

NVIDIA[®] NVS[™]
AUTHORIZED PARTNER

PNY[®]

NVIDIA NVS 810
Product Snapshot



NVIDIA NVS

Multi-display graphics

Traditional Markets



- Financial centers
- Trading floors
- Call centers
- Corporate desktops

New Growth Markets



- Digital signage
- Public facilities (airports, hospitals)
- Retail
- Emergency response
- Process control



NVIDIA NVS 810

Product positioning

▪	World's most capable display signage card providing the lowest cost per display driven and TCO
▪	Seamlessly drives 8 displays from a single card or combine cards together to form massive signage walls
▪	Advanced image management using Mosaic warp/blend/overlap and remote management with NVWMI toolkit



NVIDIA NVS 810

Solves digital signage problems

Solutions cost is too expensive:

- Only solution to offer 8x 4K displays from a single slot board for less than \$100 per display¹
- Eliminates the need for additional systems and cards = lowest TCO

Creating and deploying solutions is complicated:

- Advanced image management with warp/blend/overlap, previously only available on high-end Quadro
- Proven NVIDIA Mosaic to create massive unified displays
- Remote monitoring and configuration with NVIDIA Enterprise Management Tools (NVWMI)

Other NVS 810 benefits include:

- Latching mDP connector ensures reliability and signal integrity
- Multi-stream decode and playback of H.264



¹Maximum DVI-D SL resolution is 1920 x 1200.



NVIDIA NVS 810

Cost per display comparison

Lowest TCO

NVS 810
4GB, 68W, 8x mDP, 8x 4096 x 2160
\$80 Per Display

A6
2GB, 75W, 6x mDP, 6x 4096 x 2160
\$80 Per Display

NVS 510
2GB, 35W, 4x mDP, 4x 3840 x 2160
\$87 Per Display

M6
2GB, 75W, 6x mDP, 6x 4096 x 2160
\$100 Per Display

M4
2GB, 75W, 4x mDP, 4x 2560 x 1600
\$125 Per Display

M8
2GB, 75W, 8x mDP, 8x 2560 x 1600
\$200 Per Display

Highest TCO

Performance and Feature Support

NVIDIA NVS 810

Technical specifications

CUDA Cores	1024 (512 x 2)
GPU	GM107 x 2
GPU Memory	4GB DDR3 (2GB per GPU)
Form Factor	Single Slot, 9.5" x 4.4"
PCIe	Gen 3.0 x16
Display Connectors	8x mDP or 8x DVI-D SL
Max Display Configuration	8x 4K at 30Hz
Max Board Power	68W
Max Number of Frame Locked Displays	8
Max Boards Per System	3 Win 7 4 Win 10
Max Number of Mosaic Screens	16
Max Number of Windows Screens	24 Win 7 32 Win 10
Max Number of Linux Screens	32
Thermal Solution	Active Fansink
PNY Part Number	VCNVS810DVI-PB ¹



¹PNY PN VCNVS810DP-PB also available with 8 mDP to DP adapters.

NVIDIA NVS and Quadro

4K multi-display support¹

	1 Card	2 Cards	3 Cards	4 Cards
Quadro M6000	4 Overlap + Bezel Correction	8 Overlap + Bezel Correction and Quadro Sync	12 Overlap + Bezel Correction and Quadro Sync	16 Overlap + Bezel Correction and Quadro Sync
Quadro M5000	4 Overlap + Bezel Correction	8 Overlap + Bezel Correction and Quadro Sync	12 Overlap + Bezel Correction and Quadro Sync	16 Overlap + Bezel Correction and Quadro Sync
Quadro M4000	4 Overlap + Bezel Correction	8 Overlap + Bezel Correction and Quadro Sync	12 Overlap + Bezel Correction and Quadro Sync	16 Overlap + Bezel Correction and Quadro Sync
Quadro K1200	4 Overlap + Bezel Correction	8 Bezel Correction	12 Bezel Correction	16 Bezel Correction
NVS 810	8 Overlap + Bezel Correction	16 Bezel Correction	24 Bezel Correction	32 Bezel Correction

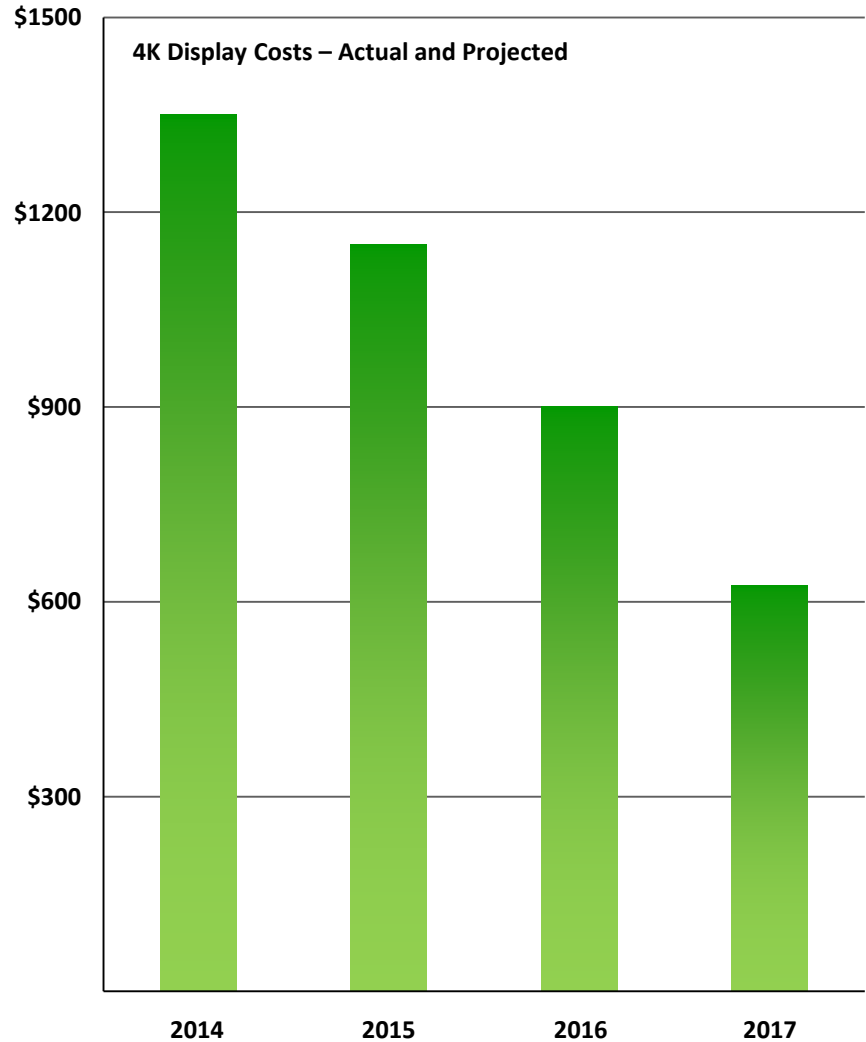
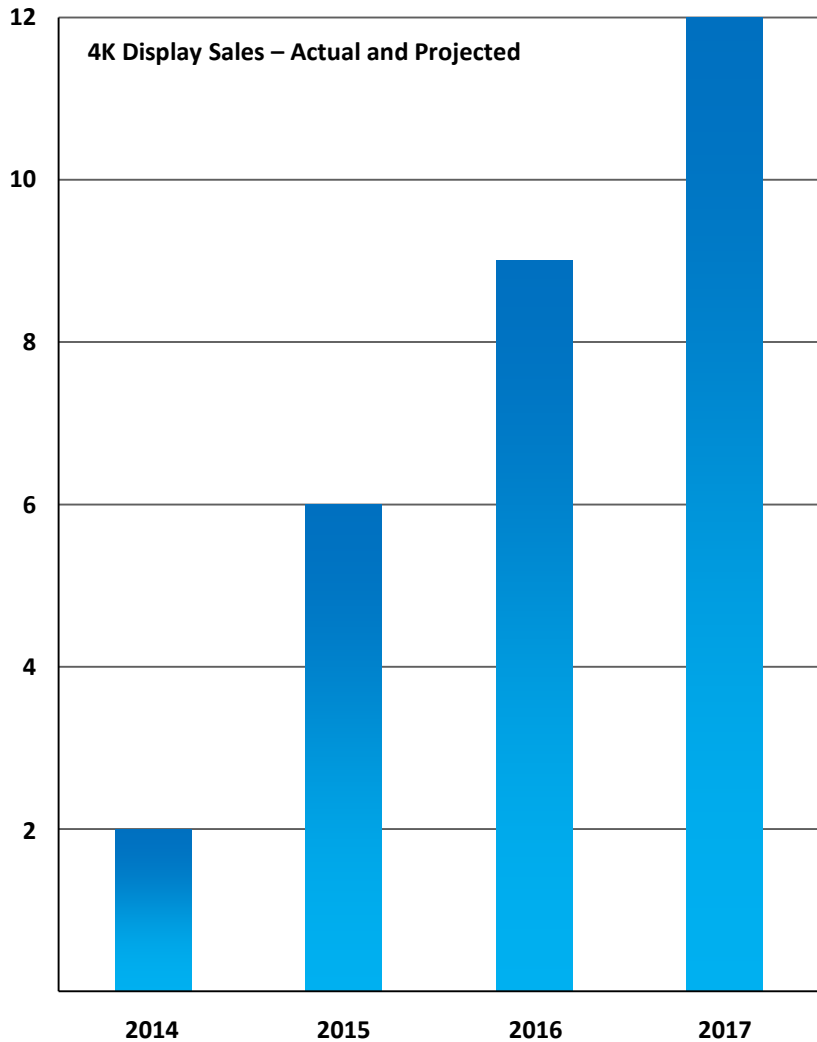
NVIDIA NVS 810 provides highest density and lowest TCO (Total Cost of Ownership)

¹4K requires use of DisplayPort since the maximum DVI-D SL resolution is 1920 x 1200.



4K Display Sales Trends

Shipments are growing rapidly while prices continue to fall¹



¹ Source: 2014 DisplaySearch an NPD Group Company.

NVIDIA NVS and Quadro Driver Features

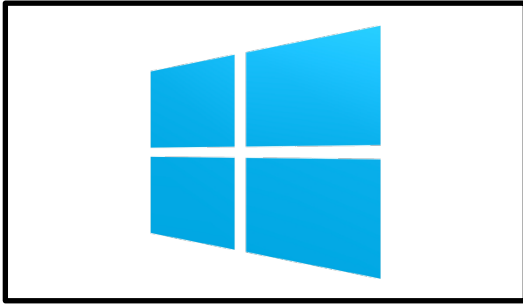
Simplifies development and deployment

Custom Resolutions	Mosaic	Tiled Displays	10- and 12-bit Color
GFT, DMT, CVT, CVT-RB, Manual timing	Seamless desktop across multiple GPU's	Automatic Mosaic setup on tiled displays using DisplayID	Support High Dynamic Range (HDR) displays
EDID Management	Mosaic + Sync	Ultra High Resolution Desktop	3D Stereo
Capture and read EDID from file	Framelock, overlap support, 3D stereo	Up to 16k by 16k	OpenGL, DirectX, active, passive, pixel packed
4K Resolution	GPU Direct for Video	External or Internal Sync	DisplayPort MST
DP 1.2 or HDMI 1.4B connectors or later	Picture-in-picture (POP) support	Genlock/TTL sync or internal sync	Support for multi-streaming devices
Warp + Intensity API	NVAPI	Display Clone Modes	GPU Affinity
Edge-blending and projection mapping for Windows or Linux	Programmatically control driver	DisplayPort clone, Pan and Scan clone, 4K cloning	Multi-GPU support and Swap Groups
8K e-Shift Support	Mosaic Confidence Monitor	NVWMI	
Native support for 8K e-shift projector	Smart clone features	Scripting, event monitor, remote setup	



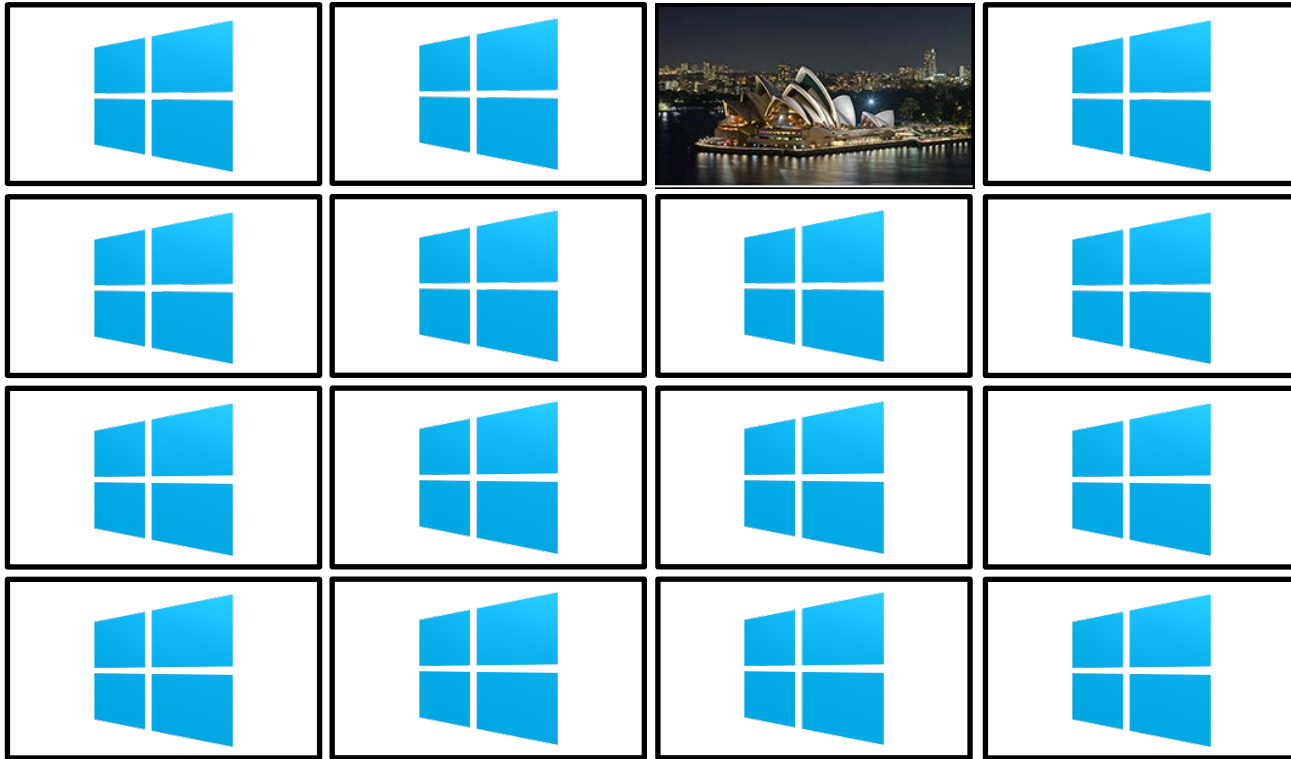
NVIDIA Mosaic: Why is it Necessary?

Windows on its own presents independent desktops



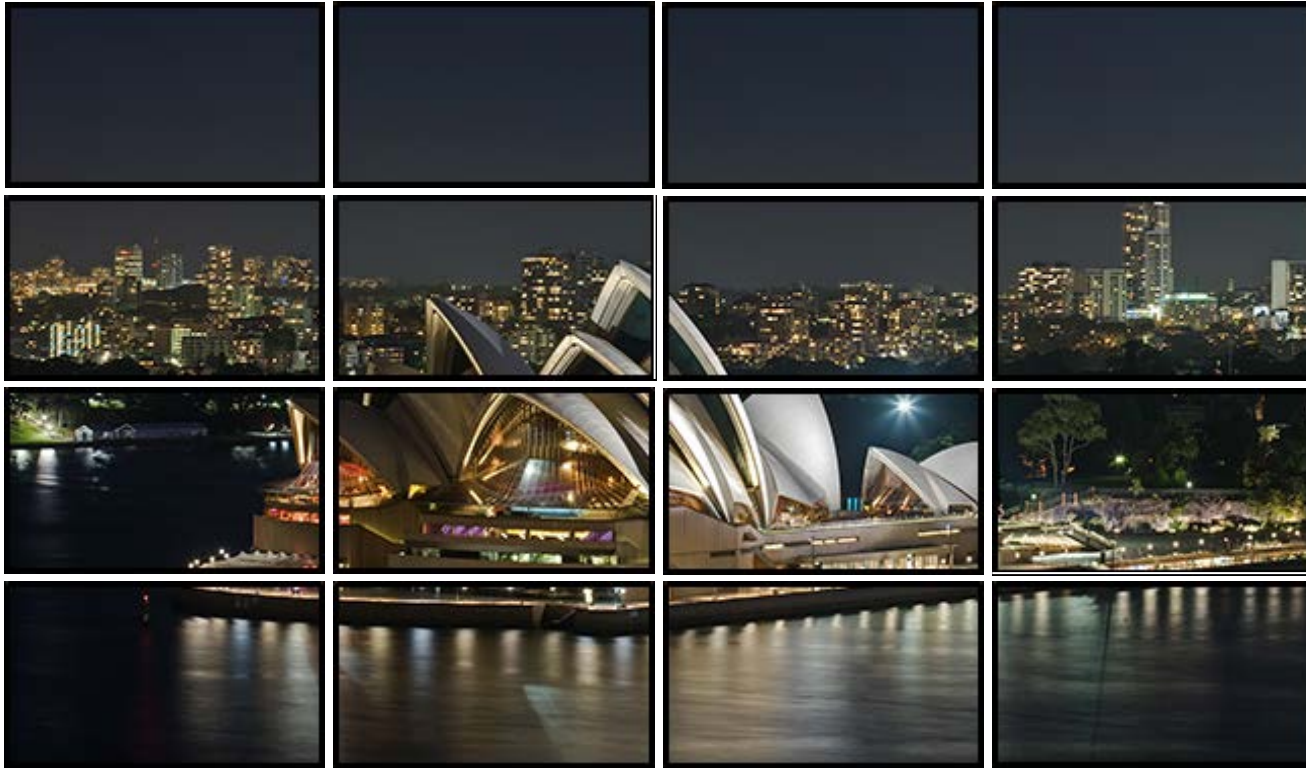
Windows Presents Independent Desktops

Even when used with multiple GPUs



NVIDIA NVS 810 with Mosaic

One large logical desktop without complexity or app modification



Mosaic Scalability

NVIDIA NVS 810 and Quadro at 4K resolution¹

	Number of displays from a single system with Mosaic				
	Up to 2	Up to 4	Up to 8	Up to 12	Up to 16
NVS 810	1 Board	1 Board	1 Board	2 Boards	2 Boards
M6000	1 Board	1 Board	2 Boards	3 Boards	4 Boards
M5000	1 Board	1 Board	2 Boards	3 Boards	4 Boards
M4000	1 Board	1 Board	2 Boards	3 Boards	4 Boards
K1200	1 Board	1 Board	2 Boards	3 Boards	4 Boards

NVS 810 reaches 16 display Mosaic limit with only two boards

¹Requires DisplayPort since maximum DVI-D SL resolution is 1920 x 1200 . Also for use case scenarios where Quadro Sync multi-board synchronization is not required.

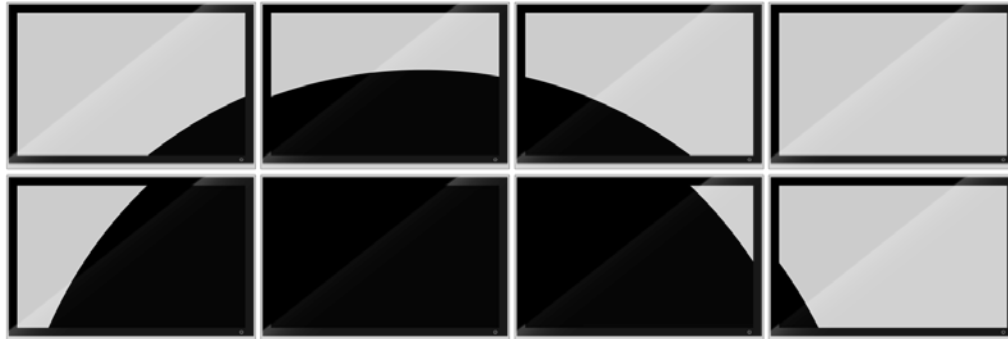


Bezel Correction

Image looks continuous by rendering under the bezel



With Bezel Correction

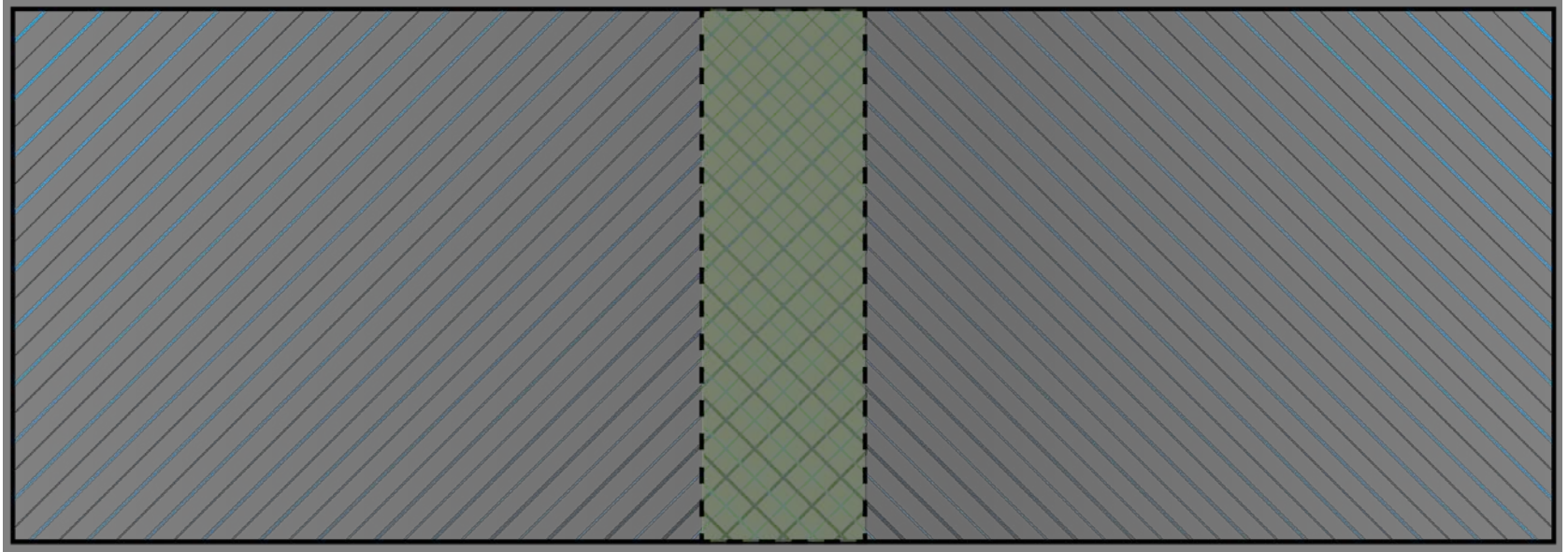


No Bezel Correction



Projector Overlap Correction

Maintains proper aspect ratio and more...



Projector Overlap

Compensates for geometry and brightness differences between projectors to present a visually seamless image | These are known as Warp (geometry corrections) or Blend (intensity adjustments) | Mosaic + Quadro Sync compatible products have the graphics and compute performance necessary to make these adjustments in real-time.



PNY's Service and Commitment

1	3 year warranty
2	Pre-sales support and configuration assistance
3	Support for all workstation brands and complex installations
4	Advanced replacement for mission-critical deployments
5	Dedicated Quadro Field Application Engineers
6	U.S. 800 number hotline and email technical support
7	Support escalation for prompt issue resolution
8	Certified software support and bug reporting
9	Published product support and training materials
10	All necessary accessories and driver software included



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