

Technical Specifications

NVIDIA Quadro K420 1GB Graphics



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J3G86AA

INTRODUCTION

The NVIDIA Quadro K420 delivers power-efficient 3D application performance and capability. 1 GB of DDR3 GPU memory with fast bandwidth enables you to create complex 3D models, and a flexible single-slot and low-profile form factor makes it compatible with even the most space and power-constrained chassis. Plus, an all-new display engine drives up to four displays with DisplayPort 1.2 support for ultra-high resolutions like 3840x2160 @ 60 Hz with 30-bit color.

PERFORMANCE AND FEATURES

- Solid graphics performance and a broad set of ISV applications certified for peace of mind
- NVIDIA Kepler GPU architecture provides advanced, power-efficient 3D application performance and capability.
- Large 1 GB DDR3 GPU memory with fast bandwidth helps with the creation of complex 3D models
- A single-slot, low-profile design with no need for external power connectors makes this card compatible with even the most space and power constrained chassis
- Support for NVIDIA® Quadro® Mosaic, NVIDIA® nView® multi-display technology

COMPATIBILITY

The NVIDIA Quadro K420 is supported in the following HP Z Workstations:

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- Z230 CMT/SFF, Z440, Z640, Z840

SERVICE AND SUPPORT

The NVIDIA Quadro K420 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, single slot Dimensions: 2.713 inches × 6.3 inches Cooling: Active
Graphics Controller	NVIDIA Quadro K420 GPU: GK107 with 192 CUDA cores Power: 41W
Bus Type	PCI Express x16, 2.0 compliant
Memory	Size: 1GB DDR3 Clock: 891MHz Memory Bandwidth: 29GB/s Memory Width: 128 bit
Connectors	One dual-link DVI-I connector One DisplayPort connector Factory Configured: No video cable adapter included After market option kit: One DP-to-DVI adapter included with card Additional DisplayPort-to-VGA or DisplayPort-to-DVI adapters are available as Factory Configuration or Option Kit accessories.
Maximum Resolution	VGA (via adapter cable): - 2048 × 1536 × 32 bpp at 85 Hz Dual-link DVI - 2560 × 1600 × 32 bpp at 60 Hz (reduced blanking) Single-link DVI - 1920 × 1200 × 32 bpp at 60 Hz (reduced blanking) DisplayPort 1.2 - 3840 × 2160 × 30 bpp at 60 Hz
Image Quality Features	12-bit internal display pipeline (hardware support for 12-bit scanout on supported panels, applications and connection) Stereoscopic 3D display support including NVIDIA® 3D Vision™ technology, 3D DLP, Interleaved,

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and passive stereo

Display Output

Maximum number of displays:
- 2 direct attached monitors
- 4 using DP 1.2a with MST and HBR2 enabled monitors

Maximum number of DisplayPort displays possible (may require MST and/or HBR2):
- 4 1920x1200
- 2 2560x1600
- 1 3840x2160

Shading Architecture

Maximum number of monitors across all available Quadro K420 outputs is 4.
Shader Model 5.0

Supported Graphics APIs

DX11, OpenGL 4.4
Programming support for CUDA C, CUDA C++, DirectCompute 5.0, OpenCL, Python, and Fortran

Available Graphics Drivers

Microsoft Windows 8.1
Microsoft Windows 8
Microsoft Windows 7
Linux - Full OpenGL implementation, complete with NVIDIA and ARB extensions

Notes

1. Factory configured Quadro K420 does not include any video adapters. Adapters must be ordered separately.
 2. Option kit Quadro K420 includes one DP to DVI-D adapter.
 3. Full Height Profile bracket installed. Low Profile bracket included in after-market kit.
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Summary of Changes

Date of change:	Version History:		Description of change:
Sept 15, 2014	Version 1	Added	Migrate to current template, add product photo

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