



## NVIDIA PROFESSIONAL GRAPHICS SOLUTIONS

Take on your most challenging digital prototyping, visual effects, and geophysical or architectural visualization workloads with the graphics horsepower, realism, and interactivity that only NVIDIA® Quadro® can deliver. It's powered by the latest NVIDIA technologies, features large ultra-fast memory, and supports four displays natively with resolutions of true 4K. Enjoy exceptional accuracy and photorealism in your creative workflow by using NVIDIA Iray® technology\* to reach new levels of interactive, physically based rendering.



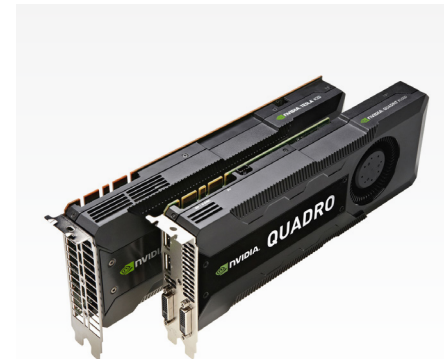
### NVIDIA® Quadro® 3D Workstation Professional Graphics Solutions

Designed and built specifically for artists, designers, and engineers, NVIDIA Quadro GPUs power more than 100 professional applications across a broad range of industries. Professionals trust them to enable their best work using applications such as Adobe® Creative Cloud, Avid Media Composer, Autodesk Suites, Dassault Systemes, CATIA and SOLIDWORKS, Siemens NX, PTC Creo, and many more.



### NVIDIA® Tesla® Co-Processors

NVIDIA Tesla GPU parallel processors are tailored to provide high-performance NVIDIA CUDA® acceleration for your workflow. Designed for professional systems and demanding professional applications, Tesla GPUs perform the complex calculations required for CAE/CFD calculations, seismic processing, ray-traced rendering, compositing, image processing, physics, and effects many times faster than a CPU.



### NVIDIA® Multi-GPU Technology

NVIDIA® Multi-GPU Technology leverages combinations of Quadro and Tesla GPUs to intelligently scale the performance of your application and dramatically speed up your workflow. This delivers significant business impact across industries such as Manufacturing, Media and Entertainment, and Energy Exploration.



### Quadro® Visual Computing Appliance (VCA)

This is a powerful, turnkey, network-attached appliance that harnesses the power of the highest performing NVIDIA Quadro GPUs. It's accessible to anyone on the network, is easily integrated into design workflows, and can scale to deliver noiseless, interactive global illumination.

\*NVIDIA Iray plugins are available separately for select applications. Learn more at [www.nvidia.com/iray](http://www.nvidia.com/iray)

# NVIDIA PROFESSIONAL GRAPHICS SOLUTIONS

GPU SPECIFICATIONS			PERFORMANCE		DISPLAY TECHNOLOGY								OPTIONS					
NVIDIA® CUDA® Processing Cores <sup>1</sup>	GPU Memory	Peak Memory Bandwidth	Floating-Point Performance- Single Precision (TFlops, Peak)	Error-Correcting Code (ECC) Memory	Dual-Link DVI <sup>2</sup>	DisplayPort 1.2 <sup>3,4,6,13</sup>	HDMI Via Adaptors, HDMI <sup>6,13</sup>	Maximum Active Displays <sup>1,10</sup>	FSAA (Maximum)	NVIDIA® FXAA™ and NVIDIA® TXAA™ Antialiasing	NVIDIA® SLI®	NVIDIA Quadro® Mosaic Technology	GPU Direct™ for Video	Graphics Synchronization <sup>5</sup>	NVIDIA Multi-GPU Technology Enabled <sup>6</sup>	Vulkan Support	3D Vision Pro	NVIDIA Optimus

## Quadro for Desktop Workstations

Quadro M6000 24GB <b>NEW</b>	3,072	24 GB	317 GBps	7	• <sup>7</sup>	1	4	4	4	64x	•	•	•	•	•	•	•	•
Quadro M6000	3,072	12 GB	317 GBps	7	• <sup>7</sup>	1	4	4	4	64x	•	•	•	•	•	•	•	•
Quadro K6000	2,880	12 GB	288 GBps	5.1	• <sup>8</sup>	2	2	4	4	64x	•	•	•	•	•	•	•	•
Quadro M5000	2,048	8 GB	211 GBps	4.2	• <sup>7</sup>	1	4	4	4	64x	•	•	•	•	•	•	•	•
Quadro K5200	2,304	8 GB	192 GBps	3.5	• <sup>8</sup>	2	2	4	4	64x	•	•	•	•	•	•	•	•
Quadro M4000	1,664	8 GB	192 GBps	2.5			4	4	4	64x	•	•	•	•	•	•	•	•
Quadro K4200	1,344	4 GB	173 GBps	2.3		1	2	3	4	64x	•	•	•	•	•	•	•	•
Quadro M2000 <b>NEW</b>	768	4 GB	106 GBps	1.8			4	4	4	64x	•	•	•	•	•	•	•	•
Quadro K2200	640	4 GB	80 GBps	1.4		1	2	3	4	64x	•	•	•	•	•	•	•	•
Quadro K1200	512	4 GB	80 GBps	1			4	4	4	64x	•	•	•	•	•	•	•	•
Quadro K620	384	2 GB	29 GBps			1	1	2	4	64x	•	•	•	•	•	•	•	•
Quadro K420	192	1 GB/2 GB	29 GBps			1	1	2	4	64x	•	•	•	•	•	•	•	•
Quadro K2000D	384	2 GB	64 GBps			2	1	3	4	64x	•	•	•	•	•	•	•	•

## Tesla for Desktop Workstations

Tesla K40	2,880	12 GB	288 GBps	5 <sup>9</sup>	•								•	•	•	•	•	•
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## Quadro for Mobile and All-in-One Workstations

<b>NEW</b> Quadro M5000M <b>NEW</b>	1,536	8 GB	160 GBps	3.2			1.2	2	4	64x	•	•	•	•	•	•	•	•
Quadro M4000M <b>NEW</b>	1,280	4 GB	160 GBps	2.6			1.2	2	4	64x	•	•	•	•	•	•	•	•
Quadro M3000M <b>NEW</b>	1,024	4 GB	160 GBps	1.9			1.2	2	4	64x	•	•	•	•	•	•	•	•
Quadro M2000M <b>NEW</b>	640	4 GB	80 GBps	1.5			1.2	2	4	64x	•	•	•	•	•	•	•	•
Quadro M1000M <b>NEW</b>	512	2 GB	80 GBps	1.1			1.2	2	4	64x	•	•	•	•	•	•	•	•
Quadro M600M <b>NEW</b>	384	2 GB	80 GBps	0.7			1.2	2	4	64x	•	•	•	•	•	•	•	•
Quadro K5100M	1,536	8 GB	115 GBps	2.3			1.2	2	4	64x	•	•	•	•	•	•	•	•
Quadro K4100M	1,152	4 GB	102 GBps	1.6			1.2	2	4	64x	•	•	•	•	•	•	•	•
Quadro K3100M	768	4 GB	102 GBps	1			1.2	2	4	64x	•	•	•	•	•	•	•	•
Quadro K2200M	640	2 GB	80 GBps	1.4			1.2	2	4	64x	•	•	•	•	•	•	•	•
Quadro K2100M	576	2 GB	48 GBps	0.75			1.2	2	4	64x	•	•	•	•	•	•	•	•
Quadro K1100M	384	2 GB	45 GBps	0.55			1.2	2	4	64x	•	•	•	•	•	•	•	•
Quadro K610M	192	1 GB	21 GBps	0.38			1.2	2	4	64x	•	•	•	•	•	•	•	•

## NVS for Desktop Workstations

NVS 810 <b>NEW</b>	1,024 <sup>11</sup>	4 GB <sup>11</sup>	29 GBps <sup>11</sup>				8	8	8	64x	•	•	•	•	•	•	•	•
NVS 510 <sup>12</sup>	192	2 GB	29 GBps				4	4	4		•	•	•	•	•	•	•	•
NVS 315	48	1 GB	14 GBps			2 <sup>3</sup>	2	2	2		•	•	•	•	•	•	•	•
NVS 310 <sup>12</sup>	48	512 MB/1 GB	14 GBps				2	2	2		•	•	•	•	•	•	•	•

## Quadro Visual Computing Appliance (VCA)

<b>GPUs:</b> 8 High-End NVIDIA GPUs	<b>GPU Memory:</b> 12 GB per GPU	<b>CUDA Cores:</b> 24,576	<b>Network:</b> 2 x 1GigE, 2 x 10GigE (SFP+), 1 x InfiniBand	<b>Quadro VCA Accelerated Applications:</b> Autodesk 3ds Max, Autodesk Maya, Autodesk Revit, Cinema 4D, Dassault Systemes CATIA Live Rendering, Dassault Systemes SOLIDWORKS Visualize, Daz 3D Daz Studio, McNeel Rhinoceros	<b>Installed Software:</b> Linux CentOS 6.5, VCA Manager, Iray 2014.3.4 or newer, V-Ray 3.0 or newer
<b>System Memory:</b> 256 GB	<b>Storage:</b> 2 TB SSD	<b>CPU:</b> Xeon E5 (2.8 Ghz)	<b>CPU Cores:</b> 20 physical cores, 40 hyper-threaded		

1. CUDA parallel processing cores cannot be compared between GPU generations due to several important architectural differences that exist between streaming multiprocessor designs.

2. Maximum display resolution: 330M Pixels/sec (ex 2560x1600 @ 60Hz or 1920x1200@120Hz)

3. Adaptors available for DVI-SL, DVI-DL, HDMI, and VGA. NVS 315 offers DP1.2 through the use of DMS-59 to DP1.2 cable.

4. Quadro K4200, K2200, and K2000D are equipped with 3 on-board display connectors, while K620 and K420 have 2 on-board display

connectors with the option to connect a third and/or fourth display using DisplayPort 1.2's new multi-streaming capabilities. 4 Displays require a supported DisplayPort 1.2 Multi-Stream capable hub or displays.

5. Quadro K-series GPUs are only compatible with NVIDIA Quadro Sync.

Other GPUs listed are compatible only with Quadro G-Sync II.

6. Quadro K-series GPUs are only compatible with Tesla K40. Other GPUs listed are compatible only with Tesla C2075.

7. Ensures data integrity and reliability by eliminating soft errors on DRAM only.

8. Ensures data integrity and reliability by eliminating soft errors on both GPU cache and on-board DRAM.

9. The Single Precision theoretical peak performance for Tesla K40 is calculated for the highest GPU Boost level of 875MHz. For more information on Tesla K40 and GPU Boost visit, [www.nvidia.com/tesla](http://www.nvidia.com/tesla)

10. Display support will vary by OEM

11. The NVS 810 is a dual GPU design, so half of this total number is per GPU.

12. Combo NVS 510 and NVS 310 for up to 6 displays is supported.

13. GPU capability

For more information on NVIDIA NVS mobile solutions please

visit, [www.nvidia.com/object/notebook-nvs.html](http://www.nvidia.com/object/notebook-nvs.html)

