Build brilliant digital signage solutions easily and cost-effectively with NVS 810.

The NVIDIA NVS 810 graphics board delivers exceptional display connectivity, cost-effective scalability, and image management capabilities that make it easy to drive any kind of multi-display digital signage setup. It’s the first of its kind to offer eight display outputs, plus the world’s most advanced GPU architecture—NVIDIA Maxwell™—all in a single-slot form factor. This makes it ideal for creating dense signage solutions, delivering the uncompromised performance and reliability required to deploy demanding content in mission-critical signage installations.

**KEY FEATURES**

**Eight Display Outputs**

The NVS 810 leverages a dual GPU design to offer eight mini-DisplayPort 1.2 connectors capable of driving true 4K displays at 30 Hz. Plus, it provides advanced features like multi-streaming and stream cloning that enable extremely efficient cable management in complex installations.

**Extreme Scalability**

The NVS 810 gives you the best mix of performance, single-slot form factor, quiet operation, and power efficiency. Simply combine multiple NVS 810 cards in a single system to create cost-effective, massive signage walls with extreme screen resolution.

**Advanced Image Management**

Tap into the NVIDIA DesignWorks™ suite of powerful tools to manage images on complex multi-display configurations. Technologies like NVIDIA Mosaic and Warp & Blend help you achieve even the most demanding display configurations with ease.

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
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<tbody>
<tr>
<td>NVIDIA CUDA® Parallel Processing Cores</td>
<td>1024 (512 cores per GPU)</td>
</tr>
<tr>
<td>Frame Buffer Memory</td>
<td>4 GB DDR3 (2GB per GPU)</td>
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<tr>
<td>Memory Interface</td>
<td>128-bit (64-bit per GPU)</td>
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<tr>
<td>Memory Bandwidth</td>
<td>28.8 GB/s</td>
</tr>
<tr>
<td>Max Power Consumption</td>
<td>68 W</td>
</tr>
<tr>
<td>Graphics Bus</td>
<td>PCI Express 3.0 x16</td>
</tr>
<tr>
<td>Display Connectors</td>
<td>Mini DP 1.2 (8)</td>
</tr>
<tr>
<td>Max Display Support</td>
<td>8x 4096x2160@30Hz, 4x 4096x2160@60Hz</td>
</tr>
<tr>
<td>Form Factor</td>
<td>4.4” H x 7.8” L</td>
</tr>
<tr>
<td>Single Slot</td>
<td>Single Slot</td>
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<tr>
<td>Thermal Solution</td>
<td>Active</td>
</tr>
<tr>
<td>Product Weight</td>
<td>468g</td>
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Supported Platforms
> Microsoft Windows 10 (64-bit and 32-bit)
> Microsoft Windows 8.1 (64-bit and 32-bit)
> Microsoft Windows 7 (64-bit and 32-bit)
> Linux® - Full OpenGL implementation, complete with NVIDIA and ARB extensions (64-bit and 32-bit)

3D Graphics Architecture
> Scalable geometry architecture
> Hardware tessellation engine
> NVIDIA FXAA/ TXAA dedicated anti-aliasing engine\(^1\)
> Shader Model 5.0 (OpenGL 4.5 and DirectX 12)
> Up to 16K x16K texture and render processing
> Transparent multisampling and super sampling
> 16x angle independent anisotropic filtering
> 32-bit per-component floating-point texture filtering and blending
> Up to 64x full scene antialiasing (FSAA)
> Decode acceleration for MPEG-2, MPEG-4 Part 2 Advanced Simple Profile, H.264, MVC, VC1, DivX version 3.11 and later, and Flash (10.1 and later)
> Dedicated H.264 Encoder\(^1\)
> NVIDIA GPU Boost\(^*\) [Automatically increases GPU engine throughput to maximize application performance.]

Parallel Computing Capabilities
> Streaming Multi-Processor Design (SM 5.0) delivers high performance and energy efficiency
> Support for all the latest NVIDIA\(^*\) CUDA\(^*\) 7.5 features
> Programming support for CUDA C, CUDA C++, DirectCompute 5.0, OpenCL, Python, and Fortran

Advanced Display Features
> Simultaneously drive up to eight displays when connected natively or when using DisplayPort 1.2 Multi-Stream
> Eight DisplayPort 1.2 outputs including Multi-Stream and HBR2 support [capable of supporting resolutions such as 4096x2160@30 Hz when all eight displays are connected]
> DisplayPort to VGA, DisplayPort to DVI [single-link and dual-link], and DisplayPort to HDMI cables available [resolution support based on dongle specifications]
> DisplayPort 1.2, HDMI, and DVI support HDCP
> 12-bit internal display pipeline [hardware support for 12-bit scanout on supported panels, applications and connection]
> Underscan/overscan compensation and hardware scaling
> Support for NVIDIA Mosaic, NVIDIA nView\(^\text{®}\) multi-display technology, and NVIDIA Enterprise Management Tools

DisplayPort and HDMI Digital Audio
> Support for the following audio modes:
  > Dolby Digital (AC3), DTS 5.1, Multi-channel (7.1) LPCM, Dolby Digital Plus (DD+), DTS-HD, TrueHD
> Output data rates of 44.1 KHz, 48 KHz, 88.2 KHz, 96 KHz, 176 KHz (HDMI only), and 192 KHz (HDMI only)
> Word sizes of 16-bit, 20-bit, and 24-bit

NVIDIA nView Desktop Management Software
> Boosts productivity by delivering maximum flexibility for single and multi-display set-ups, and provides unprecedented end-user control of the desktop experience.
> Seamless integration within the Windows environment
> Easy to use Setup Wizard
> Extended Windows Taskbar to spread the application buttons across displays
> Get virtual sub-displays with gridlines to make best use of large display setups
> Create virtual desktops to maximize work area and reduce application clutter
> Complete set of hot keys
> User Profiles for easier system deployments

NVIDIA Mosaic Technology
> Enhance your workspace over multiple displays (up to 16 displays when used with multiple NVS 810 graphics cards)
> Enables seamless taskbar spanning as well as transparent scaling of any application over multiple displays

NVIDIA Enterprise Management Tools\(^2\)
> Monitor, access, and configure graphics and display information of remote machines using industry standard WMI interface
> Scriptable using WMI command line interface for integration with system-level management tools
> Scalable enterprise-class tools to remotely install and configure graphics drivers across your entire organization

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1 This feature requires implementation by software applications and is not a stand-alone utility. Please contact quadrehelp@nvidia.com for details on availability. | 2 Supported in Microsoft Windows 7 and later only

To learn more about NVIDIA NVS, go to [www.nvidia.com/nvs](http://www.nvidia.com/nvs)