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# Important Information for Windows NT 4.0 ATI Graphics Driver

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***READ THIS FILE COMPLETELY BEFORE ATTEMPTING TO USE THIS PRODUCT!***

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## Introduction

This file contains important information for Windows NT 4.0 ATI graphics driver software.

The Graphics device drivers supplied here are for the Microsoft Retail Release of the Windows NT 4.0 operating system.

The drivers will substitute 640x480 by 256 colors if the mode selected is NOT supported by the ATI graphics hardware.

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## Known Limitations

Some applications do not handle 24bpp and 32bpp properly, producing incorrect colors.  
Hardware acceleration is not supported for 8bpp and 24 bpp in D3D and OGL.

***What to do if "ACCELERATOR not found" message appears:***

- Is there another adapter card in the system that CONFLICTS with I/O locations in the 350-35F hex range? Relocate the I/O to 300 to 31F range.
- Currently, NT4.0 does not take advantage of AGP memory.
- OGL will not work unless the NT 4.0 Service Pack 3, or greater, is installed. Please see Microsoft for the latest operating system update.
- OpenGL acceleration is only available for 16bpp and 32bpp.

## OpenGL Information for Rage128 NT driver

### Application Issues

The following issues are currently under investigation, and updated drivers will be made available as soon as possible.

SoftImage is broken when using hw accelerated page flipping (majority of the screen does not show up). In order to use SoftImage with this release, page flipping must be disabled via the OpenGL public panel.

The OpenGL public panel allows the user to modify the behavior of the OpenGL driver. There are several buttons the user may toggle to achieve improved performance or better quality. The user may opt to simply select either the 'Performance' button or the 'Quality' button which will set the individual buttons to the desired settings. See the help included with the panel for more details.

This panel is accessible through the Display Properties applet as part of an installed Rage128 driver set. If the OpenGL panel is not displayed in the Display Properties applet, the registry can be modified to enable it. To display the OpenGL public panel, set the value 'OpenGL' in the key HKLM\SOFTWARE\ATI Technologies\Desktop, to one (see instructions below).

### **Notes regarding certain OpenGL games**

OpenGL is an advanced 3D API available to games and applications. Some OpenGL games and applications were designed prior to the recent high-end capabilities of Rage 128.

ATI recognises the need to address these kinds of situations, and have placed a number of options in an ATI specific Control Panel. Included in these control panels is the ability to enable or disable certain backward compatible features as well as enable or disable performance enhancements. If you cannot access these control panels, a solution is provided below.

**A solution to this problem:** To make available the ATI Control Panels for OpenGL on your system, simply perform the following:

- 1) Run RegEdit (Click on Start, then RUN, then type in REGEDIT and press ENTER)
- 2) Locate the ATI registry directory: [ HKEY\_LOCAL\_MACHINE \ Software\ ATI Technologies \ Desktop ]
- 3) If the keys D3D and OpenGL do not exist, right click on the "Desktop key". Select "Add new DWORD Value".
- 4) Give the word the name OpenGL, and set it to the value of 1 to enable the panel.
- 5) Repeat the procedure and name the key D3D.
- 6) Note: Setting the values to 0 disables the panels.
- 7) Do not change any other settings or registry entries.

This will enable the ATI Control Panel. To access the panels, right click anywhere on the desktop background and choose "Properties". Several MS standard panes pop up as well as ATI panes including OGL. By clicking on the OpenGL tab, several options present themselves.

### **The OGL options are described here:**

OGL Button: Subpixel Precision

Determines number of bits of subpixel precision used. The more bits of subpixel precision selected, the more accurate the final rendered image will be. However, utilizing more bits of subpixel precision could slightly degrade overall performance.

OGL Button: Convert 32 Bit Textures to 16 Bit

Selecting this functionality will allow the OpenGL driver to convert all 32-bit textures sent by the application to 16 bit. This might increase overall performance of an application that makes heavy use of texture maps by reducing the space needed to store the texture maps. However, some color information is lost in the conversion, which could result in slightly degraded image quality.

OGL Button: Disable Dithering When Alpha Blending

Selecting this functionality will disable dithering when alpha blending is enabled. In certain situations, having both dithering and alpha blending enabled will cause undesirable artifacts while rendering. Choosing this functionality could alleviate some of these artifacts seen in some games and needs to be determined on an individual application/game basis. There is no performance impact.

OGL Button: Wait for Vertical Sync

Selecting this functionality will enable the driver to wait for vertical sync before swapping full screen buffers. This could increase the overall performance of full screen applications by eliminating the need to wait until the vertical blank period of the monitor refresh to perform the swap. However, tearing artifacts could be introduced as a result of not waiting for vertical blank.

#### OGL Button: Enable Page Flipping

Selecting this functionality will enable the use of HW supported page flipping to swap full-screen buffers. If not selected, a DirectDraw blt will be used to swap the contents of the buffers. Page Flipping is faster in most cases and should be selected for better performance.

#### OGL Slider: LOD Bias

Select LOD bias for mipmap selection. This value will determine when a switch between mipmaps will occur. Sliding this value to the left will result in the mipmap selection being biased towards the larger, more detailed mipmaps. This will 'sharpen' the mipmapped images to some degree. Sliding this value to the right will result in the mipmap selection being biased towards the smaller, less detailed mipmaps. This will render the mipmapped images slightly more 'fuzzy'. Modifying this value could improve the image quality of mipmapped scenes. However, it is possible that other undesirable mipmapping artifacts can be introduced if this value is changed.

#### OGL Button: Enable KTX Buffer Region Extension

Selecting this functionality will enable the KTX buffer region extension. This extension is used in conjunction with 3D StudioMax to optimize the storage of buffer regions in the local framebuffer. This translates into a more usable system by allowing fast updates of portions of the screen that have been moved or otherwise occluded.

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### **Reporting Problems**

If you experience any difficulties, open the file REPORT.TXT and complete the Problem Report form.

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