# Intel® Extreme Graphics for 845G/845GL Chipset User's Guide for Version 11.x Driver Releases

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# I. Introduction

Welcome! The Intel® 845G/GL chipset is Intel's first integrated graphics chipset designed for the Intel® Pentium® 4 Processor. The Intel 845G/GL chipset contains an entirely new 32bpp graphics hardware engine, known as Intel Extreme Graphics, which has been designed and built by Intel to optimize the performance of the Intel Pentium 4 Processor. Intel Extreme Graphics delivers higher 2D/3D graphics performance and a rich, high quality video experience to the user.

This document explains how to install the driver and describes how to use the additional software that comes with it. Detailed white papers are available for users seeking additional technical information on special, Intel-developed technologies contained within the Intel Extreme Graphics Driver, such as Intel® Dynamic Video Memory Technology (DVMT) and Intel® Zone Rendering.

Get ready to experience the power of Intel Extreme Graphics!

# II. Setup and Installation

## 2.1 Introduction

This chapter gives an overview of the operating systems that are supported by the Intel Extreme Graphics Driver. In addition, this chapter provides information on how to install the driver, verify the installation, uninstall the driver and customize the setup.

## 2.2 Operating Systems Supported

The Operating Systems supported by the Version 11.x driver release are:

- Microsoft* Windows* 98 Second Edition
- Microsoft* Windows* ME
- Microsoft* Windows* NT* 4.0
- Microsoft* Windows* 2000
- Microsoft* Windows* XP
- Linux Support – See Linux User's Guide.
- OS/2* Support – See driver's README and release notes available at: http://downloadfinder.intel.com

## 2.3 Installing the Drivers

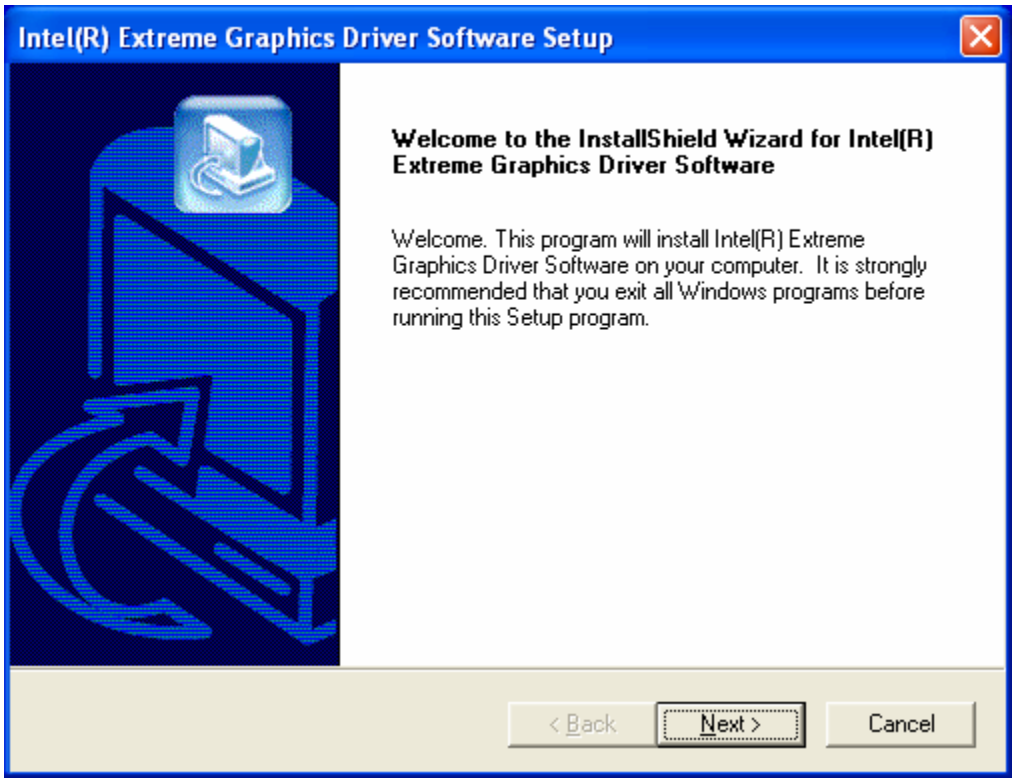
The Intel Extreme Graphics Driver can be installed using a variety of methods. The sections below detail the available methods.

### 2.3.1 Using Setup

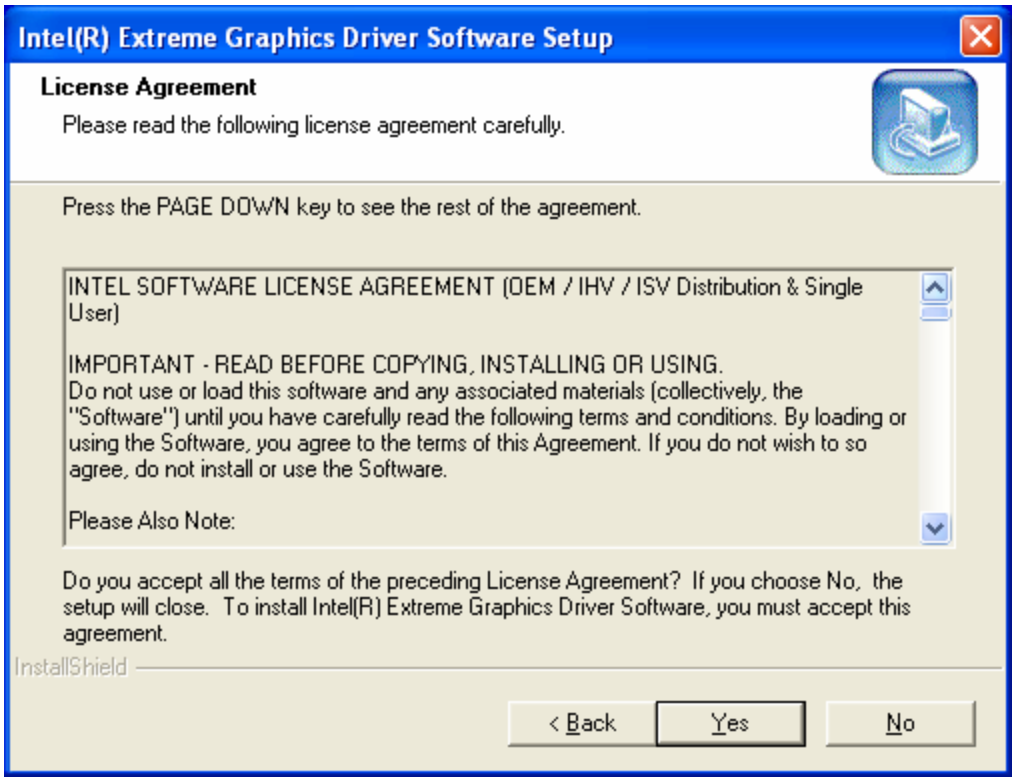
The easiest way to install the Intel Extreme Graphics Driver is to run the InstallShield* Setup program.

The Intel Extreme Graphics Driver is packaged in a self-extracting executable. To invoke the InstallShield setup program, just double-click the downloaded file.

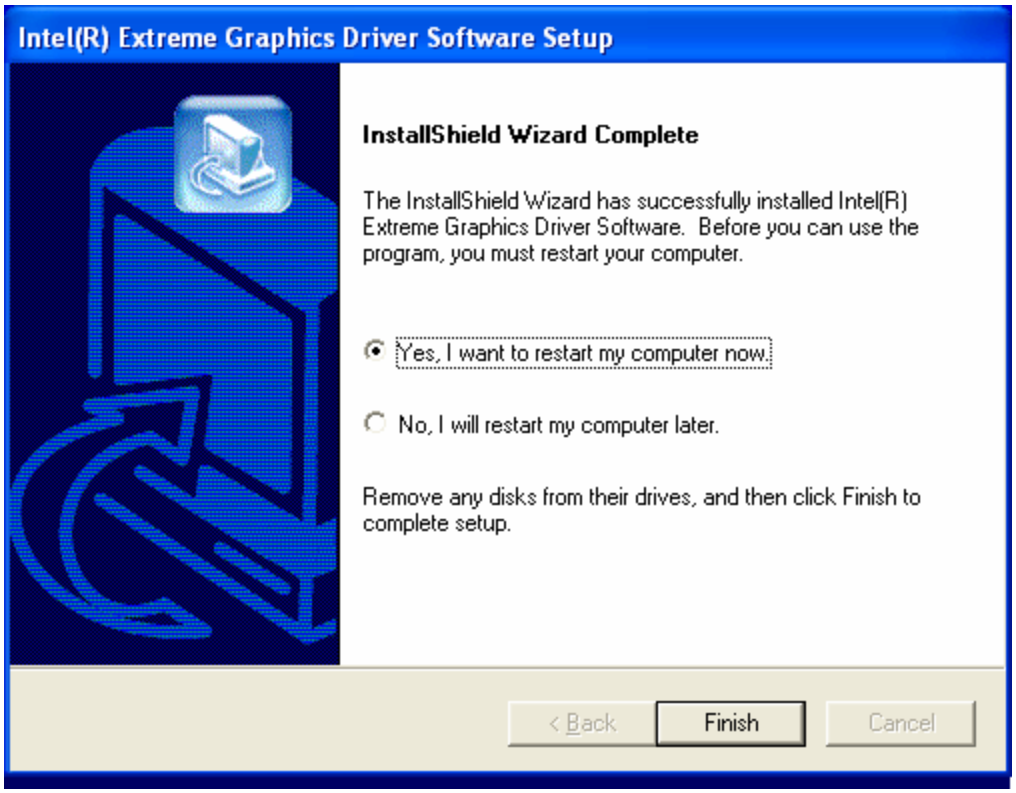
Click "Next" on the Welcome screen.



Read the license agreement and click "Yes" if you accept the terms and wish to continue.




The driver files will now be installed. When the install finishes, choose the "Yes." option to restart, and click "Finish" to restart your computer. The driver will now be loaded. To determine if the driver has been loaded correctly, refer to the Verifying Installation section below.




Press “Finish” to complete the installation process. Your system will automatically reboot.

### 2.3.2 Customizing Setup

The Intel Graphics Driver setup program can be customized to suite your particular needs. The options are not case- sensitive and may be specified in any order – except the “-s” command. The options must also be separated by spaces.

SETUP [-b] [-g{xx[x]}] [-overwrite] [-nolic]
[-16x640x480x60] [-l{lang_value}] [-f2<path\logfile>] [-s]

-b Forces a system reboot after the installation completes when used with -s (silent mode). In non-silent mode, this switch has no effect. In silent mode, the absence of this switch forces the Setup.exe to complete without rebooting (the user must manually reboot to conclude the installation process).

-g{xx[x]} Forces the configuration of a specific language version of the driver during the install. The absence of this switch will cause the installation to utilize the language of the OS locale as its default.

-overwrite  Installs the graphics driver regardless of the version of the previously installed driver.  In non-silent mode, the absence of this switch will prompt the user to confirm overwrite of a newer Intel Graphics driver.  In silent mode, the absence of this switch means that the installation will abort any attempts to regress the revision of the Intel Graphics driver.

-16x640x480x60 (-<color>x<x_pixels>x<y_pixels>x<vert_refresh>)
Sets the four default display parameters: bits per pixel, pixels per line, pixels per column, and vertical refresh rate.

-l{lang_value}  Specifies the language used for the installation user interface. The absence of this switch will cause the installation to utilize the language of the OS as its default.

-s  Run in silent mode. The absence of this switch causes the install to be performed in verbose mode.

-f2<path\logfile>  Specifies an alternate location and name  of the log file created by a silent install. By default, Setup.log log file is created and stored during a silent install in the same directory as that of Setup.ins.

### 2.3.3 Self-Extracting EXE Installation Switches Available

For a driver that is packaged as a self-extracting EXE file, such as WINXXX.EXE, switches can be passed to SETUP.EXE by having them follow the -A switch for the self-extracting EXE file.

WINXXX [-s] [-A <setup switches>]

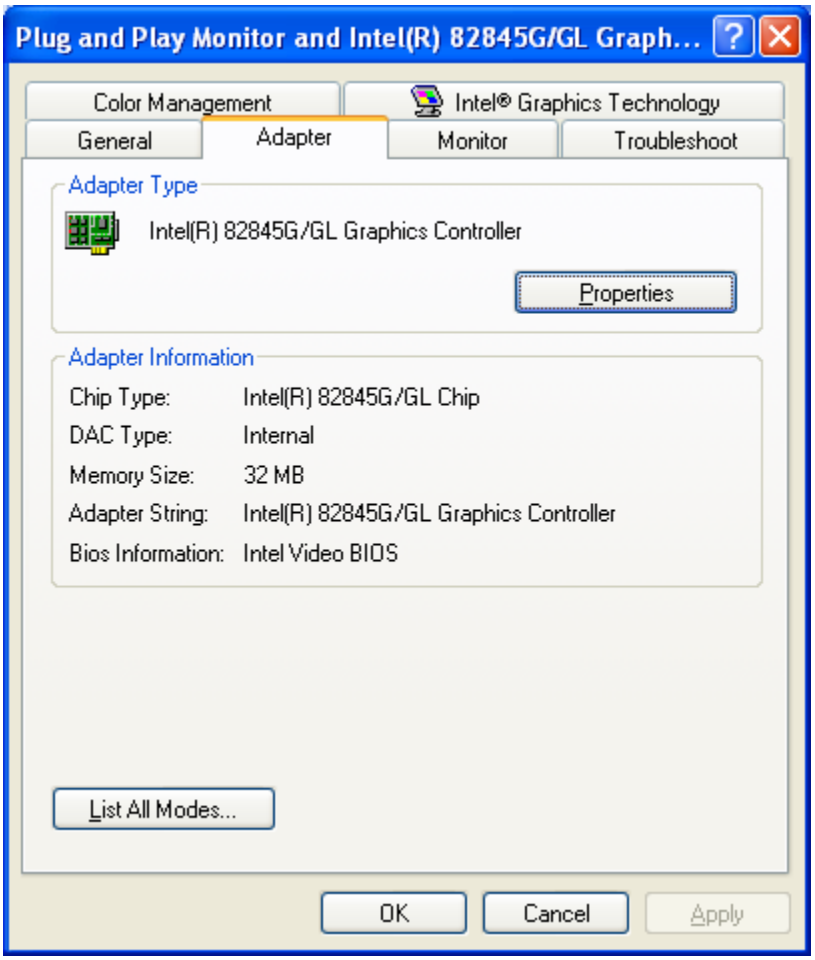
-s  Extract files to the TEMP directory in silent mode.  The absence of this switch causes the self-extracting EXE to prompt the user for the path to extract the files.

-A  Used to pass parameters to SETUP.EXE.  Switches for SETUP.EXE follow this switch.

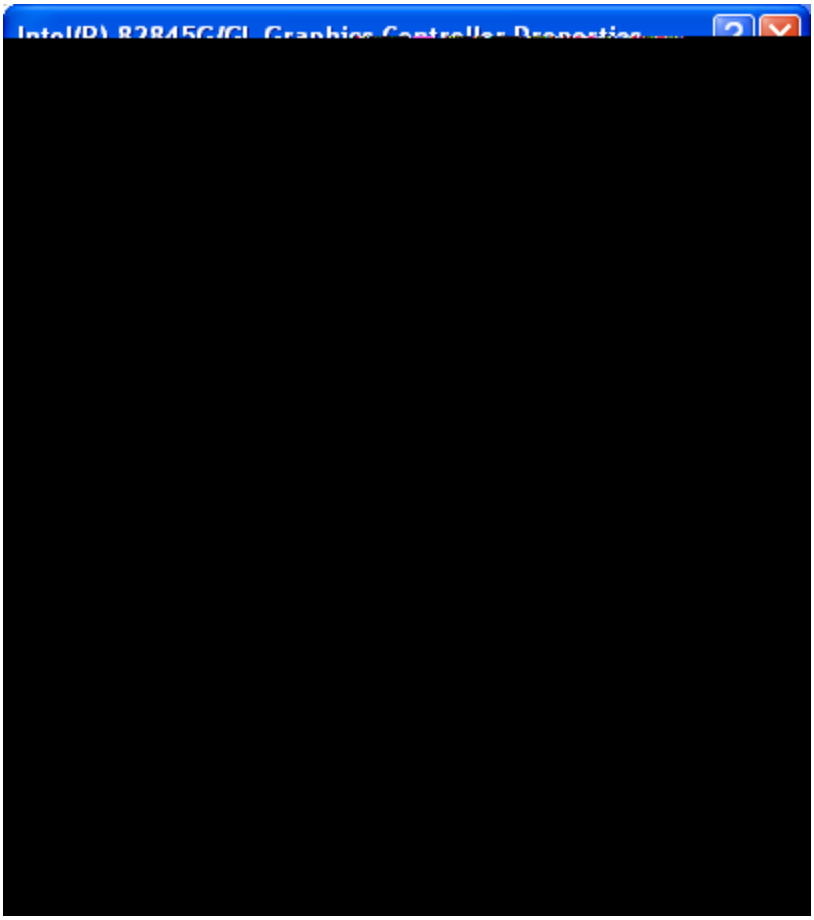
### 2.3.4 Manual Driver Installation

To install the graphics driver without the use of the Setup.Exe program, follow the steps listed below for Microsoft Windows 2000 and Microsoft Windows XP OSs. Microsoft Windows 98SE and Microsoft Windows ME OSs have slightly different menus, but the procedure is very similar.

1. Right click on Desktop
1. Select “Properties”
2. Select the “Settings” tab
3. Click on “Advanced”
4. Click the “Adapter” tab




5. Click on “Properties”
6. Click on “Driver”
7. Click on “Update Driver”



8. At this point, you can either search for the recommended drivers or browse for a specific driver. See Figure 2.1.

### 2.3.6 Uninstalling the Driver

Using the “Add/Remove” applet within the system’s control panel can uninstall the Intel Extreme Graphics Driver for 845G/845GL chipset. Upon reboot, the system will then default to Microsoft’s Standard VGA driver.

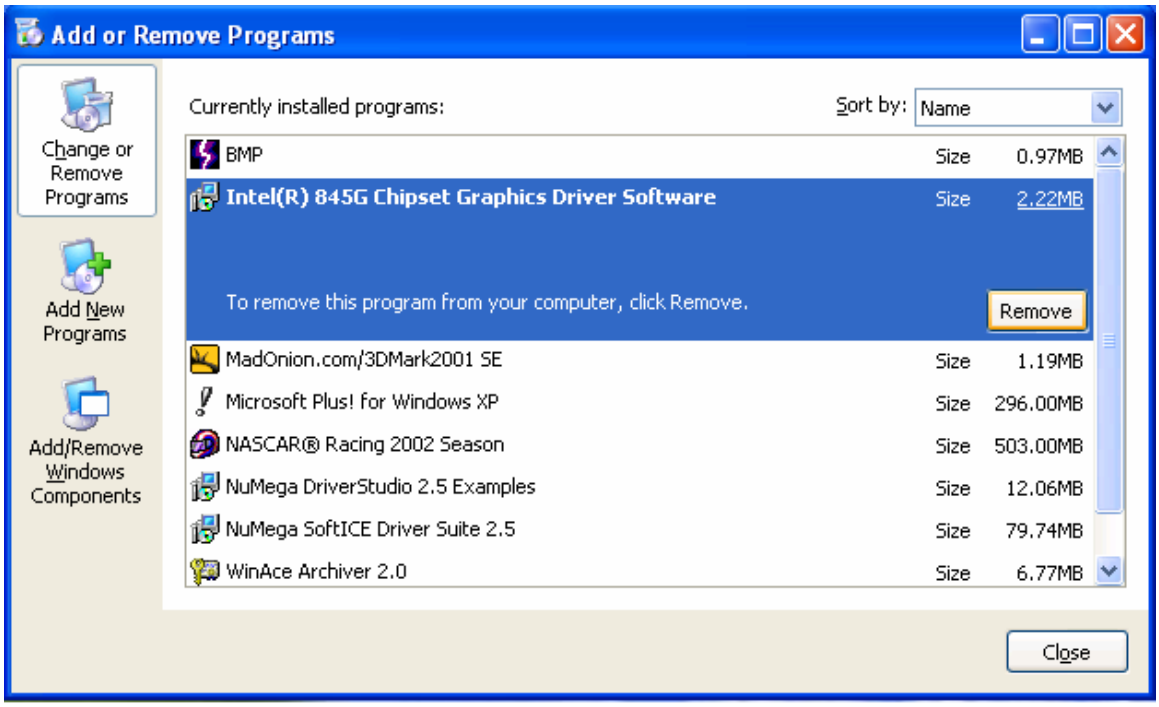



Figure 2.3 - The add/remove program applet screen with the Intel Extreme Graphics Driver highlighted.

If the driver does not appear within the Add/Remove program list, an alternative method to remove the driver is to use the Display program applet.

1. Click the "Start" button.
2. Click the "Control Panel" item.
3. Click the "Display" icon. You should be in the "Display Properties" window.
4. Click on the "Settings" tab.
5. Click the "Advanced" button.
6. Click the "Adapter" tab.
7. Click on the "Properties" button.
8. Click the "Driver" tab.
9. Click the "Uninstall" button.
10. Click “OK” in the “Confirm Device Removal" window. See Figure 2.4.
11. Click “Yes” when asked to restart the system

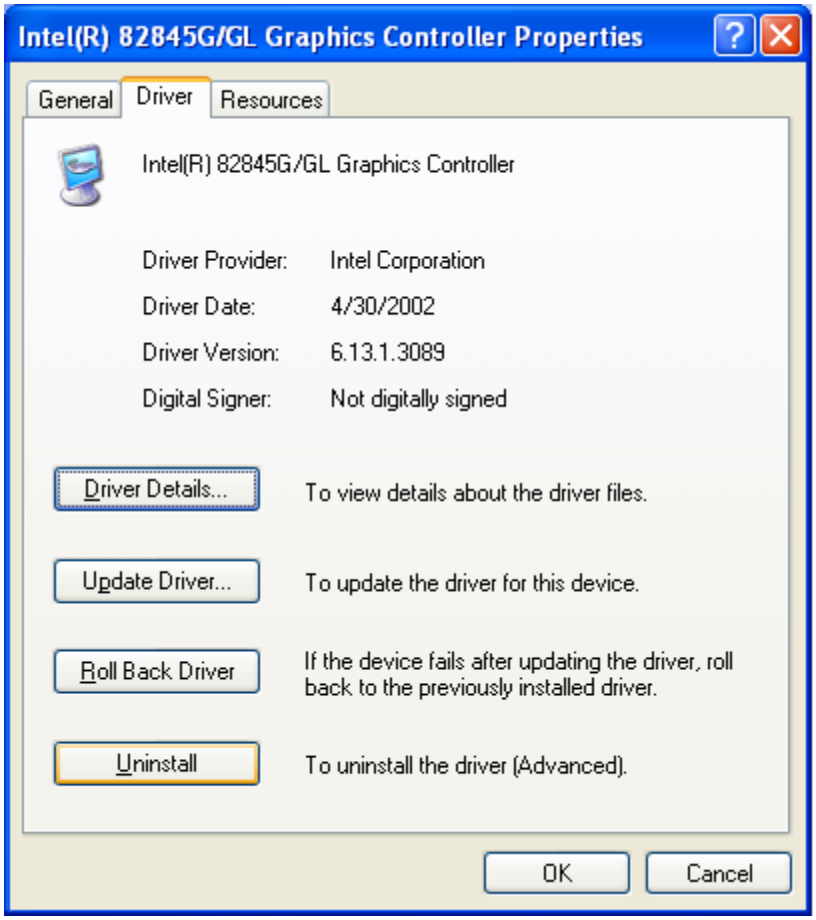



Figure 2.4 – The alternate method for un-installing the Intel Extreme Graphics Driver

The system will confirm that you are removing the driver for the graphics driver. Once rebooted, the system will then be loaded with Microsoft's standard VGA driver. The Intel Extreme Graphics Driver must be re-installed to use the advanced graphics features of the chipset.

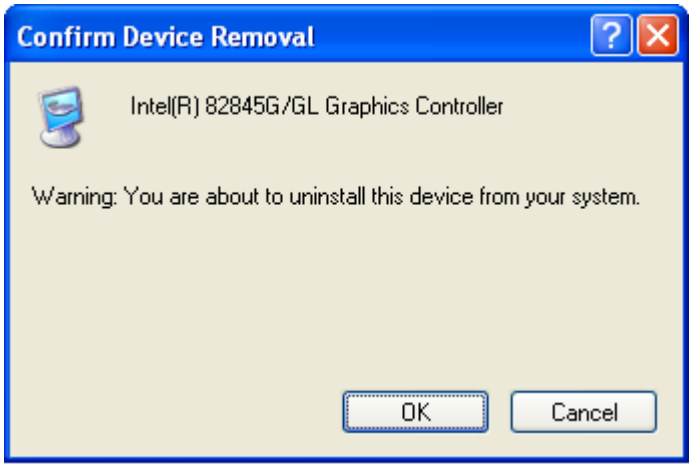



Figure 2.5. Page confirms driver will be uninstalled.

# III. User Interface / Property Pages

## 3.1 Overview

The Intel Extreme Graphics Driver extends the standard device property pages included with the operating systems by installing its own extended set of property pages. This chapter details the options available to the user through these extended property pages.

## 3.2 Accessing the Extended Property Pages

There are several methods for accessing Intel's graphics property pages. Some access methods are dependant upon the operating system. However, the simplest and most common way is as follows:

1. Right click on the desktop
2. Select "Properties"
3. Select the "Settings" tab
4. Select the "Advanced" button
5. Click on the "Intel® Graphics Technology" tab to access the Configuration page

The Intel Extreme Graphics Driver also installs a control panel applet that allows quick access to the display configuration options.

1. Click on "Start" button.
2. Click on "Settings."
3. Select "Control Panel."
4. Double click the "Intel® Graphics Technology" icon.

Depending on the installation options selected (see above), a shortcut for the extended configuration page may be installed in the systems task bar. Simply click on the Intel Graphics Technology icon to show the configuration pages.

## 3.3 Using the extended property pages

### 3.3.1 Intel Graphics Technology Page

The Intel Graphics Technology page contains general information about the graphics controller that may be useful, as well as links to important sites. The web addresses can be clicked to open a web browser with the corresponding page loaded.

The default information contained on this page is as follows (from top to bottom):

1. Vendor of the user's system.
2. Version of the graphics driver.
3. Intel's corporate web site for general information about Intel.
4. The Web location for the latest released versions of all Intel drivers.
5. The web site for further support information.
6. "Show Tray Icon" checkbox which disables and enables the tray icon.

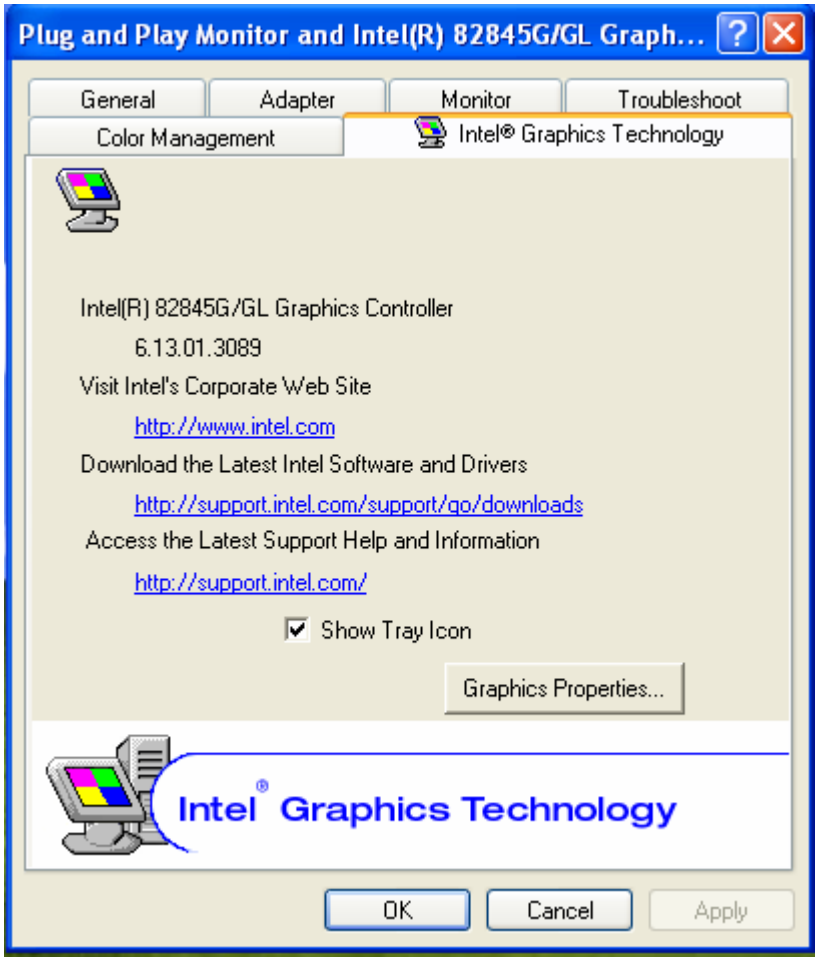



Figure 3.4. Intel® Graphics Technology Property Page

To access more advanced Property Pages, click on the "Graphics Properties" button on the "Intel® Graphics Technology" tab.

### 3.3.2 Devices Page

The Devices page is the first page shown after clicking the “Graphics Properties” button on the bottom of the Intel Graphics Technology Property page.

See Figure 3.5. To activate a device, the user selects the device or configuration from the selection bar, makes any desired configuration settings, and clicks the “activate device” check box at the bottom of the screen. With this box checked, the physical device will be activated when the user clicks OK or Apply.

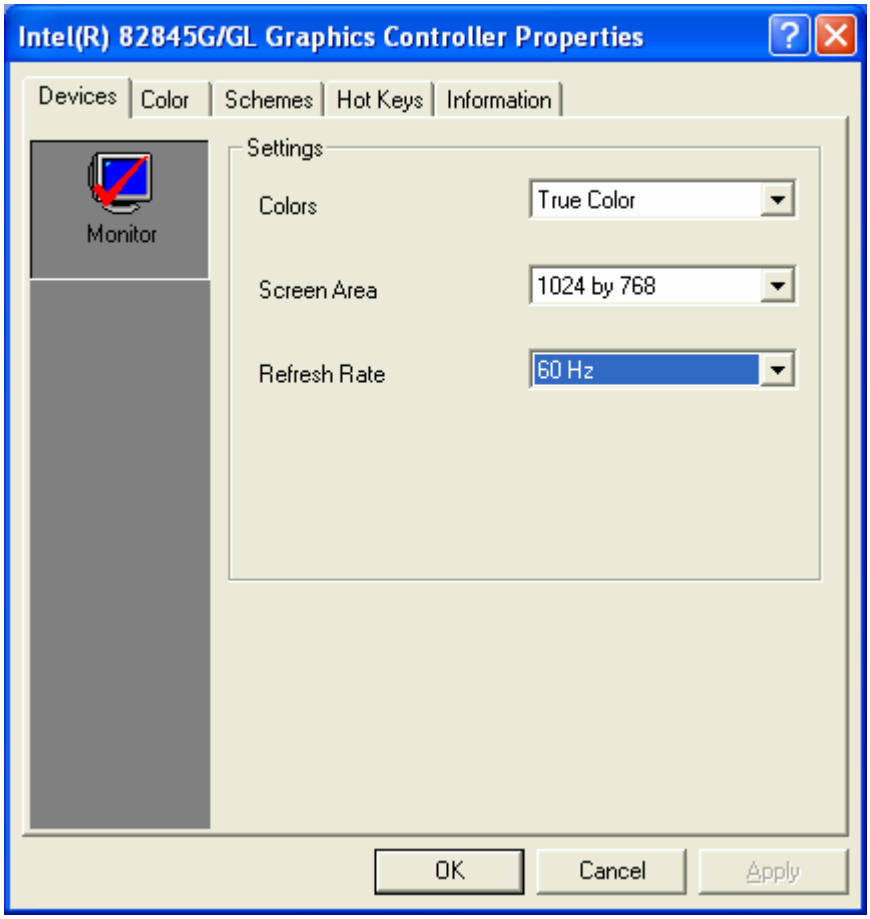



Figure 3.5. The Devices Page.

### 3.3.3 Extended Color Page

The Color settings property page gives the user control over the tinting of the colors displayed on the desktop. See Figure 3.6. This feature is offered on all operating systems. However, when utilizing any NT-based operating system, such as Windows* 2000 or Windows* XP, in power user/restricted user mode the color settings cannot be changed.

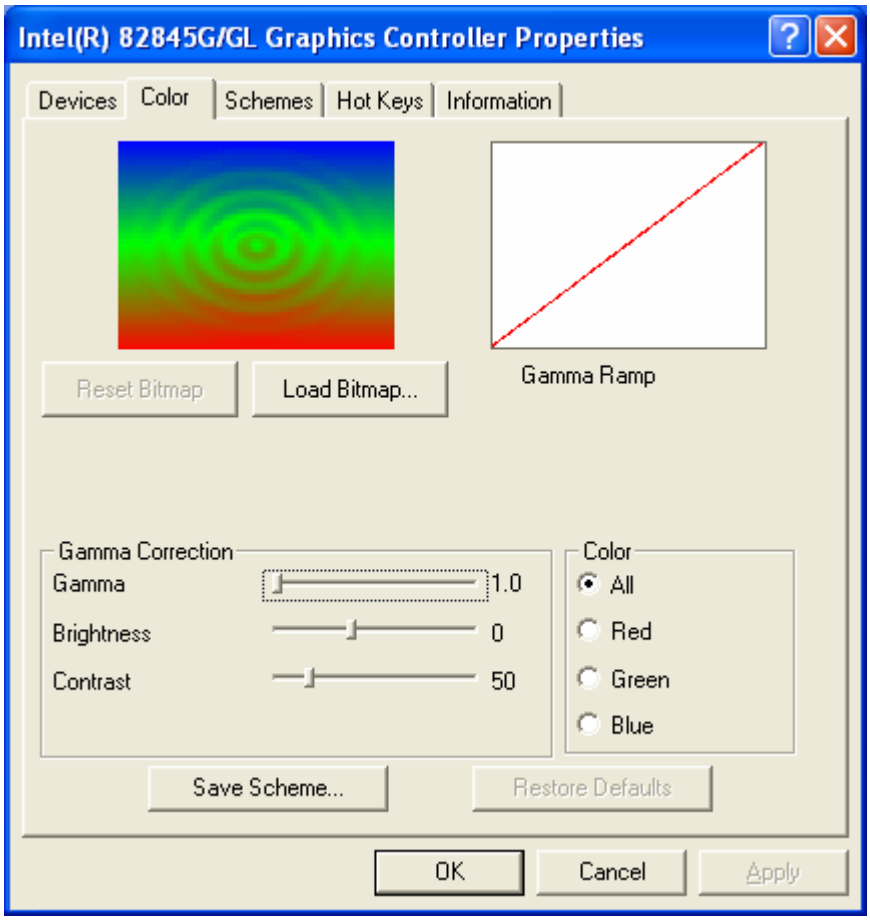



Figure 3.6. This is the Color Page.

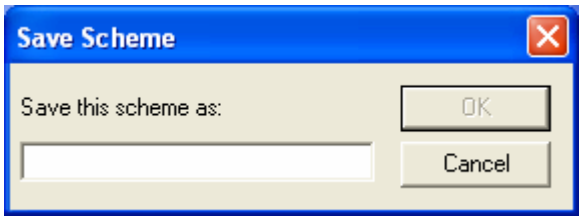
The image located in the top left corner of the color page is used to show how the color adjustments affect a selected image.

Gamma Correction is accomplished by adjusting three attributes of each color component:: gamma, brightness, and contrast. First, select a color from the set of color options (All, Red, Green, Blue). Next, move the sliders to adjust the gamma, brightness, or contrast for the selected color(s).

The image in the top right corner of the color page is a graphical representation of the gamma ramp. This graph will change when the gamma adjustment sliders are changed.

A sample bitmap is provided to test the different gamma settings. Use the “Load Bitmap” to select an alternative bitmap. The “Reset Bitmap” replaces the currently displayed bitmap with the default.

The “Save Scheme” button saves the current values into a user-specified scheme. Press this button to enter the name of the scheme to be saved.




Use the “Schemes” property pages to access the saved color settings. See the Schemes section.

If the color settings need to be reset, use the “Restore Defaults” to undo all color changes.

### 3.3.4 Schemes Page

A user can use the “Schemes” page with the Version 11.x driver to customize desktop settings to be associated with a scheme. See Figure 3.7. Specialized schemes can store the settings for the default output device, desktop mode (screen resolution and color depth), brightness, contrast, and gamma settings. In addition, a scheme can be associated with a particular application and reset on application termination. This feature is not available when using the Windows* NT*4.0 operating system.

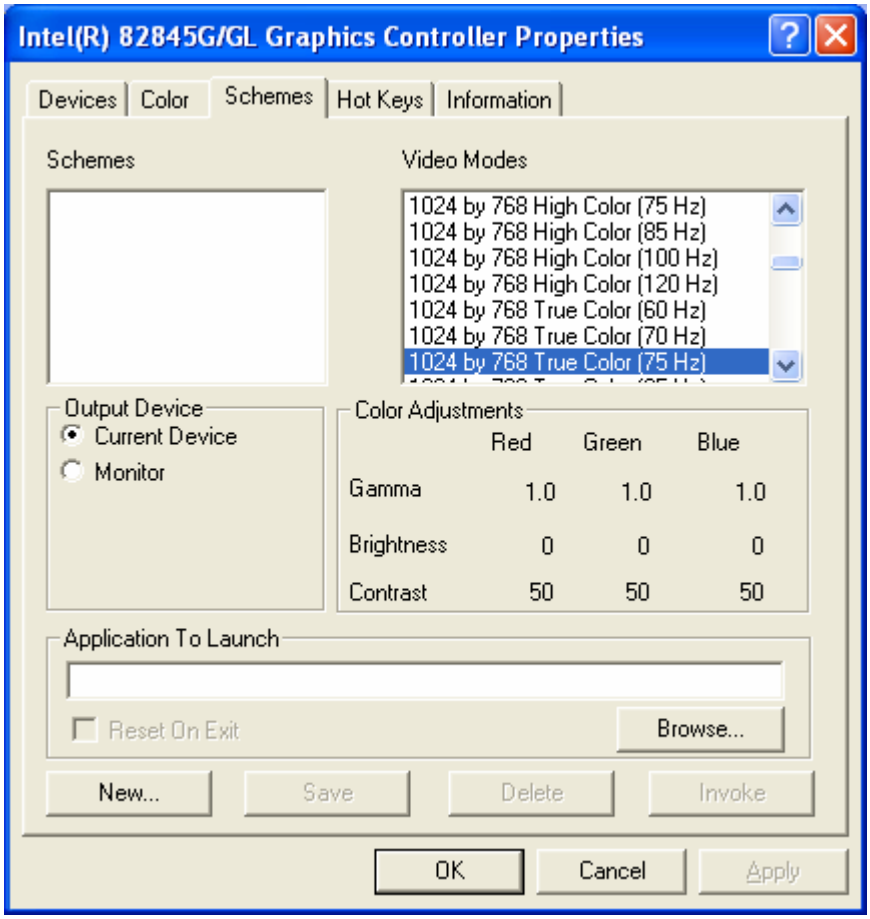
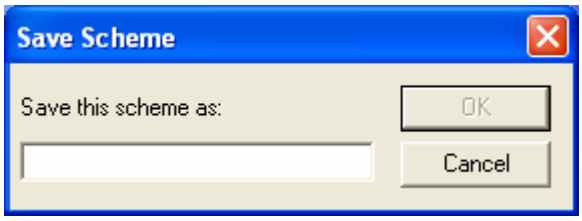


Figure 3.7. This is the Schemes Page.

Users can quickly create new user schemes from this property page. Select “New” and a dialog box will prompt the user for a unique name:




**Schemes**
The Schemes selection box contains all of the Schemes previously saved by the user. When selected, the values on the rest of the page will reflect the current values saved in this scheme. Schemes can be edited in place, or Saved and Deleted by the buttons at the bottom of the page.

**Video Modes**
The Video Modes Selection box contains a list of all video modes possible for the system. The mode selected in the list will be used with the current scheme when invoked. The current display mode is not used when defining a new scheme if another mode is already selected .

**Output Device**
The Output Device buttons are used to control what output device the scheme will use. This display shows the targeted display device for the selected scheme. If no scheme is selected, the option will be set to “Current Device”. If “Current Device” is selected, the scheme will use whatever display device the user is using at the time of the scheme creation.

**Color Adjustments**
This color table represents the color settings of the scheme. These colors will be set when the scheme is applied. To change these values, the appropriate sliders from the “Color” page must be used.

**Application to Launch**
Enter the name of the application, game, document, URL, etc., which will be launched after the scheme is applied. When the scheme is invoked the color and mode setting will be applied, and the program will be launched. This is useful for running specific applications or games at different modes without manually changing the mode. The “Browse…” button can be used to select a program to be used. Note that some games may require that their shortcut be pasted into this field rather than the path to the executable since the shortcut may provide path and/or configuration options that the game requires to operate correctly. As an example, when Calc.exe is put in the Application to Launch box and saved as “Calc Scheme”, when this scheme is invoked, the calculator application will be invoked.

**Reset On Exit**
When the “Reset On Exit” box is checked, the desktop mode will revert to the previous settings when the application exits. Therefore, the application or game can be run with different mode settings and then returned to its original state when the application is closed.

**New**
Click this button to create a new scheme. A dialog box will prompt the user for a scheme name and a new scheme will be created and added to the Schemes list box. Any text string of 50 characters or less can be used as a name.

**Save**
Use this box to name a scheme for later recall. Also, to modify an existing scheme, the scheme name should be selected and the needed values changed. Click the “Save” button to update the saved scheme.

**Delete**
When the “Delete” button is clicked, the currently selected scheme will be permanently removed from the system. The user will be prompted again to make sure it is OK to remove the scheme before it is actually removed.

**Invoke**
The currently selected scheme can be invoked by clicking the “Invoke” button. Right clicking on the desktop, expanding the “Video Modes” menu, and selecting the correct scheme from the menu can also accomplish this.

### 3.3.5 Hot Keys Page

The Hot Keys page allows the user to either enable or disable the hot keys. See Figure 3.8. The page also provides information on what hot key combinations are supported.

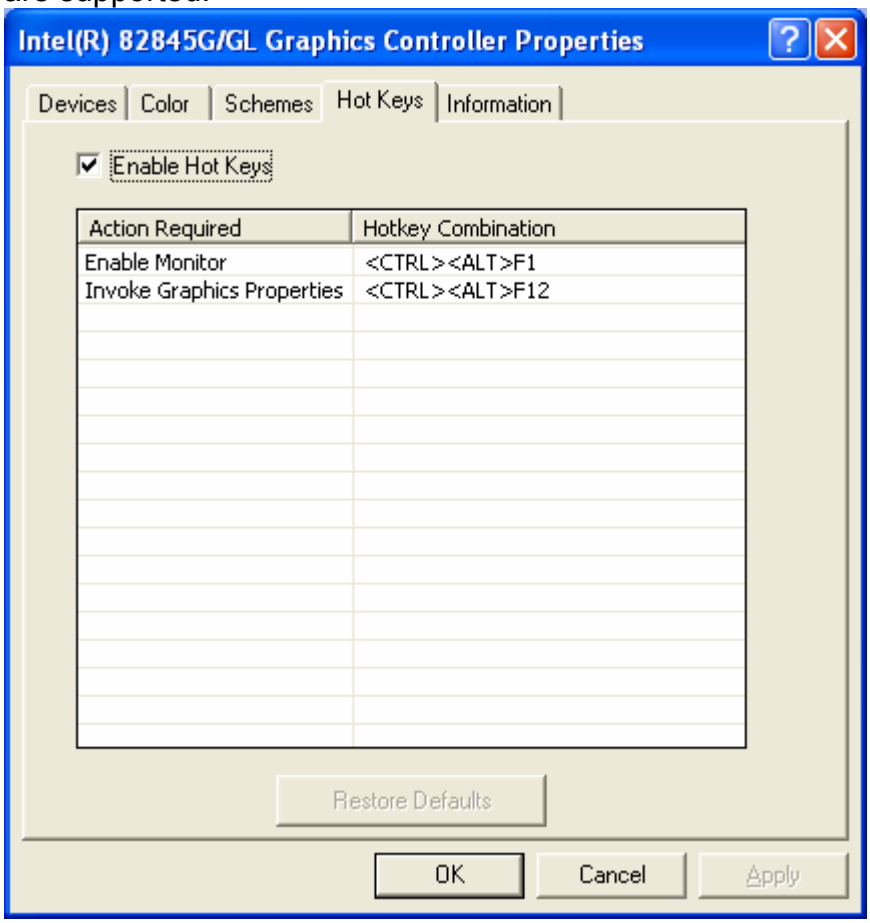



Figure 3.8. This is the Hot Keys page.

### 3.3.6 Information Page

The “Information” property page contains useful information about your configuration. See Figure 3.9. This page has four sub-categories that are listed below.

The “Accelerator” tab contains information about the following:

- Graphics controller name
- Video BIOS version
- Graphics Modes
  - Current Graphics Mode – The display mode that the desktop is currently using.
  - All available modes supported by the graphics controller. Note – Desktop modes are a subset of the available modes the controller supports.

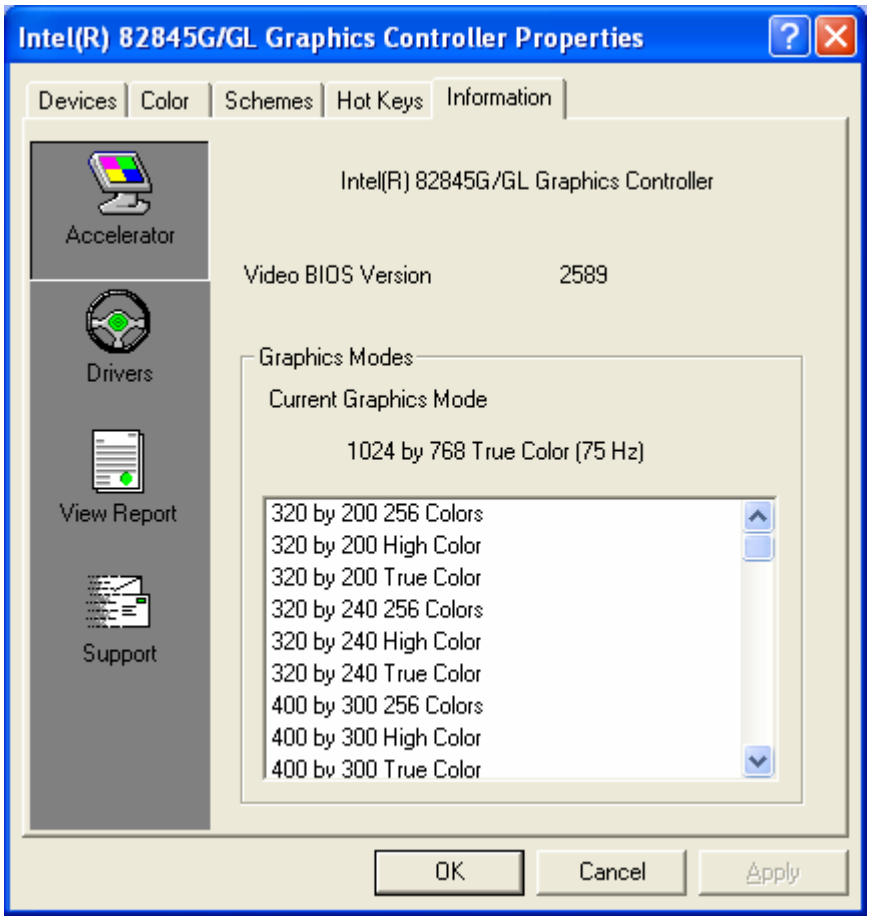



Figure 3.9. This is the Accelerator page.

### 3.3.6.1 Drivers Tab

By clicking on the “Driver” button, driver files and details on the file will be provided. See Figure 3.10. The details that are provided are description, manufacturer, version, and date.

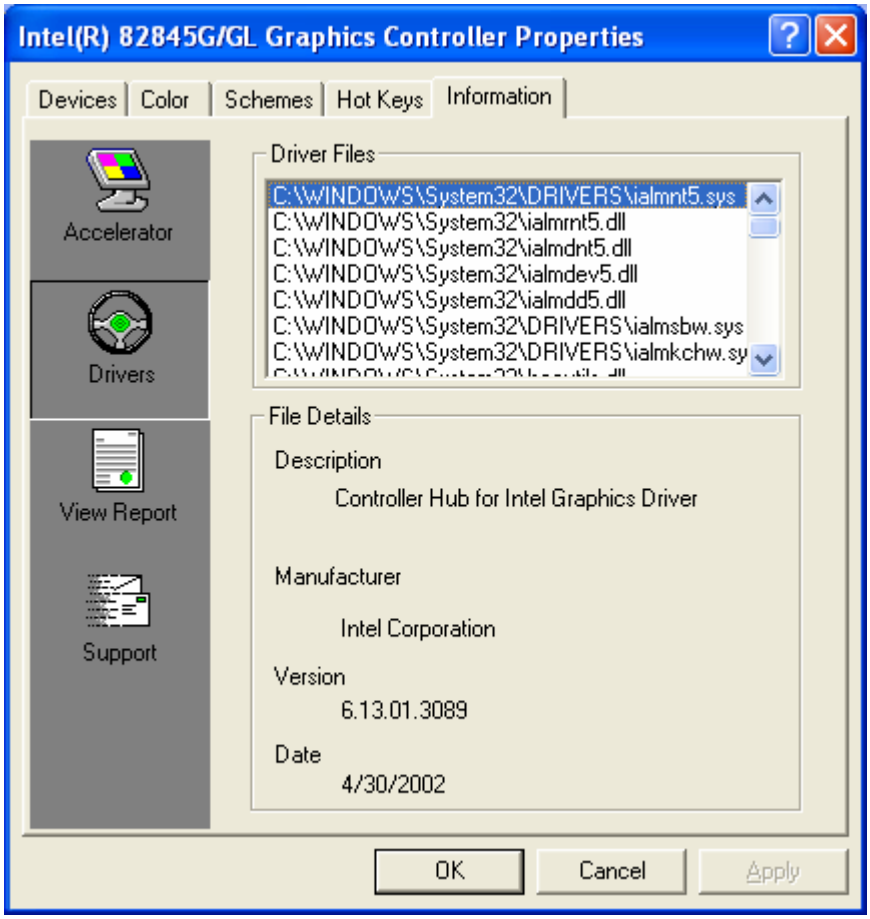


Figure 3.10. This is the Drivers page.

### 3.3.6.2 View Report Tab

By clicking on the “View Report” button, a report page titled “Intel® Graphics Report” will appear. See Figure 3.11. On this page you can find information on Report Date, Report Time, Driver Version, Operating System, Default Language, Microsoft* DirectX* Version, Physical Memory, Processor, Device Vendor ID, and Device Revision.

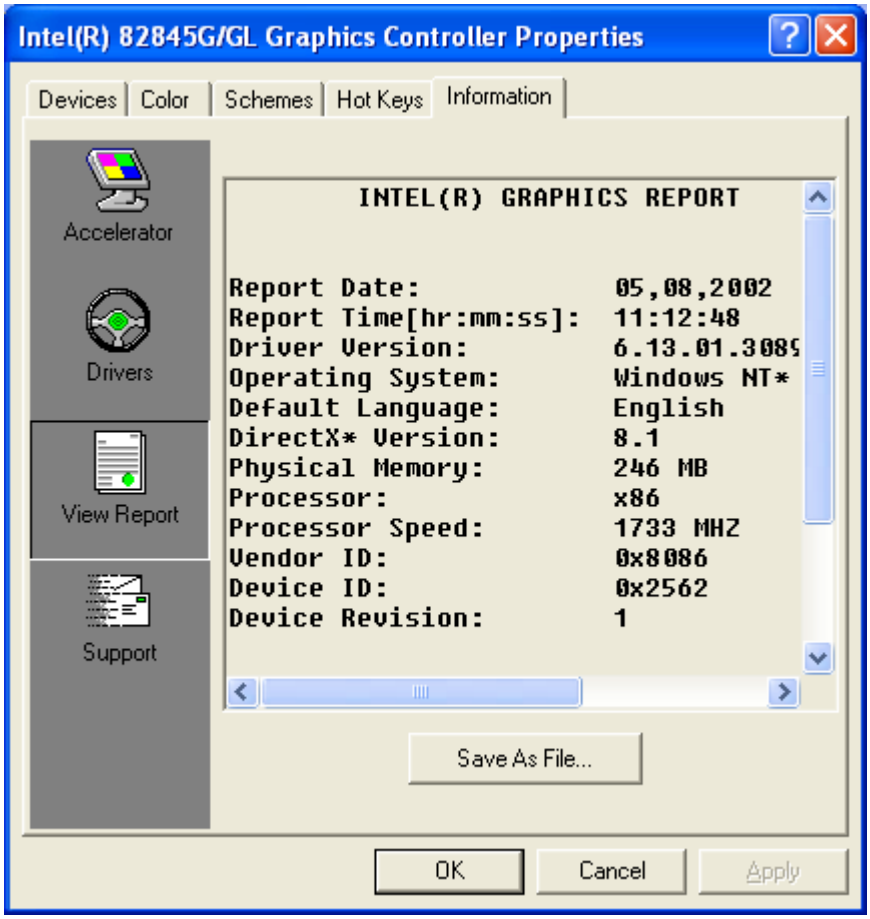


Figure 3.11. This is the View Report page.

### 3.3.6.3 Support Tab

By clicking on the “Support” button, a page containing support resource information appears. See Figure 3.12.

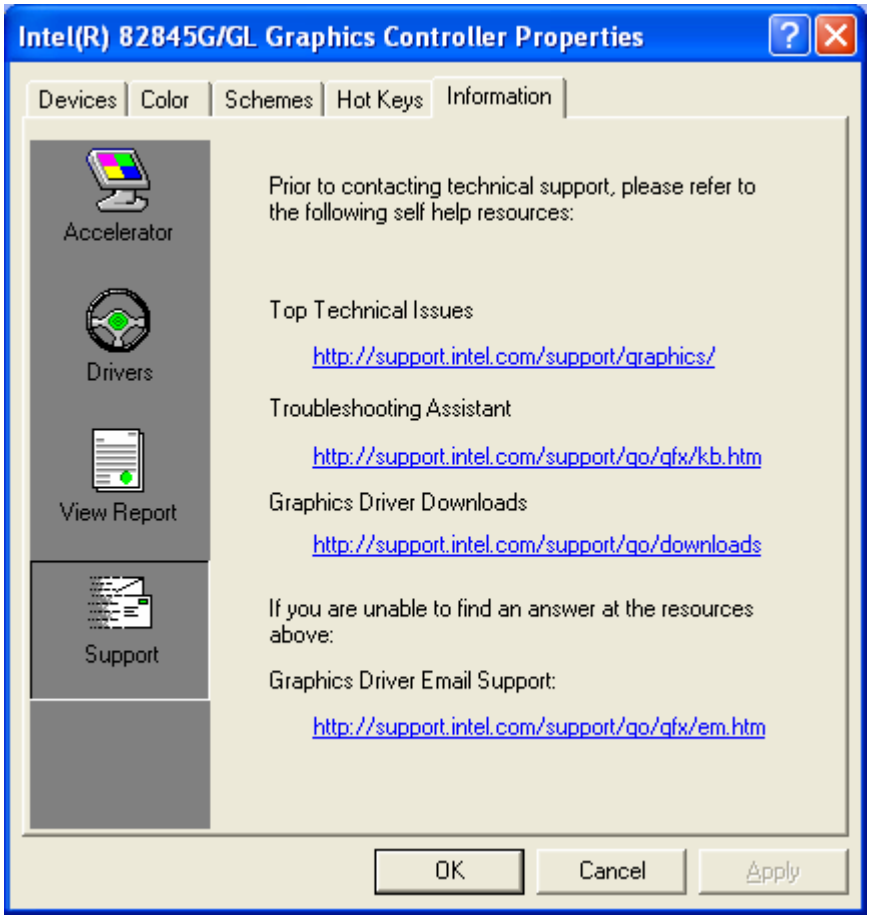



Figure 3.12. This is the Support page.