NVIDIA Quadro K4200 by PNY

INCREdiBLE GRAPHiCS PERFORMANCE

Accelerate your creativity with NVIDIA® Quadro®—the world’s most powerful workstation graphics. Support for multiple 4K displays, large memory capacity, advanced photorealistic rendering and flexible multi-GPU configurations.

The NVIDIA Quadro K4200 delivers incredible 3D application performance and capability, allowing you to take advantage of dual copy-engines for seamless data movement within GPU memory—all in a flexible, single-slot form factor. 4 GB of GDDR5 GPU memory with ultra-fast bandwidth is ideal for creating and rendering large, complex models. DisplayPort 1.2 support for ultra-high resolutions like 3840x2160 @ 60 Hz with 30-bit color and an all-new display engine drives up to four displays. Plus, NVIDIA Sync allows you to frame-lock multiple displays together and take advantage of SDI video input/output.

NVIDIA Quadro is the world’s most advanced visual computing platform for workstations. Much more than a powerful graphics accelerator for sophisticated applications used by professionals, NVIDIA Quadro enables you to create and collaborate in exciting new ways. This makes it the #1 solution for designing, visualizing, and simulating your ideas.

NVIDIA Quadro by PNY GPUs are designed, built, and tested by NVIDIA specifically for professional workstations powering more than 150 professional applications across a broad range of industries, including manufacturing, media and entertainment, sciences, and energy.

QUADRO K4200 - PRODUCT SPECIFICATIONS

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>GPU MEMORY</td>
<td>4 GB GDDR5</td>
</tr>
<tr>
<td>MEMORY INTERFACE</td>
<td>256-bit</td>
</tr>
<tr>
<td>MEMORY BANDWIDTH</td>
<td>173 GB/s</td>
</tr>
<tr>
<td>CUDA CORES</td>
<td>1344</td>
</tr>
<tr>
<td>SYSTEM INTERFACE</td>
<td>PCI Express 2.0 x16</td>
</tr>
<tr>
<td>MAX POWER CONSUMPTION</td>
<td>108 W</td>
</tr>
<tr>
<td>THERMAL SOLUTION</td>
<td>Ultra-quiet active fansink</td>
</tr>
<tr>
<td>FORM FACTOR</td>
<td>111.15 mm (H) x 241.3 mm (L)</td>
</tr>
<tr>
<td></td>
<td>Single Slot, Full Height</td>
</tr>
<tr>
<td>DISPLAY CONNECTORS</td>
<td>1 x DVI-I DL, 2 x DP1.2, 1 x Stereo¹</td>
</tr>
<tr>
<td>MAX SIMULTANEOUS DISPLAYS</td>
<td>3 direct, 4 DP 1.2 Multi-Stream</td>
</tr>
<tr>
<td>MAX DP 1.2 RESOLUTION</td>
<td>3480 x 2160 @ 60 Hz</td>
</tr>
<tr>
<td>MAX DVI-I DL RESOLUTION</td>
<td>2560 x1600 @ 60 Hz</td>
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<tr>
<td></td>
<td>1920 x1200 @ 120 Hz</td>
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<tr>
<td>MAX DVI-I SL RESOLUTION</td>
<td>1920 x1200 @ 60 Hz</td>
</tr>
<tr>
<td>MAX VGA RESOLUTION</td>
<td>2048 x 1536 at 85 Hz</td>
</tr>
<tr>
<td>GRAPHICS APIS</td>
<td>Shader Model 5.0, OpenGL 4.5², DirectX 11.2³</td>
</tr>
<tr>
<td>COMPUTE APIS</td>
<td>CUDA, DirectCompute, OpenCL</td>
</tr>
<tr>
<td>PACKAGE CONTENT</td>
<td>- 2 x DP to DVI (SL) adapter P/N: GSP-DP/DV/VI SL</td>
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<tr>
<td></td>
<td>- DVI to VGA adapter P/N: GSP-DV/VGA</td>
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<tr>
<td></td>
<td>- Stereo Connector P/N: GSP-STEROEQ4000-PB</td>
</tr>
<tr>
<td>PART NUMBER</td>
<td>VCQK4200-PB</td>
</tr>
<tr>
<td>EAN NUMBER</td>
<td>3536403943842</td>
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</tbody>
</table>

¹ Via supplied adapter/connector/bracket
² Product is based on a published Khronos Specification, and is expected to pass the Khronos Conformance Testing Process when available.
³ GPU supports DX 11.2 API, Hardware Feature Level DX 11.0

Current conformance status can be found at www.khronos.org/conformance
## Quadro K4200 - TECHNICAL SPECIFICATIONS AND FEATURES

### QUAD-DISPLAY SUPPORT
A new display engine drives up to four displays and DisplayPort 1.2 support for ultra-high resolutions like 3840x2160 @ 60 Hz with 30-bit color. NVIDIA SYNC allows multiple displays to be frame-locked together.

### INCREDIBLE GRAPHICS PERFORMANCE
The NVIDIA GPU architecture provides incredible 3D application performance with dual copy engines for seamless data movement within GPU memory—all in a flexible single-slot form factor.

### 4 GB GDDR5 GPU MEMORY WITH ULTRA-FAST BANDWIDTH
Large GPU memory with fast bandwidth enables the creation and rendering of large, complex models.

## Quadro K4200 - FEATURES
- **DisplayPort 1.2**
- **DisplayPort with Audio**
- **DVI-Dual-Link Connector**
- **VGA Support**
- **Professional 3D Support**
- **NVIDIA 3D Vision™ Pro**
- **Quadro Sync Compatibility**
- **HD SDI Capture/Output Compatibility**

## QUADRO K4200 - TECHNICAL SPECIFICATIONS

### SUPPORTED PLATFORMS
- Microsoft Windows 8.1 (64-bit and 32-bit)
- Microsoft Windows 8 (64-bit and 32-bit)
- Microsoft Windows 7 (64-bit and 32-bit)
- Linux® - Full OpenGL implementation, complete with NVIDIA and ARB extensions (64-bit and 32-bit)

### 3D GRAPHICS ARCHITECTURE
- Scalable geometry architecture
- Hardware tessellation engine
- NVIDIA® GigaThread™ engine with dual copy engines
- Shader Model 5.0 (OpenGL 4.3 and DirectX 11.2!)
- Up to 16K x 16K texture and render processing
- Transparent multisampling and super sampling
- 16x angle independent anisotropic filtering
- 128-bit point floating performance
- 32-bit per-component floating point texture filtering and blending
- 64x full scene antialiasing (FSAA) / 128x FSAA in SLI Mode
- Decode acceleration for MPEG-2, MPEG-4 Part 2 Advanced Simple Profile, H.264, MVC, VC1, DivX (version 3.11 and later), and Flash (10.1 and later)
- Dedicated H.264 Encoder
- Blu-ray dual-stream hardware acceleration (supporting HD picture-in-picture playback)
- Quadro Boost (Automatically adjusts GPU engine throughput to maximize application performance.)

### PARALLEL COMPUTING CAPABILITIES
- SMX Architecture (streaming multi-processor design that delivers greater processing and efficiency)
- Hyper Q
- Dynamic Parallelism (GPU dynamically spawns new threads without going back to the CPU)
- API support includes: CUDA C, CUDA C++, DirectCompute 5.0, OpenCL, Java, Python, and Fortran
- NVIDIA® Parallel DataCache™ hierarchy (configurable L1 and unified L2 caches)
- 64 KB of RAM (configurable partitioning of shared memory and L1 cache) Dual

### ADVANCED DISPLAY FEATURES
- 30-bit color (10-bit per each red, green, blue channel)
- Simultaneously drive up to three displays when connected natively
- Support up to four displays when using DisplayPort 1.2 Multi-Stream
- Dual DisplayPort 1.2 (supporting resolutions such as 3840x2160 @ 60 Hz)
- Dual-link DVI-D (supports outputs up to 2560 x 1600 @ 60 Hz and 1920x1200 @ 120 Hz)
- Internal 400 MHz DAC (DVI-I) output (analog display up to 2048x1536 @ 60 Hz)
- DisplayPort to VGA, DisplayPort to DVI (single-link and dual-link) and DisplayPort to HDMI cables (resolution support based on dongle specifications)
- HDCP support over DisplayPort, DVI and HDMI connectors
- 10-bit internal display processing hardware support for 10-bit scanout for both windows desktop and full screen, only available on Windows and Linux with Aero disabled
- NVIDIA 3D Vision™ technology, 3D DLP™, interleaved, and other 3D stereo format support
- Full OpenGL quad buffered stereo support
- Underscan/overscan compensation and hardware scaling
- Support for NVIDIA® Quadro® Mosaic, NVIDIA® nView® multi-display technology, NVIDIA® Enterprise Management Tools
- Support for large-scale, ultra-high resolution visualization using the quadro SFS platform which includes Quadro Mosaic, Quadro Sync and Warp/Blend technologies

### DISPLAY PORT AND HD DIGITAL AUDIO
- Support for the following audio modes: Dolby Digital (AC3), DTS 5.1, Multichannel (7.1) LPCM, Dolby Digital Plus (DD+), and MPEG-2/MPEG-4 AAC
- Data rates of 44.1 KHz, 48 KHz, 88.2 KHz, 96 KHz, 176 KHz, and 192 KHz
- Word sizes of 16 bits, 20 bits, and 24 bits

## PACKAGE CONTENT:
- 2 x DP to DVI (SL) adapter
- DVI to VGA adapter
- Stereo Additional Connector
- Drivers + Installation Guide

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