



## NVIDIA PROFESSIONAL GRAPHICS SOLUTIONS

The new family of advanced NVIDIA professional graphics is fueled by NVIDIA Kepler™—NVIDIA's most powerful GPU architecture ever—delivering unprecedented performance and innovative capabilities to boost your success. Whether you're creating revolutionary products, designing groundbreaking architecture, reviewing the fine details in a CT/MRI scan, or telling spectacularly vivid visual stories, NVIDIA professional solutions let you do it better and faster.



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

Designed and built specifically for professional workstations, NVIDIA Quadro GPUs power more than 150 professional applications across a broad range of industries. Professionals trust them to deliver the best possible experience in applications such as Adobe® Creative Cloud, Avid Media Composer, Autodesk Inventor, Dassault Systemes CATIA and SolidWorks, Siemens NX, PTC Creo, and many more.



### NVIDIA® Tesla® Co-Processors

NVIDIA Tesla GPU parallel processors provide the highest-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® Maximus™ Platform

NVIDIA Maximus-powered workstations combine the industry-leading professional 3D graphics capability of NVIDIA Quadro GPUs with the high-performance computing power of NVIDIA Tesla GPUs. Tesla co-processors automatically perform the heavy lifting of rendering or CAE computations, freeing the Quadro GPUs to do what they do best—enabling rich interactive graphics. With Maximus, engineers, artists, designers, and scientists can now interact with high-performance visuals while also performing simulations or renderings on the same system.



### NVIDIA® NVS™ Commercial Graphics Solutions

NVIDIA NVS graphics boards provide robust IT management tools for seamless enterprise deployment. This makes them the trusted solution of choice financial institutions, emergency call centers, digital signage systems, and other mission-critical environments.

# NVIDIA PROFESSIONAL GRAPHICS SOLUTIONS

DESKTOP						MOBILE		GPU SPECIFICATIONS			PERFORMANCE			DISPLAY TECHNOLOGY										OPTIONS			
HP Z1	HP Z220	HP Z220sff	HP Z420	HP Z620	HP Z820	EliteBook 8570w	EliteBook 8770w	NVIDIA® CUDA® Processing Cores <sup>1</sup>	GPU Memory	Memory Bandwidth	Floating-Point Performance-Single Precision (Gigaflops, Peak)	Floating-Point Performance-Double Precision (Gigaflops, Peak)	Error Correcting Code (ECC) Memory	Dual-Link DVI <sup>2</sup>	DisplayPort 1.1 <sup>3</sup>	DisplayPort 1.2 <sup>3</sup>	HDMI Via Adaptors	Maximum Active Displays <sup>4</sup>	FSAA (Maximum)	NVIDIA® FXAA™ Antialiasing	NVIDIA® TXAA™ Antialiasing	NVIDIA® SLI®	NVIDIA Quadro® Mosaic Technology	GPU Direct™ for Video	Graphics Synchronization <sup>5</sup>	NVIDIA 3D Vision® /3D Vision Pro <sup>6</sup>	NVIDIA Maximus™ -Enabled <sup>7</sup>

## Quadro for Desktop Workstations

Quadro K5000 <sup>8</sup>				1	2	2			1,536	4 GB	173 GBps	2,150		• <sup>9</sup>	2		2	4	4	64x	•	•	•	•	•	•	•	•
Quadro K4000 <sup>8</sup>		1		1	2	2			768	3 GB	134 GBps	1,246			1		2	3	4	64x	•	•		•	•		•	•
Quadro K2000 <sup>8</sup>		1		2	2	3			384	2 GB	64 GBps				1		2	3	4	64x	•	•		•	•		•	•
Quadro K2000D									384	2 GB	64 GBps				2		1	3	4	64x	•	•		•			•	•
Quadro K600		1	1	2	2	2			192	1 GB	29 GBps				1		1	2	2	64x	•	•		•			•	•
Quadro 410		1	1	2	2	2			192	512 MB	14 GBps				1		1	2	2	32x	•	•		•			•	•
Quadro 6000 <sup>8</sup>				1	1	2 (SLI)			448	6 GB	144 GBps	1,030	515	•	1	2		2	2	64x	•		•	•	•	•	•	•
Quadro 5000									352	2.5 GB	120 GBps	718		•	1	2		2	2	64x	•		•	•	•	•	•	•
Quadro 4000 <sup>8</sup>		1		1	2	2			256	2 GB	90 GBps	486			1	2		2	2	64x	•		•	•			•	•
Quadro 2000		1		2	2	2			192	1 GB	42 GBps				1	2		2	2	64x	•		•				•	•
Quadro 2000D				2 <sup>10</sup>	2 <sup>10</sup>	2 <sup>10</sup>			192	1 GB	42 GBps				2			2	2	64x	•		•				•	•
Quadro 600		1	1	2	2	2			96	1 GB	26 GBps				1	1		2	2	64x	•		•				•	•

## Tesla for Desktop Workstations

Tesla K20			1	1	2			2,496	5 GB	208 GBps	3,520	1,170	•											•		•
Tesla C2075			1	1	2			448	6 GB	144 GBps	1,030	515	•	1				1						•		•

## Quadro for Mobile and All-in-One Workstations

Quadro K5000M							1	1,344	4 GB	96 GBps	1,600		• <sup>8</sup>	•	•	•	•	64x	•	•	•	•	•	•	•	•
Quadro K4000M <sup>11</sup>	1						1	960	4 GB	90 GBps	1,150			•	•	•	•	64x	•	•	•	•	•	•	•	•
Quadro K3000M <sup>11</sup>	1						1	576	2 GB	90 GBps	750			•	•	•	•	64x	•	•	•	•	•	•	•	•
Quadro K2000M							1	384	2 GB	29 GBps	575			•	•	•	•	64x	•	•	•	•	•	•	•	•
Quadro K1000M							1	192	2 GB	29 GBps	325			•	•	•	•	64x	•	•	•	•	•	•	•	•
Quadro K500M								192	1 GB	13 GBps	270			•	•	•	•	64x	•	•	•	•	•	•	•	•
Quadro 1000M <sup>12</sup>	1							96	2 GB	29 GBps				•	•	•	•	64x	•	•	•	•	•	•	•	•
Quadro 500M <sup>12</sup>	1							96	1 GB	29 GBps				•	•	•	•	64x	•	•	•	•	•	•	•	•

## NVS for Desktop Workstations

NVS 510 <sup>13</sup>		1	1	2	2	2			192	2.0 GB	29 GBps						4	4	4					•				
NVS 310 <sup>13</sup>		2	2	3	4	3			48	512 MB	14 GBps						2	2	2					•				
NVS 300 <sup>13</sup>		2	2	3	4	4			16	512 MB	13 GBps				2 <sup>14</sup>	2 <sup>14</sup>		2	2					•				

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)

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

4. Quadro K4000, K2000, and K2000D are equipped with 3 on-board display connectors with the option to connect a 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. Requires 3D Vision-ready display. Visit [www.nvidia.com/3dvision](http://www.nvidia.com/3dvision)

7. Quadro K-series GPUs are only compatible with Tesla K20. Other GPUs listed are compatible only with Tesla C2075

8. May require configuration restrictions and/or alternate power supply if applicable
9. Ensures data integrity and reliability by eliminating soft errors on DRAM only

10. Available through HP's Tested & Certified Program on supported platforms

11. Also available for All-in-One workstations

12. Available for All-in-One workstations only

13. Combo NVS 510 + NVS 300/310 for up to 6 displays is supported

14. Supports dual SL-DVI-I/VGA/DP through DMS59 connector

For more information on NVIDIA Workstation products, visit [www.nvidia.com/workstation](http://www.nvidia.com/workstation)

