



### 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.

- N2 series mainboard
- QDI Driver CD 2000
- User's manual
- 1 IDE ribbon cable
- 1 floppy ribbon cable
- I/O shield
- 2 10-pin ribbon cable with bracket for USB3,4,5,6 (optional)



### 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** **N2**

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 SYSTEM HANDEL GMBH

QDI COMPUTER(FRANCE)SARL

LEGEND QDI SPAIN S.L.

QDI COMPUTER(SCANDINAVIA)A/S

QDI EUROPE B.V

QDI COMPUTER HANDELS GMBH

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:	N2
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:	Motherboard
<b>Manufacturer:</b>	<b>Quantum Designs (HK) Ltd.</b>
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 : *Xu Wang*

Date : 2002



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### **Caution**

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



### **Caution**

**Be sure to add some Silicone Grease between the CPU and the heatsink to keep them fully contacted to meet the heat sink requirement.**





## Chapter 1

### Introduction

#### Overview

N2 series of mainboards utilize nForce 420D chipset consisting of two components: Crash 12 and MCP-D, providing a fully compatible, high performance and cost-effective ATX platform. The new integrated technologies, together with AGP 4X support, AC'97 audio, 6 USB ports and ATA 100/66/33, give customers an advanced, multimedia solution at reasonable price. It provides 200/266MHz host bus speed to support AMD socket 462 processors and the largest DDR memory capacity is up to 1.5GB. It also provides advanced features such as Wake up by USB devices, Wake-on-Modem, ACPI and Keyboard Password Power-on 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. In addition, it provides an ACR slot to support some cards: Audio Riser Card (AMR), Primary/Secondary Modem Riser Card (AMR), 10/100Mb LAN Riser Card, 1Mb HomePNA Riser Card, USB Ports Riser Card and ACR SPDIF Card. QDI innovation, lets the PC boot freely and rapidly.

#### Key Features

##### Form Factor

- ATX form factor of 305mm x 224mm

##### Microprocessor

- Supports 200/266MHz FSB speed
- Supports AMD Socket 462 Athlon processors at 700/750/800/900/950MHz/1GHz/1.1/1.2/1.3/1.333/1.4/1.533/1.6/1.733/1.8GHz and future processors
- Supports AMD Socket 462 Duron processors at 600/650/700/800/850/900/950MHz/1GHz/1.1GHz and future processors

##### Chipset

- nForce 420D chipset: Crash 12 + MCP-D

##### Memory

- Provides three 184-pin DDR SDRAM Interfaces
- Supports DDR200/DDR266 SDRAM
- Supports 64/128/256/512Mb technology up to 1.5GB



### Onboard IDE

- Two fast IDE interfaces supporting four IDE devices including IDE hard disks and CDROM drives
- Supports Ultra DMA33/66/100

### 6 USB

- USB 1.1 compliant
- Supports wake-up from S1 (power on suspend), S3 (depends on device)

### 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 fast compatible UARTs (COM1/COM2/COM3/COM4 selective) with 16-byte send/receive FIFO
- One parallel port supports SPP/EPP/ECP mode
- Supports PS/2 mouse and PS/2 keyboard
- Provides one IrDA connector
- All I/O ports can be enabled/disabled in the BIOS setup

### Onboard Audio

- Standard AC'97 Codec interface
- Provides onboard Line-in Jack, Microphone-in Jack, Speaker-out Jack with onboard amplifier and MIDI/Joystick Connector

### Onboard AGP

- AGP 1.5V Connector supports AGP 2.0 including AGP 4X data transfers

### Advanced Features

- PCI v2.2 Specification Compliant
- Provides Trend ChipAwayVirus On Guard
- Supports Windows 98/2000/ME/XP soft-off
- Supports Wake-on-LAN and Wake-on-Modem
- Supports Keyboard Password Power-on function
- Supports system monitoring (monitors system temperature, CPU temperature, voltages and fan speed)
- Provides an ACR slot to support some cards: Audio Riser Card (AMR), Primary/Secondary Modem Riser Card (AMR), 10/100Mb LAN Riser Card, 1Mb HomePNA Riser Card, USB Ports Riser Card and ACR SPDIF Card
- Providing QDI innovations: BootEasy, logoEasyII, BIOS-ProtectEasy, RecoveryEasyII





## BIOS

- Licensed advanced AWARD( Phoenix ) BIOS
- Supports Flash ROM with plug and play ready
- Supports IDE CDROM or SCSI bootup

## 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( STD,suspend to Disk, depends on OS ), S5( Soft-off )

## Main Expansion Slots and Connectors

Slot/Port (Quantity)	Description
PCI ( 5 )	PCI slots
IDE ( 2 )	IDE ports
FLOPPY( 1 )	Floppy Drive port
DDR( 3 )	DIMMsocket
USB( 6 )	USB connectors
VGA( 1 )	VGA connector
ACR( 1 )	ACR slot
UART( 2 )	UART connectors
PARALLEL( 1 )	Parallel connector
IrDA( 1 )	IrDA connector
MIDI/Joystick( 1 )	MIDI/Joystick connector

**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.**



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## Chapter 2

### Installation Instructions

This section covers External Connectors and Jumper Settings. Refer to the motherboard layout chart for the 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 states 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 Connector, PS/2 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.



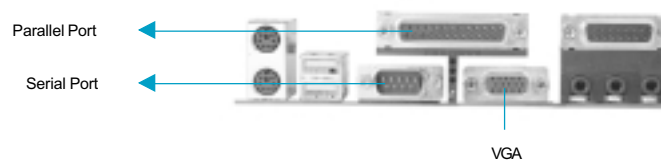
##### USB1, USB2 Connectors

Two USB ports are for connecting USB devices.



##### Parallel Port, Serial Port, Monitor Output Connector( VGA ),

The parallel port connector can be connected to a parallel device such as a printer. The serial port connector can be connected to a serial port device such as a serial port mouse. The VGA connector is for output to a VGA-compatible device. You can enable/disable them and choose the IRQ or I/O address in "INTEGRATED PERIPHERALS" in AWARD BIOS SETUP.

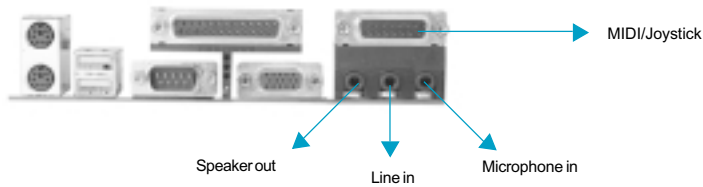




## Installation Instructions

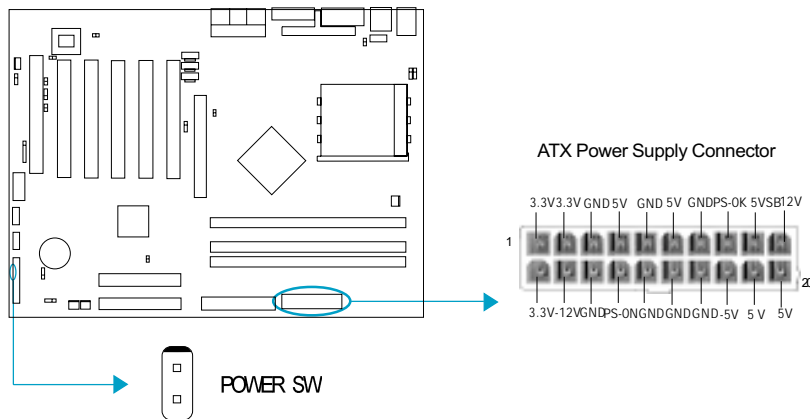
### Line-in jack, Microphone-in jack, Speaker-out jack and MIDI/Joystick Connector

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.



### ATX 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 button.



**Note:** If you change “soft-off by PWRBTN” from default “Instant-off” to “Delay 4 Sec” in the “POWER MANAGEMENT SETUP” section of the BIOS, the power button 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)

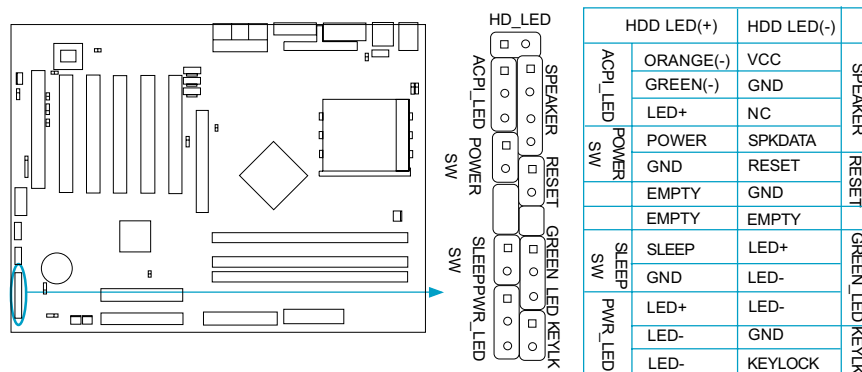
The ACPI LED is a dual-color light with three pins. Pin 1 and Pin 2 drive different color lights. If Pin 1 drives the orange light, then, Pin 2 drives the green light, the following status will come out. When the system is in S0 status, the LED is green on. When the system is in S1 status, the LED is 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.

### Key Lock Connector (KEYLK)

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

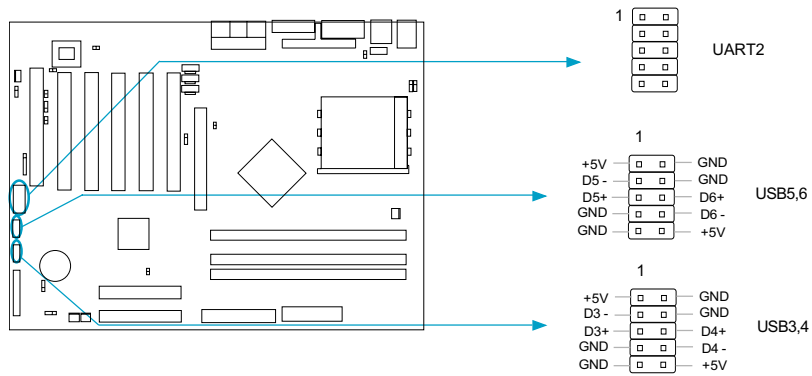




## Installation Instructions

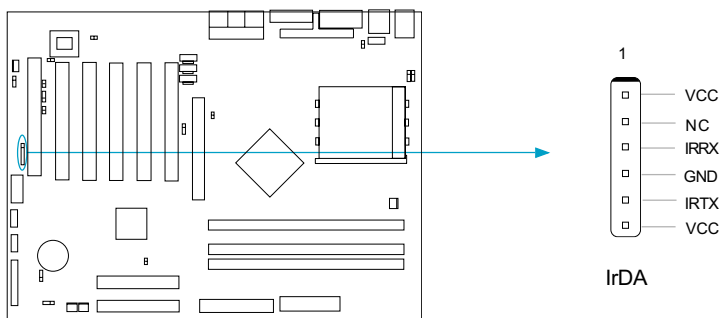
### USB3,4,5,6 and Serial Port Connector( UART2 )

Besides USB1,2 on the back panel, the mainboard also have two 10-pin headers on board which may connect to 2 front panel USB cables to provide additional four USB ports. And the mainboard also have one header on board which may connect to a cable to provide a additional UART port.



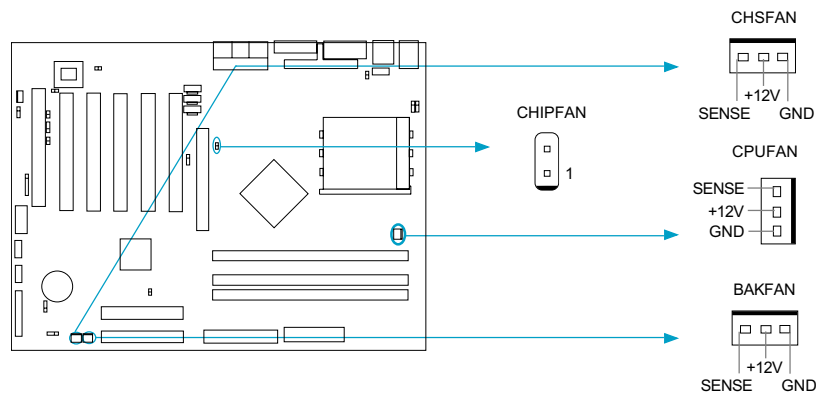
### Infrared Header (IrDA)

This connector supports wireless transmitting and receiving device.



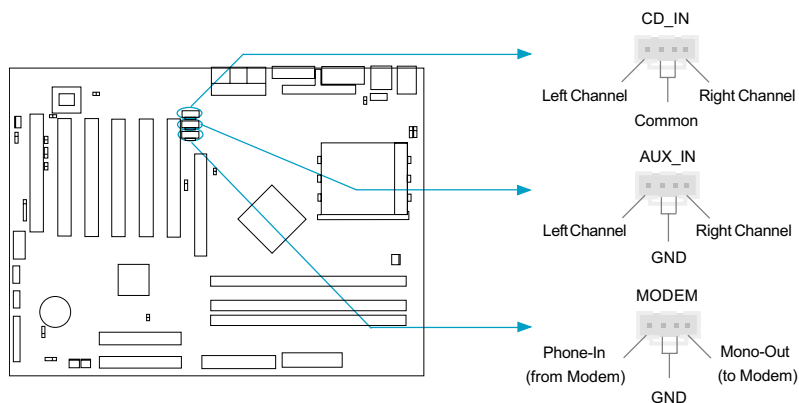
### Fan Connectors (CPUFAN, BAKFAN, CHSFAN, CHIPFAN)

The speed of CPUFAN, BAKFAN and CHSFAN can be detected and viewed in "PC HEALTH" section of the BIOS. These fans will be automatically turned off after the system enters suspend mode. The CHIPFAN should be connected to the fan of chipset.



### Audio Connectors (CD\_IN, AUX\_IN, MODEM)

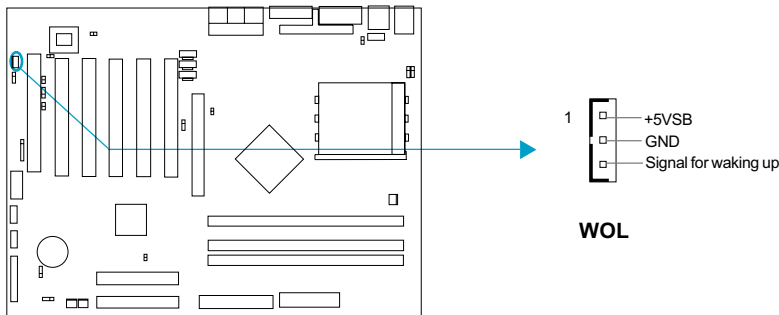
CD\_IN is a sony standard CD audio connector, it can be connected to a CD-ROM drive through a CD audio cable. AUX\_IN allow you to receive stereo audio input from sound sources such as a TV tuner, or MPEG card. The MODEM connector allows the onboard audio to interface with a voice modem card with a similar 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.





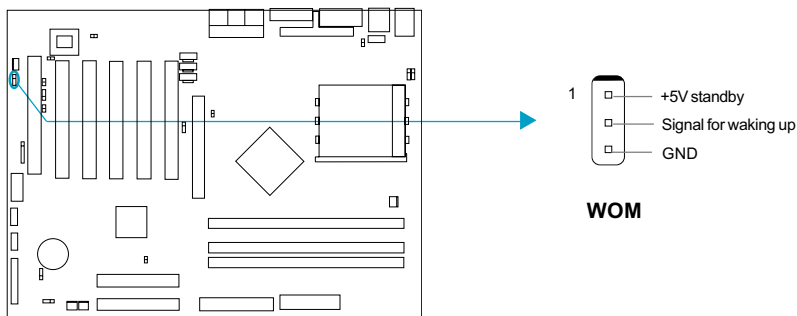
### Wake-Up On LAN (WOL)

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 on 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 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 "Wake up on 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.

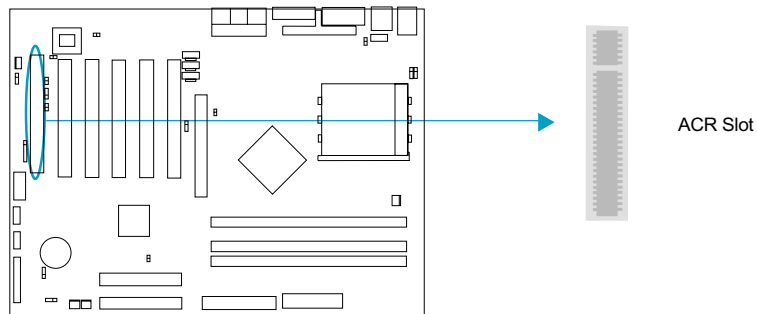






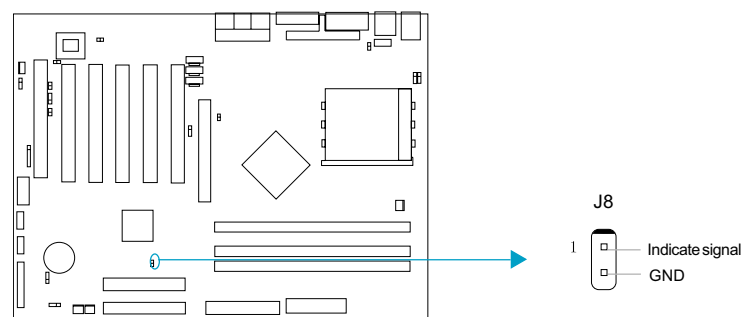
### Advanced Communications Riser Slot (ACR)

The ACR connector uses a standard connector that is reversed and offset. Legacy AMR card can be plugged into the ACR slot and works without modification. ACR provides a common architecture for analog modem, Ethernet, phoneline networking and so on. It supports legacy AMR riser designs for modem and audio codecs.



### Intruder Detect Switch(J8)

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 connector has been closed once, the system will send a message over the network to alert the network manager through the on board LAN controller within ICH4.

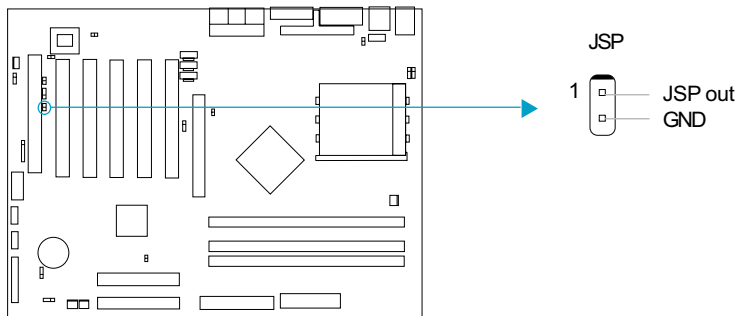







## Installation Instructions







### JSP Connector

The JSP output is capable of providing digital audio to external speakers or compressed AC3 data to an external Dolby digital decoder.



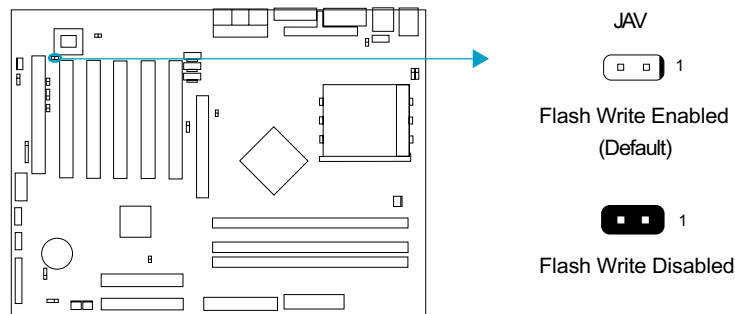
## Jumper Settings

Jumpers are located on the mainboard, the yare, 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→ ), referring to the mainboard's silkscreen. Jumpers with three pins will be shown as  to represent pin1 & pin2 ("1-2") closed and  to represent pin2 & pin3 ("2-3") closed.

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

### BIOS-Protect Jumper (JAV)

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



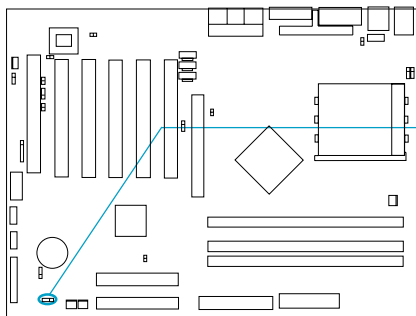
Setting the jumper JAV as open(default), meanwhile disabling the "Flash Write Protect" item of "Advanced BIOS Features" in AWARD BIOS CMOS Setup, allows you to flash the BIOS to the FLASH ROM.

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.



### 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.



#### JCC



Normal Status  
(Default)

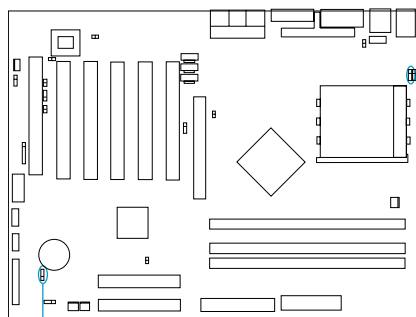


Clear CMOS:

(Unplug the AC power supply)

### Enable Front/Back Panel 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 mode including ACPI S3 by activating USB device. Before using this function, set JUSB/JFUSB as pin1 & pin2 closed. Otherwise, set JUSB/JFUSB as 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.

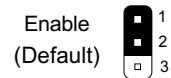


#### JUSB

Only for USB1,2



Disable



Enable  
(Default)

#### JFUSB

Only for USB3,4,5,6



Disable

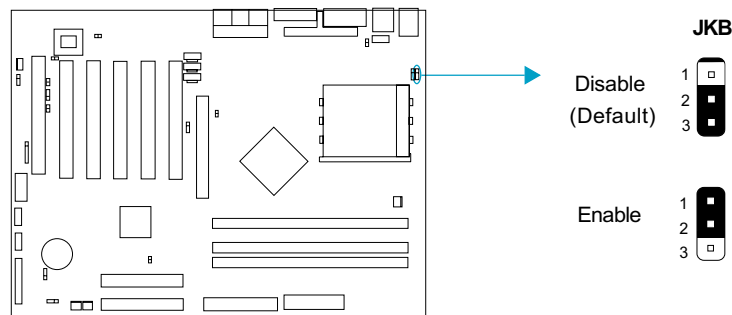


Enable  
(Default)



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

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

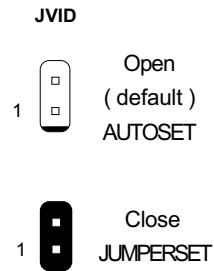
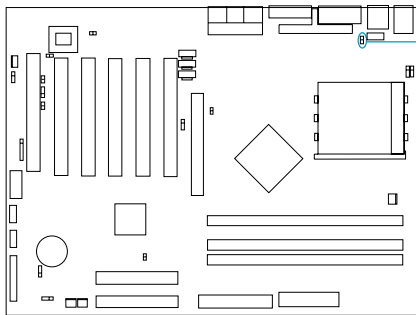
#### Note:

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 as pin2 & pin3 closed, set "POWER ON Function" to "BUTTON ONLY". Do not 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.



### CPU Core Voltage Selection (JVID)

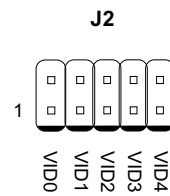
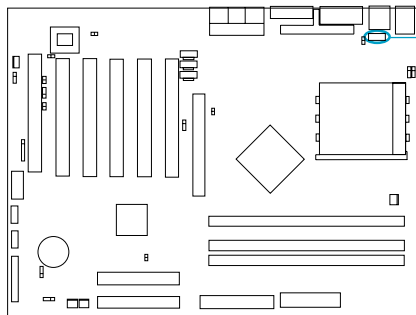
The jumper JVID located on the mainboard provides users with CPU core voltage selection. If it is set as AUTO SET, the system detects the CPU core voltage automatically. If it is set as JUMPER SET, the CPU core voltage can be set manually by jumper J2.



### CPU Core Voltage Setting (J2)

The jumper J2 allows you to adjust the CPU core voltage manually to improve the CPU overclocking ability. But we strongly recommend you not to adjust it unless you are an expert on this.

- “0”: pin1 and pin2 closed;
- “1”: pin1 and pin2 opened.





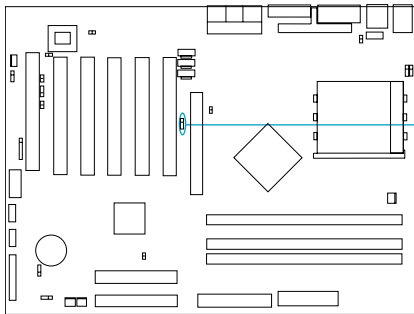
JVID4	JVID3	JVID2	JVID1	JVID0	Vcore(V)
1	1	1	1	1	Output Off
1	1	1	1	0	1.100
1	1	1	0	1	1.125
1	1	1	0	0	1.150
1	1	0	1	1	1.175
1	1	0	1	0	1.200
1	1	0	0	1	1.225
1	1	0	0	0	1.250
1	0	1	1	1	1.275
1	0	1	1	0	1.300
1	0	1	0	1	1.325
1	0	1	0	0	1.350
1	0	0	1	1	1.375
1	0	0	1	0	1.400
1	0	0	0	1	1.425
1	0	0	0	0	1.450
0	1	1	1	1	1.475
0	1	1	1	0	1.500
0	1	1	0	1	1.525
0	1	1	0	0	1.550
0	1	0	1	1	1.575
0	1	0	1	0	1.600
0	1	0	0	1	1.625
0	1	0	0	0	1.650
0	0	1	1	1	1.675
0	0	1	1	0	1.700
0	0	1	0	1	1.725
0	0	1	0	0	1.750
0	0	0	1	1	1.775
0	0	0	1	0	1.800
0	0	0	0	1	1.825
0	0	0	0	0	1.850

**Warning: To set CPU core voltage higher than its default core voltage is not suggested. If you do, we will not be responsible for any damages caused.**



### Overclocking Jumper Setting (JFSB)

The jumper JFSB located on the mainboard provides users with CPU overclocking feature. The host bus speed can be set as 100/133MHz. Refer to the chart below for the location of this jumper and the table for information on how to set it.



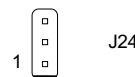
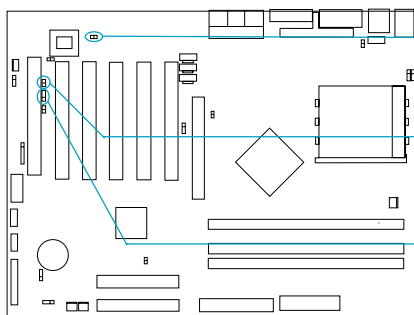
JFSB	HCLK
2-3	100MHz
1-2	133MHz

AMD Athlon CPU FSB is 100MHz/133MHz, but delivering twice the throughput of 100MHz/133MHz Pentium III-based systems(Ultra -Fast 200MHz/266MHz). However, whether or not your system can be overclocked depends on your processor's capability. We do not guarantee the overclocking system to be stable.

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

### Enable/Disable Onboard Audio(JP4, JP5, J24)

If you want to use the onboard audio( AC'97 Codec ), The table below is for your reference. To avoid conflict, it is recommended to set the jumpers as ACR Codec when using expansion sound card.



States	JP4	JP5	J24	
			1-2	2-3
Onboard Codec	close	close	open	close
ACR Codec	open	open	close	open







## 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 after 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>=8.03) from the directory \Utility located on QDI Driver CD to 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 motherboard.
4. Decompress the file download, copy the BIOS file (xx.bin) to 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: Because the BIOS Software will be updated constantly, the following BIOS screens and descriptions are for reference purposes only and may not reflect your BIOS screens exactly.



## AWARD 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 to enter the AWARD BIOS CMOS Setup Utility.

#### Press <Del> to enter SETUP

When you have entered, the Main Menu (Figure 1) appears on the screen. 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.

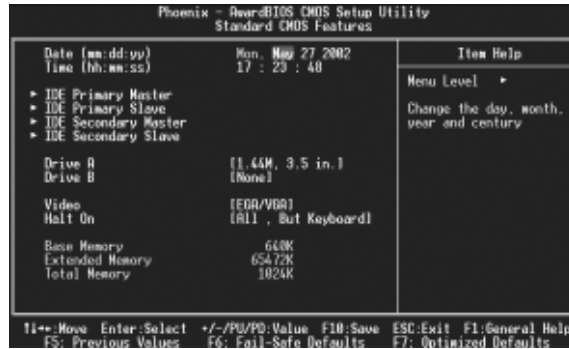


Figure-2 Standard CMOS Setup Menu

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



## BIOS Description

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

### CHS

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 CHS 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

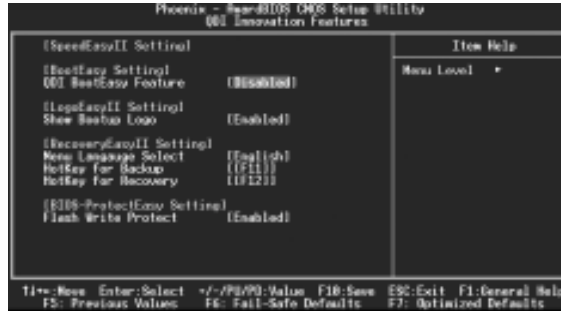


Figure-3 QDI Innovation features Menu

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

Item	Option	Description
<b>[BootEasy setting]</b>		
<ul style="list-style-type: none"> <li>QDI BootEasy feature</li> </ul>	<p><i>Enabled</i></p> <p><i>Disabled</i></p>	<p>PC boot in rapid speed, without any redundant feature waiting for the displaying of starting OS.</p> <p>PC boot in the legacy BIOS way.</p>
<b>[LogoEasyII setting]</b>		
<ul style="list-style-type: none"> <li>Show Bootup Logo</li> </ul>	<p><i>Enabled</i></p> <p><i>Disabled</i></p>	<p>The logo will be shown automatically when system boots up, otherwise, no logo appears on the screen.</p>
<b>[RecoveryEasyII setting]</b>		
<ul style="list-style-type: none"> <li>Menu language Select</li> </ul>	<p><i>English</i></p> <p><i>Chinese</i></p>	<p>Select RecoveryEasyII Interface Menu language.</p>
<ul style="list-style-type: none"> <li>Hotkey for Backup/Recovery</li> </ul>	<p><i>Null</i></p> <p><i>F2~F12</i></p>	<p>Backup/Recovery interface can not be used by Pressing Hotkey.</p> <p>Select Hotkey to enter Backup/Recovery interface during POST.</p>
<b>[BIOS-protectEasy setting]</b>		
<ul style="list-style-type: none"> <li>Flash Write Protect</li> </ul>	<p><i>Enabled</i></p> <p><i>Disabled</i></p>	<p>This option is for protecting the system BIOS, when enabled, writing to BIOS area is to be discarded.</p>

## Advanced BIOS Features Setup

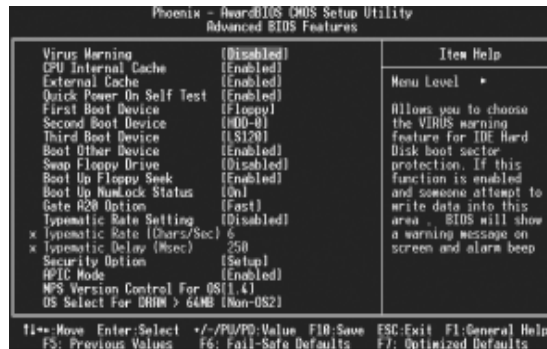


Figure-4 BIOS Features Setup Menu

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

Item	Option	Description
• Virus Warning	<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 Internal Cache	<i>Enabled</i>	Enables CPU internal cache.
	<i>Disabled</i>	Disables CPU internal cache.
• External Cache	<i>Enabled</i>	Enables CPU external cache.
	<i>Disabled</i>	Disables CPU external cache.
• Quick Power On Self Test	<i>Enabled</i>	Enable quick POST. BIOS will shorten or skip some check items during POST to speed up POST after you power on the computer.
	<i>Disabled</i>	Normal POST.
• First (Second, Third) Boot Device	<i>Disabled</i>	Selects 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>	
• Boot Other Device	<i>Enabled</i>	Boot other Device enabled.
	<i>Disabled</i>	Boot other Device disabled.



## BIOS Description

• Swap Floppy Drive	<i>Enabled</i> <i>Disabled</i>	Exchanges the assignment of A&B floppy drives. The assignments of A&B floppy drives are normal.
• Boot Up Floppy Seek	<i>Enabled</i> <i>Disabled</i>	Tests floppy drives to determine whether they have 40 or 80 tracks.
• Boot Up Numlock Status	<i>On</i> <i>Off</i>	Keypad is used as number keys. Keypad is used as arrow keys.
• Gate A20 Option	<i>Normal</i> <i>Fast</i>	The A20 signal is controlled by the keyboard controller or chipset hardware. The A20 signal is controlled by Port92.
• Typematic Rate Setting	<i>Enabled</i> <i>Disabled</i>	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	<i>System Setup</i>	Selects whether the password is required every time the system boots or only when you enter setup.
• APIC Mode	<i>Enabled</i> <i>Disabled</i>	Enable the APIC mode (Advanced Programmable Interrupt Controller). Disable the APIC mode.
• MPS Version Control for OS	1.1/1.4	Set the MPS Version Control for OS.
• OS Select For DRAM>64MB	<i>Non-OS2</i> <i>OS2</i>	If your operating system is not OS/2, please select this item. If system DRAM is more than 64MB and the operating system is OS/2, please select this item.



## Advanced Chipset Features Setup

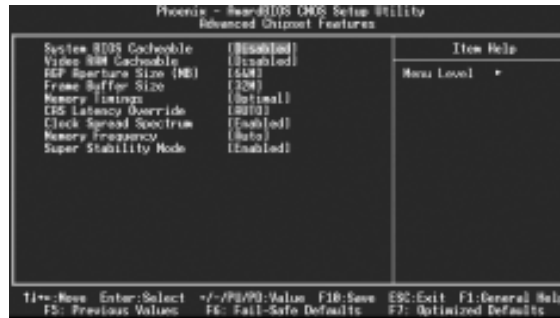


Figure-5 Advanced Chipset Features Setup Menu

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

<u>Item</u>	<u>Option</u>	<u>Description</u>
● System BIOS Cacheable	<i>Enabled</i>	Besides conventional memory, system BIOS area is also cacheable.
	<i>Disabled</i>	System BIOS area is not cacheable.
● Video RAM Cacheable	<i>Enabled</i>	Besides conventional memory, video RAM area is also cacheable.
	<i>Disabled</i>	Video RAM area is not cacheable.
● AGP Aperture Size	<i>32~512M</i>	Sets the effective size of the Graphics Aperture to be used in the particular PAC Configuration.
● Frame Buffer Size	<i>8M~32M</i>	Sets share memory of onboard AGP.
● Memory Timing	<i>Optimal Aggressive</i>	Set Memory Latency time mode.
● CAS Latency Override	<i>AUTO</i>	Set CAS Latency override
	<i>2/2.5 clocks</i>	
● Clock Spread Spectrum	<i>Enabled</i>	Enable Clock Spread Spectrum to reduce EMI.
	<i>Disabled</i>	Disable this function.
● Memory Frequency	<i>AUTO</i>	Set Memory Frequency
	<i>100/133MHz</i>	
● Super Stability Mode	<i>Enabled</i>	Enable Super Stability Mode.
	<i>Disabled</i>	Disable this function.



## 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> <i>Disabled</i>	Validates ACPI function. Invalidates ACPI function.
• ACPI Suspend Type	<i>S1(POS)</i> <i>S3(STR)</i> <i>S1&amp;S3</i>	Select the ACPI suspend type.
• Video Off Method	<i>Blank Screen</i> <i>V / H SYNC + Blank</i> <i>DPMS Support</i>	The system BIOS will only blank off the screen when disabling video. In addition to Blank Screen, BIOS will also turn off the V-SYNC & H - SYNC signals from VGA card to monitor. 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>
• HDD Down in suspend	<i>Enabled</i> <i>Disabled</i>	HDD's motor will be off in suspend state. HDD's motor will not be off in suspend state.
• Soft-off by PBTN	<i>Instant-off</i> <i>Delay 4 Sec</i>	The system will power off immediately once the power button is pressed. The system will not power off until the power button has been pressed continuously for more than 4 seconds.





- |                              |                 |   |
|------------------------------|-----------------|---|
| • Power On by PCI Card (PME) | <i>Enabled</i>  | Enable to wake up by PCI card.  |
|                              | <i>Disabled</i> | Disable to wake up by PCI card.   |
| • Power on 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.  |
| • RTC Resume                 | <i>Enabled</i>  | RTC alarm can be used to generate a wake event to power up the system in power-off status. You can set any time to power up the systems.  |
|                              | <i>Disabled</i> | RTC has no alarm function.  |
| • Time(hh:mm:ss) Alarm       |                 | Set the time of RTC.  |



### PNP/PCI Configurations Setup

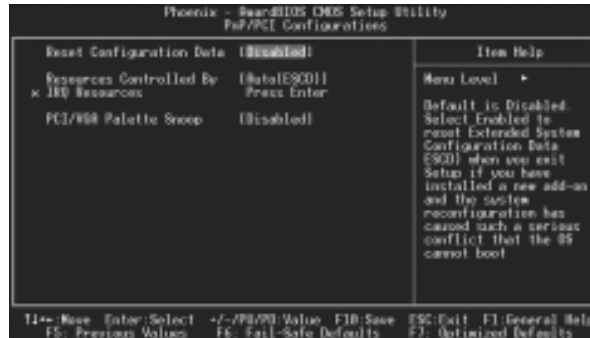


Figure-7 PNP/PCI Configurations Setup Menu

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>	The system BIOS will reset configuration data once then automatically set this item as disabled.
	<i>Disabled</i>	Disables this function.
● Resources Controlled By	<i>Manual</i>	Assigns the system resources ( IRQ and DMA) manually .
	<i>Auto(ESCD)</i>	Assigns system resources (IRQ and DMA) automatically by BIOS.
● PCI/VGA Palette Snoop	<i>Enabled</i>	Enable PCI/VGA Palette Snoop.
	<i>Disables</i>	Disable PCI/VGA Palette Snoop.

## Integrated Peripherals



Figure-8 Integrated Peripherals Menu

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

Item	Option	Description
• OnChip IDE Channel 0/1	<i>Enabled</i> <i>Disabled</i>	Enables OnChip IDE First/Second Channel. Disables OnChip IDE First/Second Channel.
• Primary/Secondary Master/Slave PIO	<i>Mode 0 ~ 4</i> <i>Auto</i>	Defines the IDE primary/secondary master/slave PIO mode. The IDE PIO mode is defined by auto -detection.
• Primary/Secondary Master/Slave UDMA	<i>Auto</i> <i>Disable</i>	Ultra DMA mode will be enabled if an ultra DMA device is detected. Disables this function.
• IDE Prefetch Mode	<i>Enabled</i> <i>Disabled</i>	Enables IDE Prefetch Mode. Disables IDE Prefetch Mode.
• Init Display First	<i>PCI SLOT</i> <i>AGP</i>	Initializes the PCI VGA first. If a PCI VGA card and an AGP card are installed together in the system, the one initialized first functions. Initializes the AGP first.
• On Chip USB	<i>Enabled</i> <i>Disabled</i>	Enables onchip USB. Disables onchip USB.
• USB Keyboard Support	<i>Enabled</i> <i>Disabled</i>	Support USB Keyboard under legacy OS. Do not support USB Keyboard under legacy OS.
• AC'97 Audio	<i>Auto</i> <i>Disabled</i>	If audio codec was installed on board, the AC'97 Audio function can be used. Otherwise, the function is disabled. Disable the AC'97 Audio onboard.



## BIOS Description

• MC'97 Modem	<i>Auto</i>	If audio codec was installed on board, the MC97 modem function can be used. Otherwise, the function is disabled.
	<i>Disabled</i>	Disable the MC97 modem onboard.
• IDE HDD Block Mode	<i>Enabled</i>	Allows IDE HDD to read/write several sectors once.
	<i>Disabled</i>	IDE HDD only reads/writes a sector once.
• Power On Function	<i>Button only</i>	Power on by power button.
	<i>Keyboard 98</i>	Power on by Keyboard 98.
	<i>Password</i>	Power on with keyboard password.
	<i>HotKey</i>	Power on by Hotkey.
	<i>Mouse Left</i>	Power on by Mouse Left.
	<i>Mouse Right</i>	Power on by Mouse Right.
• KB Power ON Password	<i>Anykey</i>	Power on by Anykey.
	<i>Enter</i>	Enter keyboard password.
• Hot Key Power On	<i>Ctrl-F1~F12</i>	Set the Hotkey Power On.
• Onboard FDC Controller	<i>Enabled</i>	Onboard floppy drive controller is enabled.
	<i>Disabled</i>	Onboard floppy drive controller is disabled.
• Onboard Serial Port 1/2	<i>3F8/IRQ4</i>	Defines the onboard serial port address and required interrupt number.
	<i>2F8/IRQ3</i>	
	<i>3E8/IRQ4</i>	
	<i>2E8/IRQ3</i>	
• UART Mode Select	<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</i>	Defines Serial Port 2 as standard serial port.
	<i>IrDA</i>	Supports IrDA mode.
	<i>ASKIR</i>	Supports SHARP ASK-IR protocol with maximum baud rate up to 57600bps.
• 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>	



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



### PC Health Status



Figure-9 PC Health Status Menu

The following describes the meaning of each item.

Item	Current Data Shown	Description
<ul style="list-style-type: none"> <li>ShutdownTemperature</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>	<ul style="list-style-type: none"> <li>The system will shut down automatically under the ACPI OS when the CPU temperature reaches the previous setting.</li> <li>The system remains on regardless of how much the CPU temperature is.</li> </ul>
<ul style="list-style-type: none"> <li>Current system/CPU Temp</li> </ul>		<ul style="list-style-type: none"> <li>Temperature of the system/CPU.</li> </ul>
<ul style="list-style-type: none"> <li>VcoreA</li> <li>+3.3V</li> <li>+5V</li> <li>+12V</li> <li>-12V</li> <li>-5V</li> <li>Voltage Battery</li> </ul>		<ul style="list-style-type: none"> <li>Displays current Voltage values including all significant voltages of the mainboard. +3.3V, +12V, +5V, -5V, -12V are voltages from the ATX power supply. Vcore Voltage is the CPU core voltage from the onboard switching power supply. The Voltage Battery is the voltage of the battery.</li> </ul>
<ul style="list-style-type: none"> <li>Current CPUFAN Speed</li> <li>Current CHSFAN Speed</li> <li>Current BAKFAN Speed</li> </ul>		<ul style="list-style-type: none"> <li>Speed of fan(RPM:Revolution Per Minute) connected to the fan header CPUFAN, BAKFAN or CHSFAN. Fan speed value is based on an assumption that tachometer signal is two pulses per revolution. In other cases, you should regard it relatively.</li> </ul>







## Supervisor/ User Password

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 "Advanced BIOS Features" 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**" in "Security Option" of "Advanced BIOS Features" 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 "CMOS Setup" to modify all settings. Also you can use User Password when booting the system or entering "CMOS 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 motherboard easily. You should install the drivers in order, and you need to restart your computer after all the drivers are installed.

- A. Chipset Software
- B. VGA Driver
- C. Audio Driver
- D. DirectX

#### 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. Lf.exe
- C. Cblog.exe

The files included in **Documents** are:

- A. Adobe Acrobat Reader V5.0
- B. N2-french.doc, N2-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>



## Installing nForce Core Drivers Under Windows 98 (nForce 420 Platform)

This application note provides instructions to install the NVIDIA nForce core drivers (GART, Ethernet, Audio, Audio Utilities, SMBUS and Memory Controller) under Windows 98. Currently, the NVIDIA installer supports Windows XP, Windows 2000 and Windows ME. Use the following procedure to install all NVIDIA devices under Windows 98 until the release of Windows 98 installer supports.

To install the nForce integrated video driver, use the standard Windows installation steps for 'Updating a Video Driver.'

### Driver Package Contents

It is recommended to have the following nForce drivers before proceeding:

1. GART Driver
2. Audio Drivers with Audio Utilities
3. Ethernet Driver
4. SMBUS Driver (System Management Bus)
5. Memory Controller Driver

### Installing GART Drivers

When a Windows 98 operating system is installed, there are a series of unknown devices in Windows 98 Device Manager. To install the nForce GART drivers, use the following procedure:

1. Extract the GART driver package to a temporary location.  
GART Manager is present in Device Manager under: PCI Standard Host CPU Bridge.  
Microsoft Generic Drivers are used until you upgrade with the proper GART drivers.
2. Go to the Device Manager (START-CONTROL PANEL-SYSTEM-DEVICE MANAGER).
3. Look for the following devices:
  - NVIDIA nForce GART Manager
  - PCI Standard Host CPU Bridge
  - PCI standard PCI-to-PCI bridge device
4. Update the drivers using the ones saved into the temporary location in step 1.
5. Restart your system.



## Installing the Audio Drivers

Use the following procedure to install nForce Audio drivers:

1. Extract the Audio driver package to a temporary location.  
Use the drivers from Audio Driver package to enumerate all unknown media class devices.
  2. Go to the Device Manager (START>CONTROL PANEL>SYSTEM>DEVICEMANAGER).
  3. Look for the following devices:
    - Unknown Drivers
      - NVIDIA Audio Codec Interface
      - NVIDIA Media Controller Processor
    - Sound, Video, and Game Controllers
      - NVIDIA nForce Audio Codec Interface
      - NVIDIA nForce MCP Audio Processing Unit
- Note: Various nForce Audio items Under Sound, Video and Game Controllers will be replaced when the System Devices are updated.
4. Update the drivers using the ones saved into the temporary location in step 1.
  5. Restart your system.



## Installing Ethernet Drivers

Use the following procedure to install Ethernet drivers:

1. Extract the Ethernet driver package to a temporary location.  
Use the drivers from the Ethernet Driver package to enumerate the unknown Ethernet Device.
  2. Go to the Device Manager (START>CONTROL PANEL>SYSTEM>DEVICEMANAGER).
  3. Look for the following devices:
    - Unknown Drivers
      - NVIDIA Ethernet Device
    - Network Adapters
      - NVIDIA nForce MCP Networking Adapter
4. Update the drivers using the ones saved into the temporary location in step 1.
  5. Restart your system.





### Installing SMBus Drivers

Use the following procedure to install Ethernet drivers:

1. Extract the SMBus driver package to a temporary location.  
SMBus needs to be enabled for DDC to function correctly and system management functions to be enabled.
2. Go to the Device Manager (START-CONTROL PANEL-SYSTEM-DEVICE MANAGER).
3. Go to Unknown Devices / PCI System Management Bus.
4. Update the drivers using the ones saved into the temporary location in step 1.
5. Restart your system.

### Updating Memory Controller Drivers

1. Extract the files from the (os)\memory directory of the driver package to a temporary location.

Microsoft Generic Drivers will be used. To replace the Microsoft drivers with NVIDIA drivers, continue with Step 2.

**Note:** Several instances of Memory Controller may be present in Device Manager under:

- Windows 9x/ME or Windows 2000/XP
- PCI Standard RAM Controller

2. Go to the Device Manager (START-CONTROL PANEL-SYSTEM-DEVICE MANAGER).
3. Look for the following devices:  
System Devices
  - PCI Standard RAM Controller
  - NVIDIA nForce 420 Memory Controller
  - NVIDIA nForce 220/420 Memory Controller
4. Update all instances of these drivers using the ones saved into the temporary location in step 1.
5. Restart your system.

**Note: It is important to restart your computer after all drivers are installed.**



## 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, WINDOWS 9X, WINDOWS NT, WINDOWS ME 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.



# RecoveryEasy II



## **Introduction:**

RecoveryEasy II — the latest edition of RecoveryEasy, providing a more easy-to-operate and more secure and reliable tool for backing up and recovering the hard disk data. It will make your data on the hard disk more secure, and make your computer more reliable.

RcoveryEasy II will bring you invaluable experiences. It allows you to experience unprecedented security and reliability with its one-hotkey backup, one-hotkey recovery and powerful virus-free functions.

## **Features:**

RcoveryEasy II has the following features:

### ⇒ **Secure Backup**

- (1) Backup area can be reserved automatically in the High Memory Block (HMB) and all of partitions can be adjusted automatically .
- (2) Backup area is invisible to any operating system and its upper software, making it impossible to be attacked completely.

### ⇒ **Ease to Operate**

- (1) RcoveryEasy II is supported in both Chinese and English. You can easily enter Backup or Recover interface by simply pressing hotkeys. Backup or recover operation can be done with simple choices.
- (2) User are not required to define the size of backup area. When backup start, it will automatically allocate an area in the High Memory Block (HMB) of hard disk as backup area upon the necessity of data storage, so as to improve the utilization of hard disk space.

### ⇒ **Adavantage Function**

- (1) Multiform partition format can be supported in RcoveryEasy II, including FAT16, FAT32, NTFS etc.
- (2)The capability of supportable Hard Disk is up to 137GB.

### ⇒ **Flexible Combination**

The hard disk data can be choosed to be protected and restored as required.





The following attachment is Backup and Recovery Function table:

Backup	Backup content	Restore content
Partition Table	Partition Table	Partition Table
System Partition	System Partition+Partition Table	System Partition, PartitionTable
Whole Disk	All Partitions+Partition Table	System Partition, PartitionTable, Whole Disk
CMOS Setup	CMOS Setup	CMOS Setup

**Menu Language and Hotkey Selection**

Please press “DEL” key to enter CMOS setup during the POST(Power On Self Test), then user can see [RecoveryEasyII Setting] items of the “QDI Innovation features” menu, in which the language on RecoveryEasyII interface and hotkey could be selected .

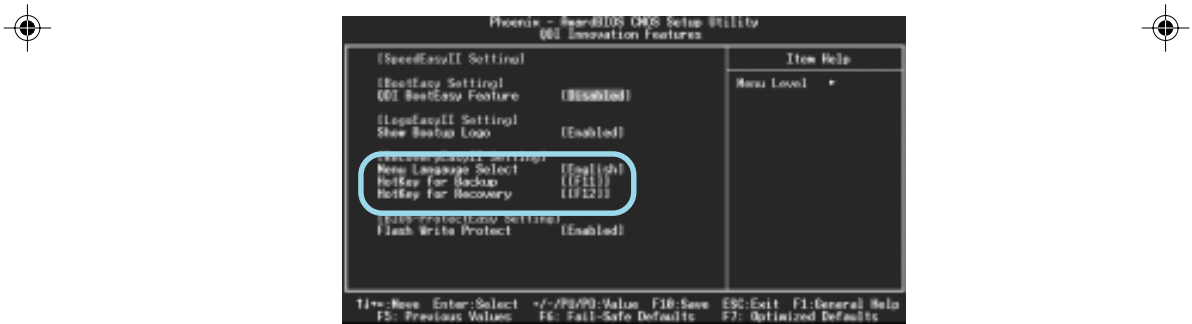


figure-1 QDI Innovation Features

**1. Menu language Select**

We provide two menu language for user to select, English is the default.

**2. Hot key for Backup**

There are 12 options, including NULL and F2~F12. Key F11 is default.If NULL is selected Backup interface can not be used with pressing hotkey. If you select one key of the rest 11 options, you can enter Backup interface by pressing the hotkey you setup during POST.



### 3. Hot key for Recovery

There are 12 options, including NULL and F2~F12. Key F12 is default. If NULL is selected, Restore interface can not be used with pressing hotkey. If you select one key of the rest 11 options, you can enter Recover interface by pressing the hotkey you setup during POST.

#### NOTE :

If the Backup hotkey and Recover hotkey have been set with the same key, the default will be Backup hotkey.

### Hard Disk Selection Menu

If you installed the system with several IDE hard disks, and you have pressed the backup or restore hotkey during POST, hard disk selection menu will popup before you enter backup or recovery interface, in which all of the IDE hard disks installed on your system will be listed. You can scroll the highlight bar to the hard disk you want to work with using arrow key. Press ENTER to confirm, and the following operation will be performed on the selected hard disk:



figure-2 Hard Disk Select

### Backup Function Introduction

press Backup Hotkey to enter Backup Interface during the POST(Power On Self Test), then the follwing interface will appear. You can scroll the highlight bar to the option you want to work with using arrow key. Press ENTER to confirm.

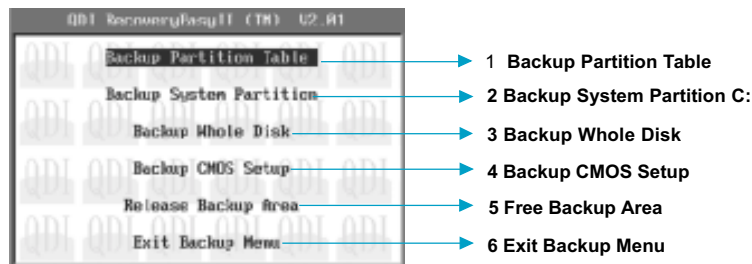


figure-3 Backup Interface



### 1. Backup Partition Table

It is used to backup partition table of current hard Disk. A partition table keeps the status of the hard disk partitions, such as the number of partitions, the type and size of each partition, etc. It is the most important information of the hard disk data structure. The incorrectness or loss of the table will result in the failure of reading data from the hard disk partitions.

### 2. Backup System Partition

It is used to backup the system partition of current hard disk. It makes a backup of the data in the bootable partition (activated partition) of current hard disk, as well as the partition table.



### 3. Backup Whole Disk

It makes a backup of all the useful data on the hard disk, including partition table and the data in all partitions.



### 4. Backup CMOS Setup

It is used to backup the settings you have made in the CMOS Setup.

### 5. Release Backup Area

It is used to unload the backup data on the hard disk, freeing the hard disk space.



### 6. Exit Backup Menu

It is used to Exit Backup Interface.

figure-4 Backup process

## Recovery Function Introduction

Press Recovery Hotkey to enter Recovery Interface during the POST (Power On Self Test), then the following interface will appear. You can scroll the highlight bar to the option you want to work with using arrow key. Press ENTER to confirm.

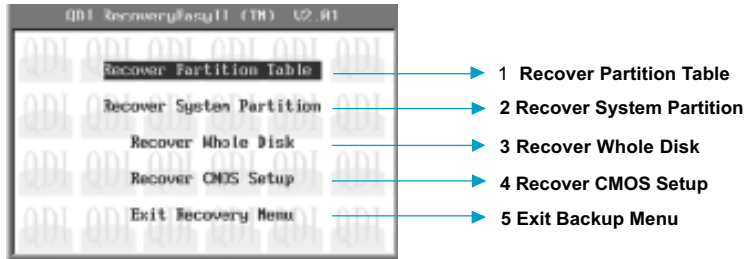
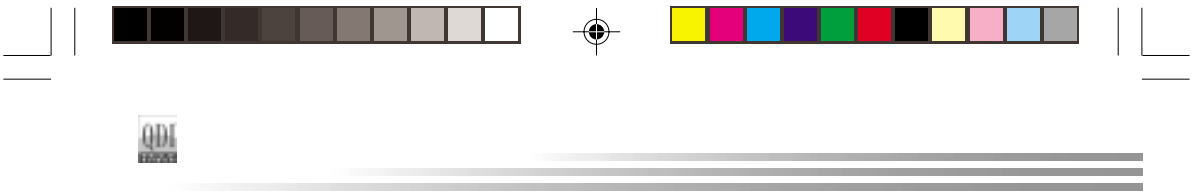
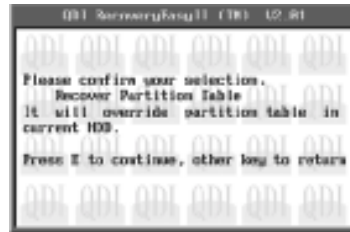


figure-5 Recover Interface

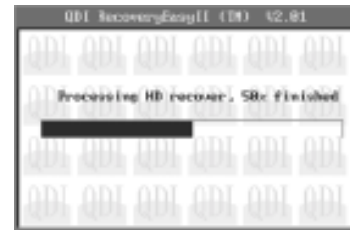
### 1.Recover Partition Table

It used to restore the partition table data stored in backup area to current Hard Disk.



### 2.Recover System Partition

It used to restore the system partition data stored in current backup area to current system partition. If current system partition doesn't match the backup system partition, a warning will be displayed indicating the recovery fails. This feature will only restore the bootable partition and contents in other partitions will be untouched.



### 3.Recover Whole Disk

It used to restore all the Hard Disk data stored in current backup area to current Hard Disk. This operation will restore the partition table and data in all partitions, as a result, existing data in current Hard Disk will be overwritten.



### 4.Recover CMOS Setup

This will restore the latest backup of the CMOS Settings you have made to the current CMOS.

### 5.Exit Recovery Menu

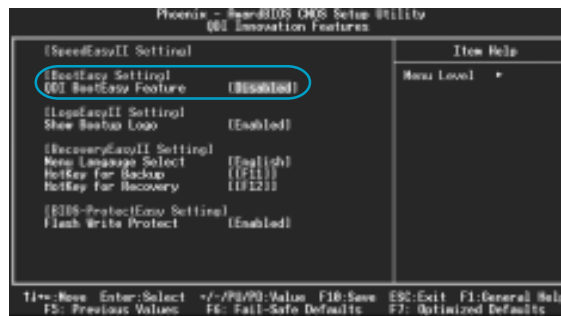
It is used to exit Recovery Interface.

figure-4 Recover process

# BootEasy



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 QDI Innovation 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.



BootEasy Setup Menu

### 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.

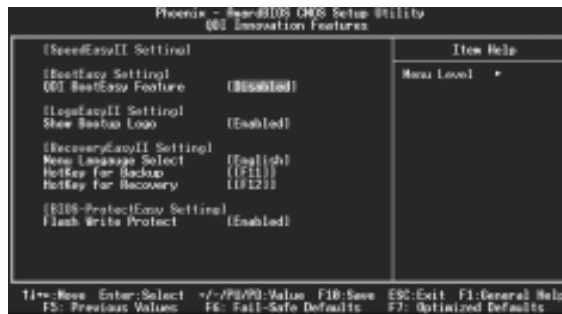
**Setting the jumper JAV as open if you encounter the above conditions.**

- 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(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.

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.



## Instalación de la placa base Legend-QDI N2(Spanish):

1. Asegúrese que se incluyen los siguientes artículos: Placa base Legend-QDI N2, 1 cable de datos para el puerto IDE y 1 cable de datos para el Floppy, jumpers, 1 manual de usuario Legend-QDI N2y un disco compacto con los controladores de la placa base Legend-QDIN2.
2. Asegúrese de que el cable de la fuente de alimentación esta desconectado y asegúrese de estar en contacto a masa utilizando una pulsera antiestática. Si no dispone de dicha pulsera, toque un objeto directamente conectado a masa o una parte metálica de su equipo como puede ser la caja de este.
3. Fije la placa base en la caja de su equipo con los tornillos especiales que acompañan a su caja.
4. Los jumpers están localizados en la placa base, con ellos se configuran, por ejemplo: Clear CMOS JCC, Habilitar BIOS ProtectEasy JAV etc. ..., el PIN1 para todos los jumpers esta marcado con una línea más gruesa (Consulte el apartado "Jumper Settings" en el manual de usuario de su placa Legend-QDI N2 en el capítulo 2).
5. Inserte el procesador en el socket y conecte el ventilador del procesador en el conector de su placa base Legend-QDI N2 marcado como "CPUFAN".
6. Inserte los módulos de memoria en los bancos de memoria DIMM de su placa base Legend-QDIN2.
7. Inserte las tarjetas PCI y/o la tarjeta CNR y AGP en las bahías de expansión de su placa base Legend-QDI N2.
8. Conecte los periféricos internos IDE y las disqueteras mediante los cables de datos específicos a su placa base Legend-QDI N2. Asegúrese que la orientación de los cables sea la correcta. (El cable rojo se corresponde con el pin 1).
9. Conecte los cables de la caja del ordenador a su placa base Legend-QDI N2, como el conector de la fuente de alimentación, los testigos de corriente, y lectura de disco duro, interruptores de inicio y reset (consulte el apartado "External Connectors" del manual de usuario de su placa base Legend-QDI N2).
10. Cuando haya finalizado de realizar todas las conexiones, conecte el cable de alimentación a la fuente de alimentación y encienda su PC:



11. Conecte los diferentes periféricos externos como el teclado PS/2, ratón PS/2, serie o USB, los dispositivos USB, el monitor y la impresora a la placa base Legend-QDI N2 (consulte el apartado "External Connectors" en el manual de su placa base Legend-QDI N2, en el capítulo 2).

### Instalación del sistema:

1. Encienda su equipo mediante el interruptor de encendido de la caja.
2. Presione la tecla « Supr » para entrar en el menú de configuración de la BIOS.
3. Seleccione los valores de la Bios en concordancia con la configuración de su sistema (Nosotros le recomendamos que deje los valores establecidos por la Bios por defecto, para evitar posibles fallos que ocasionen que su sistema no funcione correctamente). Para más información las funciones de la Bios, consulte el apartado "BIOS Description" en el manual de usuario de la placa base Legend-QDI N2). Presione la tecla « F10 » y seleccione la opción "Save & Exit Setup" en el menú de configuración de la Bios para guardar los cambios y reiniciar el sistema.
4. Instale el sistema operativo en el disco duro, no se olvide de seleccionar la secuencia de inicio correcta para que el sistema operativo pueda iniciarse.
5. Después de la instalación del sistema operativo, asegúrese que no hay conflictos con ningún dispositivo de su sistema.
6. Entonces, después del último paso, proceda a la instalación de los controladores de los diferentes dispositivos.

**Un disco compacto con controladores de Legend-QDI esta incluido en el paquete de la placa base Legend-QDI N2.**

### 1. Instalación de los controladores

Usted puede instalar todos los controladores para su placa base fácilmente. Tiene que instalar los controladores en el siguiente orden para un correcto funcionamiento del sistema, y es necesario reiniciar el equipo antes de finalizar la instalación de los controladores.

- |                     |               |
|---------------------|---------------|
| A. Chipset software | B. VGA Driver |
| C. Audio Driver     | D. DirectX    |





## 2. Accesorios

- A. QFlash V1.0
- B. Norton AntiVirus2002

## 3. Navegue por el CD

Usted puede leer todos los documentos incluidos en este CD, incluidos Utility and Documents.

Los ficheros incluidos en **Utility** son:

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

Los ficheros incluidos en **Documents** son:

- A. Adobe Acrobat Reader V5.0
- B. N2-French.doc, N2-Spanish.doc etc.





## Manuel d'installation des cartes mères de la série Legend-QDI N2 (French):

### Intégration du système :

1. Vérifier la présence de chaque élément dans la boîte de la carte mère de la série Legend-QDI N2 :

- Une carte mère de la série Legend-QDI N2.
- Un CD-ROM d'installation Legend-QDI.
- Un manuel d'utilisation de la carte mère Legend-QDI N2.
- Un sachet de cavaliers.
- Une nappe IDE compatible avec la norme ATA/66 destinée au lecteur de disque dur.
- Une nappe destinée au lecteur de disquette.
- Un fond de panier métallique destiné à l'unité centrale de l'ordinateur (Caractéristique technique optionnelle).
- Un câble d'extension destiné à permettre l'exploitation des ports USB 3 et USB 4 ou USB 5 et USB 6 (Caractéristique technique optionnelle).

2. Vérifier que le câble électrique relié au boîtier d'alimentation de l'unité centrale de l'ordinateur est déconnecté. Se relier à la terre grâce à un bracelet lié au poignet. A défaut de disposer d'un bracelet, maintenir un contact physique avec un objet lui-même relié à la terre, ou à une partie métallique du système comme la structure de l'unité centrale de l'ordinateur.
3. Fixer la carte mère dans l'unité centrale de l'ordinateur grâce aux vis fournies avec cette dernière lors de son achat.
4. S'assurer que la carte mère de la série Legend-QDI N2 est matériellement correctement configurée, pour cela vérifier que les cavaliers insérés sur les broches intégrées de cette dernière sont correctement positionnés. Dans ce but il est important de se référer à la section nommée « Configuration des cavaliers » du chapitre numéro 2 nommé « Instructions d'installation » contenu dans le manuel d'utilisation livré avec la carte mère de la série Legend-QDI N2 lors de son achat.



5. Connecter le processeur dans le socket intégré à la carte mère de la série Legend-QDI N2 et prévu à cet effet. Fixer le système de refroidissement de ce dernier et connecter son ventilateur sur les broches nommées « CPUFAN » intégrées à la carte mère de la série Legend-QDI N2 et prévu à cet effet.
6. Connecter les éventuelles barrettes de mémoire dans les slots intégrés à la carte mère de la série Legend-QDI N2 et prévu à cet effet.
7. Connecter les éventuelles cartes d'extension au format AGP, CNR ou PCI dans les slots intégrés à la carte mère de la série Legend-QDI N2 et prévu à cet effet.
8. Connecter les éventuels périphériques IDE ainsi que le lecteur de disquette à la carte mère de la série Legend-QDI N2 grâce aux nappes fournies avec cette dernière lors de son achat. S'assurer que l'orientation des nappes connectées est correcte en vérifiant que le liseré rouge de ces dernières correspond à l'emplacement de la broche numéro 1 du connecteur.
9. Connecter les câbles de l'unité centrale de l'ordinateur sur les broches intégrées à la carte mère de la série Legend-QDI N2 et prévues à cet effet. Dans ce but il est important de se référer à la section nommée « Connecteurs externes » du chapitre numéro 2 nommé « Instructions d'installation » contenu dans le manuel d'utilisation livré avec la carte mère de la série Legend-QDI N2 lors de son achat.
10. Raccorder les périphériques externes sur les connecteurs de fond de panier intégrés à la carte mère de la série Legend-QDI N2. Dans ce but il est important de se référer à la section nommée « Connecteurs externes » du chapitre numéro 2 nommé « Instructions d'installation » contenu dans le manuel d'utilisation livré avec la carte mère de la série Legend-QDI N2 lors de son achat.
11. Lorsque tous les éléments du système sont correctement intégrés, il est possible de reconnecter le câble électrique au boîtier d'alimentation de l'unité centrale de l'ordinateur.



### Installation du système :

1. Démarrer le système en pressant l'interrupteur de fonctionnement de l'unité centrale de l'ordinateur.
2. Presser la touche "Suppr" du clavier afin d'entrer dans le menu de BIOS.
3. Dans le menu de BIOS nommé "QDI Innovation features", ajuster la fréquence de fonctionnement du processeur. Attention, il est fortement recommandé de charger les réglages de sûreté par défaut afin d'éviter un éventuel dysfonctionnement du système. Dans ce but il est important de se référer à la section nommée « Description du BIOS Award » du chapitre numéro 3 nommé « Description du BIOS » contenu dans le manuel d'utilisation livré avec la carte mère de la série Legend-QDI N2 lors de son achat.
4. Procéder à l'installation du système d'exploitation sur le lecteur de disque dur intégré au système. Dans ce but il est important de vérifier que la séquence de démarrage du système paramétrable à partir du menu de BIOS permet à la procédure d'installation du système d'exploitation de s'initialiser.
5. Une fois l'installation du système d'exploitation achevée, vérifier qu'il ne subsiste aucun conflit ou périphérique inconnu au sein du système.
6. Après cette étape, procéder à l'installation des pilotes de chaque périphérique détecté par la carte mère de la série Legend-QDI N2.

**Lors de son achat un CD-ROM d'installation Legend-QDI est livré avec la carte mère de la série Legend-QDI N2.**

#### 1. Driver Install :

Avec cette option, il est possible d'installer les pilotes de la carte mère de la série Legend-QDI N2 aisément. Il est important d'installer les pilotes en respectant l'ordre prédéfini et de redémarrer le système après avoir effectué l'installation de tous les pilotes.

Applications contenues dans le dossier :

- |                      |               |
|----------------------|---------------|
| A. Chipset software. | B. VGA Driver |
| C. Audio Driver      | D. DirectX    |



## 2. Accessory :

Applications contenues dans le dossier :

- A. QflashV1.0.
- B. Norton AntiVirus 2002.

## 3. Browse CD :

Avec cette option, il est possible de consulter l'ensemble des données contenues sur le CD-ROM d'installation Legend-QDI

Applications contenues dans le dossier :

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





## Legend-Qdi N2 installazione mainboard (Italian):

1. Assicurarsi che la scatola sia completa: Legend-qdi N2 mainboard, cavo IDE e Floppy, jumpers, manuale dell'utente della mainboard Legend-QDI N2 e cd-rom drivers.
2. Controllare che il cavo alimentazione proveniente dal computer-case sia sconnesso assicurarsi inoltre di aver indossato correttamente il bracciale da polso collegato a massa. In mancanza di questo toccare un punto a massa o una parte metallica del case
3. Fissare la mainboard nel case con le speciali viti fornite con il computer-case
4. I jumper locati sulla mainboard rappresentano: JCC azzeratore BIOS , JAV abilitatore/disabilitatore in BIOS della funzione **protectEasy**; per tutti i jumper il PIN 1 e' contrassegnato da una spessa linea bianca ( consultare il manuale al capitolo 2 " JUMPER AND SETTINGS")
5. Inserire il processore nell'apposito slot ; la ventola del processore deve essere collegato nello speciale connettore targato " CPUFAN ".
6. Inserire il modulo/i di memoria nell'apposito memory slots
7. Inserire le periferiche Pci negli appositi Pci slots
8. Collegare le periferiche IDE e il FLOPPY con l'apposito cavo fornito con la mainboard negli specifici connettori marcati. Assicurarsi che l'orientamento del cavo sia corretto. ( La linea rossa sul cavo deve essere inserita nell'apposito connettore in corrispondenza del pin 1)
9. Connettere la mainboard con: il cavo di alimentazione proveniente dall'alimentatore, il connettore dell'interruttore di stand by, il connettore del led di segnalazione "acceso", il connettore led di funzionalita' HARD DISK, il connettore dello speaker interno al CASE.....( consultare il manuale capitolo 2. " EXTERNAL CONNECTORS ". Dopo chiudere il CASE)
10. Connettere le differenti periferiche esterne come il PS/2 mouse, la PS/2 tastiera, le prese USB, il monitor e la stampante con gli specifici connettori posizionati sulla faccia esterna della mainboard.
11. Quando la vostra configurazione sara' tutta connessa, aggangiare il cavo di alimentazione



## Installazione di sistema

1. Portare in posizione di accesso l'interuttore di ACCESO
2. Usare il tasto DEL per entrare nel software di configurazione del BIOS
3. Regolare le funzioni del BIOS in accordo con la configurazione di sistema (Noi ti raccomandiamo di usare l'impostazione di default per evitare rischi di anomalie di funzionalità). Per maggiori informazioni controllare il capitolo 3, sezione "BIOS DESCRIPTION". Premere F10 sulla tastiera o scegliere "SAVE and EXIT" dal menu di BIOS per salvare le impostazioni scelte ed uscire dal BIOS program.
4. Installare il sistema operativo, non dimenticando di mettere nelle giuste condizioni di partenza la sequenza di boot.
5. Dopo una giusta installazione accertarsi che non vi siano conflitti tra le periferiche in uso
6. Dopo questo ultimo passo procedere all'installazione dei driver delle varie periferiche

## IL CD CONTENENTE I DRIVER DELLA VOSTRA MAINBOARD LEGEND-QDI E' CONTENUTO NELLA SCATOLA

### 1. Installazione driver

E' possibile installare tutti i driver della Vs. mainboard in modo facile e veloce. Dovreste installare i driver nella seguente successione, finito cio' bisogna far ripartire il personal computer.

- |                     |               |
|---------------------|---------------|
| A. Chipset software | B. VGA Driver |
| C. Audio Driver     | D. DirectX    |

- |                         |
|-------------------------|
| A. QflashV1.0           |
| B. Norton AntiVirus2002 |

### Guardando il CD

Questo manuale di installazione e' disponibile anche nella sua versione elettronica all'interno del cd accompagnativo, insieme anche diverse utili quali:

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



## DDR DIMM Configuration Matrix for IGP-128

The purpose of this document is to provide information about configuring and populating DDR DIMMs for designs with NVIDIA Corporation's 128-bit Integrated Graphics Processor.

### Configuration Rules

Observe the following rules when configuring DDR DIMMs:

1. Follow correct DIMM installation order. DIMMs must be populated consecutively, in order, starting with the DIMM0 socket.
2. Do not populate DIMM2 socket with any dual load (dual bank) modules.

**Note: Dual load refers to physical device beds on the data bus**

### Population Rules

Memory loads must be distributed as provided in the Table 1. Not all possible combinations are listed in the table. Populate designs only with DIMMs that follow JEDEC standard 184-pin unbuffered non-ECC DDR DIMMs. DDR DIMMS with CAS LATENCY of 2.0 (PC2100A) or 2.5 (PC2100B) are supported.

**Table 1. Memory Loads**

Capacity	DIMM0 (A0)	DIMM1 (B0)	DIMM2 (B1)
128MB	64MB - 1B or 2B	64MB - 1B or 2B	X
192MB	128MB - 1B or 2B	64MB - 1B or 2B	X
256MB	128MB - 1B or 2B	128MB - 1B or 2B	X
128MB - 1B or 2B	64MB - 1B or 2B	64MB - 1B	64MB - 1B
384MB	256MB - 1B or 2B	128MB - 1B or 2B	X
128MB - 1B or 2B	128MB - 1B or 2B	128MB - 1B	128MB - 1B
512MB	256MB - 1B or 2B	256MB - 1B or 2B	X
256MB - 1B or 2B	128MB - 1B or 2B	128MB - 1B	128MB - 1B
768MB	512MB - 1B or 2B	256MB - 1B or 2B	X
256MB - 1B or 2B	256MB - 1B or 2B	256MB - 1B	256MB - 1B
1GB	512MB - 1B or 2B	512MB - 1B or 2B	X
512MB - 1B or 2B	256MB - 1B or 2B	256MB - 1B	256MB - 1B
1.25GB	512MB - 1B or 2B	512MB - 1B or 2B	256MB - 1B
1.5GB	512MB - 1B or 2B	512MB - 1B or 2B	512MB - 1B





### Legend:

- 1B: A one bank (single load) module
- 2B: A two bank (dual load) module
- 64MB - 1B: 64MB DDR DIMM using 4 8Mx16 (128Mb) devices - ONE BANK
- 64MB - 2B: 64MB DDR DIMM using 8 4Mx16 (64Mb) devices - TWO BANKS 1
- 128MB - 1B: 128MB DDR DIMM using 8 16Mx8 (128Mb) devices - ONE BANK
- 128MB - 2B: 128MB DDR DIMM using 8 8Mx16 (128Mb) devices - TWO BANKS
- 256MB - 1B: 256MB DDR DIMM using 8 32Mx8 (256Mb) devices or 16 32Mx4 (128Mb) devices - ONE BANK 2
- 256MB - 2B: 256MB DDR DIMM using 16 16Mx8 (128Mb) devices - TWO BANKS
- 512MB - 1B: 512MB DDR DIMM using 16 64Mx4 (256Mb) devices - ONE BANK 3
- 512MB - 2B: 512MB DDR DIMM using 16 32Mx8 (256Mb) devices - TWO BANKS
- X: DO NOT POPULATE

### Notes:

1. 64MB - 2B is an uncommon configuration and is included in the population matrix for completeness
2. 256MB - 1B using 16 32Mx4 devices is an uncommon configuration and is included in the population matrix for completeness
3. 512MB - 1B using 16 64Mx4 devices is an uncommon configuration and is included in the population matrix for completeness

### Validated IGP-128 Unbuffered Non-ECC DDR DIMMs

Table 2 lists the validated unbuffered non-ECC DDR DIMMs for the nForce 420 IGP-128 chip:

Table 2. Validated Unbuffered Non-ECC DDR DIMMs

Supplier	DIMM Part Number	DIMM Density	Speed	Number of Banks/Loads
HYNIX	HYMD1166458-H	128MB	PC2100B	1
HYNIX	HYMD1326458-H	256MB	PC2100B	2
MICRON	MT8VDDT1664AG-265A1	128MB	PC2100B	1
MICRON	MT16VDDT3264AG-265A1	256MB	PC2100B	2



# Mainboard Layout



**Note:**  
The layout includes all options.  
It is for your reference only.

