



NVIDIA PROFESSIONAL GRAPHICS SOLUTIONS

Experience the world's most powerful visual computing platform everywhere—for the ultimate in creative freedom. Whether you're developing revolutionary products, telling spectacularly vivid visual stories, designing groundbreaking architecture, or creating the most lifelike, immersive virtual experiences, NVIDIA Quadro gives you the performance to do it brilliantly. Support for multiple 5K displays, large graphics memory capacity, advanced physically based rendering, VR-specific features, and flexible multi-GPU configurations give you the power to tackle the most challenging visual computing tasks.



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.

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GPU SPECIFICATIONS			PERFORMANCE		DISPLAY TECHNOLOGY					VIRTUAL REALITY (VR)		OPTIONS				
NVIDIA® CUDA® Processing Cores ¹	GPU Memory	Peak Memory Bandwidth	Floating-Point Performance- Single Precision (TFlops, Peak)	Error-Correcting Code (ECC) Memory	Dual-Link DVI or DVI-D ²	DisplayPort 1.2 and 1.4 ^{3,11}	Maximum Active Displays ^{4,11}	HDMI via Adaptors, HDMI ¹¹	NVIDIA® SLI®	NVIDIA Quadro® Mosaic Technology	VR Ready ¹²	Simultaneous Multi-Projection	GPU Direct™ for Video	Graphics Synchronization (Sync and Sync II) ⁵	Vulkan Support	3D Vision Pro

Quadro for Desktop Workstations

Quadro P6000 NEW	3,840	24 GB	432 GBps	12	• ⁶	1	4 ³	4	4	•	•	•	•	•	•	•
Quadro M6000 24GB	3,072	24 GB	317 GBps	7	• ⁶	1	4	4	4	•	•	•	•	•	•	•
Quadro M6000	3,072	12 GB	317 GBps	7	• ⁶	1	4	4	4	•	•	•	•	•	•	•
Quadro K6000	2,880	12 GB	288 GBps	5.1	• ⁷	2	2	4	4	•	•	•	•	•	•	•
Quadro P5000 NEW	2,560	16 GB	288 GBps	8.9	• ⁶	1	4 ³	4	4	•	•	•	•	•	•	•
Quadro M5000	2,048	8 GB	211 GBps	4.2	• ⁶	1	4	4	4	•	•	•	•	•	•	•
Quadro M4000	1,664	8 GB	192 GBps	2.5			4	4	4	•	•	•	•	•	•	•
Quadro M2000	768	4 GB	106 GBps	1.8			4	4	4							•
Quadro K2200	640	4 GB	80 GBps	1.4		1	2	4	3							•
Quadro K1200	512	4 GB	80 GBps	1			4	4	4							•
Quadro K620	384	2 GB	29 GBps			1	1	4	2							•
Quadro K420	192	1 GB/2 GB	29 GBps			1	1	4	2							•

Tesla for Desktop Workstations

Tesla K40	2,880	12 GB	288 GBps	5 ⁸	•								•			•
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NVS for Desktop Workstations

NVS 810	1,024 ⁹	4 GB ⁹	29 GBps ⁹				8	8	8		•					•
NVS 510 ¹⁰	192	2 GB	29 GBps				4	4	4		•					•
NVS 315	48	1 GB	14 GBps			2	2 ³	2	2		•					•
NVS 310 ¹⁰	48	512 MB/1 GB	14 GBps				2	2	2		•					•

Quadro Visual Computing Appliance (VCA)

GPUs: 8 High-End NVIDIA GPUs	GPU Memory: 12 GB per GPU	CUDA Cores: 24,576	Network: 2 x 1GigE, 2 x 10GigE (SFP+), 1 x InfiniBand	Quadro VCA Accelerated Applications: Autodesk 3ds Max, Autodesk Maya, Autodesk Revit, Cinema 4D, Dassault Systemes CATIA Live Rendering, Dassault Systemes SOLIDWORKS Visualize, Daz 3D Daz Studio, McNeel Rhinoceros	Installed Software: Linux CentOS 6.5, VCA Manager, Iray 2014.3.4 or newer, V-Ray 3.0 or newer
System Memory: 256 GB	Storage: 2 TB SSD	CPU: Xeon E5 (2.8 GHz)	CPU Cores: 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: 1050M Pixels/sec (32.4 Gbps) (ex 7680x4320 @ 60Hz or 5120x2880@ 60Hz). Pascal GPUs support Dual-Link DVI-D.

3. Adaptors available for DVI-SL, DVI-DL, HDMI, and VGA. P6000 and P5000 support DP1.4. NVS 315 offers DP1.2 through the use of DMS-59 to DP1.2 cable.

4. Quadro K2200 is 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 Pascal GPUs are only compatible with Quadro Sync II. Quadro Kepler and Maxwell GPUs are only compatible with NVIDIA Quadro Sync.

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

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

8. 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

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

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

11. Display support will vary by OEM

12. VR Ready GPUs have the performance & features required for high-quality VR experiences.

For more information on NVIDIA NVS mobile solutions please visit, www.nvidia.com/object/notebook-nvs.html