

Item Checklist

This item checklist is only available for retail market. Completely check your package, If you discover damaged or missing items, contact your retailer.

- Superb 4 (S4) series mainboard
- QDI Utility CD
- User's manual
- 1 IDE ribbon cable
- 1 floppy ribbon cable
- I/O shield(option)
- 1 10-pin ribbon cable with bracket for USB3 and USB4(option)

Notice

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If you need any further information, please visit our web-site: "www.qdigrp.com".

Declaration of conformity



QUANTUM DESIGNS(HK) LTD.
20th Floor, Devon House, Taikoo Place, 979 King's Road,
Quarry Bay, Hong Kong

declares that the product

Mainboard
Superb 4

is in conformity with
(reference to the specification under which conformity is declared in
accordance with 89/336 EEC-EMC Directive)

- EN 55022 Limits and methods of measurements of radio disturbance characteristics of information technology equipment
- EN 50081-1 Generic emission standard Part 1:
Residential, commercial and light industry
- EN 50082-1 Generic immunity standard Part 1:
Residential, commercial and light industry

European Representative:

QDI COMPUTER (UK) LTD

QDI COMPUTER (SCANDINAVIA) A/S

QDI SYSTEM HANDEL GMBH

QDI EUROPE B. V.

QDI COMPUTER (FRANCE) SARL

QDI COMPUTER HANDELS GMBH

LEGEND QDI SPAIN S.L

QDI COMPUTER (SWEDEN) AB

Signature : Xu Wenge Place / Date : HONG KONG/2002

Printed Name : Xu Wenge Position/ Title : Assistant President

Declaration of conformity



Trade Name: QDI Computer (U. S . A.) Inc.
Model Name: [Superb 4](#)
Responsible Party: QDI Computer (U. S. A.) Inc.
Address: 41456 Christy Street
Fremont, CA 94538
Telephone: (510) 668-4933
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Equipment Classification: FCC Class B Subassembly
Type of Product: Mainboard
Manufacturer: Quantum Designs (HK) Inc.
Address: 20th Floor, Devon House, Taikoo Place
979 King's Road, Quarry Bay, HONG
KONG

Supplementary Information:

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions : (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Tested to comply with FCC standards.

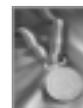
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Mainboard Layout	

 **Note:**

This manual is suitable for mainboards of Superb 4 series. Each mainboard is carefully designed for the PC user who wants diverse features.

- S4:** without onboard Audio and onboard LAN
 - S4-A:** with onboard Audio
 - S4-L:** with onboard LAN
 - S4-AL:** with onboard Audio and onboard LAN
-

 **Caution**

Be sure to add some Silicone Grease between the CPU and the heatsink of FAN to keep them fully contact , meanwhile to meet the heat sink requirement.



Chapter 1

Introduction

Overview

Superb 4 series mainboard utilizes SIS645 (SIS 645+SIS 961) Chipset, providing a fully compatible, high performance and cost-effective ATX platform. The mainboard provides 400 MHz system bus to support Intel® Pentium 4 socket 478 processors and it supports DDR200/266/333 SDRAM with the largest memory size up to 3GB. The new integrated technologies, together with AGP 4X support, AC'97 Audio, 6 USB ports, and Ultra DMA100/66/33, give customers an advanced, multimedia solution at a reasonable price. It also provides advanced features such as Wake up by USB devices, Wake-on-LAN, Wake-on-Modem and ACPI functions. Suspend to RAM, the optimal implementation of the Advanced Configuration and Power Interface (ACPI) specification, makes the PC's power consumption drop to the lowest possible level and enable quick wakeup. BootEasy, our innovation, lets the PC boot freely and rapidly.

Key Features

Form factor

- ATX form factor of 305mm x 224mm

Microprocessor

- Supports Intel® Pentium 4 (Willamette) socket 478 processors at 1.4/1.5/1.6/1.7/1.8/1.9/2.0 GHz
- Supports Intel® Pentium 4 (Northwood) socket 478 processors at 1.6/1.8/2.0/2.2/2.4GHz and above
- Supports 400MHz host bus speed

System memory

- Provides three 184-pin DDR DIMM sockets
- Supports DDR200/266/333 SDRAM
- Supports 64/128/256/512Mb DDR SDRAM technology
- The largest total memory is up to 3GB



Onboard IDE

- Supports Independent timing of up to 4 drives
- Supports Ultra ATA 100/66/33, PIO mode
- Supports two fast IDE interfaces which can support four IDE devices including IDE hard disks and CD-ROM drivers

USB Ports

- 2 USB Host Controllers with total of 6 ports
- USB 1.1 compliant
- Supports wake-up from S1 (power on suspend), S3 (Suspend to RAM, depends on device)

Onboard I/O

- One floppy port supports up to two 3.5" or 5.25" floppy drives with 360K/720K/1.2M/1.44M/2.88M format
- Two high speed 16550 compatible UARTs (COM1/COM2/COM3/COM4 selective) with 16 byte send/receive FIFO
- One parallel port supports SPP/EPP/ECP mode
- Infrared interface
- All I/O ports can be enabled/disabled in the BIOS setup

Onboard LAN (Available on S4-L/AL mainboard)

- 10/100 Mbit/sec Ethernet support
- 10/100M LAN interface built-in on board

Onboard Audio (Available on S4-A/AL)

- AC'97 2.1 Specification Compliant
- Provides onboard Line-in Jack, Microphone-in Jack, Speaker-out Jack with onboard amplifier and MIDI/Joystick Connector

AGP Interface(Optional)

- AGP Connector supports AGP 2.0 including AGP 4x data transfers

BIOS

- Licensed advanced AWARD(phoenix) BIOS
- Supports Flash RAM with plug and play ready
- Supports IDE CD-ROM or SCSI boot up



Advanced features

- PCI 2.2 Specification Compliant
- Provides Trend ChipAwayVirus On Guard
- Supports Windows 98/2000/ME/XP soft-off
- Supports Wake-on-LAN and Wake-on-Modem
- Supports system monitoring(monitors CPU and system temperatures, system voltages, fan speed)
- Providing QDI innovations such as SpeedEasy II, RecoveryEasy II, BIOS-ProtectEasy, LogoEasyII and BootEasy

Note: Our technology is now being upgraded, the description and Interface for Easy technology in this manual are only for your reference. If you would like to get the upgraded version, please download the latest BIOS or the utility from the website to re-flash your mainboard; if your mainboard supports the latest version Easy technology, refer to the webpage for functions and detailed operation of the technology.

Green function

- Supports ACPI (Advanced Configuration and Power Interface) and ODPM (OS Directed Power Management)
- Supports ACPI power status: S0 (full-on), S1 (power on suspend), S3 (Suspend to RAM), S4(Suspend to Disk ,depends on OS) and S5 (soft-off)

Expansion slots

- 1 AGP slot(optional)
- 6 PCI slots
- 1 CNR slot

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Chapter 2

Installation Instructions

This section covers External Connectors and Jumper Settings. Refer to the mainboard layout chart for locations of all jumpers, external connectors, slots and I/O ports. Furthermore, this section lists all necessary connector pin assignments for your reference. The particular state of the jumpers, connectors and ports are illustrated in the following figures. Before setting the jumpers or inserting these connectors, please pay attention to the directions.

External Connectors

PS/2 Keyboard/Mouse Connector

PS/2 keyboard connector is for the usage of PS/2 keyboard. If using a standard AT size keyboard, an adapter should be used to fit this connector. PS/2 mouse connector is for the usage of PS/2 mouse.



USB1, USB2 and LAN Connectors

Two USB ports are for connecting USB devices. The RJ-45 connector is for onboard LAN, (LAN connector is available on S4-L/AL mainboard).



Warning

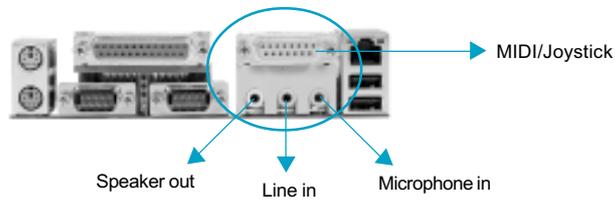
Be sure to unplug the AC power supply before adding or removing expansion cards or other system peripherals, otherwise your mainboard and expansion cards might be seriously damaged.



Line-in jack, Microphone-in jack, Speaker-out jack and MIDI/Joystick Connector

(Available on S4-A/AL)

The Line-in jack can be connected to devices such as a cassette or minidisc player to playback or record. The Microphone-in jack can be connected to a microphone for voice input. The Speaker-out jack allows you to connect speakers or headphones for audio output from the internal amplifier. The MIDI/Joystick connector allows you to connect a game joystick or a MIDI device.



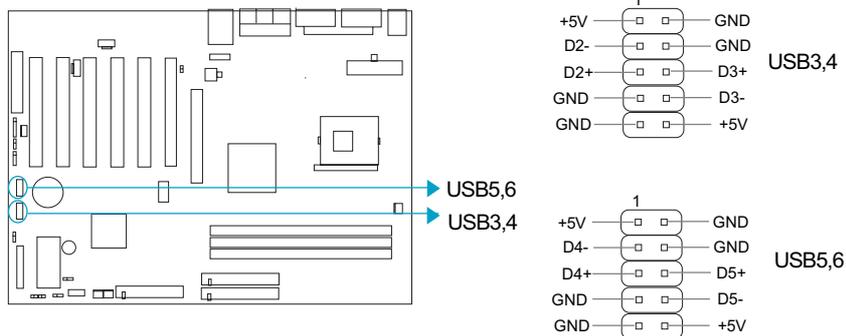
Parallel Port, Serial Port Connectors (UART1, UART2)

The parallel port connector can be connected to a parallel device such as a printer. The serial port UART1,2 connectors can be connected to a serial port device such as a serial port mouse. You can enable/disable them and choose the IRQ or I/O address in "Integrated Peripherals" from AWARD BIOS SETUP.



USB 1/4/5/6 Connectors

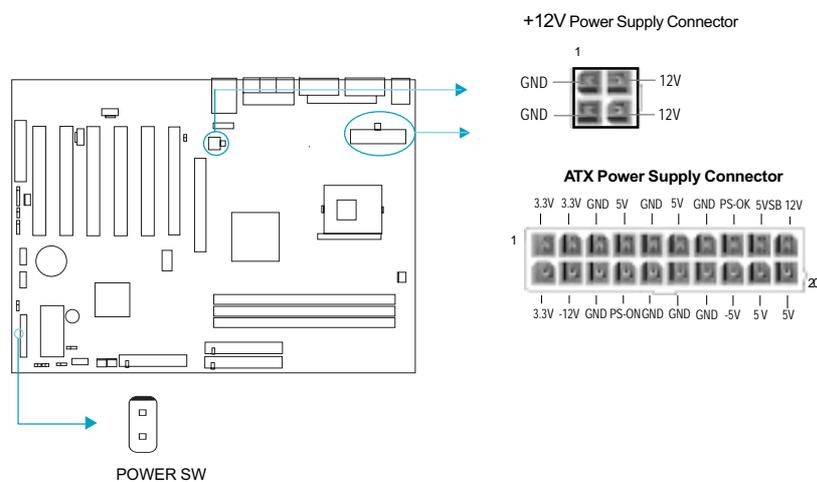
Besides USB1 and USB2 ports on the back panel, the mainboard also has another two 10-pin headers on board which may connect to front panel USB cable to provide additional 4 USB Ports.





ATX12V Power Supply Connector & Power Switch (POWER SW)

Be sure to connect the power supply plug to this connector in its proper orientation. The power switch (POWER SW) should be connected to a momentary switch. When powering up your system, first turn on the mechanical switch of the power supply (if one is provided), then push once the power switch. When powering off the system, you needn't turn off the mechanical switch, just ***Push once*** the power switch. Superb 4 series mainboard only support ATX12V power.



Note

If you change ““ POWER BUTTON OVERRIDE ” ” from default “Instant-off” to “Delay 4 Sec” in the “POWER MANAGEMENT SETUP” section of the BIOS, the power switch should be pressed for more than 4 seconds before the system powers down.

Hard Disk LED Connector (HD_LED)

The connector connects to the case's IDE indicator LED indicating the activity status of IDE hard disk. The connector has an orientation. If one way doesn't work, try the other way.

Reset Switch (RESET)

The connector connects to the case's reset switch. Press the switch once, the system resets.



Speaker Connector (SPEAKER)

The connector can be connected to the speaker on the case.

Power LED Connector (PWR LED)

When the system is in S0 status, the LED is on. When the system is in S1 status, the LED is blink; When the system is in S3,S4, S5 status, the LED is off. The connector has an orientation.

GREEN LED Connector (GREEN LED)

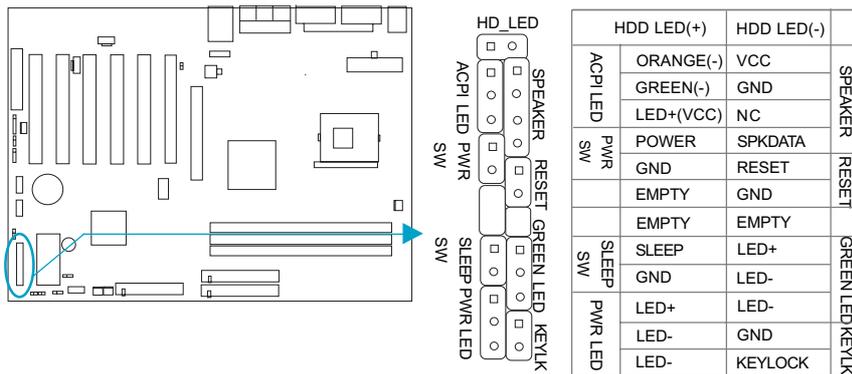
When the system is in S0,S1,S4,S5 status, the LED is off,When the system is in S3 status, the LED is on.

ACPI LED Connector (ACPI LED)

The ACPI LED is a dual-color light with three pins. Pin1 and Pin2 drive different color lights. If Pin1 drives the orange light, then, Pin2 drives the green light, the following status will come out. When the system is in S0 status, the LED is green on. When the system is in S1 status, the LED is green blink. When the system is in S3 status, the LED is orange on. When the system is in S4, S5 status, the LED is off.

Hardware Green Connector (SLEEP SW)

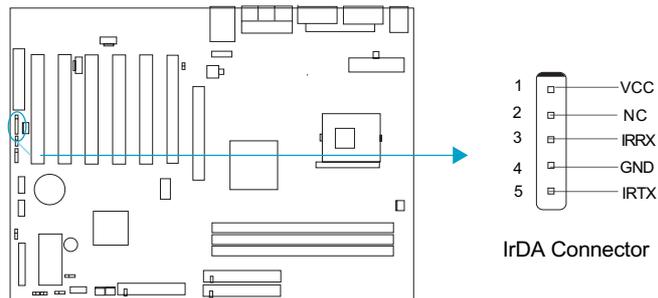
Push once the switch connected to this header, the system enters suspend mode.





Infrared Header (IrDA)

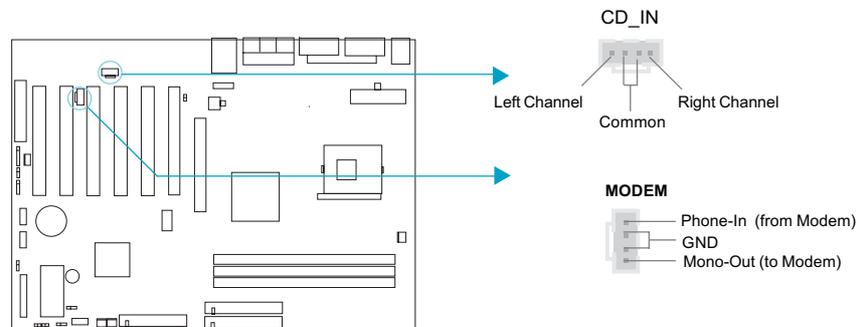
This connector supports wireless transmitting and receiving. Before using this function, configure the settings for IR Address, IR Mode and IR IRQ from the “INTEGRATED PERIPHERALS” section of the BIOS.



Audio Connectors (CD_IN, MODEM)

(Available on S4-A/AL)

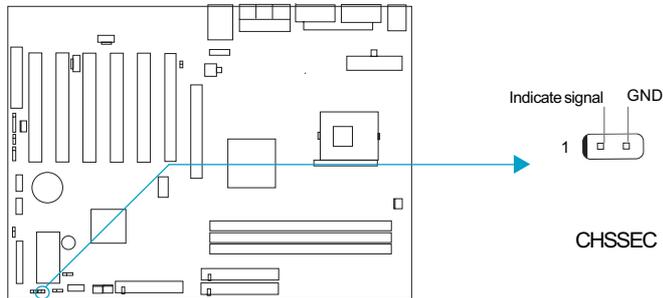
CD_IN is Sony standard CD audio connectors, it can be connected to a CD-ROM drive through a CD audio cable. The MODEM connector allows the onboard audio to interface with a voice modem card with a similar connector. It allows connecting the mono_in (such as a phone) or mono_out (such as a speaker) between the onboard audio and the voice modem card.





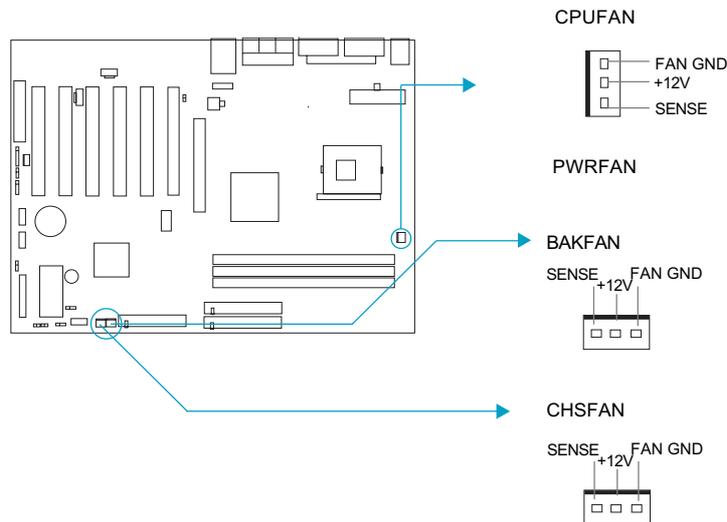
Chassis Security Switch (CHSSEC)(Reserved)

The connector connects to the chassis security switch on the case. The system can detect the chassis intrusion through the status of this connector. If the case has been opened, the system will record the status and indicate the chassis has been opened.



Fan Connectors (CPUFAN, CHSFAN, BAKFAN)

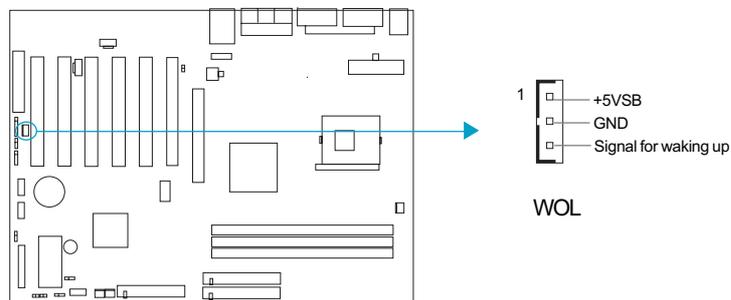
The fan speed of CPUFAN and CHSFAN can be detected and viewed in “PC Health” section of the BIOS. These three fans will be automatically turned off after the system enters suspend mode.





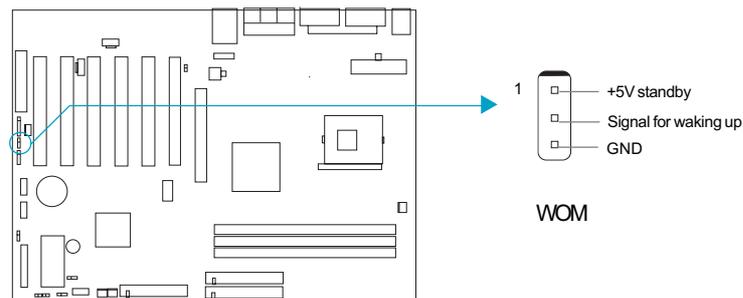
Wake-Up On LAN (WOL)

Through the Wake-Up On LAN function, a wake event occurring from the network can wake up the system. If this function is to be used, please be sure an ATX12V power, and a LAN adapter which supports this function is used. Then connect this header to the relevant connector on the LAN adapter, set "Ring Power up Control" as Enabled in the "POWER MANAGEMENT SETUP" section of the BIOS. Save and exit, then boot the operating system once to make sure this function takes effect.



Wake-Up On Internal Modem (WOM)

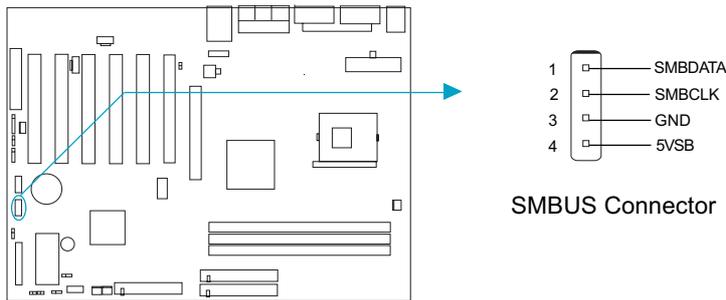
Through this function, the system which is in the suspend or soft-off status can be waked up by a ring signal received from the internal modem. When this function is used, be sure an internal modem card which supports this function is used. Then connect this header to the relevant connector on the modem card, set "Ring Power up Control" as Enabled in the "Power Management Setup" section of the BIOS. Save and exit, then boot the operating system once to make sure this function takes effect.





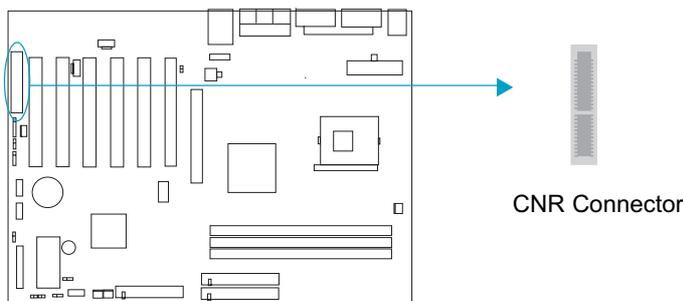
4 Pin SMBus Connector(SMBUS)

This connector allows you to connect SMBus devices. SMBus devices communicate through the SMBus with an SMBus host and/or other SMBus devices. The SMBus or System Management Bus is a specific implementation of I²C bus, which is a multi-master bus, that is, multiple chips can be connected to the same bus and each one can act as a master by initiating data transfer.



Communication and Networking Riser Interface Connector(CNR)

The mainboard provides this Communication and Networking Riser(CNR) interface which can support audio and/or modem functions. What its superiority compared with AMR is being able to support plug-and-play function. Mechanically the CNR shares a PCI slot, thus when you insert the CNR card, the neighboring PCI slot cannot be used.

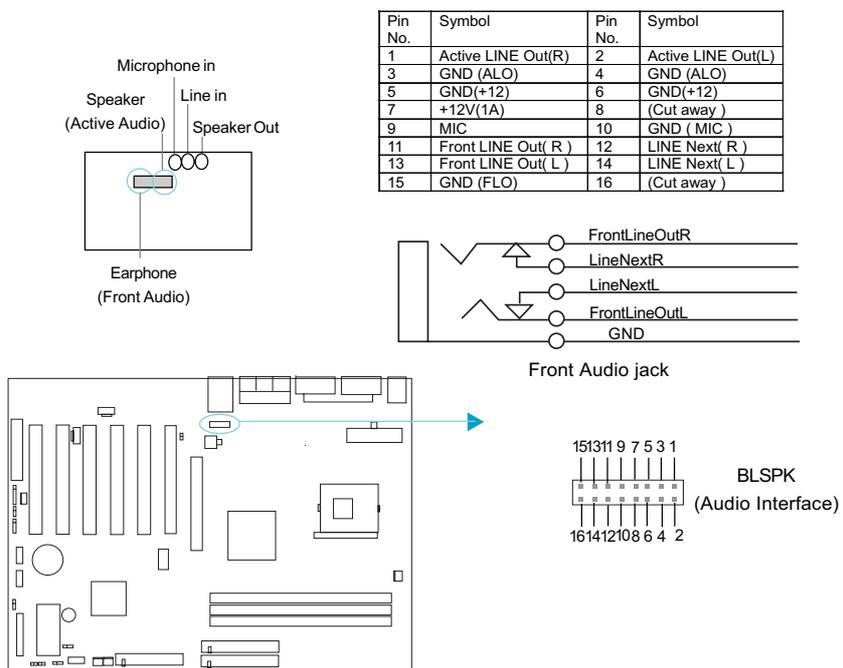


By using an audio codec, the AC'97 digital link providing by CNR allows for cost-effective, high-quality, integrated audio on the platform. AC'97 digital link also allows several external codecs to be connected. The digital link is expanded to support two or three audio codecs for up to 6 channels of PCM audio output (full AC-3 decode) or a combination of an audio and modem codec.



Audio Interface (Optional)

The audio interface can provide 3 kinds of Audio output choices :the FrontAudio, the RearAudio and the ActiveAudio. Their priority level is as sequence. when the FrontAudio is available, the RearAudio and the ActiveAudio(in-case speaker)will be cut off. when the RearAudio is available, the ActiveAudio will be cut off. An onboard amplifier is needed for the case of earphone plugged into. when the FrontAudio jack is inexistence, Pin11 and Pin12, Pin13 and Pin14 must be short connected.





Main Expansion Slots and Connectors

Slot/Port (Quantity)	Description
PCI(6)	PCI slots
CNR(1)	CNR slot
AGP(1)(optional)	AGP slot
IDE(2)	IDE ports
FLOPPY(1)	Floppy Drive port
DDR(3)	DDR sockets
USB(6)	USB connectors
UART(2)	UART connectors
PARALLEL(1)	Parallel connector
IrDA(1)	IrDA connector



Jumper Settings

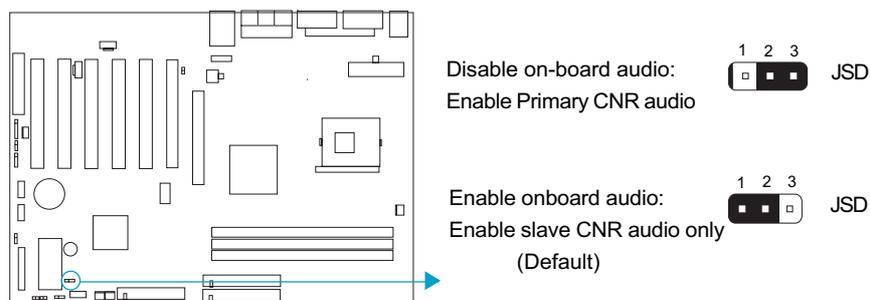
Jumpers are located on the mainboard, they represent, clear CMOS jumper JCC, enable BIOS Protection function jumper JAV etc. Pin 1 for all jumpers are located on the side with a thick white line (Pin1→ ), refer to the mainboard's silkscreen. Jumpers with three pins will be shown as  to represent pin1 & pin2 ("1-2")connected and  to represent pin2 & pin3 ("2-3")connected.

Jumper	Symbol	Description	Represent
3-pin		1-2	set pin1 and pin2 closed
		2-3	set pin2 and pin3 closed
2-pin		close	set the pins closed
		open	set the pins opened

Enable/Disable onboard audio (JSD)

(Available on S4-A/AL)

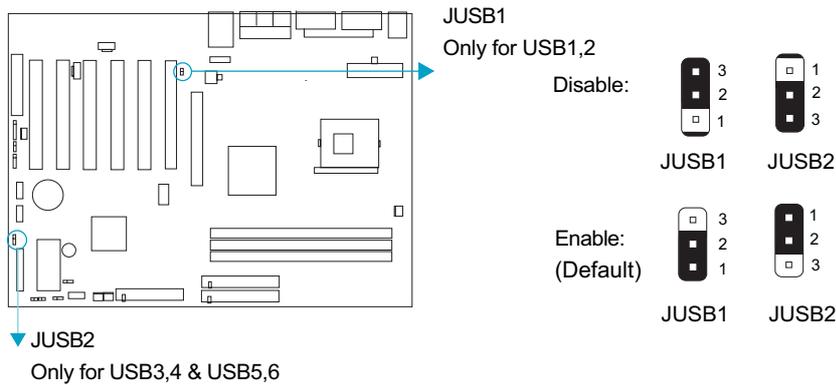
If you want to use the on-board audio, set JSD with pin2 & pin3 closed (default), Otherwise, set JSD with pin1 & pin2 closed for disabling this function.





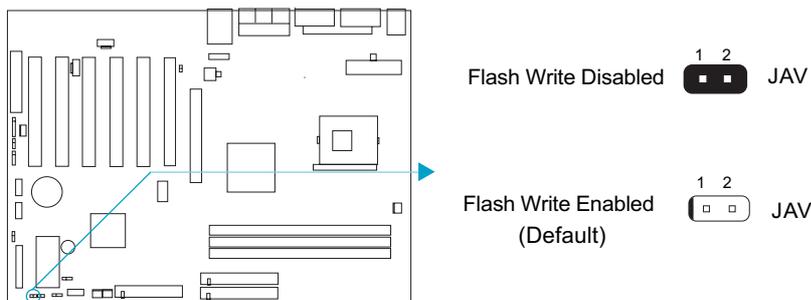
Enable Front/Back Panel USB Device Wake-up Function (JUSB1/JUSB2)

The mainboard provides the advanced USB device wake-up function. The system can be waked up from its power saving including ACPI S3 by activating USB device. Before using this function, set JUSB1/JUSB2 with pin1 & pin2 closed. Otherwise, set JUSB1/JUSB2 with pin2 & pin3 closed for disabling. Furthermore, the item "Wake-Up From S3 by USB" in BIOS setup should also be set correspondingly to enable or disable this function.



BIOS Protection Jumper (JAV)

The BIOS of the mainboard is inside the FWH. If the jumper JAV is set as closed, you will be unable to flash the BIOS to the mainboard. However in this status, the system BIOS is protected from being attacked by serious virus such as CIH virus.

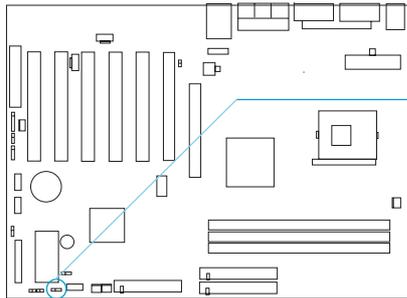


The mainboard provides the BootEasy function. If you want to use this function, please set the jumper JAV as open under PC will boot-up in normal way conditions. Refer to the BootEasy introduction.



Clear CMOS (JCC)

If you want to clear CMOS, unplug the AC power supply first, close JCC (pin1 & pin2) once, set JCC back to the normal status with pin2 & pin3 connected, then power on the system.



Normal status:
(Default)  JCC
1 2 3

Clear CMOS:  JCC
1 2 3

(Unplug the AC power supply)

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Chapter 3

BIOS Description

Utility Support:

AWDFLASH.EXE

This is a flash memory write/read utility used for the purpose of upgrading your BIOS when necessary. Before doing so, please note:

- **We strongly recommend you only upgrade BIOS when encounter problems.**
- **Before upgrading your BIOS, review the description below to avoid making mistakes, destroying the BIOS and resulting in a non-working system.**

When you encounter problems, for example, you find your system does not support the latest CPU released on our current mainboard, you may therefore upgrade the BIOS, please don't forget to set JAV as open and disable the "Flash Write Protect" item in AWARD BIOS CMOS Setup first.

Follow the steps exactly for a successful upgrade.

1. Create a bootable system floppy diskette by typing Format A:/s from the DOS prompt under DOS6.xx or Windows 9x environment.
2. Copy AWDFLASH.EXE (version>=7.95) from the directory \Utility located on QDI Mainboard Utility CD onto your new bootable diskette.
3. Download the updated BIOS file from the Website (<http://www.qdigrp.com>). Please be sure to download the suitable BIOS file for your mainboard.
4. Decompress the file downloaded, copy the BIOS file (xx.bin) onto the bootable diskette, and note the checksum of this BIOS which is located in readme file.
5. Reboot the system from the bootable diskette created.
6. Then run the AWDFLASH utility at the **A:** prompt as shown below:

```
A:\AWDFLASH xxxx.bin
```

Follow the instruction through the process. Don't turn off power or reset the system until the BIOS upgrade has been completed.

If you require more detailed information concerning AWDFLASH Utility, for example, the different usage of parameters, please type **A:\>AWDFLASH /?**

Note: AWDFLASH.EXE (version>=7.95) utility must be used to upgrade the mainboard family BIOS instead of QDI flash utility.

BIOS version will update constantly. We will not be responsible for any BIOS description differ from your mainboard BIOS shown.



AWARD(Phoenix) BIOS Description

Entering Setup

Power on the computer, when the following message briefly appears at the bottom of the screen during the POST (Power On Self Test), press key to enter the AWARD BIOS CMOS Setup Utility.

Press to enter SETUP

Once you have entered, the Main Menu (Figure 1) appears on the screen. The main menu allows you to select from eleven setup functions and two exit choices. Use the arrow keys to select among the items and press the <Enter> key to accept or enter the sub-menu.



Figure-1 Main Menu

Load Fail-Safe Defaults

The Fail-Safe Defaults are secure and useful for system. It is recommended users load the Fail -Safe Defaults when the system is in trouble.

Load Optimized Defaults

The Optimized Defaults are common and efficient. It is recommended users load the optimized defaults first, then modify the needed configuration settings.

Standard CMOS Features Setup

The basic CMOS settings included in "Standard CMOS Features" are Date, Time, Hard Disk Drive Types, Floppy Disk Drive Types, and VGA etc. Use the arrow keys to highlight the item, then use the <PgUp> or <PgDn> keys to select the value desired in each item.



Figure-2 Standard CMOS Setup Menu

For the items marked, press enter, a window will pop up as shown below. You can view detailed information or make modifications.

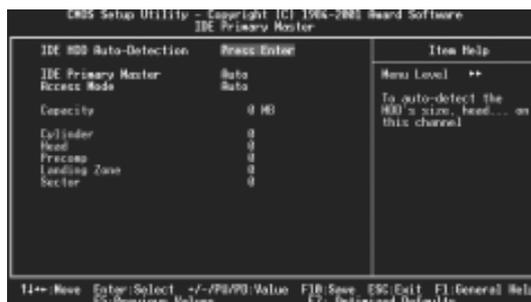


Figure-2-1 IDE Primary Master Setup Menu

Hard Disk

Primary Master/Primary Slave/Secondary Master/Secondary Slave

These categories identify the HDD types of 2 IDE channels installed in the computer system. There are three choices provided for the Enhanced IDE BIOS: None, Auto, and Manual. 'None' means no HDD is installed or set; 'Auto' means the system can auto-detect the hard disk when booting up; by choosing 'Manual', the related information should be entered regarding the following items. Enter the information directly from the keyboard and press < Enter>:

CYLS	number of cylinders	HEAD	number of heads
PRECOMP	write pre-compensation	LANDZ	landing zone
SECTOR	number of sectors	MODE	HDD access mode



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

CHS mode

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

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

LBA (Logical Block Addressing) mode

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

During HDD accessing, the IDE controller will transform the logical address described by sector, head and cylinder number into its own physical address inside the HDD.

Large mode

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

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

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

Remark

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



Video

Set this field to the type of video display card installed in your system.

EGA/ VGA	Enhanced Graphics Adapter / Video Graphic Array. For EGA, VGA, SEGA, SVGA, or PGA monitor adapters.
CGA 40	Color Graphic Adapter, powering up in 40 column mode.
CGA 80	Color Graphic Adapter, powering up in 80 column mode.
MONO	Monochrome adapter, including high resolution monochrome adapters.

Halt On

This category determines whether or not the computer will stop if an error is detected during powering up.

No errors	The system boot will not stop for any errors that may be detected.
All errors	Whenever the BIOS detects a non-fatal error, the system will stop and you will be prompted.
All, But Keyboard	The system boot will not stop for a keyboard error; but it will stop for all other errors.
All, But Diskette	The system boot will not stop for a disk error; but it will stop for all other errors.
All, But Disk/Key	The system boot will not stop for a keyboard or disk error, but it will stop for all other errors.

Memory

This is a Display-Only Category, determined by POST (Power On Self Test) of the BIOS.

Base Memory	The POST of the BIOS will determine the amount of base (or conventional) memory installed in the system.
Extended Memory	The BIOS determines how much extended memory is presented during the POST.
Total Memory	Total memory of the system .



QDI Innovation features

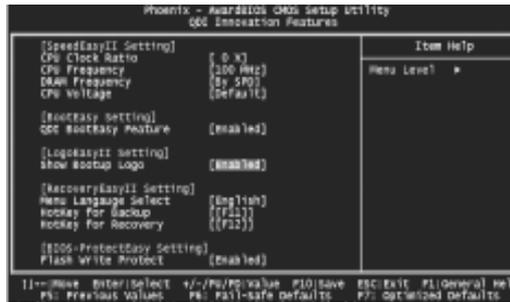


Figure-3 QDI Innovation features Menu

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

<u>Item</u>	<u>Option</u>	<u>Description</u>
[SpeedEasyII setting]		
●CPU Clock Ratio	x8-50 Key in a DEC number	Select the multiplication of processor core frequency. If a Ratio -locked processor installed, this item will be hidden. This item is only for users who understand all the CPU parameters. This function will not take effect for bus ratio locked processor. Fill in a DEC number of the ratio you want .
●CPU Frequency	100 133	Set CPU frequency as 100MHz. Set CPU frequency as 133MHz.
●DRAM Frequency	By SPD 200MHz 266MHz 333MHz	Set DRAM frequency by SPD. set DRAM frequency manually.
●CPU Voltage	Default - 0.075V + 0.300V	Set CPU frequency.



<u>Item</u>	<u>Option</u>	<u>Description</u>
[BootEasy setting]		
<ul style="list-style-type: none"> QDI BootEasy feature 	Enabled	PC boot in rapid speed, without any redundant feature waiting for the displaying of starting OS.
	Disabled	PC boot in the legacy BIOS way.
[LogoEasyII setting]		
<ul style="list-style-type: none"> Show Bootup Logo 	Enabled	The Bootup logo can be shown when system boots show up.
	Disabled	Close this function.
[RecoveryEasyII setting]		
<ul style="list-style-type: none"> Menu language Select 	English	Select RecoveryEasyII Interface Menu language.
	Chinese	
<ul style="list-style-type: none"> Hotkey for Backup/Recovery 	NULL	Backup/Recovery interface can not be used by Pressing Hotkey.
	F2-F12	Select Hotkey to enter Backup/Recovery interface during POST.
[BIOS -protectEasy setting]		
<ul style="list-style-type: none"> Flash Write Protect 	Enabled	This option is for protecting the system BIOS, when enabled, writing to BIOS area is to be discarded.
	Disabled	

Warning

Be sure your selection is right. CPU over speed will be dangerous! We will not be responsible for any damages caused.



Advanced BIOS Features Setup



Figure-4 Advanced BIOS Features Menu

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

<u>Item</u>	<u>Option</u>	<u>Description</u>
• ChipAway Virus on Guard	Enabled	Allows you to choose the VIRUS warning feature for IDE Hard Disk boot sector protection. If this function is enabled and someone attempt to write data into this area, BIOS will show a warning message on screen and alarm beep.
	Disabled	Invalidates this function.
• CPU L1&L2 Cache	Enabled	Enable CPU L1/L2 cache.
	Disabled	Disable CPU L1/L2 cache.
• CPU L2 Cache ECC Checking	Enabled	Enables CPU L2 Cache ECC function.
	Disabled	Disables CPU L2 Cache ECC function.
• Quick Power On Self Test	Enabled	Allow the system to skip certain tests while booting. This will decrease the time needed to boot the system.
	Disabled	Normal POST.
• First (Second, Third) Boot Device Boot Other Device	Disabled	Select Your Boot Device Priority. It could be Disabled, Floppy, LS120,ZIP100, HDD-0, HDD-1, HDD-2, HDD-3, SCSI, CDROM, LAN.
	Floppy	
 CDROM	



<u>Item</u>	<u>Option</u>	<u>Description</u>
• Swap Floppy Drive	Enabled Disabled	If the system has two floppy drives, choose enable to assign physical drive B to logical drive.
• Boot Up Floppy Seek	Enabled Disabled	Tests floppy drives to determine whether they have 40 or 80 tracks.
• Boot Up NumLock Status	On Off	Select power on state for NumLock.
• Gate A20 Option	Normal Fast	Let chipset control GateA20 and Normal - a pin in the keyboard controller controls GateA20. Default is Fast.
• Typematic Rate Setting	Enabled Disabled	Keystrokes repeat at a rate determined by the keyboard controller - when enabled, the typematic rate and typematic delay can be selected.
• Typematic Rate (chars/sec)	6-30	The rate at which character repeats when you hold down a key.
• Typematic Delay (Msec)	250-1000	The delay before keystrokes begin to repeat.
• Security Option	Setup System	Select whether the password is required every time the system boot or only when you enter setup.
• OS Select For DRAM>64MB	Non-OS2 OS2	Select OS2 only if you are running OS/2 operating system with more than 64MB of RAM.
• HDD S.M.A.R.T. Capability	Enabled Disabled	Enable hard disk S.M.A.R.T. support. Invalidate this feature.
• Report no FDD for WIN 95	Yes No	Report NO Floppy Disk Drive for WIN 95 to release IRQ6. Do not report No Floppy Disk Drive for WIN 95.



Item	Option	Description
• Video BIOS Shadow	Enabled	Video BIOS will be copied to RAM. Video Shadow will increase the video speed.
	Disabled	Invalidates this feature.
• Show Logo EPA show	Enabled	The EPA logo will be shown automatically when system boots up, otherwise, no logo appears on the screen.
	Disabled	



Advanced Chipset Features Setup



Figure-5 Advanced Chipset Features Menu

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

<u>Item</u>	<u>Option</u>	<u>Description</u>
• Advanced DRAM Control	Press Enter	Press enter to set the items about DRAM.
• System Performance	Safe Mode Normal Mode Fast Mode Turbo Mode Ultra Mode	Set system performance.
• CAS Latency Setting	2T/2.5T/3T	Define CAS latency time.
• DRAM Addr/Command Rate	AUTO 1T/2T	DRAM address and command delay time setting.
• Precharge Caching	Enable Disable	Enable precharge caching. Invalidates this function.
• Memory hole at 15M-16M	Enabled Disabled	Memory hole at 15-16M is reserved for expanded ISA card. Do not set this memory hole.
• AGP Aperture Size (MB)	4/8/16/32 64/128/256	Set the effective size of the Graphics Aperture to be used in the particular GART Configuration.



<u>Item</u>	<u>Option</u>	<u>Description</u>
• Graphic Window WR combin	Enabled	Set Graphic Window to improve 3D performance.
	Disabled	Invalidates this function.
• Close Empty DIMM/PCI Clk	Enabled	Close empty DIMM or PCI clock to reduce EMI.
	Disabled	Do not close empty DIMM or PCI clock.
• Spread Spectrum	Enabled	Enable Clock Spread Spectrum to reduce EMI.
	Disabled	Disable Clock Spread Spectrum.



Power Management Setup



Figure-6 Power Management Setup Menu

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

Item	Option	Description
• ACPI function	Enabled Disabled	Enable ACPI function. Disable this function.
• ACPI Suspend Type	S1(POS) S3(STR) S1&S3	Select the ACPI suspend type.
• S3 Resume Init VGA	Auto Enabled Disabled	The VGA device could be initialized automatically when system was waken up from S3 status. Enable VGA device be initialized when system was waken up from S3 status. Disable VGA device be initialized when system was waken up from S3 status.
• Video Off Option	Suspend -> Off Always On	Screen blanks after the system enters either standby mode or suspend mode. Screen is always on.



<u>Item</u>	<u>Option</u>	<u>Description</u>
• Video Off Method	Blank Screen	The system BIOS will only blank off the screen when disabling video.
	V / H SYNC + Blank	In addition to Blank Screen, BIOS will also turn off the V-SYNC & H - SYNC signals from VGA card to monitor.
	DPMS	This function is enabled only for VGA cards supporting DPMS. Note: When the green monitor does not detect the V/H-SYNC signals, the electron gun will be turned off.
• Switch function	break/wake	Enable Power Switch to wake up.
	Disabled	Disable Power Switch to wake up.
• MODEM Use IRQ	3, 4, 5, 7, 9 10, 11 Auto	Special wake-up event for Modem.
• HDD Off After	Disabled	HDD's motor will not turn off by timer.
	1 - 15 Min	Define the continuous HDD idle time before the HDD enters power saving mode (motor off).
• Power Button Override	Instant-Off	The system will immediately power off once the power button is pressed.
	Delay 4 sec.	The system will power off when power button is pressed for more than 4 seconds.
• Power State Resume Control	Always Off	System is always off when put on AC power.
	Always On	System is on once put on AC power.
	keep pre-states	Keep the preceding states.
• PM Wake up Events	Press Enter	Enter to set the items about PM.
• IRQ(3~7,9~15) NMI	Enabled	Enables IRQ"X" to wake up.
	Disabled	Disables IRQ"X" to wake up.
• IRQ 8 Break Suspend	Enabled	Allows the system to be waken up by IRQ 8.
	Disabled	Does not allow the system to be waken up by IRQ8.



Item	Option	Description
<ul style="list-style-type: none"> Ring Power-Up Control 	Enabled	Allow the system to be powered on when a Ring indicator signal comes up to UART1 or UART2 from external modem .
	Disabled	Do not allow Ring wake up.
<ul style="list-style-type: none"> MACPME Power Up Control 	Enabled	Allows the system to be waken up by onboard LAN.
	Disabled	Does not allow the system to be powered on by onboard LAN.
<ul style="list-style-type: none"> PCIPME Power Up Control 	Enabled	Allows the system to be waken up by PCI card.
	Disabled	Does not allow the system to be powered on by PCI card.
<ul style="list-style-type: none"> USB Port Wake Up Control 	Enabled	The system could be waked up by USB devices from the Suspend to RAM status.
	Disabled	The system cannot be waked up by USB devices from the Suspend To RAM status.
<ul style="list-style-type: none"> Power by Alarm 	Enabled	RTC alarm can be used to generate a wake-up event to power up the system.
	Disabled	RTC has no alarm function.



PNP/PCI Configuration Setup

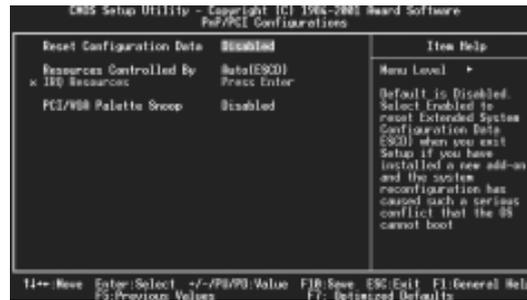


Figure-7 PNP/PCI Configuration Setup Menu

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

<u>Item</u>	<u>Option</u>	<u>Description</u>
<ul style="list-style-type: none"> Reset Configuration Data 	Enabled	Default setting is 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 serious conflicts preventing the OS from booting.
	Disabled	Disable the configuration data function.
<ul style="list-style-type: none"> Resources Controlled By 	Auto(ESCD)	BIOS can automatically configure all boot and Plug and Play compatible devices. If you choose Auto, you cannot select IRQ DMA and memory base address fields, because BIOS automatically assigns them.
	Manual	
<ul style="list-style-type: none"> PCI/VGA Palette Snoop 	Disabled	Default setting.
	Enabled	Non-standard VGA cards such as graphics accelerators or MPEG video cards may not show colors properly. Enabling this item can solve this problem.



Integrated Peripherals

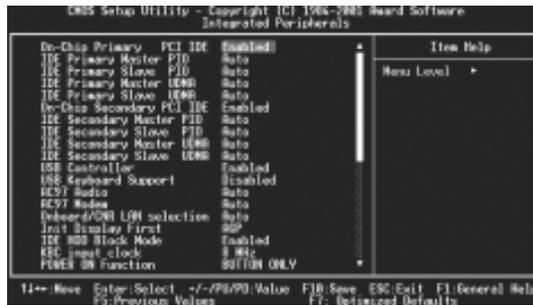


Figure-8 Integrated Peripherals Menu

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

<u>Item</u>	<u>Option</u>	<u>Description</u>
• SIS On-Chip IDE device	Press Enter	Press enter to set On-Chip IDE device.
• Internal PCI/IDE	Disabled Primary Secondary Both	Set the ports of Onboard IDE.
• IDE Primary Master/Slave PIO	Mode 0 - 4 Auto	Define the IDE primary master/ slave PIO mode. The IDE PIO mode is defined by auto -detection.
• IDE Primary Master/Slave UDMA	Auto Disabled	Ultra DMA mode will be enabled if an Ultra DMA device is detected. Disable this function.
• IDE Burst Mode	Enabled Disabled	Enables IDE Burst Mode. Disables IDE Burst Mode.
• SIS On-Chip PCI device	Press Enter	Press enter to set On-Chip PCI device.
• SIS-7012 AC97 Audio	Enabled Disabled	If audio codec was installed on board, the AC97 audio function can be used. Disable the AC97 audio onboard.



Item	Option	Description
• SIS-7013 S/W Modem	Enabled	Enable CNR AC97 Modem.
	Disabled	Disable CNR AC97 Modem.
• SIS-900 10/100METHERNET	Enabled	The onboard LAN is enabled.
	Disable	The onboard LAN is disabled.
• System Share Memory Size	4/8/16 MB 32/64 MB	Set the display memory as 6/8/16/32/64MB.
• Onboard Super IO Device	Press Enter	Press enter to set Super IO device.
• Onboard FDC Controller	Enabled	Onboard floppy disk controller is enabled.
	Disabled	Onboard floppy disk controller is disabled.
• Onboard Serial Port 1/2	3F8/IRQ4, 2F8/IRQ3, 3E8/IRQ4, 2E8/IRQ3, Auto	Define the onboard serial port address and required interrupt number.
	Auto	Onboard serial port address and IRQ are automatically assigned.
	Disabled	Onboard serial port is disabled.
• UART Mode Select	Normal	Defines Serial Port as standard serial port.
	IrDA	Supports IRDA mode.
	ASK IR	Supports SHARP ASK-IR protocol with maximum baud rate up to 57600bps.
• UR2 Duplex Mode	Half	Default is recommended.
	Full	
• Onboard Parallel Port	378/IRQ7	Define parallel port address and IRQ channel.
	278/IRQ5	
	3BC/IRQ7	
	Disabled	Onboard parallel port is disabled.
• Parallel Port Mode	SPP	Define the parallel port mode
	EPP	
	ECP	
	ECP+EPP	



Item	Option	Description
• ECP Mode Use DMA	3 1	Set ECP Mode Use DMA is 1 or 3.
• Game Port Address	Disabled 201,209	This option is used to configure Game Port Address.
• Midi Port Address	Disabled 290/300 330	This option is used to configure Midi Port Address.
• Midi Port IRQ	5 10	This option is used to configure Midi Port IRQ.
• USB Controller	Enabled Disabled	Enable onchip USB controller. Disable onchip USB controller.
• USB Keyboard Support	Enabled Disabled	Support USB Keyboard under legacy OS. Do not support USB Keyboard under legacy OS.
• IDE HDD Block Mode	Enabled Disabled	Allow IDE HDD to read/write several sectors at once. IDE HDD only reads/writes a sector once.
• Init Display First	PCI Slot AGP	Initialize the PCI VGA first. Initialize the AGP first.
• AGP Auto Calibration	Enabled Disabled	Enable the AGP auto calibration. Disable the AGP auto calibration.
• IDE Access Interface	Embedded BUS PCI BUS	Access IDE using Embedded BUS. Access IDE using PCI BUS.
• MAC Access Interface	Embedded BUS PCI BUS	Access MAC using Embedded BUS. Access MAC using PCI BUS.
• USB1 Access Interface	Embedded BUS PCI BUS	Access USB1 using Embedded BUS. Access USB1 using PCI BUS.



Item	Option	Description
<ul style="list-style-type: none">• USB0 Access Interface	Embedded BUS PCI BUS	Access USB0 using Embedded BUS. Access USB0 using PCI BUS.
<ul style="list-style-type: none">• Audio Access Interface	Embedded BUS PCI BUS	Access Audio using Embedded BUS. Access Audio using PCI BUS.



PC Health Status

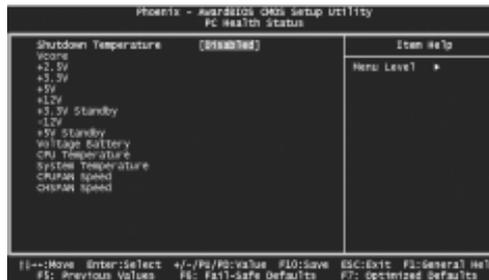


Figure-9 PC Health Status Menu

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

<u>Item</u>	<u>Option</u>	<u>Description</u>
<ul style="list-style-type: none"> Shutdown Temperature 	60°C/140°F 65°C/149°F 70°C/158°F 75°C/167°F Disabled	The system will shut down automatically under the ACPI OS when the CPU temperature reaches the previous setting, 60°C/140°F, 65°C/149°F, 70°C/158°F, 75°C/167°F. The system remains on regardless of how much the CPU temperature is.
<ul style="list-style-type: none"> Vcore +2.5V +3.3V +5 V +12 V +3.3V Standby +5V Standby Voltage Battery 		Display current voltage value including all significant voltages of the mainboard. Display the voltage of battery.
<ul style="list-style-type: none"> CPU Temperature 		The temperature of CPU.
<ul style="list-style-type: none"> System Temperature 		Current System temperature.
<ul style="list-style-type: none"> CPUFAN Speed CHSFAN Speed 		RPM (Revolution Per Minute) Speed of fan. Fan speed value is based on an assumption that tachometer signal is two pulses per revolution. In other cases, you should regard it relatively.



Password Setting

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

ENTER PASSWORD

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

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

PASSWORD DISABLED

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

If you have selected "**Setup**" at "Security Option" from "BIOS Features Setup" menu, you will be prompted for the password only when you enter BIOS Setup.

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

Boot with BIOS defaults

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



Appendix

QDI Utility CD

A QDI Utility CD is supplied with this mainboard, the contents contained in it are showed as below:

1. Driver Install

Using this choice, you can install all the drivers for your mainboard . You should install the drivers in order, and you need to restart your computer until all the drivers are installed.

- | | |
|---------------------------|-----------------------------|
| A. Chipset software | B. Network Driver(optional) |
| C. Audio Driver(optional) | D. DirectX |
| E. VGA Driver(optional) | |

2. Accessory

- A. Norton AntiVirus 2002
- B. QFlashV1.0

3. Browse CD

You could read all the contents contained in this CD, including Utility and Documents.

The files included in **Utility** are:

- | | |
|-----------------|--------------|
| A. Awdflash.exe | B. Cblog.exe |
| C. Lf.exe | |

The files included in **Documents** are:

- A. Adobe Acrobat Reader V5.0
- B. Superb 4-French.doc,Superb 4-Spanish.doc etc.

Norton AntiVirus

When you install Norton AntiVirus and accept options, your computer is safe. Norton AntiVirus automatically checks boot records for viruses at system startup, Checks programs for viruses at the time you use them, scans all local hard drives for viruses once per week, and monitors your computer for any activity that might indicate the work of a virus in action. It also scans files you download from the internet and checks floppy disks for boot viruses when you use them.

The list below shows the most important tasks Norton AntiVirus helps you perform:Scan for viruses on your computer;Remove viruses from your computer;Update your virus protection with LiveUpdate;Quarantine an infected file. you can go to the Symantec Web site to view an online tutorial:

<http://www.symantec.com/techsupp/tutorial>



LogoEasy II



Thank you for using QDI upgraded innovation--- LogoEasy II, which is completely compatible with LOGOEASY. LOGOEASY II can be easily operated in a Windows environment, following in steps with the trend. It has added the functions of supporting JPEG images and true color display of 64K and 16M colors with regard to JPEG-format graphics files and the high-precision display equipment, which are now widely used.

LOGOEASY II supports the high-resolution 640x480 or 800x600 image display and full-screen, top right corner or bottom right corner display. It also supports simultaneous display of logo and sign-on message of the BIOS testing system. LOGOEASY II is a tool that can be operated in multi-platforms to refresh and change LOGO graphics including DOS, WINDOWS9X, WINDOWSNT, WINDOWSME and WINDOWS XP. In particular, the tools under the interface of WINDOWS are simple and easy to operate. It teaches you by taking your hand how to change LOGO.

ITEM		LogoEasy II	LogoEasy
Colors	16 colors	×	×
	256 colors	✓	✓
	16M colors	✓	×
Resolution	640*480	✓	✓
	800*600	✓	×
Display Self-Test msg at the same time		✓	✓
Full Screen Logo		✓	✓
Display logo on corners		✓	✓

✓ ----- Support x ----- Not Support

When you power on or reset your system, the picture shown below will be displayed on the screen.

You can use "LogoEasy II" to replace it by any other logo which you want.

We provide two Utilities in the QDI Driver CD, which bring user the following two means to select:





A. Using CBLOGO.EXE Utility (Under DOS):

1. Copy "CBLOGO.EXE" and "AWDFLASH.EXE" from the directory Utility located on QDI Driver CD to your hard disk.
2. Get the BIOS file from "AWDFLASH.EXE" or Download the BIOS file from the Website (<http://www.qdigrp.com>) and copy the BIOS file (xxxxxx.bin) to your hard disk.
3. Boot the system into DOS environment, Put your favor picture into BIOS file by "CBLOGO.EXE" command. For example: CBLOGO.EXE xxxxxx.bin myphoto.bmp
4. Flash the BIOS to motherboard by "AWDFLASH.EXE". For example: AWDFLASH xxxxxx.bin

B. Using QFlash (Under Windows):

1. Download the QFlash Utility from the Website (<http://www.qdigrp.com>) or get it from QDI Driver CD.
2. Run QFlash program step by step, following the directions until complete it .
3. Reboot the system, you can see the new picture displayed on the screen.

NOTE:

If you require more parameters information concerning "CBLOGO.EXE", please refer to the online help. If you don't prefer the logo displayed on the screen during bootup, set the "Show Bootup Logo" option as Disabled in CMOS Setup.

*** We reserve the right of modifying the default full-logo of QDI without further notification.**

BIOS_ProtectEasy



The BIOS of the mainboard is contained inside the Flash ROM. Severe viruses such as CIH virus are so dangerous that it may overwrite the BIOS of the mainboard. If the BIOS has been damaged, the system will be unable to boot. We provide the following solution which protects the system BIOS from being attacked by such viruses.

There are two choices which implements this function.

1. Set the jumper (JAV) as closed, the BIOS can not be overwritten.
2. Set the jumper (JAV) as opened, meanwhile set "Flash Write Protect" as Enabled in CMOS Setup. In this way, the BIOS can not be overwritten, but the DMI information can be updated.