

Overview

Models

NVIDIA NVS 510 2GB Graphics

C2J98AA

Introduction

The NVIDIA® NVS 510 business graphics solution delivers a reliable hardware and software platform for a stable environment and robust IT management tools for seamless enterprise deployment. Featuring NVIDIA® nView® and Mosaic single desktop and multi-display management solutions and support for up to four displays, business professionals can maximize productivity through increased desktop real estate and advanced application management tools. The NVS 510 is certified on leading business applications and designed to meet the needs of today's most demanding business user.

Performance and Features

- Combined with NVIDIA's nView® advanced desktop management software and NVIDIA's Mosaic technologies, the NVS 510 is the ideal Enterprise Class GPU for users that require single large display or multi-display solutions with the optimal balance between performance, power and acoustics.
 - Low profile professional graphics solution capable of driving 4 displays simultaneously.
 - Unified Driver Architecture (UDA): Part of the NVIDIA Forceware unified software environment (USE). The NVIDIA UDA guarantees forward and backward compatibility with software drivers. Simplifies upgrading to a new NVIDIA product because the latest driver supports all current NVIDIA products.
 - Quad DisplayPort: Capable of driving quad ultra high resolution displays up to 3840 × 2160.
 - Ultimate Image Quality: NVS graphics products deliver the industry's best image quality, sharpness and pixel tracking for any panel display technology with resolutions up to 3840 × 2160.
 - EnergyStar Enabling Design: Enables ENERGY STAR system solutions with low maximum and low idle power levels.
 - PCI Express 2.0 Compliant: Doubles the data transfer rate up to 5 GT/sec per lane for an aggregate bandwidth of 16 GB/sec bi-directional (8 GB/sec in each direction).
 - Integrated multimode DisplayPort transmitters support multi-stream technology, stream cloning, and ultra-high-resolution panels (up to 3840 x 2160 @ 60Hz) enabling maximum range, resolution, refresh rate, and color depth designed to support the latest display technologies.
 - API support for CUDA C, CUDA C++, DirectCompute 5.0, OpenCL, Java, Python, Fortran
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Compatibility

The NVS 510 is supported on the following HP Workstations:

- Z220, Z420, Z620, Z820
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Service and Support

The NVIDIA NVS 510 has a one-year limited warranty or the remainder of the warranty of the HP product in which it is installed. Technical support is available seven days a week, 24 hours a day by phone, as well as online support forums. Parts and labor are available on-site within the next business day. Telephone support is available for parts diagnosis and installation. Certain restrictions and exclusions apply.

Technical Specifications

Form Factor	Low Profile, 2.713 inches × 6.3 inches, single slot
Graphics Controller	NVS 510 GPU Core Clock: 797 Mhz Memory Clock: 891 Mhz CUDA Cores: 192
Bus Type	PCI Express x16, Generation 2.0
Memory	2GB DDR3
Connectors	Four mini-DisplayPort. Four mini-DisplayPort to DisplayPort adapters included. (DisplayPort to DVI-D, DisplayPort to VGA, DisplayPort to HDMI, and DisplayPort to Dual-Link DVI adapters available as separate accessories)
Maximum Resolution	Mini-DisplayPort connectors support ultra-high-resolution panels (up to 3840 x 2160 @ 60Hz) NOTE: This card supports up to four displays. For Windows XP, only 2 active displays are supported.
RAMDAC	Not Applicable
Image Quality Features	10-bit internal display processing, including hardware support for 10-bit scan-out
Display Output	DisplayPort with Multi-Stream Technology (MST) and High Bit Rate 2 (HBR2) support. Digital Display Support 1. DisplayPort Output <ul style="list-style-type: none">• Drives four DisplayPort enabled digital display at resolutions up to 3840 × 2160 at 60 Hz with reduced blanking, when connected natively using the 4 DisplayPort connectors on the NVS 510 graphics card.• DisplayPort Multi-Stream Topology (MST) Technology: Supports various combinations of display resolutions and number of displays when using DisplayPort multi stream topology technology - up to a maximum of 4 monitors at a resolution of 1920 × 1200 at 60 Hz with reduced blanking. 2. DVI-D Output <ul style="list-style-type: none">• Drives four digital displays at resolutions up to 1920 × 1200 at 60 Hz with reduced blanking using DisplayPort to DVI-D single-link cable adaptors.• Drives four digital displays at resolutions up to 2560× 1600 at 60 Hz with reduced blanking using DisplayPort to DVI-D dual-link cable adaptors. 3. HDMI Output The NVS 510 graphics board is capable of driving four high definition (HD) panels up to resolutions of 1920 × 1080P at 60 Hz using DisplayPort to HDMI cable adaptors. Analog Display Support 1. VGA display output <ul style="list-style-type: none">• Drives four analog displays at resolutions up to 1920 × 1200 at 60 Hz using DisplayPort to VGA cable adaptors.
Supported Graphics APIs	Full Microsoft DirectX 11, Shader Model 5.0 support Full OpenGL 4.3 support

Technical Specifications

Available Graphics Drivers	Genuine Windows 7 Professional (64-bit and 32-bit) Microsoft Windows XP Professional (64-bit and 32-bit) Red Hat Enterprise Linux(RHEL) 6 Desktop/Workstation SUSE Linux Enterprise Desktop 11 (64-bit and 32-bit)
	HP qualified drivers may be preloaded or available from the HP support Web site: http://welcome.hp.com/country/us/en/support.html
Power Consumption	33.4 Watts
Note	Heatsink cooler design is active.

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