NVIDIA QUADRO NVS 450
RAISING THE BAR FOR PROFESSIONAL 2D GRAPHICS

QUADRO NVS 450 DATASHEET

The NVIDIA® Quadro® NVS 450 business graphics solution delivers a reliable hardware and software platform for a stable environment and robust IT management tools for seamless enterprise deployment.

Quadro® NVS 450 is the chosen solution across mixed environments, including financial institutions, emergency call centers, digital signage systems, and other mission-critical environments.

Featuring CUDA™ parallel computing processors with a unified architecture designed to dynamically allocate GPU resources, the Quadro NVS 450 solution delivers optimized performance for business graphics. Capable of supporting up to four digital displays at resolutions of up to 2560 x 1600 each through the DisplayPort connectors, the Quadro NVS 450 maximizes productivity by enabling more screen real estate from a single graphics card.

Through the NVIDIA® nView™ advanced display software, Quadro NVS 450 enables features such as profiles, extended Windows taskbar, gridlines, and virtual desktops. In addition, Quadro NVS 450 provides high-quality HD video output and high memory bandwidth for today's more demanding digital signage requirements.

Quadro NVS 450 business solution is engineered and built by NVIDIA to provide a reliable platform and is designed with a fanless cooling solution for quieter desktop environment. In addition, Quadro NVS 450 is tested for compatibility with leading business applications to meet the needs of today's most demanding business users.

Quadro NVS 450 is the professional 2D solution from a wide range of product offerings. The entire Quadro NVS family takes the leading business applications to a new level of interactivity by enabling unprecedented capabilities in display technology. Featuring Quadro NVS 450, 440, 290, and 280 at the professional 2D segment, Quadro delivers unmatched workstation performance and quality.

PRODUCT SPECIFICATIONS

FORM FACTOR
> ATX profile, 4.376" (H) x 6.6" (L)

FRAME BUFFER MEMORY
> 512MB GDDR3

MEMORY INTERFACE
> 64-bit per GPU

MEMORY BANDWIDTH
> 11.2 GB/s per GPU

MAX POWER CONSUMPTION
> 35W

GRAPHICS BUS
> PCI Express x16

DISPLAY CONNECTORS
> DisplayPort (qty 4)

SINGLE LINK DVI-I
> Yes (qty 4 through DP to DVI-D cable)

AUXILIARY POWER CONNECTORS
> No

NUMBER OF SLOTS
> 1

THERMAL SOLUTION
> Passive heatsink

FEATURES AND BENEFITS

NVIDIA UNIFIED GPU ARCHITECTURE	Industry's first unified architecture designed to dynamically allocate GPU resources to deliver optimized performance.
NVIDIA® CUDA™ PARALLEL COMPUTING PROCESSOR	16 CUDA parallel processing cores compatible with all CUDA accelerated applications. NVIDIA CUDA provides a C language environment and tool suite that unleashes new capabilities to solve various visualization challenges.
QUAD DISPLAYPORT	Featuring the small and user friendly DisplayPort connectors, Quadro NVS 450 is capable of supporting quad high-resolution displays at 2560 x 1600 resolution.
PCI EXPRESS 2.0 COMPLIANT	Doubles the data transfer rate up to 5 GT/sec per lane for an aggregate bandwidth of 16 GBps bi-directional (8 GB/s in each direction).
FANLESS DESIGN	Built with a passive heatsink for a quieter desktop environment.
NVIDIA® PUREVIDEO® TECHNOLOGY	NVIDIA PureVideo technology is the combination of high-definition video processors and software that delivers unprecedented picture clarity, smooth video, accurate color, and precise image scaling for SD and HD video content. Features include, high-quality scaling, spatial temporal de-interlacing, inverse telecine, and high quality HD video playback from DVD.
NVIDIA® NVIEW® ADVANCED-DISPLAY SOFTWARE	The NVIEW advanced display software delivers maximum flexibility for single-large display or multi-display configurations, providing unprecedented end-user control of the desktop experience for increased productivity.
ENERGYSTAR ENABLING DESIGN	Enables EnergyStar compliance with low maximum and low idle power levels.

TECHNICAL SPECIFICATIONS

SUPPORTED PLATFORMS

- Microsoft® Windows® Vista (64-bit and 32-bit)
- Microsoft Windows XP (64-bit and 32-bit)
- Microsoft Windows 2000 (32-bit)
- Linux® - Hardware OpenGL® implementation, complete with NVIDIA and ARB extensions (64-bit and 32-bit)
- Solaris® x86
- AMD64, Intel EM64T

NVIDIA QUADRO NVS 450 ARCHITECTURE

- Internal DisplayPort support
- PCI Express 2.0 support
- PureVideo™ HD technology
- CUDA capable
- 128-bit color precision
- Unlimited fragment instruction
- Unlimited vertex instruction
- 3D volumetric texture support
- 12 pixels per clock rendering engine
- 3rd-generation occlusion culling
- 16 textures per pixel in fragment programs
- Window ID clipping functionality
- Hardware accelerated line stippling

DISPLAY RESOLUTION SUPPORT

- Quad DisplayPort outputs drive DisplayPort enabled digital displays at resolutions up to 2560 x 1600 @ 60Hz
- DisplayPort to DVI-D (Single Link) industry standard cables can be used to drive digital displays at resolutions up to 1920 x 1200 @ 60Hz

To learn more about NVIDIA Quadro, go to **www.nvidia.com/quadro**

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