



Application Note

NVIDIA Quadro GPUs Resolution Tables

Document Change History

Version	Date	Responsible	Description of Change
01	March 3, 2006	FP, SM	Initial Release
02	April 24, 2006	FP, SM	Addition of NVIDIA Quadro FX 350, 550, 560, 1500, 3500, 5500 and 4500 X2
03	February 7, 2007	FP, RG, SM	Removed reference to IBM and Viewsonic
04	February 8, 2007	FP, RG, SM	Removed reference to refresh rates not supported
05	April 27, 2007	FP, RG, SM	Addition of Quadro FX 4600 and Quadro FX 5600
06	September 13, 2007	FP, RG, SM	Addition of Quadro FX 370, 570, 1700 and NVS 290
07	May 19, 2008	FP, RG, SM	Addition of Quadro FX 3700 and 4700 X2

List of Tables

Table 1.	Display Resolutions Support (Up to Digital 1280 x 1024).....	7
Table 2.	Display Resolution Support (Quadro NVS)	10
Table 3.	Display Resolutions (Quadro4 XGL).....	13
Table 4.	Single-Link DVI Display Resolution Support (Up to Digital 1600 x 1200)	16
Table 5.	Single-Link DVI Display Resolutions	19
Table 6.	Dual-Link DVI Display Resolutions	23

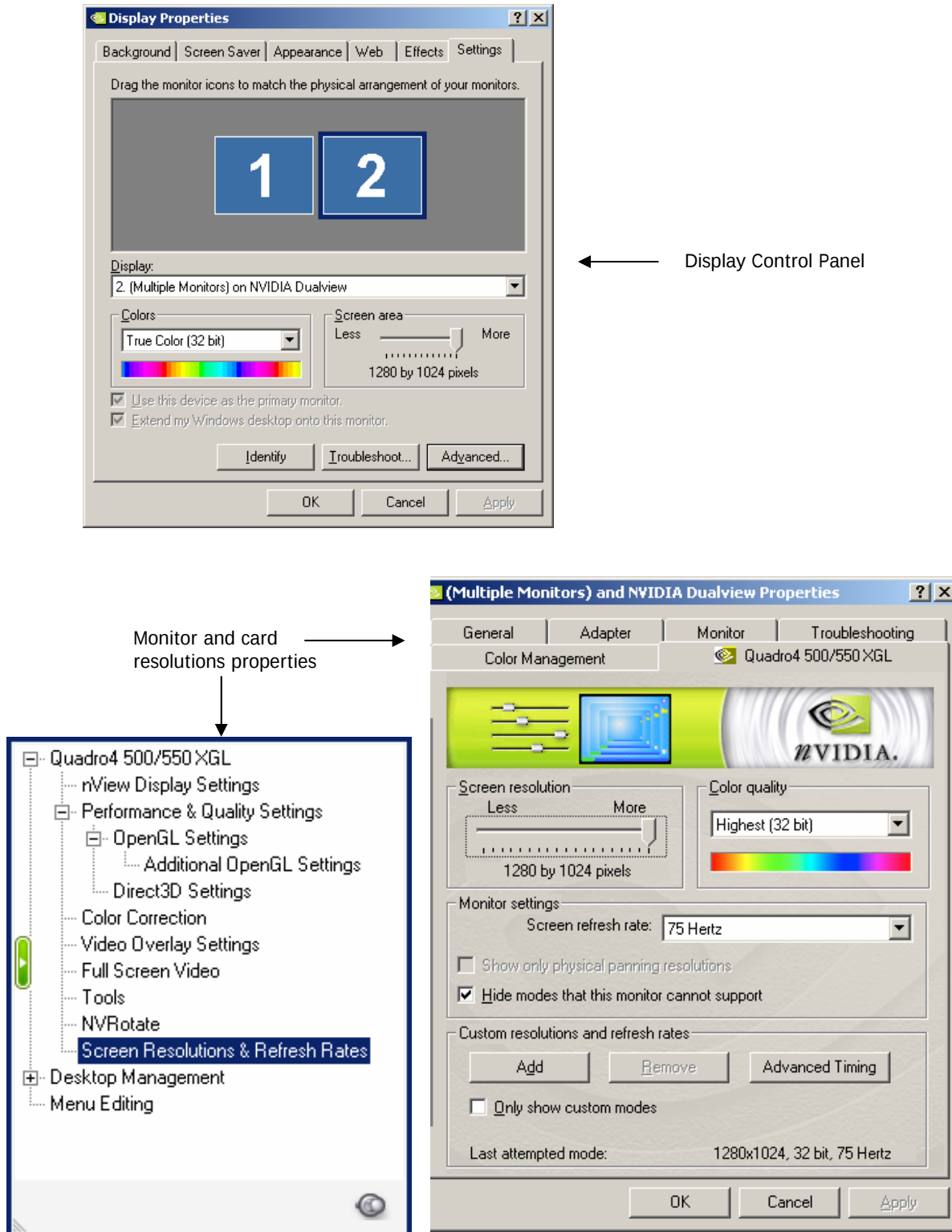


Overview

This application note contains the resolutions capable of being supported by the NVIDIA Quadro® professional solutions graphics processing units (GPUs). The specific model numbers are given in the title of each table.

The resolutions represent modes that are made available based on your specific hardware and monitor combinations. Additional modes not listed may be available for selection in the display control panel (Figure 1). For example, current monitors have the ability to expose what resolutions are supported to the attached graphics card. From this information, a list of valid resolutions are generated and used by the operating system. NVIDIA® products will automatically enable these resolutions as long as they fall within the hardware capabilities.

In special cases, more resolutions can be custom added (Figure 2) by the user and made available, as long as they fall within the hardware capabilities. For more information on adding customer resolutions, please refer to the *ForceWare Graphic User Guide* (section *Changing Screen Resolutions and Refresh Rates*) found on the driver pages on NVIDIA.com.



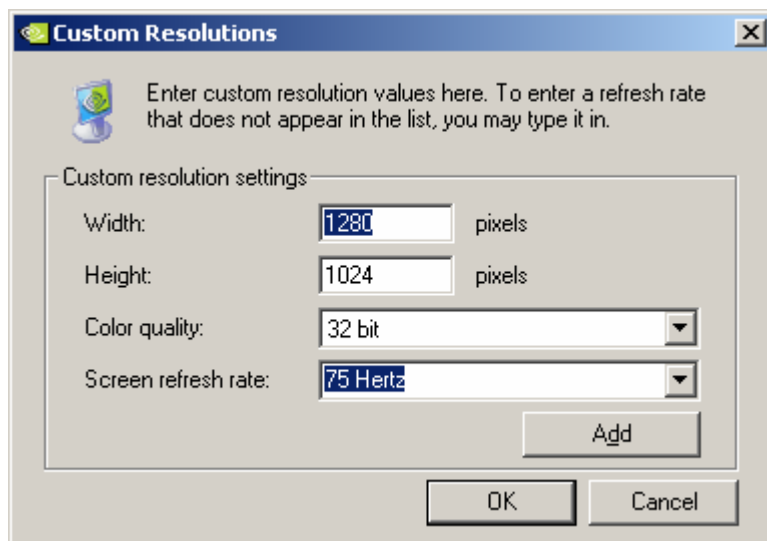


Figure 2. Custom Resolutions

Note: Linux users will need to add a monitor specific mode line.

The tables are separated into resolutions supported by Microsoft's Windows XP. Other operating systems should support the same resolutions or similar.

Your respective notebook vendor will provide you with the maximum resolution support for the VGA-out connector.



Quadro GPUs Resolution Tables

The following are the NVIDIA Quadro® GPUs and their associated resolution table for Windows XP operating system.

- ❑ NVIDIA Quadro 400 NVS (Table 1)
- ❑ NVIDIA Quadro 200 NVS (Table 1)
- ❑ NVIDIA Quadro NVS 280 AGP (Table 2)
- ❑ NVIDIA Quadro NVS 280 PCI Express (Table 2)
- ❑ NVIDIA Quadro NVS 280 PCI (Table 2)
- ❑ NVIDIA Quadro NVS 50 (Table 2)
- ❑ NVIDIA Quadro NVS 285 (Table 5)
- ❑ NVIDIA Quadro NVS 440 (Table 5)
- ❑ NVIDIA Quadro NVS 290 (Table 5)

- ❑ NVIDIA Quadro4 580 XGL (Table 1)
- ❑ NVIDIA Quadro4 380 XGL (Table 1)
- ❑ NVIDIA Quadro4 700 XGL (Table 3)
- ❑ NVIDIA Quadro4 750 XGL (Table 3)
- ❑ NVIDIA Quadro4 900 XGL (Table 3)
- ❑ NVIDIA Quadro4 980 XGL (Table 3)

- ❑ NVIDIA Quadro FX 2000 (Table 6)
- ❑ NVIDIA Quadro FX 1000 (Table 4)
- ❑ NVIDIA Quadro FX 500 (Table 4)
- ❑ NVIDIA Quadro FX 3000 (Table 6)
- ❑ NVIDIA Quadro FX 3000 G (Table 6)
- ❑ NVIDIA Quadro FX 1100 (Table 4)
- ❑ NVIDIA Quadro FX 600 PCI (Table 5)
- ❑ NVIDIA Quadro FX 700 (Table 5)
- ❑ NVIDIA Quadro FX 330 (Table 4)
- ❑ NVIDIA Quadro FX 1300 (Table 4)
- ❑ NVIDIA Quadro FX 4000 SDI [AGP version] (Table 6)
- ❑ NVIDIA Quadro FX 3400 (Table 6)
- ❑ NVIDIA Quadro FX 4000 SDI PCI Express (Table 6)
- ❑ NVIDIA Quadro FX 540 (Table 5)
- ❑ NVIDIA Quadro FX 1400 (Table 5)
- ❑ NVIDIA Quadro FX 4400 (Table 6)
- ❑ NVIDIA Quadro FX 4500 (Table 6)
- ❑ NVIDIA Quadro FX 3450 (Table 6)
- ❑ NVIDIA Quadro FX 350 (Table 5)
- ❑ NVIDIA Quadro FX 550 (Table 5)
- ❑ NVIDIA Quadro FX 560 (Table 6)
- ❑ NVIDIA Quadro FX 1500 (Table 6)
- ❑ NVIDIA Quadro FX 3500 (Table 6)
- ❑ NVIDIA Quadro FX 3700 (Table 6)
- ❑ NVIDIA Quadro FX 5500 (Table 6)
- ❑ NVIDIA Quadro FX 4500 X2 (Table 6)
- ❑ NVIDIA Quadro FX 4700 X2 (Table 6)
- ❑ NVIDIA Quadro FX 4600 (Table 6)
- ❑ NVIDIA Quadro FX 5600 (Table 6)
- ❑ NVIDIA Quadro FX 370 (Table 6)
- ❑ NVIDIA Quadro FX 570 (Table 6)
- ❑ NVIDIA Quadro FX 1700 (Table 6)

The following are the dual-link DVI display resolutions for the follow Quadro GPUs.

- ❑ Single dual-link DVI
 - NVIDIA Quadro FX 2000
 - NVIDIA Quadro FX 3000
 - NVIDIA Quadro FX 3000 G
 - NVIDIA Quadro FX 4000 SDI [AGP version]
 - NVIDIA Quadro FX 3400
 - NVIDIA Quadro FX 3450
 - NVIDIA Quadro FX 4000 SDI PCI Express
 - NVIDIA Quadro FX 560
 - NVIDIA Quadro FX 370
- ❑ Dual dual-link DVI
 - NVIDIA Quadro FX 4000
 - NVIDIA Quadro FX 4400
 - NVIDIA Quadro FX 4500
 - NVIDIA Quadro FX 1500
 - NVIDIA Quadro FX 3500
 - NVIDIA Quadro FX 3700
 - NVIDIA Quadro FX 5500
 - NVIDIA Quadro FX 4500 X2 (consists of 4 dual-link capable ports)
 - NVIDIA Quadro FX 4700 X2 (consists of 4 dual-link capable ports)
 - NVIDIA Quadro FX 4600
 - NVIDIA Quadro FX 5600
 - NVIDIA Quadro FX 570
 - NVIDIA Quadro FX 1700

Note: Single dual-link DVI has only one output capable of the resolution rates (Table 6), whereas dual dual-link DVI has two identical outputs both capable of the resolution rates in Table 6.

Table 1 lists the display resolution support (up to digital 1280 × 1024) for the following Quadro NVS and Quadro XGL GPUs.

- NVIDIA Quadro 400 NVS
- NVIDIA Quadro 200 NVS
- NVIDIA Quadro4 580 XGL
- NVIDIA Quadro4 380 XGL

Table 1. Display Resolutions Support (Up to Digital 1280 x 1024)

Resolution	Bits per Pixel	Refresh Rate (Hz)													
		Shaded: Digital and Analog Support Nonshaded: Analog Support Only Bold: Digital Only													
320 × 200	8	60	70	72	75										
	16	60	70	72	75										
	32	60	70	72	75										
320 × 24	8	60	70	72	75										
	16	60	70	72	75										
	32	60	70	72	75										
400 × 300	8	60	70	72	75										
	16	60	70	72	75										
	32	60	70	72	75										
480 × 360	8	60	70	72	75										
	16	60	70	72	75										
	32	60	70	72	75										
512 × 384	8	60	70	72	75										
	16	60	70	72	75										
	32	60	70	72	75										
640 × 400	8	60	70	72	75										
	16	60	70	72	75										
	32	60	70	72	75										
640 × 480	8	60	70	72	75	85	100	120	140	144	150	170	200	240	
	16	60	70	72	75	85	100	120	140	144	150	170	200	240	
	32	60	70	72	75	85	100	120	140	144	150	170	200	240	
720 × 480	8	60													
	16	60													
	32	60													
720 × 576	8	60													
	16	60													
	32	60													
800 × 600	8	60	70	72	75	85	100	120	140	144		170	200	240	
	16	60	70	72	75	85	100	120	140	144		170	200	240	
	32	60	70	72	75	85	100	120	140	144		170	200	240	

Resolution	Bits per Pixel	Shaded: Digital and Analog Support Nonshaded: Analog Support Only Bold: Digital Only												
		Refresh Rate (Hz)												
848 × 480	8	60	70	72	75	85	100	120	140	144		170	200	240
	16	60	70	72	75	85	100	120	140	144		170	200	240
	32	60	70	72	75	85	100	120	140	144		170	200	240
1024 × 768	8	60	70	72	75	85	100	120	140	144	150	170	200	240
	16	60	70	72	75	85	100	120	140	144	150	170	200	240
	32	60	70	72	75	85	100	120	140	144	150	170	200	
1152 × 864	8	60	70	72	75	85	100	120	140	144	150	170	200	
	16	60	70	72	75	85	100	120	140	144	150	170	200	
	32	60	70	72	75	85	100	120	140		150	170		
1280 × 720	8	60	70	72	75	85	100	120	140	144	150	170		
	16	60	70	72	75	85	100	120	140	144	150	170		
	32	60	70	72	75	85	100	120	140		150			
1280 × 768	8	60	70	72	75	85	100	120	140	144	150	170		
	16	60	70	72	75	85	100	120	140	144	150	170		
	32	60	70	72	75	85	100	120	140		150			
1280 × 960	8	60	70	72	75	85	100	120	140	144	150	170		
	16	60	70	72	75	85	100	120	140	144	150	170		
	32	60	70	72	75	85	100	120	140		150			
1280 × 1024	8	60	70	72	75	85	100	120	140	144	150	170		
	16	60	70	72	75	85	100	120	140	144	150	170		
	32	60	70	72	75	85	100	120	140		150			
1360 × 768	8	60	70	72	75	85	100	120	140	144	150	170		
	16	60	70	72	75	85	100	120	140	144	150	170		
	32	60	70	72	75	85	100	120	140		150			
1600 × 900	8	60	70	72	75	85	100	120	140	144	150			
	16	60	70	72	75	85	100	120	140	144	150			
	32	60	70	72	75	85	100	120						
1600 × 1024	8	60	70	72	75	85	100	120						
	16	60	70	72	75	85	100	120						
	32	60	70	72	75	85	100							
1600 × 1200	8	60	70	72	75	85	100	120						
	16	60	70	72	75	85	100	120						
	32	60	70	72	75	85	100							
1920 × 1080	8	60	70	72	75	85	100							
	16	60	70	72	75	85	100							
	32	60	70	72	75	85								
1920 × 1200	8	60	70	72	75	85	100							
	16	60	70	72	75	85	100							
	32	60	70	72	75	85								
1920 × 1440	8	60	70	72	75	85								

Resolution	Bits per Pixel	Refresh Rate (Hz) Shaded: Digital and Analog Support Nonshaded: Analog Support Only Bold: Digital Only												
		60	70	72	75	85								
2048 × 1536	16	60	70	72	75	85								
	32	60	70		75									
	8	60	70	72	75									
	16	60	70	72	75									
	32	60												

Table 2 lists the display resolution support for the following Quadro GPUs.

- ❑ NVIDIA Quadro NVS 280 AGP
- ❑ NVIDIA Quadro NVS 280 PCI Express
- ❑ NVIDIA Quadro NVS 280 PCI
- ❑ NVIDIA Quadro NVS 50

Table 2. Display Resolution Support (Quadro NVS)

Resolution	Bits per Pixel	Refresh Rate (Hz)													
		Shaded: Digital and Analog Support Nonshaded: Analog Support Only Bold: Digital Only													
320 × 200	8	60	70	72	75										
	16	60	70	72	75										
	32	60	70	72	75										
320 × 240	8	60	70	72	75										
	16	60	70	72	75										
	32	60	70	72	75										
400 × 300	8	60	70	72	75										
	16	60	70	72	75										
	32	60	70	72	75										
480 × 360	8	60	70	72	75										
	16	60	70	72	75										
	32	60	70	72	75										
512 × 384	8	60	70	72	75										
	16	60	70	72	75										
	32	60	70	72	75										
640 × 400	8	60	70	72	75										
	16	60	70	72	75										
	32	60	70	72	75										
640 × 480	8	60	70	72	75	85	100	120	140	144	150	170	200	240	
	16	60	70	72	75	85	100	120	140	144	150	170	200	240	
	32	60	70	72	75	85	100	120	140	144	150	170	200	240	
720 × 480	8	60													
	16	60													
	32	60													
720 × 576	8	60													
	16	60													
	32	60													
800 × 600	8	60	70	72	75	85	100	120	140	144		170	200	240	
	16	60	70	72	75	85	100	120	140	144		170	200	240	
	32	60	70	72	75	85	100	120	140	144		170	200	240	
848 × 480	8	60	70	72	75	85	100	120	140	144		170	200	240	

Resolution	Bits per Pixel	Shaded: Digital and Analog Support Nonshaded: Analog Support Only Bold: Digital Only												
		Refresh Rate (Hz)												
	16	60	70	72	75	85	100	120	140	144		170	200	240
	32	60	70	72	75	85	100	120	140	144		170	200	240
1024 × 768	8	60	70	72	75	85	100	120	140	144	150	170	200	240
	16	60	70	72	75	85	100	120	140	144	150	170	200	240
	32	60	70	72	75	85	100	120	140	144	150	170	200	
1152 × 864	8	60	70	72	75	85	100	120	140	144	150	170	200	
	16	60	70	72	75	85	100	120	140	144	150	170	200	
	32	60	70	72	75	85	100	120	140		150	170		
1280 × 720	8	60	70	72	75	85	100	120	140	144	150	170		
	16	60	70	72	75	85	100	120	140	144	150	170		
	32	60	70	72	75	85	100	120	140		150			
1280 × 768	8	60	70	72	75	85	100	120	140	144	150	170		
	16	60	70	72	75	85	100	120	140	144	150	170		
	32	60	70	72	75	85	100	120	140		150			
1280 × 960	8	60	70	72	75	85	100	120	140	144	150	170		
	16	60	70	72	75	85	100	120	140	144	150	170		
	32	60	70	72	75	85	100	120	140		150			
1280 × 1024	8	60	70	72	75	85	100	120	140	144	150	170		
	16	60	70	72	75	85	100	120	140	144	150	170		
	32	60	70	72	75	85	100	120	140		150			
1360 × 768	8	60	70	72	75	85	100	120	140	144	150	170		
	16	60	70	72	75	85	100	120	140	144	150	170		
	32	60	70	72	75	85	100	120	140		150			
1600 × 900	8	60	70	72	75	85	100	120	140	144	150			
	16	60	70	72	75	85	100	120	140	144	150			
	32	60	70	72	75	85	100	120						
1600 × 1024	8	60	70	72	75	85	100	120						
	16	60	70	72	75	85	100	120						
	32	60	70	72	75	85	100							
1600 × 1200*	8	60	70	72	75	85	100	120						
	16	60	70	72	75	85	100	120						
	32	60	70	72	75	85	100							
1920 × 1080	8	60	70	72	75	85	100							
	16	60	70	72	75	85	100							
	32	60	70	72	75	85								
1920 × 1200	8	60	70	72	75	85	100							
	16	60	70	72	75	85	100							
	32	60	70	72	75	85								
1920 × 1440	8	60	70	72	75	85								
	16	60	70	72	75	85								

Resolution	Bits per Pixel	Refresh Rate (Hz) Shaded: Digital and Analog Support Nonshaded: Analog Support Only Bold: Digital Only												
		60	70		75									
2048 × 1536	32	60	70		75									
	8	60	70	72	75									
	16	60	70	72	75									
	32	60												

*Up to 1600 × 1200 digital support with reduced blanking

Table 3 lists the display resolutions for the following Quadro GPUs.

- ❑ NVIDIA Quadro4 700 XGL
- ❑ NVIDIA Quadro4 750 XGL
- ❑ NVIDIA Quadro4 900 XGL (see footnotes at the end of the table)
- ❑ NVIDIA Quadro4 980 XGL (see footnotes at the end of the table)

Table 3. Display Resolutions (Quadro4 XGL)

Resolution	Bits per Pixel	Refresh Rate (Hz)												
		Shaded: Digital and Analog Support Nonshaded: Analog Support Only Bold: Digital Only												
320 × 200	8	60	70	72	75									
	16	60	70	72	75									
	32	60	70	72	75									
320 × 240	8	60	70	72	75									
	16	60	70	72	75									
	32	60	70	72	75									
400 × 300	8	60	70	72	75									
	16	60	70	72	75									
	32	60	70	72	75									
480 × 360	8	60	70	72	75									
	16	60	70	72	75									
	32	60	70	72	75									
512 × 384	8	60	70	72	75									
	16	60	70	72	75									
	32	60	70	72	75									
640 × 400	8	60	70	72	75									
	16	60	70	72	75									
	32	60	70	72	75									
640 × 480	8	60	70	72	75	85	100	120	140	144	150	170	200	240
	16	60	70	72	75	85	100	120	140	144	150	170	200	240
	32	60	70	72	75	85	100	120	140	144	150	170	200	240
720 × 480	8	60												
	16	60												
	32	60												
720 × 576	8	60												
	16	60												
	32	60												
800 × 600	8	60	70	72	75	85	100	120	140	144		170	200	240
	16	60	70	72	75	85	100	120	140	144		170	200	240
	32	60	70	72	75	85	100	120	140	144		170	200	240
848 × 480	8	60	70	72	75	85	100	120	140	144		170	200	240

Resolution	Bits per Pixel	Shaded: Digital and Analog Support Nonshaded: Analog Support Only Bold: Digital Only Refresh Rate (Hz)												
		60	70	72	75	85	100	120	140	144		170	200	240
	16	60	70	72	75	85	100	120	140	144		170	200	240
	32	60	70	72	75	85	100	120	140	144		170	200	240
1024 × 768	8	60	70	72	75	85	100	120	140	144	150	170	200	240
	16	60	70	72	75	85	100	120	140	144	150	170	200	240
	32	60	70	72	75	85	100	120	140	144	150	170	200	
1152 × 864	8	60	70	72	75	85	100	120	140	144	150	170	200	
	16	60	70	72	75	85	100	120	140	144	150	170	200	
	32	60	70	72	75	85	100	120	140		150	170		
1280 × 720	8	60	70	72	75	85	100	120	140	144	150	170		
	16	60	70	72	75	85	100	120	140	144	150	170		
	32	60	70	72	75	85	100	120	140		150			
1280 × 768	8	60	70	72	75	85	100	120	140	144	150	170		
	16	60	70	72	75	85	100	120	140	144	150	170		
	32	60	70	72	75	85	100	120	140		150			
1280 × 960	8	60	70	72	75	85	100	120	140	144	150	170		
	16	60	70	72	75	85	100	120	140	144	150	170		
	32	60	70	72	75	85	100	120	140		150			
1280 × 1024	8	60	70	72	75	85	100	120	140	144	150	170		
	16	60	70	72	75	85	100	120	140	144	150	170		
	32	60	70	72	75	85	100	120	140		150			
1360 × 768	8	60	70	72	75	85	100	120	140	144	150	170		
	16	60	70	72	75	85	100	120	140	144	150	170		
	32	60	70	72	75	85	100	120	140		150			
1600 × 900	8	60	70	72	75	85	100	120	140	144	150			
	16	60	70	72	75	85	100	120	140	144	150			
	32	60	70	72	75	85	100	120						
1600 × 1024	8	60	70	72	75	85	100	120						
	16	60	70	72	75	85	100	120						
	32	60	70	72	75	85	100							
1600 × 1200*	8	60	70	72	75	85	100	120						
	16	60	70	72	75	85	100	120						
	32	60	70	72	75	85	100							
1920 × 1080	8	60	70	72	75	85	100							
	16	60	70	72	75	85	100							
	32	60	70	72	75	85								
1920 × 1200*	8	60	70	72	75	85	100							
	16	60	70	72	75	85	100							
	32	60	70	72	75	85								
1920 × 1440	8	60	70	72	75	85								
	16	60	70	72	75	85								

Resolution	Bits per Pixel	Refresh Rate (Hz) Shaded: Digital and Analog Support Nonshaded: Analog Support Only Bold: Digital Only												
		60	70		75									
2048 × 1536	32	60	70		75									
	8	60	70	72	75									
	16	60	70	72	75									
	32	60												

*Up to 1600 × 1200 digital support with reduced blanking.

Table 4 lists the single-link DVI display resolution support (up to digital 1600 × 1200) for the following Quadro GPUs.

- ❑ NVIDIA Quadro FX 1300
- ❑ NVIDIA Quadro FX 1100
- ❑ NVIDIA Quadro FX 1000
- ❑ NVIDIA Quadro FX 700
- ❑ NVIDIA Quadro FX 500
- ❑ NVIDIA Quadro FX 330

Table 4. Single-Link DVI Display Resolution Support (Up to Digital 1600 x 1200)

Resolution	Bits per Pixel	Refresh Rate (Hz)												
		Shaded: Digital and Analog Support Nonshaded: Analog Support Only Bold: Digital Only												
320 × 200	8	60	70	72	75									
	16	60	70	72	75									
	32	60	70	72	75									
320 × 240	8	60	70	72	75									
	16	60	70	72	75									
	32	60	70	72	75									
400 × 300	8	60	70	72	75									
	16	60	70	72	75									
	32	60	70	72	75									
480 × 360	8	60	70	72	75									
	16	60	70	72	75									
	32	60	70	72	75									
512 × 384	8	60	70	72	75									
	16	60	70	72	75									
	32	60	70	72	75									
640 × 400	8	60	70	72	75									
	16	60	70	72	75									
	32	60	70	72	75									
640 × 480	8	60	70	72	75	85	100	120	140	144	150	170	200	240
	16	60	70	72	75	85	100	120	140	144	150	170	200	240
	32	60	70	72	75	85	100	120	140	144	150	170	200	240
720 × 480	8	60												
	16	60												
	32	60												
720 × 576	8	60												
	16	60												
	32	60												

Resolution	Bits per Pixel	Shaded: Digital and Analog Support Nonshaded: Analog Support Only Bold: Digital Only												
		Refresh Rate (Hz)												
800 × 600	8	60	70	72	75	85	100	120	140	144	150	170	200	240
	16	60	70	72	75	85	100	120	140	144	150	170	200	240
	32	60	70	72	75	85	100	120	140	144	150	170	200	240
848 × 480	8	60	70	72	75	85	100	120	140	144	150	170	200	240
	16	60	70	72	75	85	100	120	140	144	150	170	200	240
	32	60	70	72	75	85	100	120	140	144	150	170	200	240
1024 × 768	8	60	70	72	75	85	100	120	140	144	150	170	200	240
	16	60	70	72	75	85	100	120	140	144	150	170	200	240
	32	60	70	72	75	85	100	120	140	144	150	170	200	
1152 × 864	8	60	70	72	75	85	100	120	140	144	150	170	200	
	16	60	70	72	75	85	100	120	140	144	150	170	200	
	32	60	70	72	75	85	100	120	140	144	150	170		
1280 × 720	8	60	70	72	75	85	100	120	140	144	150	170		
	16	60	70	72	75	85	100	120	140	144	150	170		
	32	60	70	72	75	85	100	120	140	144	150			
1280 × 768	8	60	70	72	75	85	100	120	140	144	150	170		
	16	60	70	72	75	85	100	120	140	144	150	170		
	32	60	70	72	75	85	100	120	140	144	150			
1280 × 800	8	60												
	16	60												
	32	60												
1280 × 960	8	60	70	72	75	85	100	120	140	144	150	170		
	16	60	70	72	75	85	100	120	140	144	150	170		
	32	60	70	72	75	85	100	120	140	144	150			
1280 × 1024	8	60	70	72	75	85	100	120	140	144	150	170		
	16	60	70	72	75	85	100	120	140	144	150	170		
	32	60	70	72	75	85	100	120	140	144	150			
1360 × 768	8	60	70	72	75	85	100	120	140	144	150	170		
	16	60	70	72	75	85	100	120	140	144	150	170		
	32	60	70	72	75	85	100	120	140	144	150			
1366 × 768	8	60												
	16	60												
	32	60												
1400 × 1050	8	60			75	85								
	16	60			75	85								
	32	60			75	85								
1440 × 900	8	60			75	85								
	16	60			75	85								
	32	60			75	85								
1600 × 900	8	60	70	72	75	85	100	120	140	144	150			

Resolution	Bits per Pixel	Shaded: Digital and Analog Support Nonshaded: Analog Support Only Bold: Digital Only												
		Refresh Rate (Hz)												
	16	60	70	72	75	85	100	120	140	144	150			
	32	60	70	72	75	85	100	120						
1600 × 1024	8	60	70	72	75	85	100	120						
	16	60	70	72	75	85	100	120						
	32	60	70	72	75	85	100							
1600 × 1200 *	8	60	70	72	75	85	100	120						
	16	60	70	72	75	85	100	120						
	32	60	70	72	75	85	100							
1680 × 1050 *	8	60			75	85								
	16	60			75	85								
	32	60			75	85								
1920 × 1080	8	60	70	72	75	85	100							
	16	60	70	72	75	85	100							
	32	60	70	72	75	85								
1920 × 1200	8	60	70	72	75	85	100							
	16	60	70	72	75	85	100							
	32	60	70	72	75	85								
1920 × 1440	8	60	70	72	75	85								
	16	60	70	72	75	85								
	32	60	70	72	75	85								
2048 × 1536	8	60	70	72	75	85								
	16	60	70	72	75	85								
	32	60	70	72	75	85								

*Digital support with reduced blanking.

Table 5 lists the single-link DVI display resolutions for the following Quadro FX and Quadro NVS GPUs.

- ❑ NVIDIA Quadro FX 600 PCI
- ❑ NVIDIA Quadro FX 1400
- ❑ NVIDIA Quadro FX 540
- ❑ NVIDIA Quadro FX 350
- ❑ NVIDIA Quadro FX 550
- ❑ NVIDIA Quadro NVS 440
- ❑ NVIDIA Quadro NVS 285
- ❑ NVIDIA Quadro NVS 290

Table 5. Single-Link DVI Display Resolutions

Resolution	Bits per Pixel	Refresh Rate (Hz)												
		Shaded: Digital and Analog Support Nonshaded: Analog Support Only Bold: Digital Only												
320 × 200	8	60	70	72	75									
	16	60	70	72	75									
	32	60	70	72	75									
320 × 240	8	60	70	72	75									
	16	60	70	72	75									
	32	60	70	72	75									
400 × 300	8	60	70	72	75									
	16	60	70	72	75									
	32	60	70	72	75									
480 × 360	8	60	70	72	75									
	16	60	70	72	75									
	32	60	70	72	75									
512 × 384	8	60	70	72	75									
	16	60	70	72	75									
	32	60	70	72	75									
640 × 400	8	60	70	72	75									
	16	60	70	72	75									
	32	60	70	72	75									
640 × 480	8	60	70	72	75	85	100	120	140	144	150	170	200	240
	16	60	70	72	75	85	100	120	140	144	150	170	200	240
	32	60	70	72	75	85	100	120	140	144	150	170	200	240
720 × 480	8	60												
	16	60												
	32	60												
720 × 576	8	60												
	16	60												

Resolution	Bits per Pixel	Shaded: Digital and Analog Support Nonshaded: Analog Support Only Bold: Digital Only												
		Refresh Rate (Hz)												
	32	60												
800 × 600	8	60	70	72	75	85	100	120	140	144	150	170	200	240
	16	60	70	72	75	85	100	120	140	144	150	170	200	240
	32	60	70	72	75	85	100	120	140	144	150	170	200	240
848 × 480	8	60	70	72	75	85	100	120	140	144	150	170	200	240
	16	60	70	72	75	85	100	120	140	144	150	170	200	240
	32	60	70	72	75	85	100	120	140	144	150	170	200	240
1024 × 768	8	60	70	72	75	85	100	120	140	144	150	170	200	240
	16	60	70	72	75	85	100	120	140	144	150	170	200	240
	32	60	70	72	75	85	100	120	140	144	150	170	200	
1152 × 864	8	60	70	72	75	85	100	120	140	144	150	170	200	
	16	60	70	72	75	85	100	120	140	144	150	170	200	
	32	60	70	72	75	85	100	120	140	144	150	170		
1280 × 720	8	60	70	72	75	85	100	120	140	144	150	170		
	16	60	70	72	75	85	100	120	140	144	150	170		
	32	60	70	72	75	85	100	120	140	144	150			
1280 × 768	8	60	70	72	75	85	100	120	140	144	150	170		
	16	60	70	72	75	85	100	120	140	144	150	170		
	32	60	70	72	75	85	100	120	140	144	150			
1280 × 800	8	60												
	16	60												
	32	60												
1280 × 960	8	60	70	72	75	85	100	120	140	144	150	170		
	16	60	70	72	75	85	100	120	140	144	150	170		
	32	60	70	72	75	85	100	120	140	144	150			
1280 × 1024	8	60	70	72	75	85	100	120	140	144	150	170		
	16	60	70	72	75	85	100	120	140	144	150	170		
	32	60	70	72	75	85	100	120	140	144	150			
1360 × 768	8	60	70	72	75	85	100	120	140	144	150	170		
	16	60	70	72	75	85	100	120	140	144	150	170		
	32	60	70	72	75	85	100	120	140	144	150			
1366 × 768	8	60												
	16	60												
	32	60												
1400 × 1050	8	60			75	85								
	16	60			75	85								
	32	60			75	85								
1440 × 900	8	60			75	85								
	16	60			75	85								
	32	60			75	85								

Resolution	Bits per Pixel	Shaded: Digital and Analog Support Nonshaded: Analog Support Only Bold: Digital Only												
		Refresh Rate (Hz)												
1600 × 900	8	60	70	72	75	85	100	120	140	144	150			
	16	60	70	72	75	85	100	120	140	144	150			
	32	60	70	72	75	85	100	120						
1600 × 1024	8	60	70	72	75	85	100	120						
	16	60	70	72	75	85	100	120						
	32	60	70	72	75	85	100							
1600 × 1200 *	8	60	70	72	75	85	100	120						
	16	60	70	72	75	85	100	120						
	32	60	70	72	75	85	100							
1680 × 1050 *	8	60			75	85								
	16	60			75	85								
	32	60			75	85								
1920 × 1080 *	8	60	70	72	75	85	100							
	16	60	70	72	75	85	100							
	32	60	70	72	75	85								
1920 × 1200 *	8	60	70	72	75	85	100							
	16	60	70	72	75	85	100							
	32	60	70	72	75	85								
1920 × 1440	8	60	70	72	75	85								
	16	60	70	72	75	85								
	32	60	70	72	75	85								
2048 × 1536	8	60	70	72	75	85								
	16	60	70	72	75	85								
	32	60	70	72	75	85								

* Digital support with reduced blanking.

Table 6 lists the dual-link DVI display resolutions for the follow Quadro GPUs.

- ❑ Single dual-link DVI
 - NVIDIA Quadro FX 2000
 - NVIDIA Quadro FX 3000
 - NVIDIA Quadro FX 3000 G
 - NVIDIA Quadro FX 4000 SDI [AGP version]
 - NVIDIA Quadro FX 3400
 - NVIDIA Quadro FX 3450
 - NVIDIA Quadro FX 4000 SDI PCI Express
 - NVIDIA Quadro FX 560
 - NVIDIA Quadro FX 370
- ❑ Dual dual-link DVI
 - NVIDIA Quadro FX 4000
 - NVIDIA Quadro FX 4400
 - NVIDIA Quadro FX 4500
 - NVIDIA Quadro FX 1500
 - NVIDIA Quadro FX 3500
 - NVIDIA Quadro FX 3700
 - NVIDIA Quadro FX 5500
 - NVIDIA Quadro FX 4500 X2 (consists of 4 dual-link capable ports)
 - NVIDIA Quadro FX 4700 X2 (consists of 4 dual-link capable ports)
 - NVIDIA Quadro FX 4600
 - NVIDIA Quadro FX 5600
 - NVIDIA Quadro FX 570
 - NVIDIA Quadro FX 1700

Note: Single dual-link DVI has only one output capable of the resolution rates (Table 6), whereas dual dual-link DVI has two identical outputs both capable of the resolution rates in Table 6.

Table 6. Dual-Link DVI Display Resolutions

Resolution	Bits per Pixel	Refresh Rate (Hz)												
		Shaded: Digital and Analog Support Nonshaded: Analog Support Only Bold: Digital Only												
320 × 200	8	60	70	72	75									
	16	60	70	72	75									
	32	60	70	72	75									
320 × 240	8	60	70	72	75									
	16	60	70	72	75									
	32	60	70	72	75									
400 × 300	8	60	70	72	75									
	16	60	70	72	75									
	32	60	70	72	75									
480 × 360	8	60	70	72	75									
	16	60	70	72	75									
	32	60	70	72	75									
512 × 384	8	60	70	72	75									
	16	60	70	72	75									
	32	60	70	72	75									
640 × 400	8	60	70	72	75									
	16	60	70	72	75									
	32	60	70	72	75									
640 × 480	8	60	70	72	75	85	100	120	140	144	150	170	200	240
	16	60	70	72	75	85	100	120	140	144	150	170	200	240
	32	60	70	72	75	85	100	120	140	144	150	170	200	240
720 × 480	8	60												
	16	60												
	32	60												
720 × 576	8	60												
	16	60												
	32	60												
800 × 600	8	60	70	72	75	85	100	120	140	144	150	170	200	240
	16	60	70	72	75	85	100	120	140	144	150	170	200	240
	32	60	70	72	75	85	100	120	140	144	150	170	200	240
848 × 480	8	60	70	72	75	85	100	120	140	144	150	170	200	240
	16	60	70	72	75	85	100	120	140	144	150	170	200	240
	32	60	70	72	75	85	100	120	140	144	150	170	200	240
1024 × 768	8	60	70	72	75	85	100	120	140	144	150	170	200	240
	16	60	70	72	75	85	100	120	140	144	150	170	200	240
	32	60	70	72	75	85	100	120	140	144	150	170	200	
1152 × 864	8	60	70	72	75	85	100	120	140	144	150	170	200	
	16	60	70	72	75	85	100	120	140	144	150	170	200	

Resolution	Bits per Pixel	Refresh Rate (Hz)												
		60	70	72	75	85	100	120	140	144	150	170		
1280 × 720	32	60	70	72	75	85	100	120	140	144	150	170		
	8	60	70	72	75	85	100	120	140	144	150	170		
	16	60	70	72	75	85	100	120	140	144	150	170		
1280 × 768	32	60	70	72	75	85	100	120	140	144	150			
	8	60	70	72	75	85	100	120	140	144	150	170		
	16	60	70	72	75	85	100	120	140	144	150	170		
1280 × 800	32	60	70	72	75	85	100	120	140	144	150			
	8	60												
	16	60												
1280 × 960	32	60												
	8	60	70	72	75	85	100	120	140	144	150	170		
	16	60	70	72	75	85	100	120	140	144	150	170		
1280 × 1024	32	60	70	72	75	85	100	120	140	144	150			
	8	60	70	72	75	85	100	120	140	144	150	170		
	16	60	70	72	75	85	100	120	140	144	150	170		
1360 × 768	32	60	70	72	75	85	100	120	140	144	150			
	8	60	70	72	75	85	100	120	140	144	150	170		
	16	60	70	72	75	85	100	120	140	144	150	170		
1366 × 768	32	60	70	72	75	85	100	120	140	144	150			
	8	60												
	16	60												
1400 × 1050	32	60												
	8	60			75	85								
	16	60			75	85								
1440 × 900	32	60			75	85								
	8	60			75	85								
	16	60			75	85								
1600 × 900	32	60			75	85								
	8	60	70	72	75	85	100	120	140	144	150			
	16	60	70	72	75	85	100	120	140	144	150			
1600 × 1024	32	60	70	72	75	85	100	120						
	8	60	70	72	75	85	100	120						
	16	60	70	72	75	85	100	120						
1600 × 1200 *	32	60	70	72	75	85	100							
	8	60	70	72	75	85	100	120						
	16	60	70	72	75	85	100	120						
1680 × 1050 *	32	60			75	85								
	8	60			75	85								
	16	60			75	85								

Shaded: Digital and Analog Support
Nonshaded: Analog Support Only
Bold: Digital Only

Resolution	Bits per Pixel	Refresh Rate (Hz)												
		Shaded: Digital and Analog Support Nonshaded: Analog Support Only Bold: Digital Only												
1920 × 1080 *	8	60	70	72	75	85	100							
	16	60	70	72	75	85	100							
	32	60	70	72	75	85								
1920 × 1200 *	8	60	70	72	75	85	100							
	16	60	70	72	75	85	100							
	32	60	70	72	75	85								
1920 × 1440 * **	8	60	70	72	75	85								
	16	60	70	72	75	85								
	32	60	70	72	75	85								
2048 × 1536 * **	8	60	70	72	75	85								
	16	60	70	72	75	85								
	32	60	70	72	75	85								
2560 × 1600 * ** ***	8	60												
	16	60												
	32	60												

* Digital support with reduced blanking.

** Digital support only available on dual-link enabled boards and outputs.

*** Apple 30" monitor, Dell 3007 WFP 30" monitor and similar products

Notice

ALL NVIDIA DESIGN SPECIFICATIONS, REFERENCE BOARDS, FILES, DRAWINGS, DIAGNOSTICS, LISTS, AND OTHER DOCUMENTS (TOGETHER AND SEPARATELY, "MATERIALS") ARE BEING PROVIDED "AS IS." NVIDIA MAKES NO WARRANTIES, EXPRESSED, IMPLIED, STATUTORY, OR OTHERWISE WITH RESPECT TO THE MATERIALS, AND EXPRESSLY DISCLAIMS ALL IMPLIED WARRANTIES OF NONINFRINGEMENT, MERCHANTABILITY, AND FITNESS FOR A PARTICULAR PURPOSE.

Information furnished is believed to be accurate and reliable. However, NVIDIA Corporation assumes no responsibility for the consequences of use of such information or for any infringement of patents or other rights of third parties that may result from its use. No license is granted by implication or otherwise under any patent or patent rights of NVIDIA Corporation. Specifications mentioned in this publication are subject to change without notice. This publication supersedes and replaces all information previously supplied. NVIDIA Corporation products are not authorized for use as critical components in life support devices or systems without express written approval of NVIDIA Corporation.

Macrovision Compliance Statement

NVIDIA Products that are Macrovision enabled can only be sold or distributed to buyers with a valid and existing authorization from Macrovision to purchase and incorporate the device into buyer's products.

Macrovision copy protection technology is protected by U.S. patent numbers 5,583,936; 6,516,132; 6,836,549; and 7,050,698 and other intellectual property rights. The use of Macrovision's copy protection technology in the device must be authorized by Macrovision and is intended for home and other limited pay-per-view uses only, unless otherwise authorized in writing by Macrovision. Reverse engineering or disassembly is prohibited

Trademarks

NVIDIA, the NVIDIA logo and Quadro are trademarks or registered trademarks of NVIDIA Corporation in the United States and other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Copyright

© 2006, 2007, 2008 NVIDIA Corporation. All rights reserved.



NVIDIA.