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>Specification</th>
<th>Value</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>
</tr>
<tr>
<td>Memory Interface</td>
<td>128-bit (64-bit per GPU)</td>
</tr>
<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 Single Slot</td>
</tr>
<tr>
<td>Thermal Solution</td>
<td>Active</td>
</tr>
<tr>
<td>Product Weight</td>
<td>468g</td>
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</tbody>
</table>
TECHNICAL SPECIFICATIONS

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
- 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 blening
- 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
- 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® 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
- 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

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