



Chapter 4

Crystal Audio Description

On-board audio system is based on the Crystal CS4235 single chip multimedia audio system controller that integrates 3D sound technology. It provides CrystalClear™ 3D audio solution for multimedia applications, entertainment, educational sound and business audio. It incorporates the best features of Sound Blaster™, Sound Blaster Pro™, Microsoft Windows Sound System™, AdLib, MPU401 and more.

Features

3D Sound	⇒ Integrated CrystalClear™ 3D stereo Enhancement.
Software Wavetable	⇒ Supports Wave Stream General MIDI compatible music synthesizer (Software music synthesizer) in Windows 95 environment.
Wave Audio	⇒ Maximum recording and playback sampling rate of up to 48KHz stereo, 16-bit digital-to-analog and analog-to-digital converter, 16-bit and 8-bit digitizing in stereo and mono mode.
20-voice FM Music Synthesizer	⇒ plays up to 20 instruments simultaneously delivering a high quality of rich and crisp music.
Digital / Analog Mixer	⇒ Stereo analog mixing from CD Audio, Line-in, FM Music & Digital voice, Stereo Digital Mixing from Microphone, Line-in, CD-Audio and Master Volume control.
Microsoft Plug & Play and Direct Sound standard	⇒ Supports Microsoft plug & play and directsound in Windows95.
Full Duplex	⇒ For concurrent recording and playback such as Internet phone.
MIDI Interface/Joystick Port	⇒ Built-in integrated MIDI UART interface with MPU 401, joystick / gameport.



Setting the Hardware System

Refer to chapter 2 for Installation information on how to connect various devices such as speaker, microphone and joystick to the audio system on page 8, also disabling/enabling the on-board audio is found on page 6.

Software Drivers Installation

I. Installation of Windows 95 driver

- Under Windows95, insert the QDI Mainboard Utility CD into the CD-ROM drive.
- Direct the path to D:\Dev Drv \Sound\Cry4235 \ Driver\ Win95\English and run setup.exe.
- The ' Crystal Install/uninstall' menu will pop-up as shown below, choose ' Install Driver' , then choose ' restart' when the system prompts you.



- During Windows95 start-up, the **Update Device Driver Wizard** will guide you through the installation of the crystal audio devices. When the following window appears, click **Other Locations** to locate the driver place as D:\DevDrv \ sound\ Cry4235\ Driver\Win95\English, then click **Finish**.





- When the system prompts for the driver 'Crystal Driver Disk', direct the path to D:\DevDrv\sound\Cry4235\Driver\Win95\English, click several OK buttons, then the Finish button. If Windows 95 CD-ROM is requested, insert the CD-ROM and direct the path to D:\win95.



- After completing the installation, the sound, video and game controllers should be listed in the Device Manager of system properties, as shown below. If a yellow marking appears before them, please remove the driver, retry the steps above and install the Crystal Audio Driver again.



***Note:**


Windows95 OSR2.1 or later version should be installed for all on-board AGP feature benefits, therefore the installation process in this manual is based on Windows 95 OSR2.1.



II. Installation of Windows NT 4.0 driver

- Turn the PC on and start up Windows NT4.0.
- Insert the QDI Mainboard Utility CD into the CD-ROM drive.
- Double click the Multimedia icon in the control panel and click on the Devices tab.
- Press the ADD button. Select 'Unlisted or Updated Drivers' and press <OK>.
- A dialog box appears requesting the path of the location for the driver files. Search this path D:\DevDrv\ Sound\Cry4235\Driver\WINNT\NT 4.0\English by clicking the BROWSE button.
- Another dialog box appears with the CrystalWare Audio Driver list. Press <OK> to continue with the installation.
- Press <Enter> twice during installation.
- Windows NT may ask you to restart your system. Even though it is not necessary to do so, we recommend you click on the Restart Now button.
For more information (such as un-installing.), please refer to README. File in directory D:\DevDrv\ Sound\Cry4235\ Driver\WINNT\ NT40\English.

III. Taking effect of 3D sound

In Windows 95 or Windows NT 4.0, click  icon on the task bar to gain access to the 3D audio control. The 3D audio accessory provides one slider which is labeled space, for controlling the sound effect of your 3D audio. Moving the slider toward the plus sign increases the effect.



IV. Software Wavetable Synthesis

↳ Function

Wavetable Synthesizer uses digital samples of actual musical instruments to create the waveforms produced by those instruments. Software wavetable synthesis uses the power of the CPU to fetch and manipulate this data. While this does require the use of some processing power, it means that no additional hardware is required to obtain higher-quality sound other than what would normally be expected from a PC.



➤ Installation Instructions (in Windows 95)

- Start the 'Add New Hardware' application in Start → Setting → Control Panel menu or My Computer window.
- Click <Next>.
- Select "No" when asked 'Do you want Windows to search for new hardware?'
- Click <Next>.



- Highlight 'Sound, Video and game controllers' from the 'Hardware types' list. Click <Next>.
- Click <Have Disk> and enter or browse the directory D:\DevDrv\Sound\Cry4235\Wavesynt.
- Click several <OK>s.
- Click <Finish>.

➤ Selecting the crystal software synthesizer as your default MIDI device

- Start the 'Multimedia' application located in Start → Setting → Control Panel menu.
- Select the MIDI tab.
- In the single instrument window, highlight 'Crystal Software Synthesizer' in the list of devices.



- Click either <Apply> or <OK>.

Please read the readme file included in the directory D:\DevDrv\Sound\Cry4235\Wavesynt for details.



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Appendix A

QDI Mainboard Utility CD-ROM

A QDI Mainboard Utility CD-ROM is supplied with each mainboard. The contents used for this mainboard are:

1. SiS530 Chipset Drivers:

A. IDE Driver

SiS530 Chipset Driver included in the directory \ChipDrv\SiS\IDE is used for this mainboard. First copy the file Uide100.exe to a user directory on the hard disk and extract it. Then install the SiS530 IDE driver accordingly.

- For Windows 95, run...\Win9X\setup.exe for installation.
- For Windows 98 & Windows 95 OSR2, Please follow the steps contained in the readme file. (we suggest the user use Windows 98 & Windows 95 OSR2 default PIO/DMA driver)

B. Onchip VGA Driver

The VGA drivers included in the directory \chipDrv\SiS\SiS530\vga are for the SiS530 onchip VGA.

For Windows 9X, Run\chipDrv\SiS\SiS530\vga setup.exe for installation.

For Window NT driver, when the system prompts for the driver, direct the path to \chipDrv\sis\sis530\winnt40.

2. Onboard Audio Drivers

The audio drivers included in the directory\DevDrv\Sound\CS4235\Driver are for the onboard Crystal CS4235 PCI audio.

Run \DevDrv\Sound\CS4235\Driver\Real Dos\Install.exe to install Dos/Windows 3.1x driver.

Run \DevDrv\Sound\CS4235\Driver\Inst 95&98\Setup.exe to install Windows95 & 98 driver.

Run \DevDrv\Sound\CS4235\Driver\InstNT\Setup.exe to install Windows NT 4.0 driverr.

3. 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>.

**Installation of PC-cillin 98**

For Windows 95/98 English version, run Setup.exe for installation from the utility CD directory \Pccillin\Win9x.

For Windows 95/98 Chinese version, run Setup.exe for installation from the utility CD directory \Pccillin\PWin9x.

For Windows NT 4.0, run Setup.exe for installation from the utility CD directory \Pccillin\WinNT4.0.

S/N is PN EF-9991-6558-5857-5535.

4. 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 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, a bridge between the complex hardware and OS, used to access hardware status and to execute 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 the system and monitor some key reference data concerning 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.

Installation of QDI ManageEasy V2.0

Run Setup.exe from the utility CD directory \QME2 to install the QDI ManageEasy V2.0. The QDI ManageEasy Setup Wizard will guide you through the installation process.

For detailed information on how to use QDI ManageEasy V2.0, please refer to the QDI ManageEasy V2.0 online help.

6. QDI Mainboard Utility:

The utilities located in the directory \Utility are:

FLASH.EXE

CBLOGO.EXE

LF.EXE

Refer to the online help for information on how to use these utilities.



Appendix B.

Boot Logo

When you power on or reset your system, the picture shown below will appear 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.**



The patent for SpeedEasy

Item Checklist

Completely check your package. If you discover damaged or missing items, contact your retailer.

- ☒ Superb 1 mainboard
- ☒ QDI Mainboard Utility CD-ROM
- ☒ I/O shield
- ☒ 1 IDE ribbon cable
- ☒ 1 floppy ribbon cable
- ☒ User' s manual

Notice

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

Board Layout of Superb 1 V1.0