Memory Configuration

This mainboard provides three168 pin 3.3V PC133 un-buffered DIMM sockets to support a flexible memory size ranging from 32MB up to 512MB for SDRAM. PC100/PC133MHz SDRAM with SPD are supported, the following set of rules allows optimum configurations.

● Possible SDRAM DIMM memory sizes are 32MB, 64MB, 128MB, 256MB, 512MB in each DIMM socket, but the total memory size cannot be over 512MB.

● Processor with 66MHz FSB should be paired with PC100, PC133 SDRAM processor with 100MHz FSB should be paired with either PC100 or PC133 SDRAM, processor with 133MHz FSB should be paired only with PC133 SDRAM.

● Supports Suspend to RAM.

Installation of All Drivers (EASY!)

A QDI Driver CD 2000 is supplied with this mainboard, all drivers can be installed from this CD-ROM. Before installing the drivers, check the system requirements such as the enough system memory (at least 32MB for Windows 95/98 system or 64MB for Windows 2000 system) and enough disk space. Windows 95 or Windows 98 must be fully installed and running on the system. All running applications should be closed before installing these drivers.

Features of this CD-ROM:

- DemoShield Software
Utilizing DemoShield software to develop it, providing you a very new, easier-to-use and more intuitive user interface.

- Point-and-Click
when using this CD-ROM, just point to the option you required and click it, then the driver or the software that you need will be automatically installed.

- Intelligently Recognition
Automatically recognizing the hardware, then installing the necessary drivers for your onboard components to work properly.

Please refer to page 38 to get more detailed information of the contents contained in this CD-ROM.

PC-cillin 98

New viruses are appearing frequently; the chance of your PC being infected increases; antivirus softwares are becoming a must. PC-cillin 98 offers you full-time active virus protection as well as manual scans, plus virus clean capability. Keeping up to date on the latest threats and updating significant files are crucial in keeping antivirus software effective. PC-cillin 98 provides Free Virus Pattern File Updates from the Trend Micro Website: http://www.trend.com/download/pattern.htm or http://www.antivirus.com/download/pattern.htm.

QDI ManageEasy

It is well known that guaranteeing the computer's security and reliability is essential. Especially today, effectively managing and monitoring the computer's hardware is even more important; because processing and exchanging critical data through computer and network are happening everyday. Moving with the computer's development, the system of the computer will become more and more complex; at the same time, the control of computer's hardware will be strengthened. Today, it is possible to monitor and manage your complex hardware from Windows 9X and Windows NT. QDI ManageEasy is a system tool, like a bridge between the complex hardware and OS, used to access hardware status and to execute some control functions. It supports stronger functions for Windows 9X and Windows NT. These functions enables you to view more than one hundred of the basic information about your computer and monitor some key reference data about computer health in real time. QDI ManageEasy also helps you to use remote access and control computers in your local area network. With QDI ManageEasy, you can improve your management level.

Additional Information

When you change a new CPU, whose bus ratio has not been locked, and is lower than that of the previous one, be sure to clear CMOS once before boot up, otherwise the previous CPU's higher bus ratio saved in CMOS will still take effect, and the new CPU may not work at that high speed.

--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 JAV as open and disable the "Flash Write Protect" item in AWARD BIOS CMOS Setup first (refer to page 16 and page 28).

Follow the steps exactly for a successful upgrade.

1. Create a bootable system floppy diskette by typing Format A:/s from the DOS prompt under DOS6.xx or Windows 9x environment.

2. Copy AWDFLASH.EXE (version>7.07) from the directory \Utility located on QDI Mainboard Utility CD onto your new bootable diskette.

3. Download the updated BIOS file from the Website (http://www.qdigrp.com). Please be sure to download the suitable BIOS file for your mainboard.

4. Decompress the file downloaded, copy the BIOS file (xx.bin) onto the bootable diskette, and note the checksum of this BIOS which is located in readme file.

5. Reboot the system from the bootable diskette created.

6. Then run the AWDFLASH utility at the **A:** prompt as shown below:

   A:\AWDFLASH xxxx.bin

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

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

Note: AWDFLASH.EXE (version>7.07) utility must be used to upgrade the SynactiX 1 mainboard BIOS instead of QDI flash utility.

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

Press <Del> to enter SETUP

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

Figure-1 Main Menu

Load Optimized Defaults

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

Standard CMOS Features Setup

The basic CMOS settings included in "Standard CMOS Features" are Date, Time, Hard Disk Drive Types, Floppy Disk Drive Types, and VGA etc. Use the arrow keys to highlight the item, then use the <PgUp> or <PgDn> keys to select the value desired in each item.
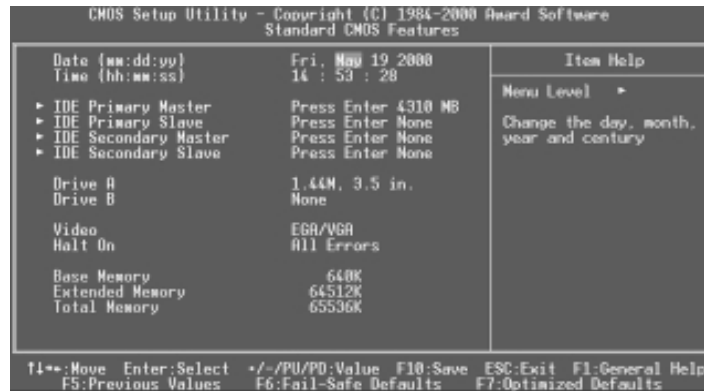
Figure-2   Standard CMOS Setup Menu

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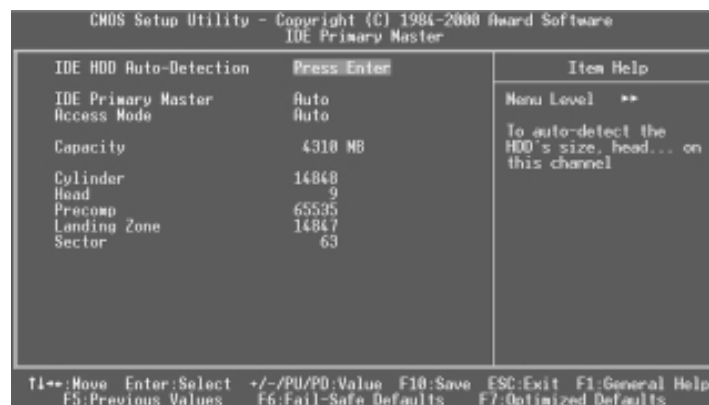

Figure-2-1   IDE Primary Master Setup Menu

Hard Disk

Primary Master/Primary Slave/Secondary Master/Secondary Slave

These categories identify the HDD types of 2 IDE channels installed in the computer system. There are three choices provided for the Enhanced IDE BIOS: None, Auto, and User. 'None' means no HDD is installed or set; 'Auto' means the system can auto-detect the hard disk when booting up; by choosing 'user', 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.

NORMAL

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 NORMAL 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.
Other Memory	This is the memory that can be used for different applications. Shadow RAM is most used in this area.
Total Memory	Total memory of the system equals the sum of the above memory.

CPU SpeedEasy Setup

Figure-3   CPU SpeedEasy Setup Menu

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

Item	Option	Description
● CPU Ratio	*x3,* *x3.5,* *.* *.* *.* *x8*	Selects the multiplication of processor core frequency if a Ratio locked processor installed, this item will be hidden. This item is only for users who understand all the CPU parameters, i.e. system bus frequency, "66MHz" and multiplication of processor core frequency for system bus frequency "x3, x3.5, x4, x4.5, x5, x5.5, x6, x6.5, x7, x7.5, x8". Selects the CPU speed according to your CPU brand and type.
● Host Clock /Sprd Spec /PC133	*Default* *66Mhz/0.60%/No* *68Mhz/Off/No* *.* *.* *100Mhz/0.60%/No* *.* *.* *166Mhz/Off/No*	Sets the bus frequency/Spread Spectrum/PC133 support.
● Close Empty DIMM/PCI Clk	*Enabled* *Disabled*	Close empty DIMM or PCI clock to reduce EMI. Does not close empty DIMM or PCI clock.

Warning: Be sure your selection is right. CPU over speed will be dangerous!

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
● ChipAwayVirus On Guard	Enabled	Guards against boot virus threats early in the boot cycle, before they have a chance to load into your system, ensuring your computer boots to a clean operating system.
	Disabled	Disables this function.
● CPU Internal Cache	Enabled	Enabling this option speeds up memory access.
	Disabled	However, it depends on CPU/chipset design.
● External Cache	Enabled	Enables external L2 cache. This allows better p erformance.
	Disabled	Disables external cache.
● CPU L2 Cache ECC Checking	Enabled	Enables CPU L2 Cache ECC (Error Checking and Correction) function.
	Disabled	Disables CPU L2 Cache ECC function.
● Processor Number Feature	Enabled	When Pentium III CPU is installed, the serial number is readable.
	Disabled	The serial number is unreadable.
● Quick Power On Self Test	Enabled	Allows 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, LS/ZIP, HDD-0, HDD-1, HDD-2, HDD-3, SCSI, CDROM, LAN.

● Swap Floppy Drive	*Enabled* *Disabled*	If the system has two floppy drives, choose enable to assign physical drive B to logical drive A and vice-versa.
● Boot Up Floppy Seek	*Enabled* *Disabled*	Tests floppy drives to determine whether they have 40 or 80 tracks.
● Boot Up NumLock Status	*On* *Off*	Selects power on state for NumLock.
● Gate A20 Option	*Normal* *Fast*	Lets chipset control GateA20 and Normal - a pin in the keyboard controller controls GateA20. Default is Fast.
● Typermatic Rate Setting	*Enabled* *Disabled*	Keystrokes repeat at a rate determined by the keyboard controller - when enabled, the typematic rate and typematic delay can be selected.
● Typermatic Rate (chars/sec)	*6-30*	The rate at which character repeats when you hold down a key.
● Typermatic Delay (Msec)	*250-1000*	The delay before keystrokes begin to repeat.
● Security Option	*Setup* *System*	Selects whether the password is required every time the system boots or only when you enter setup.
● OS Select For DRAM>64MB	*Non-OS2* *OS2*	Selects OS2 only if you are running OS/2 operating system with more than 64MB of RAM.
● HDD S.M.A.R.T. Capability	*Disabled* *Enabled*	Enables hard disk S.M.A.R.T. support. Invalidates this feature.
● Report NO FDD for WIN 95	*Yes* *No*	Reports NO Floppy Disk Drive for WIN 95 to release IRQ6. Does not report No Floppy Disk Drive for WIN 95.
● Flash Write Protect	*Enabled* *Disabled*	This option is for protecting the system BIOS, when enabled, writing to BIOS area is to be discarded.
● Show Bootup Logo	*Enabled* *Disabled*	The logo will be shown automatically when system boots up, otherwise, no logo appears on the screen.

Advanced Chipset Features Setup

Figure-5 Advanced Chipset Features Menu

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

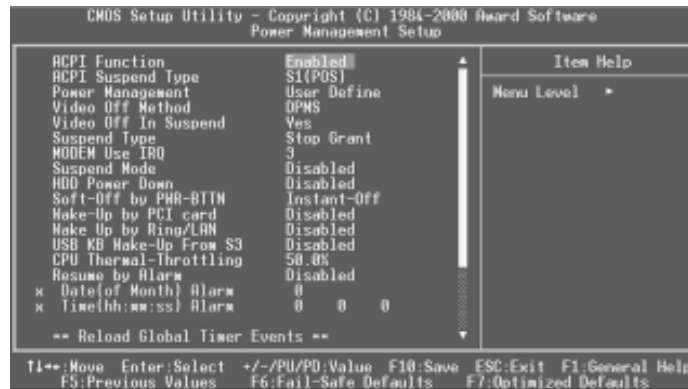| Item	Option	Description
● SDRAM CAS Latency Time	3 / 2	Contains the information for SDRAM initialization procedure.
● SDRAM Cycle Time Tras/Trc	5/7 / 6/8	
● SDRAM RAS-to-CAS Delay	2 / 3	Adds a delay time between the assertion of RAS and CAS. Without additional delay time.
● SDRAM RAS Precharge Time	2 / 3	Default setting is recommended.
● System BIOS Cacheable	Enabled / Disabled	Besides conventional memory, the system BIOS area is also cacheable.
● Video BIOS Cacheable	Enabled	Besides conventional memory, video RAM area is also cacheable.
	Disabled	Video RAM area is not cacheable.
● Memory hole at 15M-16M	Enabled	Memory hole at 15-16M is reserved for expanded ISA card.
	Disabled	Does not set this memory hole.
● CPU Latency Timer	Enabled / Disabled	Defines the CPU Latency Timer
● Delayed Transaction	Enabled / Disabled	Default setting is recommended.
● On-Chip Video Window Size	32/64MB / Disabled	Selects graphic display cache window size. Does not select it.
● AGP Graphics Aperture Size	64MB / 32MB	Sets the effective size of the Graphics Aperture to be used in the particular GART Configuration.
● Display Cache Frequency	100 MHz / 133 MHz	Selects the Display Cache Frequency as 100MHz or 133MHz, 133MHz can be set if CPU frequency is over 133MHz.
● System Memory Frequency	100 MHz / 133 MHz / Auto	Selects the System Memory Frequency, the default setting 100MHz is recommended.

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	*Disabled*	Invalidates ACPI function.
	Enabled	Validates ACPI function.
● ACPI Suspend Type	*S1*	Selects the ACPI suspend type.
	S3	
● Power Management	*Disabled*	Global Power Management (PM) will be disabled.
	User Define	Users can configure their own Power Management Timer.
	Min Saving	Pre - defined timer values are used. All timers are in their MAX values.
	Max Saving	Pre - defined timer values are used. All timers are in their MIN values.
● Video Off Method	*Blank Screen*	The system BIOS will only blank off the screen when disabling video.
	V / H SYNC +	In addition to Blank Screen, BIOS will also turn off the V-SYNC & H - SYNC signals from VGA card to monitor.
	DPMS	This function is enabled only for VGA cards supporting DPMS. **Note: When the green monitor does not detect the V/H-SYNC signals, the electron gun will be turned off.**
● Video Off In Suspend	*Yes*	The system will disable video when entering suspend mode.
	No	Does not turn off video when entering suspend mode.

| ● Suspend Type	*Stop Grant PwrOn Suspend*	Selects the Suspend type.
● MODEM Use IRQ	*3, 5, 7, 9, 10, 11 NA*	Special wake-up event for Modem.
● Suspend Mode	*Disabled*	The system never enters Suspend mode by timer.
	Min ~ 1Hr	Defines the continuous idle time before the system enters Suspend mode. If any items defined in "PM Events" are on and activated, the system will be woken up.
● HDD Power Down	*Disabled*	HDD's motor will not be off by timer.
	1 - 15 Min	Defines the continuous HDD idle time before the HDD enters power saving mode (motor off).
● Soft-Off by PWR-BTTN	*Instant-Off*	The system will immediately power off once the power button is pressed.
	Delay 4 secs	The system will power off when power button is pressed for 4 seconds.
● Wake-Up by PCI card	*Enabled*	Allows the system to be waken up by PCI card. Does not allow the system to be powered on by PCI card.
● Wake-Up by Ring/LAN	*Enabled*	Allows 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).
	Disabled	Does not allow Ring/LAN wake up.
● USB KB Wake-Up From S3	*Enabled*	The system could be waken up by USB Keyboard from the Suspend to RAM status.
	Disabled	The system cannot be waken up by USB Keyboard from the Suspend To RAM status.
● CPU Thermal-Throttling	*12.5%, 25%, 50%, 37.5%, 62.5%, 75%, 87.5%*	Selects the duty cycle of the STPCLK# signal, slowing down the CPU speed when the system enters green mode.
● Resume by Alarm	*Enabled*	RTC alarm can be used to generate a wake-up event to power up the system.
	Disabled	RTC has no alarm function.
● Primary IDE 0/1, Secondary IDE 0/1	*Enabled*	Reloads global timer, when there's an IDE event.
	Disabled	Does not reload global timer.
● FDD/COM/LPT Port	*Enabled*	Reloads global timer, when there's a FDD/COM/ LPT event.
	Disabled	Does not reload global timer.
● PCI IRQ [A - D] #	*Enabled*	Reloads global timer, when there's a PCI event.
	Disabled	Does not reload global timer.

PNP/PCI Configuration Setup
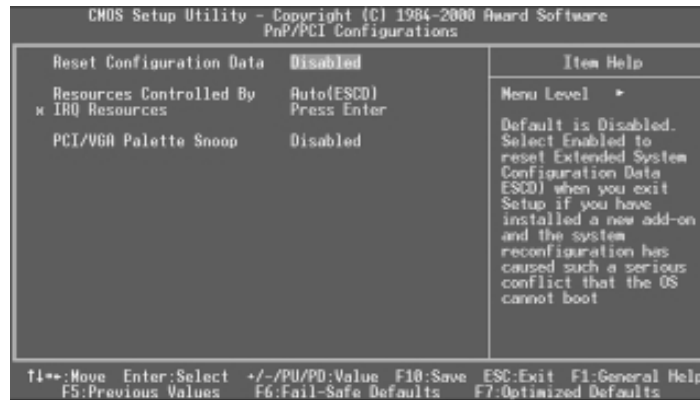
Figure-7   PNP/PCI Configuration Setup Menu

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

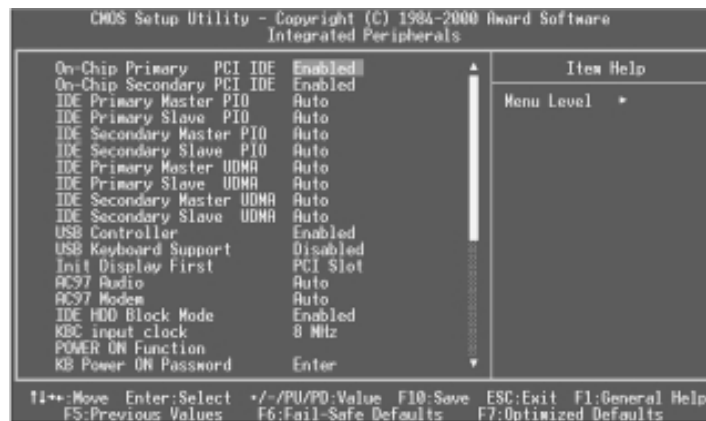| Item	Option	Description
• Reset Configuration Data	*Enabled*	Default setting is Disabled. Select Enabled to reset Extended System Configuration Data ESCD when you exit Setup, if you have installed a new add-on and the system reconfiguration has caused serious conflicts preventing the OS from booting.
	Disabled	Disables the configuration data function.
• Resources Controlled By	*Auto(ESCD)* *Manual*	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.
• PCI/VGA Palette Snoop	*Disabled*	Default setting.
	Enabled	Non-standard VGA cards such as graphics accelerators or MPEG video cars may not show colors properly. Enabling this item can solve this problem.

Integrated Peripherals

Figure-8 Integrated Peripherals Menu

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

Item	Option	Description
● On-Chip Primary/ Secondary PCI IDE	*Enabled*	On-Chip Primary/Secondary PCI IDE is enabled.
	Disabled	On-Chip Primary/Secondary PCI IDE is disabled.
● IDE Primary/ Secondary Master/Slave PIO	*Mode 0 - 4*	Defines the IDE primary/secondary master/ slave PIO mode.
	Auto	The IDE PIO mode is defined by auto -detection.
● IDE Primary/ Secondary Master/Slave UDMA	*Auto*	Ultra DMA mode will be enabled if an Ultra DMA device is detected.
	Disabled	Disables this function.
● USB Controller	*Enabled*	Enables onchip USB controller.
	Disabled	Disables onchip USB controller.
● USB Keyboard Support	*Enabled*	Supports USB Keyboard under DOS status.
	Disabled	Does not support USB Keyboard under DOS status.
● Init Display First	*PCI Slot*	Initializes the PCI VGA first.
	Onboard	Initializes the onboard VGA first. For PCI VGA or onboard VGA, the one initialized first functions.
● AC97 Audio	*Enabled*	Enables the AC97 Audio onboard.
	Disabled	Disables the AC97 Audio onboard.
● AC97 Modem	*Enabled*	Enables the AC97 Modem onboard.
	Disabled	Disables the AC97 Modem onboard.
● IDE HDD Block Mode	*Enabled*	Allows IDE HDD to read/write several sectors at once.
	Disabled	IDE HDD only reads/writes a sector once.

|		
• Power On Function	*BUTTON ONLY*	Uses the power button to power up the system.
	Password	Enables the Keyboard Password Power-On.
• KB Power ON Password	*Enter*	Uses the keyboard password to power up the system.
• Onboard FDC Controller	*Enabled*	Onboard floppy disk controller is enabled.
	Disabled	Onboard floppy disk controller is disabled.
• Onboard Serial Port 1/2	*3F8/IRQ4, 2F8/IRQ3, 3E8/IRQ4, 2E8/IRQ3,*	Defines the onboard serial port address and required interrupt number.
	Auto	Onboard serial port address and IRQ are automatically assigned.
	Disabled	Onboard serial port is disabled.
• UART Mode Select	*Normal*	This option is used to configure UART Mode.
• Onboard Parallel Port	*378/IRQ7, 278/IRQ5, 3BC/IRQ7*	Defines onboard parallel port address and IRQ channel.
	Disabled	Onboard parallel port is disabled.
• Parallel Port Mode	*SPP*	Defines the parallel port mode as standard
	EPP	Parallel Port(SPP), Enhanced Parallel Port(EPP), or
	ECP	Extended Capabilities Port(ECP).
	ECP+EPP	
• PWRON After PWR-Fail	*OFF*	The system remains OFF when the AC power supply resumes.
	ON	The system will be powered up when the AC power supply resumes.
	Former-Sts	Whatever the system status is before the AC power supply cuts off, the system resumes in the previous status (ON/OFF) 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*	This option is used to configure Midi Port
	7	IRQ.

PC Health Status
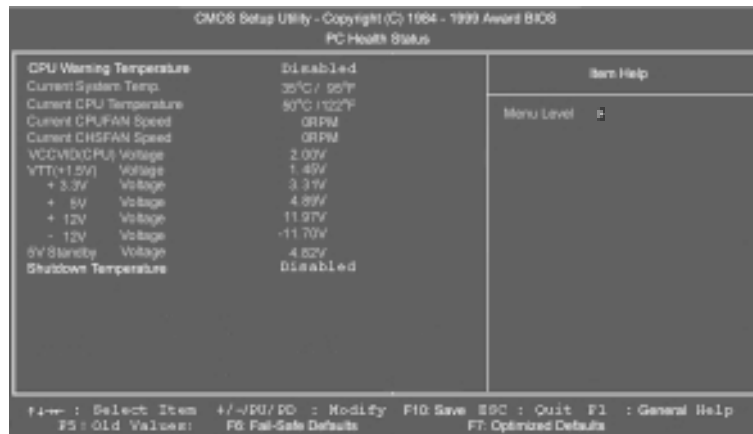
Figure-9 PC Health Status Menu

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

Item	Option	Description
● CPU Warning Temperature	$50^0C/122^0F$ $53^0C/127^0F$ $56^0C/133^0F$ $60^0C/140^0F$ $63^0C/145^0F$ $66^0C/151^0F$ $70^0C/158^0F$ $75^0C/167^0F$ $80^0C/176^0F$ $85^0C/185^0F$ $90^0C/194^0F$ $95^0C/205^0F$	An alarm will beep when the CPU temperature reaches the previous setting, $50^0C/122^0F$, $53^0C/127^0F$, $56^0C/133^0F$, $60^0C/140^0F$, $63^0C/145^0F$, $66^0C/151^0F$, $70^0C/158^0F$. $75^0C/167^0F$, $80^0C/176^0F$, $85^0C/185^0F$, $90^0C/194^0F$, $95^0C/205^0F$.
	Disabled	No alarm beep.
● Current System Temp.		The temperature inside the chassis.
● Current CPU Temperature		The temperature near CPU.
● Current CPUFAN Speed Current CHSFAN Speed		RPM (Revolution Per Minute) Speed of fan which is connected to the fan header, CPUFAN 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.

- VCCVID(CPU) Voltage, VTT(+1.5V) Voltage, +3.3V, +5 V, +12 V, -12 V, 5V Standby Voltage

  Displays current voltage value including all significant voltages of the mainboard. +3.3V, +5V, +12V, -12V are voltages from the ATX power supply, VTT(+1.5) Voltage is GTL Termination voltage from the on board regulator and VCCVID (CPU) Voltage is the CPU core voltage from the on board switching Power Supply.

- Shutdown Temperature

  $60^0C/140^0F$
  $65^0C/149^0F$
  $70^0C/158^0F$
  $75^0C/167^0F$
  $80^0C/176^0F$
  $85^0C/185^0F$
  $90^0C/194^0F$
  $95^0C/205^0F$

  The system will shut down automatically when the CPU temperature reaches the previous setting, $60^0C/140^0F$, $65^0C/149^0F$, $70^0C/158^0F$, $75^0C/167^0F$, $80^0C/176^0F$, $85^0C/185^0F$, $90^0C/194^0F$, $95^0C/205^0F$.

  Disabled

  The system remains on regardless of how much the CPU temperature is.

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 A
QDI Driver CD 2000

A QDI Driver CD 2000 is supplied with this mainboard, the contents contained in it are showed as below:

1. Express Install

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

A.   IntelINF   B.   VGA Driver

C.   Audio Driver

2. Accessory

Using this choice, you can install some common software. It includes game interface software DirectX, system management software(RM) and anti-virus software PC-cillin.

A.   DirectX   B.   QDIManageEasy

C.   PC-Cillin

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

The files included in **Documents** are:

A.   Adobe Acrobat Reader V3.0 - Ar32e301.exe

B.   CenturiX 1, CenturiX 2, WinneX 1, WinneX 1E, WinneX 2, WinneX 2E, WinneX 3 and WinneX 3E French Manual - CX1 FR, CX2 FR, WX1 FR, WX1E FR, WX2 FR, WX2E FR, WX3 FR, WX3E FR.

Appendix B.
Boot Logo

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

If you press <**Esc**>, it switches to the booting message screen. Otherwise, it enters operating system directly. You can use "**cblogo.exe**" (included on the QDI Mainboard Utility CD) to replace it by any other logo which you prefer. Regarding the method of using **cblogo.exe** utility, please refer to it's online help. If you don't prefer the logo displayed on the screen during boot up, set the "Show Bootup Logo" option as Disabled in the "BIOS FEATURES SETUP" section of the BIOS.

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

--This page is intentionally left blank--

RecoveryEasy

Introduction:

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

Operation Process:

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

1. Partition Interface (see figure-1)

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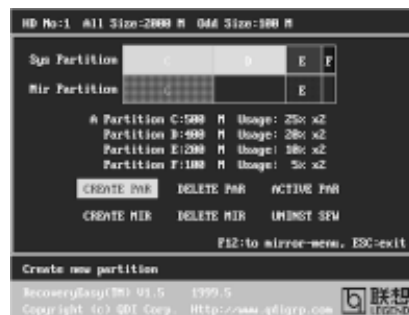

figure-1 Partition Interface

1.0 Install RecoveryEasy for the first time

a. The utility checks the previous disk partition at first, and displays the status of the first four partitions. If there are more than four disk partitions, users will be asked to delete the redundant disk partitions, since only four partitions that can be activated are allowed to exist. However, if there're only four or fewer partitions, users can follow the system prompt and choose to install RecoveryEasy based on the previous disk partitions. In this way, the original extension partitions will be changed to normal ones, and probably the sequence of the partitions will be changed also, but the contents contained in each partition will remain the same.

    b. If choosing to install RecoveryEasy on an absolutely clear disk, the utility will
       delete all the previous partitions.

    c. The password is set as default setting "qdiqdi" after installing RecoveryEasy.

1.1 CREATE PAR

Function : Creates a new partition.

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

Steps : After pressing the "CREATE PAR" button.

a. The system will prompt whether users want to create a mirror partition for it or
   not.

b. If answering "Y", input the new partition size in Megabyte. Notice that the
   maximum partition size that can be assigned is half of the left disk space, which
   is also displayed in the status line. Another half is for the mirror partition. If
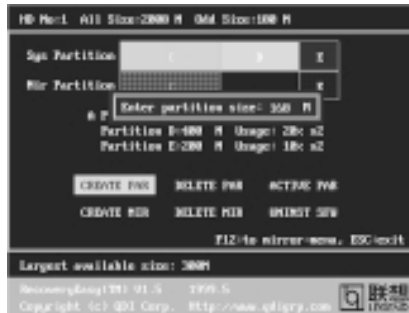   answering "N", the whole disk space left can be assigned. See figure-2.

figure-2 Create Partition

Note:

a. The system will prompt "Insert system floppy, then reset" when the first
   partition on the first hard disk is created.

b. After using DOS6.xx boot disk to format C partition, the system should be reset in
   order to access the partition.

c. In Windows system 1,048,576 bytes equal 1 Megabyte, while in RecoveryEasy
   1,000,000 bytes equal 1 Megabyte, therefore a smaller size will be displayed in
   Windows system compared with the size displayed in RecoveryEasy.

1.2 DELETE PAR

Function : Deletes the last partition and its mirror partition.

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

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

1.3 ACTIVE PAR

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

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

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

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

1.4 CREATE MIR

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

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

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

1.5 DELETE MIR

Function : Deletes the mirror partition.

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

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

1.6 UNINST SFW

Function : Uninstall RecoveryEasy.

Limitation : None.

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

Note : After RecoveryEasy is uninstalled, all the mirror areas have been disconnected with the relate partitions. If no partition is deleted or changed in size, or no other partition is created, users have chance to "Recover existing RecoveryEasy settings" when next time entering RecoveryEasy partition interface, meanwhile the password will be set as default setting "qdiqdi".

1.7 OTHERS

F12 : Switches to Recovery User Interface.

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

F5:

a. When two or more than two hard disks are installed on the system, use F5 key to choose the hard disk. Every time users use F5 key to switch the hard disk, the operation result for the previous hard disk is saved. When processing a certain hard disk, F5 key can be used to choose the partition.

b. In addition, when two or more than two hard disks are installed, the sign of partitions will be changed from C, D, E, F to 1, 2, 3, 4 accordingly.

2.   Recovery Interface (see figure-3)

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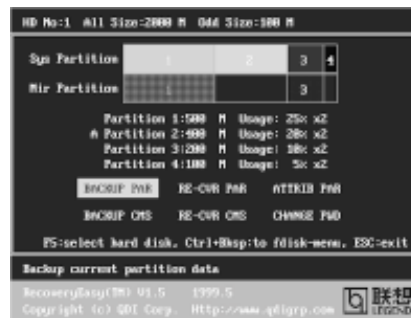

figure-3 Recovery User Interface

2.1   BACKUP PAR

Function   : Backups the content of the partition to its mirror area.
Limitation : If no mirror partition exists, this button is disabled.
Steps:

a. Use F5 key to choose the partition with mirror area existed.

b. If the partition chosen has been backuped before, a warning message will be shown, and the time when last backup was done will be displayed in the status line. After confirming the warning message, the system performs the backup. By press-ing "N" or "ESC" key, the system quits.

2.2   RE-CVR PAR

Function   : Recovers the content from the mirror area to the relate partition.
Limitation : If users didn't backup any partitions before, this button is disabled.
Steps:

a. Use F5 key to choose the backuped partition.

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

Note:

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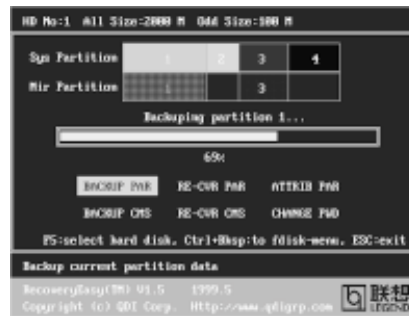

figure-4 Backup Partition

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

2.3   ATTRIB PAR

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

Limitation : None.

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

Note:

a. The switch resets to the default setting "disable" every time the system reboots.

b. In order to implement this function, users need to enable the switch when installing the OS or modifying the partition properties. Please note: Do not create or delete partitions or change the partition size when modifying the partition properties.

2.4   BACKUP CMS

Function   : Backups all CMOS settings.

Limitation : None.

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

2.5   RE-CVR CMS

Function   : Recovers all CMOS settings.

Limitation : None.

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

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

2.6 CHANGE PWD

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

Limitation : None.

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

Note:

a. The password should be no more than 6 characters, only digital and alphabetic letters are valid.

b. Once the password is enabled, users will be asked to input the password every time they try to enter the RecoveryEasy user interfaces, and up to 3 times try is permitted.

2.7 Others

Ctrl+Bksp : Switches to Partition User Interface.

ESC : Exits from the Partition User Interface.

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

FAQ:

1. What does RecoveryEasy do?

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

2. Does RecoveryEasy occupy the system resources?

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

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

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

4. Are there any hard disk limitations of RecoveryEasy?

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

5. Are there any OS limitations of RecoveryEasy?

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

6. Why does the remainder size plus partitions size not match the total size shown in RecoveryEasy sometimes?

When the location of partitions is not continuous, the above problem exists.

7. Are there any other disk partition tools that can modify the partition table made by RecoveryEasy?

RecoveryEasy provides a write-protect function, so the disk tools such as Fdisk, Partition Magic, BootMenu, SmartDisk and BootStar can not modify the partition table created by RecoveryEasy. Some of the applications even terminate during operation. However the disk tools bundled in the OS such as Windows NT, Windows 2000, Unix and OS2 could change the mirror partition.

8. Why does it happen that a prompt "*installation can not continue"* pops up when installing Windows98 or a yellow exclamation mark shown beside IDE device in system properties?

During Windows 98 installation, the installation program will write to MBR (Master Boot Record) which is protected by RecoveryEasy, therefore the installation will be terminated. To avoid this problem, a "ATTRIB PAR" button is provided in Recovery User Interface. Enable this switch before installing Windows 98, then the installation will be successfully completed. In order to remove the yellow question mark before IDE devices in Device Manager, enable this switch once more after system reboot.

9. Why does the converting of FAT16->FAT32 in PQ Magic go wrong?

MBR will be accessed when converting FAT16 to FAT32 with PQ Magic, which is protected by RecoveryEasy, therefore the conversion will be invalidate. Enabling the " ATTRIB PAR" switch from Recovery User Interface before converting can avoid this problem. It's the same situation as "FAT32 Converter" provided in Windows98.

10. What if partitions be wrongly deleted in RecoveryEasy?

If users delete a partition in RecoveryEasy by mistake, they can save it by pressing the Reset button on their system at once. Do not press the "ESC"

key to quit RecoveryEasy, this will save the change. Do not try to create the partition again, since creating partition will clear all the content of the partition.

11.   What is multi-boot?

RecoveryEasy can implement the multi-boot function by activating different partition. For example on the hard disk, partition C contains DOS, partition D contains Windows 95 version, partition E contains Windows 98 version, when activating partition C in RecoveryEasy, the system enters DOS, when activating partition E, the system enters Windows 98 version. At the same time, the sequence of the partitions is adjusted accordingly, partition E becomes C:, partition C becomes D: and partition D becomes E:. This function is the same as that of fdisk.exe, but the system needs reboot in order to make the change validate for fdisk.exe.

12.   What if computer accidentally power off when backuping (recover-ing)?

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

13.   What if users lose the password?

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

14.   Does RecoveryEasy protect hard disk against CIH?

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

Board Layout of
SynactiX 1 V1.0