

Product	Quadro NVS 280	Quadro NVS 290	Quadro NVS 420	Quadro NVS 440	Quadro NVS 450
Bus Interface	PCI-32	PCI Express x16 PCI Express x1	PCI Express x16 PCI Express x1	PCI Express x16 PCI Express x1	PCI Express x16
Memory Size	64MB DDR	256MB DDR2	512MB GDDR3 ³	256MB DDR ²	512MB GDDR3 ³
Memory Interface	64-bit	64-bit	128-bit (64bit/gpu)	256-bit (128bit/gpu)	128-bit (64bit/gpu)
Memory Bandwidth	3.2GB/s	6.4 GB/s	11.2 GB/s per gpu	8 GB/s per gpu	11.2 GB/s per gpu
Form Factor	SFF ¹	SFF ¹	SFF ¹	ATX Full Height, 1/2 length	ATX Full Height, 1/2 length
CUDA Processor Cores	N/A	16	16	N/A	16
Display Connectors	DMS-59 (1)	DMS-59 (1)	VHDCI (1)	DMS-59 (2)	DisplayPort (4)
Max. Displays per Board	2	2	4	4	4
Max Digital Resolution	1600x1200	1920 x 1200	2560 x 1600	1920x1200	2560 x 1600
Max Analog Resolution	2048x1536	2048 x 1536	N/A	2048x1536	N/A
OpenGL	1.4	2.0	2.1	1.5	2.1
DirectX	9.0	10.0	10.0	9.0c	10.0
Shader Model	2.0	4.0	4.0	3.0	4.0
CUDA enabled	N/A	Yes	Yes	N/A	Yes
Power & Cooling	12W - Passive	21W - Passive	40W - Active ⁷	31W - Passive	35W - Passive
nView Enabled	Yes	Yes	Yes	Yes	Yes
DisplayPort Links	N/A	N/A	4 ⁴	N/A	4
DVI Links	2	2	4 ⁵	4	4 ⁶
Analog Displays VGA	2	2	N/A	4	N/A

¹ SFF= Small Form Factor

² 256MB of local frame buffer (128MB DDR memory per GPU)

³ 512MB of local frame buffer (256MB GDDR3 memory per GPU)

⁴ Through VHDCI to Quad DisplayPort adapter, PN VCQ420NVS-X16-DP-PB or PN VCQ420NVS-X1-DP-PB

⁵ Through VHDCI to Quad DVI-D (Single Link) adapter, PN VCQ420NVS-X16-DVI-PB or PN VCQ420NVS-X1-DVI-PB

⁶ Through DisplayPort to DVI-D (Single Link) industry standard adapter

⁷ High reliability, variable speed fansink