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.

- ☑ BA1 series mainboard
- ☑ QDI Utility CD
- ☑ User's manual
- ☑ IDE ribbon cable
- ☑ Floppy ribbon cable
- ☑ I/O shield
- ☐ 10-pin ribbon cable with bracket for USB Connector(optional)

Notice

The information in this document is subject to change in order to improve reliability, design, or function without prior notice and does not represent a commitment on the part of this company. In no event will we be liable for direct, indirect, special, incidental, or consequential damages arising out of the use or the possibility of such damages.

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

Declaration of conformity

CE

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

declares that the product

Mainboard
BA1

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

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

European Representative:

QDI COMPUTER (UK) LTD	QDI COMPUTER (SCANDINAVIA) A/S
QDI SYSTEM HANDEL GMBH	QDI EUROPE B. V.
QDI COMPUTER (FRANCE) SARL	QDI COMPUTER HANDELS GMBH
LEGEND QDI SPAIN S.L .	QDI COMPUTER (SWEDEN) AB

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

Printed Name : Xu Wenge Position/ Title : Assistant President

Declaration of conformity

Trade Name:	QDI Computer (U. S . A.) Inc.
Model Name:	BA1
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 : 2002

CONTENTS

CONTENTS

⚠ 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.

⚠ Note:

This manual is suitable for mainboards of BA1 series. Each mainboard is carefully designed for the PC user who wants diverse features.

Name	NorthBridge
BA1	845GL
BA1/G	845G
BA1/GV	845GV
BA1/GE	845GE
BA1/PE	845PE

Suffix	Onboard Audio	Onboard LAN
	Without	Without
-A	2channel	Without
-6A	6channel	Without
-L	Without	With
-AL	2channel	With
-6AL	6channel	With

-- This page is intentionally left blank --

Chapter 1
Introduction

Overview

BA1 series mainboard utilizes Intel 845G/GL/PE/GE/GV(845G/GL/PE/GE/GV + ICH4) Chipset, providing a fully compatible, high performance and cost-effective mATX platform. The mainboard provides 400 MHz/533MHz(supported on BA1/G, BA1/GE, BA1/PE and BA1/GV only) system bus to support Intel® Pentium 4 socket 478 processors and it supports DDR200/266/DDR333(supported on BA1/GE and BA1/PE only) SDRAM with the largest memory size up to 2GB.The new integrated technologies, together with AC'97 Audio(2-channel, 6-channel)(optional), 4 USB and Ultra DMA100/66/33, give customers an advanced, multimedia solution at a reasonable price.

Key Features

Form factor

- mATX form factor of 244mm x 200mm

Microprocessor

- Supports Intel® Pentium 4 (Willamette) socket 478 processors at 1.4/1.5/1.6/1.7/1.8/1.9/ 2.0GHz and above
- Supports Intel® Pentium 4 (Northwood) socket 478 processors at 2.0/2.2/2.26/2.4/2.53/2.66/2.8GHz and above
- Supports Intel® Celeron socket 478 processors at 1.7/1.8/2.0GHz and above

BA1G, BA1/GE, BA1/PE, BA1/GV mainboard

- Supports both 400MHz and 533MHz host bus speed

BA1 mainboard

- Supports 400MHz host bus speed

System memory

- Provides two 184-pin DDR DIMM sockets
- Supports DDR 200/266 SDRAM
- Supports DDR 333 SDRAM(available on BA1/GE, BA1/PE)
- Supports 64/128/256/512Mb DDR SDRAM technology
- The largest total memory is up to 2GB
- Supports overlock DDR333(available on BA1/G, BA1/GV,CPU533MHz)

Chipset

Name	NorthBridge	SouthBridge
BA1	845GL	ICH4
BA1/G	845G	ICH4
BA1/GV	845GV	ICH4
BA1/GE	845GE	ICH4
BA1/PE	845PE	ICH4

Onboard Graphics(available on BA1, BA1/GE, BA1/GV)

- Integrated 2D/3D graphics accelerator
- Integrated 350 MHz RAMDAC
- Provides VGA output connector
- Provides 32 bpp true color support for high resolution texture
- Provides new 3D features create real-life environment and character effects

Onboard IDE

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

4 USB

- USB 2.0 compliant, operates at 480Mbps, about 40X times faster than USB 1.1 which currently works at a snails pace of just 12Mbps
- 2 USB ports on back panel, 2 USB on board with optional cable.

Onboard I/O

- One floppy port supports one 3.5" or 5.25" floppy drive with 360K/720K/1.2M 1.44M/2.88M format
- One high speed 16550 compatible COM with 16 byte send/receive FIFO
- One parallel port supports SPP/EPP/ECP mode(optional)
- Supports PS/2 mouse and PS/2 keyboard
- Infrared interface(optional)
- Smart Card Reader Connector(SCR)(optional)
- All I/O ports can be enabled/disabled in the BIOS setup

Onboard LAN (Available on-L, -AL, -6AL series mainboard)

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

2-Channel Onboard Audio (Available on -A,-AL series mainboard)

- AC'97 2.2 Specification Compliant
- Support S/PDIF output(optional)
- Provides onboard Line-in Jack, Microphone-in Jack, Speaker-out Jack with onboard amplifier and MIDI/Joystick Connector

6-Channel Onboard Audio (Available on -6A,-6AL series mainboard)

- AC'97 2.2 Specification Compliant
- Support S/PDIF input/output(optional)
- Provides Front Left&Right, Rear Left&Right/Line in and Center&Woofer/Micro phone-in Jack, which can be specified by software

Onboard AGP

BA1/G, BA1/GE, BA1/PE mainboard

- Support both 1.5V AGP 4X interface and Intel AGP Digital Display(ADD) card

BA1, BA1/GV mainboard

- Only support Intel AGP Digital Display(ADD) card

BIOS

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

Advanced features

- PCI 2.2 Specification Compliant
- Provides Trend ChipAwayVirus On Guard
- Supports Windows 98/2000/ME/XP soft-off

Green function

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

Note: Our technology is subject to upgrade from time to time, the description and interface for Easy technology in this manual are only for your reference. Please download the latest BIOS or the utility from the website.

-- This page is intentionally left blank --

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.

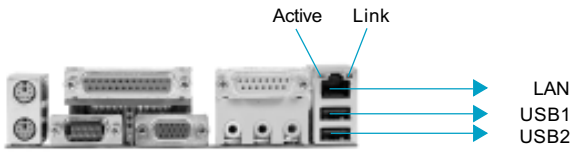
External Connectors

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 -L, -AL, -6AL series mainboard).

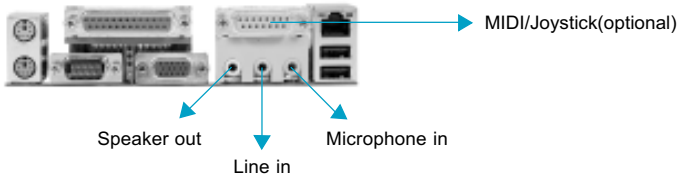


Parallel Port, Serial Port and VGA Output Connectors

The parallel port connector can be connected to a parallel device such as a printer. The serial port COM1 connectors can be connected to a serial port device such as a serial port mouse. The VGA output connector is for output to a VGA-compatible device. (VGA output connector is available on BA1, BA1/G, BA1/GE, BA1/GV)

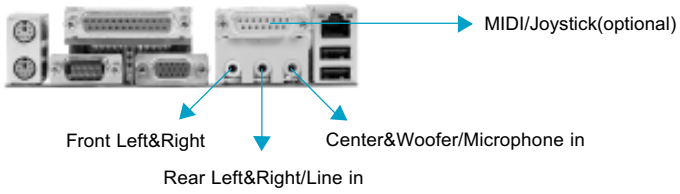
Line-in jack, Microphone-in jack, Speaker-out jack and MIDI/Joystick Connector (Available on -A, -AL series mainboard)

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.



6-Channel Audio(Available on -6A,-6AL series mainboard)

This mainboard utilizes ALC650 chip providing 6-channel Audio, which consists of Front Left, Front Right, Rear Left, Rear Right, Center and Woofer for a complete surround sound effect. The function of the Front Left&Right jack and the Rear Left&Right are same as the 4-Channel Audio, and the Center&Woofer jack can be connected to the center speaker and woofer. Microphone function is offered by F_AUDIO Connector on the mainboard now. If set 2-Channel Audio mode on -6A or -6AL mainboard, you can connect two speakers to the Front Left&Right jack, at the same time use the Rear Left&Right jack as Line in jack, and use the Center&Woofer jack as Microphone in jack.

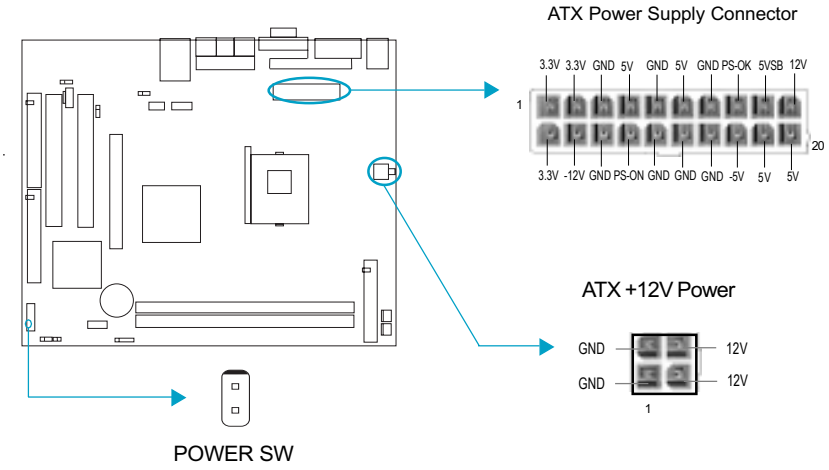


Be sure to unplug the AC power supply before adding or removing expansion cards or other system peripherals, otherwise your mainboard and expansion cards might be seriously damaged.

ATX12V Power Supply Connector & Power Switch (POWER SW)

The BA1 series mainboards prefer an ATX 12V power supply. Be sure to connect the ATX 12V power supply plug to this connector in its proper orientation. The BA1 series mainboards provide an unique design especially for those who still use ATX power supply(without +12V connector) as long as their ATX power supplies can provide enough current on +12V rail(at least 8 Amperes).System stability with an ATX power supply is not guaranteed and we are not responsible for any damage caused.

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.



Note

If you change "Soft-off by POWER BUTTON " from default "Instant-off" to "Delay 4 Sec" in the "POWER MANAGEMENT SETUP" section of the BIOS, the power switch should be pressed for morethan 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.

Power LED Connector (PWR_LED)

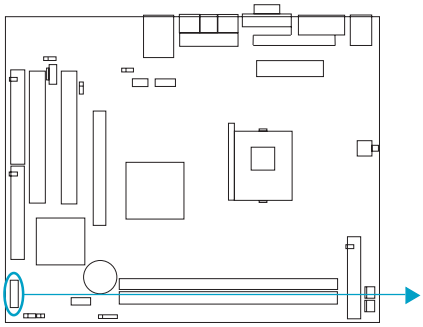
When the system is in S0 status, the LED is on. When the system is in S1 status, the LED is blink; When the system is in S4, S5 status, the LED is off. The connector has an orientation.

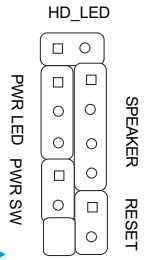
Speaker Connector (SPEAKER)

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

Reset Switch (RESET)

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

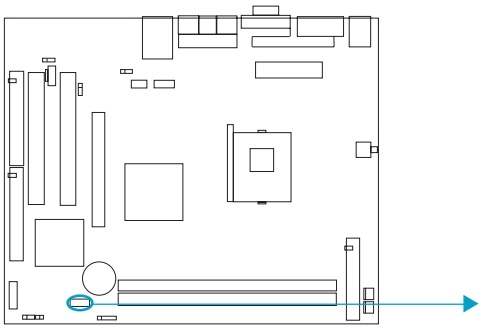


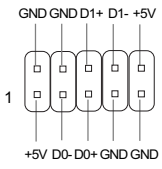


	HDD LED(+)	HDD LED(-)	
PWR LED	LED+	VCC	SPEAKER
	LED-	GND	
	LED-	NC	
PWR SW	GND	SPKDATA	
	POWER	RESET	RESET
	EMPTY	GND	

USB3,4 Connectors

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

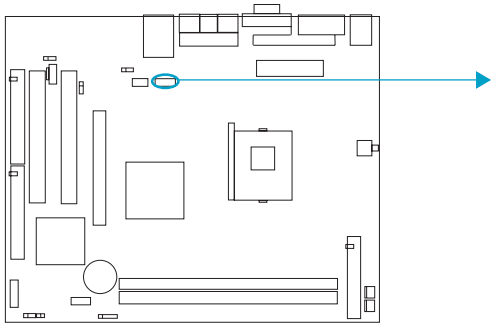


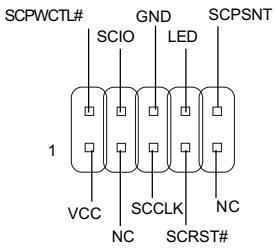


USB3,4

Smart Card Reader Connector(SCR)(Optional)

The SCR includes a standard UART to control Smart Card interface handshaking and then performs data transfers. The SCR can be used for a broad range of applications in GSM, ID, banking and so forth. It also provides a Smart Card clock divider for those ICC (Integrated Circuit Card) without internal clocks. If use this function, set “UART Mode Select” to SCR in the “INTEGRATED PERIPHERALS” section of the BIOS.

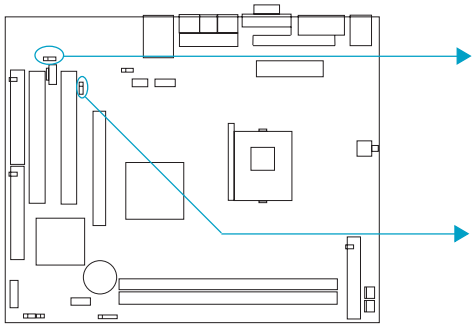


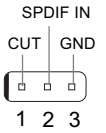


SCR

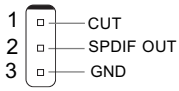
SPDIF Input/Output Connector(SPDIF_IN/_OUT)(Optional)

The SPDIF(Sony/Philips Digital Interface)input connector allow your digital audio input from digital audio devices and the output connector allow your digital audio output to the SPDIF_in on the external speaker.





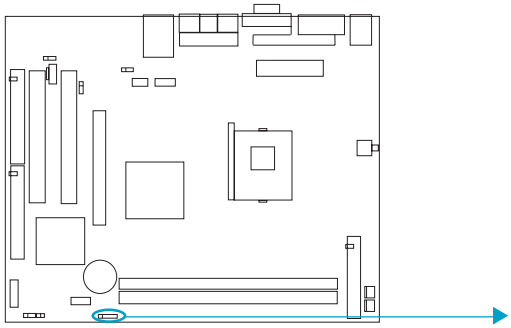
SPDIF Input



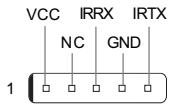
SPDIF Output

Infrared Header (IrDA)

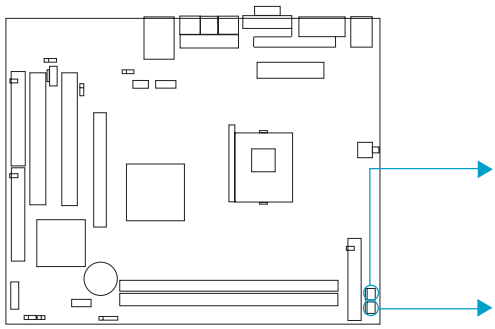
This connector supports wireless transmitting and receiving.

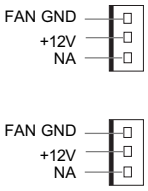


IrDA Connector



Fan Connectors (CPUFAN, SYSFAN)



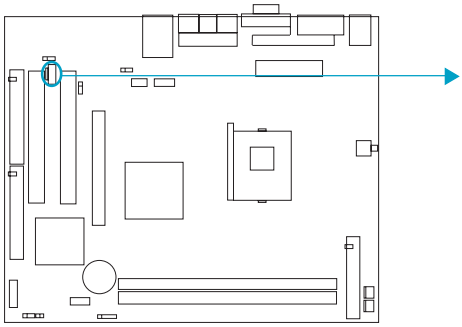


CPU_FAN

SYS_FAN

Audio Connectors (CD_IN)(Optional)

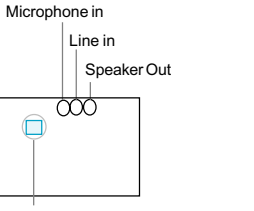
CD_IN is Sony standard CD audio connector, which can be connected to a CD-ROM drive through a CD audio cable.

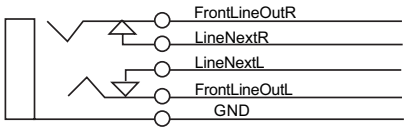


CD_IN

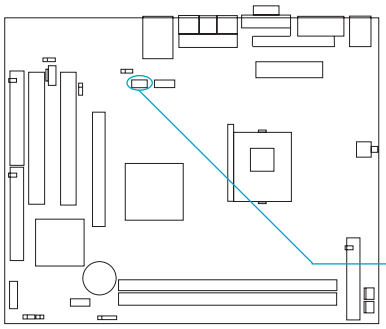
Audio Interface (F_AUDIO)(Optional)

The audio interface can provide 2 kinds of Audio output choices :the FrontAudio and the RearAudio. Their priority level is as sequence. when the FrontAudio is available, the RearAudio will be cut off. when the FrontAudio jack is inexistence, Pin3 and Pin4, Pin5 and Pin6 must be short connected.

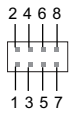




Front Audio jack



Pin No.	Symbol	Pin No.	Symbol
1	MIC	2	GND(MIC)
3	Front LINE Out(R)	4	LINE Next(R)
5	Front LINE Out(L)	6	LINE Next(L)
7	GND(FLO)	8	(Cut away)



F_AUDIO

Main Expansion Slots and Connectors

Slot/Port (Quantity)	Description
PCI(2)	PCI slots
AGP(1)(option)	AGP slot
IDE(2)	IDE ports
FLOPPY(1)	Floppy Drive port
DIMM(2)	DIMM sockets
USB(4)	USB connectors
COM(1)	COM connectors
PARALLEL(1)(option)	Parallel connector
VGA(1)(option)	VGA Output connector
IrDA(1)	IrDA connector
SPDIF(2)(option)	S/PDIF connector
SCR(1)(option)	SCR connector

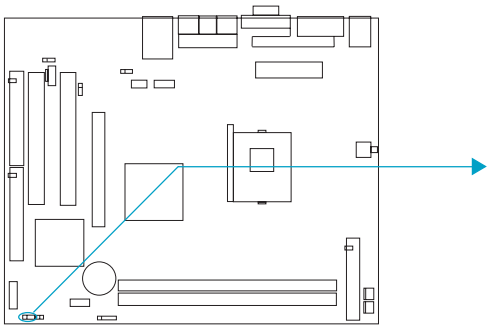
Jumper Settings

Jumpers are located on the mainboard, they represent, clear CMOS jumper CLR_CMOS, enable BIOS Protection function jumper BIOS_WP 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 (CLR_CMOS)

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



CLR_CMOS

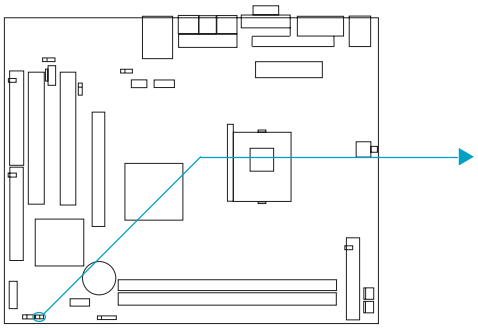
Normal status: (Default)

Clear CMOS:

(Unplug the AC power supply)

BIOS Protection Jumper (BIOS_WP)

The BIOS of the mainboard is inside the FWH. If the jumper BIOS_WP 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. Setting the jumper BIOS_WP as open(default), meanwhile disabling the “Flash Write Protect” item from “QDI Innovation Features” in AWARD BIOS CMOS Setup, allows you to flash the BIOS to the Flash ROM.



Flash Write Disabled

Flash Write Enabled
(Default)

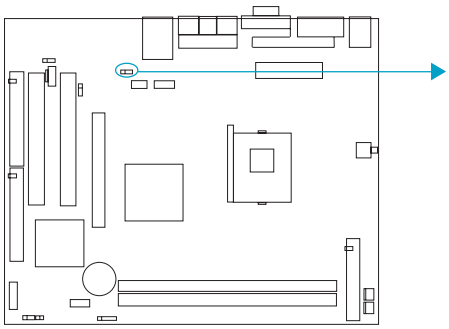
BIOS_WP

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.

Enable/Disable Onboard LAN(LAN_EN)

(Available on -L,-AL series mainboard)

You can enable or disable onboard LAN function through jumper LAN_EN. Please disable onboard LAN when using expansion ethernet card.



Enable onboard LAN
(Default)

Disable onboard LAN

LAN_EN

-- This page is intentionally left blank --

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 BIOS_WP 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>=8.18q) 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: 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(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 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.

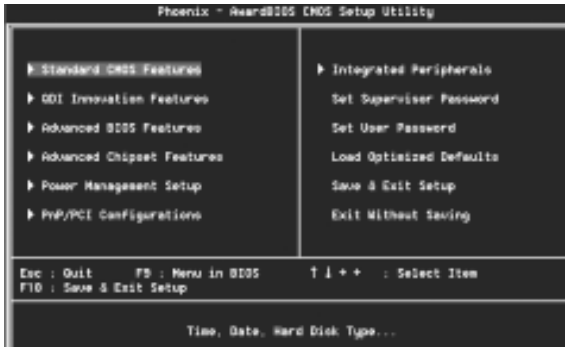


Figure-1 Main Menu

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 MastePrimary Slave/Secondary Master/Secondary Slave

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

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

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

CHS mode

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

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

LBA (Logical Block Addressing) mode

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

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

Large mode

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

BIOS tricks DOS (or other OS) into divising 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

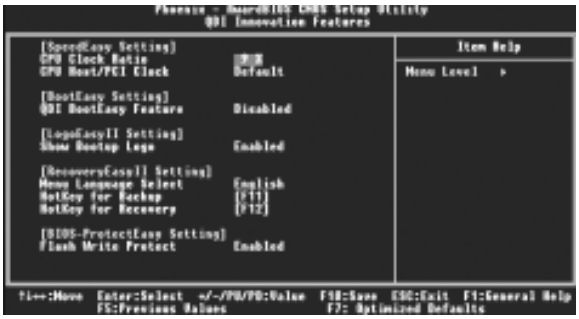


Figure-3 QDI Innovation features Menu

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

Item	Option	Description
[SpeedEasy setting]		
• CPU Clock Ratio	*x9~x50*	Select the multiplication of processor core frequency.
• CPU Host/PCI Clock	*Default* *100/33MHz* *166/33MHz*	Set CPU Host or PCI frequency.
[BootEasy setting]		
• QDI BootEasy feature	*Enabled* *Disabled*	PC boot in rapid speed, without any redundant feature waiting for the displaying of starting OS. PC boot in the legacy BIOS way.
[LogoEasyII setting]		
• Show Bootup Logo	*Enabled* *Disabled*	The logo will be shown automatically when system boots up, otherwise, no logo appears on the screen.

[RecoveryEasyII setting]		
• Menu language Select	*English* *Chinese*	Select RecoveryEasyII Interface Menu language
• Hotkey for Backup/Recovery	*Null* *F2~F12*	Backup/Recovery interface can not be used by Pressing Hotkey. Select Hotkey to enter Backup/Recovery interface during POST.
[BIOS-protectEasy setting]		
• Flash Write Protect	*Enabled* *Disabled*	This option is for protecting the system BIOS, when enabled, writing to BIOS area is to be discarded.

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.

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

Item	Option	Description
• Gate A20 Option	*Normal*	The A20 signal is controlled by the keyboard controller.
	Fast	The A20 signal is controlled by Port92.
• Typematic Rate Setting	*Enabled*	Keystrokes repeat at a rate determined by the keyboard controller - when enabled, the typematic ate and typematic delay can be selected.
	Disabled	
• Typematic Rate (chars/sec)	*6-30*	The rate at which character repeats when you hold down a key.
• Typematic Delay (Msec)	*250-1000*	The delay before keystrokes begin to repeat.
• Security Option	*Setup*	Select whether the password is required every time the system boot or only when you enter setup.
	System	
• OS Select For DRAM>64MB	*Non-OS2*	Select OS2 only if you are running OS/2 operating system with more than 64MB of RAM.
	OS2	
• HDD S.M.A.R.T. Capability	*Enabled*	Enable hard disk S.M.A.R.T. support.
	Disabled	Invalidate this feature.
• Report NO FDD for WIN 95	*Yes*	Report NO Floppy Disk Drive for WIN 95 to release IRQ6.
	No	Do not report No Floppy Disk Drive for WIN 95.

Advanced Chipset Features Setup

Figure-5 Advanced Chipset Features Menu

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

Item	Option	Description
• DRAM Timing Selectable	*Manual* *By SPD*	DRAM timing is defined by user. DRAM timing is defined by SPD.
• CAS Latency Time	*1.5~3*	Set CAS latency time.
• Active to Precharge Delay	*5,6,7*	Set precharge delay time.
• DRAM RAS# to CAS# Delay	*2,3*	Set DRAM RAS# to CAS# delay 3 SCLKs or 2 SCLKs.
• DRAM RAS# Precharge	*2,3*	Set DRAM RAS# precharge as 3 or 2.
• Memory Frequency For	*Auto* *DDR200* *DDR266* *DDR333*	Set Memory Frequency. Set Memory Frequency as 333MHz(BA1, BA1/G and BA1/GV can not support DDR333)
• System BIOS Cacheable	*Enabled* *Disabled*	Besides conventional memory, the system BIOS area is also cacheable. System BIOS area is not cacheable.

Item	Option	Description
• Video BIOS Cacheable	*Enabled*	Besides conventional memory, video BIOS area is also cacheabl
	Disabled	Video BIOS area is not cacheable.
• Memory hole at 15M-16M	*Enabled*	Memory hole at 15-16M is reserved for expanded ISA card.
	Disabled	Do not set this memory hole.
• Delayed Transaction	*Enabled*	Enable Delayed Transaction.
	Disabled	Disable Delayed Transaction.
• Delay Prior to thermal	*4/8/16Min 32Min*	Setting time for CPU automatically enters thermal mode.
• AGP Aperture Size(MB)	*4/8/16/32 64/128/256*	Set the effective size of the Graphics Aperture to be used in the particular GART Configuration(It is not available when onboard VGA used).
• On-chip VGA	*Enabled*	Enable onboard VGA.
	Disabled	Disable onboard VGA(It is not available when external graphics card used).
• On-chip Frame Buffer size	*8MB 1MB*	Set On-chip Frame Buffer as 8MB or 1MB.(It is not available when external graphics card used).
• Auto Detect PCI Clk	*Enabled*	Close empty PCI clock to reduce EMI.
	Disabled	Do not close empty PCI clock.
• Spread Spectrum	*+/-0.25% … +/-0.38%*	Enable Clock Spread Spectrum to reduce EMI.
	Disabled	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	*Enabled* *Disabled*	Enable ACPI function. Disable this function.
• Power Management	*User Define* *Min Saving* *Max Saving*	Users can configure their own Power Management Timer. Pre - defined timer values are used. All timers are in their MAX values. Pre - defined timer values are used. All timers are in their MIN values.
• Video Off Method	*Blank Screen* *V / H SYNC + Blank* *DPMS*	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. **Note: When the green monitor does not detect the V/H-SYNC signals, the electron gun will be turned off.**
• Video Off In Suspend	*Yes* *No*	The system will disable video when entering suspend mode. Do not turn off video when entering suspend mode.

Item	Option	Description
• Suspend Type	*Stop Grant* *PwrOn Suspend*	Select the Suspend type.
• MODEM Use IRQ	*3,4,5,7,9, 10,11* *NA*	Special Wake-up event for Modem. This function is not applied.
• Suspend Mode	*Disabled* *1Min ~ 1Hour*	The system never enter Suspend mode by timer. Define 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	*Disabled* *1 - 15 Min*	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	*Instant-Off* *Delay 4 sec*	The system will immediately power off once the power button is pressed. The system will power off when power button is pressed for 4 seconds.
• Wake-Up by PCI card	*Enabled* *Disabled*	Allow the system to be waked up by PCI card. Do not allow the system to be powered on by PCI card.
• Resume by Alarm	*Enabled* *Disabled*	RTC alarm can be used to generate a wake-up event to power up the system. RTC has no alarm function.
** Reload Global Timer Events **		
• Primary IDE 0/1, Secondary IDE 0/1	*Enabled* *Disabled*	Reload global timer, when there's an IDE event. Do not reload global timer.
• FDD,COM,LPT Port	*Enabled* *Disabled*	Reload global timer, when there's a FDD/COM/ LPT event. Do not reload global timer.
• PCI PIRQ[A - D]#	*Enabled* *Disabled*	Reload global timer, when there's a PCI event. 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.

Item	Option	Description
• Reset Configuration Data	*Enabled*	Default setting is Disabled. Select Enabled to reset Extended System Configuration Data ESCD when you exit Setup, if you have installed a new add-on and the system reconfiguration has caused serious conflicts preventing the OS from booting.
	Disabled	Disable the configuration data function.
• Resources Controlled By	*Auto(ESCD)*	BIOS can automatically configure all boot and Plug and Play compatible devices. If you choose Auto, you cannot select IRQ DMA and memory base address fields, because BIOS automatically assigns them.
	Manual	
• PCI/VGA Palette Snoop	*Disabled*	Default setting.
	Enabled	Non-standard VGA cards such as graphics accelerators or MPEG video cards may not show colors properly. Enabling this item can solve this problem.

Integrated Peripherals

Figure-8 Integrated Peripherals Menu

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

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

Item	Option	Description
• Init Display First	*PCI Slot* *Onboard/AGP*	Initialize the PCI VGA first. Initialize the AGP first.
• IDE HDD Block Mode	*Enabled* *Disabled*	Allow IDE HDD to read/write several sectors once. IDE HDD only reads/writes a sector once.
• KBC input clock	*8/12 MHz*	Set the PS/2 Keyboard input clock as 8/12 MHz.
• Onboard FDC Controller	*Enabled* *Disabled*	Onboard floppy disk controller is enabled. Onboard floppy disk controller is disabled.
• Onboard Serial Port 1/2	*3F8/IRQ4* *2F8/IRQ3* *3E8/IRQ4* *2E8/IRQ3* *Auto* *Disabled*	Define the onboard serial port address and required interrupt number. Onboard serial port address and IRQ are automatically assigned. Onboard serial port is disabled.
• UART Mode Select	*IrDA* *ASKIR*	Set UART mode.
• UR2 Duplex Mode	*Half* *Full*	Default is recommended.
• Onboard Parallel Port	*378/IRQ7* *278/IRQ5* *3BC/IRQ7* *Disabled*	Define parallel port address and IRQ channel. Onboard parallel port is disabled.
• Parallel Port Mode	*SPP* *EPP* *ECP* *ECP+EPP*	Define the parallel port mode.
• ECP Mode Use DMA	*3* *1*	Set ECP Mode Use DMA 1 or 3.

Item	Option	Description
• PWRON After PWR-Fail	*off, on* *Former-Sts*	The system remains OFF/ON/Former state when the AC power supply resumes.
• Game Port Address	*Disabled* *201,209*	This option is used to configure Game Port Address.
• Midi Port Address	*Disabled* *300* *330*	This option is used to configure Midi Port Address.
• Midi Port IRQ	*5* *10*	This option is used to configure Midi Port *IRQ.*

Password Setting

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

ENTER PASSWORD

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

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

PASSWORD DISABLED

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

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

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

Boot with BIOS defaults

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

Appendix

QDI Utility CD

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

1. Driver Install

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

A. Chipset software
B. USB2.0 Driver
C. Audio Driver(optional)
D. VGA Driver(optional)
E. Network Driver(optional)
F. DirectX (optional)

2. Accessory

A. Norton AntiVirus 2002
B. QFlashV1.0

3. Browse CD

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

The files included in **Utility** are:

A. Awdflash.exe
B. Cblogo.exe
C. Lf.exe

The files included in **Documents** are:

A. Adobe Acrobat Reader V5.0

Norton AntiVirus

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

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

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

LogoEasy II

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

LOGOEASY II supports the high-resolution 640x480 or 800x600 image display and full-screen, top right corner or bottom right corner display. It also supports simultaneous display of logo and sign-on message of the BIOS testing system. LOGOEASY II is a tool that can be operated in multi-platforms to refresh and change LOGO graphics including DOS, 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	LogoEas
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.

SpeedEasy

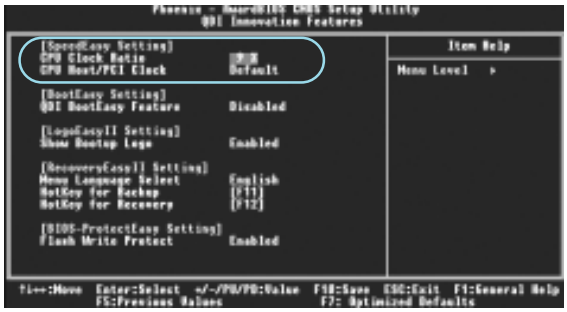
Procedures:

1. Correctly insert the your CPU.
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 “QDI Innovation features” menu to set up the CPU speed.
5. Set CPU Clock ratio and CPU Host Frequency .
6. Save and exit BIOS Setup, your system will now boot successfully.

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 “QDI Innovation features” menu screen.

CPU SpeedEasy Setup Menu

select <QDI Innovation features> item from the main menu and enter the sub-menu:



QDI Innovation features Menu

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

RecoveryEasy II(optional)

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 un-precedented 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 .

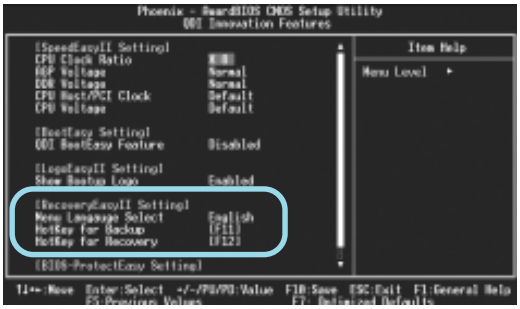


figure-1 QDI Innovation Features

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.

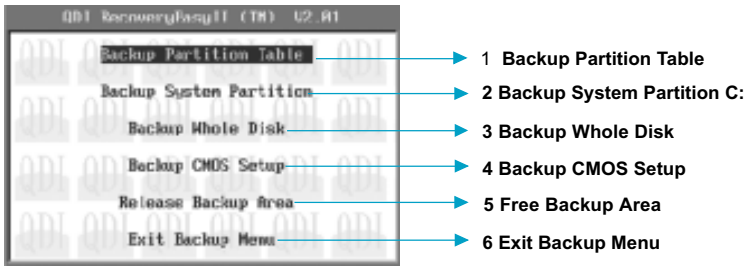


figure-3 Backup Interface

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 (actived 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.

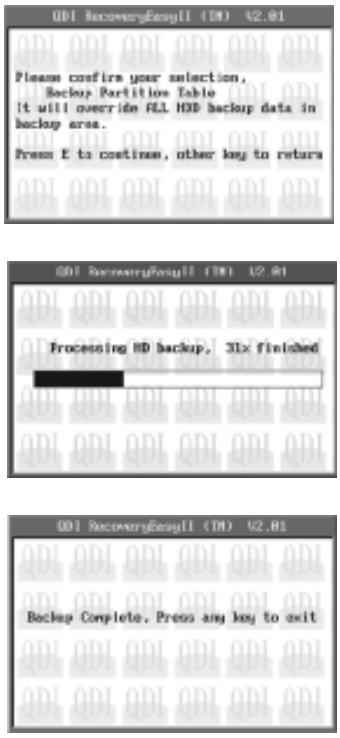


figure-4 Backup process

Recovery Function Introduction

Press Recovery Hotkey to enter Recovery Interface duringthe 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.

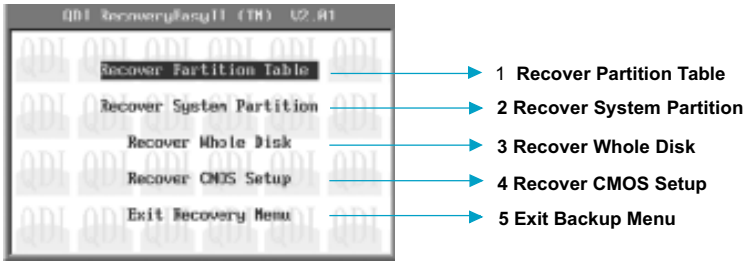


figure-5 Recover Interface

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(optional)

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.

Note:

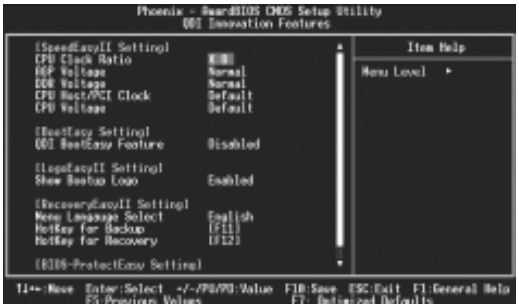
1. Under the following conditions, PC will boot-up in normal way.
   (1) PC boot-up for the first times after set option as Enabled.
   (2) the system information saved by BIOS was damaged.
   (3) PC fail to boot-up continually over three times.
   Setting the jumper JAV as open if you encounter the above conditions.

2. Don't power off or reset system while BootEasy initializing.

3. 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 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 Warterei 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 QDI BA1(Spanish)

1. Asegúrese que se incluyen los siguientes artículos: Placa base QDI BA1, 1 cable de datos para el puerto IDE y 1 cable de datos para el Floppy, jumpers, 1 manual de usuario QDI BA1y un disco compacto con los controladores de la placa base QDI BA1.

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 QDI BA1 en el capítulo 2).

5. Inserte el procesador en el socket y conecte el ventilador del procesador en el conector de su placa base QDI BA1 marcado como “CPUFAN”.

6. Inserte los módulos de memoria en los bancos de memoria DIMM de su placa base QDI BA1.

7. Inserte las tarjetas PCI y/o la tarjeta ISA y AGP en las bahías de expansión de su placa base QDI BA1.

8. Conecte los periféricos internos IDE y las disqueteras mediante los cables de datos específicos a su placa base QDI BA1. 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 QDI BA1, 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 QDI Superb4).

10. 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 QDI Superb4 (consulte el apartado “External Connectors” en el manual de su placa base QDI Superb4, en el capítulo 2).
11. Cuando haya finalizado de realizar todas las conexiones, conecte el cable de alimentación a la fuente de alimentación y encienda su PC:

Instalación del sistema:

1. Encienda su equipo mediante el interuptor 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 QDI Superb4). 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 QDI esta incluido en el paquete de la placa base QDI Superb4.

1. Instalación de los controladores

Usted puede instalar todos los controladores para su placa base facilmente. 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 instalacción de los controladores.

A. Chipset software
B. Network Driver (Opcional)
C. Audio Driver (Opcional)
D. VGA Driver (Opcional)
E. DirectX(Opcional)
F. USB2.0(Opcional)

2. Accessorios

A. QFlash
B. Norton AntiVirus

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. Cblogo.exe
C. Lf.exe

Manuel d'installation des cartes mères de la série QDI BA1 (French)

Intégration du système :

1. Vérifier la présence de chaque élément dans la boite de la carte mère de la série QDI BA1 :

   - ☑ Une carte mère de la série QDI BA1.
   - ☑ Un CD-ROM d'installation QDI.
   - ☑ Un manuel d'utilisation de la carte mère QDI BA1.
   - ☑ 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 (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 QDI BA1 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 QDI BA1 lors de son achat.

5. Connecter le processeur dans le socket intégré à la carte mère de la série QDI BA1 et prévus 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 QDI BA1 et prévus à cet effet.
6. Connecter les éventuelles barrettes de mémoire dans les slots intégrés à la carte mère de la série QDI BA1 et prévus à cet effet.
7. Connecter les éventuelles cartes d'extension au format AGP, ISA ou PCI dans les slots intégrés à la carte mère de la série QDI BA1 et prévus à cet effet
8. Connecter les éventuels périphériques IDE ainsi que le lecteur de disquette à la carte mère de la série QDI BA1 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 QDI BA1 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 QDI BA1 lors de son achat.
10. Raccorder les périphériques externes sur les connecteurs de fond de panier intégrés à la carte mère de la série QDI BA1. 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 QDI BA1 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 QDI BA1 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 QDI BA1.

Lors de son achat un CD-ROM d'installation QDI est livré avec la carte mère de la série QDI BA1.

1. Driver Install :

Avec cette option, il est possible d'installer les pilotes de la carte mère de la série QDI BA1 aisément. Il est important d'installer les pilotes en respectant l'ordre prédéfinit et de redémarrer le système après avoir effectué l'installation de tous les pilotes.

Applications contenues dans le dossier :

A. Pilotes du chipset intégré.
B. Pilote de la fonction réseau intégrée.

D. Pilote VGA.
E. Microsoft DirectX.
F. Pilote USB2.0

2. Accessory :

Applications contenues dans le dossier :

A. Qflash.
B. Symantec 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 QDI

Applications contenues dans le dossier :

A. Awdflash.exe.
B. Cblogo.exe.
C. Lf.exe.

QDI BA1 installazione mainboard (Italian)

1. Assicurarsi che la scatola sia completa: QDI BA1mainboard, cavo IDE e Floppy, jumpers, manuale dell'utente della mainboard QDI BA1 e cd-rom drivers.
2. Controllare che il cavo alimentazione proveniente dal computer-case sia sconnesso assicurarsi inolre di aver indossato corretamente 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 abbilitatore/disabbilitatore in BIOS della funzione protectEasy; per tutti i jumper il PIN 1 e' contrassegnato da un spessa linea bianca (consultare il manuale al capitolo 2 " JUMPER AND SETTINGS")
5. Inserire il processore nell'apposito slot ; la ventola del processore deve essre 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 connetori marcati. Assicurarsi che l'orientamento del cavo sia corretto. (La linea rossa sul cavo deve essere inserita nellapposito connettore in corispondezza del pin 1)
9. Conettere la mainboard con: il cavo di alimentazione proveniente dall'alimentatore, il connettore dell'interuttore di stand by, il conettore del led di segnalazione "acceso", il connettore led di funzionalita' HARD DISK, il connettore dello spekear 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 acceso l'interuttore di ACCESO
2. Usare il tasto DEL per entrare nel 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 funzionalita'). Per maggiori informazioni controllare il capitolo 3, sezione "BIOS DESCRIPITION". 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 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 succesione, finito cio' bisogna far ripartire il personal computer.

A. Chipset software
B. Network Driver (Optional)
C. Audio Driver (Optional)
D. VGA Driver(Optional)
E. DirectX(Optional)
F. USB2.0 Driver

A. Qflash
B. Norton AntiVirus

Guardando il CD

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

A. Awdflash.exe
B. Cblogo.exe
C. Lf.exe

Appendix:

Using 4- or 6-Channel Audio

The motherboard is equipped with Realtek ALC650 chip, which provides support for 6-channel audio output, including 2 Front, 2 Rear, 1 Center and 1 Subwoofer channel. ALC650 allows the board to attach 4 or 6 speakers for better surround sound effect. The section will tell you how to install and use 4-/6-channel audio function on the board.

TOPICS:

- Installing the Audio Driver
- Using 4-/6-Channel Audio Function
- Testing the Connected Speakers
- Playing KaraOK

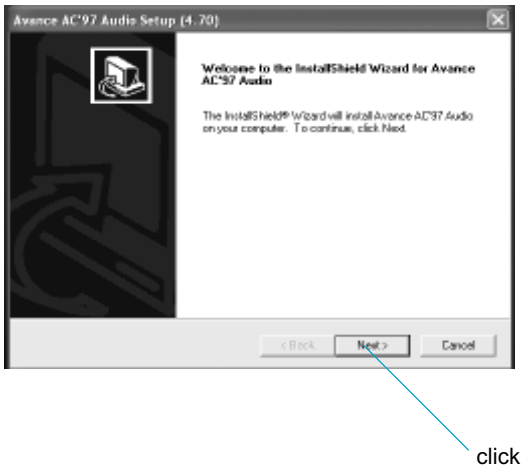
Installing the Audio Driver

You need to install the driver for Realtek ALC650 chip to function prop-erly before you can get access to 4-/6-channel audio operations. Follow the procedures described below to install the drivers for different operating systems.

Installation for Windows 98SE/ME/2000/XP

The following illustrations are based on Windows ® XP environment and could look slightly different if you install the drivers in different operating systems.

1. *Insert the companion CD into the CD-ROM drive. The setup screen will automatically appear.*
2. *Select the Sound Driver.*
3. *Click **Next** to start installing files into the system.*



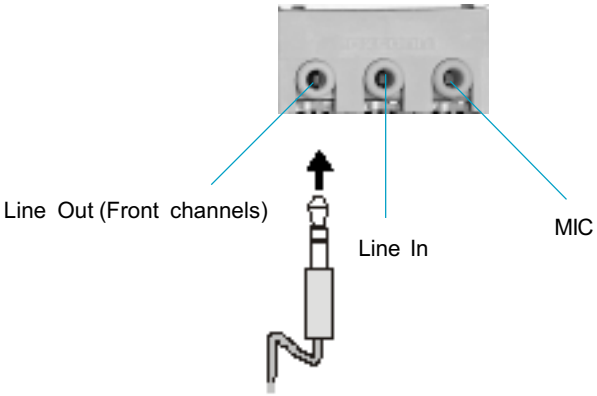
*4. Click **Finish** to restart the system.*

Attaching speakers

To perform multichannel audio operation, connect multiple speakers to the system. You should connect the same number of speakers as the audio channels you will select in the software utility.

2-Channel Analog Audio Output

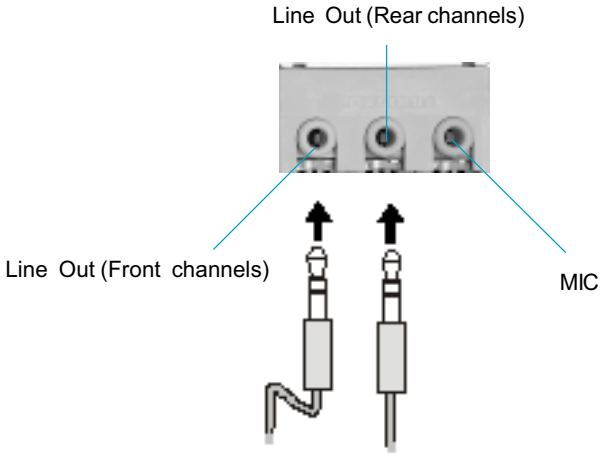
The audio connectors on the back panel already provide 2-channel analog audio output function. The back panel's audio connectors can be transformed to 4-/6-channel analog audio connectors automatically when you select correct setting in the software utility. For information about the setting, refer to Selecting 4- or 6-Channel Setting later in the section. Make sure all speakers are connected to Line Out connectors. Diverse connector configurations for 2-, 4- and 6-channel using back panel connectors are described below:



Description:

Line Out, Line In and MIC functions all exist under 2-channel configuration.

4-Channel Analog Audio Output



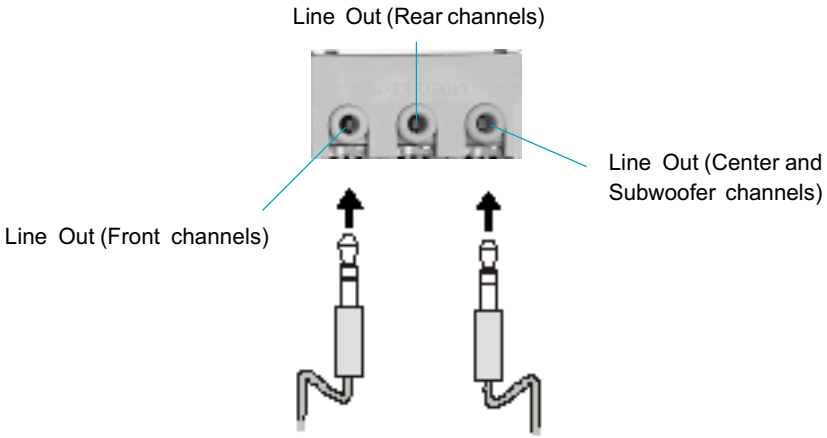
Description:

Line In is converted to Line Out function under 4-channel configuration.

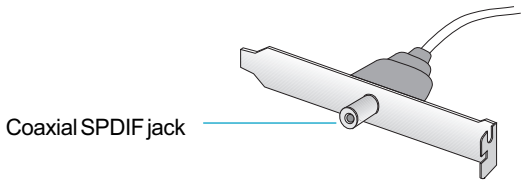
6-Channel Analog Audio Output

Description:

Both Line In and MIC are converted to Line Out function under 6-channel configuration.



Digital Audio Output

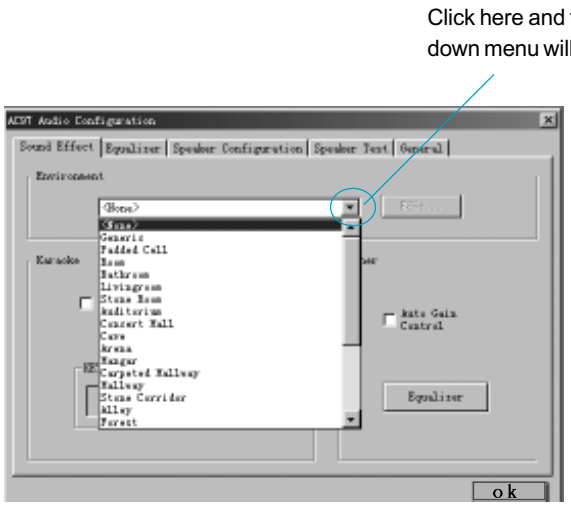


Description:

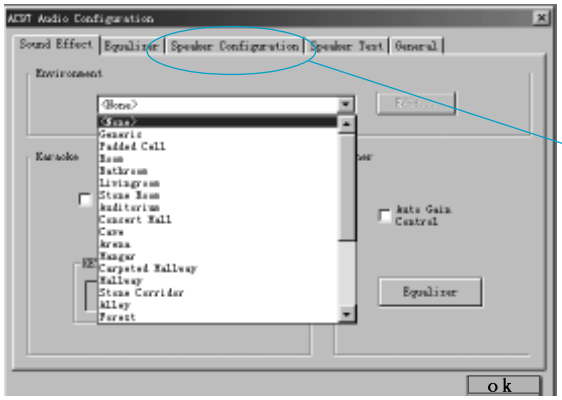
Connnet the SPDIF speakers to the Coaxial SPDIF jack.

Selecting 4- or 6-Channel Setting

1. *Click the audio icon*  *from the window tray at the bottom of the screen.*
2. *Select any surround sound effect you prefer from the "Environment" pull-down menu under the* ***Sound Effect*** *tab.*



3. Click the ***Speaker Configuration*** tab.



4. The following window appears.

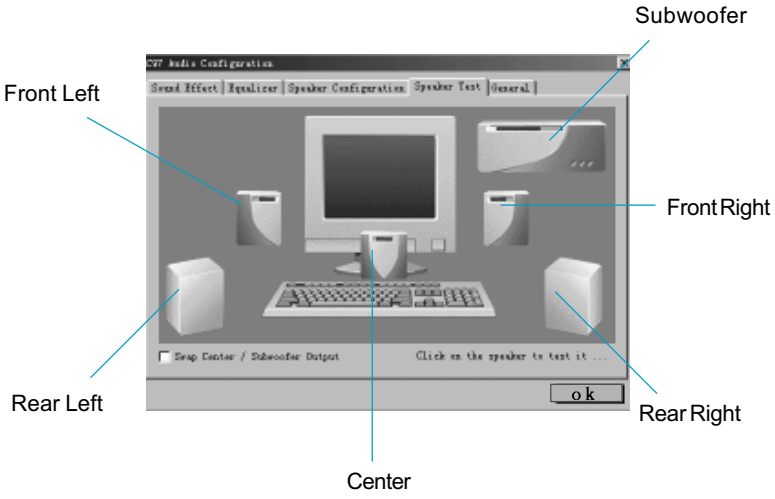
5. Select the multi-channel operation you prefer from ***No. of Speakers.***
6. Click ***OK***

Testing the Connected Speakers

To ensure 4- or 6-channel audio operation works properly, you may need to test each connected speaker to make sure every speaker work properly. If any speaker fails to sound, then check whether the cable is inserted firmly to the connector or replace the bad speakers with good ones.

Testing Each Speaker

1. *Click the audio icon*  *from the window tray at the bottom of the screen.*
2. *Click the* ***Speaker Test*** *tab.*
3. *The following window appears.*



4. *Select the speaker which you want to test by clicking on it.*

Playing KaraOK

The KaraOK function will automatically remove human voice (lyrics) and leave melody for you to sing the song. **The function is applied only for 2-channel audio operation,** so make sure “2 channels mode” is selected in the “No. of Speakers” column before playing KaraOK.

Playing KaraOK

1. *Click the audio icon*  *from the window tray at the bottom of the screen.*
2. *Make sure the* ***Sound Effect*** *tab is selected.*
3. *Select* ***Voice Cancellation*** *in the “KaraOK” column.*

Click this

4. *Click* ***OK****.*

Board Layout of
BA1

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