



Release Notes

3Dfx Interactive Direct3D™ 2.14 Driver

Document Revision 2.14

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3Dfx Interactive, Inc.

4435 Fortran Drive
San Jose, CA 95134
408-935-4400
www.3dfx.com



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The 3Dfx Interactive Software Developer Kit

This document is part of the 3Dfx Interactive Software Developer Kit (SDK). The 3Dfx Interactive SDK documentation consists of:

- **DOCS\D3DRELNO.DOC - *Release Notes: 3Dfx Direct 3D[®] 2.14***
- DOCS\GLRELNO.DOC - *Release Notes: Glide 2.4.2*
- DOCS\GPGUIDE.DOC - *Porting Guide: Glide 2.4.2*
- DOCS\INSTALL.DOC - *Installation Guide: 3Dfx Interactive Reference Boards and Related Software 2.6*



General Information

Welcome to the world of 3Dfx Interactive! We are releasing our latest product for your pleasure, and we hope you enjoy it!

This distribution contains Version 2.14 of the 3Dfx Interactive Direct3D drivers for the golden release of Microsoft DirectX™ 5. These drivers support DirectDraw™, Direct3D retained mode and Direct3D immediate mode as well as DrawPrimitive. This version contains many significant changes that include support for Voodoo Graphics™, Voodoo Rush™, performance optimization and bug fixes. This document will describe the current status of the driver.

Important Tips

The following information highlights known issues and solutions. We will provide fixes for these issues in future releases.

D3D Device for Voodoo Graphics

- When the application creates a DirectDraw object, it must use the HAL D3D device. It can not use the RAMP or RGB emulation D3D device. For example, if you run *d3dtest* from the Microsoft® SDK then you must select *dd3dfx* for the DirectDraw device and Direct3D HAL for the D3D Device. The software renderers RAMP and RGB emulation are not supported.

D3D Device for Voodoo Rush

- 3Dfx Interactive is aware of intermittent failures in a few games when in windowed Direct3D mode on some Pentium® Pro systems. We are actively searching for a resolution. In the interim, these same games do not exhibit these problems when running in full screen mode.

D3D Device for Voodoo Graphics and Voodoo Rush

- The Microsoft Direct3D demos in the SDK are based on general functions in the miscellaneous directory. There is a problem in *d3dapp.c* where the application does not call *FlipoGDIsurface* at the appropriate time. To correct this problem, search for "*FlipoGDIsurface*" and make sure that this is called in full screen mode.
- A number of the older applications, e.g. *foxbear*, do not enumerate the DirectDraw object and will not enumerate our DirectDraw object. See the porting guide for details on how to enumerate the DirectDraw object correctly.
- Microsoft DirectDraw does not handle emulation properly for non-primary devices which causes colorfill BLTs to host memory surfaces and host to host memory BLTs to fail.
- Chroma key transparent video to video BLTs are not supported by the DirectDraw Driver.

Direct3D Render States and Renders Primitives that are not supported.

- The span primitive is not supported.
- The *D3DFILTER_LINEARMIPEAREST* and *D3DFILTER_LINEARMIPLINEAR* are not supported and will be ignored if specified.



Hardware Support

The following products use the 3Dfx Interactive Voodoo Graphics and Voodoo Rush chip sets. 3Dfx Interactive has only tested products with the 3Dfx Interactive Direct3D 2.14 reference drivers that are in **bold** type.

- *Innovision Cyber 3D X5000 (Ask)*
- *Helios Voodoo (A-Trend)*
- *Venus 3D Graphics (Biostar)*
- *Venus 3D Rush (Biostar)*
- *Pure 3D (Canopus)*
- *RealVision Flash 3D and RealVision Flash AT3D Rush (Deltron Technology)*
- **Monster 3D™ (Diamond Multimedia)**
- *3D Acceleration (Express)*
- *Dragon 1000 (Gainward)*
- *Highscore -3D (Miro)*
- *MAXi Gamer 3D fx (Guillemot International)*
- **Stingray™ 128/3D (Hercules Computer Technology)**
- **Intense 3D™ Voodoo (Intergraph)**
- *Maxigamer 3D* (Guillemot)*
- *Adrenaline Rush 3D (Jass)*
- **Righteous 3D™ (Orchid Technology)**
- **Obsidian & Ventana (Quantum3D)** This release supports only one Texelfx with two or four Mb of texture memory.
- *Magic 3D (Skywell)*
- *Power 3D (Techworks)*
- **Alliance Semiconductor AT3D reference design and the Voodoo Rush reference design daughterboard**
- **Alliance Semiconductor AT25/ Voodoo Rush single planar reference design.**
- **Macronix MX86251 / Voodoo Rush single planar reference design.**



Technical Support

We highly recommend that you utilize the drivers provided by your board manufacturer. The following web sites should be consulted for the latest drivers:

<i>Vendor</i>	<i>Web Site</i>
Deltron Technology	www.deltrontech.com
Diamond	www.diamondmm.com
Guillemot International	www.guillemot.com/france/
Hercules	www.hercules.com
Intergraph	www.intergraph.com
Orchid	www.orchid.com
Quantum 3D	www.quantum3d.com

Changes in Release 2.14

Bug Fixes

1. Fixed Moto Racer letter box mode display corruption on Voodoo Rush.
2. Solved sound stuttering problem on Voodoo Graphics.

Changes in Release 2.13

Changes

1. Support for 4Mb of texture memory has been added for Voodoo Graphics and Alliance/Voodoo Rush.
2. First release to support the Macronix MX86251/Voodoo Rush combination.

Bug Fixes

1. The SDK application Boids no longer hangs in 800x600x16 or greater resolutions.
2. Every other pixel was drawn when using points in D3D.

Changes in Release 2.12

Changes

1. Reading and writing with Lock on Z buffer now works.
2. Fixed a bug that occasionally caused D3D games to lock up after running a Glide game.



Changes in Release 2.11

DirectX 5.0 Support

1. Native DrawPrimitive support with performance optimizations.
2. New Render States: D3DRENDERSTATE_TEXTUREADDRESSU, D3DRENDERSTATE_TEXTUREADDRESSV, D3DRENDERSTATE_COLORKEYENABLE, D3DRENDERSTATE_ALPHABLENDENABLE.

Changes in Release 2.10

Changes

1. Pentium® Pro and Pentium® II optimizations for Voodoo Rush.
2. Bug fixes for Voodoo Graphics and Voodoo Rush.

Changes in Release 2.08

Changes

1. 512×384 and 320×240 modes on Voodoo Rush are properly displayed.
2. Resizing Direct3D windows now uses the appropriate stride.
3. Sound break-up problem has been partially resolved.

Changes in Release 2.07

Additional feature support

1. Line support
2. Point support
3. Wireframe fill mode and point fill mode

Windowed Direct3D application on Voodoo Rush

1. D3D now supports more resolutions. Resolutions are dependent on the 2D graphics chip.
2. DirectDraw now has full support for all 2D features. Hardware acceleration is dependent on the 2D chip.
3. Direct3D supports 16 BPP modes (8 & 24 BPP not supported).

Changes in Release 2.05

1. Direct3D rendering to the front buffer is supported.
2. MIP-mapped textures are not MIP-mapped when *D3DFILTER_NEAREST* or *D3DFILTER_LINEAR* are specified. You must specify *D3DFILTER_MIPNEAREST* and *D3DFILTER_MIPLINEAR* for MIP-mapping.
3. Color key on palletized textures is corrected.



Changes in Release 2.03

This release contains performance enhancements and bug fixes. The following list summarizes the changes:

1. The triangle throughput of the Direct3D driver have been improved significantly. Direct3D test shows an improvement of approximately 30%.
2. The DirectDraw 2 call *GetAvailableVidMem* for texture memory now returns the correct available texture memory.
3. Texture memory is no longer fragmented into small chunks after running games for long periods of time.
4. Drivers use the MSVC 4.2 runtime library and the install program now installs the *MSVCRT.DLL* on your machine.

Web Information

To fully utilize our resources, visit the 3Dfx Interactive web site at <http://www.3dfx.com/>. Here, you will find useful links to the following:

**We encourage you to e-mail your comments or suggestions through the 3Dfx newsgroups. Please visit our news server at <news://news.3dfx.com>.*

Developer Support

Total Immersion Program

Total Immersion, the 3Dfx Interactive Developer Program, is a collection of the top industry developers and publishers optimizing the hottest retail games for 3Dfx Interactive technology. Like the best games, the Total Immersion program is totally interactive and real time: We want your feedback so we can help make your products - and ours - truly great. Sign up for Total Immersion and become part of the inner circle of the new software elite. You'll get to hang out with some of the best minds in the business and gain access to the big-league PC and coin-op markets via our roster of heavy-hitting industry partners.

Just a few of the marketing and support benefits of being a Total Immersion developer are:

- Co-marketing and promotional advertising and events with 3Dfx Interactive
- Inside information from both 3Dfx Interactive and our industry-leading partners
- A high-bandwidth, low-latency communication channel with 3Dfx Interactive partners, customers and other Total Immersion developers
- Software Developer Kits (SDKs) to help you design and enhance your software using the advanced features found in 3Dfx Interactive products
- Dedicated engineering support for your most radical game and tool development efforts via phone, e-mail, private newsgroups, and private access web site

For an application to the 3Dfx Interactive Developer Program or more information about Total Immersion, please e-mail devprogram@3dfx.com. Be sure to include all relevant contact information.



Support Environment

Resource Page

To check out some cool sites that use the Obsidian technology to deliver “affordable reality,” visit:

- SAIC SIMTools: <http://members.aol.com/simtools/index.htm>
- Gemini Technology: <http://www.gemtech.com>
- MetaVR: <http://www.metavr.com/3dfx.htm>
- Datapath Technologies: <http://www.datapath.co.uk>
- Systems Technologies: <http://www.systemstech.com/paramain.htm>

Development & Deployment

As a member of Total Immersion, game developers have access to dedicated engineering support for your most radical game and tool development efforts via phone, e-mail, private newsgroups, and private access web site. Technical and development issues are handled by a well-versed and knowledgeable software engineering team. In addition to basic technical programming questions, the developer support team is on hand to aid in game development consulting. Utilize our staff to get the full suite of 3D advanced features from your 3Dfx optimized game.

For an application to the 3Dfx Interactive Developer Program or more information about Total Immersion, please e-mail devprogram@3dfx.com. Be sure to include all relevant contact information.

Bug Reporting

There is a new Bug Report form on the 3Dfx Interactive Developers' web site. Please report problems using this form. If you are unable to access the web site and you must send e-mail, there is a form included on the CD. Look in `\docs\3dfxbugs.txt` for the proper format. You must use the keywords “D3D Bug” in the subject line for your submission to be processed.

Developer Bug Submission Form

3Dfx Interactive, Inc.

REQUIRED INFORMATION:

Submitter:

Company:

Severity:

1=system crash/hang

2=feature severely broken



3=feature abnormality

4=cosmetic/enhancement request

Hardware Product:

(3Dfx Board Type)

Revision:

(Board Revision number)

Software Product:

(3Dfx Software, i.e., ATB, D3D, Glide, etc.)

Version:

(Software Version number, i.e., 2.0b, 2.0b1, etc.)

OEM Video Board Vendor:

(Name that card)

Synopsis:

(A brief description of the defect)

Description:

(A detailed description, including steps to recreate)

Attached Files:

(Files needed to recreate the problem)

System:

(System information for the computer used: processor type, speed, chip set, motherboard manufacturer, memory size)

Operating System:

(Windows 95, NT, DOS...)

Compiler:



(Watcom, MSVC...)

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