Overview

Models

NVIDIA GeForce 310 DP PCIe x16 Graphics Card   VG885AA

Introduction

If you are seeking stable 2D and advanced 3D graphics performance from your HP Compaq Business Desktop, the NVIDIA GeForce 310 DP PCIe x16 Graphics Card is the perfect solution, providing a low profile, PCI Express x16 graphics add-in card.

The NVIDIA GeForce 310 DP PCIe x16 Graphics Card is an excellent choice for your small business, enabling you to engage in video conferencing or 3D image manipulation, while improving your everyday business PC experience with faster frame rates and excellent visual quality.

The NVIDIA GeForce 310 DP PCIe x16 Graphics Card delivers superior PCI Express (PCIe) features including:

- Unprecedented flexibility for new applications and enhanced performance
- Full 16 lane support with peak bandwidth support
- High resolution LCD monitor support with the dual-link DVI port
- Multimode DisplayPort connector for current and future technology support

Key Benefits

- Stable 2D and advanced 3D graphics performance
- Faster frame rates and excellent visual quality
- Low profile configured with full-height bracket
- 512 MB DDR3 dedicated on-board graphics frame buffer memory
- Conforms to full PCI Express 2.0 specification for low-profile form factor (x16 lanes native PCI Express implementation)
- Provides dual-link (DL) DVI-I and DisplayPort output ports
- DVI-to-VGA adapter for VGA output support included
- Dual-link (DL) DVI support for high resolution LCD monitor support (such as the HP LP3065 LCD monitor)
- Supports audio with video through the DisplayPort connector
- HDCP for content protected playback support
- DisplayPort connector supports Multimode technology to support connection to DVI-D monitors*

*With the appropriate adapter cable

Memory	Peak theoretical memory bandwidth
512 MB DDR3 64 bit	12.6 GB/s

Compatibility

The NVIDIA GeForce 310 DP PCIe x16 Graphics Card is compatible with the HP Compaq dx2420 Microtower, HP Compaq dx2450 Microtower, HP Compaq 6000 Pro Microtower, HP Compaq 6000 Pro Small Form Factor, HP Compaq 6005 Pro Microtower, HP Compaq 6005 Pro Small Form Factor, HP Compaq 8000 Elite Small Form Factor, HP Compaq 8000 Elite Convertible Minitower Business PCs.

Overview

Service and Support

Your Option Limited Warranty is a one (1) year (HP Option Limited Warranty Period) parts replacement warranty on any HP-branded or Compaq-branded options (HP Options). If your HP Option is installed in an HP Hardware Product, HP may provide warranty service either for the HP Option Limited Warranty Period or the remaining Limited Warranty Period of the HP Hardware Product in which the HP Option is being installed, whichever period is the longer but not to exceed three (3) years from the date you purchased the HP Option.

QuickSpecs

Technical Specifications

NVIDIA GeForce 310 DP PCIe x16 Graphics Card		
	Bus type	PCI Express (x16 lanes)
	Maximum vertical refresh rate	85 Hz
	Display support	Integrated 400 MHz RAMDAC
	Display max resolution	2560x1600 digital, 2048 x 1536 analog

NVIDIA GeForce 310 DP PCIe x16 Graphics Card display resolutions and refresh rates

NOTE: Other resolutions may be available but are not recommended as the may not have been tested and qualified by HP

Resolution	Maximum Refresh Rate (Hz)	
	Analog Connection	Digital Connection
640x480	85	60
800x600	85	60
1024x768	85	60
1280x720	85	60
1280x1024	85	60
1440x900	75	60
1600x1200	85	60
1680x1050	75	60
1920x1080	85	60-R
1920x1200	85	60-R
1920x1440	85	N/A
2048x1536	75	N/A
2560x1600	N/A	60*

* Only supported when using a dual-link DVI or DP connection
NOTE: 60-R denotes reduced blanking timings are used on single-link DVI connections and may be used with other digital connections

Board display options	Supports two displays via the DisplayPort and DVI connectors	
Board configuration	Specification	Description
	Graphics Chip	GT218
	Core clock	589 MHz
	Memory clock	790 MHz
	Frame buffer	512 MB DDR3, 64 bit wide
Audio Support (through DisplayPort only)	Integrated HD Audio codec supports linear PCM and Dolby® Digital (7.1) audio formats for DisplayPort output	
Operating systems support	Windows 7 Home Basic*, Windows 7 Home Premium*, Windows 7 Professional Edition 32*, Windows 7 Professional Edition 64*, Windows 7 Ultimate Edition 32*, Windows 7 Ultimate Edition 64*, Windows Vista Business 32†, Windows Vista Business 64†, Windows Vista Home Basic 32†, Windows Vista Home Basic 64†, Windows XP Professional or Windows XP Home 32†.	

*This system may require upgraded and/or separately purchased hardware and/or a DVD drive to install the Windows 7 software and take full advantage of Windows 7 functionality. See http://www.microsoft.com/windows/windows-7/ for details.

Technical Specifications

† Certain Windows Vista product features require advanced or additional hardware. Windows Vista Upgrade Advisor can help you determine which features of Windows Vista will run on your computer. To download the tool, visit: http://www.windowsvista.com/upgradeadvisor. For Windows Vista system requirements, visit: http://www.windowsvista.com/systemrequirements.
Linux x86 and x86_64 distributions using XFree86 or X.Org‡.

Linux x86 and x86_64 distributions using XFree86 or X.Org‡.

‡Linux drivers are available from ATI's website and may be available in a Linux distribution. Refer to the Open Source and Linux from HP website: http://www.hp.com/wwsolutions/linux/products/clients/ for support information.information.

Core power	25 W (max)
Dimensions (H x D)	2.71 in x 6.60 in (68.90 mm x 167.65 mm)
Weight	0.29 lb (133g)
Option kit contents	• NVIDIA GeForce 310 DP PCIe x16 Graphics Card with full height bracket attached • DVI-I to VGA adapter • Software CD with graphics drivers • Low profile bracket to convert the card for using in a low profile chassis • Warranty documentation
Compliance standards	EMC Emissions: a) FCC Part 15, Subpart B - Unintentional Radiators, Class B Computing Devices for Home & Office Use b) CISPR22: 1997/EN 55022:1998 – Class B – Limits and methods of measurement of radio disturbance characteristics of Information Technology Equipment c) Canadian Standard ICES-003 is equivalent to CISPR22 d) Taiwanese Standard BSMI e) Japanese VCCI f) Australian C-Tick g) Korean (KCC) EMC Immunity: CISPR 24:1997/EN 55024:1998 – Information Technology Equipment - Immunity Characteristics – Limits and Methods of Measurement.