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Contents

English

P4SFC Features

CPU
- Supports Intel Pentium 4® Socket 478 processor up to 3.06 GHz.
- Running at 533 MHz Front Side Bus frequency.

Chipset
- North Bridge: SIS 651.
- South Bridge: SIS 962L.

Main Memory
- Supports up to 2 DDR devices.
- Supports 200/ 266/ 333 MHz (without ECC).
- The largest memory capacity is 2GB.

Slots
- Three 32-bit PCI bus master slots.
- One AGP slot.

On Board IDE
- Supports four IDE hard disk drives.
- Supports PIO Mode 4, Master Mode and Ultra DMA 33/ 66/ 100/ 133 Bus Master Mode.

LAN – VT6103 (optional)
- Dual Speed - 100/10 Mbps.
- Half and Full Duplex.
- Auto Negotiation: 10/ 100, Full/ Half Duplex.

Audio
- AC97 2.2 interface.
- PC99 complaint.
- Supports 6 channels.

On Board Peripherals
- Supports 360K, 720K, 1.2MB, 1.44MB and 2.88MB floppy disk drivers.
- Supports 1 serial port.
- Supports 1 VGA port.
- Supports 1 LAN port (optional).
- Supports 1 multi-mode parallel port. (SPP/EPP/ECP mode)
- Supports PS/2 mouse and PS/2 keyboard.
- Supports 1 vertical audio port.
- Supports 4 rear USB2.0 ports and 2 front USB2.0 ports.

BIOS

- AWARD legal Bios.
- Supports APM1.2.
- Supports ACPI.
- Supports USB Function.

Operating System

- Offers the highest performance for Windows 98SE, Windows 2000, Windows Me, Windows XP, LINUX and SCO UNIX

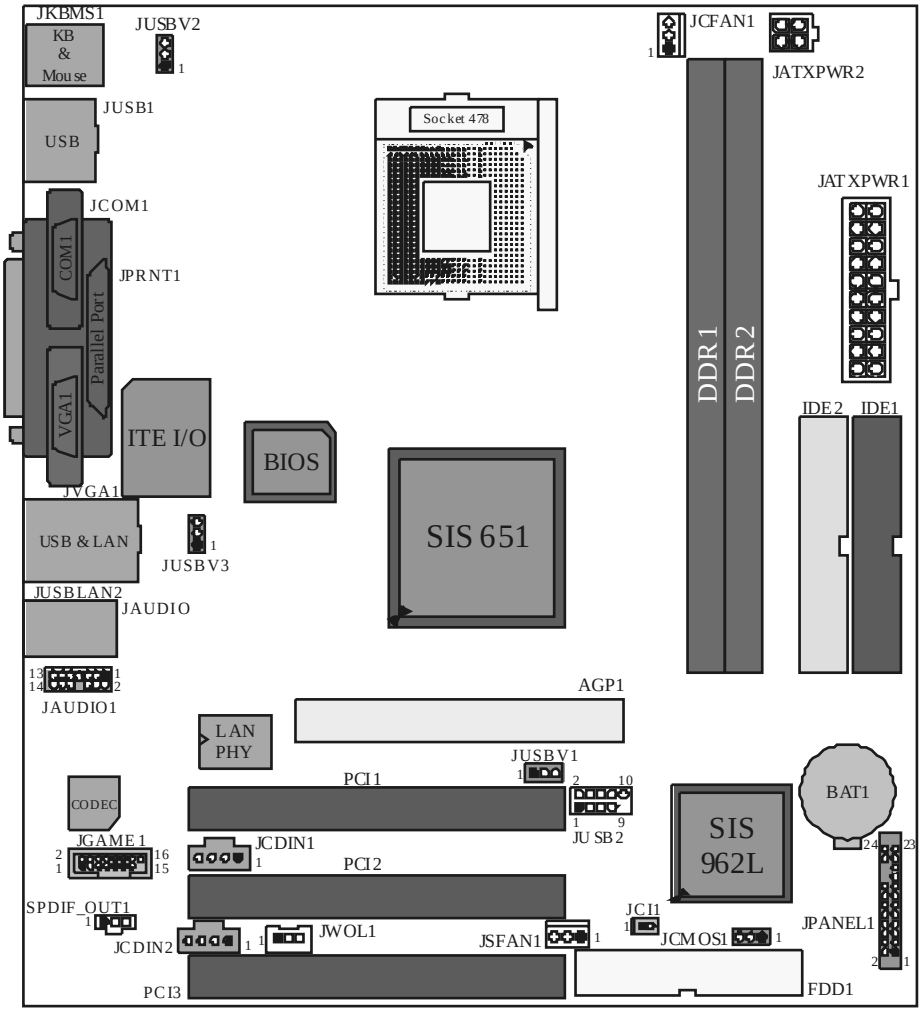
Dimensions

- Micro ATX Form Factor: 20.3cm X 23.4cm (W X L).

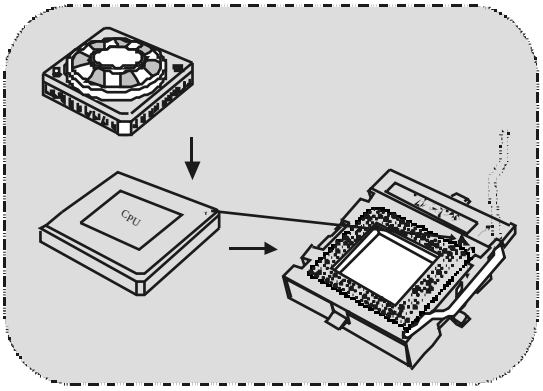
Package contents

- HDD Cable X1
- FDD Cable X1
- Fully Setup Driver CD X1
- USB Cable X2 (Optional)
- Rear I/O Panel for Micro-ATX Case X 1 (Optional)
- SPDIF Out Cable X1 (Optional)
- User's Manual X1

Layout of P4SFC



CPU Installation

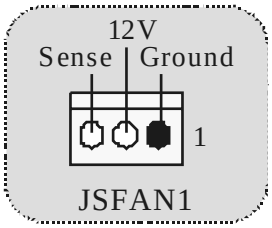


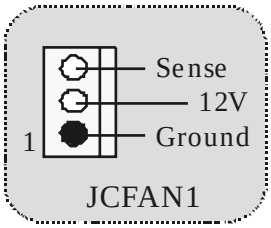
1. Pull the lever sideways away from the socket then raise the lever up to 90-degree angle.

2. Locate Pin A in the socket and lock for the white dot or cut edge in the CPU. Match Pin A with the white dot/cut edge then insert the CPU.

3. Press the lever down. Then Put the fan on the CPU and buckle it and put the fan's power port into the JCFAN1, then to complete the installation.

CPU/System Fan Headers: JCFAN1/JSFAN1





DDR DIMM Modules: DDR1-2

DRAM Access Time: 2.5V Unbuffered DDR 200/ 266/ 333 MHz Type required.
DRAM Type: 64MB/ 128MB/ 256MB/ 512MB/ 1GB DIMM Module (184 pin)

DIMM Socket Location	DDR Module	Total Memory Size (MB)
DDR 1	64MB/128MB/256MB/512MB/1GB *1	Max is 2GB
DDR 2	64MB/128MB/256MB/512MB/1GB *1	

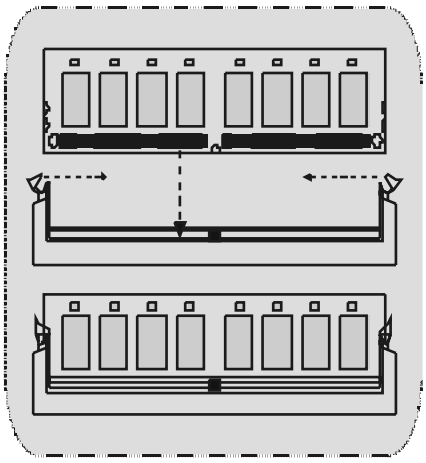
* The list shown above for DRAM configuration is only for reference.

How to install a DIMM Module
DDR DIMM Module

1. The DIMM socket has a " Plastic Safety Tab", and the DIMM memory module has an "Asymmetrical notch", so the DIMM memory module can only fit into the slot in one direction.

2. Push the tabs out. Insert the DIMM memory modules into the socket at a 90-degree angle, then push down vertically so that it will fit into the place.

3. The Mounting Holes and plastic tabs should fit over the edge and hold the DIMM memory modules in place.



Jumpers, Headers, Connectors & Slots

Hard Disk Connectors: IDE1/ IDE2

The motherboard has a 32-bit Enhanced PCI IDE Controller that provides PIO Mode 0~4, Bus Master, and Ultra DMA / 33/ 66/ 100 / 133 functionality. It has two HDD connectors IDE1 (primary) and IDE2 (secondary).
The IDE connectors can connect a master and a slave drive, so you can connect up to four hard disk drives. The first hard drive should always be connected to IDE1.

Floppy Disk Connector: FDD1

The motherboard provides a standard floppy disk connector that supports 360K, 720K, 1.2M, 1.44M and 2.88M floppy disk types. This connector supports the provided floppy drive ribbon cables.

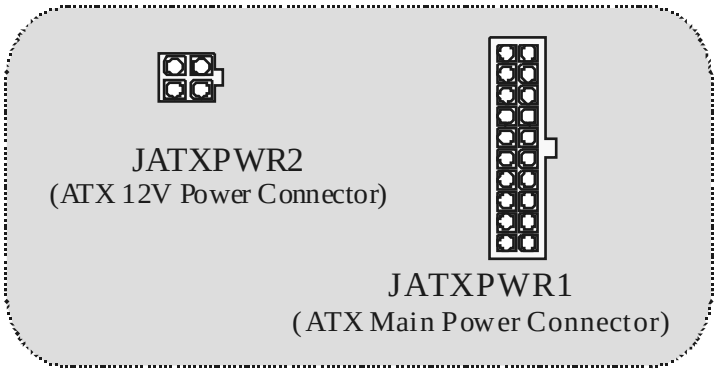
Accelerated Graphics Port Slot: AGP1

Your monitor will attach directly to that video card. This motherboard supports video cards for PCI slots, but it is also equipped with an Accelerated Graphics Port. An AGP card will take advantage of AGP technology for improved video efficiency and performance, especially with 3D graphics.

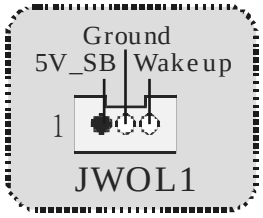
Peripheral Component Interconnect Slots: PCI1-3

This motherboard is equipped with 3 standard PCI slots. PCI stands for Peripheral Component Interconnect, and it is a bus standard for expansion cards, which has, supplanted the older ISA bus standard in most ports. This PCI slot is designated as 32 bits.

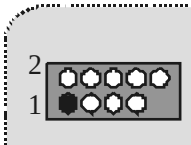
Power Connectors: JATXPWR1/ JATXPWR2



Wake On LAN Header: JWOL1



Front USB Header: JUSB2

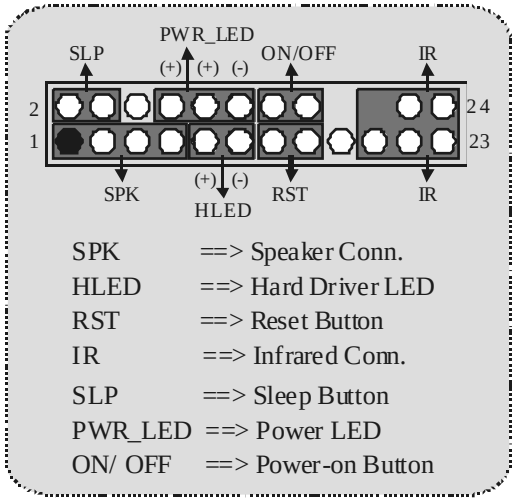


Pin	Assignment	Pin	Assignment
1	+5V	2	+5V
3	Data (-)	4	Data (-)
5	Data (+)	6	Data (+)
7	Ground	8	Ground
9	Key	10	NA

5V/ 5VSB Selection for USB: JUSBV1/ JUSBV2/ JUSBV3

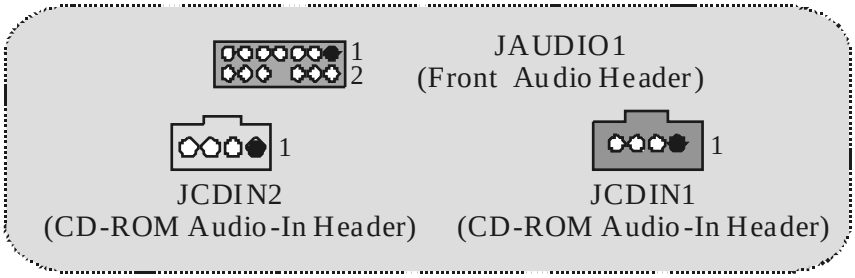
JUSBV1/ 2/ 3	Assignment
 Pin 1-2 on	5V
 Pin 2-3 on	5V_SB

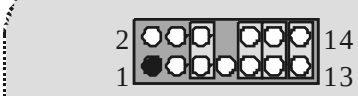
Front Panel Connector:
JPANEL1



SPK ==> Speaker Conn.
HLED ==> Hard Driver LED
RST ==> Reset Button
IR ==> Infrared Conn.
SLP ==> Sleep Button
PWR_LED ==> Power LED
ON/ OFF ==> Power-on Button

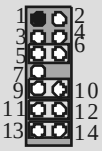
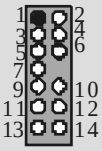
Audio Subsystem: JAUDIO1/ JCDIN1/ JCDIN2



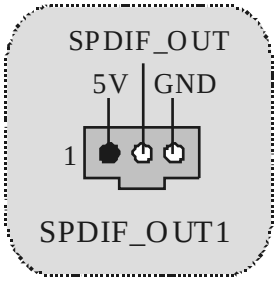


Pin	Assignment	Pin	Assignment
1	Mic In	2	Ground
3	Mic Power	4	Audio Power
5	RT Line Out	6	RT Line Out
7	Reserved	8	NC
9	LFT Line Out	10	LFT Line Out
11	RT Line In	12	RT Line In
13	LFT Line In	14	LFT Line In

Front Panel Audio Connector/ Jumper Block

Jumper Setting	*Configuration*
 Pin 5 and 6 Pin 9 and 10 Pin11 and 12 Pin13 and 14	Audio line out signals are routed to the back panel audio line out connector.
 No jumpers installed	Audio line out and mic in signals are available for front panel audio connectors.

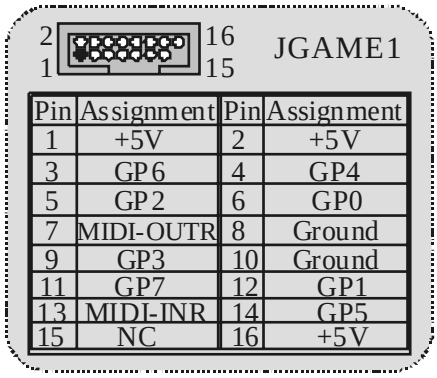
Digital Audio Connector: SPDIF_OUT1



Clear CMOS Jumper: JCMOS1

JCMOS1	Assignment
 1 Pin 1-2 on	Normal Operation (default)
 1 Pin 2-3 on	Clear CMOS Data

Game Header: JGAME1 (Optional)

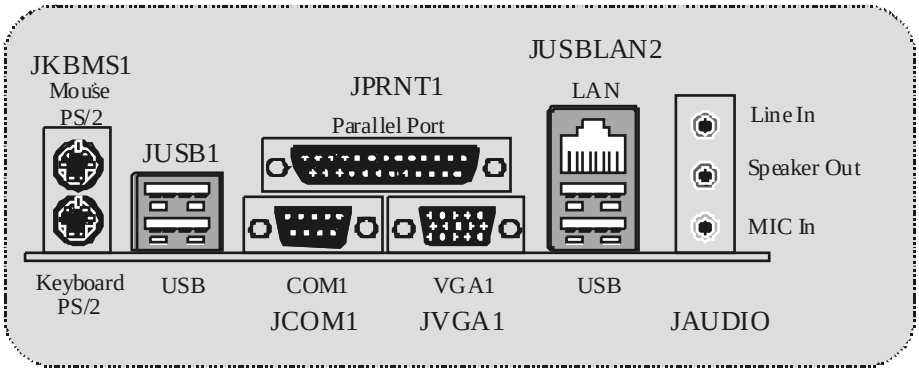


Pin	Assignment	Pin	Assignment
1	+5V	2	+5V
3	GP6	4	GP4
5	GP2	6	GP0
7	MIDI-OUTR	8	Ground
9	GP3	10	Ground
11	GP7	12	GP1
13	MIDI-INR	14	GP5
15	NC	16	+5V

Case Open Connector: JCI1

JCI1	Assignment
1 No jumper installed	Normal Operation (default)
1 Pin 1-2 on	Case Open

Back Panel Connectors



Español

Características del P4SFC

CPU
- Soporta procesador Intel Pentium 4® Socket 478 de hasta 3.06 GHz.
- Corre a 533 MHz Front Side Bus.

Chipset
- North Bridge: SIS 651.
- South Bridge: SIS 962L.

Memoria Principal
- Soporta hasta 2 dispositivos DDR.
- Soporta 200/ 266/ 333 MHz (sin ECC).
- Capacidad máxima de memoria 2GB.

Ranuras
- Tres ranuras de 32-bit PCI bus master.
- Una ranura AGP.

IDE Onboard
- Soporta cuatro discos duros IDE.
- Soporta Modo PIO 4, Modo Master y Ultra DMA 33/ 66/ 100/ 133 Bus Modo Master.

LAN – VT6103 (opcional)
- Doble Velocidad - 100/10 Mbps.
- Half y Full Duplex.
- Auto Negociación: 10/ 100, Full/ Half Duplex.

Audio
- Interface AC97 2.2.
- PC99 compatible.
- Soporta 6 canales.

Periféricos Onboard
- Soporta disquetera de 360K, 720K, 1.2MB, 1.44MB y 2.88MB.
- Soporta 1 puerto serie.
- Soporta 1 puerto VGA.
- Soporta 1 puerto LAN (opcional).
- Soporta 1 puerto paralelo multi-mode. (modo SPP/EPP/ECP)
- Soporta ratón PS/2 y teclado PS/2.
- Soporta 1 puerto de audio vertical.
- Soporta 4 puertos USB2.0 traseros y 2 puertos USB2.0 frontales.

BIOS

- AWARD legal Bios.
- Soporta APM1.2.
- Soporta ACPI.
- Soporta función USB.

Sistema Operativo

- Ofrece el más alto funcionamiento en Windows 98SE, Windows 2000, Windows Me, Windows XP, LINUX y SCO UNIX.

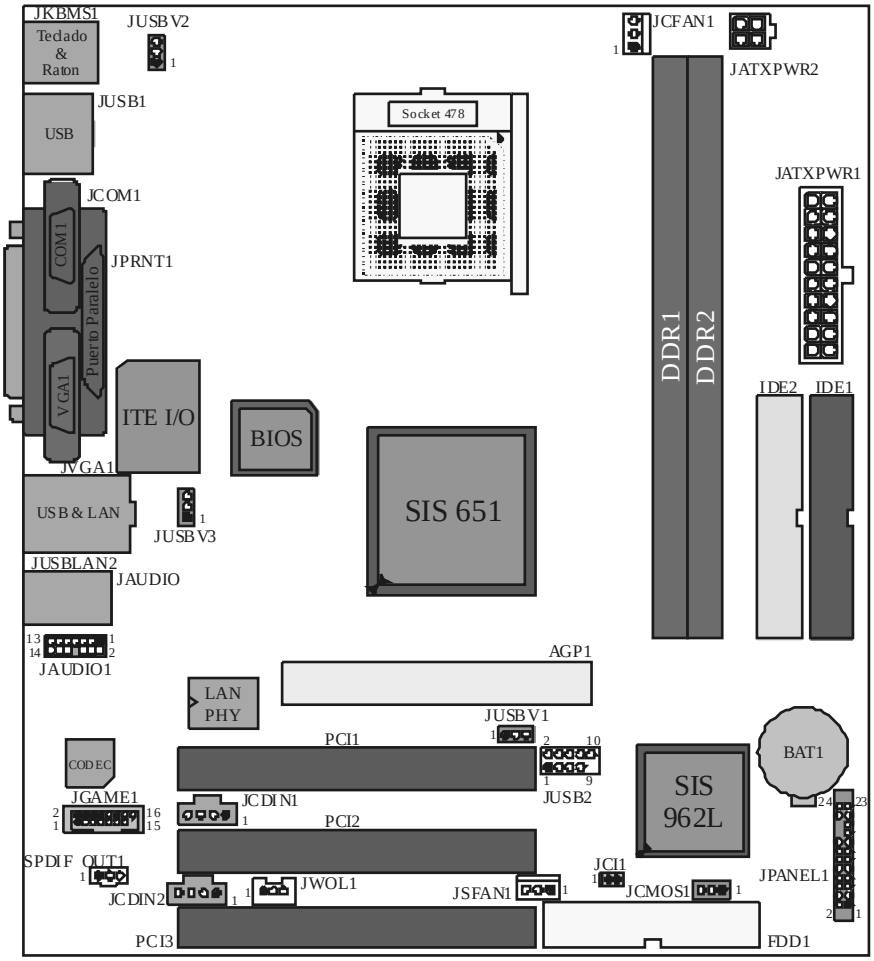
Dimensiones

- Factor de Forma Micro ATX: 20.3cm X 23.4cm (W X L).

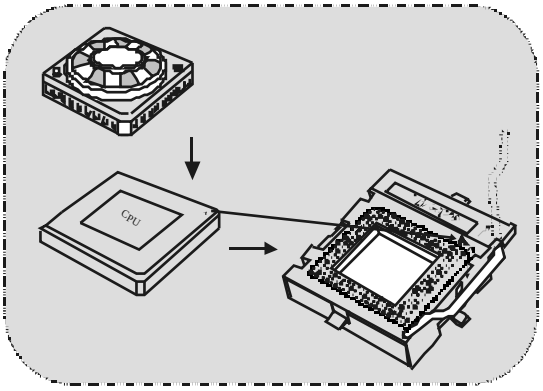
Contenido del Paquete

- Cable HDD X 1
- Cable FDD X 1
- Configuración Completa del CD Driver X 1
- Cable USB X 2 (Opcional)
- Panel Trasero I/O para carcasa Micro-ATX X 1 (Opcional)
- Cable SPDIF Out X 1 (Opcional)
- Manual del Usuario X 1

Disposición del P4SFC



Instalación del CPU

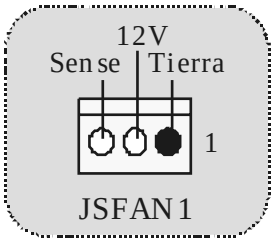


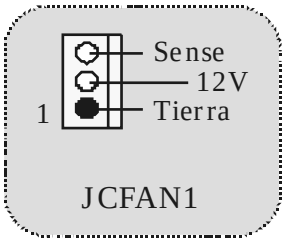
1. Tire de la palanca del lado del zócalo, luego levante la palanca hasta un ángulo de 90 grados.

2. Sitúe el contacto A del zócalo y busque el punto blanco o corte el borde en la CPU. Empareje el contacto A con el punto blanco/ corte del borde, luego inserte la CPU.

3. Presione la palanca para abajo. Ponga el ventilador en la CPU y abróchelo. Luego ponga el puerto de corriente del ventilador en el JCFAN1. Y ya habrá completado su instalación.

CPU/ Cabezales del Sistema de Ventilación: JCFAN1/ JSFAN1





Módulos DDR DIMM: DDR1-2

DRAM Tiempo de Acceso: 2.5V Unbuffered DDR 200/ 266/ 333 MHz Tipo requerido.
DRAM Tipo: 64MB/ 128MB/ 256MB/ 512MB/ 1GB Módulo DIMM (184 cortactos)

Localización del Módulo DIMM	Módulo DDR	Total del Tamaño de Memoria (MB)
DDR 1	64MB/128MB/256MB/512MB/1GB *1	Máximo 2GB
DDR 2	64MB/128MB/256MB/512MB/1GB *1	

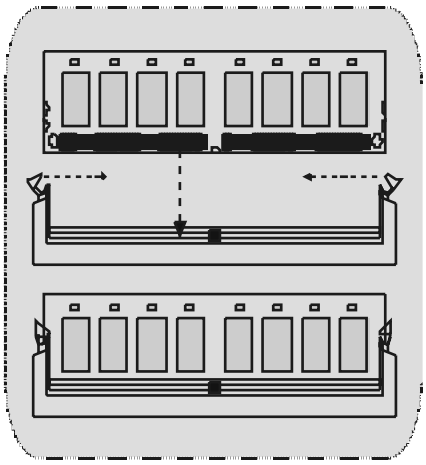
∗ La lista de arriba para la configuración DRAM es solamente para referencia.

Cómo instalar un módulo DIMM
Módulo DDR DIMM

1. El zócalo DIMM tiene una lengüeta plástica de seguridad y el módulo de memoria DIMM tiene una muesca asimétrica, así el módulo de memoria DIMM puede caber solamente en la ranura de una sóla dirección.

2. Tire la lengüeta hacia afuera. Inserte los módulos de memoria DIMM en el zócalo a los 90 grados, luego empuje hacia abajo verticalmente de modo que encaje en el lugar.

3. Los agujeros de montaje y las lengüetas plásticas deben caber por sobre el borde y sostenga los módulos de memoria DIMM en el lugar.



Conectores, Cabezales, Puentes y Ranuras

Conectores del Disco Duro: IDE1/ IDE2

La placa madre tiene un controlador de 32-bit PCI IDE que proporciona Modo PIO 0~4, Bus Master, y funcionalidad Ultra DMA 33/ 66/ 100/ 133. Tiene dos conectores HDD IDE1 (primario) y IDE2 (secundario).
El conector IDE puede conectar a un master y un drive esclavo, así puede conectar hasta cuatro discos rígidos. El primer disco duro debe estar siempre conectado al IDE1.

Conector para Disquete: FDD1

La placa madre proporciona un conector estándar del disquete (FDC) que soporta 360K, 720K, 1.2M, 1.44M y 2.88M tipos de disquete. Éste conector utiliza los cables de cinta proporcionados por el disquete.

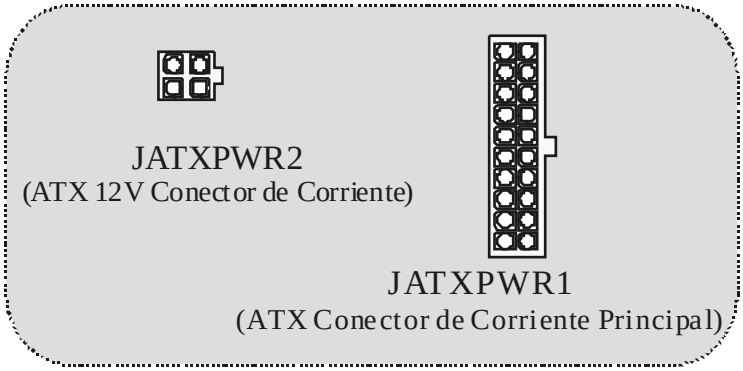
Ranura del Puerto Acelerado para Gráficos: AGP1

Su monitor se fijará directamente a la tarjeta de video. Ésta placa madre soporta tarjetas de video para ranuras PCI, y también está equipado con un Puerto Acelerado para Gráficos. Ésta tarjeta AGP tomará ventaja de la tecnología del AGP para el mejoramiento de la eficiencia y funcionamiento del video, especialmente con gráficos 3D.

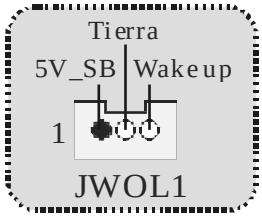
Ranura de Interconexión del Componente Periférico: PCI1-3

Ésta placa madre está equipada con 3 ranuras estándar PCI. PCI es la sigla para Interconexión del Componerte Periférico, y es un bus estándar para tarjetas de expansión en el que suplanta a la antigua bus estándar ISA, en su mayoría de las partes. Ésta ranura PCI está diseñado con 32 bits.

Conectores de Corriente: JATXPWR1/ JATXPWR2



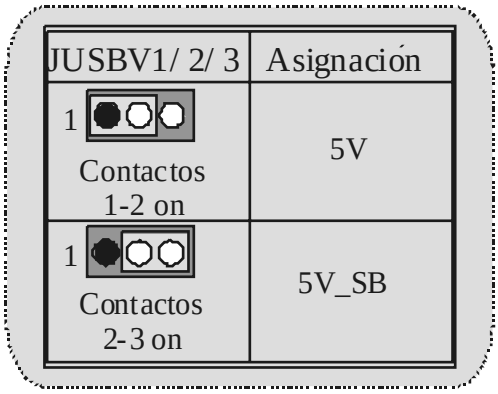
Cabezal Wake On LAN: JWOL1



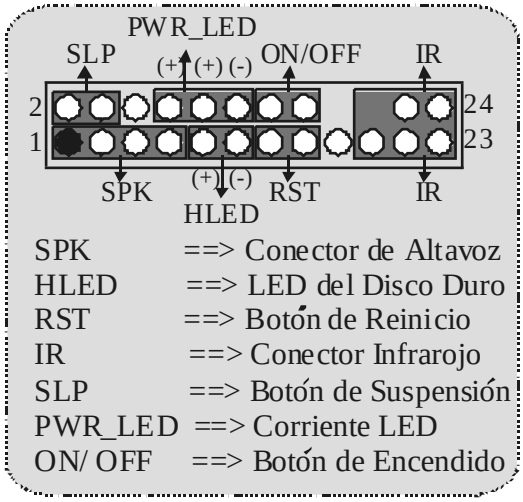
Cabezal Frontal USB: JUSB2

Contactos	Asignación	Contactos	Asignación
1	+5V	2	+5V
3	Data (-)	4	Data (-)
5	Data (+)	6	Data (+)
7	Tierra	8	Tierra
9	Key	10	NA

5V/ 5VSB Selección para USB: JUSBV1/ JUSBV2/ JUSBV3



Conector del Panel Frontal: JPANEL1



SPK ==> Conector de Altavoz
HLED ==> LED del Disco Duro
RST ==> Botón de Reinicio
IR ==> Conector Infrarojo
SLP ==> Botón de Suspensión
PWR_LED ==> Corriente LED
ON/ OFF ==> Botón de Encendido

Subsistema de Audio: JAUDIO1/ JCDIN1/ JCDIN2

JAUDIO1
(Cabezal Frontal de Audio)

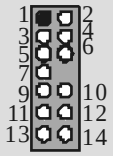
JCDIN2
(Cabezal de Entrada de Audio CD-ROM)

JCDIN1
(Cabezal de Entrada de Audio CD-ROM)

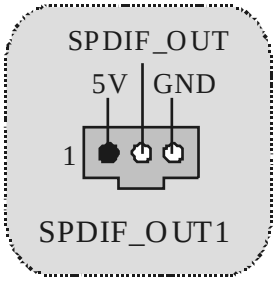
JAUDIO1

Contactos	Asignación	Contactos	Asignación
1	Entrada del MIC	2	Tierra
3	Corriente del MIC	4	Corriente de Audio
5	RT Salida de Línea	6	RT Salida de Línea
7	Reservado	8	Key
9	LFT Salida de Línea	10	LFT Salida de Línea
11	RT Entrada de Línea	12	RT Entrada de Línea
13	LFT Entrada de Linea	14	LFT Entrada de Línea

Conector del Panel Frontal de Audio/ Jumper Block

Jumper Setting	*Configuración*
 Contacto 5 & 6 Contacto 9 & 10 Contacto 11 & 12 Contacto 13 & 14	La señal de salida de linea del Audio encamina al conector de la salida de linea del Audio ubicado en el panel trasero.
 No jumpers installed	La señal de salida de linea del Audio y la señal del entrada del mic estan disponibles desde el conector de Audio del panel frontal.

Conector Digital de Audio: SPDIF_OUT1



Puente de Borrar CMOS: JCMOS1

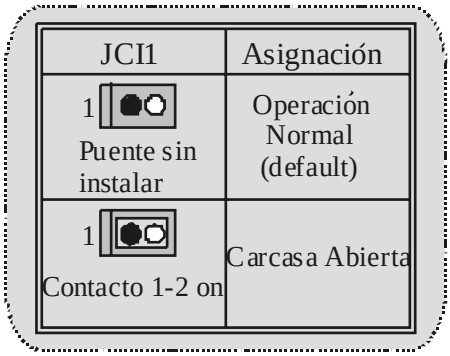
JCMOS1	Asignacion
 1 Contacto 1-2 on	Operacion Normal (Default)
 1 Contacto 2-3 on	Borrar Datos CMOS

Cabezal de Juego: JGAME1 (Opcional)

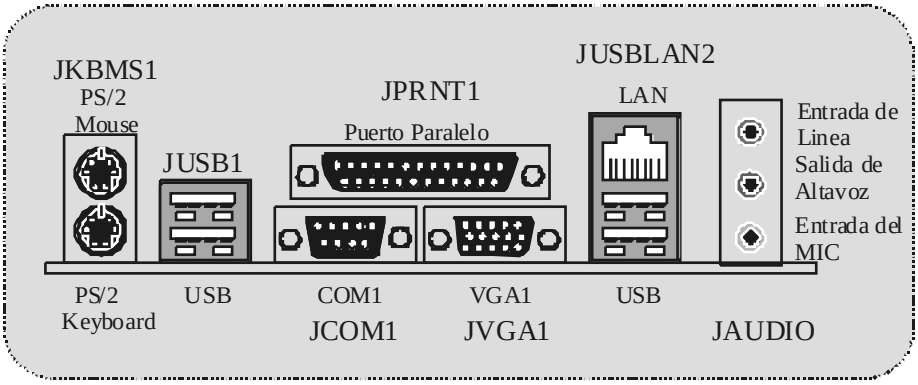
JGAME1

Contactos	Asignación	Contactos	Asignación
1	+5V	2	+5V
3	GP6	4	GP4
5	GP2	6	GP0
7	MIDI-OUTR	8	GND
9	GP3	10	GND
11	GP7	12	GP1
13	MIDI-INR	14	GP5
15	NC	16	+5V

Conector de la Carcasa Abierta: JCI1



Conector del Panel Trasero



Deutsch

Merkmale des P4SFC

CPU
- Unterstützung für den Intel Pentium 4® Prozessor(Socket 478) bis zu 3.06 GHz.
- FSB 533 MHz.

Chipsatz
- Northbridge: SIS 651.
- Southbridge: SIS 962L

Main Memory
- Unterstützung für 2 DDR Geräte
- Unterstützung für 200/ 266/ 333 MHz (ohne ECC).
- Die maximale Speichergröße ist 2GB.

Slots
- Drei 32-Bit PCI-Bus-Master-Slots.
- Ein AGP-Slot.

On-Board-IDE
- Unterstützung für vier IDE Diskettenlaufwerke.
- Unterstützung für PIO Modus 4, Master Modus und Ultra DMA 33/ 66/ 100/ 133 Bus Master Modus.

LAN – VT6103 (optional)
- Dual Speed - 100/10 Mbps.
- Half - und Full-Duplex.
- Auto Negotiation: 10/ 100, Full/ Half Duplex.

Audio
- AC97-2.2-Interface.
- PC99 kompatibel.
- Unterstützung für 6-Kanal.

On-Board-Peripheriegeräte
- 1 Floppy-Port mit Unterstützung für 2 Diskettenlaufwerke.(360KB, 720KB, 1.2MB, 1.44MB und 2.88MB).
- 1 serielle Schnittstelle.
- 1 VGA-Schnittstelle.
- 1 LAN-Schnittstelle. (optional)
- 1 parallele Schnittstelle mit Unterstützung für SPP/EPP/ECP -Modus
- Unterstützung für PS/2-Maus und PS/2-Tastatur.
- 1 vertikale Audio-Sschnittstelle.
- 4 USB2.0-Ports auf der Rückwand und 2 USB2.0-Ports auf der Vorderseite.

BIOS

- Unterstützung für AWARD legal Bios.
- Unterstützung für APM1.2.
- Unterstützung für ACPI.
- Unterstützung für USB Function.

Betriebsysteme

- Unterstützung für die am meisten verbreiteten Betriebsysteme wie Windows 98SE, Windows 2000, Windows ME, Windows XP, LINUX und SCO UNIX.

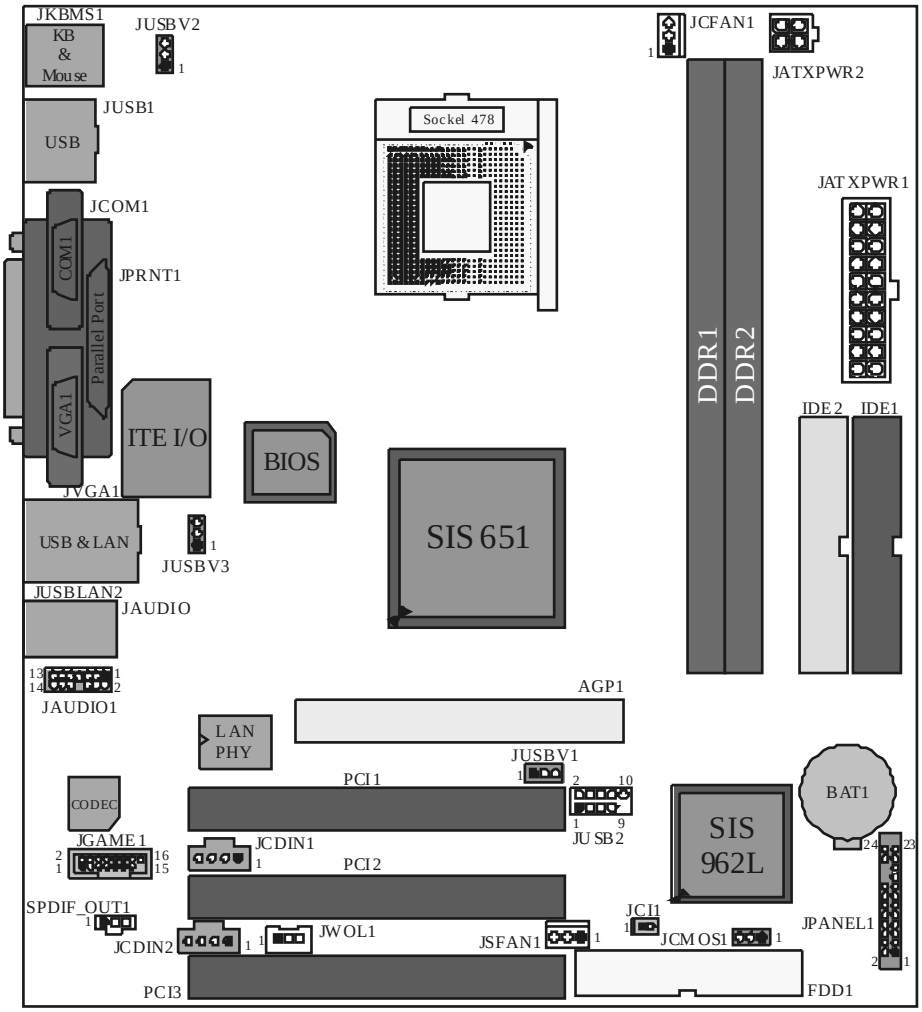
Abmessungen

- Micro ATX Form-Factor: 20.3cm X 23.4cm (W X L).

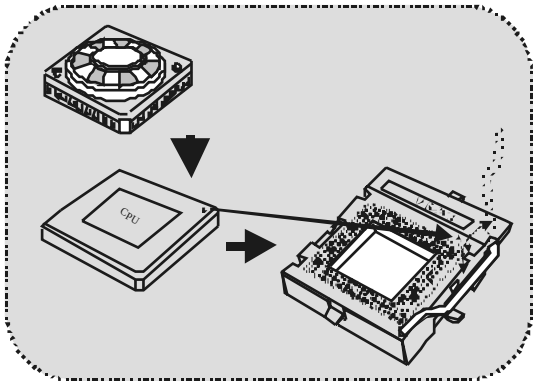
Verpackungsinhalt

- HDD Kable X 1
- FDD Kable X 1
- Treiber CD für Installation X 1
- USB Kable X 2 (optional)
- I/O-Rückwand für ATX Gehäuse X 1 (optional)
- SPDIF-Ausgang Kable X1 (optional)
- Benutzer Handbuch X 1

Layout von P4SFC



Installation der CPU

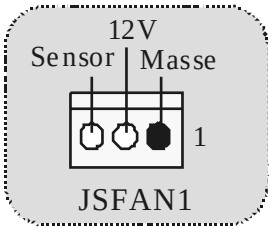


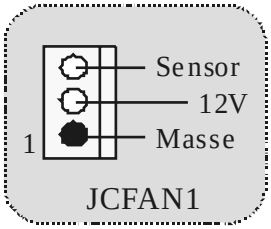
1. Ziehen Sie den Hebel seitwärts von der Sockel und neigen Sie ihn um 90-Grad nach oben.

2. Suchen Sie Pin A im Sockel und den weißen Punkt oder die Abschnittkante in der CPU. Passen Sie Pin A mit dem weißen Punkt/der Abschnittkante zusammen und legen Sie danach die CPU ein.

3. Drücken Sie den Hebel nach unten. Befestigen Sie danach den Lüfter auf die CPU und schließen Sie die Stromschnittstelle des Lüfters an JCFAN1 an und beenden Sie die Installation.

CPU/System Fan Headers: JCFAN1/JSFAN1





DDR-DIMM-Modules: DDR1-2

DRAM Zugriffszeit: 2.5V unbuffer DDR 200/266/ 333 MHz.
DRAM Typen: 64MB/ 128MB/ 256MB/ 512MB/ 1GB DIMM-Module (184 pin)

DIMM- Sockel Standort	DDR-Module	Speichergröße (MB)
DDR 1	64MB/128MB/256MB/512MB/1GB *1	maximal ist 2GB
DDR 2	64MB/128MB/256MB/512MB/1GB *1	

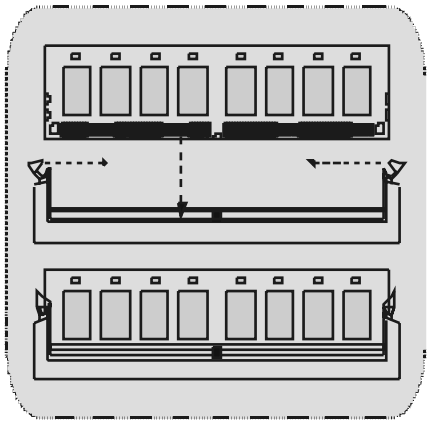
∗ Die obergezeigt Liste für DRAM-Konfiguration ist nur als Referenz.

Installation von DIMM-Modulen
DDR-DIMM-Module

1. Es gibt eine Plastikklammer an beiden Enden der DIMM-Slot, und eine Passkerbe in der Mitte des Moduals. Deswegen passt das Dimm-Modual nur in einer Richtung.

2. Ziehen Sie die Plastikklammer aus. Setzen Sie das DIMM-Modual im 90-Grad-Winkel in den DIMM-Steckplatz und drücken es nach unten.

3. Schließen Sie die Plastikklammer, um das DiMM-Modul zu verriegeln.



Jumpers, Headers, Connectors & Slots

Festplattenanschlüsse: IDE1 und IDE2

Das Mainboard hat einen 32-Bit Enhanced PCI IDE-Controller, der die Modi PIO0~4, Bus Master sowie die Ultra DMA/33/66/100/133- Funktion zur Verfügung stellt. Dieser ist mit zweii HDD-Anschlüssen versehen IDE1 (primär) und IDE2 (sekundär).
Die IDE-Anschlüsse können eine Master- und eine Slave-Festplatte verbinden, so dass bis zu 4 Festplatten angeschlossen werden können. Die erste Festplatte sollte immer an IDE1 angeschlossen werden.

Diskettenanschluss: FDD1

Das Motherboard enthält einen standardmäßigen Diskettenanschluss, der 360K-, 720K-, 1.2M-, 1.44M- und 2.88M-Disketten unterstützt. Dieser Anschluss unterstützt die mitgelieferte Bandkabel des Diskettenlaufwerks.

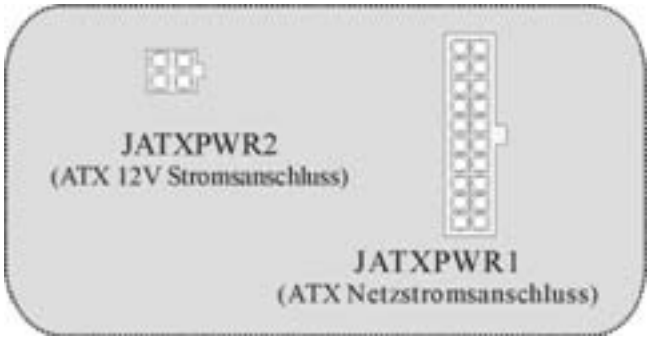
Accelerated Graphics Port Slot: AGP1

Ihr Monitor wird direkt an die Grafikkarte angeschlossen. Dieses Motherboard unterstützt Grafikkarten für PCI-Slots, aber es ist auch mit einem Accelerated Graphics Port ausgestattet. AGP-Karten verwenden die AGP-Technologie, um die Wirksamkeit und Leistung von Videosignalen zu verbessern, besonders wenn es sich um 3D-Grafiken handelt.

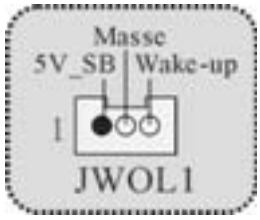
Peripheral Component Interconnect Slots: PCI1-3

Dieses Motherboard ist mit 2 standardmäßigen PCI-Slots ausgestattet. PCI steht für Peripheral Component Interconnect und bezieht sich auf einem Busstandard für Erweiterungskarten, der den älteren ISA-Busstandard in den meisten Schnittstellen ersetzt hat. Dieser PCI-Slot ist für 32 bits vorgesehen.

Stromversorgungsanschlüssü: JATXPWR1/ JATXPWR2



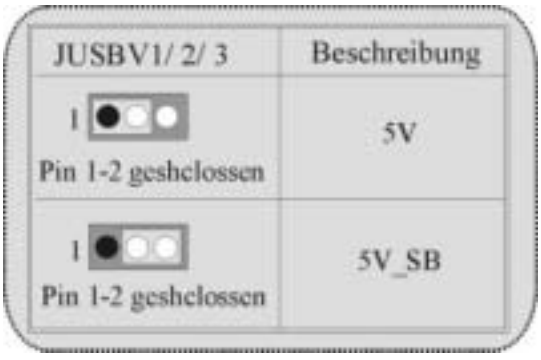
Wake On LAN Header: JWOL1



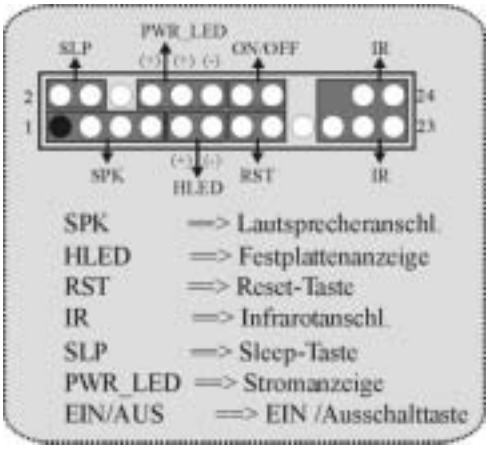
Front USB Header: JUSB2

Pin	Beschreibung	Pin	Beschreibung
1	+5V	2	+5V
3	Data (-)	4	Data (-)
5	Data (+)	6	Data (+)
7	Masse	8	Masse
9	Schlüssel	10	Kein

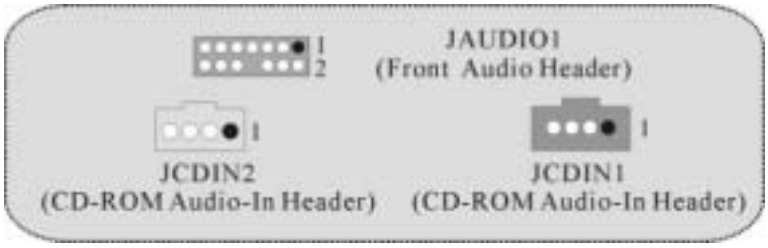
Auswahl von 5V/ 5VSB fürUSB: JUSBV1/ JUSBV2JUSBV3

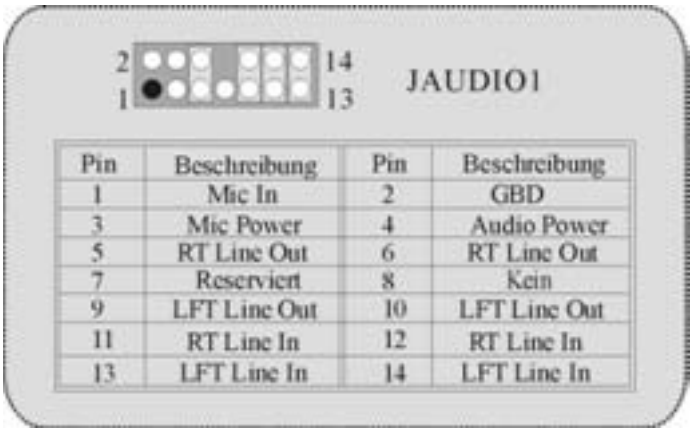


Anschlüsse auf der Vorderseite:JPANEL1

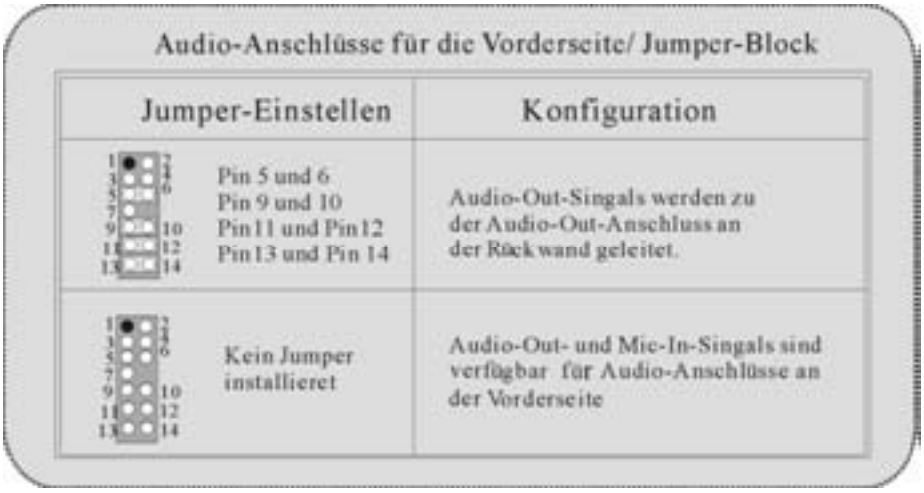


Audio Subsystem: JAUDIO1/ JCDIN1/ JCDIN2

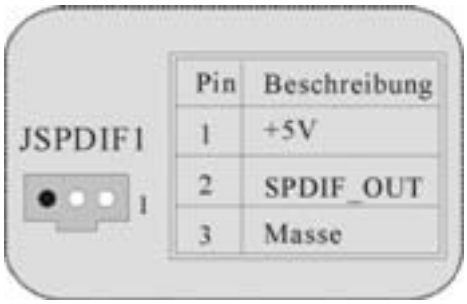




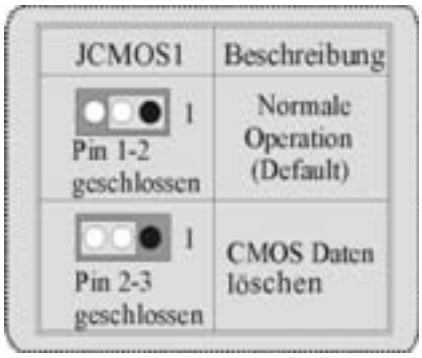
Pin	Beschreibung	Pin	Beschreibung
1	Mic In	2	GBD
3	Mic Power	4	Audio Power
5	RT Line Out	6	RT Line Out
7	Reserviert	8	Kein
9	LFT Line Out	10	LFT Line Out
11	RT Line In	12	RT Line In
13	LFT Line In	14	LFT Line In



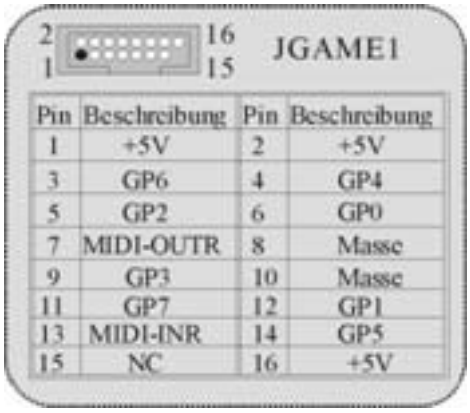
Digital Audio Connector: SPDIF_OUT1



Jumper zum Löschen des CMOS: JCMOS1

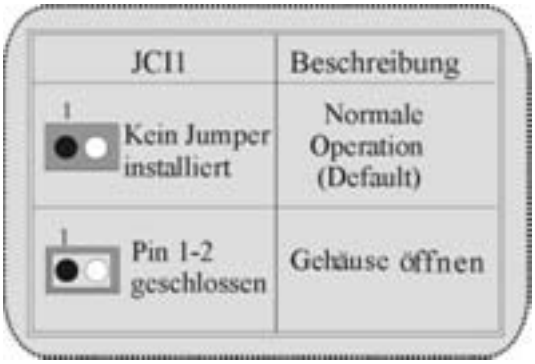


Game Header: JGAME1 (Optional)

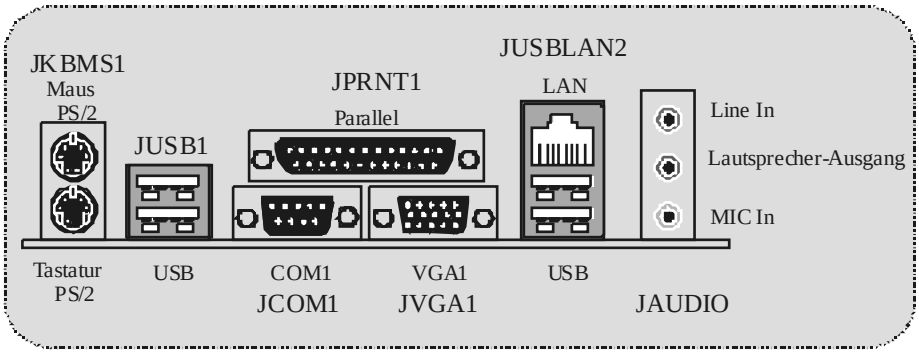


Pin	Beschreibung	Pin	Beschreibung
1	+5V	2	+5V
3	GP6	4	GP4
5	GP2	6	GP0
7	MIDI-OUTR	8	Masse
9	GP3	10	Masse
11	GP7	12	GP1
13	MIDI-INR	14	GP5
15	NC	16	+5V

Jumper zum Gehäuse-Öffnen: JCI1



Anschlüsse auf der Rückwand



Trouble Shooting

PROBABLE	SOLUTION
No power to the system at all Power light don't illuminate, fan inside power supply does not turn on. Indicator light on keyboard does not turn on	* Make sure power cable is securely plugged in * Replace cable * Contact technical support

PROBABLE	SOLUTION
System inoperative. Keyboard lights are on, power indicator lights are lit, hard drive is spinning.	* Using even pressure on both ends of the DIMM, press down firmly until the module snaps into place.

PROBABLE	SOLUTION
System does not boot from hard disk drive, can be booted from CD-ROM drive.	* Check cable running from disk to disk controller board. Make sure both ends are securely plugged in; check the drive type in the standard CMOS setup. * Backing up the hard drive is extremely important. All hard disks are capable o breaking down at any time.

PROBABLE	SOLUTION
System only boots from CD-ROM. Hard disk can be read and applications can be used but booting from hard disk is impossible.	* Back up data and applications files. Reforma the hard drive. Re-install applications and data using backup disks.

PROBABLE	SOLUTION
Screen message says “Invalid Configuration” or “CMOS Failure.”	* Review system’s equipment . Make sure correct information is in setup.

PROBABLE	SOLUTION
Cannot boot system after installing second hard drive.	* Set master/slave jumpers correctly. * Run SETUP program and select correct drive types. Call drive manufacturers for compatibility with other drives.

Solución de Problemas

CAUSA PROBABLE	SOLUCIÓN
No hay corriente en el sistema. La luz de corriente no ilumina, ventilador dentro de la fuente de alimentación apagada. Indicador de luz del teclado apagado.	* Asegúrese que el cable de transmisión esté seguramente enchufado. * Reemplace el cable. * Contacte ayuda técnica.

CAUSA PROBABLE	SOLUCIÓN
Sistema inoperativo. Luz del teclado encendido, luz de indicador de corriente iluminado, disco rígido está girando.	* Presione los dos extremos del DIMM presione para abajo firmemente hasta que el módulo encaje en ellugar.

CAUSA PROBABLE	SOLUCIÓN
Sistema no arranca desde eldisco rígido, puede ser arrancado desde el CD-ROM drive.	* Controle el cable de ejecución desde el disco hasta el disco del controlador. Asegúrese de que ambos lados estén enchufados con seguridad; controle el tipo de disco en la configuraciónestándar CMOS. * Copiando el disco rígido es extremadamente importante. Todos los discos rígidos son capaces de dañarse en cualquier momento.

CAUSA PROBABLE	SOLUCIÓN
Sistema solamente arranca desde el CD-ROM. Disco rígido puede leer y aplicaciones pueden ser usados pero el arranque desde el disco rígido es imposible.	* Copie datos y documentos de aplicación. Vuelva a formatear el disco rígido. Vuelva a instalar las aplicaciones y datos usando e disco de copiado.

CAUSA PROBABLE	SOLUCIÓN
Mensaje de pantalla "Invalid Configuration" o "CMOS Failure."	* Revise el equipo del sistema. Asegúrese de que la información configurada seacorrecta.

CAUSA PROBABLE	SOLUCIÓN
No puede arrancar después de instalar el segundo disco rígido.	* Fije correctamente el puente master/esclavo. * Ejecute el programa SETUP y seleccione e tipo de disco correcto. Llame a una manufacturación del disco para compatibilidad con otros discos.

Problemlösung

MÖGLICHE URSACHE	LÖSUNG
Das System hat keine Spannungsversorgung. Die Stromanzeige leuchtet nicht, der Lüfter im Inneren der Stromversorgung wird nicht eingeschaltet. Tastaturleuchten sind nicht an.	* Versichern Sie sich, dass das Stromkabel richtig angebracht ist * Ersetzen Sie das Stromkabel * Wenden Sie sich an Ihre Kundendienststelle

MÖGLICHE URSACHE	LÖSUNG
Das System funktioniert nicht. Die Tastaturleuchten sind an, die Stromanzeige leuchtet, die Festplatte dreht sich.	* Drücken Sie das DIMM-Modul bei gleichem Druck an beide Seiten, bis es einrastet.

MÖGLICHE URSACHE	LÖSUNG
Das System wird von der Festplatte nicht hochgefahren, vom CD-ROM-Treiber aber ja.	* Überprüfen Sie das Kabel zwischen Festplatte und Festplatten-Controller. Versichern Sie sich, dass beide Enden richtig angebracht sind; überprüfen Sie den Laufwerktyp in der standardmäßigen CMOS-Einrichtung. * Ein Backup der Festplatte ist sehr wichtig. Alle Festplatten können irgendwann beschädigt werden.

MÖGLICHE URSACHE	LÖSUNG
Das System wird nur von der CD-ROM hochgefahren. Die Festplatte wird gelesen und die Anwendungen sind funktionsfähig, aber es ist nicht möglich, das System von der Festplatte zu starten.	* Machen Sie eine Sicherungskopie von allen Daten und Anwendungsdateien. Formatieren Sie die Festplatte und reinstallieren Sie die Anwendungen und Daten mit Hilfe von Backup-Disks.

MÖGLICHE URSACHE	LÖSUNG
Auf dem Bildschirm erscheint die Meldung "Ungültige Konfiguration" oder "CMOS Fehler."	* Überprüfen Sie die Systemkomponenten und versichern Sie sich, das diese richtig eingerichtet sind.

MÖGLICHE URSACHE	LÖSUNG
Das System kann nach der Installation einer zweiten Festplatte nicht hochgefahren werden.	* Setzen Sie die Master/Slave-Jumper richtig ein. * Führen Sie das SETUP-Programm aus und wählen Sie die richtigen Laufwerktypen. Wenden Sie sich an den Laufwerkhersteller, um die Kompatibilität mit anderen Laufwerken zu überprüfen.

04/4/2003

P4SFC BIOS Setup

BIOS Setup

Introduction

This manual discussed Award™ 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 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 Intel Pentium ® 4 processor input/output system. The BIOS provides critical low-level support for standard devices such as disk drives and serial and parallel ports.

Adding important has customized the Award BIOS™, but nonstandard, features such as virus and password protection as well as special support for detailed fine-tuning of the chipset controlling the entire system.

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

Plug and Play Support

These 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.

APM Support

These 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.

PCI Bus Support

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

DRAM Support

DDR SDRAM (Double Data Rate Synchronous DRAM) are supported.

Supported CPUs

This AWARD BIOS supports the Intel Pentium ® 4 CPU.

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.

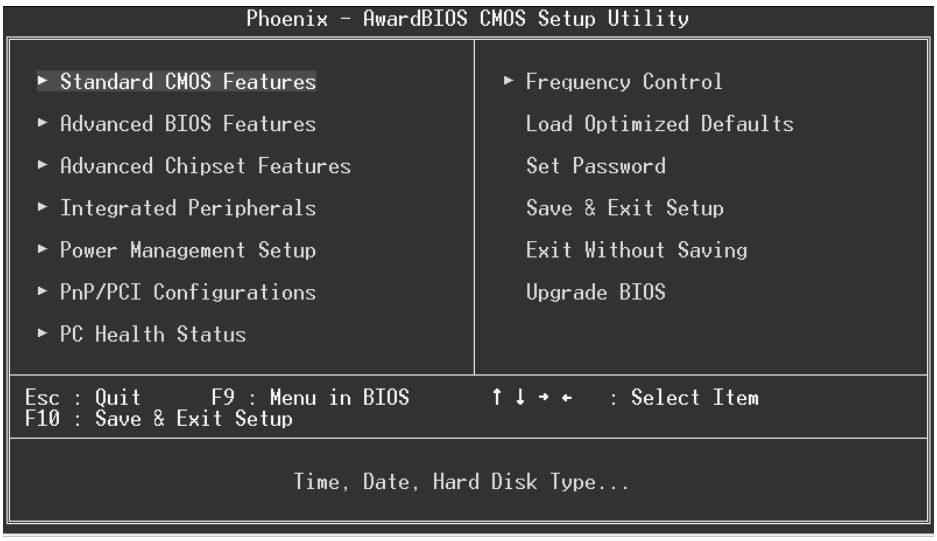
Keystroke	Function
Up arrow	Move to previous item
Down arrow	Move to next item
Left arrow	Move to the item on the left (menu bar)
Right arrow	Move to the item on the right (menu bar)
Move Enter	Move to the item you desired
PgUp key	Increase the numeric value or make changes
PgDn key	Decrease the numeric 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
F7 key	Load the optimized defaults
F10 key	Save all the CMOS changes and exit

1 Main Menu

Once you enter Award BIOS™ CMOS Setup Utility, the Main Menu will appear on the screen. The Main Menu allows you to select from several setup functions. 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**) is just for reference, please refer to the BIOS installed on board, for update information.

■ **Figure 1. Main Menu**



Standard CMOS Features

This submenu contains industry standard configurable options.

Advanced BIOS Features

This submenu allows you to configure enhanced features of the BIOS.

Advanced Chipset Features

This submenu allows you to configure special chipset features.

Integrated Peripherals

This submenu allows you to configure certain IDE hard drive options and Programmed Input/ Output features.

Power Management Setup

This submenu allows you to configure the power management features.

PnP/PCI Configurations

This submenu allows you to configure certain "Plug and Play" and PCI options.

PC Health Status

This submenu allows you to monitor the hardware of your system.

Frequency Control

This submenu allows you to change CPU Vcore Voltage and CPU/PCI clock. **(However, this function is strongly recommended not to use. Not properly change the voltage and clock may cause CPU or M/B damage!)**

Load Optimized Defaults

This selection allows you to reload the BIOS when the system is having problems particularly with the boot sequence. These configurations are factory settings optimized for this system. A confirmation message will be displayed before defaults are set.

Set Password

Setting the password will prohibit everyone except the supervisor from making changes using the CMOS Setup Utility. You will be prompted with to enter a password.

Save & Exit Setup

Save all configuration changes to CMOS(memory) and exit setup. Confirmation message will be displayed before proceeding.

Exit Without Saving

Abandon all changes made during the current session and exit setup. confirmation message will be displayed before proceeding.

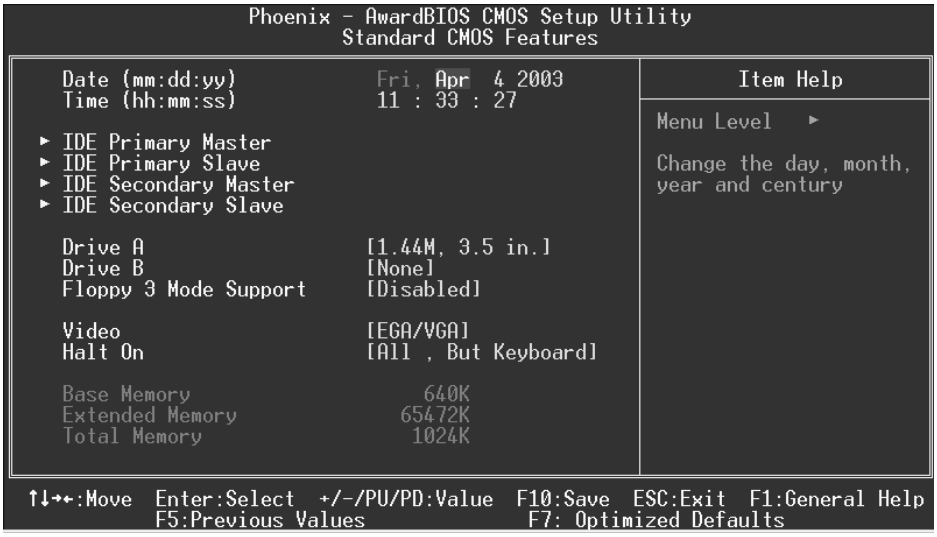
Upgrade BIOS

This submenu allows you to upgrade bios.

2 Standard CMOS Features

The items in Standard CMOS Setup Menu are 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 Setup**



Main Menu Selections

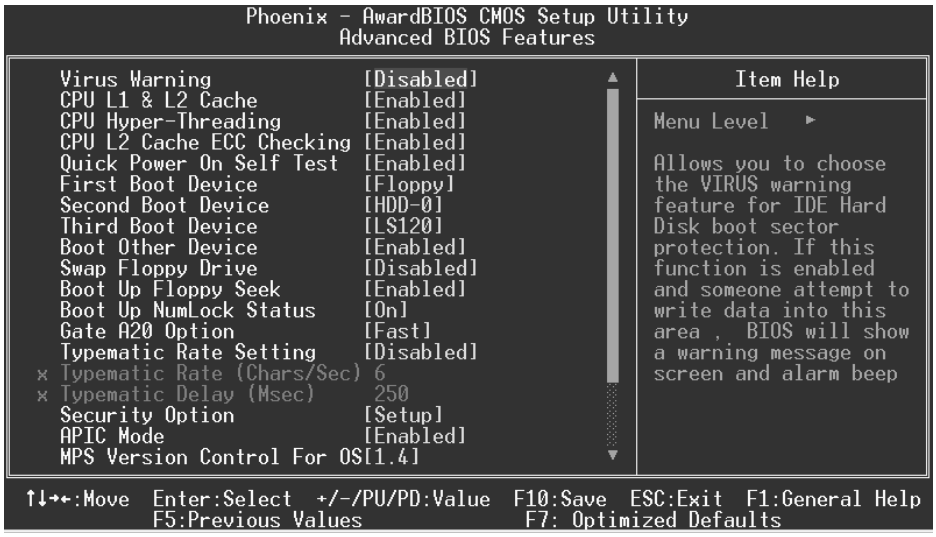
This table shows the selections that you can make on the Main Menu.

Item	Options	Description
Date	mm : dd : yy	Set the system date. Note that the 'Day' automatically changes when you set the date.
Time	hh : mm : ss	Set the system internal clock.
IDE Primary Master	Options are in its sub menu.	Press <Enter> to enter the sub menu of detailed options
IDE Primary Slave	Options are in its sub menu.	Press <Enter> to enter the sub menu of detailed options.
IDE Secondary Master	Options are in its sub menu.	Press <Enter> to enter the sub menu of detailed options.
IDE Secondary Slave	Options are in its sub menu.	Press <Enter> to enter the sub menu of detailed options.
Drive A Drive B	360K, 5.25 in 1.2M, 5.25 in 720K, 3.5 in 1.44M, 3.5 in 2.88M, 3.5 in None	Select the type of floppy disk drive installed in your system.
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 you.
Base Memory	N/A	Displays the amount of conventional memory detected during boot up.
Extended Memory	N/A	Displays the amount of extended memory detected during boot up.
Total Memory	N/A	Displays the total memory available in the system.

3 Advanced BIOS Features

■ **Figure 3. Advanced BIOS Setup**



Virus Warning

This option allows you to choose the Virus Warning feature that is used to protect the IDE Hard Disk boot sector. If this function is enabled and an attempt is made to write to the boot sector, BIOS will display a warning message on the screen and sound an alarm beep.

Disabled (default)	Virus protection is disabled.
Enabled	Virus protection is activated.

CPU L1 & L2 Cache

The option allows you to enable/ disable CPU Cache to speed up the system performance.

Enabled (default)	Enable cache.
Disabled	Disable cache.

CPU Hyper-Threading

This option allows you to enable or disabled CPU Hyper-Threading.

The Choices: Enabled (Default), Disabled.

CPU L2 Cache ECC Checking

This item allows you to enable/disable CPU L2 Cache ECC Checking.
The Choices: Enabled (default), Disabled.

Quick Power On Self Test

Enabling this option will cause an abridged version of the Power On Self-Test (POST) to execute after you power up the computer.

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

First /Second/Third/ Boot Other Device

These 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, HPT370, Enabled, Disabled.

Swap Floppy Drive

For systems with two floppy drives, this option allows you to swap logical drive assignments.
The Choices: Enabled, **Disabled** (default).

Boot Up Floppy Seek

Enabling this option will test the floppy drives to determine if they have 40 or 80 tracks. Disabling this option reduces the time it takes to boot-up.
The Choices: Enabled (default), Disabled.

Boot Up NumLock Status

Selects the NumLock. State after power on.

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

When a key is held down, the keystroke will repeat at a rate determined by the keyboard controller. When enabled, the typematic rate and typematic delay can be configured.
Disabled (default)
Enabled

Typematic Rate (Chars/Sec)

Sets the rate at which a keystroke is repeated when you hold the key down.

The Choices: 6 (default)**,** 8,10,12,15,20,24,30.

Typematic Delay (Msec)

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

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

Security Option

This option will enable only individuals with passwords to bring the system online and/or to use the CMOS Setup Utility.

System	A password is required for the system to boot and is also required to access the Setup Utility.
Setup (default)	A password is required to access the Setup Utility only.

This will only apply if passwords are set from the Setup main menu.

APIC Mode

This option allows you to enable or disable the APIC (Advanced Programmable Interrupt Control).

The Choices: Enabled (default), Disabled.

MPS Version Control For OS

The BIOS supports version 1.1 and 1.4 of the Intel Multi-Processor Specification.
Select version supported by the operation system running on this computer.

The Choices: 1.4 (default), 1.1.

OS Select For DRAM > 64MB

A choice other than Non-OS2 is only used for OS2 systems with memory exceeding 64MB.

The Choices: Non-OS2 (default), OS2.

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

This item allows you to enable/disable the S.M.A.R.T. function of the hard disk.

The Choices: Disabled (default), Enabled.

Report No FDD For WIN 95

Whether report no FDD for WIN 95 or not.

The Choices: No (default), Yes.

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.

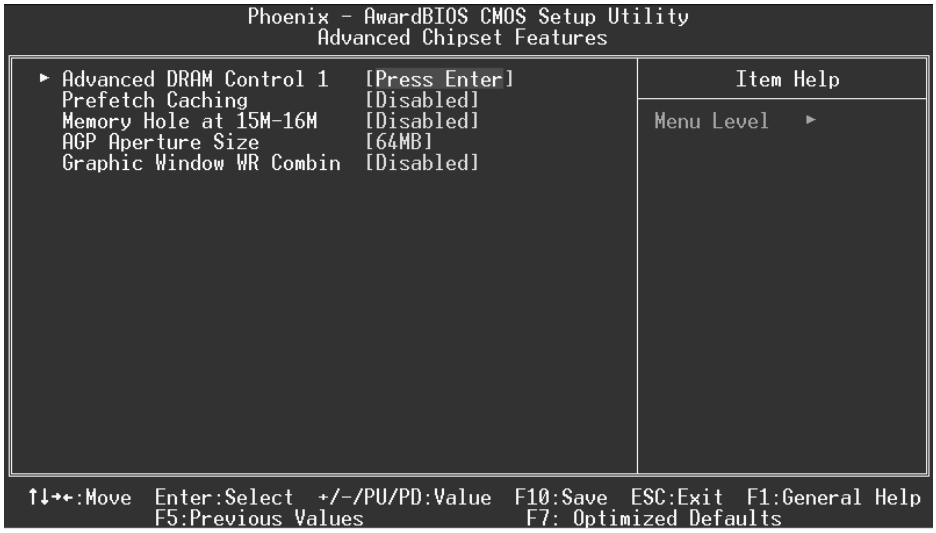
Summary Screen Show

This item allows you to enable/ disable display the Summary Screen Show.
The Choices: Disabled (default), Enabled.

4 Advanced Chipset Features

This submenu allows you to configure the specific features of the chipset installed on your system. This chipset manage bus speeds and access to system memory resources, such as DRAM. It also coordinates communications with the PCI bus. The default settings that came with your system have been optimized and therefore should not be changed unless you are suspicious that the settings have been changed incorrectly.

■ **Figure 4. Advanced Chipset Setup**



Advanced DRAM Control 1

To control the DDR SDRAM. If you highlight the literal "Press Enter" next to the "Advanced DRAM Control" label and then press the enter key, it will take you a submenu with the following options:

DRAM Timing Control
This item determines DRAM clock/ timing follow SPD or not.
The Choices: By SPD(default), Manual.

RAS Precharge Time (tRP)
This items allows you to specify the delay from precharge command to activate command.
The Choices: 2T, **3T** (default).

RAS Active Time (tRAS)
This items allows you to specify the minimum bank active time.
The Choices: 6T (default), 5T.

RAS to CAS Delay (tRCD)
Use this item to specify the delay from the activation of a bank to the time that a read or write command is accepted.
The Choices: 2T, **3T** (default).

CAS Latency Setting
When synchronous DRAM is installed, the number of clock cycles of CAS latency depends on the DRAM timing.
The Choices: By SPD (default), 2T, 2.5T, 3T.

DRAM Addr/ Cmd Rate
The Choices: Auto (default), 1T, 2T.

Prefetch Caching

This item allows you enable/disable Prefetch Caching.
The Choices: Enabled, **Disabled** (default).

Memory Hole at 15M-16M

When enabled, you can reserve an area of system memory for ISA adapter ROM. When this area is reserved , it cannot be cached. Refer to the user documentation of the peripheral you are installing for more information.
The Choices: Disabled (default), Enabled.

AGP Aperture Size

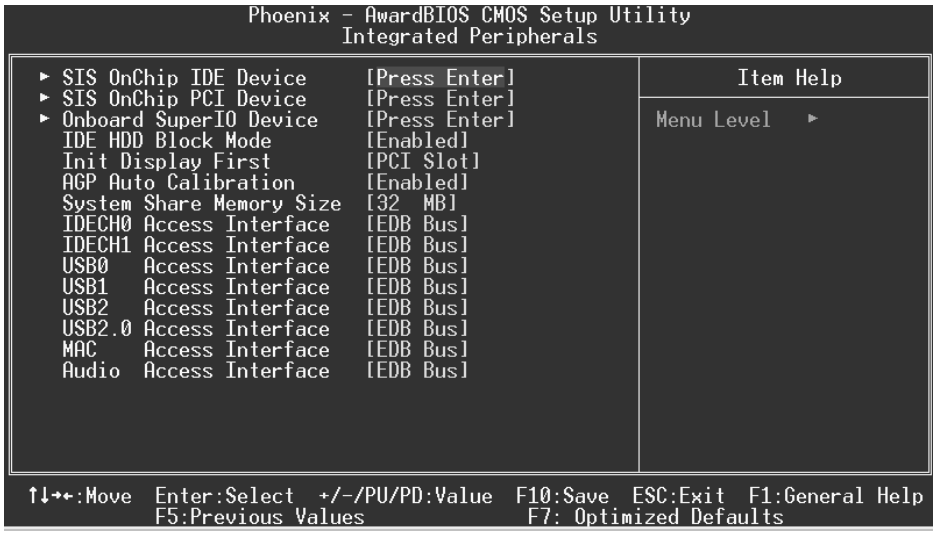
Select the size of the Accelerated Graphics Port (AGP) aperture. The aperture is a portion of the PCI memory address range dedicated for graphics memory address space. Host cycles that hit the aperture range are forwarded to the AGP without any translation.
The Choices: 4M, 8M,16M, 32M, **64M** (default), 128M, 256M.

Graphic Window WR Combin

This item allows you enable/disable Graphic Window write-combine.
The Choices: Enabled, **Disabled** (default).

5 Integrated Peripherals

■ **Figure 5. Integrated Peripherals**



SIS OnChip IDE Device

If you highlight the literal "Press Enter" next to the "SIS OnChip IDE Device" label and then press the enter key, it will take you a submenu with the following options:

Internal PCI/IDE

This item allows you select Internal PCI/IDE.

The Choices: Both (default), Disabled, Primary, Secondary.

IDE Primary / Secondary Master / Slave PIO

The IDE PIO (Programmed Input / Output) fields let you set a PIO mode (0-4) for each of the IDE devices that the onboard IDE interface supports. Modes 0 through 4 provide successively increased performance. In Auto mode, the system automatically determines the best mode for each device.

The Choices: Auto (default), Mode0, Mode1, Mode2, Mode3, Mode4.

Primary / Secondary Master / Slave UltraUDMA

Ultra DMA/133 functionality can be implemented if it is supported by the IDE hard drives in your system. As well, your operating environment requires a DMA driver (Windows 95 OSR2 or a third party IDE bus master driver). If your hard drive and your system software both support Ultra DMA/133, select Auto to enable BIOS support.

The Choices: Auto (default), Disabled.

IDE Burst Mode
This item allows you enable/disable IDE Burst Mode.
The Choices: Enabled (default), Disabled.

SIS OnChip PCI Device

If you highlight the literal "Press Enter" next to the "SIS OnChip PCI Device" label and then press the enter key, it will take you a submenu with the following options:

SIS USB Controller
This option allows you to control SIS USB Controlller.
The Choices: Enabled (default), Disabled.

USB Ports Number
This option allows you to control USB Ports Number.
The Choices: 6 (default), 5, 4, 3.

USB 2.0 Supports
This option allows you to enabled or disabled USB2.0 Supports.
The Choices: Disabled, **Enabled** (default).

USB Keyboard Support
Enables support for USB attached keyboards.
The Choices: Disabled (default), Enabled.

SIS AC97 Audio
This option allows you to control the onboard AC97 Audio.
The Choices: Auto (default), Disabled.

SIS S/W Modem
This option allows you to control the onboard S/W Modem.
The Choices: Auto (default), Disabled.

SIS 10/100M ETHERNET
This option allows you to control the 10/100M Ethernet.
The Choices: Auto (default), Disabled.

SIS MAC Address Input

Onboard SuperIO Device

If you highlight the literal "Press Enter" next to the "Onboard Super IO Device" label and then press the enter key, it will take you a submenu with the following options:

Onboard FDC Controller
Select Enabled if your system has a floppy disk controller (FDC) installed on the system board and you wish to use it. If install and FDC or the system has no floppy drive, select Disabled in this field.
The Choices: Enabled (default), Disabled.

Onboard Serial Port 1
Select an address and corresponding interrupt for the first and second serial ports.
The Choices: Disabled, **3F8/IRQ4** (default), 2F8/IRQ3, 3E8/IRQ4, 2E8/IRQ3, Auto.

Onboard Serial Port 2
Select an address and corresponding interrupt for the first and second serial ports.
The Choices: Disabled (default), 2F8/IRQ3, 3F8/IRQ4, 3E8/IRQ4, 2E8/IRQ3, Auto.

UART Mode Select
This item allows you to determine which Infra Red (IR) function of onboard I/O chip.
The Choices: Normal, AS KIR, **IrDA** (default).

UR2 Duplex Mode
Select the value required by the IR device connected to the IR port. Full-duplex mode permits simultaneous two-direction transmission. Half-duplex mode permits transmission in one direction only at a time.
The Choices: Half (default), Full.

Onboard Parallel Port
This item allows you to determine access onboard parallel port controller with which I/O Address.
The Choices: 378/IRQ7 (default), 278/IRQ5, 3BC/IRQ7, Disabled.

Parallel Port Mode
The default value is SPP.

SPP(default)	Using Parallel port as Standard Printer 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
Select a DMA Channel for the port.
The Choices: 3 (default), 1.

Game Port Address
Game Port I/O Address.
The Choices: 201 (default), 209, Disabled.

Midi Port Address
Midi Port Base I/O Address.
The Choices: 330 (default),300, 290**,** Disabled.

Midi Port IRQ
This determines the IRQ in which the Midi Port can use.
The Choices: 5, **10** (default).

IDE HDD Block Mode

Block mode is otherwise known as block transfer, multiple commands, or multiple sector read/write. Select the "Enabled" option if your IDE hard drive supports block mode (most new drives do). The system will automatically determine the optimal number of blocks to read and write per sector.
The Choices: Enabled (default), Disabled.

Init Display First

With systems that have multiple video cards, this option determines whether the primary display uses a PCI Slot or an AGP Slot.
The Choices: PCI Slot (default), AGP.

AGP Auto Calibration

This item allows you enable/disable AGP Auto Calibration.
The Choices: Enabled (default), Disabled.

System Share Memory Size

This item allows you to select the system share memory size.
The Choices: 32MB (default), 64MB, 16MB, 8MB, 4MB.

IDECH0/1 Access Interface

This item allows you to select the IDECH0/1 Access Interface.
The Choices: EDB Bus (default), PCI Bus.

USB0 Access Interface

This item allows you select the USB0 Access Interface.
The Choices: EDB Bus (default), PCI Bus.

USB1 Access Interface

This item allows you select the USB1 Access Interface.
The Choices: EDB Bus (default), PCI Bus.

USB2 Access Interface

This item allows you select the USB2 Access Interface.
The Choices: EDB Bus (default), PCI Bus.

USB2.0 Access Interface

This item allows you select the USB2.0 Access Interface.
The Choices: EDB Bus (default), PCI Bus.

MAC Access Interface

This item allows you select the MAC Access Interface.
The Choices: Embedded Bus (default), PCI Bus.

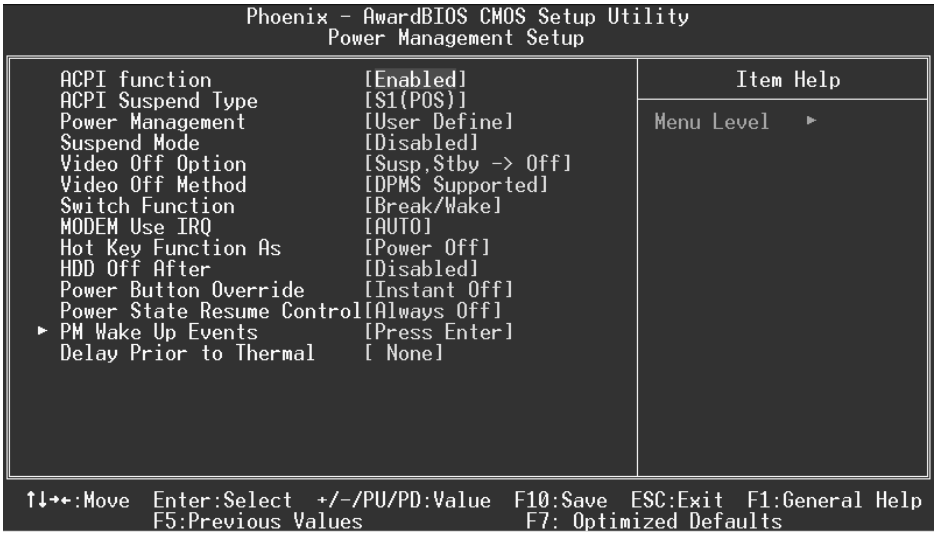
Audio Access Interface

This item allows you select the Audio Access Interface
The Choices: Embedded Bus (default), PCI Bus.

6 Power Management Setup

The Power Management Setup Menu allows you to configure your system to utilize energy conservation and power up/power down features.

- **Figure 6. Power Management Setup**



ACPI function

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

The Choices: Enabled (default), Disabled.

ACPI Suspend Type

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

The Choices: S1 (POS) (default)	Power on Suspend
S3 (STR)	Suspend to RAM
S1 & S3	POS+STR

Power Management

This category allows you to select the type (or degree) of power saving and is directly related to the following modes:
1.HDD Power Down.

2.Suspend Mode.

There are four options of Power Management, three of which have fixed mode settings

Min. Power Saving

Minimum power management.
Suspend Mode = 1 hr.

Max. Power Saving

Maximum power management only available for sl CPU's.
Suspend Mode = 1 min.

User Defined (default)

Allows you to set each mode individually.
When not disabled, each of the ranges are from 1 min. to 1 hr.

Suspend Mode

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

The Choices: Disabled (default), 1 Min, 2 Min, 4 Min, 6 Min, 8 Min, 20 Min, 30 Min, 40 Min, 1 Hour.

Video Off Option

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

The Choices: Suspend→ Off, Always on, **Susp, Stby→ Off** (Default), All modes→ Off.

Video Off Method

This option determines the manner in which the monitor is goes blank.

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.

DPMS Supported (default)

Initial display power management signaling.

Switch Function

You can choose whether or not to permit your system or enter complete suspend mode. Suspend mode offers greater power savings, with a correspondingly longer with a correspondingly longer awakening period.

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

Modem Use IRQ

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

The Choices: Auto (default), 3, 4, 5, 7, 9, 10, 11, NA.

Hot Key Function As

This item allows you select Hot Key Function As Power Off (Ctrl-Alt-Backspace).

The Choices: Power Off (default), Suspend, Disabled.

HDD Off After

After a selected period of drive inactivity, the hard disk drive will power down while all other devices remain active.

The Choices: Disabled (default), 1 Min, 2 Min, 3 Min, 4 Min, 5 Min, 6 Min, 7 Min, 8 Min, 9 Min, 10 Min, 11 Min, 12 Min, 13 Min, 14 Min, 15 Min.

Power Button Override

When you select Delay 4 sec, pressing the power button for more than 4 seconds forces the system to enter the Soft-Off state.

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

Power State Resume Control

This item allows you to select Power State Resume Control.

The Choices: Always off (default), Always on, Keep Pre-State.

Chassis Open Warning

This item allows you to enable or disable chassis open warning beep sound.

The Choices: Enabled, **Disabled** (Default).

PM Wake Up Events

If you highlight the literal "Press Enter" next to the "PM Wake Up Events" label and then press the enter key, it will take you a submenu with the following options:

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

This item allows you enable/disable IRQ [3-7,9-15] NMI.

The Choices: Enabled (default), Disabled.

IRQ 8 Break Suspend

This item allows you enable/disable IRQ8 Break Suspend.

The Choices: Disabled (default), Enabled.

RING/ WOL Power Up Control
This item allows you to control the RING Power Up.
The Choices: Enabled, **Disabled** (default).

MACPME Power Up Control
This item allows you to control the MACPME Power Up.
The Choices: Enabled, **Disabled** (default).

PCIPME Power Up Control
This item allows you to control the PCIPME Power Up.
The Choices: Enabled, **Disabled** (default).

Power Up by Alarm
When you select Enabled, fields appear that let you set the alarm that returns the system to Full On state.
The Choices: Disabled (default), Enabled.

Month Alarm
Select a month (1-12) or NA if you want the alarm active during all months
Day of Month Alarm
Select a date in the month. Select 0 if you prefer to set a weekly alarm.
Time (hh:mm:ss) Alarm
Set the time you want the alarm to go off on the days when it is activated.

Reload Global Timer Events

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

Primary IDE	**Disabled** (default), Enabled.
Secondary IDE	**Disabled** (default), Enabled.
FDD, COM, LPT Port	**Disabled** (default), Enabled.
PCI, PIRQ[A-D]#	**Disabled** (default), Enabled.

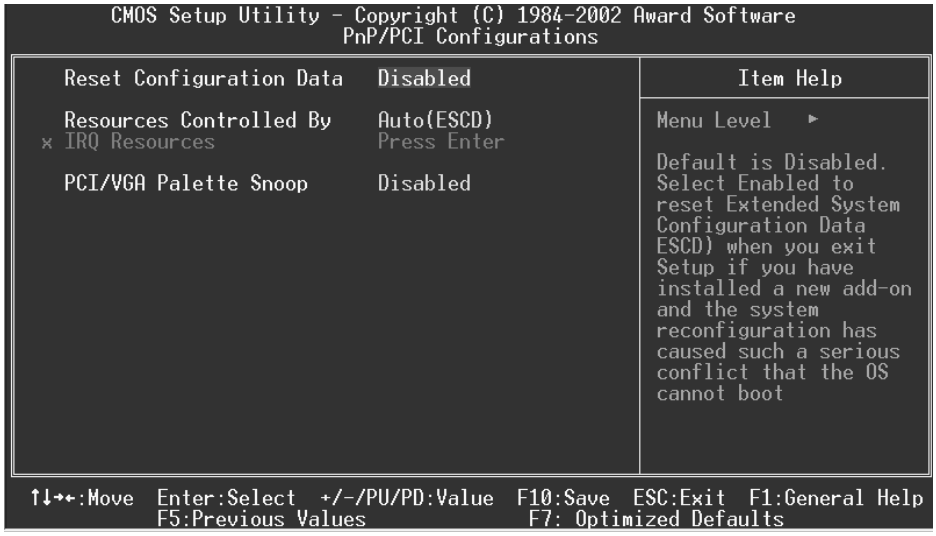
Delay Prior to Thermal

Set this item to enable the CPU Thermal function to engage after a specified time.
The Choices: None (default), 1Min, 2Min, 4Min, 8Min, 16Min, 32Min, 64Min.

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 uses when communicating with its own special components. This section covers some very technical items and it is strongly recommended that only experienced users should make any changes to the default settings.

- **Figure 7. PnP/PCI Configurations**



Reset Configuration Data

The system BIOS supports the PnP feature which requires the system to record which resources are assigned and protects 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 in the system BIOS. If the Disabled (default) option is chosen, the system's ESCD will update only when the new configuration varies from the last one. If the Enabled option is chosen, the system is forced to update ESCDs and then is automatically set to the "Disabled" mode.

The above settings will be shown on the screen only if "Manual" is chosen for the resources controlled by function.
Legacy is the term, which signifies that a resource is assigned to the ISA Bus and provides non-PnP ISA add-on cards. PCI / ISA PnP signifies that a resource is assigned to the PCI

Bus or provides for ISA PnP add-on cards and peripherals.

The Choices: Disabled (default), Enabled.

Resources Controlled By

By Choosing "**Auto(ESCD)**" (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

This submenu will allow you to assign each system interrupt a type, depending on the type of device using the interrupt. When you press the "Press Enter" tag, you will be directed to a submenu that will allow you to configure the system interrupts. This is only configurable when "Resources Controlled By" is set to "Manual".

IRQ-3	assigned to	PCI Device
IRQ-4	assigned to	PCI Device
IRQ-5	assigned to	PCI Device
IRQ-7	assigned to	PCI Device
IRQ-9	assigned to	PCI Device
IRQ-10	assigned to	PCI Device
IRQ-11	assigned to	PCI Device
IRQ-12	assigned to	PCI Device
IRQ-14	assigned to	PCI Device
IRQ-15	assigned to	PCI Device

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.

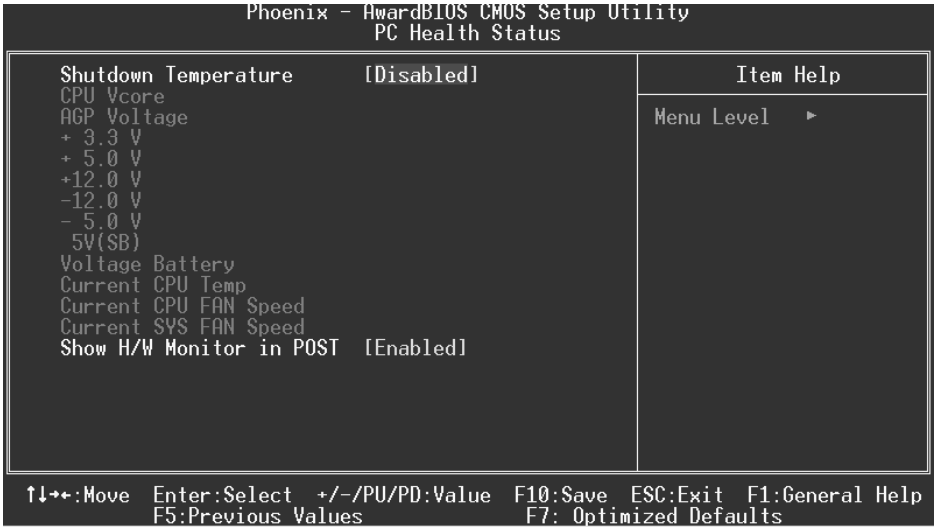
However, the color information coming from the VGA controller is drawn from the palette table inside the VGA controller to generate the proper colors, and the graphic controller needs to know what is in the palette of the VGA controller. To do this, the non-VGA graphic controller watches for the Write access to the VGA palette and registers the snoop data. In PCI based systems, where the VGA controller is on the PCI bus and a non-VGA graphic controller is on an ISA bus, 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)	Disables the function.
Enabled	Enables the function.

8 PC Health Status

■ **Figure 8. PC Health Status**



Shutdown Temperature

This item allows you to set up the CPU shutdown Temperature. This item only effective under Windows 98 ACPI mode.

The Choices: Disabled (default), $60^{O}C/140^{O}F$, $65^{O}C/149^{O}F$, $70^{O}C/158^{O}F$, $75^{O}C/167^{O}F$.

CPU Vcore/AGP Voltage/+3.3V/+5V/+12V/-12V/-5V/ 5V(SB) Voltage Battery

Detect the system's voltage status automatically.

Current CPU Temp

This field displays the current temperature of CPU.

Current CPUFAN Speed

This field displays the current speed of CPU fan.

Current SYS FAN Speed

This field displays the current speed SYSTEM fan.

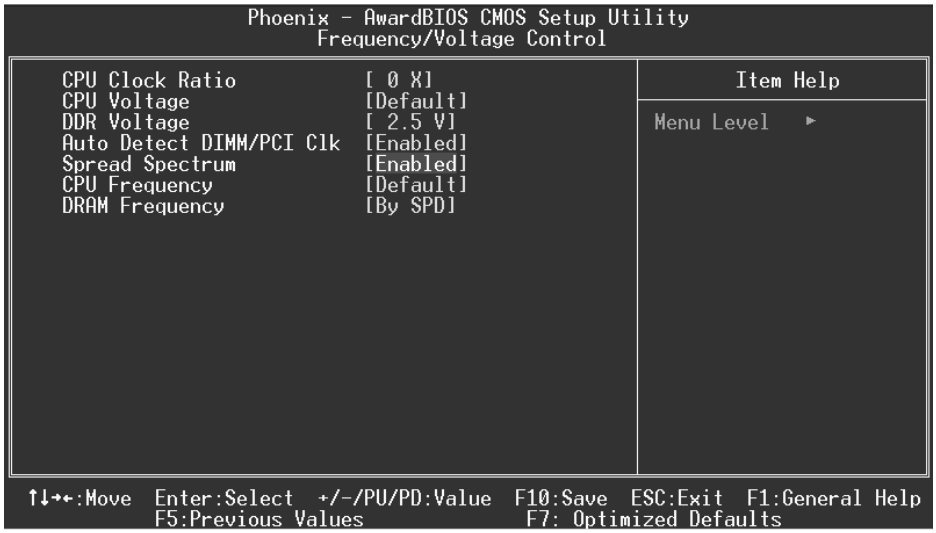
Show H/W Monitor in POST

If your computer contains a monitoring system, it will show PC health status during POST stage.

The Choices: Enabled (Default), Disabled.

9 Frequency Control

■ **Figure 9. Frequency Control**



CPU Clock Ratio

This item allows you to select the CPU Ratio.

The Choices: 0X (default).

CPU Voltage

This item allows you to select CPU Voltage Regulator.

The Choices: 2.5V (default), 2.6V, 2.7V, 2.8V.

DDR Voltage

This item allows you to select DDR Voltage Regulator.

The Choices: 2.5V (Default), 2.6, 2.7, 2.8.

Auto Detect DIMM/ PCI Clk

This item allows you to enable / disable auto Detect PCI Clock.

The Choices: Enabled (default), Disabled.

Spread Spectrum

This item allows you to enable/disable the Spread Spectrum function.
The Choices: Enabled (default), Disabled.

CPU Frequency

This item allows you to control CPU Frequency.
The Choices: Default (default), 100MHz, 133MHz.

DRAM Frequency

This item allows you to control DRAM Frequency.
The Choices: By SPD (default), 200MHz, 266MHz, 333MHz.

If unfortunately, the system's frequency that you are selected is not functioning, there are two methods of booting-up the system.
Method 1: Clear the CMOS data by setting the JCMOS1 ((2-3) closed)) as "ON" status. All the CMOS data will be loaded as defaults setting.
Method 2: Press the <Insert> key and Power button simultaneously, after that keep-on pressing the <Insert> key until the power-on screen showed. This action will boot-up the system according to FSB of the processor.