

### **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.

- PlatiniX 4N series mainboard
- QDI Driver CD 2000
- 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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# 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**  
**PlatiniX 4N**

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/2001

Printed Name : Xu Wenge Position/ Title : Assistant President

## Declaration of conformity



Trade Name: QDI Computer ( U. S . A. ) Inc.  
Model Name: PlatiniX 4N  
Responsible Party: QDI Computer ( U. S. A.) Inc.  
Address: 41456 Christy Street  
Fremont, CA 94538  
Telephone: (510) 668-4933  
Facsimile: (510) 668-4966

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.

Signature :  Date : 2001

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**⚠ Note:**

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

**P4N: without onboard Audio and onboard LAN**

**P4N-A: with onboard Audio**

**P4N-L: with onboard LAN**

**P4N-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

PlatiniX 4N series mainboard utilizes Intel® 850 Chipset(82850 MCH+82801BA ICH2), providing a fully compatible, high performance and cost-effective PC/ATX platform. The new integrated technologies, together with AGP 4X support, AC'97 Audio, 4 USB ports, and Ultra ATA100/66/33, give customers an advanced, multimedia solution at a reasonable price. It provides 400 MHz system bus to support Intel® Pentium 4 socket 478 processors and its largest memory capacity is up to 2GB. It also provides advanced features such as Wake up by USB devices, Wake-on-LAN, Wake-on-Modem and Keyboard Power-on function. 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. ManageEasy, our system management application is also supplied to enable remote monitoring and configuration of the system. BootEasy, lets the PC boot freely and rapidly.

### Key Features

#### Form factor

- ATX form factor of 305mm x 244mm

#### Microprocessor

- Supports Intel® Pentium 4(Willamette) socket 478 processors at 1.5/1.6/1.7/1.8/1.9/2.0GHz and above
- Supports Intel® Pentium 4(Northwood) socket 478 processors at 2GHz and above
- Supports 400MHz host bus speed

#### System memory

- Provides four 168-pin RIMM sockets
- Supports two channel PC800/PC600 RDRAM
- Supports 512MB using 64Mb RDRAM technology
- Supports 1GB using 128Mb RDRAM technology
- Supports 2GB using 256Mb RDRAM technology
- The largest total memory is up to 2GB

**Note:** Channel A is composed of RIMM1 and RIMM3, Channel B is composed of RIMM2 and RIMM4. The memory configuration of RIMM1 and RIMM2, RIMM3 and RIMM4 must be identical. C-RIMMs(Continuity RIMM) must be used to complete the sockets that are not populated by RDRAMs. But the mainboard doesn't work when using 4 C-RIMMs to fill all sockets.



### **USB Ports**

- USB 1.1 compliant
- Supports wake-up from S1 (suspend), S3 (Suspend to RAM, depend on device)

### **Onboard IDE**

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

### **Onboard I/O**

- One floppy port supporting 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
- One Game Port
- All I/O ports can be enabled/disabled in the BIOS setup

### **Onboard LAN (Available on P4N-L P4N-AL Mainboard)**

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

### **Onboard Audio(Available on P4N-A P4N-AL Mainboard)**

- 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**

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

### **BIOS**

- Licensed advanced AWARD(phoenix) BIOS, 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 soft-off
- Supports Wake-on-LAN and Wake-on-Modem
- Supports Keyboard Password Power-on function
- Supports system monitoring(monitors CPU and system temperatures, system voltages, fan speed)
- Supports QDI ManageEasy
- Providing QDI innovations such as SpeedEasy, RecoveryEasy, BIOS-ProtectEasy(to protect the system BIOS from being attacked by severe virus such as CIH ), LogoEasy, BootEasy

**Green function**

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

**Expansion slots**

- 1 AGP slot
- 1 CNR slot
- 4 PCI slots

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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 P4N-L P4N-AL Mainboard).



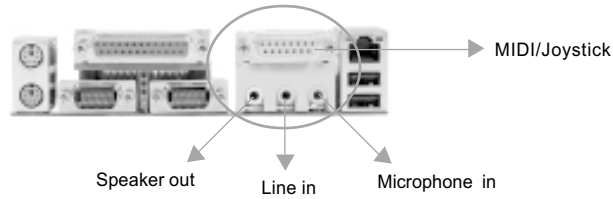
#### Note:

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 P4N-A P4N-AL Mainboard)

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.



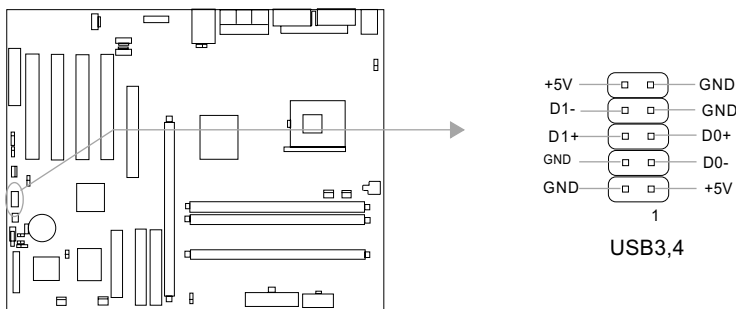
### Parallel Port, Serial Port Connectors (UART1, UART2)

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 BIOS SETUP.



### USB3, USB4 Connectors

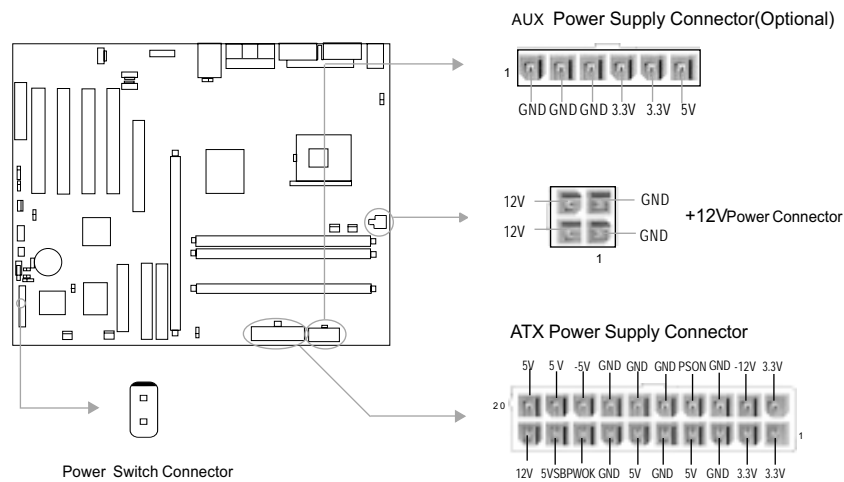
Besides USB1 and USB2 ports on the back panel, the mainboard also has a 10-pin header on board which may connect to front panel USB cable to provide additional 2 USB Ports.





### 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. The difference between ATX12V power and ATX power is ATX12V power added two power connectors: +12V power connector and AUX power connector(Optional). PlatiniX 4N series mainboard only support ATX12V power.



**Note:** If you change “Soft-off by PWR-BTTN” 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.



### 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.

### 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 or S1 status(under APM mode), the LED is on.

### Hardware Green Connector (SLEEP SW)

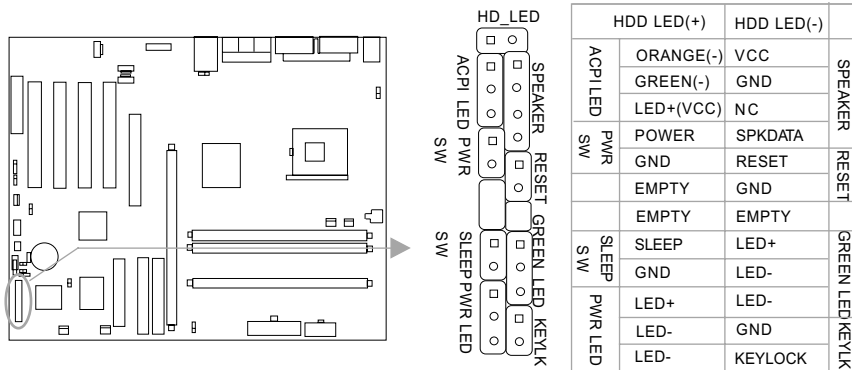
Push once the switch connected to this header, the system enters suspend mode.

### 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.

### Key Lock Connector (KEY LK)(Reserved)

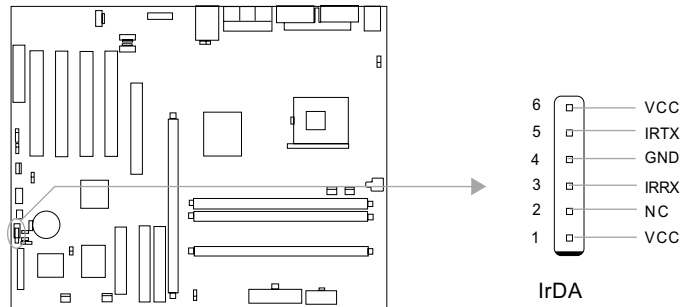
The connector can be connected to the keyboard lock switch on the case for locking the keyboard.





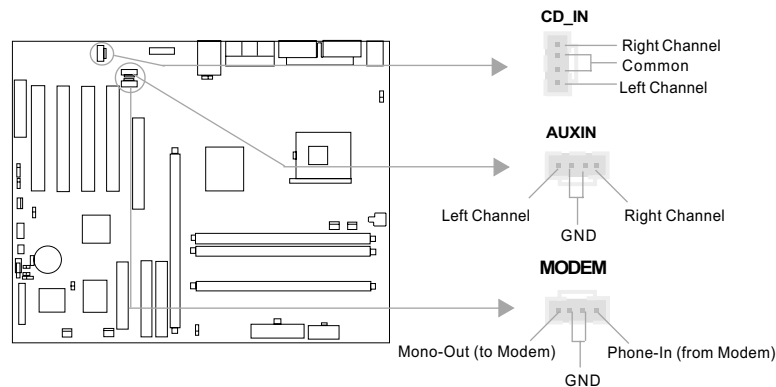
### Infrared Header (IrDA)

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, AUXIN, MODEM)(Available on P4N-A P4N-AL Mainboard)

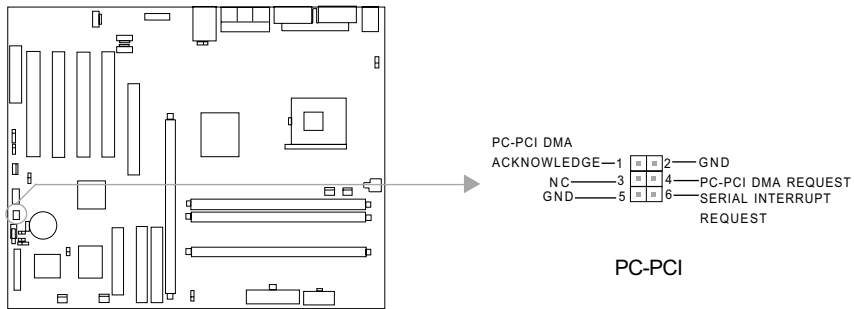
CD\_IN is a Sony standard CD audio connector, it can be connected to a CD-ROM drive through a CD audio cable. The MODEM connector allows the onboard audio to interface with a voice modem card with a similar connector. It allows connecting the mono\_in (such as a phone) or mono\_out (such as a speaker) between the onboard audio and the voice modem card. AUXIN allow you to receive stereo audio input from such sound sources as a CD-ROM, TV tuner, or MPEG card.





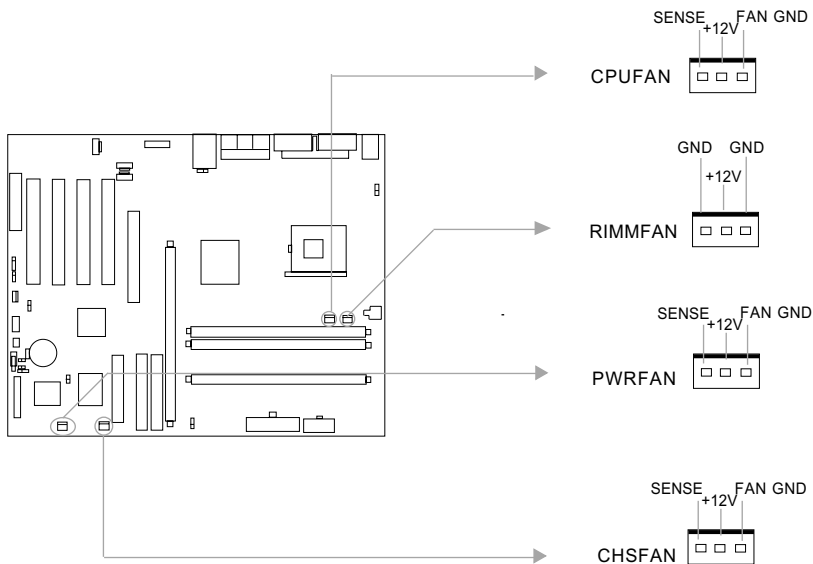
### Sound Connector (PC-PCI)

This connector provides a bridge between the mainboard and PCI sound card to deliver sound compatibility under DOS real-mode environment.



### Fan Connectors (CPUFAN, CHSFAN, PWRFAN, RIMMFAN)

CPUFAN, CHSFAN, PWRFAN will be automatically turned off after the system enters suspend mode. The speed of them can be detected and viewed in "PC Health" section of the BIOS. The RIMM FAN is used for decreasing memory temperature.

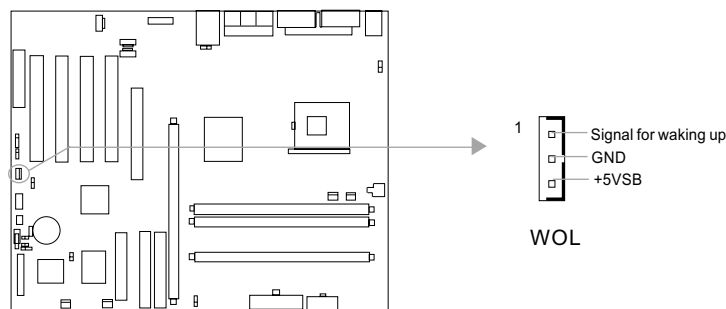






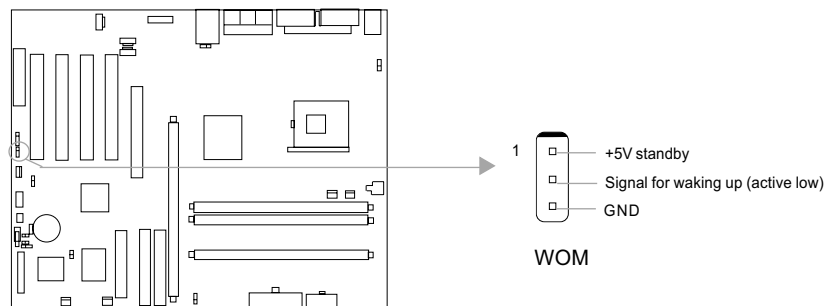
### Wake-Up On LAN (WOL)

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 "Wake-Up by Ring/ LAN" 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)

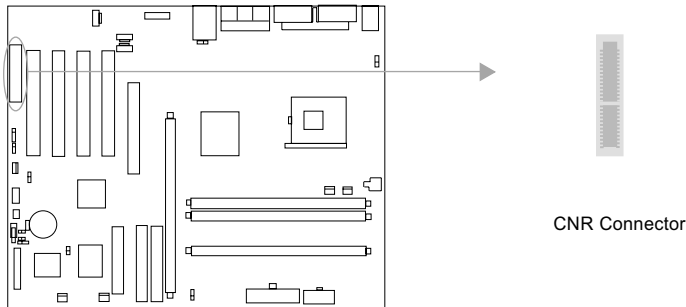
Through the Wake-Up On Internal Modem function, the system which is in the suspend or soft-off status can be powered on by a ring signal received from internal modem. If this function is to be used, be sure an internal modem card which supports this function is used. Then connect this header to the relevant connector on the modem card, set "Wake up on LAN/Ring" as Enabled in the "POWER MANAGEMENT SETUP" section of the BIOS. Save & exit, then boot the operating system once to make sure this function takes effect.





### 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 . Furthermore, it provides a LAN interface for networking 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.

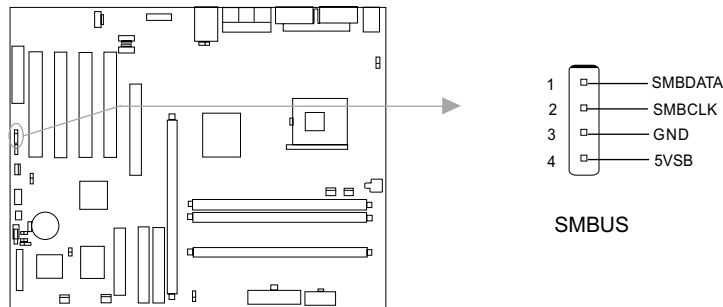


By using an audio codec, the AC'97 digital link providing by CNR allows for cost-effective, high-quality, integrated audio on the platform. AC'97 digital link also allows two external codecs to be connected to the ICH2. The digital link is expanded to support two audio codecs for up to 6 channels of PCM audio output (full AC-3 decode) or a combination of an audio and modem codec.



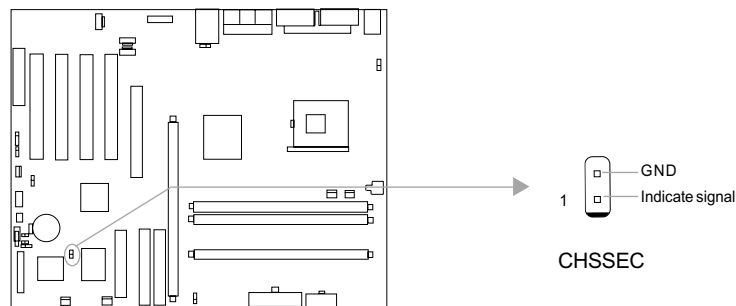
#### 4 Pin SMBus Connector(SMBUS)

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 I<sup>2</sup>C 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.



#### Chassis Security Switch (CHSSEC)

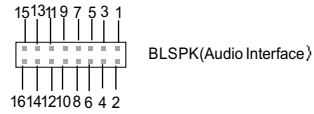
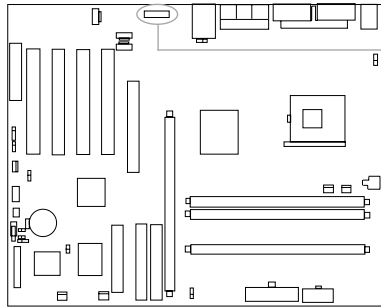
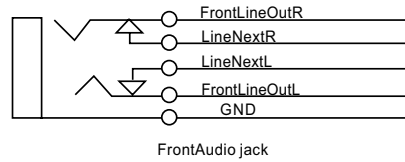
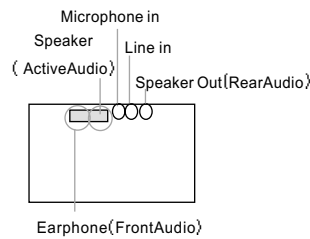
The connector connects to the chassis security switch on the case. The system can detect the chassis intrusion through the status of this connector. If the case has been opened, the system will record the status and indicate the chassis has been opened. You can receive this information from QDI ManageEasy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





### Audio Interface (Available on P4N-A P4N-AL Mainboard)

The audio interface can provide 3 kinds of Audio output choics :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.

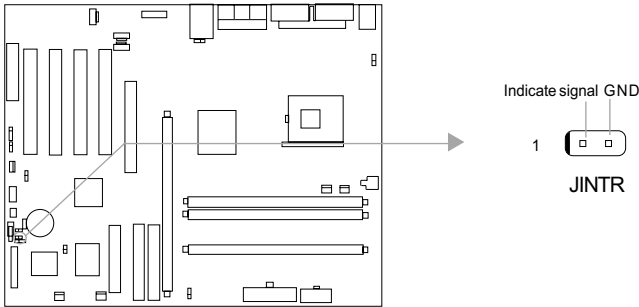


Pin No.	Symbol	Pin No.	Symbol
1	Active LINE Out(R)	2	Active LINE Out(L)
3	GND (ALO)	4	GND (ALO)
5	GND(+12)	6	GND(+12)
7	+12V(1A)	8	(Cut away)
9	MIC	10	GND (MIC)
11	Front LINE Out( R )	12	LINE Next( R )
13	Front LINE Out( L )	14	LINE Next( L )
15	GND (FLO)	16	(Cut away)



**Intruder Detect Switch(JINTR)(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.












**Main Expansion Slots and Connectors**

Slot/Port(Quantity)	Description
PCI(4)	PCI slots
CNR(1)	CNR slot
AGP(1)	AGP slot
IDE(2)	IDE ports
FLOPPY(1)	Floppy Drive port
RIMM(4)	RIMM sockets
USB(4)	USB connectors
UART(2)	UART connectors
PARALLEL(1)	Parallel connector
IrDA(1)	IrDA connector



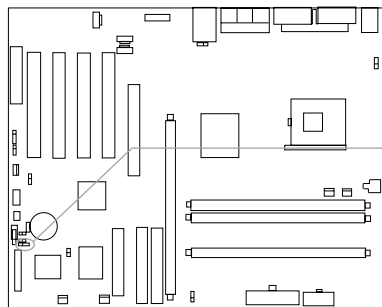
## Jumper Settings


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

## 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

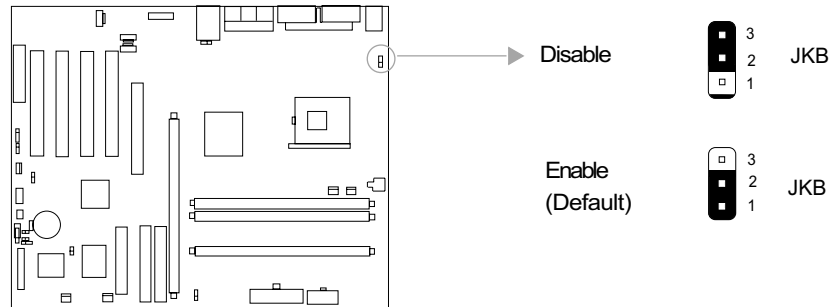
Clear CMOS:  JCC  
1 2 3

( Unplug the AC power supply)



### Enable keyboard password power-on function (JKB)

The mainboard provides the advanced keyboard password power-on function. Before using this function, set JKB with pin1 & pin2 closed. Otherwise, set JKB with pin2 & pin3 closed for disabling.



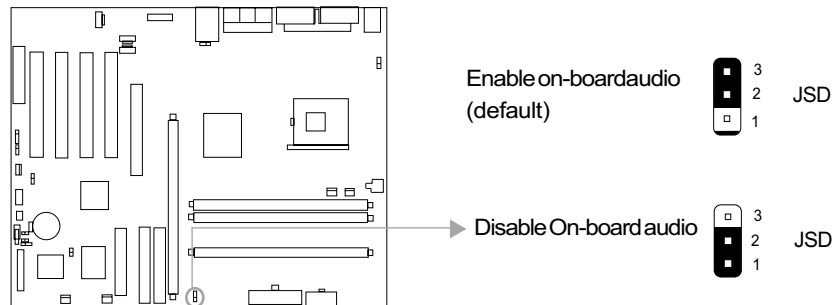
Furthermore in order to implement this function, set "POWER ON Function" to Password and enter the keyboard power-on password in the "INTEGRATED PERIPHERALS" section of the BIOS. Save and exit, then power off your system. In this case, the power button's power-on function has been disabled.

#### Note:

1. If using this function, 5VSB line of the power supply should be capable of delivering enough current for all the devices connected to the keyboard port, if not, you will be unable to power up the system using the keyboard.
2. If you set JKB with pin2 & pin3 closed, set "POWER ON Function" to "BUTTON ONLY", don't set it to Password, or you'll be unable to power up your system by the keyboard or the power button.
3. If you encounter the above problems, clear CMOS and set the jumper and BIOS option again.

### Enable/Disable onboard audio (JSD)(Available on P4N-A P4N-AL Mainboard)

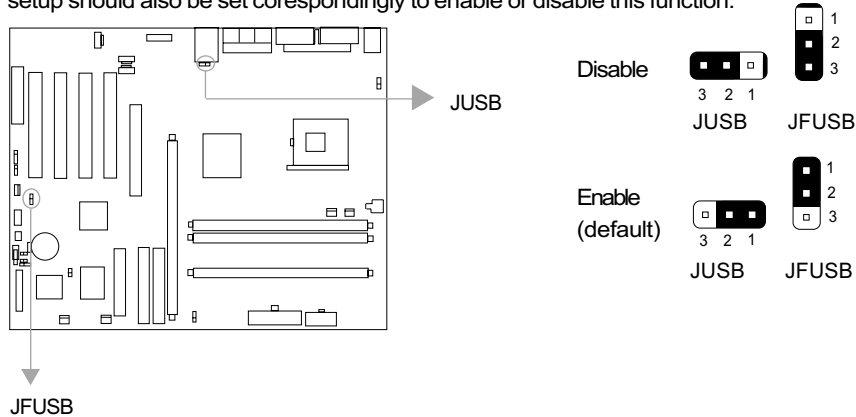
If you want to use the on-board audio, set JSD with pin2 & pin3 closed, Otherwise, set JSD with pin1 & pin2 closed for disabling this function.





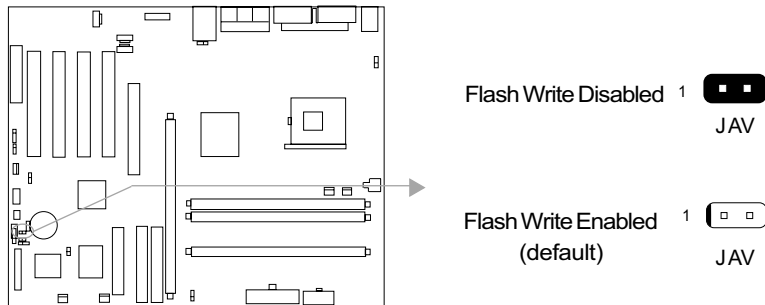
### Enable USB Device Wake-up Function (JFUSB/JUSB)

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 JFUSB/JUSB with pin1 & pin2 closed. Otherwise, set JFUSB/JUSB 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.

The DMI (Desktop Management Interface) system information such as the CPU type/speed, memory size, and expansion cards will be detected by the onboard BIOS and stored in the flash ROM. Whenever the system hardware configuration is changed, DMI information will be updated automatically. However, setting jumper JAV as closed makes flashing BIOS and updating DMI information impossible. Therefore, set JAV as open when changing the system hardware configuration, or the error message "Unknown Flash Type" will be displayed on the screen, and DMI information update will be fail.





## 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 <Del> key or simultaneously press the <Ctrl> + <Alt> + <Esc> keys, to enter the AWARD BIOS CMOS Setup Utility.

#### Press <Del> 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 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.

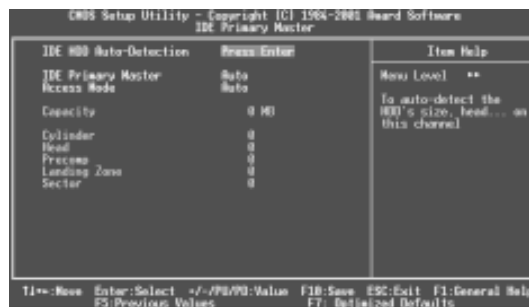


Figure-2-1 IDE Primary Master Setup Menu

## 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: CHS, 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.

### **Auto detect**

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 .



## CPU SpeedEasy Setup



Figure-3 CPU SpeedEasy Setup Menu

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

<u>Item</u>	<u>Option</u>	<u>Description</u>
• CPU Clock Ratio	8-24	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. However the multiplier setting will not function for bus ratio locked processor, only bus ratio unlocked processor.

**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>
● QDI BootEasy Feature	<i>Enabled</i>	PC boot in rapid speed, without any redundant waiting for the displaying of starting OS.
	<i>Disabled</i>	PC boot in the legacy BIOS way.
● ChipAway Virus on Guard	<i>Enabled</i>	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.
	<i>Disabled</i>	Invalidates this function.
● CPU L1&L2 Cache	<i>Enabled</i>	Enable CPU L1/L2 cache.
	<i>Disabled</i>	Disable CPU L1/L2 cache.
● Quick Power On Self Test	<i>Enabled</i>	Allow the system to skip certain tests while booting. This will decrease the time needed to boot the system.
	<i>Disabled</i>	Normal POST.
● First (Second, Third) Boot Device Boot Other Device	<i>Disabled</i>	Select Your Boot Device Priority. It could be Disabled, Floppy, LS120,ZIP100, HDD-0, HDD-1, HDD-2, HDD-3, SCSI, CDROM, LAN.
	<i>Floppy</i>	
● Swap Floppy Drive	<i>Enabled</i>	Exchanges the assignment of A&B floppy drives.
	<i>Disabled</i>	The assignment of A&B floppy drives are normal.
● Boot up Floppy Seek	<i>Enabled</i>	Allow the system to detect the floppy.
	<i>Disabled</i>	Invalidates this function.



<u>Item</u>	<u>Option</u>	<u>Description</u>
● Boot Up NumLock Status	<i>On</i>	Keypad is used as number keys.
	<i>Off</i>	Keypad is used as arrow keys.
● Boot Up System Speed	<i>High</i>	Define Boot Up System Speed.
	<i>Low</i>	
● Gate A20 Option	<i>Normal</i>	The A20 signal is controlled by the keyboard controller.
	<i>Fast</i>	The A20 signal is controlled by Port92.
● Typematic Rate Setting	<i>Enabled</i>	Keystrokes repeat at a rate determined by the keyboard controller - when enabled, the typematic rate and typematic delay can be selected.
	<i>Disabled</i>	
● 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	<i>Setup</i> <i>System</i>	Select whether the password is required every time the system boot or only when you enter setup.
● OS Select For DRAM>64MB	<i>Non-OS2</i> <i>OS2</i>	Select OS2 only if you are running OS/2 operating system with more than 64MB of RAM.
● HDD S.M.A.R.T. Capability	<i>Enabled</i>	Enable hard disk S.M.A.R.T. support.
	<i>Disabled</i>	Invalidate this feature.
● Report no FDD for WIN 95	<i>Yes</i>	Report NO Floppy Disk Drive for WIN 95 to release IRQ6.
	<i>No</i>	Do not report No Floppy Disk Drive for WIN 95.
● Small Logo(EPA) show	<i>Enabled</i>	The EPA logo can be shown when system boots up.
	<i>Disabled</i>	Close this function.
● Show Bootup Logo	<i>Enabled</i>	The logo will be shown automatically when system boots up
	<i>Disabled</i>	No logo appear on the screen.
● Flash Write Protect	<i>Enabled</i>	This option is for protecting the system BIOS, when enabled, writing to BIOS area is to be discarded.
	<i>Disabled</i>	





## Advanced Chipset Features Setup

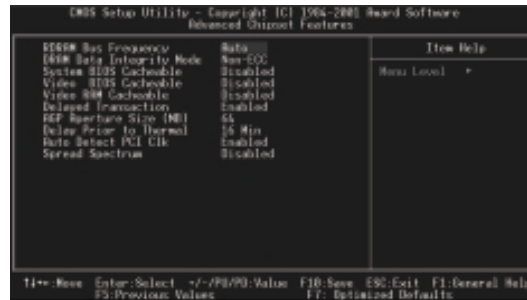


Figure-5 Advanced Chipset Features Menu

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

<b>Item</b>	<b>Option</b>	<b>Description</b>
• RDRAM BUS Frequency	<i>Auto</i> <i>300MHz</i> <i>400MHz</i>	Setting RDRAM BUS Frequency as Auto, 300MHz, 400MHz.
• DRAM Data Integrity Mode	<i>ECC</i> <i>Non-ECC</i>	This option allows you to select the Parity or ECC (Error-Checking and Correcting), according to the type of installed DRAM.
• System BIOS Cacheable	<i>Enabled</i> <i>Disabled</i>	Besides conventional memory, the system BIOS area is also cacheable. System BIOS area is not cacheable.
• Video BIOS Cacheable	<i>Enabled</i> <i>Disabled</i>	Besides conventional memory, video BIOS area is also cacheable. Video BIOS area is not cacheable.
• Video RAM Cacheable	<i>Enabled</i> <i>Disabled</i>	Besides conventional memory, video RAM area is also cacheable. Video RAM area is not cacheable.
• Delayed Transaction	<i>Enabled</i> <i>Disabled</i>	Disabled is normal operation. Enabled for slow speed ISA device in system.
• AGP Aperture Size (MB)	<i>4/8/16/32</i> <i>64/128/256</i>	Set the effective size of the Graphics Aperture to be used in the particular GART Configuration.



<b>Item</b>	<b>Option</b>	<b>Description</b>
• Delay Prior to thermal	<i>4/8/16Min</i> <i>32Min</i>	Setting time for CPU automatically enters thermal mode.
• Auto Detect PCI Clk	<i>Enabled</i> <i>Disabled</i>	Close empty PCI clock to reduce EMI. Do not close empty PCI clock.
• Spread Spectrum	<i>Disabled</i> <i>+/-0.38%</i> <i>+/-0.5%</i> <i>-0.5%</i>	Disable Clock Spread Spectrum to reduce EMI. Enable Clock Spread Spectrum to reduce EMI.



## 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	<i>Enabled</i>	Enables ACPI function.
	<i>Disabled</i>	Disable this function.
• ACPI Suspend Type	<i>S1(POS)</i>	Select the ACPI suspend type.
	<i>S3(STR)</i>	
• Power Management	<i>User Define</i>	Users can configure their own Power Management Timer.
	<i>Min Saving</i>	Pre - defined timer values are used. All timers are in their MAX values.
	<i>Max Saving</i>	Pre - defined timer values are used. All timers are in their MIN values.
• Video Off Method	<i>Blank Screen</i>	The system BIOS will only blank off the screen when disabling video.
	<i>V / H SYNC + Blank</i>	In addition to Blank Screen, BIOS will also turn off the V-SYNC & H - SYNC signals from VGA card to monitor.
	<i>DPMS</i>	This function is enabled only for VGA cards supporting DPMS. <b>Note: When the green monitor does not detect the V/H-SYNC signals, the electron gun will be turned off.</b>



<b>Item</b>	<b>Option</b>	<b>Description</b>
• Video Off In Suspend	Yes	The system will disable video when entering suspend mode.
	No	Do not turn off video when entering suspend mode.
• Suspend Type	<i>Stop Grant</i> <i>PwrOn suspend</i>	Select the Suspend type.
• MODEM Use IRQ	3, 4, 5, 7, 9 10, 11 NA	Special wake-up event for Modem.
• Suspend Mode	<i>Disabled</i> <i>1Min ~ 1Hr</i>	The system never enters Suspend mode by timer. Defines the continuous idle time before the system enters Suspend mode. If any items defined in "PM Events" are on and activated, the system will be woken up.
• HDD Power Down	<i>Disabled</i> <i>1 - 15 Min</i>	HDD's motor will not be off by timer. Define the continuous HDD idle time before the HDD enters power saving mode (motor off).
• Soft-Off by PWR-BTTN	<i>Instant-Off</i>	The system will immediately power off once the power button is pressed.
	<i>Delay 4 sec.</i>	The system will power off when power button is pressed for 4 seconds.
• CPU ThRM-Throttling	12.5%, 25%, 37.5%, 50%, 62.5%, 75%, 87.5%	Select the duty cycle of the STPCLK# signal, slowing down the CPU speed when the system enters green mode.
• Wake-Up by PCI card	<i>Enabled</i>	Allows the system to be waken up by PCI card.
	<i>Disabled</i>	Does not allow the system to be powered on by PCI card.
• Wake-Up by Ring/LAN	<i>Enabled</i>	Allow the system to be powered on when a Ring indicator signal comes up to UART1 or UART2 from external modem (to LAN Wake-up Header from LAN adapter or to modem Ring on Header from internal modem card).
	<i>Disabled</i>	Do not allow Ring/LAN wake up.
• Wake-Up From S3 by USB	<i>Enabled</i>	The system could be waked up by USB Keyboard from the Suspend to RAM status.
	<i>Disabled</i>	The system cannot be waked up by USB Keyboard from the Suspend To RAM status.



<b>Item</b>	<b>Option</b>	<b>Description</b>
<ul style="list-style-type: none"> <li>Resume by Alarm</li> </ul>	<i>Enabled</i>	RTC alarm can be used to generate a wake-up event to power up the system.
	<i>Disabled</i>	RTC has no alarm function.

#### Reload Global Timer Events

<ul style="list-style-type: none"> <li>Primary IDE 0/1, Secondary IDE 0/1</li> </ul>	<i>Enabled</i>	Reload global timer, when there's an IDE event.
	<i>Disabled</i>	Do not reload global timer.
<ul style="list-style-type: none"> <li>FDD,COM,LPT Port</li> </ul>	<i>Enabled</i>	Reload global timer, when there's a FDD/COM/LPT event.
	<i>Disabled</i>	Do not reload global timer.
<ul style="list-style-type: none"> <li>PCI PIRQ[A - D]#</li> </ul>	<i>Enabled</i>	Reload global timer, when there's a PCI event.
	<i>Disabled</i>	Do not reload global timer.



## PNP/PCI Configuration Setup

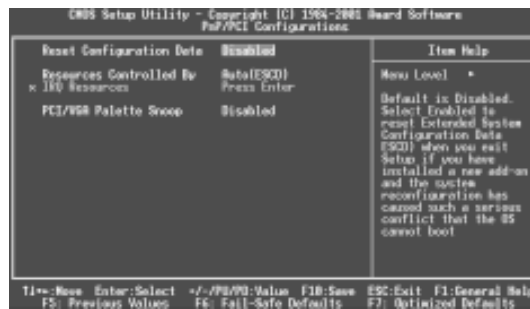


Figure-7 PNP/PCI Configuration Setup Menu

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

<u>Item</u>	<u>Option</u>	<u>Description</u>
• Reset Configuration Data	<i>Enabled</i>	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.
	<i>Disabled</i>	Disable the configuration data function.
• Resources Controlled By	<i>Auto(ESCD)</i>	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.
	<i>Manual</i>	
• PCI/VGA Palette Snoop	<i>Disabled</i>	Default setting.
	<i>Enabled</i>	Non-standard VGA cards such as graphics accelerators or MPEG video cars may not show colors properly. Enabling this item can solve this problem.



## Integrated Peripherals

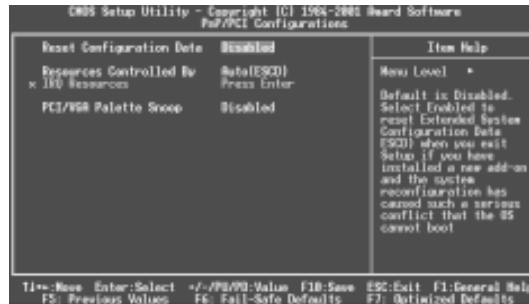


Figure-8 Integrated Peripherals Menu

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

<u>Item</u>	<u>Option</u>	<u>Description</u>
● On-Chip Primary/ Secondary PCI IDE	<i>Enabled</i> <i>Disabled</i>	On-Chip Primary/Secondary PCI IDE is enabled. On-Chip Primary/Secondary PCI IDE is disabled.
● IDE Primary/ Secondary Master/Slave PIO	<i>Mode 0 - 4</i> <i>Auto</i>	Define the IDE primary/secondary master/ slave PIO mode. The IDE PIO mode is defined by auto -detection.
● IDE Primary/ Secondary Master/Slave UDMA	<i>Auto</i> <i>Disabled</i>	Ultra DMA mode will be enabled if an Ultra DMA device is detected. Disable this function.
● USB Controller	<i>Enabled</i> <i>Disabled</i>	Enable onchip USB controller. Disable onchip USB controller.
● USB Keyboard Support	<i>Enabled</i> <i>Disabled</i>	Support USB Keyboard under legacy OS. Do not support USB Keyboard under legacy OS.
● Init Display First	<i>PCI Slot</i> <i>AGP</i>	Initialize the PCI VGA first. Initialize the AGP first.
● AC97 Audio	<i>Auto</i>	If audio codec was installed on board, the AC97 Audio function can be used. otherwise, the function is disabled.
● AC97 Modem	<i>Disabled</i> <i>Auto</i> <i>Disabled</i>	Disable the AC97 Audio onboard. If modem codec was installed on board, the AC97 modem function can be used. otherwise, the function is disabled. Disable the AC97 Modem onboard.



<b>Item</b>	<b>Option</b>	<b>Description</b>
● Onboard/CNR LAN Selection	<i>Auto</i>	If a CNR Interface is enabled, the onboard LAN will be automatically disabled. Otherwise, the onboard LAN is enabled.
	<i>Onboard</i>	The onboard LAN is enabled.
	<i>Ext.CNR</i>	CNR Interface is enabled.
● IDE HDD Block Mode	<i>Enabled</i>	Allow IDE HDD to read/write several sectors at once.
	<i>Disabled</i>	IDE HDD only reads/writes a sector once.
● KBC input clock	<i>6/8 MHz</i>	Set the PS/2 Keyboard input clock as 6/8/12/16MHz.
	<i>12/16 MHz</i>	
● Power On Function	<i>Button only</i>	Power on by power button.
	<i>Password</i>	Power on with keyboard password.
● KB Power ON Password	<i>Enter</i>	Enter keyboard password.
● Onboard FDC Controller	<i>Enabled</i>	Onboard floppy disk controller is enabled.
	<i>Disabled</i>	Onboard floppy disk controller is disabled.
● Onboard Serial Port 1/2	<i>3F8/IRQ4, 2F8/IRQ3, 3E8/IRQ4, 2E8/IRQ3</i>	Define the onboard serial port address and required interrupt number.
	<i>Auto</i>	Onboard serial port address and IRQ are automatically assigned.
	<i>Disabled</i>	Onboard serial port is disabled.
● UART Mode Select	<i>Normal, ASKIR, IrDA</i>	Set UART mode.
● Rx/D, Tx/D Active	<i>Hi, Lo/Lo, Hi Lo, Lo/Hi, Hi</i>	Default is recommended.
● IR Transmission Delay	<i>Enabled</i>	Enable IR Transmission delay Function.
	<i>Disabled</i>	Disable IR Transmission delay Function.
● UR2 Duplex Mode	<i>Half</i>	Default is recommended.
	<i>Full</i>	





<b>Item</b>	<b>Option</b>	<b>Description</b>
• Use IR Pins	<i>IR-Rx2Tx2</i> <i>RxD2, TxD2</i>	Default is recommended.
• Onboard Parallel Port	<i>378/IRQ7</i> <i>278/IRQ5</i> <i>3BC/IRQ7</i> <i>Disabled</i>	Define parallel port address and IRQ channel.  Onboard parallel port is disabled.
• Parallel Port Mode	<i>SPP</i> <i>EPP</i> <i>ECP</i> <i>ECP+EPP</i>	Define the parallel port mode.
• EPP Mode Select	<i>EPP1.7</i> <i>EPP1.9</i>	Set EPP Mode is EPP 1.7 Version or is 1.9 Version.
• ECP Mode Use DMA	<i>3</i> <i>1</i>	Set ECP Mode Use DMA is 1 or 3.
• PWRON After PWR-Fail	<i>OFF, ON</i> <i>Former-Sts</i>	The system remains OFF/ON/Former state when the AC power supply resumes.
• Game Port Address	<i>Disabled</i> <i>201,209</i>	This option is used to configure Game Port Address.
• Midi Port Address	<i>Disabled</i> <i>290</i> <i>300</i> <i>330</i>	This option is used to configure Midi Port Address.
• Midi Port IRQ	<i>5</i> <i>10</i>	This option is used to configure Midi Port IRQ.



## PC Health Status

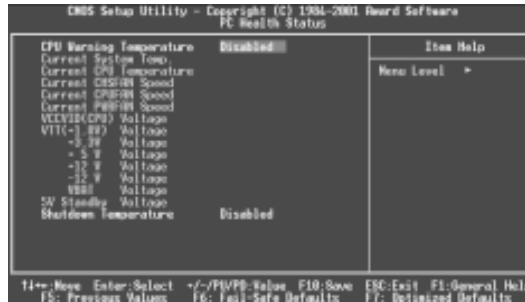


Figure-9 PC Health Status Menu

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"> <li>• CPU Warning Temperature</li> </ul>	50°C/122°F 53°C/127°F 56°C/133°F 60°C/140°F 63°C/145°F 66°C/151°F 70°C/158°F 75°C/167°F 80°C/176°F 85°C/185°F 90°C/194°F 95°C/205°F Disabled	An alarm will beep when the CPU temperature reaches the previous setting, 50°C/122°F, 53°C/127°F, 56°C/133°F, 60°C/140°F, 63°C/145°F, 66°C/151°F, 70°C/158°F, 75°C/167°F, 80°C/176°F, 85°C/185°F, 90°C/194°F, 95°C/205°F.  No alarm beep.
<ul style="list-style-type: none"> <li>• Current System Temp.</li> </ul>		The temperature inside the chassis.
<ul style="list-style-type: none"> <li>• Current CPU Temperature</li> </ul>		The temperature of CPU.



Item	Option	Description
<ul style="list-style-type: none"> <li>Current CHSFAN Speed</li> <li>Current CPUFAN Speed</li> <li>Current PWRFAN Speed</li> </ul>		RPM (Revolution Per Minute) Speed of fan which is connected to the fan header, CHSFAN, CPUFAN or PWRFAN. Fan speed value is based on an assumption that tachometer signal is two pulses per revolution. In other cases, you should regard it relatively
<ul style="list-style-type: none"> <li>VCCVID(CPU) Voltage,                             <ul style="list-style-type: none"> <li>+3.3V,</li> <li>+5 V,</li> <li>+12 V,</li> <li>-12 V,</li> <li>VBAT Voltage</li> <li>5V Standby Voltage</li> </ul> </li> </ul>		Display current voltage value including all significant voltages of the mainboard. +3.3V, +5V, +12V, -12V are voltages from the ATX power supply, VCCVID (CPU) Voltage is the CPU core voltage from the on board switching Power Supply. The VBAT Voltage is the voltage of battery.
<ul style="list-style-type: none"> <li>Shutdown Temperature</li> </ul>	<ul style="list-style-type: none"> <li>60°C/140°F</li> <li>65°C/149°F</li> <li>70°C/158°F</li> <li>75°C/167°F</li> <li>Disabled</li> </ul>	<p>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.</p> <p>The system remains on regardless of how much the CPU temperature is.</p>



## 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 Driver CD 2000

A QDI Driver CD 2000 is supplied with this mainboard. Insert CD 2000 that came with your mainboard into your CD-ROM drive to bring up the screen, click the options to install. The contents contained in it are showed as below:

#### 1. Install Driver

It's recommended for most users that program will be installed with the most common options.

- A. Chipset software
- B. Network Driver{ Optional}
- C. Audio Driver{ 可选 }
- D. DirectX

#### 2. Accessory

The softwares contained in this directory are:

- A. QDI ManageEasy
- B. Norton AntiVirus

#### 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. Cblogo.exe
- C. Lf.exe

The files included in **Documents** are:

- A. Adobe Acrobat Reader V3.0 - Ar32e301.exe
- B. RecoveryEasy-FR.doc, P4N FR.doc, Handbuch-manageEasy



## LogoEasy

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



You can use **“CBLOGO.EXE”** (included on the QDI Mainboard Utility CD) to replace it by any other logo which you prefer.

Please you follow these steps to use CBLOGO.EXE Utility:

1. Copy “CBLOGO.EXE” and “AWDFLASH.EXE” from the directory \Utility located on QDI Mainboard Utility CD onto 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) onto 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 into mainboard by “AWDFLASH.EXE”. For example: AWDFLASH xxxxxx.bin

Reboot the system,. You can see the new picture displayed on the screen. If you require more parameters information concerning “CBLOGO.EXE”. Please you refer to it's on\_line help. If you don't prefer the logo displayed on the screen during boot up, set the “Show Bootup Logo” option as Disabled in the “Advanced BIOS Features Setup” section of the BIOS.

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



## RecoveryEasy

### Introduction:

RecoveryEasy, the latest QDI innovation, is able to protect the system from being destroyed, by creating a so-called “mirror partition” for a current hard disk partition and backing up all the data to the mirror area. This ideal utility provides disk partition, disk data backup/recovery, CMOS settings backup/recovery and multi-boot functions. RecoveryEasy is also able to prevent the system from being attacked by different kinds of boot virus or other severe virus such as CIH. In case the system is ruined either by mistake or virus, the system can be recovered from the mirror partition. It applies the build-in BIOS technology that does not occupy either the hard disk space or the system memory. It's the best choice for both corporations and PC users.

### Operation Process:

There are two hotkeys – Ctrl+Bksp and F12 for RecoveryEasy to enter “Partition” and “Recovery” user interfaces accordingly during BIOS booting up. If two or more hard disks are installed, use F5 key to choose the hard disk.

#### 1. Partition Interface (see figure-1)

Users can create and delete partitions/mirror partitions, activate partitions, and uninstall RecoveryEasy in Partition User Interface.



figure-1 Partition Interface

#### 1.0 Install RecoveryEasy for the first time

- a. The utility checks the previous disk partition at first, and displays the status of the first four partitions. If there are more than four disk partitions, users will be asked to delete the redundant disk partitions, since only four partitions that can be activated are



allowed to exist. However, if there're only four or fewer partitions, users can follow the system prompt and choose to install RecoveryEasy based on the previous disk partitions. In this way, the original extension partitions will be changed to normal ones, and probably the sequence of the partitions will be changed also, but the contents contained in each partition will remain the same.

- b. If choosing to install RecoveryEasy on an absolutely clear disk, the utility will delete all the previous partitions.
- c. The password is set as default setting "qdiqdi" after installing RecoveryEasy.

### 1.1 CREATE PAR

**Function** : Creates a new partition.

**Limitation** : When no disk space remains or 4 partitions already exist, this button is disabled.

**Steps** : After pressing the "CREATE PAR" button.

- a. The system will prompt whether users want to create a mirror partition for it or not.
- b. If answering "Y", input the new partition size in Megabyte. Notice that the maximum partition size that can be assigned is half of the left disk space, which is also displayed in the status line. Another half is for the mirror partition. If answering "N", the whole disk space left can be assigned. See figure-2.

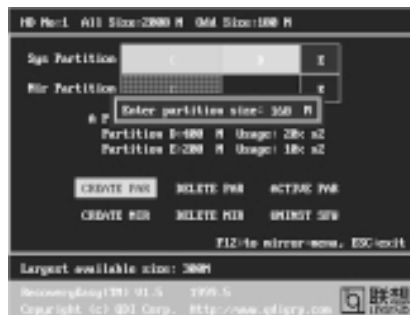


figure-2 Create Partition

**Note:**

- a. The system will prompt "Insert system floppy, then reset" when the first partition on the first hard disk is created.
- b. After using DOS6.xx boot disk to format C partition, the system should be reset in order to access the partition.
- c. In Windows system 1,048,576 bytes equal 1 Megabyte, while in RecoveryEasy 1,000,000 bytes equal 1 Megabyte, therefore a smaller size will be displayed in Windows system compared with the size displayed in RecoveryEasy.





## 1.2 DELETE PAR

**Function** : Deletes the last partition and its mirror partition.

**Limitation**: When no partition exists, this button is disabled.

**Steps** : After choosing this function, only the final partition can be deleted in order to keep the continuous disk space. If the warning message is confirmed, the partition will be deleted. By pressing "N" or "ESC" key, the system quits.

## 1.3 ACTIVE PAR

**Function** : Implements multi-boot function by activating one of the partitions.

**Limitation**: When no partition exists, this button is disabled.

**Steps** : If there're two or more partitions, choose one of them by pressing F5 key.

**Note** : After setting active partition, a letter "A" will be shown in front of this partition.

## 1.4 CREATE MIR

**Function** : Adds mirror partition for the disk partition that has no mirror.

**Limitation**: This function should be performed by order, for example, from partition 1 to 4. If no disk space remains or the last partition has its mirror partition already, this button is disabled.

**Steps** : After pressing the "CREATE MIR" button, use F5 key to choose the partition to create mirror. The partition of which the size is bigger than the left disk space will be ignored.

## 1.5 DELETE MIR

**Function** : Deletes the mirror partition.

**Limitation**: If there is no mirror partition, this button is disabled. This function should be performed in reverse order, for example, from partition 4 to 1.

**Steps** : After pressing the "DELETE MIR" button, only the final mirror partition can be deleted in order to keep the continuous disk space. If the warning message is confirmed, the mirror partition will be deleted. By pressing "N" or "ESC" key, the system quits.

## 1.6 UNINST SFW

**Function** : Uninstall RecoveryEasy.

**Limitation**: None.

**Steps** : After pressing the "UNINST SFW" button and the warning message is confirmed, RecoveryEasy will be uninstalled. By answering "N", the system quits.

**Note** : After RecoveryEasy is uninstalled, all the mirror areas have been disconnected with the relate partitions. If no partition is deleted or changed in size, or no other partition is created, users have chance to "Recover existing RecoveryEasy settings" when next time entering RecoveryEasy partition



### 1.7 OTHERS

**F12** : Switches to Recovery User Interface.

**ESC** : Exits from the Partition User Interface. If users made some mistakes, for example, wrongly delete a partition, do not press the “ESC” key, press the reset button on your system at once, in this way users can save their system.

**F5:**

- a. When two or more than two hard disks are installed on the system, use F5 key to choose the hard disk. Every time users use F5 key to switch the hard disk, the operation result for the previous hard disk is saved. When processing a certain hard disk, F5 key can be used to choose the partition.
- b. In addition, when two or more than two hard disks are installed, the sign of partitions will be changed from C, D, E, F to 1, 2, 3, 4 accordingly.

## 2. Recovery Interface (see figure-3)

Users can backup the partition to its mirror area, and recover the partition from its mirror area from Recovery User Interface. This interface also provides users with CMOS settings backup or recovery, and changing password functions.

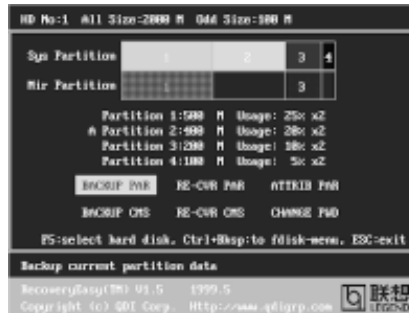


figure-3 Recovery User Interface

### 2.1 BACKUP PAR

**Function** : Backups the content of the partition to its mirror area.

**Limitation** : If no mirror partition exists, this button is disabled.

**Steps:**

- a. Use F5 key to choose the partition with mirror area existed.
- b. If the partition chosen has been backuped before, a warning message will be shown, and the time when last backup was done will be displayed in the status line. After confirming the warning message, the system performs the backup. By pressing “N” or “ESC” key, the system quits.



## 2.2 RE-CVR PAR

**Function** : Recovers the content from the mirror area to the relate partition.

**Limitation** : If users didn't backup any partitions before, this button is disabled.

**Steps:**

- Use F5 key to choose the backedup partition.
- The time when the latest backup was done will be displayed in the status line. After confirming the warning message, the system performs the content recovery. By pressing "N" or "ESC" key, the system quits.

**Note:**

- During the process of partition backup or recovery, a guage will be shown as below, the backup or recovery speed is about 4-5Mbyte/s. See figure-4.

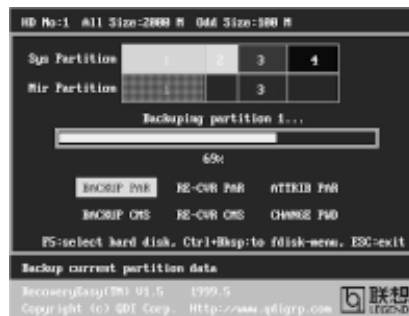


figure-4 Backup Partition

- If a disk I/O error occurs during the process of partition backup or recovery, this means there's physical damage on the hard disk, however users can ignore it and continue the process.

## 2.3 ATTRIB PAR

**Function** : Allows users to modify the properties of the partition (eg. FAT16 -> FAT32) after entering OS.

**Limitation** : None.

**Steps** : After pressing this button, turn on/off the switch.

**Note:**

- The switch resets to the default setting "disable" every time the system reboots.
- In order to implement this function, users need to enable the switch when installing the OS or modifying the partition properties. Please note: Do not create or delete partitions or change the partition size when modifying the partition properties.



## 2.4 BACKUP CMS

**Function** : Backups all CMOS settings.

**Limitation** : None.

**Steps** : After choosing this function, the current CMOS settings will be saved.

## 2.5 RE-CVR CMS

**Function** : Recovers all CMOS settings.

**Limitation** : None.

**Steps** : After choosing this function, the latest backup of the CMOS settings will be recovered. The system needs reboot in order to validate the new CMOS settings.

**Note** : If users have never backed up the CMOS settings, a wrong message will be shown after choosing this function.

## 2.6 CHANGE PWD

**Function** : Changes the password to enter RecoveryEasy Partition or Recovery User Interface.

**Limitation** : None.

**Steps** : Follow the system prompt, input the password no more than 6 characters twice. To delete the password, follow the system prompt and press the "Enter" key twice.

**Note:**

- a. The password should be no more than 6 characters, only digital and alphabetic letters are valid.
- b. Once the password is enabled, users will be asked to input the password every time they try to enter the RecoveryEasy user interfaces, and up to 3 times try is permitted.

## 2.7 Others

**Ctrl+Bksp** : Switches to Partition User Interface.

**ESC** : Exits from the Partition User Interface.

**F5** : When two or more than two hard disks are installed on the system, use F5 key to choose the hard disk. When processing a certain hard disk, F5 key can be used to choose the partition.

**FAQ:****1. What does RecoveryEasy do?**

RecoveryEasy creates a so-called “mirror partition” with same size for the hard disk partition on the same hard disk, and then completely backups all the data sector by sector to the mirror area. This mirror partition is reserved to OS. When the OS ruins either by mistakes or virus, users can recover the partition from its mirror.

**2. Does RecoveryEasy occupy the system resources?**

Although some hard disk data protection applications can automatically protect the disk data in runtime, it lowers the system performance. Unlike these applications, RecoveryEasy need users to backup or restore data manually when needed, but it DOES NOT lower the system performance when the system is running. It does not occupy either hard disk space or system memory, additional floppy disk or ISA/PCI cards are unnecessary.

**3. RecoveryEasy utilizes Build-in BIOS skill, what is build-in BIOS?**

RecoveryEasy build-in BIOS means all functions of RecoveryEasy including creating partition, backuping and restoring partition are built in BIOS. Users just need to download the latest BIOS from our Website (<http://www.qdigrp.com>) when wanting to upgrade (It's free!).

**4. Are there any hard disk limitations of RecoveryEasy?**

RecoveryEasy supports all kinds of current IDE hard disks and has no limitation on the hard disk capacity. RecoveryEasy can not provide its function for some special hard disk types such as SCSI, but it will not affect their usage.

**5. Are there any OS limitations of RecoveryEasy?**

RecoveryEasy supports current operating systems such as DOS, Windows 95/98. However in Windows NT, Windows 2000, Unix and OS2 systems, users should notice that the disk tools bundled in the OS could change the mirror partition. On the other hand, since users can create partition with RecoveryEasy, it is unnecessary to use other disk tools.

**6. Why does the system halt when HDD access mode is changed (eg. LBA->LARGE)?**

This is a way to protect the system from the errors of data accessing caused by changing HDD access mode. When RecoveryEasy detects such things, the system will be locked, users could reboot the system and set the HDD access mode as the original one in BIOS SETUP.



- 7. Why does the remainder size plus partitions size not match the total size shown in RecoveryEasy sometimes?**  
When the location of partitions is not continuous, the above problem exists.
- 8. Are there any other disk partition tools that can modify the partition table made by RecoveryEasy?**  
RecoveryEasy provides a write-protect function, so the disk tools such as Fdisk, Partition Magic, BootMenu, SmartDisk and BootStar can not modify the partition table created by RecoveryEasy. Some of the applications even terminate during operation. However the disk tools bundled in the OS such as Windows NT, Windows 2000, Unix and OS2 could change the mirror partition.
- 9. Why does it happen that a prompt “*installation can not continue*” pops up when installing Windows98 or a yellow exclamation mark shown beside IDE device in system properties?**  
During Windows 98 installation, the installation program will write to MBR (Master Boot Record) which is protected by RecoveryEasy, therefore the installation will be terminated. To avoid this problem, a “ATTRIB PAR” button is provided in Recovery User Interface. Enable this switch before installing Windows 98, then the installation will be successfully completed. In order to remove the yellow question mark before IDE devices in Device Manager, enable this switch once more after system reboot.
- 10. Why does the converting of FAT16->FAT32 in PQ Magic go wrong?**  
MBR will be accessed when converting FAT16 to FAT32 with PQ Magic, which is protected by RecoveryEasy, therefore the conversion will be invalidate. Enabling the “ATTRIB PAR” switch from Recovery User Interface before converting can avoid this problem. It's the same situation as “FAT32 Converter” provided in
- 11. What if partitions be wrongly deleted in RecoveryEasy?**  
If users delete a partition in RecoveryEasy by mistake, they can save it by pressing the Reset button on their system at once. Do not press the “ESC” key to quit RecoveryEasy, this will save the change. Do not try to create the partition again, since creating partition will clear all the content of the partition.
- 12. What is multi-boot?**  
RecoveryEasy can implement the multi-boot function by activating different partition. For example on the hard disk, partition C contains DOS, partition D contains Windows 95 version, partition E contains Windows 98 version, when activating partition C in RecoveryEasy, the system enters DOS, when activating partition E, the system enters Windows 98 version.



At the same time, the sequence of the partitions is adjusted accordingly, partition E becomes C:, partition C becomes D: and partition D becomes E:. This function is the same as that of fdisk.exe, but the system needs reboot in order to make the change validate for fdisk.exe.

**13. What if computer accidentally power off when backuping (recovering)?**

The partition should be completely backuped or recovered. If the computer accidentally powers off, the partition should be backuped or recovered once again.

**14. What if users lose the password?**

To make sure the security, the password is saved in the hard disk. **It's very important for users to remember the password.** If forgetting the password, contact us, clearing CMOS is useless.

**15. Does RecoveryEasy protect hard disk against CIH?**

RecoveryEasy can strongly protect the hard disk from boot-virus, as well as the attack of CIH. If the system is attacked by CIH, RecoveryEasy will automatically recover the MBR and each partition boot record before system boots up, and try to recover the FAT. In this way the system can basically boot up, then users can use some anti-virus application to kill the virus. However this depends on how CIH virus affects the system. CIH normally outbreaks on 26<sup>th</sup> every month, if the system cannot boot up that day, power off the computer instantly, and use the second safe way to recover the system, that is, recover the partition from its mirror area from Recovery User Interface. Remember to create a mirror partition and backup before virus attacks the system.



## 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 Advanced BIOS Features Setup. In this way, the BIOS can not be overwritten, but the DMI information can be updated.

## 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/nav2001>





## ManageEasy

It is well known that guaranteeing the computer's security and reliability is essential. Especially today, effectively managing and monitoring the computer's hardware is even more important; because processing and exchanging critical data through computer and network are happening everyday. Moving with the computer's development, the system of the computer will become more and more complex; at the same time, the control of computer's hardware will be strengthened. Today, it is possible to monitor and manage your complex hardware from Windows 9X and Windows NT.

QDI ManageEasy is a system tool, like a bridge between the complex hardware and OS, used to access hardware status and to execute some control functions. It supports stronger functions for Windows 9X and Windows NT. These functions enables you to view more than one hundred of the basic information about your computer and monitor some key reference data about computer health in real time. QDI ManageEasy also helps you to use remote access and control computers in your local area network. With QDI ManageEasy, you can improve your management level.



## SpeedEasy Quick Setup

### Procedures :

1. Correctly insert the processor.
2. Plug in other configurations and restore the system.
3. Switch on power to the system and press the <Del> key to enter BIOS Setup.
4. Enter "CPU SpeedEasy Setup" menu to set up the CPU speed.
5. Save and exit BIOS Setup, your system will now boot successfully.



## CPU SpeedEasy Setup Menu

Select <CPU SpeedEasy Setup> item from the main menu and enter the sub-menu:



CPU SpeedEasy Setup Menu

BIOS provides you with a set of basic values for your processor selection instead of the jumper settings. The processor speed can be manually selected on the “CPU SpeedEasy SETUP” menu screen.

### Warning:

Do not set CPU frequency higher than its working frequency. If you do, we will not be responsible for any damages caused.



## QDI BootEasy (English)

BootEasy is a new member of legend QDI Easy series, which is the latest innovation comes from legend QDI.



BootEasy Setup Menu

BootEasy technology enormously improves the long BOOT process time of computers. Reducing the wait time every user has to suffer when starting their computer. BIOS without BootEasy has to perform many routines every time when the system starts, such as checking system core of the computer and initializing system peripherals. Now with the BootEasy, BIOS will not run these repetitive Processes any longer, PC can boot-up without any redundant waiting for the displaying of starting OS. BootEasy is quite easy to use, choose the right option in CMOS SETUP, (refer to Advanced BIOS Features) it can be easily booted quickly. BootEasy save all the information when PC first normally boot-up, and it restores all the parameters for the system and thus let the PC boot freely and rapidly.

### Note:

- Under the following conditions, PC will boot-up in normal way.
  - PC boot-up for the first times after set option as Enabled.
  - the system information saved by BIOS was damaged.
  - PC fail to boot-up continually over three times.

**Setting the jumper JAV as open if you encounter the above conditions.**

- Don't power off or reset system while BootEasy initializing.
- set "QDI BootEasy Feature" as "Disabled" before you replace system equipment.  
set "QDI BootEasy Feature" as "Enabled" after you accomplished replacing.



## QDI BootEasy (Italy)

Boot Easy è il nuovo software membro della famiglia legend QDI Easy, quale innovazione da LEGEND-QDI.



BootEasy Setup Menu

La tecnologia Boot Easy abbrevia gli enormi tempi del computer in fase di BOOT.

Riduce le attese d'ogni utente che accede al suo computer. Il BIOS senza Boot Easy deve eseguire molte routines ogni qualvolta il sistema parte, come controllo della sezione centrale del computer oltre che inizializzare le varie periferiche esterne.

Ora con Boot Easy, il BIOS non eseguirà questi processi ripetitivi così lunghi, il Pc potrà partire senza attese ridondanti prima della presentazione del logo del sistema operativo.

Boot Easy è facile da usare, basta scegliere la giusta opzione nel BIOS setup, (riferito al Advanced BIOS Features) ed il computer potrà velocemente ripartire.

Boot Easy salva tutte le informazioni al primo avvio normale, tutti i parametri saranno restituiti ai BOOT successivi

Nota:

1 Il Pc partirà normalmente se saranno rispettate le seguenti condizioni

- (1) Il Pc fa' il primo BOOT con l'opzione Enable
- (2) Le informazioni su i parametri salvati dal BIOS non erano DANNEGiate
- (3) Il PC fallisce l'avvio più di tre volte

Non spegnere o resettare il PC durante l'avvio di BOOT EASY

Disabilita il "QDI BootEasy Feature" prima di sostituire le periferiche ad esso collegate (HDD, CD-ROM, ecc.) solo dopo riabilita il "QDI BootEasy Feature".



## QDI BootEasy (German)

BootEasy ist eine Neuentwicklung von Legend QDI, die neue Innovation der QDI Easy – Technologien.



BootEasy Setup Menu

Mit der BootEasy- Technologie Technik wird der Bootvorgang nur noch vier bis fünf Sekunden in Anspruch nehmen, bis das Betriebssystem geladen wird. Der Grund für die lange Wartezeit liegt in den Routine-Abfragen, die das BIOS bei jedem Start abarbeitet. So wird beispielsweise jedes Mal die Taktfrequenz des Prozessors geprüft oder angeschlossene Geräte aktiviert.

Die BootEasy-Technik prüft diese Punkte nur beim erstmaligen Start des Rechners und speichert die Ergebnisse in einem Flash ROM. Beim nächsten Start ruft das System lediglich diese Informationen aus dem Speicher ab und kann so innerhalb von wenigen Sekunden den Boot-Prozess abschließen.

Bei Änderungen am System, beispielsweise nach dem Einbau eines neuen Prozessors, muss deshalb zuvor die BootEasy-Funktion deaktiviert werden, beim nächsten Start werden die neuen Informationen dann erneut abgespeichert.

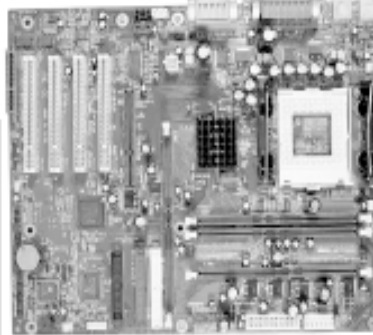
Falls Fehler im Flash ROM den Bootvorgang behindern, versucht das System drei Mal den Rechner hochzufahren, bei Misserfolg schaltet es auf die althergebrachte Art zu booten um, das heißt, es dauert wieder ebenso lang wie früher. Anschließend kann die BootEasy – Technik wieder aktiviert werden.

## PlatiniX 4X

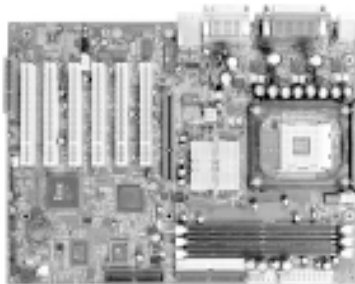
**Form Factor:** ATX  
**CPU:** Socket-423  
**Chipset:** Intel 850  
**FSB:** 400MHz  
**Memory:** 4 PC800/PC600 RDRAM  
**IDE:** ATA 100/66/33  
**AGP:** 4x  
**I/O:** 4 PCI/1 AGP/1 CNR  
1 IrDA/4 USB

**Optional:**  
Onboard AC'97 Audio

**QDI Innovations:**  
SpeedEasy, BootEasy, LogoEasy,  
ManageEasy, BIOS-ProtectEasy,  
RecoveryEasy



## PlatiniX 2



**Form Factor:** ATX  
**CPU:** Socket-478  
**Chipset:** Intel 845  
**FSB:** 400MHz  
**Memory:** 3 PC133 SDRAM  
**IDE:** ATA 100/66/33  
**AGP:** 4x  
**I/O:** 0/1ISA6/5 PCI/1 AGP  
1 CNR/ 1 IrDA/4 USB

**Optional:**  
Onboard AC'97 Audio  
Onboard 100/10 Mb Ethernet

**QDI Innovations:**  
SpeedEasy, BootEasy, LogoEasy,  
ManageEasy, BIOS-ProtectEasy,  
RecoveryEasy, StepEasy(optional)

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# **Board Layout of PlatiniX 1**

This layout is just for your reference  
**P/N: 147000229**