Echo Digital Audio Corporation
Echo 3G family:
Gina3G
Layla3G
Windows driver version 7.3 install

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Disclaimer

This is a fully supported release. While we have tested these drivers extensively, there may still be bugs lurking. Please be aware that these drivers are used at your own risk; Echo Digital Audio Corporation is not responsible for any damage or loss incurred by the use of these drivers.

Introduction

This driver supports the following versions of Windows:

- Windows 2000
- Windows XP
- Windows XP Professional x64 Edition
- Windows Server 2003
- Windows Server 2003 x64 Edition
- Windows Vista
- Windows Vista 64-bit Edition

Windows ME is no longer supported.

New features

- Support for playing compressed Dolby Digital, WMA Pro, and DTS over S/PDIF
- Multichannel Windows volume controls for surround sound
- Console sessions are now saved in the user documents folder.

Fixes

- Better physical memory management for x64 Windows
- Improved kernel streaming framing for better Vista and DirectKS support
- Fix for recording with NGWave

Known issues

- In Vista, you may hear glitching with Windows Media Player. If so, try changing the preferred format to a lower sample rate in Vista's "Sound" control panel.
- In Windows XP, you may still see warnings that the driver is unsigned. Windows XP will display this warning unless a driver has been signed directly by Microsoft.
- ASIO Direct Monitoring changes are not updated in the console in real time.
- ASIO Direct Monitoring panning control does not work.

Windows Vista

This release provides support for Windows Vista running in 32-bit and 64-bit mode.

Windows Vista features a completely new audio architecture. This new architecture affects any application that uses DirectSound, wave/MME, or the new Vista audio interfaces. Applications that use ASIO are unaffected and should work as before.

Please remember the following when using Windows Vista with your Echo hardware:

- Using the sample rate lock in the console may result in applications playing or recording at the wrong sample rate.

- Wave device configuration and PureWave are still supported. To change the wave device configuration without restarting the computer, you need to run the console as an administrator. To do so, right-click on "Show all console windows" and select "Run as administrator."

- Setting the device name in the console does not affect the name displayed for the audio devices.

- Windows Vista allows you to select the preferred sample rate for playing and recording. If you are using multiple audio applications at the same time, ensure that the preferred sample rate is set to the correct rate for each playback and record device in Vista's "Sound" control panel.

- Surround sound delay management is not supported in Windows Vista.

Finally, please be aware that not all audio applications have been updated for Windows Vista and may not behave properly. Some may require you to run them with administrator privileges.

64-bit Windows

Using Windows in 64-bit mode is very similar to using 32-bit mode. Some features are not available when using 64-bit Windows:

-   PureWave is not supported
-   GSIF is not supported

This release includes support for both 32-bit ASIO applications and 64-bit ASIO applications.

ASIO support

This driver release includes full ASIO 2.2 support. Just select "ASIO Echo PCI" from within your ASIO-based application.

Help! I don't see all of my inputs and outputs.

This is probably due to the fact that another program is using them. The most likely culprit is the Microsoft wavetable synthesizer, which is being opened by your audio application as a MIDI output device. Make sure that your audio application does not have "Microsoft GS Wavetable SW Synth" selected as a MIDI output device.

If your outputs still don't show up, you may have some other software that's doing the same thing.

Using SONAR

SONAR supports ASIO and WDM/KS for low-latency access to audio hardware. The ASIO mode performs well and is straightforward to set up, requiring no special configuration.

If you prefer, you can also use SONAR in WDM/KS mode. Here are the required settings for using SONAR with our driver in WDM/KS mode:

Within SONAR, go to Options/Audio.

- On the "General" tab, set "Audio Driver Bit Depth" to 24.

- On the "Advanced" tab, we suggest selecting "Trigger & Freewheel"

- On the "Driver Profiles" tab, uncheck "Access Driver In Mono". Be sure to set "Stream > 16 bit data as" to "32-bit PCM, left justified".

You may get a message that your audio devices are not compatible with the specified format; you may need to restart SONAR several times. Make sure each time that the settings are correct; once SONAR starts successfully without the "not compatible" message, be sure to run the Wave Profiler under Options/Audio/General.

Note: When installing a new hardware device, you may need to delete the aud.ini file in your Sonar install folder. (This is found in ProgramData folder in Vista). This resets the settings back to their defaults and facilitates installing new or different hardware.

Windows volume controls

The WDM driver supports the Windows volume control program.

When you run it (Start/Programs/Accessories/Entertainment/Volume control), you should see a slider marked "Line volume".   This is the same as the "Virtual Out" slider in the console.

Adjusting the "Wave" and "Synth" sliders will set the volume levels for the Windows kernel mixer, not the hardware. These settings are *not* the same as the volume sliders in the console. The console sliders adjust the levels in the hardware; the Windows volume controls are for adjusting the levels in the Windows mixer.

Troubleshooting

If you are running Windows 2000, XP, or Vista and your computer spontaneously reboots on you, you probably have experienced what Microsoft calls a "bug check", but what everyone else calls the Blue Screen of Death (BSOD).

The default setting for the BSOD is not to show the BSOD, but to reboot the computer. This isn't very helpful for tracking down problems. If you are experiencing blue screens, here's how you can help us track it down:

Select Start/Settings/Control Panel/System
Go to the Advanced tab and click on "Startup and Recovery"
Uncheck "Automatically reboot"
Set the memory dump to "Small Memory Dump"

Now, next time you get a blue screen, look at it. See if the crash occurred in echo3g.sys; if it did, it may be something we need to fix.

Restart your computer and find the most recent .dmp file – this is the memory dump. It's probably in a folder called "minidump" under your main Windows folder.

Zip up this .dmp file and send it to techsupport@echoaudio.com along with a description of how it happened.

Version History

7.3

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7.2

- Added support for Windows Vista 64-bit Edition.
- Installer and drivers are digitally signed.
- Optimizations for Windows Vista.
- Installers re-written for improved Windows Vista support.

7.1

- Improved kernel streaming for Sonar in WDM/KS mode
- Improved kernel streaming to reduce glitching in Windows Vista

7.0

- Added support for x64 Windows XP and Server 2003
- Added support for 32-bit Windows Vista
- Fix for mono recording with Adobe Audition
- Fixed issue in Cubase with changing sample rates

6.14

- Fixed problems with delay management code and 7.1 audio playback
- Fixed minor bug with getClockSources in the ASIO driver
- New firmware to fix problems with 88.2 kHz and 96 kHz S/PDIF inputs

6.13

- Fixed several bugs that could potentially cause the machine to crash.
- Improved the DMA code

6.12

- New firmware - resolves the issue with MIDI input and output causing audio to glitch.
- Rewrote the DMA code
- The ASIO driver is now called "ASIO Echo PCI" instead of "ASIO Echo WDM".
- Fixed a problem with synchronizing wave devices

6.11

- Initial release