



NVIDIA SOLUTIONS FOR MEDIA AND ENTERTAINMENT

NVIDIA professional GPUs deliver unprecedented performance and innovative capabilities to boost your success. Whether you're creating digital characters, designing groundbreaking effects, reviewing client content, or telling spectacularly vivid visual stories, NVIDIA professional solutions let you do it better and faster.

NVIDIA® QUADRO® PROFESSIONAL GRAPHICS

Designed and built specifically for professional workstations, NVIDIA Quadro GPUs power more than 100 digital content creation applications and plug-ins. Professionals trust Quadro to deliver the best possible experience with applications such as Adobe Creative Cloud, Avid Media Composer, Autodesk 3ds Max and Maya, The Foundry Nuke, 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 ray-traced rendering, compositing, image processing, physics, and effects many times faster than a CPU.



NVIDIA GEFORCE® GTX™ GRAPHICS

NVIDIA GeForce GTX processors combine superior performance and advanced features for users on personal computers. Built to deliver the ultimate PC gaming experience, GTX TITAN systems also bring extreme rendering and simulation capability to your Windows or Linux PC.



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. Multi-GPU applications such as Adobe Premiere Pro, Autodesk 3ds Max with NVIDIA Iray rendering, Blackmagic Design DaVinci Resolve, and Chaos V-Ray RT offer increased performance by leveraging additional GPUs.

NVIDIA GRID™

NVIDIA GRID technology allows artists working in a remote or virtualized environment on lightweight Mac, Windows, or Linux devices the same high-end GPU-accelerated experience offered by a dedicated professional workstation. Artists can work on graphics-rich applications such as Vizrt VizArtist, Adobe After Effects, and Autodesk Maya anywhere, from any device. NVIDIA GRID technology is integrated into servers from Cisco, Dell, HP, IBM, and other systems providers.

NVIDIA QUADRO VISUAL COMPUTING APPLIANCE (VCA)

Accelerate design and VFX workflows with the VCA, the fastest way to interactive photorealistic digital 3D models and scenes. 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.

GPU SPECIFICATIONS			PERFORMANCE		DISPLAY TECHNOLOGY						OPTIONS			
NVIDIA® CUDA® Processing Cores ¹	GPU Memory	Memory Bandwidth	Floating-Point Performance-Single Precision (GigaFlops, Peak)	Error-Correcting Code (ECC) Memory	Dual-Link DVI ²	DisplayPort 1.2 ³	HDMI Via Adaptors	Maximum Active Displays ⁴	NVIDIA Antialiasing	NVIDIA Quadro® Mosaic Technology	NVIDIA GPUDirect™ for Video	Multi-Display Synchronization ⁵	NVENC h.264 HW Encode ⁶	NVIDIA Multi-GPU Technology ⁷

Quadro & Tesla for Workstations

LATEST	Quadro M6000 NEW	3,072	12 GB	317 GBps	7	• ⁹	1	4	4	4	FX/TX	•	•	•	•	
	Quadro M5000 NEW	2,048	8 GB	211 GBps	4.2	• ⁹	1	4	4	4	FX/TX	•	•	•	•	
	Quadro M4000 NEW	1,664	8 GB	192 GBps	2.5			4	4	4	FX/TX	•	•	•	•	
	Quadro K2200	640	4 GB	80 GBps	1.4		1	2	3	4	FX/TX	•		•	•	
	Quadro K1200 ¹⁰ NEW	512	4 GB	80 GBps	1			4	4	4	FX/TX	•		•	•	
	Quadro K620	384	2 GB	29 GBps			1	1	2	3	FX/TX	•		•	•	
	Quadro K420	192	1 GB / 2 GB	29 GBps			1	1	2	4	FX/TX	•		•	•	
	Quadro K6000	2,880	12 GB	288 GBps	5.1	• ⁸	2	2	4	4	FX/TX	•	•	•	•	•
	Quadro K5200	2,304	8 GB	192 GBps	3.5	• ⁸	2	2	4	4	FX/TX	•	•	•	•	•
	Quadro K5000	1,536	4 GB	173 GBps	2.1	• ⁹	2	2	4	4	•	•	•	•	•	•
Quadro K5000 for Mac	1,536	4 GB	173 GBps	2.1	• ⁹	2	2 ¹¹	4	4	•	•	•	•	•	•	
Quadro K4200	1,344	4 GB	173 GBps	2.1		1	2	3	4	FX/TX	•	•	•	•	•	
Quadro K4000	768	3 GB	134 GBps	1.2		1	2	3	4	•	•		•	•		
Quadro K2000	384	2 GB	64 GBps			1	2	3	4	FX/TX	•		•	•		
Quadro K2000D	384	2 GB	64 GBps			2	1	3	4	FX/TX	•		•	•		
Quadro K600	192	1 GB	29 GBps			1	1	2	2	FX/TX	•		•	•		
Quadro 410	192	512 MB	14 GBps			1	1	2	2	FX/TX	•		•	•		
Tesla K40	2,880	12 GB	288 GBps	5 ¹²	•						•		•	•		
Tesla K20	2,496	5 GB	208 GBps	3.5	•						•		•	•		

Server Co-Processors

Tesla K80	4,992	24 GB	480 GBps	8.73	•						•	•	•	•
Tesla K40	2,880	12 GB	288 GBps	5 ¹²	•						•	•	•	•
Tesla K20X	2,688	6 GB	250 GBps	4	•						•	•	•	•
Tesla K20	2,497	6 GB	209 GBps	3.5	•						•	•	•	•
GRID K2	2x 1,536	8 GB	320 GBps	4.5	• ⁹				FX				•	•
GRID K1	4x 192	16 GB	144 GBps		•				FX				•	•

Quadro for Mobile and All-in-One Workstations

LATEST	Quadro M5000M NEW	1,536	8 GB	160 GBps	3.2	• ¹³	• ¹³	• ¹³	• ¹³	FX/TX	•	•	•	•	
	Quadro M4000M NEW	1,280	4 GB	160 GBps	2.6	• ¹³	• ¹³	• ¹³	• ¹³	FX/TX	•		•	•	
	Quadro M3000M NEW	1,024	4 GB	160 GBps	1.9	• ¹³	• ¹³	• ¹³	• ¹³	FX/TX	•		•	•	
	Quadro M2000M NEW	640	4 GB	80 GB ps	1.5	• ¹³	• ¹³	• ¹³	• ¹³	FX/TX	•		•	•	
	Quadro M1000M NEW	512	2 GB	80 GBps	1.1	• ¹³	• ¹³	• ¹³	• ¹³	FX/TX	•		•	•	
	Quadro M600M NEW	384	2 GB	80 GBps	0.7	• ¹³	• ¹³	• ¹³	• ¹³	FX/TX	•		•	•	
	Quadro K5100M	1,536	8 GB	115 GBps	2.3	• ¹³	• ¹³	• ¹³	• ¹³	FX/TX	•	•	•	•	•
	Quadro K4100M	1,152	4 GB	102 GBps	1.6	• ¹³	• ¹³	• ¹³	• ¹³	FX/TX	•		•	•	
	Quadro K3100M	768	4 GB	102 GBps	1.0	• ¹³	• ¹³	• ¹³	• ¹³	FX/TX	•		•	•	
	Quadro K2200M	640	2 GB	80 GBps	1.4	• ¹³	• ¹³	• ¹³	• ¹³	FX/TX	•		•	•	
Quadro K2100M	576	2 GB	48 GBps	0.75	• ¹³	• ¹³	• ¹³	• ¹³	FX/TX	•		•	•		
Quadro K1100M	384	2 GB	45 GBps	0.55	• ¹³	• ¹³	• ¹³	• ¹³	FX/TX	•		•	•		
Quadro K620M	384	2 GB	14.4 GBps	0.75	• ¹³	• ¹³	• ¹³	• ¹³	FX/TX	•		•	•		
Quadro K610M	192	1 GB	21 GBps	0.38	• ¹³	• ¹³	• ¹³	• ¹³	FX/TX	•		•	•		
Quadro K510M	192	1 GB	19 GBps	0.34	• ¹³	• ¹³	• ¹³	• ¹³	FX/TX	•		•	•		

GeForce for Desktop PCs

GeForce GTX TITAN X	3,072	12 GB	336.5 GBps	7		1	3	1	4	FX/TX				
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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, 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		

- CUDA parallel processing cores cannot be compared between GPU generations due to several important architectural differences that exist between streaming multiprocessor designs.
- Maximum display resolution: 330M Pixels/sec (ex 2560x1600 @ 60 Hz or 1920x1200 @ 120 Hz)
- Adaptors available for DVI-SL, DVI-DL, HDMI, and VGA
- Quadro K4200, K4000, K2200, K2000, and K2000D are equipped with 3 on-board display connectors, while K620, K600 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.
- Quadro K-series GPUs are only compatible with NVIDIA Quadro Sync.
- This feature requires implementation by software applications and is not a stand-alone utility. Please contact quadrohelp@nvidia.com for details on availability.

- Quadro K-series GPUs are only compatible with Tesla K20 and K40.
- Ensures data integrity and reliability by eliminating soft errors on DRAM only
- Available in low-profile (half height) form factor only. No ATX version.
- Ensures data integrity and reliability by eliminating soft errors on both GPU cache and on-board DRAM
- On Mac OS X, DisplayPort 1.2 multi-streaming feature is currently not supported.

- 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
- Display support will vary by OEM; please see OEM Mobile Workstation platform specifications for details.

