	
CPU/DRAM CLK Synch CTL	Auto	Menu Level
DRAM Background Cycles	Auto	
LD-off dram RD/WR Cycles	Auto	

←→↑↓: Move Enter:Select +/-PU/PD:Value F10:Save ESC:Exit
 F1:General Help F5:Previous Values F6:Fail-Safe Defaults
 F7:Optimized Defaults

Auto Configuration

If you leave this item at *Auto*, the system will automatically detect and configure any DRAM devices it finds. If it fails to find a memory module, change the value to *Manual* and then manually configure the memory module by entering its characteristics in the items below (SDRAM RAS,... etc.) Refer to your DRAM's documentation if you need to obtain this information.

The Choices: Normal Mode(default), Safe Mode, Fast Mode, Ultra Mode.

DDR SDRAM Latency

2.5T (default) Set SDRAM Latency is 2.5T.
2.0T Set SDRAM Latency is 2.0T.

CPU/DRAM CLK Synchron CTL

The Choices: Auto(default), Synchronous, Asynchronous.

DRAM Background Cycles

The Choices: Auto(default), delay 1T, Normal.

LD-off dram RD/WR Cycles

The Choices: Auto(default), delay 1T, Normal.

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Advanced DRAM System Control 2

CS[5:0]# Hold Time CTL	+0.5ns	Item Help
DQS/CSB Hold Time CTL	+0.5ns	Menu Level

←→↑↓: Move Enter: Select +/-PU/PD: Value F10: Save ESC: Exit
 F1: General Help F5: Previous Values F6: Fail-Safe Defaults
 F7: Optimized Defaults

System BIOS Cacheable

When enabled, the access to the system BIOS ROM address at F0000H-FFFFFFH is cached.

The Choices: Enabled(default), Disabled.

Video RAM Cacheable

Enabled (default) Enabled Video RAM Cacheable.

Disabled Disabled Video RAM Cacheable.

Memory Hole At 15-16M

In order to improve performance, certain space in memory can be reserved for ISA cards. This memory must be mapped into the memory's space below 16MB.

The Choices: Disabled(default), Enabled.

AGP Aperture Size

Select the size of the Accelerated Graphic Port(AGP) aperture. The aperture is a portion of the PCI memory address range dedicated for graphics memory address space. Host cycle that hit the aperture range are forwarded to the AGP without any translation.

The Choices: 64MB(default), 32MB, 16MB, 8MB, 4MB, 128MB.

2.5 Integrated Peripherals

© Figure 5. Integrated Peripherals

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Integrated Peripherals

SiS Onchip IDE Function	Press Enter	Item Help
SiS Onchip Device Function	Press Enter	Menu Level
Onchip SuperIO Function	Press Enter	
IDE HDD Block Mode	Enabled	
Init Display First	PCI Slot	
IDE Access Interface	Embedded Bus	
MAC Access Interface	Embedded Bus	
Audio Access Interface	Embedded Bus	

←→↑↓: Move Enter: Select +/-PU/PD: Value F10: Save ESC: Exit
F1: General Help F5: Previous Values F6: Fail-Safe Defaults
F7: Optimized Defaults

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SiS Onchip IDE Function

Internal PCI/IDE	Both	Item Help
Primary Master PIO	Auto	Menu Level
Primary Slave PIO	Auto	
Secondary Master PIO	Auto	
Secondary Slave PIO	Auto	
Primary Master UDMA	Auto	
Primary Slave UDMA	Auto	
Secondary Master UDMA	Auto	
Secondary Slave UDMA	Auto	
IDE Burst Mode	Enabled	
IDE DMA Transfer Access	Enabled	

←→↑↓: Move Enter: Select +/-PU/PD: Value F10: Save ESC: Exit
F1: General Help F5: Previous Values F6: Fail-Safe Defaults
F7: Optimized Defaults

Internal PCI/IDE

Use this item to enable or disable the IDE channels that are integrated on the mainboard. Leaving this item at Both enables you to set the IDE Primary/Secondary Master/Slave PIO, Primary/Secondary Master/Slave UltraDMA, and IDE Burst Mode fields. Setting this item to Primary enables you to set the IDE Primary Master/Slave PIO, Primary Master/Slave UltraDMA and IDE Burst Mode fields. If you set this item to Secondary, it enables you to set the IDE Secondary Master/Slave PIO, Secondary Master/Slave UltraDMA and IDE Burst Mode fields.

The Choices: Both(default).

On-Chip Secondary PCI IDE

Enabled(default)

Enabled onboard 2nd channel IDE port.

Disabled

Disabled onboard 2nd channel IDE port.

IDE Primary Master PIO (for onboard IDE 1st channel)

Auto(default)

BIOS will automatically detect the IDE HDD Accessing mode.

Mode 0~4

Manually set the IDE Accessing mode.

IDE Primary Slave PIO (for onboard IDE 2nd channel)

Auto(default)

BIOS will automatically detect the IDE HDD Accessing mode.

Mode 0~4

Manually set the IDE Accessing mode.

IDE Secondary Master PIO (for onboard IDE 1st channel)

Auto(default)

BIOS will automatically detect the IDE HDD Accessing mode.

Mode 0~4

Manually set the IDE Accessing mode.

IDE Secondary Slave PIO (for onboard IDE 2nd channel)

- Auto (default)** BIOS will automatically detect the IDE HDD Accessing mode.
- Mode 0~4** Manually set the IDE Accessing mode.

IDE Primary Master UDMA

- Auto (default)** BIOS will automatically detect the IDE HDD Accessing mode.
- Disabled** Disabled.

IDE Primary Slave UDMA

- Auto (default)** BIOS will automatically detect the IDE HDD Accessing mode.
- Disabled** Disabled.

IDE Secondary Master UDMA

- Auto (default)** BIOS will automatically detect the IDE HDD Accessing mode.
- Disabled** Disabled.

IDE Secondary Slave UDMA

- Auto (default)** BIOS will automatically detect the IDE HDD Accessing mode.
- Disabled** Disabled.

IDE Burst Mode

- Enables or disables the IDE Bus Master generating PCI burst cycle control.
- The Choices:** Enabled(default), Disabled.

IDE DMA Transfer Access

- The Choices:** Enabled(default), Disabled.

CMOS Setup Utility-Copyright (C) 1984-2002 Award Software**SiS Onchip Device Function**

SiS-7012 AC Audio	Enabled	Item Help
SiS-900 10/100M ETHERNET	Enabled	Menu Level
SiS-900 MAC Address Input	Press Enter	
System Share Memory Size	32MB	
SiS 301 Display Type	H/W Default	
Display From Cmos	Enabled	
OSD Support in BIOS	Enabled	
Display Logo While Post	Enabled	

←→↑↓: Move Enter: Select +/-PU/PD: Value F10: Save ESC: Exit
 F1: General Help F5: Previous Values F6: Fail-Safe Defaults
 F7: Optimized Defaults

SiS-7012 AC97 Audio

- The default setting of this item utilizes an onboard sound chip for audio output. There is no need to buy and insert a sound card. If a sound card is installed, disable this item.
- The Choices:** Enabled(default), Disabled.

SiS-900 10/100M ETHERNET

- The Choices:** Enabled(default), Disabled.

System Share Memory Size

- The Choices:** 32MB(default), 4MB, 8MB, 16MB, 64MB.

Display From Cmos

- The Choices:** Enabled(default), Disabled.

OSD Support in BIOS

- The Choices:** Enabled(default), Disabled.

Display Logo While Post

- The Choices:** Enabled(default), Disabled.

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Onchip Super IO Function

Onboard FDC Controller	Enabled	Item Help
Onboard Serial Port 1	3F8/IRQ4	Menu Level
Onboard Serial Port 2	2F8/IRQ3	
UART Mode Select	Normal	
RxD, Tx D Active	Hi, Lo	
IR Transmission Delay	Enabled	
UR2 Duplex Mode	Half	
Use IR Pins	IR-Rx2Tx2	
Onboard Parallel Port	378/IRQ7	
Parallel Port Mode	SPP	
EPP Mode Type	EPP1.7	
ECP Mode Use DMA	3	
PWRON After PWR-Fail	OFF	
Game Port Address	201	
Midi Port Address	330	
Midi Port IRQ	10	

←→↑↓: Move Enter: Select +/-PU/PD: Value F10: Save ESC: Exit
 F1: General Help F5: Previous Values F6: Fail-Safe Defaults
 F7: Optimized Defaults

Onboard FDC Controller

Enabled(default)

Enabled onboard FDC Controller.

Disabled

Disabled onboard FDC Controller.

Onboard Serial Port1

Select an address and corresponding interrupt for the first and second serial ports.

The Choices: Auto(default), (3F8/IRQ4), (2F8/IRQ3), (3E8/IRQ4), (2E8/IRQ3), Disabled.

Onboard Serial Port 2

Auto (default)

BIOS will automatically setup the Serial Port 2 address.

3F8/IRQ4

Enabled onboard Serial Port 2 and address is 3F8.

2F8/IRQ3

Enabled onboard Serial Port 2 and address is 2F8.

3E8/IRQ4

Enabled onboard Serial Port 2 and address is 3E8.

2E8/IRQ3

Enabled onboard Serial Port 2 and address is 2E8.

Disabled

Disabled.

UART Mode Select

This item allows you to select which Infra Red(IR) function of the onboard I/O chip you wish to use.

The Choices: Normal(default), IrDA, SCR, ASKIR.

UR2 Duplex Mode

This item allows you to select which Infra Red(IR) function of the onboard I/O chip you wish to use.

The Choices: Half (default), Full.

Parallel Port Mode

SPP (default)

Using Parallel port as Standard Parallel Port.

EPP

Using Parallel port as Enhanced Parallel Port.

ECP

Using Parallel port as Extended Capabilities Port.

ECP/EPP

Using Parallel port as ECP/EPP mode.

ECP Mode Use DMA

The Choices: 3(default), 1.

PWRON After PWR-Fail

This option will determine how the system will power on after a power failure.

The Choices: Off(default), On, Former-Str.

Game Port Address)

201 (default)	Set onboard game port to 201.
209	Set onboard game port to 209.
Disabled	Disabled.

Midi Port Address

290	Set Midi Port address to 290.
300	Set Midi Port address to 300.
330 (default)	Set Midi Port address to 330.
Disabled	Disabled.

Midi Port IRQ

10 (default)	Set Midi Port IRQ to 10.
5	Set Midi Port IRQ to 5.

Init Display First

PCI Slot (default)	Set Init Display First to PCI Slot.
Onboard/AGP	Set Init Display First to onboard/AGP.

IDE HDD Block Mode

Enabled (default)	Enabled.
Disabled	Disabled.

IDE Access Interface

The Choices: Embedded Bus(default), PCI Bus.

MAC Access Interface

The Choices: Embedded Bus(default), PCI Bus.

Audio Access Interface

The Choices: Embedded Bus(default), PCI Bus.

2.6 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 own style of computer use.

© **Figure 6. Power Management Setup**

CMOS Setup Utility-Copyright (C) 1984-2002 Award Software
Power Management Setup

ACPI Function	Enabled	Item Help
ACPI Suspend Type	S1(POS)	Menu Level
Power Management	User Define	
Suspend Type	Disabled	
Video Off Option	Susp, Stby->off	
Video Off Method	DMPs Supported	
Switch Function	Break/Wake	
Modem Use IRQ	3	
Hot Key Function As	Power Off	
HDD off After	Disabled	
Power Button Override	Instant Off	
PM Wake up Events	Press Enter	

←→↑↓: Move Enter: Select +/-PU/PD: Value F10: Save ESC: Exit
F1: General Help F5: Previous Values F6: Fail-Safe Defaults
F7: Optimized Defaults

ACPI Function

This item display status of the Advanced Configuration and Power Management (ACPI).

ACPI Suspend Type

The item allows you to select the suspend type under ACPI operating system.

S1(POS) (default)	Power on Suspend.
S3(STR)	Suspend to RAM.

Power Management

This option allows you to set each mode individually. When not disabled, each of the ranges are from 1 min. to 1 hr. except for HDD Power Down which ranges from 1 min. to 15 min. and disable.

The Choices: User Define (default), Min Saving, Max Saving.

Game Port Address)

201 (default)	Set onboard game port to 201.
209	Set onboard game port to 209.
Disabled	Disabled.

Midi Port Address

290	Set Midi Port address to 290.
300	Set Midi Port address to 300.
330 (default)	Set Midi Port address to 330.
Disabled	Disabled.

Midi Port IRQ

10 (default)	Set Midi Port IRQ to 10.
5	Set Midi Port IRQ to 5.

Init Display First

PCI Slot (default)	Set Init Display First to PCI Slot.
Onboard/AGP	Set Init Display First to onboard/AGP.

IDE HDD Block Mode

Enabled (default)	Enabled.
Disabled	Disabled.

IDE Access Interface

The Choices: Embedded Bus(default), PCI Bus.

MAC Access Interface

The Choices: Embedded Bus(default), PCI Bus.

Audio Access Interface

The Choices: Embedded Bus(default), PCI Bus.

2.6 Power Management Setup

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Power Management Setup

ACPI Function	Enabled	Item Help
ACPI Suspend Type	S1(POS)	
Power Management	User Define	Menu Level
Suspend Type	Disabled	
Video Off Option	Susp.Stby->off	
Video Off Method	DMPs Supported	
Switch Function	Break/Wake	
Modem Use IRQ	3	
Hot Key Function As	Power Off	
HDD off After	Disabled	
Power Button Override	Instant Off	
PM Wake up Events	Press Enter	

←→↑↓: Move Enter: Select +/-/PU/PD: Value F10: Save ESC: Exit
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ACPI Function

This item display status of the Advanced Configuration and Power Management (ACPI).

ACPI Suspend Type

The item allows you to select the suspend type under ACPI operating system.

S1(POS) (default)	Power on Suspend.
S3(STR)	Suspend to RAM.

Power Management

This option allows you to set each mode individually. When not disabled, each of the ranges are from 1 min. to 1 hr. except for HDD Power Down which ranges from 1 min. to 15 min. and disable.

The Choices: User Define (default), Min Saving, Max Saving.

Suspend Type

The Choices: Disabled(default), 1Min~1hour.

Video Off Option

This field determines when to activate the video off feature for monitor power management.

The Choices: Susp,Stby->off(default), Always on, Suspend->off, All Modes->off.

Video Off Method

This determines the manner in which the monitor is blanked.

V/H SYNC+Blank This selection will cause the system to turn off the vertical and horizontal synchronization ports and write blanks to the video buffer.

Blank Screen This option only writes blanks to the video buffer.

DPMSSupported (default) Initial display power management signaling.

Switch Function

The Choices: Break/Wake(default), Disabled.

Modem Use IRQ

This determines the IRQ, which can be applied in Modem use.

3 (default)
4/5/7/9/10/11/NA.

Hot Key Function As

Enables you to set the power button function in DOS.

The Choices: Power off(default).

HDD Off After

The IDE hard drive will spin down if it is not accessed within a specified length of time. Options are from 1 Min to 15 Min and Disable.

The Choices: Disabled(default), Enabled.

Power Button Override

Pressing the power button for more than 4 seconds forces the system to enter the Soft-Off state when the system has "hung".

The Choices: Instant-Off(default), Delay 4 Sec.

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PM Wake Up Events

IRQ [3-7,9-15],NMI	Enabled	Item Help
IRQ 8 Break Suspend	Disabled	Menu Level
Ring Power Up Control	Enabled	
MACPME Power Up Control	Enabled	
PCI/PME Power Up Control	Enabled	
PS2KB Wakeup From S3/S4/S5	Any key	
PS2MS Wakeup From S3/S4/S5	Disabled	
Power Up by Alarm	Disabled	
Month Alarm	NA	
Day of Month Alarm	0	
Time (hh:mm:ss) Alarm	0 0 0	
**Reload Global Timer Events **		
Primary IDE	Disabled	
Secondary IDE	Disabled	
FDD, COM, LPT Port	Disabled	
PCI IRQ[A-D]#	Disabled	

←→↑↓: Move Enter:Select +/-PU/PD:Value F10:Save ESC:Exit
F1:General Help F5:Previous Values F6:Fail-Safe Defaults
F7:Optimized Defaults

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

When enabled, any event occurring at IRQs 3 through 15 (excluding IRQ 8) will awaken a system, which has been powered down.

The Choices: Enabled(default), Disabled.

IRQ 8 Break Suspend

This field allows you to enable or disable monitoring of IRQ8 so that it does not awaken the system from a suspend mode.

The Choices: Disabled(default), Enabled.

Ring Power Up Control

When set to Enabled, the system power will be turned on if there is any modem activity.

The Choices: Enabled(default), Disabled.

MACPME Power Up Control

During Disabled, the system will ignore any incoming call from the EtherNet controller. During Enabled, the system will boot up if there's an incoming call from the EtherNet controller.

The Choices: Enabled(default), Disabled.

PCIPME Power Up Control

The Choices: Enabled(default), Disabled.

PS2KB Wakeup From S3/S4/S5

The Choices: Any key(default), Password.

PS2MS Wakeup From S3/S4/S5

The Choices: Disabled(default), Enabled.

Power Up by Alarm

When set to Enabled, the following three fields become available and you can set the month, date (day of the month), hour, minute and second to turn on your system.

The Choices: Disabled(default), Enabled.

Primary IDE

Disabled (default)

Disabled.

Enabled

Enabled monitor Primary IDE 0/1 for Green event.

Secondary IDE

Disabled (default)

Disabled.

Enabled

Enabled monitor Secondary IDE 0/1 for Green event.

FDD, COM, LPT Port

Disabled (default)

Disabled.

Enabled

Enabled monitor FDD, COM, LPT Port.

PCIPIRQ[A-D]#

Disabled (default)

Ignore PCI PIRQ[A-D]# Active.

Enabled

Monitor PCI PIRQ[A-D]# Active.

2.7 PnP/PCI Configurations

This section describes configuring the PCI bus system. PCI or Personal Computer Interconnect, is a system which allows I/O devices to operate at speeds nearing the speed of the CPU itself when communicating with its own special components. This section covers some very technical items and it is strongly recommended that only experienced users make any changes to the default settings.

© Figure 7. PnP/PCI Configurations

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PnP/PCI Configurations

Reset Configuration Data	Disabled	Item Help
Resources Controlled By	Auto(ESCD)	Menu Level
IRQ Resources	Press Enter	
PCI/VGA Palette Snoop	Disabled	When resources are controlled manually, assign each system interrupt a type, depending on the type of device using the interrupt

←→↑↓: Move Enter: Select +/-/PU/PD: Value F10: Save ESC: Exit
F1: General Help F5: Previous Values F6: Fail-Safe Defaults
F7: Optimized Defaults

PNP OS Installed

When set to YES, BIOS will only initialize the PnP cards used for booting (VGA, IDE, SCSI). The rest of the cards will be initialized by the PnP operating system like Windows 95. When set to No, BIOS will initialize all the PnP cards. Therefore for non-PnP operating system (DOS, Netware), this option must be set to No.

Reset Configuration Data

The system BIOS supports the PnP feature so the system needs to record which resource is assigned and proceeds resources from conflict. Every peripheral device has a node, which is called ESCD. This node records which resources are assigned to it. The system needs to record and update ESCD to the memory locations. These locations (4K) are reserved at the system BIOS. If Disabled (Default) is chosen, the system's ESCD will update only when the new configuration varies from the last one. If Enabled is chosen, the system is forced to update ESCDs and then is automatically set to the "Disabled" mode.

IRQ3	assigned to: 3~15, Auto
IRQ4	assigned to: 3~15, Auto
IRQ5	assigned to: 3~15, Auto
IRQ6	assigned to: 3~15, Auto
IRQ7	assigned to: 3~15, Auto
IRQ8	assigned to: 3~15, Auto
IRQ9	assigned to: 3~15, Auto
IRQ10	assigned to: 3~15, Auto
IRQ11	assigned to: 3~15, Auto
IRQ12	assigned to: 3~15, Auto
IRQ13	assigned to: 3~15, Auto
IRQ14	assigned to: 3~15, Auto
IRQ15	assigned to: 3~15, Auto

Resources Controlled By

By Choosing "Auto" (default), the system BIOS will detect the system resources and automatically assign the relative IRQ and DMA channel for each peripheral. By Choosing "Manual", the user will need to assign IRQ & DMA for add-on cards. Be sure that there are no IRQ/DMA and I/O port conflicts.

IRQ Resources

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

PCI/VGA Palette Snoop

Choose Disabled or Enabled. Some graphic controllers which are not VGA compatible take the output from a VGA controller and map it to their display as a way to provide boot information and VGA compatibility.

However, the color information coming from the VGA controller is drawn from the palette table inside the VGA controller to generate the proper colors, and the graphic controller needs to know what is in the palette of the VGA controller. To do this, the non-VGA graphic controller watches for the write access to the VGA palette and registers the snoop data. In PCI based systems, the Write Access to the palette will not show up on the ISA bus if the PCI VGA controller responds to the Write.

In this case, the PCI VGA controller should not respond to the Write, it should only snoop the data and permit the access to be forwarded to the ISA bus. The non-VGA ISA graphic controller can then snoop the data on the ISA bus. Unless you have the above situation, you should disable this option.

Disabled (default)	Function Disabled.
Enabled	Function Enabled.

2.8 PC Health Status

© Figure 8. PC Health Status

CMOS Setup Utility-Copyright (C) 1984-2002 Award Software

PC Health Status

Current System Temp.	Item Help
Current CPU1 Temperature	Menu Level
Current CPU Fan1 Speed	
Current CPU Fan2 Speed	
CPU(V)	
+3.3V	
+5V	
+12V	
-12V	
-5V	
VBAT(V)	
5VSB(V)	

←→↑↓: Move Enter: Select +/-PU/PD: Value F10: Save ESC: Exit
 F1: General Help F5: Previous Values F6: Fail-Safe Defaults
 F7: Optimized Defaults

Current Voltage(V) Vcore 3.3V/ +-12V/+-5V/5VSB/VBAT

Detect system's voltage status automatically.

Current CPU1, System Temperature(°C / °F)

This field displays the current CPU temperature, if your computer contains a monitoring system.

Current CPU Fan1/Fan2 Speed

These field displays the current speed of up to System Fans, if your computer contains a monitoring system.

2.9 Frequency / Voltage Control

© Figure 9. Frequency / Voltage Control

CMOS Setup Utility-Copyright (C) 1984-2002 Award Software

Frequency / Voltage Control

Auto Detect DIMM / PCI CLK	Enabled	Item Help
Spread Spectrum	Disabled	
CPU Host/SDRAM/PCI Clock	Default	Menu Level

←→↑↓: Move Enter: Select +/-PU/PD: Value F10: Save ESC: Exit
 F1: General Help F5: Previous Values F6: Fail-Safe Defaults
 F7: Optimized Defaults

Auto Detect DIMM / PCI CLK

This item allows you to enable/disable auto detect DIMM / PCI CLOCK.

The Choices: Enabled(default), Disabled.

(Note: Default value is 100/100MHz.)

Spread Spectrum

This function is designed for the EMI test only.

The Choices: Disabled(default), Enabled.

CPU Host/SDRAM/PCI Clock

This item allows you to select the CPU Host/SDRAM/PCI clock from 100/100/33MHz to 133/166/33MHz (*for over clock using).

The Choices: Default.

NOTE:

We don't recommend users use over clock function for possible CPU damage.

2.10 Load Fail-Safe Defaults

When you press <Enter> on this item, you get a

confirmation dialog box with a message similar to:

© Figure 10. Load Fail-Safe Defaults

CMOS Setup Utility-Copyright (C) 1984-2002 Award Software

Standard CMOS Features	Frequency/Voltage Control
Advanced BIOS Features	Load Fail-Safe Defaults
Advanced Chipset Features	Load Optimized Defaults
Integrated Peripherals	Set User Password
Power Management	Load Fail-Safe Default (Y/N)? N
PNP/PCI Configuration	Exit Without Saving
PC Health Status	
Esc: Quit F9: Menu in BIOS ←→↑↓: Select Item	
F10: Save & Exit Setup	
Time, Date, Hard Disk Type ...	

Pressing 'Y' loads the default values that are factory settings for optimal performance of system operations.

2.11 Load Optimized Defaults

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

© Figure 11. Load Optimized Defaults

CMOS Setup Utility-Copyright (C) 1984-2002 Award Software

Standard CMOS Features	Frequency/Voltage Control
Advanced BIOS Features	Load Fail-Safe Defaults
Advanced Chipset Features	Load Optimized Defaults
Integrated Peripherals	Set User Password
Power Management	Exit Without Saving
PNP/PCI Configuration	
PC Health Status	
Esc: Quit F9: Menu in BIOS ←→↑↓: Select Item	
F10: Save & Exit Setup	
Time, Date, Hard Disk Type ...	

Load Optimized Default (Y/N)? N

Pressing 'Y' loads the default values that are factory settings for optimal performance of system operations.

2.12 Set User Password

© Figure 12. Set Supervisor / User Password

CMOS Setup Utility-Copyright (C) 1984-2002 Award Software

Standard CMOS Features	Frequency/Voltage Control
Advanced BIOS Features	Load Fail-Safe Defaults
Advanced Chipset Features	Load Optimized Defaults
Integrated Peripherals	Set User Password
Power Management	Enter Password:
PNP/PCI Configuration	Exit Without Saving
PC Health Status	
Esc: Quit F9: Menu in BIOS ←→↑↓: Select Item	
F10: Save & Exit Setup	
Time, Date, Hard Disk Type ...	

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 a password, up to eight characters, and press <Enter>. The password you type 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 and not enter a password. To disable the password, just press <Enter> when you are prompted to enter a password. A message will confirm that you wish to disable the password. Once the password is disabled, the system will boot and you can enter setup freely.

Password Disabled

If you select "System" at the Security Option of BIOS Features Setup Menu, you will be prompted for the password every time when the system is rebooted, or any time when you try to enter Setup. If you select "Setup" at the Security Option of BIOS Features Setup Menu, you will be prompted only when you try to enter Setup.

2.13 Save & Exit Setup

© Figure 13. Save & Exit Setup

CMOS Setup Utility-Copyright (C) 1984-2002 Award Software

Standard CMOS Features	Frequency/Voltage Control
Advanced BIOS Features	Load Fail-Safe Defaults
Advanced Chipset Features	Load Optimized Defaults
Integrated Peripherals	Set User Password
Power Management Setup	Save & Exit Setup
PNP/PCI Configuration	Exit Without Saving
PC Health	

Save & Exit Setup (Y/N)? Y

Esc : Quit F9 : Menu in BIOS ←→↑↓: Select Item

F10 : Save & Exit Setup

Time , Date , Hard Disk Type ...

Typing "Y" will quit the Setup Utility and save the user setup value to RTC CMOS RAM.

Typing "N" will return to the Setup Utility.

2.14 Exit Without Saving

© Figure 14. Exit Without Saving

CMOS Setup Utility-Copyright (C) 1984-2002 Award Software

Standard CMOS Features	Frequency/Voltage Control
Advanced BIOS Features	Load Fail-Safe Defaults
Advanced Chipset Features	Load Optimized Defaults
Integrated Peripherals	
Power Management Setup	Save & Exit Setup
PNP/PCI Configuration	Exit Without Saving
PC Health Status	
Esc : Quit F9 : Menu in BIOS ←→↑↓: Select Item	
F10 : Save & Exit Setup	
Time , Date , Hard Disk Type ...	

Typing “Y” will quit the Setup Utility without saving to RTC CMOS RAM.

Typing “N” will return to the Setup Utility.

Chapter

3

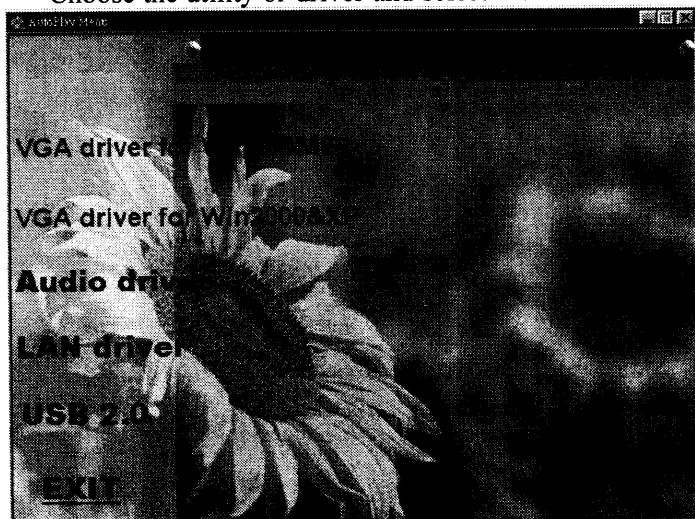
There are motherboard drivers and utilities included in CFI Bonus CD disc. You don't need to install all of them in order to boot your system. But after you finish the hardware installation, you have to install your operation system first (such as windows 98) before you can install any drivers or utilities. Please refer to your operation system installation guide.

Note:

1. Please follow recommended procedure after install Windows 98/ME/XP/2000.
2. Windows NT operating system can't supported by SiS740 VGA driver.

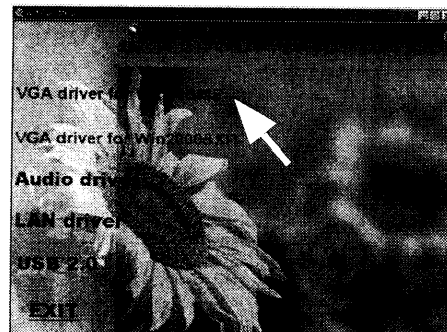
3.1 Auto-run Menu

You can use the auto-run menu of Bonus CD disc. Choose the utility or driver and select model name.

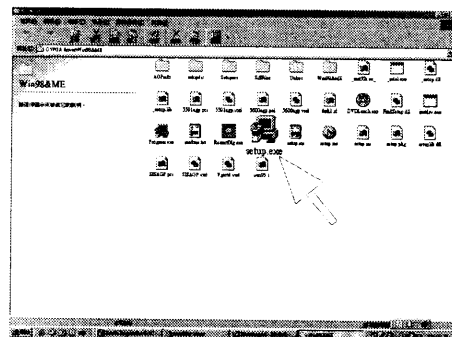


3.2 Installing VGA Driver (for win98/ME)

SiS 740 IGUI chipset integrated a 2D/3D graphics acceleration.



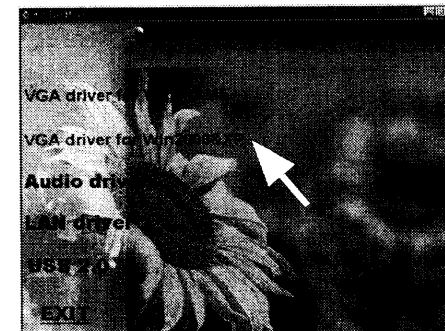
(1)
Click "VGA driver" Item.



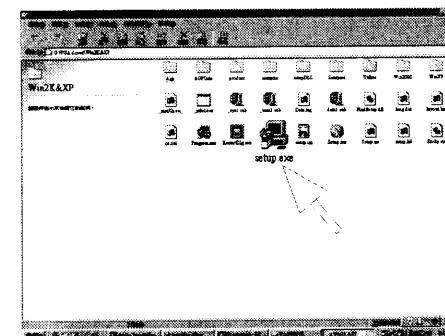
(2)
Click "Setup.exe" Item.

3.3 Installing VGA Driver (for win2K/XP)

SiS 740 IGUI chipset integrated a 2D/3D graphics acceleration.



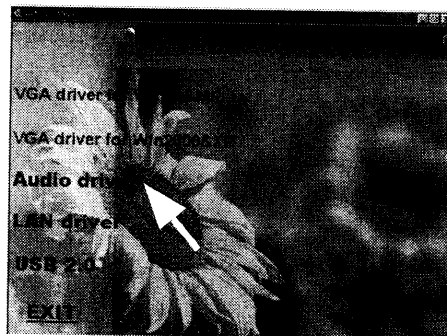
(1)
Click "VGA driver" Item.



(2)
Click "Setup.exe" Item.

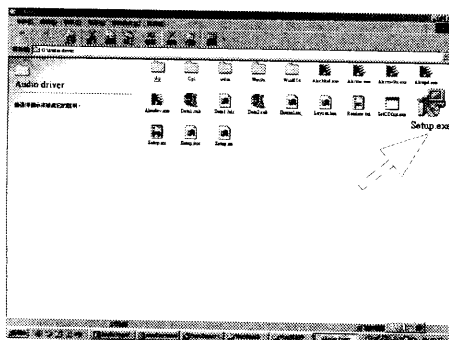
3.4 Installing Audio Driver

This motherboard comes with an AC97 CODEC and the sound controller is in Intel South Bridge chipset. You can find the sound driver from the Bonus Pack CD disc auto-run menu.



(1)

Click "Audio driver" Item.

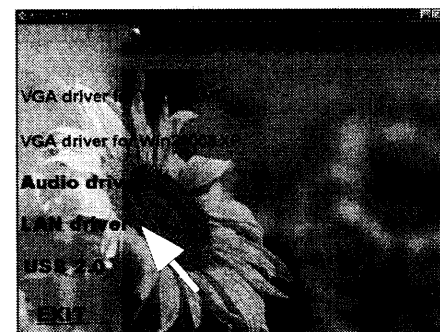


(2)

Click "Setup.exe" Item.

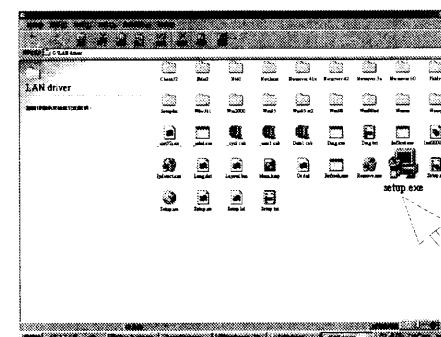
3.5 Installing LAN Driver

When your mainboard comes with the Realtek® RT8201L LAN controller, you must install the Realtek® LAN driver to support the LAN function. In some operating systems like Windows 98, Windows 2000 the provided CD will auto-run when you insert the CD disk into the CD-ROM drive.



(1)

Click "LAN driver" Item.

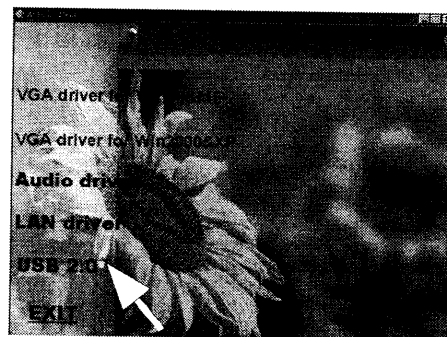


(2)

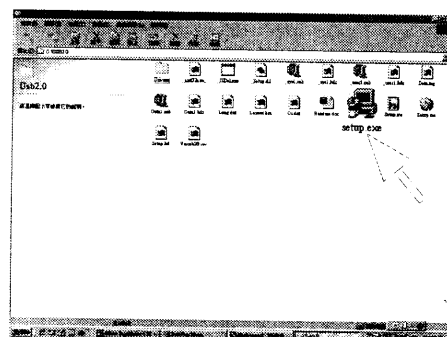
Click "Setup.exe" Item.

3.6 Installing USB 2.0 Driver

Compliant with Universal Serial Bus(USB) specification
revision 1.1 & 2.0.



(1)
Click "USB 2.0 driver"
Item.



(2)
Click "Setup.exe" Item.

CFI-S76 System Compatibility Test Report

** Note:

This test report is for your reference, we would like to suggest you to use these devices that we had approved.

A. CPU & Memory Compatibility Test Pass

CPU TYPE		MEMORY TYPE					
Nucleus	Model	Module	IC_Vender & IC_NO	CAPACITY	DRAM CLK	Location	WS 2001
		Vender		SIDE			Business
Athlon XP	1500 +	Apacer	NANYA NT5DS16M87AT-7K	128M/D	266	DIMM1,2	37
		Kingmax	Kingmax KDL684T4A2A-05	256M/D	333	DIMM1,2	40.3
		CHINA	HYNIX HY5DU28822AT-H	256M/D	266	DIMM1,2	34.3
Athlon XP	1800 +	Kingston	NANYA NT5DS16M87AT-7K	256M/D	266	DIMM1,2	41.9
		CHINA	SAMSUNG K4H280838B-TCB0	128M/S	266	DIMM1,2	47.4
		Kingston	HYUNDAI HY5DU28822T-H	256M/D	266	DIMM1,2	43.5
Morgan	1000 /100	Transcend	SAMSUNG K4H280838B-TCB0	256M/D	266	DIMM1,2	50.2
		SILAN	NANYA NT5DS16M87AT-7K	256M/D	266	DIMM1,2	47.9
		ARMAS	SAMSUNG K4H280838B-TCB0	128M/D	266	DIMM1,2	39.6
Athlon	1333 /133	Kingston	NANYA NT5DS16M87AT-7K	256M/D	266	DIMM1,2	41.1
		Transcend	Winbond W942508AH-7	256M/S	266	DIMM1,2	40.6
		Kingston	HYUNDAI HY5DU28822T-H	256M/D	266	DIMM1,2	40.4
Athon	1400 /133	Transcend	SAMSUNG K4H280838B-TCB0	256M/S	333	DIMM1,2	44.9
		Kingston	HYUNDAI HY5DU28822T-H	256M/D	266	DIMM1,2	46
		WEBLINK	Elixir N2DS12880AT-75B	256M/D	266	DIMM1,2	47.2
Morgan	1000 /100	CHINA	HYNIX HY5DU28822AT-H	128M/S	266	DIMM1,2	44.1
		WEBLINK	Elixir N2DS12880AT-75B	256M/D	266	DIMM1,2	50.7
		SILAN	SAMSUNG K4H280838B-TCB0	128M/S	266	DIMM1,2	52.3
Morgan	1200 /100	Transcend	Winbond W942508AH-7	256M/S	266	DIMM1,2	52.4
		SILAN	NANYA NT5DS16M87AT-7K	256M/D	266	DIMM1,2	52.6
		ARMAS	SAMSUNG K4H280838B-TCB0	256M/D	266	DIMM2	40.3
Duron	650 /100	Transcend	SAMSUNG K4H280838B-TCB0	512M/D	333	DIMM2	41
		Kingston	Infineon HYB25D256800AT-7	256M/D	266	DIMM2	40.2
		Acaper	HYUNDAI HY5DU28822T-H	128M/S	266	DIMM2	35.7
		Kingston	SAMSUNG K4H280838B-TCB0	512M/D	266	DIMM2	40.3
		WEBLINK	elixir N2DS12880AT-75B	256M/D	266	DIMM2	39.2
		Kingston	HYUNDAI HY5DU28822T-H	256M/D	266	DIMM2	35.9
		ARMAS	SAMSUNG K4H280838B-TCB0	128M/D	266	DIMM2	35.2
		Transcend	Winbond W942508AH-7	256M/S	333	DIMM2	25.9
		Kingmax	Kingmax KDL684T4A2A-05	256M/D	333	DIMM2	25.8

B. CPU & Memory Compatibility Test Pass

HUB USB Device	Vendor	Model	Result
Joystick	Microsoft	SideWinder P&P GamePad	PASS
ZIP	lomega	ZIP 100	PASS
Mouse	Microsoft	Optical Mouse	PASS
Keyboard	Logitech	Y-BE22	PASS

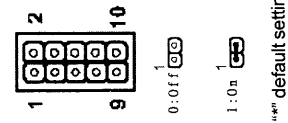
CFI-S76 System Compatibility Test Report

B. USB Device Compatibility Test

Device Model	Windows 98SE	Windows ME	Windows 2000	Windows XP
USB Mouse	Microsoft Optical Mouse	GENUINE Optical Mouse	GENUINE Optical Mouse	GENUINE Optical Mouse
USB Keyboard	Logitech Y-BE22	Standard 7932M	Standard 7932M	Standard 7932M
USB Modem	ACORP HCF V90 Data Fax Modem			
USB Print	HP DeskJet 930C			
USB ZIP	Iomega ZIP 100			
USBSCANNER	ACER S2W 4300U	ACER S2W 4300U	UMAX AstraSlim 600	UMAX AstraSlim 600
USB Joystick	Microsoft SideWinder P&P GamePad			
USB Digital COMERA	FUJIFILM FinePix 2400 Zoom	FUJIFILM FinePix 2400 Zoom	FUJIFILM FinePix 2400 Zoom	FUJIFILM FinePix 2400 Zoom

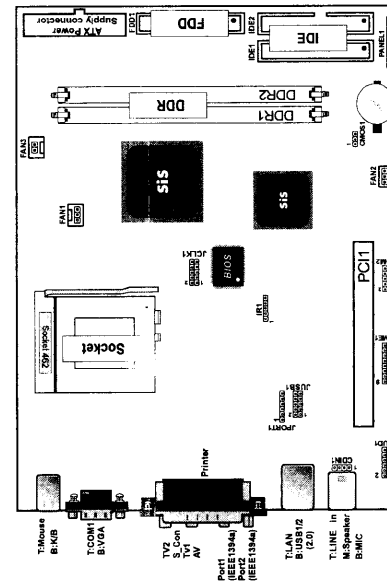
C. PCI/ISA Device Compatibility Test

Device Model	Slot	Vendor Model	O.S.	Driver Version	Result
All PCI/ISA	PCI	PC tel PCT789T-A	Win98 SE	7.66-9K-03	PASS
All PCI/ISA	PCI	Initio INIC-950P	Win XP	2.17	PASS
IEEE1394 Card	PCI	IEEE 1394 582V2	Win 98SE	4.10.2222	PASS
	PCI	IEEE 1394	Win XP	5.1.2600.0	PASS
USB 2.0 Card	PCI	USB 2.0 (Taiwan)	Win 98SE	1.0.0.0	PASS
	PCI	NEC USB 2.0	Win XP	5.1.2600.0	PASS
LAN Card	PCI	3Com 3C905C	Win 98SE	1.60.00.000	PASS
	PCI	D-LINK DFE-530TX	Win XP	2.66	PASS
SCSI Card	PCI	Adaptec AHA-2940UW	Win 98SE	V2.21a	PASS
	PCI	Tekram DC-390U2W	Win XP	5.1.2409.1	PASS
Sound Card	PCI	Creative VIBRA 128	Win 98SE	4.12.01.2003	PASS
	PCI	YAMAHA 754	Win 98SE	4.08.00.0400	PASS
MODEM Card	PCI	C3DX CMI8738	Win XP	5.00.2195.3	PASS
	PCI	ESS ES2838S	Win 98SE	4.43.022	PASS
	PCI	PC tel PCT789T-A	Win XP	7.54.077	PASS
TV / FM Capture Card	PCI	ACORP BT878	Win XP	3.1.28.0	PASS
IEEE1394 Device	Verus Series 3.5" Storage Enclosure				PASS
USB 2.0 Device	Skymaster 3.5 " Crystal Case (for HDD)				PASS



CPU Clock Frequency Setting: JCLK1

CPU Clock Frequency Setting - 500MHz									
S1S 740 CLK(MHz)		CPU					AGPCLK (MHz)		
1-2	3-4	5-6	7-8	CPU	SDRAM	PCI	9-10=0	9-10=1	
0	0	0	0	66.6	66.6	33.3	66.6	50	
*1	*0	*0	*0	100	100	33.3	*66.6	55.6	
0	1	0	0	166	166	31.3	62.5	55.6	
0	1	0	0	133	133	33.3	66.6	50	
0	0	1	0	66.6	100	33.3	66.6	50	
1	0	1	0	100	66.6	33.3	66.6	50	
0	1	1	0	100	133	33.3	66.6	50	
1	1	1	0	133	100	33.3	66.6	50	
0	0	0	1	112	112	33.6	67.2	56	
1	0	0	1	124	124	31	62	46.5	
0	1	0	1	138	138	34.5	69	51.8	
0	1	0	1	150	150	30	60	50	
1	1	1	1	66.6	133	33.3	66.6	50	
0	0	1	1	133	150	30	60	50	
1	1	1	1	150	100	30	60	50	
0	1	1	1	160	120	20	60	40	



The CFI-S76 Jumper Setting Summary

CMOS Function Selection: CMOS1

Pin CMOS ¹	Definition
1-2	Normal (Default)
2-3	Clear CMOS

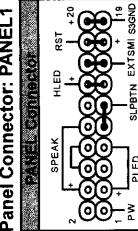
Fan Connectors: Fan1/2/3

Pin	Fan1/2	Definition
1	0 ₁	Ground
2	0 ₂	+12VDC
3	0 ₃	Signal

IEEE 1394a Connector: JPORT1

Pin	Assignment
1	+12V
2	XTPB2M
3	XTPB2P
4	XTPA2M
5	XTPA2P

Panel Connector: PANEL1



CD Audio-In Connectors: CDIN1

Pin CDIN1 Assignment	
1	CD-L
2	GND
3	GND
4	CD-C