

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, while the NVIDIA GRID Visual Computing Appliance (VCA) delivers these benefits in a turnkey platform.

NVIDIA VISUAL COMPUTING APPLIANCE

Accelerate design and VFX workflows with the NVIDIA® Visual Computing Appliance (VCA), the fastest way to interactive photorealistic digital 3D models and scenes. This is a powerful network-attached appliance that harnesses the power of the highest-performing NVIDIA GPUs. It's accessible to anyone on the network, easily integrated into design workflows and effortlessly scales to multiple VCAs to minimize the time to noiseless physically-based global illumination. This means you can now deliver photograph-quality images faster than ever before.

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 1.1 ³	DisplayPort 1.2 ³	HDMI Via Adapters	Maximum Active Displays ⁴	NVIDIA Antialiasing	NVIDIA Quadro® Mosaic Technology	NVIDIA GPU Direct™ for Video	Multi-Display Synchronization ⁵	NVENC h.264 HW Encode ⁶	NVIDIA Multi-GPU Technology ⁷

Quadro & Tesla for Workstations

NEW	Quadro K5200	2,304	8 GB	192 GBps	4,037		2		2	4	4	FX/TX	•	•	•	•
	Quadro K4200	1,344	4 GB	173 GBps	2,390		1		2	3	4	FX/TX	•	•	•	•
	Quadro K2200	640	4 GB	80 GBps			1		2	3	4	FX/TX	•		•	•
	Quadro K620	384	2 GB	29 GBps			1		1	2	3		•			
	Quadro K420	192	1 GB	29 GBps			1		1	2	4					
	Quadro K6000	2,880	12 GB	288 GBps	5,196	• ⁸	2		2	4	4	FX/TX	•	•	•	•
	Quadro K5000	1,536	4 GB	173 GBps	2,150	• ⁹	2		2	4	4		•	•		
	Quadro K5000 for Mac	1,536	4 GB	173 GBps	2,150	• ⁹	2		2 ¹⁰	4	4		•			
	Quadro K4000	768	3 GB	134 GBps	1,246		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	5,040 ¹¹	•							•	•	•	•
	Tesla K20	2,496	5 GB	208 GBps	3,520	•							•	•	•	•

Server Co-Processors

Tesla K40	2,880	12 GB	288 GBps	5,040 ¹¹	•								•	•	•	•
Tesla K20X	2,688	6 GB	250 GBps	3,935	•								•	•	•	•
Tesla K20	2,497	6 GB	209 GBps	3,521	•								•	•	•	•
GRID K2	2x 1,536	8 GB	320 GBps	4,580	• ⁹							FX		•	•	•
GRID K1	4x 192	16 GB	144 GBps		•							FX		•	•	•

Quadro for Mobile and All-in-One Workstations

Quadro K5100M	1,536	8 GB	115 GBps	2,350	• ⁹	• ¹²		• ¹²	• ¹²	• ¹²	FX/TX	•			•	
Quadro K4100M	1,152	4 GB	102 GBps	1,600		• ¹²		• ¹²	• ¹²	• ¹²	FX/TX	•			•	
Quadro K3100M	768	4 GB	102 GBps	1,050		• ¹²		• ¹²	• ¹²	• ¹²	FX/TX	•			•	
Quadro K2100M	576	2 GB	48 GBps	750		• ¹²		• ¹²	• ¹²	• ¹²	FX/TX	•			•	
Quadro K1100M	384	2 GB	45 GBps	550		• ¹²		• ¹²	• ¹²	• ¹²	FX/TX	•				
Quadro K610M	192	1 GB	21 GBps	375		• ¹²		• ¹²	• ¹²	• ¹²	FX/TX	•				
Quadro K510M	192	1 GB	19 GBps	325		• ¹²		• ¹²	• ¹²	• ¹²	FX/TX	•				
Quadro K5000M	1,344	4 GB	96 GBps	1,600	• ⁹	• ¹²		• ¹²	• ¹²	• ¹²	FX/TX	•			•	
Quadro K4000M ¹³	960	4 GB	90 GBps	1,150		• ¹²		• ¹²	• ¹²	• ¹²	FX/TX	•				
Quadro K3000M ¹³	576	2 GB	90 GBps	750		• ¹²		• ¹²	• ¹²	• ¹²	FX/TX	•				
Quadro K2000M	384	2 GB	29 GBps	575		• ¹²		• ¹²	• ¹²	• ¹²	FX/TX	•			•	
Quadro K1000M	192	2 GB	29 GBps			• ¹²		• ¹²	• ¹²	• ¹²	FX/TX	•				
Quadro K500M	192	1 GB	13 GBps			• ¹²		• ¹²	• ¹²	• ¹²	FX/TX	•				

GeForce for Desktop PCs

GeForce GTX TITAN BLACK	2,880	6 GB	336 GBps	5,121		•		•	•	4	FX/TX					
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- 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 Tesla K20 and K40. Other GPUs listed are compatible only with Tesla C2075.
- Ensures data integrity and reliability by eliminating soft errors on both GPU cache and on-board DRAM
- Ensures data integrity and reliability by eliminating soft errors on DRAM only
- This feature requires implementation by software applications and is not a stand-alone utility. Please contact

- quadrohelp@nvidia.com for details on availability.
- Display support will vary by OEM; please see OEM Mobile Workstation platform specifications for details.
- 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
- Available for All-in-One workstations only

For more information on NVIDIA Workstation products, visit www.nvidia.com/quadro

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