



NVIDIA  
PROFESSIONAL  
GRAPHICS  
SOLUTIONS

## WHICH PNY PROFESSIONAL BOARD

Part Numbers	GPU SPECIFICATIONS			PERFORMANCE	
	NVIDIA® CUDA® <sup>1</sup> Processing Cores	GPU Memory	Memory Bandwidth	Floating-Point Performance (Single Precision) (GigaFlops, Peak)	Error Correcting Code (ECC) Memory

### NVIDIA QUADRO for Desktop Workstations

<b>Quadro M6000</b>	<b>NEW</b>	VCQM6000-PB	3 072	12 GB	317 GB/s	7 000	√ <sup>8</sup>
Quadro K6000		VCQK6000-PB	2 880	12 GB	288 GB/s	5 196	√ <sup>8</sup>
<b>Quadro M5000</b>	<b>NEW</b>	VCQM5000-PB	2 048	8 GB	211 GB/s	4 300	√ <sup>8</sup>
Quadro K5200		VCQK5200-PB	2 304	8 GB	192 GB/s	3 074	√ <sup>8</sup>
Quadro K5000 for Mac		VCQK5000MAC-PB	1 536	4 GB	173 GB/s	2 150	√ <sup>8</sup>
<b>Quadro M4000</b>	<b>NEW</b>	VCQM4000-PB	1 644	8 GB	192 GB/s	2 600	
Quadro K4200		VCQK4200-PB	1 344	4 GB	173 GB/s	2 072	
Quadro K2200		VCQK2200-PB	640	4 GB	80 GB/s		
Quadro K2000		VCQK2000-PB	384	2 GB	64 GB/s		
Quadro K2000D		VCQK2000DVI-PB	384	2 GB	64 GB/s		
<b>Quadro K1200</b>	<b>NEW</b>	VCQK1200-PB	512	4 GB	80 GB/s		
Quadro K620		VCQK620-PB	384	2 GB	29 GB/s		
Quadro K600		VCQK600-PB	192	1 GB	29 GB/s		
Quadro K420		VCQK420-PB	192	1 GB	29 GB/s		
Quadro 410		VCQ410-PB	192	512 MB	14 GB/s		

### NVIDIA TESLA for Desktop Workstations (Co-Processors)

Tesla K40	TCSK40CARD-PB	2 880	12 GB	288 GBps	5 040 <sup>10</sup>	√
Tesla K20	TCCK20CARD-PB	2 496	5 GB	208 GBps	3 520	√

### NVIDIA NVS for Desktop Workstations Graphics Boards

NVS 510	VCNV510DP-PB VCNV510DVI-PB VCNV510VGA-PB	192	2 GB	29 GBps		
NVS 315	VCNV315DP-PB VCNV315DVI-PB	48	1 GB	14 GBps		
NVS 310	VCNV310DP-PB VCNV310DVI-PB	48	512 MB	14 GBps		

- 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 @ 60Hz or 1920x1200@120Hz).
- 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.
- 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. Other GPUs listed are compatible only with Quadro G-Sync II.
- Requires 3D Vision-ready display. Visit [www.nvidia.com/3dvision](http://www.nvidia.com/3dvision).
- 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.

[www.pny.eu](http://www.pny.eu)

## IS RIGHT FOR YOU ?

DISPLAY TECHNOLOGY									OPTIONS						
Dual-Link DVI <sup>2</sup>	DisplayPort 1.2 <sup>3</sup>	Maximum Active Displays <sup>4</sup>	Maximum Resolution Support	FSAAs (Maximum)	NVIDIA® FXAA™ Antialiasing	NVIDIA® TXAA™ Antialiasing	NVIDIA Quadro® Mosaic Technology	Maximum Power Consumption	NVIDIA® Multi-OS Workstation Support	HD SDI Cap-ture/Output	GPUDirect™ for Video	Graphics Synchronization <sup>5</sup>	NVIDIA 3D Vi-sion@ 3D Vision Pro <sup>6</sup>	NVIDIA Multi GPU Technology Enabled <sup>7</sup>	

1	4	4	4096x2160	64x	√	√	√	250 W	√		√	√	√	√
2	2	4	4096x2160	64x	√	√	√	225 W	√	√	√	√	√	√
2	2	4	4096x2160	64x	√	√	√	150 W	√		√	√	√	√
2	2	4	4096x2160	64x	√	√	√	150 W	√	√	√	√	√	√
2	2	4	3840x2160	64x	√	√	√	122 W			√			
1	2	3 <sup>4</sup>	3840x2160	64x	√	√	√	108 W			√	√	√	√
-	4	4	4096x2160	64x	√	√	√	80 W			√	√	√	√
1	2	3 <sup>4</sup>	3840x2160	64x	√	√	√	60 W					√	√
1	2	2 <sup>4</sup>	3840x2160	64x	√	√	√	51 W					√	√
2	1	2 <sup>4</sup>	3840x2160	64x	√	√	√	51 W					√	√
-	4	4	4096x2160	64x	√	√	√	45 W					√	√
1	1	2 <sup>4</sup>	4096x2160	64x	√	√	√	41 W					√	√
1	1	2 <sup>4</sup>	3840x2160	64x	√	√	√	41 W					√	√
1	1	2 <sup>4</sup>	3840x2160	64x	√	√	√	45 W					√	√
1	1	2	3840x2160	32x	√	√	√	37 W					√	√

						√		235 W	√		√			√
						√		225 W	√		√			√

4 <sup>11</sup>	4 <sup>11</sup>	4 <sup>12</sup>	3840x2160				√	35 W	√					
2 <sup>11</sup>	2 <sup>11</sup>	2	2560x1600				√	19,5 W						
2 <sup>11</sup>	2	2	2560x1600				√	19,5 W						

- Ensures data integrity and reliability by eliminating soft errors on DRAM only.
- 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](http://www.nvidia.com/tesla)
- Using included adaptors.
- Up to 16 displays, with DP 1.2 multi-stream technology and cloning mode.

For more information on NVIDIA Workstation products, visit [www.nvidia.com/quadro](http://www.nvidia.com/quadro) & [www.pny.eu/quadro](http://www.pny.eu/quadro)  
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**NVIDIA QUADRO BY PNY**

ULTRA HIGH-END			
		PACKAGE CONTENT	IDEAL FOR
	<b>QUADRO M6000</b> VCQM6000-PB	3 x DP to DVI (SL) adapters 1 x DVI to VGA adapter 1 x Driver & Quick Installation Guide 1 x Stereo Connector Bracket 1 x Dual 6-pin to 8-pin power cable	Animation - Visualization Broadcast - Video Editing Design Oil & Gas Medical Imaging
	<b>QUADRO K6000</b> VCQK6000-PB	2 x DP to DVI (SL) adapters 1 x DVI to VGA adapter 1 x Driver & Quick Installation Guide 1 x Stereo Connector Bracket	Animation - Visualization Broadcast - Video Editing Design Oil & Gas Medical Imaging
HIGH-END			
	<b>QUADRO M5000</b> VCQM5000-PB	3 x DP to DVI (SL) adapters 1 x DVI to VGA adapter 1 x Driver 1 x Quick Installation Guide 1 x Stereo Additional Connector	Animation - Visualization Broadcast - Video Editing Design Manufacturing - large models Medical Imaging
	<b>QUADRO K5000 for MAC</b> VCQK5000MAC-PB	2 x DP to DVI (SL) adapter 1 x DVI to VGA adapter 1 x DP to mDP adapter 1 x Stereo Connector Bracket 1 x Driver & Quick Installation Guide	Animation Broadcast - Video Editing Design
	<b>QUADRO M4000</b> VCQM4000-PB	4 x DP to DVI (SL) adapter 1 x Auxiliary Power Cable 1 x Stereo Connector Bracket 1 x Driver & Quick Installation Guide	Animation / Video Editing Design Manufacturing - med/large models Medical Imaging
MID-RANGE			
	<b>QUADRO K2200</b> VCQK2200-PB	2 x DP to DVI (SL) adapter 1 x DVI to VGA adapter 1 x Driver & Quick Installation Guide	Animation Video Editing Manufacturing - medium models
	<b>QUADRO K2000D</b> VCQK2000DVI-PB	1 x mDP to DVI (SL) adapter 1 x DVI to VGA adapter 1 x mDP to DP adapter 1 x Driver & Quick Installation Guide	Animation Video Editing Manufacturing - medium models Medical Imaging
	<b>QUADRO K1200</b> VCQK1200DP-PB VCQK1200DVI-PB	4 x mDP to DP adapter 4 x mDP to DVI (SL) adapter (DVI) <sup>1</sup> 1 x Driver & Quick Installation Guide	Animation Video Editing Manufacturing - medium models
ENTRY-LEVEL			
	<b>QUADRO K620</b> VCQK620-PB	1 x DP to DVI (SL) adapter 1 x DVI to VGA adapter 1 x Attached Standard-Height Bracket 1 x Unattached LP Bracket 1 x Driver & Quick Installation Guide	Video Editing Manufacturing - small / medium models
	<b>QUADRO K420</b> VCQK420-PB	1 x DP to DVI (SL) adapter 1 x DVI to VGA adapter 1 x Attached LP Bracket 1 x Unattached Standard-Height Bracket 1 x Driver & Quick Installation Guide	Manufacturing - volume CAD

<sup>1</sup> only included with VCQK1200DVI







**NVIDIA TESLA BY PNY**

**HIGH-PERFORMANCE COMPUTING**

	<b>TESLA K80</b> TCSK80M-PB	- Server	SP Peak Performance: 8.74 Tflops DP Peak Performance: 2.91 Tflops
	<b>TESLA K40 CARD</b> TCSK40CARD-PB	- Workstation	SP Peak Performance: 4.29 Tflops DP Peak Performance: 1.43 Tflops
	<b>TESLA K40 M</b> TCSK40M-PB	- Server	SP Peak Performance: 4.29 Tflops DP Peak Performance: 1.43 Tflops
	<b>TESLA K20X</b> TCSK20X-PB	- Server	SP Peak Performance: 3.95 Tflops DP Peak Performance: 1.31 Tflops
	<b>TESLA K20 CARD</b> TCSK20CARD-PB	- Workstation	SP Peak Performance: 3.52 Tflops DP Peak Performance: 1.17 Tflops
	<b>TESLA K20 M</b> TCSK20M-PB	- Server	SP Peak Performance: 3.52 Tflops DP Peak Performance: 1.17 Tflops
	<b>TESLA K10</b> TCSK10-R2L-PB TCSK10-L2R-PB	- Server	SP Peak Performance: 4.58 Tflops DP Peak Performance: 190 Gflops



**NVIDIA NVS BY PNY**

**MULTI-DISPLAY BUSINESS GRAPHICS**

	<b>NVS 510</b> VCNVS510DP-PB VCNVS510DVI-PB VCNVS510VGA-PB	 Quad-Display	Financial Trading Digital Signage
	<b>NVS 315</b> VCNVS315DP-PB VCNVS315DVI-PB	 Dual-Display	Call Center General Productivity Applications
	<b>NVS 310</b> VCNVS310DP-PB VCNVS310DVI-PB	 Dual-Display	Upgrade From Integrated Graphics

**NVIDIA GRID BY PNY**

**VIRTUALIZED GRAPHICS**

	<b>GRID K2</b> VCGRIDK2M-R2L-PB VCGRIDK2M-L2R-PB	2 x High-End Kepler GPUs	Designer / Engineer / Power User
	<b>GRID K1</b> VCGRIDK1M-PB	4 x Entry Kepler GPUs	Knowledge Worker

## QUADRO HARDWARE IS BUILT FOR YEARS OF NON-STOP USE

- › Quadro cards are built for 24 hours a day, 7 days a week use. Extended availability and support is offered for all professional cards (including bug fixes for professional applications). Quadro boards are built for workplace environments.
- › Deployment can be for tens or hundreds of PCs in offices. That is why Quadro cards have more memory, smaller footprints, and consume less power.
- › Application certified, meaning the board/driver combination has been tested to work flawlessly on 100% of the certified software features and views professionals use.

## QUADRO CARDS COME WITH PROFESSIONAL MANAGEMENT TOOLS, LIKE

- › **NVIDIA® nView®** for desktop management, allowing users to create grids and snap applications to them.
- › **NVIDIA® Mosaic™** for combining multiple displays into one large display seamlessly without tearing.
- › Advanced 3D stereo supports stereoscopic 3D display on HDMI 3D TVs, projectors and displays, allowing for viewing images and ultrasounds in 3D.



DESIGN / ENGINEERING / MANUFACTURING			
Application	GOOD	BETTER	BEST
Altair® HyperWorks®	Quadro K2200	Quadro M4000	Quadro M5000
ANSYS Mechanical™	Multi-GPU Quadro K2200 + Tesla® K40	Multi-GPU Quadro M4000 + Tesla K40	Multi-GPU Quadro M5000 + Tesla K40
ANSYS Fluent®	Multi-GPU Quadro K2200 + Tesla® K40	Multi-GPU Quadro M4000 + Tesla K40	Multi-GPU Quadro M6000 + Tesla K40
AutoCAD® Design Suite (AutoCad + Showcase + 3Ds Max)	Quadro K2200	Quadro M5000	Quadro M5000 + Tesla K40
Autodesk® AutoCAD®	Quadro K620	Quadro K2200	Quadro M4000
Product Design Suite (Inventor + Showcase + 3Ds Max)	Quadro K2200	Quadro M5000	Multi-GPU Quadro M5000 + Tesla K40
Autodesk Inventor®	Quadro K2200	Quadro M4000	Quadro M5000
Autodesk MoldFlow®	Multi-GPU Quadro K620 + Tesla K40	Multi-GPU Quadro K2200 + Tesla K40	Multi-GPU Quadro M4000 + Tesla K40
Autodesk Mudbox™	Quadro M4000	Quadro M5000	Quadro M6000
Building Design Suites	Quadro K2200	Quadro M4000	Quadro M5000
Autodesk Revit®	Quadro K620	Quadro K2200	Quadro M4000
Autodesk Showcase™	Quadro K2200	Quadro M4000	Quadro M5000
Autodesk Inventor + 3ds Max®	Quadro K2200	Quadro M5000	Multi-GPU Quadro M5000 + Tesla K40
Autodesk Revit + 3ds Max	Quadro K2200	Quadro M5000	Multi-GPU Quadro M5000 + Tesla K40
Bunsped SHOT, PRO, DRIVE	Quadro M4000	Quadro M5000	Quadro M6000
Dassault Systèmes SIMULIA Abaqus*	Multi-GPU Quadro K2200 + Tesla K40	Multi-GPU Quadro M4000 + Tesla K40	Multi-GPU Quadro M5000 + Tesla K40
Dassault Systèmes Catia V5 & V6	Quadro K2200	Quadro M4000	Quadro M5000
Dassault Systèmes Catia Live Rendering	Quadro M5000	Multi-GPU Quadro M4000 + Tesla K40	Multi-GPU Quadro M6000 + 2 x Tesla K40
Dassault Systèmes SOLIDWORKS	Quadro K2200	Quadro M4000	Quadro M5000
MathWorks MATLAB	Multi-GPU Quadro K620 + Tesla K40	Multi-GPU Quadro M4000 + Tesla K40	Multi-GPU Quadro M5000 + Tesla K40
MSC Nastran * *	Multi-GPU Quadro K2200 + Tesla K40	Multi-GPU Quadro M4000 + Tesla K40	Multi-GPU Quadro M5000 + Tesla K40
PTC Creo	Quadro K2200	Quadro M4000	Quadro M5000
RTT DeltaGen/DeltaView/Delta-View+	Quadro M4000	Quadro M5000	Quadro M6000
Siemens NX	Quadro K2200	Quadro M4000	Quadro M5000
MODELING / ANIMATION / VISUALIZATION / EFFECTS			
Application	GOOD	BETTER	BEST
Autodesk 3ds Max	Quadro K2200	Quadro M4000	Quadro M5000
Autodesk 3ds Max for Interactive Rendering	Quadro M5000	Multi-GPU Quadro M5000 + Tesla K40	Multi-GPU Quadro M5000 + 2 x Tesla K40
Autodesk Maya®	Quadro M4000	Quadro M5000	Quadro M6000
Autodesk Maya for Interactive Rendering	Quadro M6000	Multi-GPU Quadro M5000 + Tesla K40	Multi-GPU Quadro M6000 + Tesla K40
Maxon CINEMA 4D	Quadro K2200	Quadro M4000	Quadro M5000
NewTek Lightwave™	Quadro K2200	Quadro M4000	Quadro M5000
Side Effects Houdini	Quadro M6000	Multi-GPU Quadro M5000 + Tesla K40	Multi-GPU Quadro M6000 + Tesla K40
Adobe After Effects CC	Quadro M4000	Multi-GPU Quadro M5000 + Tesla K40	Multi-GPU Quadro M6000 + Tesla K40
VIDEO EDITING			
Application	GOOD	BETTER	BEST
Adobe® Premiere Pro® CC	Quadro K2200	Quadro M5000	Multi-GPU Quadro M6000 + Tesla K40
Avid® Media Composer®	Quadro K2200	Quadro M4000	-
Grass Valley Edius®	Quadro K620	Quadro K2200	Quadro M4000
Sony Vegas Pro™	Quadro K620	Quadro K2200	Quadro M4000
OIL & GAS			
Application	GOOD	BETTER	BEST
Halliburton (Landmark) DecisionSpace®, GeoProbe®	Quadro M4000	Quadro M5000	Quadro M6000
Paradigm Geophysical VoxelGeo®	Quadro M5000	Quadro M6000	Multi-GPU Quadro M6000 + Tesla K40
Paradigm Geophysical EarthStudy360®	Quadro M4000	Quadro M5000	Quadro M6000
Schlumberger Petrel	Quadro M4000	Quadro M5000	Quadro M6000
IHS KINGDOM	Quadro K2200	Quadro M4000	Quadro M5000

\* Quadro is for Abaqus/CAE and Tesla is for Abaqus/Standard \*\* Quadro is for MSC Patran and Tesla is for MSC Nastran

## PNY ADVANTAGE

### PNY PROVIDES UNSURPASSED SERVICE AND COMMITMENT TO ITS PROFESSIONAL GRAPHICS CUSTOMERS

- > 3 year standard warranty
- > Pre-sales support and system configuration assistance
- > Dedicated Field Application engineers
- > Direct tech support hot lines
- > Support escalation for prompt issue resolution
- > Certified software support and bug reporting
- > Published product support and training materials
- > Advanced replacement options for mission-critical deployments
- > Long product life cycles and availability
- > Loyalty partner channel programs

### COMPATIBILITY & SUPPORT FOR ALL WORKSTATION BRANDS

#### PNY WARRANTY EXTENSION SERVICE

- > To better protect your investment, PNY offers a comprehensive extended 5 Year warranty to your NVIDIA QUADRO, NVS, TESLA or GRID card from PNY.

**Main features:**

- > **Additional 2 Year Extended Warranty Service** for your NVIDIA card by PNY
- > **Advanced Product Replacement** *(for European Union countries, Norway and Switzerland)*

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