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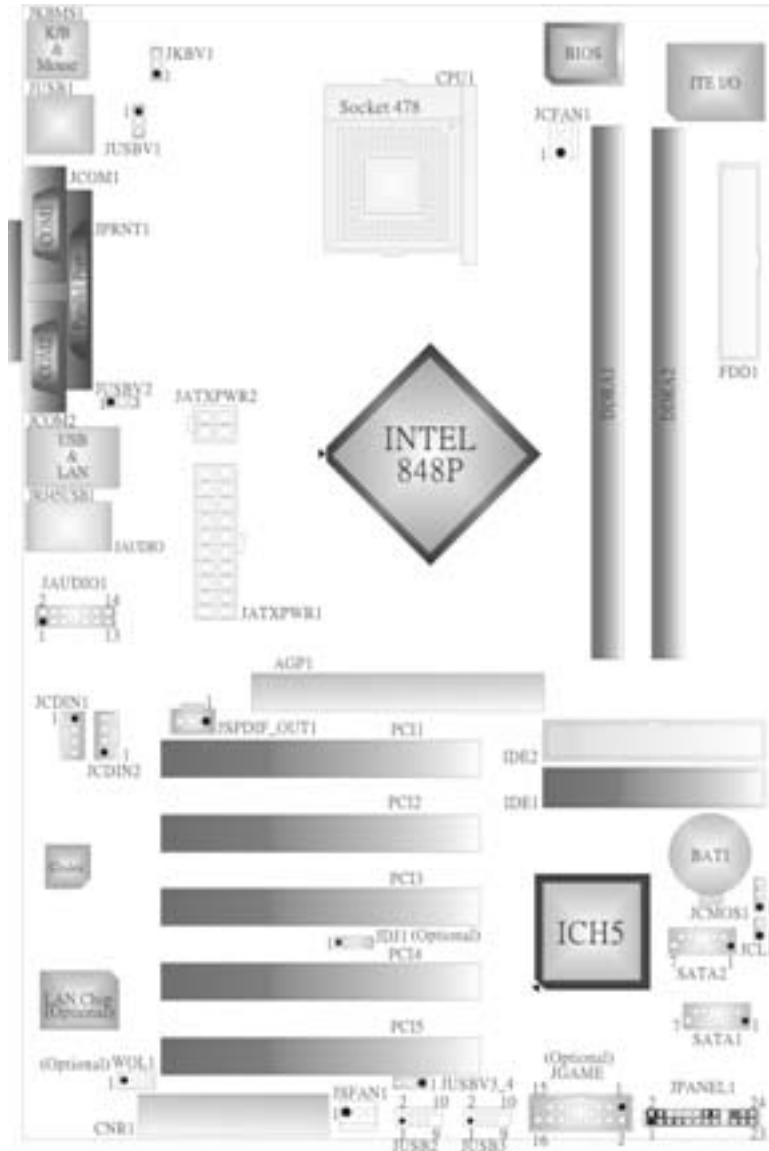
Contents

Layout of P4TSP-D2 Version 1.x

NOTE: ●represents the first pin.

Component Index for P4TSP-D2 Version 1.x

A. Power Source Selection for Keyboard and Mouse (JKBV1)

B. Power Source Selection for USB (JUSBV1)

C. Back Panel Connector

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B1. Audio DJ Connector (JDJ1): Optional

Layout of P4TSP-D2 Version 7.x
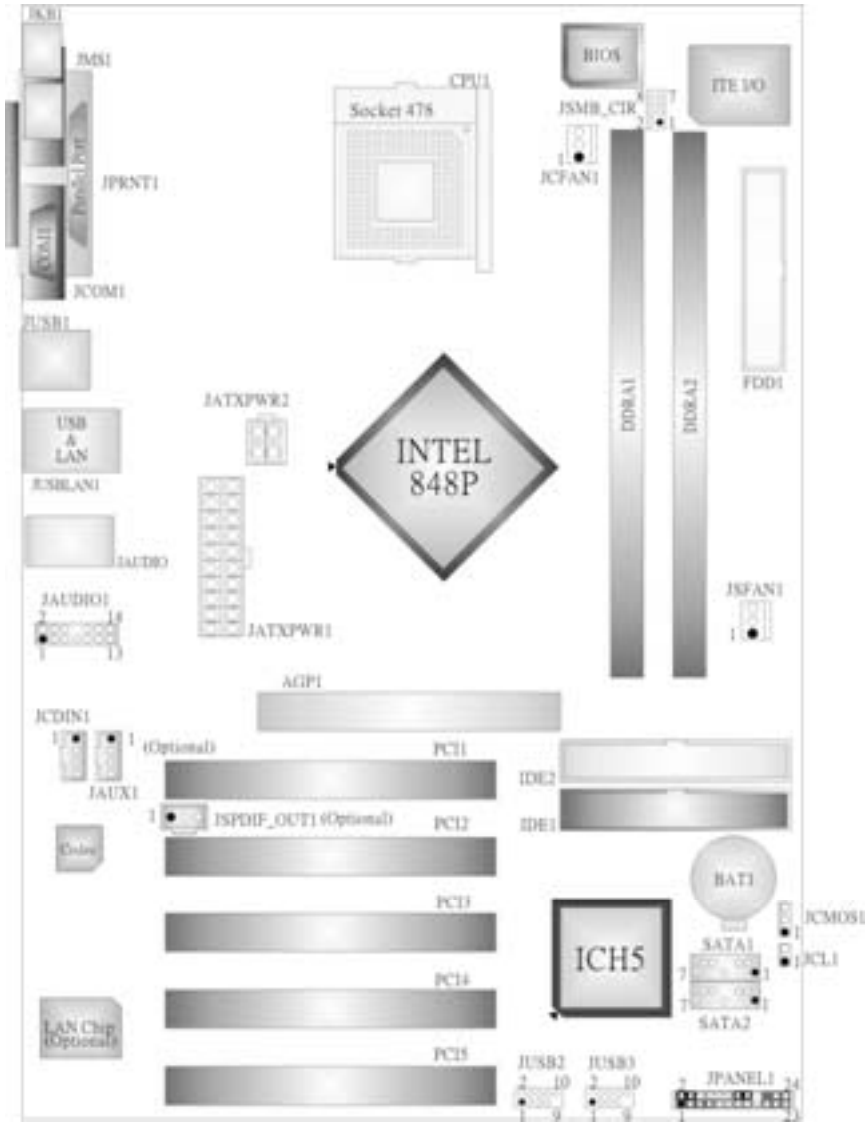
NOTE: ● represents the first pin.

English

P4TSP-D2 Features

A. Hardware

CPU
- Provides Socket 478.
- Supports the Intel® Pentium® 4 processor to 3.2GHz.
- Supports the Intel® Pentium® 4 Northwood CPU. (Willamette not supported)
- Supports the Intel® Pentium® 4 478-pin Prescott CPU.
- Front Side Bus at 400/533/800MHz.
- Supports Hyper-Threading Technology.

Chipset
- North Bridge: Intel 848P.
- South Bridge: Intel ICH5.

Main Memory
- Supports 64-bit wide DDR data channels with 2 DIMMs.
- Available bandwidth up to 3.2GB/s (DDR 400) for single-channel mode.
- Supports 128-Mb, 256-Mb, 512-Mb DDR technologies.
- Supports only x8, x16, DDR devices.
- Supports four bank devices.
- Maximum memory size is 2GB.

Super I/O
- Chip: ITE IT8712.
- Low Pin Count Interface.
- Provides the most commonly used legacy Super I/O functionality.
- Environment Control initiatives,
  - H/W Monitor
  - Fan Speed Controller
  - ITE's "Smart Guardian" function

Slots
- Five 32-bit PCI bus master slots.
- One CNR slot. (only optional on version 1.x)
- One AGP 4X/8X compatible slot.

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

LAN (optional)
- Chip: RTL8100C/RTL8110S(B)
- Supports 10Mb/s, 100Mb/s, and 1000Mb/s auto-negotiation operation.

- Half/Full duplex capability.
- Supports ACPI, PCI power management.

On Board AC'97 Sound Codec
- Chip: CMI9739A (for v.1.0-v.1.2)/ CMI9761A (for v.1.3 &v.7.x).
- Compliant with AC'97 specification.
- AC97 2.2 interface (CMI9739A)/ AC97 2.3 interface (CMI9761A).
- Supports 6 channels.
- Supports stereo microphone. (only for CMI9761A.)

On Board Peripherals
a. Rear side
- 2 serial ports. (version 7.x only supports one serial port.)
- 1 parallel port. (SPP/EPP/ECP mode)
- Audio ports in vertical position.
- 1 RJ-45 LAN jack. (optional)
- PS/2 mouse and PS/2 keyboard.
- 4 USB2.0 ports. (optional)

b. Front Side
- 1 floppy port supports 2 FDDs with 360K, 720K, 1.2M, 1.44M and 2.88Mbytes.
- 4 USB2.0 ports.
- 1 front audio header.
- 1 S/PDIF_Out header.

Dimensions
- ATX Form Factor: 20.3 X 30.5cm (W x L) (for version 1.x)
- ATX Form Factor: 20.3 X 29.3 cm (W x L) (for version 7x)

B. BIOS & Software

BIOS
- Award legal BIOS.
- APM1.2.
- ACPI.
- USB Function.

Software
- Supports Warpspeeder™, 9th Touch™, BootBlocker™, WinFlasher™, FLASHER™.
- Offers the highest performance for Windows 98 SE, Windows 2000, Windows Me, Windows XP, UNIX series, etc.

Package contents

- HDD Cable X 1
- FDD Cable X 1
- User's Manual X 1

- Fully Setup Driver CD X 1
- USB 2.0 Cable X1 (optional)
- S/PDIF Cable X 1 (optional)
- Rear I/O Panel for ATX Case X 1
- Serial ATA Cable X 1 (optional)
- Serial ATA Power Switch Cable X 1 (optional)

How to set up a Jumper?

The illustration shows how to set up jumpers. When a Jumper cap is placed on pins, the jumper is "close". If no jumper cap is placed on the pins, the jumper is "open". The illustration shows a 3-pin jumper whose pin1 and 2 are "close" when a jumper cap is placed on these 2 pins.

| Jumper open | Jumper close | Pin 1-2 close |
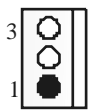
CPU Installation

Step1: Pull the lever sideways away from the socket and then raise the lever up to a 90-degree angle.

Step2: Look for the white dot/cut edge. The white dot/cut edge should point wards the lever pivot. The CPU will fit only in the correct orientation.

Step3: Hold the CPU down firmly, and then close the lever to complete the installation.

Step4: Put the CPU Fan on the CPU and buckle it. Connect the CPU fan power cable to the JCFAN1. This completes the installation.

| Step1 | Step2 | Step3 | Step4 |
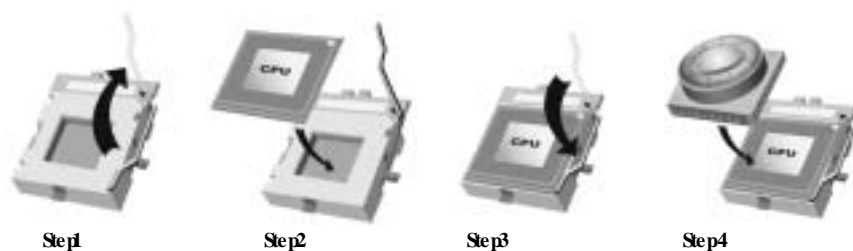
CPU Fan Header: JCFAN1

Pin	Assignment
1	Ground
2	+12V
3	FAN RPM rate Sense

JCFAN1

System Fan Header: JSFAN1

Pin	Assignment
1	Ground
2	+12V
3	FAN RPM rate Sense

JSFAN1

DDR DIMM Modules: DDRA1/ DDRA2

DRAM Access Time: 2.5V Unbuffered/no registered (without ECC) DDR SDRAM PC2100/ PC2700/ PC3200 Type required.
DRAM Type: 128MB/ 256MB/ 512MB/ 1GB DIMM Module. (184 pin)

DIMM Socket Location	DDR Module	Total Memory Size (MB)
DDRA1	64MB/128MB/256MB/512MB/1GB *1	Max is 2GB
DDRA2	64MB/128MB/256MB/512MB/1GB *1	

Only for reference

Installing DDR Module

1. Unlock a DIMM slot by pressing the retaining clips outward. Align a DIMM to the slot in the way that the notch of the DIMM matches the break of the slot.

2. Insert the DIMM vertically and firmly into the slot until the retaining chip snap back in place and the DIMM is properly seated

Jumpers, Headers, Connectors & Slots

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.

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 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.

Peripheral Component Interconnect Slots: PCI 1-5

This motherboard is equipped with 5 standard PCI slots. PCI stands for Peripheral Component Interconnect, and it is a bus standard for expansion cards. This PCI slot is designated as 32 bits.

Accelerated Graphics Port Slot: AGP1
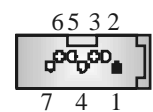
Your monitor will attach directly to that video card. This motherboard supports video cards for PCI slots, but it is also equipped with an Accelerated Graphics Port (AGP). An AGP card will take advantage of AGP technology for improved video efficiency and performance, especially with 3D graphics.

Communication Network Riser Slot: CNR1 (not support version 7.x)

The CNR specification is an open Industry Standard Architecture, and it defines a hardware scalable riser card interface, which supports modem only.

Serial ATA Connector: SATA1/ SATA2

The motherboard has a PCI to SATA Controller with 2 channels SATA interface, it satisfies the SATA 1.0 spec and with transfer rate of 1.5Gb/s.

	Pin	Assignment	Pin	Assignment
6 5 3 2 7 4 1 **SATA1/ SATA2**	1	Ground	2	TX+
	3	TX-	4	Ground
	5	RX-	6	RX+
	7	Ground		

Front Panel Connector: JPANEL1

Pin	Assignment	Function	Pin	Assignment	Function
1	+5V	Speaker	2	Sleep Control	Sleep
3	NA	Connector	4	Ground	Button
5	NA		6	NA	NA
7	Speaker		8	Power LED (+)	POWER
9	HDD LED (+)	Hard Drive	10	Power LED (+)	LED
11	HDD LED (-)	LED	12	Power LED (-)	
13	Ground	Reset	14	Power Button	Power-on
15	Reset Control	Button	16	Ground	Button
17	NA		18	KEY	
19	NA	IrDA	20	KEY	IrDA
21	+5V	Connector	22	Ground	Connector
23	IRTX		24	IRRX	

Power Connectors: JATXPWR1 / JATXPWR2

PIN	Assignment	PIN	Assignment
1	+3.3V	11	+3.3V
2	+3.3V	12	-12V
3	Ground	13	Ground
4	+5V	14	PS_ON
5	Ground	15	Ground
6	+5V	16	Ground
7	Ground	17	Ground
8	PW_OK	18	-5V
9	Standby Voltage +5V	19	+5V
10	+12V	20	+5V

	PIN	Assignment	PIN	Assignment
JATXPWR2	1	+12V	3	Ground
	2	+12V	4	Ground

Power Source Selection for Keyboard/Mouse: JKBV1 (only optional on version 1.x)

JKBV1	Assignment	Description
3 ⃝ ⃝ 1 ⬤ Pin 1-2 close	+5V	+5V for keyboard and mouse
3 ⃝ ⃝ 1 ⬤ Pin 2-3 close	+5V Standby Voltage	PS/2 Mouse and PS/2 Keyboard are powered with +5V standby voltage

Note: In order to support this function "Power-on system via keyboard and mouse", "JKBV1" jumper cap should be placed on pin 2-3.

Power Source Selection for USB: JUSBV1/ JUSBV2/ JUSBV3_4 (only optional on version 1.x)

JUSBV1/JUSBV2/ JUSBV3_4	Assignment	Description
1 ⬤ ⃝ ⃝ 3 Pin 1-2 close	+5V	JUSBV1: 5V for USB at the JUSB1 connector port JUSBV2: 5V for USB at the JRJ45USB1 coonector port JUSBV3_4: 5V for USB at the JUSB2/3 connector ports
1 ⬤ ⃝ ⃝ 3 Pin 2-3 close	+5V Standby Voltage	JUSBV1: JUSB1 port powered with standby voltage of 5V JUSBV2: JRJ45USB1 port powered with standby voltage of 5V JUSBV3_4: JUSB2/3 ports powered with standby voltage of 5V

Note: In order to support this function "Power-on system via USB device", "JUSBV1/JUSBV2/ JUSBV3_4" jumper cap should be placed on pin 2-3 individually.

Clear CMOS Jumper: JCMOS1

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

※ Clear CMOS Procedures:
1. Remove AC power line.
2. Set the jumper to "Pin 2-3 Close".
3. Wait for five seconds.
4. Set the jumper to "Pin 1-2 Close".
5. Power on the AC.
6. Reset your desired password or clear the CMOS data.
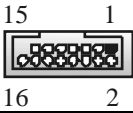
Case Open Connector: JCL1

	Pin	Assignment
1 JCL1	1	Case Open Signal
	2	Ground

AUDIO DJ Connector: JDJ1 (only optional on version 1.x)

	Pin	Assignment	Pin	Assignment
1 5 JDJ1	1	SMBDATA	2	SMBCLK
	3	INT_B	4	KEY
	5	ATX_PWROK		

Game Header: JGAME1 (only optional on version 1.x)

15   1

16   2   **JGAME1**

Pin	Assignment	Pin	Assignment
1	+5V	2	+5V
3	Joystick B Button 1	4	Joystick A Button 1
5	Joystick B Coordinate X	6	Joystick A Coordinate X
7	MIDI Output	8	Ground
9	Joystick B Coordinate Y	10	Ground
11	Joystick B Button 2	12	Joystick A Coordinate Y
13	MIDI Input	14	Joystick A Button 2
15	NA	16	+5V

CD-ROM Audio-In Header: JCDIN1/(JCDIN2: only optional on version 1.x)

JCDIN1/ JCDIN2

Pin	Assignment
1	Left Channel Input
2	Ground
3	Ground
4	Right Channel Input

Front Panel Audio Header: JAUDIO1

2 14
1 13

JAUDIO1

Pin	Assignment	Pin	Assignment
1	Mic In/Center	2	Ground
3	Mic Power/ Bass	4	Audio Power
5	Right Line Out/ Speaker Out Right	6	Right Line Out/ Speaker Out Right
7	Reserved	8	Key
9	Left Line Out/ Speaker Out Left	10	Left Line Out/ Speaker Out Left
11	Right Line In/ Rear Speaker Right	12	Right Line In/ Rear Speaker Right
13	Left Line In/ Rear Speaker Left	14	Left Line In/ Rear Speaker Left
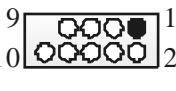
Digital Audio Connector: JSPDIF_OUT1 (optional)

	Pin	Assignment
JSPDIF_OUT1	1	+5V
	2	SPDIF_OUT
	3	Ground
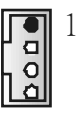
Wake On LAN Header: WOL1 (only optional on version 1.x)

	Pin	Assignment
WOL1	1	+5V_Standby
	2	Ground
	3	Wake up
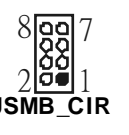
Front USB Header: JUSB2/JUSB3

	Pin	Assignment	Pin	Assignment
JUSB2/3	1	+5V	2	+5V
	3	USB-	4	USB-
	5	USB+	6	USB+
	7	Ground	8	Ground
	9	KEY	10	NA

Auxiliary Audio-In Connector: JAUX1 (only optional on version 7.x)

	Pin	Assignment
JAUX1	1	Left channel AUX_IN
	2	CD_Ground
	3	CD_Ground
	4	Righ channel AUX_IN

SM Bus Consumer Infrared Header: JSMB_CIR (only optional on version 7.x)

	Pin	Assignment	Pin	Assignment
JSMB_CIR	1	Ground	2	+5V Standby
	3	CIRRX	4	CIRTX
	5	NA	6	Power-on Button
	7	SMBDATA	8	SMBCLK

Back Panel Connectors (for version 1.x)

JKBMS1
PS/2 Mouse
JUSB1 USB
JPRNT1 Parallel Port
JRJ45 USB1 LAN (optional)
Line In
Speaker Out
MIC In
PS/2 Keyboard
COM1 **JCOM1**
COM2 **JCOM2**
USB
JAUDIO

Back Panel Connectors (for version 7.x)

Printer Port
LAN
Line In
Speaker Out
Mic In
PS/2 Keyboard
PS/2 Mouse
COM1
USB (Optional)
USB

6 Channel Speakers

Line In/ Rear Speaker (Left & Right)
Speaker Out/ Right & Left
Mic In/ Center & Bass
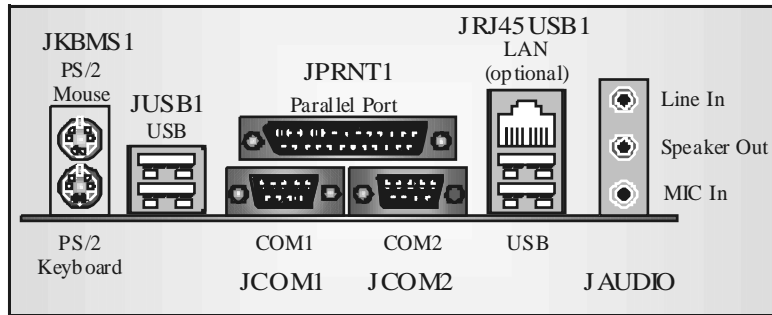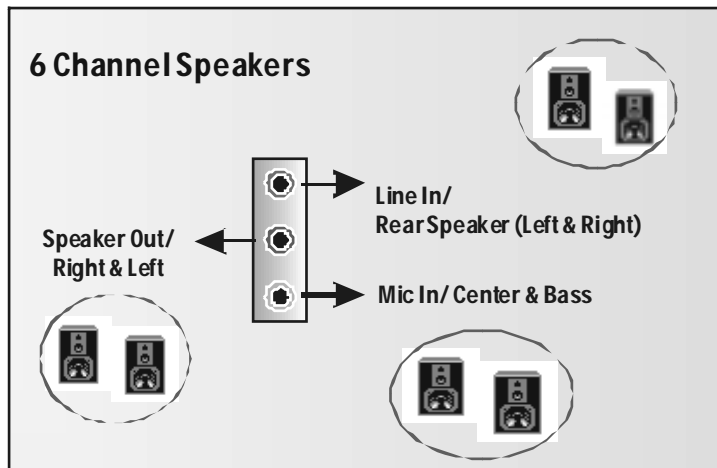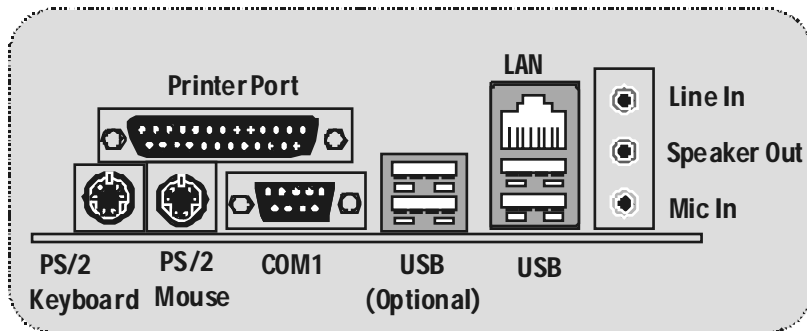
Deutsch

Die Spezifikationen von P4TSP-D2

A. Hardware

CPU
- Uterstützung für Sockel 478.
- Unterstützung für Intel CPU Northwood. (Willamette wird nicht untergestützt)
- Unterstützung für den Intel Pentium$^®$ 4 Prozessor bis zu 3.2GHz.
- Unterstützung für den Intel Pentium$^®$ 4 Prescott CPU.
- FSB mit 400/533/800MHz.
- Uterstützung für die Hyper-Threading Technologie.

Chipsatz
- Die Northbridge: Intel 848P.
- Die Southbridge: Intel ICH5.

Hauptspeicher
- Unterstützung für 64-bit Breite DDR-Datenkanal mit ein oder zwei DIMMs pro Kanal.
- Verfügbare Bandbreite bis zu 3.2GB/s (DDR400) für Einzeln-Kanal-Modus.
- Unterstützung für 128-MB, 256-Mb und 512-Mb DDR Technologie.
- Unterstützung für x8, x16 DDR Geräte.
- Vier DDR Speicherbänke.
- Die maximale Speichergröße ist 2GB.

Super I/O
- Chip: ITE IT8712.
- Low Pin Count Interface.
- Die meisten gemeinsamen vergebrauchten Super I/O Funktionen werden geliefert.
- Umweltkontroll-Initiative:
  - H/W Monitor
  - Vetilator-Geschwindigkeit-Controller
  - ITE's "Smart Guardian" Funktion

Steckplätze
- Fünf 32-bit PCI-Bus-Slots.
- Ein CNR-Slot. (optional)
- Ein 4X/8X AGP-Slot.

Onboard-IDE
- Unterstützung für vier IDE Diskettenlaufwerke.
- Unterstützung für PIO Modus 4, Ultra DMA 33/66/100 Bus Master Modus.

LAN (optional)

■ Chip: RTL8100C/ RTL8110S(B).
■ Unterstützung für 10 Mb/s, 100 Mb/s und 1000Mb/s Auto-Negotiation.
■ Halb/Voll-Duplex Fähigkeit.
■ Unterstützung für ACPI, PCI Power Management.

Onboard AC'97 Sound Codec
■ Chip: CMI9739A (für version 1.0-12)/CMI9761A (für version 1.3 &version 7.x).
■ Entspricht der Spezifikation von AC'97.
■ AC97 2.2 Interface (CMI9739A)/ AC97 2.3 Interface (CMI9761A).
■ Unterstützung für 6-Kanal.
■ Unterstützung für Stereo-Mikrofon (für CMI9761A).

Onboard-Peripheriegeräte

a. Rückwand
■ 2 serielle Schnittstellen. (1 serielle Schnittstelle für version 7.x)
■ 1 parallele Schnittstelle. (SPP/EPP/ECP-Modus)
■ Audio-Schnittstellen auf der vertikalen Position
■ 1 RJ-45 LAN Buchse.(optional)
■ PS/2-Maus und PS/2-Tastatur.
■ 4 USB2.0-Ports.

b. Vorderseite
■ 1 Floppy-Port mit Unterstützung für 2 Diskettenlaufwerke.(360KB, 720KB, 1.2MB, 1.44MB und 2.88MB)
■ 4 USB2.0-Ports.
■ 1 Front- Audio-Header.
■ 1 S/PDIF-Header. (optional)

Abmessung
■ ATX Form-Factor. 20.3 X 30.5cm (W XL)
■ ATX Form-Factor. 20.3 X 30.5cm (W XL) (für version 7.x)

B. BIOS & Software

BIOS
■ Award legal BIOS.
■ Unterstützung für APM1.2.
■ Unterstützung ACPI.
■ Unterstützung USB Funkion.
Software
■ Unterstützung für Warpspeeder™, 9th Touch™, BootBlocker™, WinFlasher™, FLASHER™
■ Unterstützung für die am meisten verbreiteten Betriebsysteme wie Windows 98SE., Windows 2000, Windows ME, Windows XP and SCO UNIX usw..

Verpackungsinhalt

■ HDD Kable X 1
■ FDD Kable X 1
■ Benutzer Handbuch X1
■ Treiber CD für Installation X1
■ USB 2.0 Kable X1 (optional)
■ S/PDIF Kable X 1 (optional)
■ I/O-Rückwand für ATX Gehäuse X 1
■ Serial ATA Kable X 1 (optional)
■ Serial ATA Netzschalter Kable X 1 (optional)

Einstellung der Jumper

Die Abbildung verdeutlicht, wie Jumper eingestellt werden. Pins werden durch die Jumper-Kappe verdeckt, ist der Jumper "*geschlossen*". Keine Pins werden durch die Jumper-Kappe verdeckt, ist der Jumper "*geöffnet*". Die Abbiildung zeigt einen 3-Pin Jumper dessen Pin1 und Pin2 "*geschlossen*" sind, bzw. es befindet sich eine Jumper-Kappe auf diesen beiden Pins.

Jumper geschlossen   Jumper geöffnet   Pin1-2 geschlossen
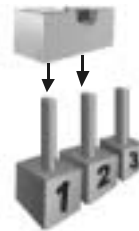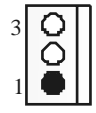
Installation der CPU
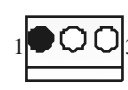
Schritt 1: Ziehen Sie den Hebel seitlich vom Sockel weg. Heben Sie den Hebel dann in 90-Grad-Winkel nach oben.

Schritt 2: Suchen Sie nach der scharfen Kante, die auf Drehpunkt des Hebels weisen muss. Die CPU passt nur, wenn sie richtig ausgerichtet ist.

Schritt 3: Drücken Sie die CPU fest in den Sockel und schließen Sie den Hebel.

Schritt 4: Stecken Sie Ihren CPU-Lüfter auf die CPU. Schließen Sie die Stromversorgungsstecker für CPU-Lüfter an JCFAN1 an. Dann beenden Sie die Installation.

Schritt 1 **Schritt 2** **Schritt 3** **Schritt 4**
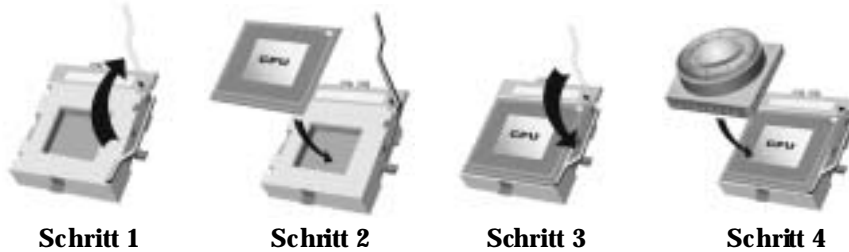
CPU-Lüfter Header: JCFAN1

Pin	Beschreibung
1	Masse
2	+12V
3	Lüfter RPM Geschwindigkeit Sensor

System-Lüfter Header: JSFAN1

Pin	Beschreibung
1	Masse
2	+12V
3	Lüfter RPM Geschwindigkeit Sensor

DDR-DIMM-Modules: DDRA1/ DDRA2

DRAM-Zugriffszeit: 2.5V unbuffered/ nicht registrierter (ohne ECC) DDR SDRAM PC2100/ PC2700/ PC3200 Typ erforderlich.

DRAM-Typ: 128MB/ 256MB/ 512MB/ 1GB DIMM-Module (184-Pin)

DIMM-Sockel Standort	DDR-Module	Speichergröße (MB)
DDRA1	64MB/128MB/256MB/512MB/1GB *1	Maximal ist 2GB
DDRA2	64MB/128MB/256MB/512MB/1GB *1	

Nur als Referenz

Installation von DDR-Modul

1. Öffnen Sie einen DIMM-Slots, indem Sie die seitlich Chips nach außen drücken. Richten Sie das DIMM-Modul so über dem Slot aus, dass das Modul mit der Kerbe in den Slot passt.
2. Drücken Sie das DIMM-Modul in den Slot, bis die seitlichen Clips zuschnappen und das Modul fest sitzt.

Jumpers, Headers, Anschlüsse & Slots

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.

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 zwei 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.

Peripheral Component Interconnect Slots: PCI 1-5

Dieses Motherboard ist mit 5 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.

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.

Communication Network Riser Slot: CNR1 (optional)

Die CNR-Angaben entsprechen einer offenen Industry Standard Architecture, und sie definieren eine Hardware-skalierbare Riser-Card-Schnittstelle, welche nur Audio, Netzwerk und Modem unterstützt.
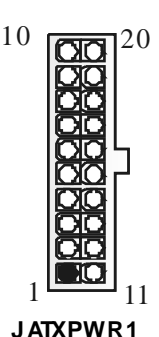
Serial ATA Connector: JSATA1/JSATA2

Auf diesen Motherboard gibt es ein PCI-to-SATA Controller mit 2-Kanal Interface, die der Spezifikation von SATA 1.0 ertspricht (Dtenübertragung mit 1.5Gb/S)

Anschlüsse für die Vorderseite: JPANEL1
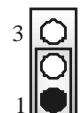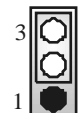
Pin	Belegung	Funktion	Pin	Belegung	Funktion
1	+5V		2	Schlaf - Kortroll	Schlaf -
3	Kein	Lautsprecher-	4	Erde	Knopf
5	Kein	Anschluss	6	Kein	Kein
7	Lautsprecher		8	Power LED (+)	POWER
9	HDD LED (+)	Festplatte	10	Power LED (+)	LED
11	HDD LED (-)	LED	12	Power LED (-)	
13	Masse	Rückstell-	14	Power-Knopf	Power-On
15	Reset-Kontroll	knopf	16	Erde	Knopf
17	Kein		18	Schlüsse	
19	Kein	IrDA-	20	Schlüsse	IrDA
21	+5V	Anschluss	22	Erde	Anschluss
23	IRTX		24	IRRX	

Power Connectors: JATXPWR1/ JATXPWR2

PIN	Belegung	PIN	Belegung
1	+3.3V	11	+3.3V
2	+3.3V	12	-12V
3	Erde	13	Masse
4	+5V	14	PS_ON
5	Erde	15	Erde
6	+5V	16	Erde
7	Erde	17	Erde
8	PW_OK	18	-5V
9	+5V reservierte Spannung	19	+5V
10	+12V	20	+5V

	PIN	Belegung	PIN	Belegung
	1	+12V	3	Erde
JATXPWR2	2	+12V	4	Erde

Auswahl von Stromsmodi für Tastatur/Maus: JKBV1 (optional)

JKBV1	Pin-Belegung	Beschreibung
 Pin 1-2 geschlossen	+5V	+5V für Tastatur und Maus
 Pin 2-3 geschlossen	+5V reservierte Spannung	Durch +5V reservierte Spannung für PS/2-Maus und PS/2-Tastatur zum Erwecken vom System

Anmerkung: Um die Funktion —"Erwecken durch Tastatur/Maus" — zu aktivieren, müssen Pins 2-3 von JKBV1 durch die Jumperkappe verdeckt werden.

Auswahl von Stromsmodi für USB: JUSBV1/JUSBV2/ JUSBV3_4 (optional)

JUSBV1/JUSBV2/ JUSBV3_4	Pin-Belegung	Beschreibung
 Pin 1-2 geschlossen	+5V	JUSBV1: 5V für USB-Port von JUSB1 JUSBV2: 5V für USB-Port von JRJ45USB1 JUSBV3_4: 5V für USB-Port von JUSB2/3
 Pin 2-3 geschlossen	+5V reservierte Spannung	JUSBV1: 5V reservierte Spannung für JUSB1 zum Erwecken JUSBV2: 5V reservierte Spannung für JRJ45USB1 zum Erwecken JUSBV3_4: 5V reservierte Spannung für JUSB2/3 zum Erwecken

Jumper zum Löschen des CMOS: JCMOS1

JCMOS1	Beschreibung
3 ○ ○ ● 1 Pin 1-2 geschlossen	Normale Operation (Default)
3 ○ ○ ● 1 Pin 2-3 geschlossen	CMOS-Daten zum Löschen

※ Prozeduren zum Löschen des CMOS:

1. Ausschalten Sie das System.
2. Lassen Sie Pin 2-3 von JCOMS1 geshclossen sein.
3. Bitte warten Sie 15 Sekunden.
4. Lassen Sie Pin 1-2 von JCOMS1 geshclossen sein.
5. Einschalten Sie das System wieder.
6. Zürücksetzen Sie ihr gewunschtes Kennwort oder löschen Sie die CMOS-Daten.

Serial ATA Anschlüsse: SATA1/ SATA2

	Pin	Belegung	Pin	Belegung
6 5 3 2	1	Erde	2	TX+
	3	TX-	4	Erde
7 4 1	5	RX-	6	RX+
SATA1/ SATA2	7	Erde		

Warnmeldung für Chassis-Öffnen Anschluss: JCL1

	Pin	Belegung
1 ○ ● JCL1	1	Warnmeldung für Chassis-Öffnen
	2	Erde

AUDIO DJ Anschluss: JDJ1 (optional)

Pin	Belegung	Pin	Belegung
1	SMBDATA	2	SMBCLK
3	INT_B	4	Schlüsse
5	ATX_PWROK		

JDJ1

Game Header: JGAME1 (optional)

JGAME1

Pin	Belegung	Pin	Belegung
1	+5V	2	+5V
3	Joystick B Knopf 1	4	Joystick A Knopf 1
5	Joystick B Koordierung X	6	Joystick A Koordierung X
7	MIDI Ausgabe	8	Erde
9	Joystick B Koordierung Y	10	Erde
11	Joystick B Knopf 2	12	Joystick A Koordierung Y
13	MIDI Eingabe	14	Joystick A Knopf 2
15	Kein	16	+5V

CD-ROM Audio-In Header: JCDIN1/(JCDIN2: optional)

JCDIN1/ JCDIN2

Pin	Belegung
1	Linkkanal Eingabe
2	Erde
3	Erde
4	Rechtkanal Eingabe

Digital Audio Anschluss: JSPDIF_OUT1 (optional)

JSPDIF_OUT1

Pin	Belegung
1	+5V
2	SPDIF_Ausgabe
3	Erde

Front Panel Audio Header: JAUDIO1

Pin	Belegung	Pin	Belegung
	2 ⦾⦾⦾ ⦾⦾⦾ 14 1 ■⦾⦾⦾⦾⦾⦾ 13 **JAUDIO1**		
1	Mikrofon-Eingang/ Zentrum	2	Erde
3	Mikrofon-Betriebsspannung /Bass	4	Audio-Betriebsspannung
5	Audio-Signal des rechten Kanals zur Vorderseite / Lautsprecher-Signal des rechten Kanals zur Vorderseite	6	Audio-Signal des rechten Kanals zur Vorderseite / Lautsprecher-Signal des rechten Kanals zur Vorderseite
7	Reserviert für spät. Verwendung durch Kopfhörer-Verstärker	8	Schlüsse
9	Audio-Signal des linken Kanals zur Vorderseite / Lautsprecher-Signal des linken Kanals zur Vorderseite	10	Audio-Signal des linken Kanals zur Vorderseite / Lautsprecher-Signal des linken Kanals zur Vorderseite
11	Audio-Signal des rechten Kanals von der Vorderseite / Lautsprecher-Signal des rechten Kanals von der Vorderseite	12	Audio-Signal des rechten Kanals von der Vorderseite/ Lautsprecher-Signal des rechten Kanals von der Vorderseite
13	Audio-Signal des linken Kanals von der Vorderseite/ Lautsprecher-Signal des linken Kanals von der Vorderseite	14	Audio-Signal des linken Kanals von der Vorderseite/ Lautsprecher-Signal des linken Kanals von der Vorderseite

Wake On LAN Header: WOL1 (optional)

	Pin	Beschreibung
1 ●⦾⦾ **WOL1**	1	+5V_SB
	2	Erde
	3	Wake-up

Front USB Header: JUSB2/JUSB3

Pin	Belegung	Pin	Belegung
1	+5V(geschmelzt)	2	+5V(geschmelzt)
3	USB-	4	USB-
5	USB+	6	USB+
7	Erde	8	Erde
9	Schlüsse	10	Kein

JUSB2/3

Auxiliary Audio-In Connector: JAUX1 (optional)

Pin	Assignment
1	Left channel AUX_IN
2	CD_Erde
3	CD_Erde
4	Righ channel AUX_IN

JAUX1

SM Bus Consumer Infrared Header: JSMB_CIR (optional)

Pin	Assignment	Pin	Assignment
1	Erde	2	+5V geschmelzt
3	CIRRX	4	CIRTX
5	Kein	6	Power-on Button
7	SMBDATA	8	SMBCLK

JSMB_CIR

Anschlüsse für die Rückwand

JKBMS1
PS/2-Maus
JUSB1 USB
JPRNT1 Parallel Port
JRJ45USB1 LAN (optional)
Line In
Lautsprecher Ausgang
MIC In
PS/2-Tastatur
COM1 JCOM1
COM2 JCOM2
USB
JAUDIO
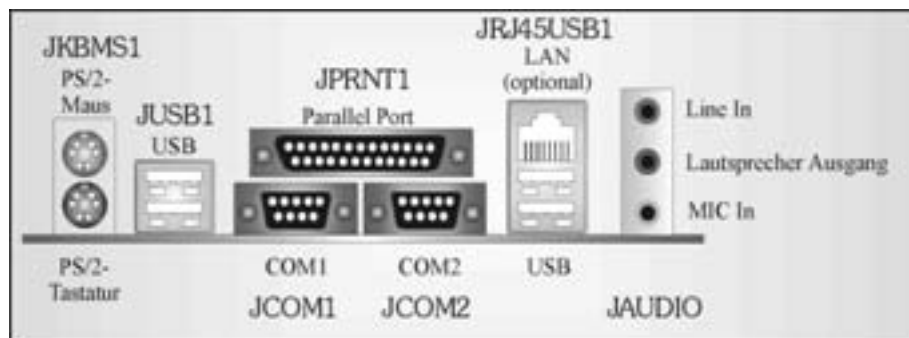
Anschlüsse für die Rückwand (für version 7.x)

Printer Port

LAN

Line In

Speaker Out

Mic In

PS/2 Keyboard

PS/2 Mouse

COM1

USB (Optional)

USB

6 Kanal Lautsprecher

Lautsprecher Ausgang/ Fornt-Lautsprecher (L/R)

Line-In/ Rücklautsprecher (L/R)

Mikrofon Eingang/ Zentrallautsprecher & Bass
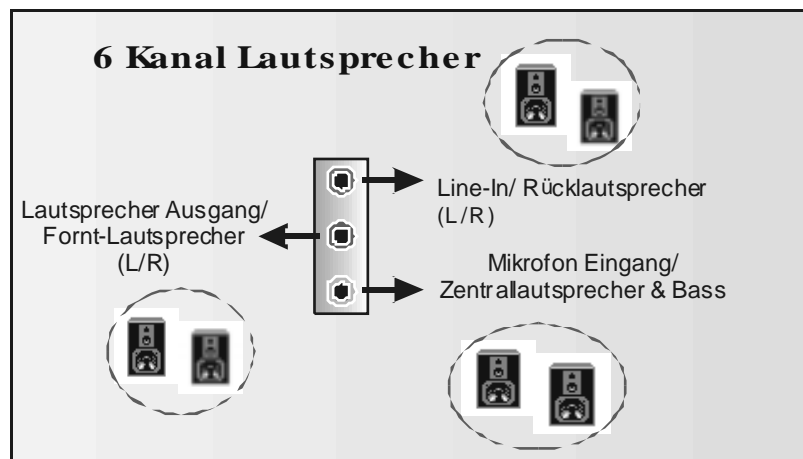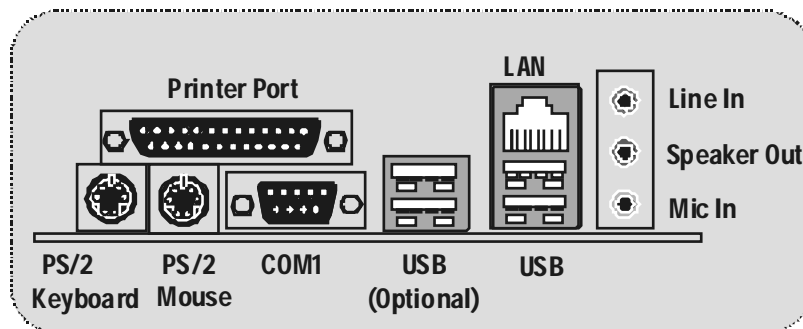
Français

Caractéristiques de P4TSP-D2

CPU
- Offre les Socket-478.
- Supporte le processeur Intel Pentium 4 jusqu'à 3.2GHz.
- Supporte Intel Pentium 4 Northwood CPU. (Willamette not supported)
- Supporte Intel Pentium 4 478 Prescott CPU.
- Fonctionnant en Bus Frontal de 400/ 533/800MHz.
- Supporte Hyper-Threading. (seulment pour onboard VGA)

Chipset
- North Bridge: Intel 848P
- South Bridge: Intel ICH5

Mémoire Principale
- Prend en charge un ou deux canaux de données DDR de 64 bits de large avec 1 DIMM par canal.
- Bande passant disponible jusqu'à 3.2Go/s (DDR400) pour le mode canal simple et 6.4Go/s (DDR 400) pour mode canal double.
- Prend en charge les technologies DDR 128 Mo, 256 Mo, 512 Mo.
- Prend en charge seulement les périphériques DDR x8, x16. (Ne prend pas en charge les DIMM et ECC en registres)
- Prend en charge quatre banques de mémoire.
- La taille maximum de la mémoire est de 2Go.

Super E/S
- Puce: ITE IT8712.
- Intefface de Comptage de Broche Faible.
- Offre la fonctionnalité Super E/S héritée la plus couramment utilisée.
- Initiatives de Contrôle d'Environnement,
    - Moniteur H/W
    - Fonction "Smart Guardian" de ITE

Slots
- 5 slots de maîtrise de bus PCI 32 bits.
- Un slot CNR. (optionnel)
- Un slot AGP 4X/8X.

IDE Interne
- Supporte quatre disques durs IDE.
- Supporte PIO Mode 4, le Mode Maître et le Mode de Maîtrise de Bus Ultra DMA 33/66/100/133.

LAN (optionnel)
- RealTek RTL8100C/RTL8110S(B).
- Supporte Négociation automatique : 10/100/1000 Mb/s.
- Full/Half Duplex.
- Supporte ACPI, PCI Power management.

Codec Son AC'97 Interne
- CMI9739A (pour version 1.0-1.2)/CMI9761A (pour version 1.3 & 7.x)

- Conforme aux spécifications du codec AC'97.
- Supporte 6 canaux.
- Prend en charge le microphone stéréo. (pour CMI9761A)

Périphériques Internes
a. Côté arrière
- 2 ports série (1 port pour version 7.x)
- 1 port parallèle (mode SPP/EPP/ECP)
- Ports audio en position verticale.
- 1 port RJ-45 LAN. (Optionnel)
- Souris PS/2 et clavier PS/2.
- 4 ports USB2.0.

b. Côté frontal :
- 1 port disquette prenant en charge 2 FDD avec 360K, 720K, 1.2M, 1.44M et 2,88Mo.
- 4 ports USB2.0.
- 1 Embase S/PDIF. (Optionnel)
- 1 Embase Audio.

BIOS
- AWARD legal Bios.
- Supporte APM1.2.
- Supporte ACPI
- Supporte la Fonction USB.

Système d'Exploitation
- Offre les meilleures performances pour MS-DOS, Windows 2000, Windows Me, Windows XP, SCO UNIX etc.
- Supporte Warspeeder^{TM}, 9th Touch^{TM}, BootBlocker^{TM}, WinFlasher^{TM}, FLASHER^{TM}

Dimensions
- Facteur de Forme ATX: 20.3cm X 30.5cm (l X L)
- Facteur de Forme ATX: 20.3cm X 29.3cm (l X L) (pour version 7.x)

Contenu de l'Emballage

- Câble de Disque Dur X1
- Câble de Lecteur de Disquette X1
- Manuel d'utilisation X1
- Câble USB X1 (Optionnel)
- Panneau d'E/S Arrière pour Boîtier Flex X 1
- CD de Pilote Complet X 1
- Câble S/PDIF X 1 (optionnel)
- Câble ATA Série X 1 (optionnel)
- Câble de Commutateur d'Alimentation ATA Série X 1 (optionnel)

WarpSpeeder^{TM}

Introduction

[WarpSpeeder™], a new powerful control utility, features three user-friendly functions including Overclock Manager, Overvoltage Manager, and Hardware Monitor.

With the Overclock Manager, users can easily adjust the frequency they prefer or they can get the best CPU performance with just one click. The Overvoltage Manager, on the other hand, helps to power up CPU core voltage and Memory voltage. The cool Hardware Monitor smartly indicates the temperatures, voltage and CPU fan speed as well as the chipset information. Also, in the About panel, you can get detail descriptions about BIOS model and chipsets. In addition, the frequency status of CPU, memory, AGP and PCI along with the CPU speed are synchronically shown on our main panel.

Moreover, to protect users' computer systems if the setting is not appropriate when testing and results in system fail or hang, [WarpSpeeder™] technology assures the system stability by automatically rebooting the computer and then restart to a speed that is either the original system speed or a suitable one.

System Requirement

OS Support: Windows 98 SE, Windows Me, Windows 2000, Windows XP

DirectX: DirectX 8.1 or above. (The Windows XP operating system includes DirectX 8.1. If you use Windows XP, you do not need to install DirectX 8.1.)

Installation

1. Execute the setup execution file, and then the following dialog will pop up. Please click "Next" button and follow the default procedure to install.
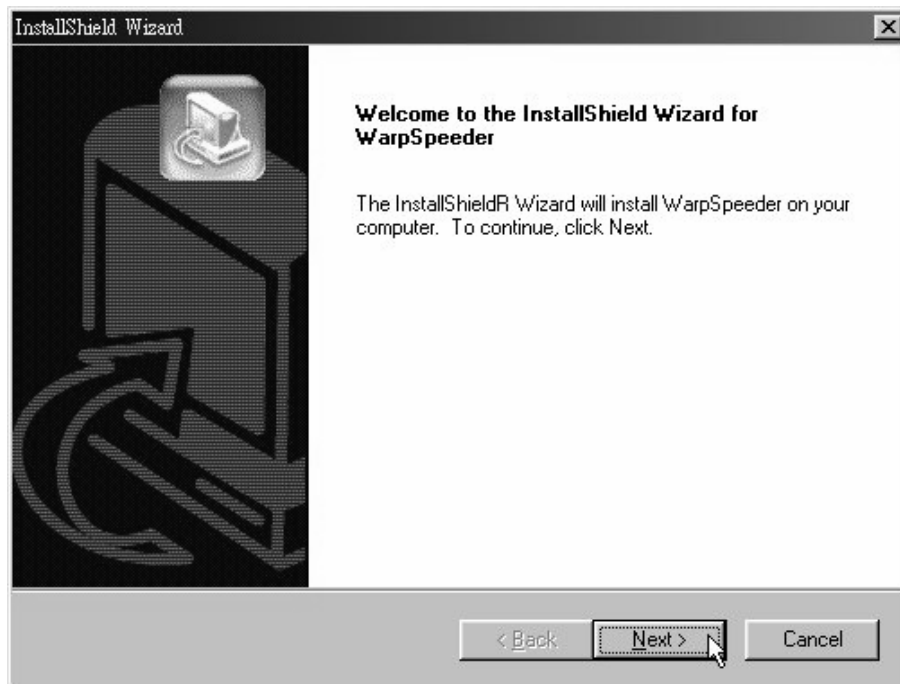
2. When you see the following dialog in setup procedure, it means setup is completed. If the "Launch the WarpSpeeder Tray Utility" checkbox is checked, the Tray Icon utility and [WarpSpeeder™] utility will be automatically and immediately launched after you click "Finish" button.

Usage

The following figures are just only for reference, the screen printed in this user manual will change according to your motherboard on hand.

[WarpSpeeder™] includes 1 tray icon and 5 panels:

1.   Tray Icon:

Whenever the Tray Icon utility is launched, it will display a little tray icon on the right side of Windows Taskbar.

This utility is responsible for conveniently invoking [WarpSpeeder™] Utility. You can use the mouse by clicking the left button in order to invoke [WarpSpeeder™] directly from the little tray icon or you can right-click the little tray icon to pop up a popup menu as following figure. The "Launch Utility" item in the popup menu has the same function as mouse left-click on tray icon and "Exit" item will close Tray Icon utility if selected.

2. Main Panel

If you click the tray icon, [WarpSpeeder™] utility will be invoked. Please refer

do the following figure; the utility's first window you will see is Main Panel.

Main Panel contains features as follows:

a. Display the CPU Speed, CPU external clock, Memory clock, AGP clock, and PCI clock information.

b. Contains About, Voltage, Overclock, and Hardware Monitor Buttons for invoking respective panels.

c. With a user-friendly Status Animation, it can represent 3 overclock percentage stages:

> Duck walking => overclock percentage from 100% ~ 110 %

> Duck running => overclock percentage from 110% ~ 120%

> Duck Burning => overclock percentage from 120% ~ above
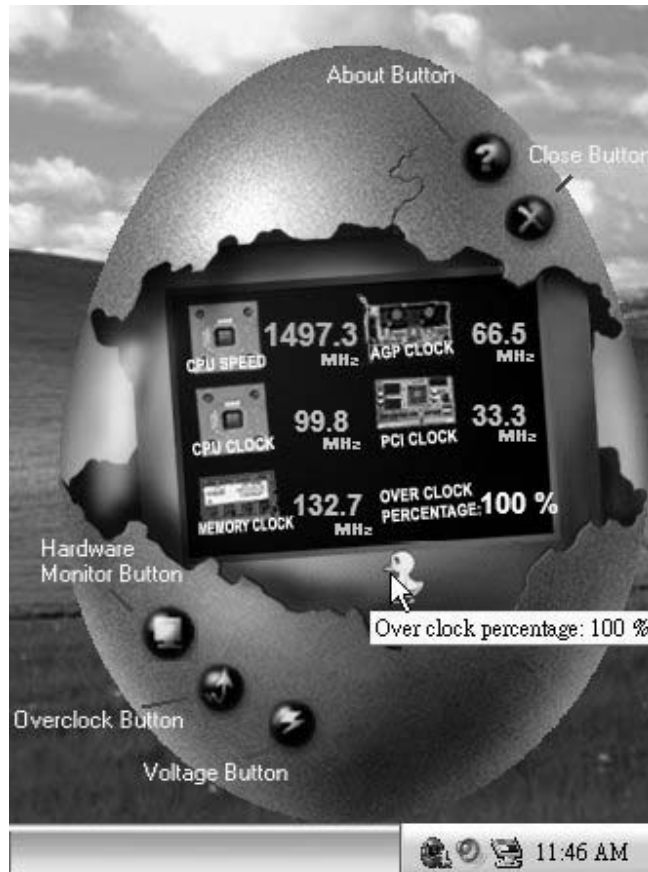
3. Voltage Panel

Click the Voltage button in Main Panel, the button will be highlighted and the Voltage Panel will slide out to up as the following figure.

In this panel, you can decide to increase CPU core voltage and Memory voltage or not. The default setting is "No". If you want to get the best performance of overclocking, we recommend you click the option "Yes".

4. Overclock Panel

Click the Overclock button in Main Panel, the button will be highlighted and the Overclock Panel will slide out to left as the following figure.

Overclock Panel contains the these features:

a. "–3MHz button", "-1MHz button", "+1MHz button", and "+3MHz button": provide user the ability to do real-time overclock adjustment.

> *Warning: Manually overclock is potentially dangerous, especially when the overclocking percentage is over 110 %. We strongly recommend you verify every speed you overclock by click the Verify button. Or, you can just click Auto overclock button and let [WarpSpeeder™] automatically gets the best result for you.*

b. "Recovery Dialog button": Pop up the following dialog. Let user select a restoring way if system need to do a fail-safe reboot.
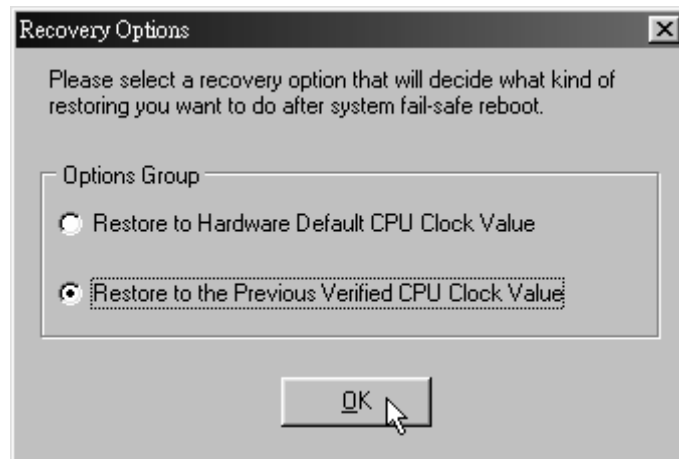
c. "Auto-overclock button": User can click this button and [WarpSpeeder™] will set the best and stable performance and frequency automatically. [WarpSpeeder™] utility will execute a series of testing until system fail. Then system will do fail-safe reboot by using Watchdog function. After reboot, the [WarpSpeeder™] utility will restore to the hardware default setting or load the verified best and stable frequency according to the Recovery Dialog's setting.

d. "Verify button": User can click this button and [WarpSpeeder™] will proceed a testing for current frequency. If the testing is ok, then the current frequency will be saved into system registry. If the testing fail, system will do a fail-safe rebooting. After reboot, the [WarpSpeeder™] utility will restore to the hardware default setting or load the verified best and stable frequency according to the Recovery Dialog's setting.

Note: Because the testing programs, invoked in Auto-overclock and Verify, include DirectDraw, Direct3D and DirectShow tests, the DirectX 8.1 or newer runtime library is required. And please make sure your display card's color depth is High color (16 bit) or True color(24/32 bit) that is required for Direct3D rendering.

5. Hardware Monitor Panel

Click the Hardware Monitor button in Main Panel, the button will be highlighted and the Hardware Monitor panel will slide out to left as the following figure.

In this panel, you can get the real-time status information of your system. The information will be refreshed every 1 second.
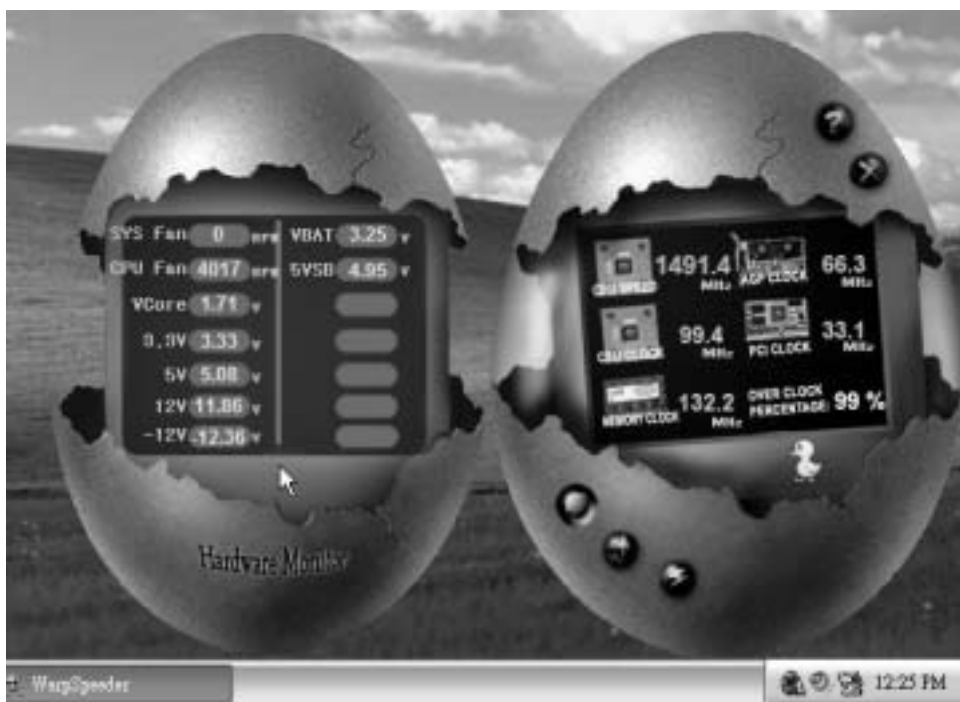
6. About Panel

Click the About button in Main Panel, the button will be highlighted and the About Panel will slide out to up as the following figure.

In this panel, you can get model name and detail information in hints of all the chipset that are related to overclocking. You can also get the mainboard's BIOS model and the Version number of [WarpSpeeder™] utility.
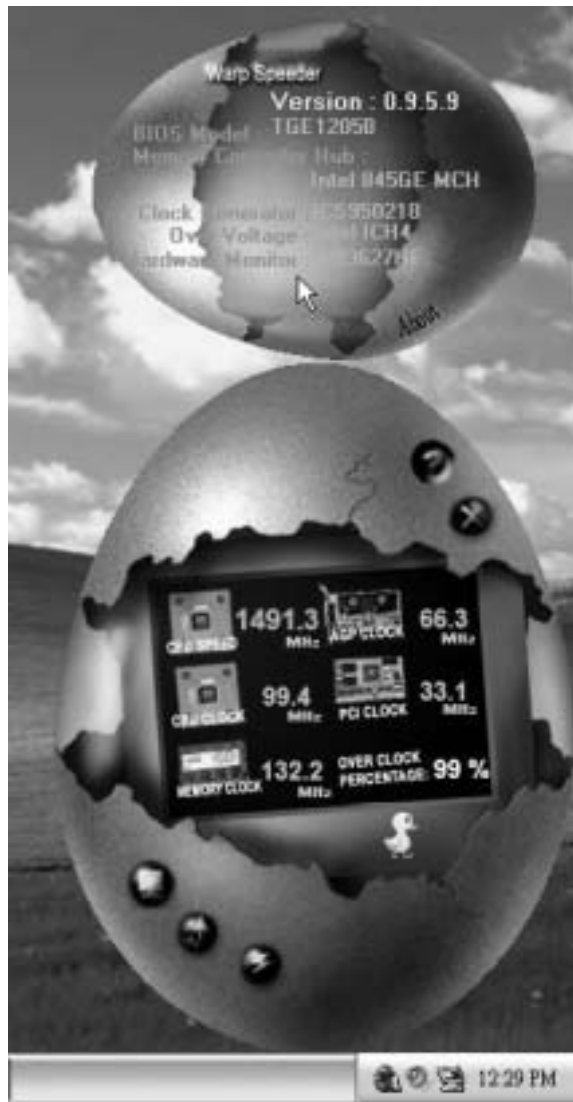
Note: Because the overclock, overvoltage, and hardware monitor features are controlled by several separate chipset, [WarpSpeeder™] divide these features to separate panels. If one chipset is not on board, the correlative button in Main panel will be disabled, but will not interfere other panels'

functions. This property can make [WarpSpeeder™] utility more robust.

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 lghts 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 of 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. Reformat 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 SET UP program and select correct drive types. Call drive manufacturers for compatibility with other drives.

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 aller 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.

03/22/2004

P4TSP-D2 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. This AWARD BIOS can manage power to the hard disk drives and video monitors .

ACPI Support

Award ACPI BIOS support Version 1.0 of Advanced Configuration and Power interface specification (ACPI).   It provides ASL code for power management and device configuration capabilities as defined in the ACPI specification, developed by Microsoft, Intel and Toshiba.

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PCI Bus Support

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

DRAM Support

DDR DRAM (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

P4TSP-D2 BIOS Setup

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**

```
          Phoenix - AwardBIOS CMOS Setup Utility

 ▶ Standard CMOS Features          ▶ Frequency/Voltage Control

 ▶ Advanced BIOS Features             Load Optimized Defaults

 ▶ Advanced Chipset Features          Set Supervisor Password

 ▶ Integrated Peripherals             Set User Password

 ▶ Power Management Setup             Save & Exit Setup

 ▶ PnP/PCI Configurations             Exit Without Saving

 ▶ PC Health Status                  Upgrade BIOS

 Esc : Quit      F9 : Menu in BIOS      ↑ ↓ → ←   : Select Item
 F10 : Save & Exit Setup

                Time, Date, Hard Disk Type...
```

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.

P4TSP-D2 BIOS Setup

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.

```
Load Optimized Defaults (Y/N)? N
```

Set Supervisor Password

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

```
Enter Password:
```

Set User Password

If the Supervisor Password is not set, then the User Password will function in the same way as the Supervisor Password.   If the Supervisor Password is set and the User Password is set, the "User" will only be able to view configurations but will not be able to change them.

```
Enter Password:
```

P4TSP-D2 BIOS Setup

Save & Exit Setup

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

```
SAVE to CMOS and EXIT (Y/N)? Y
```

Exit Without Saving

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

```
Quit Without Saving (Y/N)? N
```

Upgrade BIOS

This submenu allows you to upgrade bios.

```
BIOS UPDATE UTILITY (Y/N)? N
```

P4TSP-D2 BIOS Setup

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**
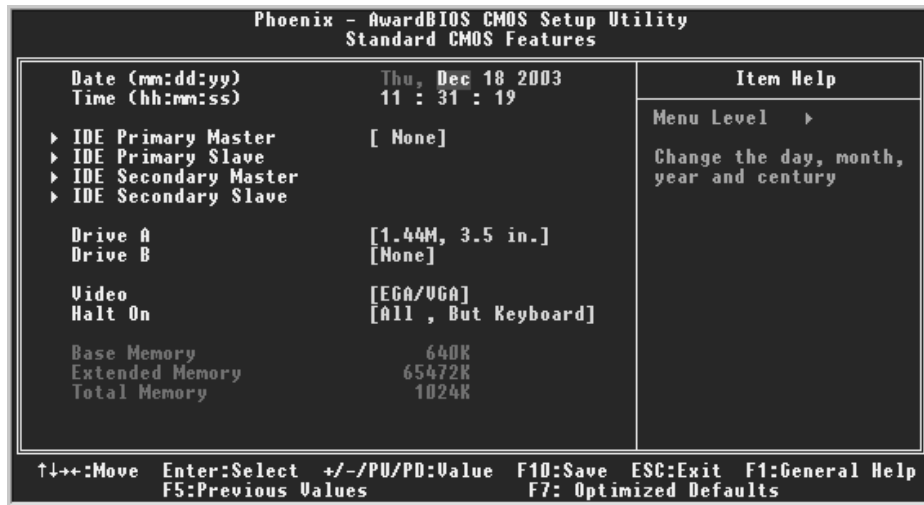
P4TSP-D2 BIOS Setup

<u>**Main Menu Selections**</u>

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.

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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.

P4TSP-D2 BIOS Setup

3 Advanced BIOS Features

■ **Figure 3. Advanced BIOS Setup**

```
          Phoenix - AwardBIOS CMOS Setup Utility
                 Advanced BIOS Features
 ┌─────────────────────────────────────────────┬──────────────────────┐
 │ ▶ Boot Seq & Floppy Setup    [Press Enter]   │      Item Help       │
 │ ▶ Cache Setup                [Press Enter]   │                      │
 │ ▶ CPU Feature                [Press Enter]   │  Menu Level    ▶     │
 │   Virus Warning              [Disabled]      │                      │
 │   Hyper-Threading Technology[Enabled]        │                      │
 │   Quick Power On Self Test   [Enabled]       │                      │
 │   Boot Up NumLock Status     [On]            │                      │
 │   Gate A20 Option            [Fast]          │                      │
 │   Typematic Rate Setting     [Disabled]      │                      │
 │ x Typematic Rate (Chars/Sec)  6              │                      │
 │ x Typematic Delay (Msec)      250            │                      │
 │   Security Option            [Setup]         │                      │
 │   APIC Mode                  [Enabled]       │                      │
 │   MPS Version Control For OS[1.4]            │                      │
 │   OS Select For DRAM > 64MB [Non-OS2]        │                      │
 │   Summary Screen Show        [Disabled]      │                      │
 │                                              │                      │
 ├─────────────────────────────────────────────┴──────────────────────┤
 │ ↑↓++:Move  Enter:Select  +/-/PU/PD:Value  F10:Save  ESC:Exit  F1:General Help │
 │          F5:Previous Values        F7: Optimized Defaults           │
 └─────────────────────────────────────────────────────────────────────┘
```

Boot Seq & Floppy Setup

First/ Second/ Third/ Boot Other Device
These BIOS attempt to load the operating system from the device in the sequence selected in these items.
The Choices: Floppy, LS120, HDD-0, SCSI, CDROM, HDD-1, HDD-2, HDD-3, ZIP100, LAN, HPT370, Disabled, Enabled.

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

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: Disabled, **Enabled** (default).

Report NO FDD for Win95
The Choices: NO (default).

P4TSP-D2 BIOS Setup

Cache Setup

CPU L1 & L2 Cache/CPU L3 Cache
Depending on the CPU/ chipset in use, you may be able to increase memory access time with this option.
Enabled (default)   Enable cache.
Disabled   Disable cache.

CPU Feature

Thermal Management
This option allows you to select the way to control the "Thermal Management."
The Choices: Thermal Monitor 1 (Default), Thermal Monitor 2.

TM2 Bus Ratio
This option represents the frequency (bus ratio of the throttled performance state that will be initiated when the on-diesensor goes from not hot to hot.)
Min=   0
Max= 255
Key in a DEC number=
The Choices: 0 X (Default)

TM2 Bus VID
This option represents the voltage of the throttled performance state that will be initiated when the on-diesensor goes from not hot to hot.
The Choices: 0.8375V (Default), 0.8375-1.6000.

Limit CPUID MaxVal
Set Limit CPUID MaxVal to 3, it should be "Disabled" for WinXP.
The Choices: Disabled (Default), Enabled.

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

Hyper-Threading Technology

This option allows you to enable or disabled Hyper-Threading Technology. "Enabled" for Windows XP and Linux 2.4.x (OS optimized for Hyper-Threading Technology). "Disable" for other OS (OS not optimized for Hyper-Threading Technology).
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.

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

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.
The Choices: 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

Selecting Enabled enables ACPI device mode reporting from the BIOS to the operating system.
The Choices: Enabled (default), Disabled.

P4TSP-D2 BIOS Setup

MPS Version Control For OS

The BIOS supports version 1.1 and 1.4 of the Intel multiprocessor 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.

Summary Screen Show

This item allows you to enable/disable the summary screen. Summary screen means system configuration and PCI device listing.
The choices: Enabled, **Disabled** (default).

P4TSP-D2 BIOS Setup

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**

```
          Phoenix - AwardBIOS CMOS Setup Utility
                 Advanced Chipset Features

   DRAM Timing Selectable    [By SPD]          Item Help
   CAS Latency Time          [2]
   Active to Precharge Delay [8]          Menu Level    ▶
   DRAM RAS# to CAS# Delay   [4]
   DRAM RAS# Precharge       [4]
   Memory Frequency For      [Auto]
   System BIOS Cacheable     [Enabled]
   Video  BIOS Cacheable     [Enabled]
   Memory Hole At 15M-16M    [Disabled]
   Delay Prior to Thermal    [16 Min]
   AGP Aperture Size (MB)    [128]
   Init Display First        [AGP]




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

DRAM Timing Selectable

When synchronous DRAM is installed, the number of clock cycles of CAS latency depends on the DRAM timing.
> **The Choices: By SPD** (default), Manual.

CAS Latency Time

When synchronous DRAM is installed, the number of clock cycles of CAS latency depends on the DRAM timing.
> **The Choices:** 1.5, **2** (default), 2.5, 3.

Active to Precharge Delay

This item controls the number of DRAM clocks to activate the precharge delay.
> **The Choices: 8** (default),7, 6, 5

DRAM RAS# to CAS# Delay

This field let you insert a timing delay between the CAS and RAS strobe signals, used when DRAM is written to, read from, or refreshed. Fast gives faster performance; and slow gives more stable performance. This field applies only when synchronous DRAM is installed in the system.

The Choices: 4 (default), 3, 2.

DRAM RAS# Precharge

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

The Choices: 4 (default), 3, 2.

Memory Frequency For

This item allows you to select the Memory Frequency.

The Choices: Auto (default), DDR266, DDR300, DDR400.

System BIOS Cacheable

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

The Choices: Enabled (default), Disabled.

Video BIOS Cacheable

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

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

Video RAM Cacheable

This option allows you to enable or disable VGA RAM cache capability.

The Choices: Disabled (default), Enabled

Memory Hole At 15M-16M

You can reserve this area of system memory for ISA adapter ROM. When this area is reserved it cannot be cached. The user information of peripherals that need to use this area of system memory usually2 discussed their memory requirements.

The Choices: Disabled (default), Enabled.

Delay Prior to Thermal

Set this item to enable the CPU Thermal function to engage after the specified time.

The Choices: 4 Min, 8 Min**, 16 Min** (default), 32 Min.

P4TSP-D2 BIOS Setup

AGP Aperture Size (MB)

Select the size of the Accelerated Graphics Port (AGP) aperture. The apertures 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: 64 , 4, 8, 16, 32, **128** (default), 256.

Init Display First

This item allows you to decide to active whether PCI Slot or on-chip VGA first.
The Choices: AGP (default), PCI Slot.

P4TSP-D2 BIOS Setup

5 Integrated Peripherals

■ **Figure 5. Integrated Peripherals**

```
            Phoenix - AwardBIOS CMOS Setup Utility
                     Integrated Peripherals
┌──────────────────────────────────────────┬────────────────────────┐
│ ▶ Onboard IDE Device      [Press Enter]   │      Item Help         │
│ ▶ Onboard Device          [Press Enter]   │                        │
│ ▶ SuperIO Device          [Press Enter]   │  Menu Level    ▶       │
│                                           │                        │
│                                           │                        │
│                                           │                        │
│                                           │                        │
│                                           │                        │
│                                           │                        │
│                                           │                        │
│                                           │                        │
│                                           │                        │
├──────────────────────────────────────────┴────────────────────────┤
│ ↑↓←→:Move  Enter:Select  +/-/PU/PD:Value  F10:Save  ESC:Exit  F1:General Help │
│            F5:Previous Values          F7: Optimized Defaults       │
└────────────────────────────────────────────────────────────────────┘
```
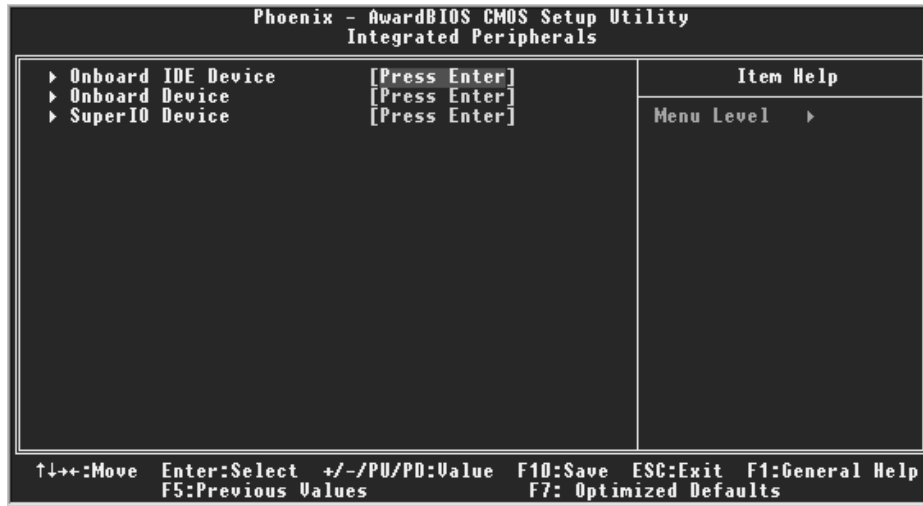
Onboard IDE Device

Press Enter to configure the onboard IDE Controllers.

IDE HDD Block Mode
Block mode is also called block transfer, multiple commands, or multiple sector read / write. If your IDE hard drive supports block mode (most new drives do), select Enabled for automatic detection of the optimal number of block mode (most new drives do), select Enabled for automatic detection of the optimal number of block read / write per sector where the drive can support.
The Choices: Enabled (default), Disabled**.**

IDE DMA transfer access
The Choices: Enabled (default), Disabled.

On-Chip Primary/ Secondary PCI IDE
This item allows you to enable or disable the primary/ secondary IDE Channel.
The Choices: Enabled (Default), Disabled.

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 to 4 will increased performance progressively. 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 UDMA
Ultra DMA/100 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/100, select Auto to enable BIOS support.
The Choices: Auto (default), Disabled.

On-Chip Serial ATA
This item allows you to choose "Disabled" to disabled SATA Controller, "Auto" auto arrange by bios, "Combined Mode" PATA and SATA are combined with a maximun of 2 IDE drives in each channels, "Enhanced Mode" enabled SATA and PATA with a maximun of 6 IDE drives, "SATA Only" SATA is operating in legacy mode.
The Choices: Auto (default), Disabled, Combined Mode, Enhanced Mode, SATA Only.

Serial ATA Port0/1 Mode
The Choices: Primary Master(default), Primary Slave, Secondary Master, Secondary Slave, SATA0 Master, SATA1 Master.

Onboard Device

Press Enter to configure the onboard Device.

USB Controller
Select Enabled if your system contains a Universal Serial Bus (USB) controller and you have USB peripherals.
The Choices: Enabled (default), Disabled

USB 2.0 Controller
The Choices: enabled (default), disabled.

USB Keyboard/Mouse Support
This item allows you to enable or disable the USB Keyboard/ Mouse Legacy Support.

Enabled	Enable USB Keyboard/Mouse Support.
Disabled (default)	Disable USB Keyboard/Mouse Support.

AC97 Audio/ Modem
This item allows you to decide to enable/ disable to support AC97 Audio/Modem.
The Choices: Auto (default), Disabled.

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Onboard PCI LAN
This item allows you to enable or disable the onboard PCI LAN.
The Choices: Enabled (default), disabled.

Onboard LAN Boot ROM
Decide whether to invoke the boot ROM of the onboard LAN chip.
The Choices: Disabled, **Enable** (default).

Super IO Device

Press Enter to configure the Super I/O Device.

Power On Function
This item allows you to choose the powen on function.
The Choices: Button Only (default), Password, Hot Key, Mouse Left,
Mouse Right, Any Key, Keyboard 98.

KB Power on Possword
Input password and press Enter to set the Keyboard power on password .

HOT Key power ON
Input password and press Enter to set the Keyboard power on password .
The Choices: Ctrl-F1(default) , Ctrl-F2 , Ctrl-F3 , Ctrl-F4 , Ctrl-F5,
Ctrl-F6 , Ctrl-F7 , Ctrl-F8 , Ctrl-F9, Ctrl-F10 , Ctrl-F11 , Ctrl-F12 .

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

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

UART Mode Select
This item allows you to determine which Infrared (IR) function of onboard I/O
chip.
The Choices: Normal (default), ASKIR, IrDA, SCR .

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.

Power After Power Fail
This setting specifies whether your system will reboot after a power fail or interrupts occurs.

off	Leaves the computer in the power off state.
on	Reboots the computer.
Former-Sts	Restores the system to the status before power failure or interrupt occurs.

The Choices: off (default), on, Former-Sts.

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, Disabled.

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

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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**

```
           Phoenix - AwardBIOS CMOS Setup Utility
                  Power Management Setup

 ACPI Function             [Enabled]              Item Help
 ACPI Suspend Type         [S1(POS)]
x Run VGABIOS if S3 Resume  Auto         Menu Level   ▶
 Power Management          [User Define]
 Video Off Method          [DPMS]
 Video Off In Suspend      [Yes]
 Suspend Type              [Stop Grant]
 MODEM Use IRQ             [3]
 Suspend Mode             [Disabled]
 HDD Power Down           [Disabled]
 Soft-Off by PWR-BTTN     [Instant-Off]
 Intruder# Detection      [Disabled]
 Wake-Up by PCI card      [Disabled]
 Power On by Ring         [Disabled]
x USB KB Wake-Up From S3   Disabled
 Resume by Alarm          [Disabled]
x Date(of Month) Alarm      0
x Time(hh:mm:ss) Alarm      0 :  0 :  0

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

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) (optional)   Suspend to RAM
S1 & S3   POS+STR

Run VGABIOS if S3 Resume

Choosing Enabled will make BIOS run VGA BIOS to initialize the VGA card when system wakes up from S3 state . The system time is shortened if you disable the function , but system will need AGP driver to initialize the card . So , if the AGP driver of the VGA card does not support the initialization feature , the display may work abnormally or not function after S3 .
The Choices:Auto (default), Yes, No.

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.Doze Mode.
3.Suspend Mode.

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

Min. Saving

Minimum power management.
Doze Mode = 1 hr.
Standby Mode = 1 hr
Suspend Mode = 1 hr.
HDD Power Down = 15   min

Max Saving

Maximum power management only available for sl CPU's.
Doze Mode = 1 min
Standby Mode = 1 min.
Suspend Mode = 1 min.
HDD Power Down = 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. except for HDD Power Down which ranges from 1 min. to 15 min. and disable.

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 (default)

Initial display power management signaling.

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Video Off In Suspend

This determines the manner in which the monitor is blanked.
The Choices: Yes (default), No.

Suspend Type

Select the Suspend Type.
The Choices: Stop Grant (default, PwrOn Suspend).

MODEM Use IRQ

This determines the IRQ, which can be applied in MODEM use.
The Choices:3 (default)/ 4 / 5 / 7 / 9 / 10 / 11 / NA.

Suspend Mode

When enabled and after the set time of system inactivity, all devices except the CPU will be shut off.
The Choices: Disabled (default), 1Min, 2Min, 4Min, 8Min, 12Min, 20Min, 30Min, 40Min, 1Hour.

HDD Power Down

When enabled and after the set time of system inactivity , the hard disk drive will be powered down while all other devices remain active.
The Choices: Disabled (default), 1Min, 2Min, 3Min, 4Min, 5Min, 6Min, 7Min, 8Min, 9Min, 10Min, 11Min, 12Min, 13Min, 14Min, 15Min.

Soft-Off by PWR-BTTN

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

Intruder# Detection

This item allows you to enabled or disable intruder# detection
The Choices: Disabled (default), Enabled.

Wake-Up by PCI card

When you select Enable, a PME signal from PCI card returns the system to Full On state.
The Choices: Enabled, **Disabled** (default).

Power On by Ring

An input signal on the serial Ring Indicator (RI) line (in other words, an

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incoming call on the modem) awakens the system from a soft off state.
The Choices: Enabled, **Disabled** (default).

USB Keyboard/ Mouse Wake-Up from S3

This item allows you to enable or disabled wake up from S3 from USB keyboard/ Mouse.
The Choices: Disabled (Default), Enabled.

Resume by Alarm

This function is for setting date and time for your computer to boot up. During Disabled, you cannot use this function. During Enabled, Choose the Date and Time.
Alarm: **Date (of Month) Alarm**   You can choose which month the system will boot up.
Time (hh:mm:ss) Alarm   You can choose shat hour, minute and second the system will boot up.

Note: If you have change the setting, you must let the system boot up until it goes to the operating system, before this functin will work.

Reload Global Timer Event

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 0/1
Secondary IDE 0/1
FDD, COM, LPT Port
PCI PIRQ [A-D]#

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**

```
           Phoenix - AwardBIOS CMOS Setup Utility
                    PnP/PCI Configurations
┌──────────────────────────────────────────┬─────────────────────┐
│  Reset Configuration Data   [Disabled]    │     Item Help       │
│                                           │                     │
│  Resources Controlled By    [Auto(ESCD)]  │  Menu Level    ▶    │
│ x IRQ Resources             Press Enter   │                     │
│                                           │  Default is Disabled.│
│  PCI/VGA Palette Snoop      [Disabled]    │  Select Enabled to  │
│                                           │  reset Extended System│
│                                           │  Configuration Data │
│                                           │  ESCD) when you exit│
│                                           │  Setup if you have  │
│                                           │  installed a new add-on│
│                                           │  and the system     │
│                                           │  reconfiguration has│
│                                           │  caused such a serious│
│                                           │  conflict that the OS│
│                                           │  cannot boot        │
│                                           │                     │
├──────────────────────────────────────────┴─────────────────────┤
│ ↑↓→←:Move  Enter:Select  +/-/PU/PD:Value  F10:Save  ESC:Exit  F1:General Help│
│           F5:Previous Values              F7: Optimized Defaults │
└─────────────────────────────────────────────────────────────────┘
```

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.

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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**

```
        Phoenix - AwardBIOS CMOS Setup Utility
                    PC Health Status

 Shutdown Temperature      [Disabled]              Item Help
 CPU FAN Control by        [Always ON]
 SYS FAN Control by        [Always ON]         Menu Level    ►
 CPU Vcore
 AGP Voltage
 + 3.3 V
 + 5.0 V
 +12.0 V
  5V(SB)
 Voltage Battery
 Current CPU Temp
 Current SYS FAN Speed
 Current CPU FAN Speed
 Show H/W Monitor in POST  [Enabled]




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

Shutdown Temperature

> This item allows you to set up the CPU shutdown Temperature. This item only effective under Windows 98 ACPI mode.
> > **The Choices:** 60 °C/140 °C, 65 °C/149 °F, **Disabled** (default).

CPU FAN Control by

> The Choice "smart" can make your CPU FAN to reduce noice.

> > **The Choices: Always On**(default), smart.

SYS FANControl by

> The Choice "smart" can make your System FAN to reduce noice.

> > **The Choices: Always On** (default), smart.

CPU Vcore/ AGP Voltage/ +3.3V/ +5.0V/ +12V/ 5V (SB)/ Voltage Battery

> Detect the system's voltage status automatically.

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Current CPU Temp

Show you the current CPU temperature.

Current SYS FAN Speed

This field displays the current speed SYSTEM fan.

Current CPU FAN Speed

This field displays the current CPUFAN speed.
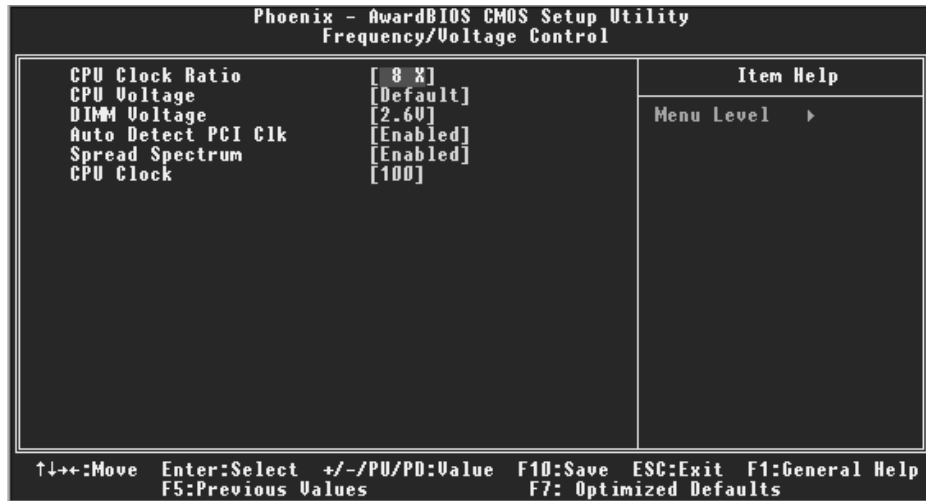
Show H/W Monitor in POST

If you computer contain a monitoring system, it will show PC health status during POST stage. The item offers several delay time to select you want.
> **The Choices: Enabled** (default), Disabled .

9 Frequency Control

■ **Figure 9. Frequency Control**

```
          Phoenix - AwardBIOS CMOS Setup Utility
                  Frequency/Voltage Control
  ┌──────────────────────────────────────┬──────────────────────┐
  │ CPU Clock Ratio          [ 8 X]       │      Item Help        │
  │ CPU Voltage              [Default]    │                      │
  │ DIMM Voltage             [2.6V]       │ Menu Level    ▶      │
  │ Auto Detect PCI Clk      [Enabled]    │                      │
  │ Spread Spectrum          [Enabled]    │                      │
  │ CPU Clock                [100]        │                      │
  │                                       │                      │
  │                                       │                      │
  │                                       │                      │
  │                                       │                      │
  │                                       │                      │
  │                                       │                      │
  │                                       │                      │
  │                                       │                      │
  ├───────────────────────────────────────┴──────────────────────┤
  │ ↑↓←→:Move  Enter:Select  +/-/PU/PD:Value  F10:Save  ESC:Exit  F1:General Help │
  │           F5:Previous Values            F7: Optimized Defaults │
  └───────────────────────────────────────────────────────────────┘
```

CPU Clock Ratio

    The Choices: **8 X**(default), 9X, 10X, 11X, 12X, 13X, 14 X, 15X, 16X, 17X, 18X, 19X, 20 X, 21 X, 22 X, 23 X.

CPU Voltage

    This item allows you to select CPU Voltage Regulator.
        The Choices: Default (default), +2.5%, +5.5%, +8.1%.

DIMM Voltage

    This item allows you to select DDR Voltage Regulator.
        The Choices: 2.5V (Default), 2.6V, 2.7V, 2.8V.

Auto Detect 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.

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CPU Clock

This item allows you to select CPU Clock, and CPU over clocking.

> ⚠️ 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 COMS data by setting the JCOMS1 ((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.
> ※ **It's strongly recommended to set CPU Vcore and clock in default setting. If the CPU Vcore and clock are not in default setting, it may cause CPU or M/B damage.**