NVIDIA NVS 810
PNY Part Number: VCNVS810DP-PB (with DP adapter)
PNY Part Number: VCNVS810DVI-PB (with DVI adapter)

User Guide
**NVIDIA NVS 810 Hardware Components**

The NVIDIA NVS 810 consists of the following hardware components:

- NVIDIA NVS 810 graphics board
- Mini DP to DP or Mini DP to DVI (Depends on SKU selection)
- Software installation disc with PDF documentation

**NVIDIA NVS 810 Overview**

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

The NVIDIA NVS 810 graphics board is a PCI Express full-height form factor (4.4 inches by 7.8 inches) graphics add-in card based on the NVIDIA NVS 810 graphics processing unit (GPU). It is targeted as a digital signage graphics solution for PCI Express systems. The NVIDIA NVS 810 graphics board offers 4GB of GDDR3 GPU (2GB per GPU) memory and supports either 4K displays.

**Eight Display Outputs**

The NVS 810 leverages a dual GPU design to offer eight mini-Display port 1.2 connectors capable of driving true 4K displays at 30Hz. Plus, it provides advance features like multi-streaming and stream cloning that enable extremely efficient capable management in complex installations. This version of the NVS 810 includes eight locking mDP to DVID-SL adapters for installations requiring legacy DVI display support.

**Extreme Scalability**

The NVS 810 give 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 a cost effective, massive signage wall with extreme 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 the most demanding display configurations with ease.
NVIDIA NVS 810 Specifications and Features

- GPU: NVIDIA NVS 810
- Maximum core clock: 900 MHz
- CUDA cores: 1024 (512 core per GPU)
- GPU memory: 8 GB GDDR3
- Memory interface: 128-bit
- Memory bandwidth: 28.8 GB/s
- PCI Express: PCIe Gen 3.0 x16
- Maximum power consumption: 68 W
- Physical dimensions: 4.4 x 7.8 inches, single slot

Display Connectors
- Eight Display Port 1.2 connectors
Display Support
- 8x display’s: 4096 x 2160 at 30Hz
- 4x display’s: 4096 x 2160 at 60Hz

Driver Support:
- Windows 10, 8.1, 8, 7, and Linux (32- and 64-bit)

NVS 810 Mosaic Configuration Options
1) Eight (1 x 8 or 2 x 4) display configuration with one NVS 810.
2) Sixteen (4 x 4) display configurations with two NVS 810.

**Motherboard, Power Supply, and System Enclosure Selection**

NVIDIA Mosaic supports up to two NVS 810 boards. The number of NVS 810’s that can be installed will vary by motherboard, system enclosure, and power supply capacity. When configuring a multi-NVS 810 system choose all of these components accordingly. Also pay attention to thermal capacity since multiple high-performance NVS 810 boards, even based on the reasonable individual wattage utilized, generate heat load that must be accounted for.