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® Multi-GPU Technology

NVIDIA® Multi-GPU Technology leverages multiple Quadro 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® GP100

The Quadro GP100 is the world's most advanced professional graphics solution ever created that combines the highest levels of visualization and compute performance. NVIDIA Pascal GPU, HBM memory, and NVLink technologies result in unprecedented power, performance, and capabilities for professional users to create their most complex designs, solve the most complex problems, and experience their creations with the most detailed, life-like VR environments.

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Column groups: **GPU SPECIFICATIONS** (CUDA Cores, GPU Memory, Peak Memory Bandwidth) · **PERFORMANCE** (Floating-Point Performance, ECC) · **DISPLAY TECHNOLOGY** (Dual-Link DVI, DisplayPort, Max Active Displays, HDMI, NVLink, SLI, HDR, Mosaic) · **VIRTUAL REALITY (VR)** (VR Ready, Simultaneous Multi-Projection) · **OPTIONS** (GPUDirect, Graphics Synchronization, Vulkan, 3D Stereo, H.264/265)

Quadro for Desktop Workstations

Product	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]	Maximum Active Displays	HDMI via Adaptors, HDMI[4]	NVIDIA NVLink	NVIDIA SLI	HDR - High Dynamic Range[4]	NVIDIA Quadro Mosaic Technology	VR Ready[5]	Simultaneous Multi-Projection	GPUDirect for Video	Graphics Synchronization (Sync and Sync II)[6]	Vulkan Support	3D Stereo	H.264/265 Video Encode
Quadro GP100	3,584	16 GB	717 GBps	10.3	•[7]	1	4	4	4	•	•	•	•	•		•	•	•	•	•
Quadro P6000	3,840	24 GB	432 GBps	12.6	•[8]	1	4	4	4		•	•	•	•	•	•	•	•	•	•
Quadro P5000	2,560	16 GB	288 GBps	8.9	•[8]	1	4	4	4		•	•	•	•	•	•	•	•	•	•
Quadro P4000	1,792	8 GB	256 GBps	5.3			4	4	4			•	•	•	•	•	•	•	•	•
Quadro P2000	1,024	5 GB	140 GBps	3.0			4	4	4			•	•					•	•	•
Quadro P1000	640	4 GB	80 GBps	1.8			4	4	4			•	•					•	•	•
Quadro P620	512	2 GB	80 GBps	1.3			4	4	4			•	•					•	•	•
Quadro P600	384	2 GB	64 GBps	1.1			4	4	4			•	•					•	•	•
Quadro P400	256	2 GB	32 GBps	0.6			3	3[9]	3			•	•					•	•	•
Quadro M6000 24GB	3,072	24 GB	317 GBps	6.8	•[8]	1	4	4	4		•		•	•		•	•	•	•	•
Quadro K6000	2,880	12 GB	288 GBps	5.1	•[7]	2	2	4	4		•		•	•		•	•	•	•	•
Quadro M5000	2,048	8 GB	211 GBps	4.2	•[8]	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	1.0			4	4	4				•					•	•	•
Quadro K620	384	2 GB	29 GBps			1	1	4	2				•					•	•	•
Quadro K420	192	2 GB	29 GBps			1	1	4	2				•					•	•	•

NVS for Desktop Workstations

Product	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]	Maximum Active Displays	HDMI via Adaptors, HDMI[4]	NVIDIA NVLink	NVIDIA SLI	HDR - High Dynamic Range[4]	NVIDIA Quadro Mosaic Technology	VR Ready[5]	Simultaneous Multi-Projection	GPUDirect for Video	Graphics Synchronization (Sync and Sync II)[6]	Vulkan Support	3D Stereo	H.264/265 Video Encode
NVS 810	1,024[10]	4 GB[10]	29 GBps[10]				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	1 GB	14 GBps				2	2	2				•						•	

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. GP 100 and Pascal architecture support DP1.4. 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. Supported adaptors required for HDMI.
5. VR Ready GPUs have the performance & features required for high-quality VR experiences.
6. Quadro Pascal GPUs are only compatible with Quadro Sync II. Quadro Kepler and Maxwell GPUs are only compatible with NVIDIA Quadro Sync.
7. Ensures data integrity and reliability by eliminating soft errors on both GPU cache and on-board DRAM.
8. Ensures data integrity and reliability by eliminating soft errors on DRAM only.
9. P400 can drive 4 displays via MST.
10. The NVS 810 is a dual GPU design, so half of this total number is per GPU.

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