Release Notes

3Dfx Interactive Glide 2.3 Driver

Document Revision 2.3

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THE 3DFX INTERACTIVE SOFTWARE DEVELOPERS KIT

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

- **DOCS\GLRELNO.DOC – *Release Notes: Glide 2.3***
- DOCS\ATBRELNO.DOC – *Release Notes: ATB 0.5*
- DOCS\D3DRELNO.DOC – *Release Notes: 3Dfx Direct 3D™ 2.08*
- DOCS\GPGUIDE.DOC – *Glide Porting Guide: Voodoo Rush™ 2.3*
- DOCS\INSTALL.DOC – *Installation Guide: 3Dfx Interactive Reference Boards and Related Software 2.6*

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 2.3 of Glide. This version contains many significant changes that includes support for Voodoo Rush™, optimization and bug fixes. This document will describe the installation procedure for the drivers and the current status of the driver.
This revision of the driver now properly recognizes Voodoo Graphics™ boards that have been installed on a secondary PCI bus.

Important Tips

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

Using Glide 2.3 on Pentium Pro® Systems

This prerelease version of Glide for Voodoo Rush is not compatible with Pentium Pro processors. This issue will be addressed in a future release. There are no known problems with Pentium Pro processors and Voodoo Graphics.

Voodoo Rush

- If the application window completely covers the DOS box window or if the DOS box otherwise has zero area, DirectDraw terminates incorrectly.
- When running an application in full screen mode, corruption may be observed on the first scanline at the top of the screen.
- The pass through mode may not be toggled correctly, especially if a console application is activated. The workaround is to manually toggle pass through by entering CTRL–F9 on the keyboard.

Multiple Glide windowed Applications

- Cannot run multiple Glide windowed applications.

Using The Trident ProVidia 9685–1 + Voodoo Rush reference design Card

- Observed screen flashing problems in all the Demos and tests running Glide on the Trident part.
- Experienced a corrupt cursor with Glide on the Trident part.
- Trident card does not run on a PC with a SCSI PCI part.
- Trident card does not run on a P6.
- 2D drivers do not work well in high resolution modes > 800x600.

3Dfx Glide support is available for the following products:

Obsidian (Pro) Board

Glide 2.3 supports one Texel*fx* or two Texel*fx* chips . ICS and AT&T RAMDAC are supported as it comes with the Obsidian products. Scan Line Interleaved (SLI) configurations of the Obsidian and Obsidian Pro are supported.

Righteous 3D (Orchid Technologies)

This release of Glide supports the Righteous 3D board from Orchid.

Monster 3D (Diamond Multimedia)

This release of Glide supports the Monster 3D board from Diamond.

Alliance Semiconductor ProMotion−AT3D Rev. A reference design and the Voodoo Rush reference design Daughterboard

This release of Glide supports the Alliance AT3D Board and the Voodoo Rush Daughterboard.

The Trident ProVidia 9685−1 + Voodoo Rush reference design Board

This release of Glide supports The Trident ProVidia 9685−1 + Voodoo Rush reference design Board, subject to the restrictions noted above.

[redacted]

We highly recommend that you use the drivers provided by the vendors who developed your boards. Diamond Monster 3D and Righteous 3D board users can find the latest drivers at the Diamond website (www.diamondmm.com) and at the Orchid website (www.orchid.com), respectively.

[redacted]

Glide supports Windows® 95, Windows® NT 4.0, MS−DOS®, and MAC™ OS. There is no native support in the development release for OS/2® or Linux.

DOS Notes

If you are running within DOS (_not_ a DOS Prompt or DOS Shell under Windows for Workgroups, Windows 95, or OS/2) and you have less than 24MB of RAM you must set the environment variable DOS4GVM to the value 1.

```
C:\>SET
DOS4GVM=1
```

Windows 95 Notes

If you are running under Win95 and you have less than 24MB RAM you must change your DOS properties settings. The value for DPMI memory must be changed from AUTO to 16384. The initial environment setting must also be changed from AUTO to a minimum of 4096 for some applications.

Windows NT Notes

Glide programs built for DOS4GW cannot be run under Windows NT.

Changes to Drivers

1. Hardware: Alliance AT3D and Voodoo Rush
2. glide.dll changed to glide2x.dll
3. sst.ini was removed
4. glide.lib changed to glide2x.lib (This library was imported)
5. API supports Glide applications running in a window
6. Glide API for linear frame buffer writes now contains stride information in order to support windowed applications and new hardware.
7. Supports DOS dynamically–linked libraries.

Using Dual Video Cards Simultaneously

Glide now supports running Voodoo Graphics and Voodoo Rush simultaneously in the same system, with certain restrictions. This can be achieved by arranging the search path so as to select the correct DLL when an application is run.

These changes, originally described in the Glide 2.2 release notes, are repeated here for convenience. Some subroutines have been added in Glide 2.2, and in some cases, these replace routines in previous versions of Glide. The result is that there may be compatibility issues with existing applications. Changing existing Glide code will result in compatibility with future products and support windowed Glide applications with a minimum of effort.

New Routines

Several new routines have been added to support windowed Glide applications on Voodoo Rush, and to ensure compatibility with future hardware.

GrSstWinOpen

Allows for Glide in a window

grSstWinClose

Allows Glide applications to shut down and restart 3D engine safely

grSstControl

Used to inform glide of system events

grLfbLock

Changes the paradigm for LFB access, LFB access needed a notion of variable stride as well as a lockin notion for windowing systemsgrLfbUnlock

grLfbUnlock

See grLfbLock

grLfbWriteRegion

Locks are to be discouraged whenever possible in favor of optimized host memory BLTs which can be hardware accelerated

grLfbReadRegion

You may not read−lock FB RAM on an SLI system, we can, however read rectangles of FB RAM from an SLI system at the driver level.

Routines Removed

The following routines have been removed. The reasons for removal vary and are described in detail in the porting guide. For the most part, they represent areas where Glide´s old paradigms were incompatible with running in a window or running full−screen on systems, where the device to which Glide renders, is also the primary display adapter.

- grSstOpen
- grSstPassThru
- grLfbBegin
- grLfbEnd
- guFbWriteRegion
- guFbReadRegion
- grLfbOrigin
- grLfbwriteMode

Bug Fixes

- The primary focus of Glide 2.3 is support for Voodoo Rush and Glide in a window, so there were relatively few bug fixes. However, changes were made to solve the problem of sound breakup for several applications.
- We no longer ship debug dlls. They will be distributed to Total Immersion members through 3Dfx Developer Support.

To fully utilize our resources, visit website at http://www.3dfx.com/   Here, you will find useful links to the following:

If there is something that you cannot locate or would like to see here, we encourage you to e–mail your comments or suggestions to our news server* ***news://news.3dfx.com**.*
We always strive to provide the best support for our partners.

- Products–http://www.3Dfx.com/products/products.html
- FAQs– http://www.3Dfx.com/game_dev/general_faq.html
- Technology Overviews– http://www.3Dfx.com/tech/tech.html
- Game and Developer Information– http://www.3Dfx.com/game_dev/game_dev.html

Total Immersion Program

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For more 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.

Resource Page

To check out some cool sites that use Obsidian technology to deliver ˆaffordable 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, the 3Dfx Interactive Developer Program, 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. All technical and development issues are consulted 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 more 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.

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 ˆGlide Bug˜ in the subject line for your submission to be processed.

3Dfx Interactive, Inc.

Developer Bug Submission Form

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)

Rev:

(Board Revision number)

Software Product:

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

Version:

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

OEM Video Board Vendor:

(Name that card)

Synopsis:

Description:

(A brief description of the defect)

(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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