

### Overview

### Models

NVIDIA Quadro K4000 3GB Graphics

C2J94AA

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### Introduction

The NVIDIA Quadro K4000 graphics board is a single slot PCI Express add-in card based on the new NVIDIA Kepler architecture graphics processing unit (GPU). The Quadro K4000 graphics board is the perfect choice for medium-to-large complexity designs and models in professional CAD, M&E and visualization applications. This card provides impressive performance capabilities in a single slot design.

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### Performance and Features

- Comprehensive ISV certifications for professional environments
  - Ultra-efficient 80W maximum power provides industry leading performance/watt results.
  - 3 GB of blazing GDDR5 memory
  - Attach up to 4 active digital monitors using DisplayPort daisy chaining monitors or by a DisplayPort hub device.
  - Direct attach up to 3 active monitors using all available display connectors on the Quadro K4000
  - Latest graphics API's supported including OpenGL 4.3 and CUDA 5.0
  - Windows 8 compliant
  - NVIDIA Mosaic Technology enabled
  - NVIDIA nView™ multi-display manageme
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### Compatibility

The Quadro K4000 is supported on the following HP Personal Workstations:

- Z820, Z620, Z420, Z220
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### Service and Support

The NVIDIA Quadro K4000 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

<b>Form Factor</b>	4.376" H x 9.5" L Single Slot, Full Height
<b>Graphics Controller</b>	NVIDIA Quadro K4000 Graphics Card Kepler GK106 GPU 768 CUDA cores Max Power: 80 Watts
<b>Bus Type</b>	PCI Express 2.0 x16
<b>Memory</b>	3 GB GDDR5, 2800 Mhz 192-bit memory I/O path 134 GB/s memory bandwidth
<b>Connectors</b>	1 DL-DVI(I) output, 2 DisplayPort outputs CTO: No video cable adapter included AMO: One DP-to-DVI adapter included with card
<b>Maximum Resolution</b>	Additional DVI-to-VGA, DisplayPort-to-VGA or DisplayPort-to-DVI adapters are available as accessories DisplayPort: - up to 3840 x 2160 x 30 bpp @ 60Hz - supports High Bit Rate 2 (HBR2) and Multi-Stream Transport (MST)  DL-DVI(I) output: - up to 2560 x 1600 x 32 bpp @ 60Hz
<b>Image Quality Features</b>	<ul style="list-style-type: none"><li>• 10-bit internal display processing pipeline</li><li>• 10-bit scan-out support</li></ul>
<b>Display Output</b>	VGA: - requires use of DVI-to-VGA and/or DP-to-VGA video cable adapters - 400 Mhz integrated RAMDAC - Max resolution: 2048 x 1536 x 32 bpp @ 85 Hz  DL-DVI(I): - Max resolution: 2560 x 1600 x 32 bpp @ 60 Hz  SL-DVI(I): - Max resolution: 1920 x 1200 x 32 bpp @ 60 Hz  DisplayPort: - Supports HBR2 and MST - Max resolution: 3840 x 2160 x 30 bpp @ 60 Hz (only one monitor can be connected to a Quadro K4000 DisplayPort connector at this resolution) - Max number of DisplayPort daisy-chained monitors or hub connected monitors from a single Quadro K4000 DisplayPort connector: 4 with maximum resolution of 1920 x 1200  HDMI: - Requires use of DP-to-HDMI cable - Max Resolution: 1920 x 1080 x 32 bpp @ 60Hz  Maximum number of monitors across all available Quadro K4000 outputs is 4.
<b>Shading Architecture</b>	Full Microsoft DirectX 11 Shader Model 5.0

### Technical Specifications

**Supported Graphics APIs** OpenGL 4.3  
DirectX 11  
API support includes:  
CUDA C, CUDA C++, DirectCompute 5.0, OpenCL, Java, Python, and Fortran

**Available Graphics Drivers** Windows 8 Pro 64-bit  
Windows 8 (China) 64-bit  
Genuine Windows 7 Professional (64-bit and 32-bit)  
Red Hat Enterprise Linux (RHEL) 5 Desktop/Workstation (64-bit)  
Red Hat Enterprise Linux(RHEL) 6 Desktop/Workstation  
SUSE Linux Enterprise Desktop 11 (64-bit)

HP qualified drivers may be preloaded or available from the HP support Web site:

<http://welcome.hp.com/country/us/en/support.html>

SUSE Linux Enterprise drivers may also be obtained from: <ftp://download.nvidia.com/novell> or  
<http://www.nvidia.com>

- Notes**
1. Quadro K4000 offered as CTO does not include a video cable adapter. Video cable adapters must be ordered separately.
  2. Quadro K4000 offered as AM0 includes one DP-to-DVI video cable adapter. Additional cables must be ordered separately.
  3. Quadro K4000 is Windows 8 Compliant.
  4. A total maximum of 4 active monitors are supported across all display output types. To get 4 monitors, at least one monitor must be daisy chained on a DisplayPort output.
  5. A DisplayPort hub device may be used to connect multiple DisplayPort monitors to a single Quadro K4000 DisplayPort output.

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