NVIDIA QUADRO FX 470 mGPU
PRO GRAPHICS.
GREAT VALUE.

In today's competitive global marketplace, engineers, analyst, traders, designers, and power office users consistently demand more from their desktop computing solutions.

Increasingly sophisticated professional applications require higher performance and system reliability on tight information technology budgets. Although desktop PCs can address some enterprise user needs, the requirements of professional applications like AutoCAD and Adobe require a graphics solution built for professionals. Yet, based on today's traditional workstation pricing, organizations often only deploy professional graphics solutions to hands-on designers and engineers, leaving a significant portion of the workforce with sub-optimal productivity.

Now, with the introduction of the first professional motherboard GPU (mGPU), the NVIDIA® Quadro® FX 470, organizations no longer have to make this trade-off. Built for professionals, the Quadro FX 470 addresses the expanding graphics and parallel processing requirements of professional applications, from volume CAD to digital content creation applications. With the Quadro FX 470, corporations can enhance their productivity with a wide range of NVIDIA professional graphics solutions that meet budgets requirements.

The Quadro FX 470 mGPU features a revolutionary unified GPU architecture that dynamically allocates geometry, shading and compute processing power to deliver optimized GPU performance for professional applications. The Quadro FX 470 platform solution is certified on leading applications and supports dual DVI-I connectors offering superb image quality at resolutions up to 2560 x 1600.

The entire Quadro family takes the leading professional applications to a new level of interactivity by enabling unprecedented capabilities in programmability and precision. The industry's leading workstation applications leverage this architecture to enable hardware-accelerated features, performance, and quality not found in any other professional graphics solutions. From Quadro FX 5600 and 4700 X2 at the ultra-high-end, and Quadro FX 4600 and 3700 at the high-end, through Quadro FX 1700 at the mid-range, to Quadro FX 570, 470, 370, and 370 Low Profile at the entry-level, Quadro delivers the productivity you need at every price point.

mGPU SPECIFICATIONS

DIRECTX 10 SUPPORT
> Yes

OPEN GL
> Open GL 2.1

CUDA™ PARALLEL COMPUTING PROCESSOR
> 16

QUAD DISPLAY WITH SINGLE QUADRO FX 370
> DVI-I DL + DVI+I SL

SYSTEM SPECIFICATIONS

CPU
> Core 2 Family (Dual & Quad), Pentium D, Pentium 4, Celeron D, Celeron

FSB
> 1333 Mhz

MEMORY
> Dual-channel, 4 DIMM DDR2-800 (up to 8 GB)

EXPANSION SLOTS
> 1 x16 PCI Gen 2 for Graphics
> x4 PCIe Gen 2 (x1 link) for SAS
> x1 PCIe for I/O Expansion
> 1 PCI 32-bit/33 MHz slot

HDD BAYS
> 3 Internal SATA HDD Cage

AUXILIARY BAY OPTIONS
> 1 3.5" 7 in 1 Card Reader
> 1 5.25" option DVD-ROM/DVD-RW

SATA DRIVES/SPEEDS
> 6 3Gb/s

NETWORKING
> Dual 10/100/1000

USB PORTS
> 10/2C

ENERGY STAR COMPLIANT
> Yes

PLATFORM ACOUSTICS
> Low 24dB

Images courtesy of Schlumberger, CyberHeart Inc., WTVF station and WSI corporation, and Realtime Technology AG.

QUADRO FX 470 | DATASHEET | OCT08 | REV1

FEATURES AND BENEFITS

PROFESSIONAL MOTHERBOARD GRAPHICS (mGPU)	First ever integration of NVIDIA's high performance Quadro graphics in NVIDIA MCP platform solutions enabling a professional class graphics solution at a great price.
I/O SCALABILITY & PERFORMANCE	Extensive I/O slot support enables peripherals like SAS and dual GbE that lengthen platform life cycle and performance. Support for power supplies up to 495 watts enables platform scalability to address a wide-range of user requirements.
NVIDIA® CUDA™ PARALLEL COMPUTING PROCESSOR	A parallel computing processor architecture exposed through a C language environment and tool suite in combination with high performance visualization, CUDA unleashes new capabilities to solve highly complex challenges such as real-time ray tracing, video encoding, and interactive volume rendering.
LOW POWER & ULTRA QUIET DESIGN	Enables Entry Level professional graphic platform at 40W advantage vs competitive platforms. Power efficiency coupled with platform design enable ultra quiet system acoustics at sub 25dB.
32-BIT FLOATING POINT PRECISION, FILTERING & BLENDING	Sets new standards for image clarity and quality through 32-bit floating point capabilities in shading, filtering, texturing, and blending. Enables unprecedented rendered image quality for visual effects processing.
NVIEW MULTI-DISPLAY TECHNOLOGY	Integrated Dual DVI digital connectors on Quadro FX 470 platform enable highest resolution digital displays available in the market. NVIDIA® nView® multi-display technology enables first professional platform allowing users to scale to Quad display with addition of single Quadro FX 370.

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® - Full OpenGL® implementation, complete with NVIDIA and ARB extensions (64-bit and 32-bit)
> Solaris® x86

NVIDIA QUADRO FX 470 mGPU ARCHITECTURE

> 128-bit color precision
> Unlimited fragment instruction
> Unlimited vertex instruction
> 3D volumetric texture support
> 12 pixels per clock rendering engine
> Hardware accelerated antialiased points & lines
> Hardware OpenGL overlay planes
> Hardware accelerated two-sided lighting
> Hardware accelerated clipping planes
> 3rd-generation occlusion culling
> 16 textures per pixel in fragment programs
> Window ID clipping functionality
> Hardware accelerated line stippling

SHADING ARCHITECTURE

> Full Shader Model 4.0 (OpenGL 2.1/DirectX 10 class)
> Long fragment programs (unlimited instructions)
> Long vertex programs (unlimited instructions)
> Looping and subroutines (up to 256 loops per vertex program)
> Dynamic flow control
> Conditional execution

HIGH LEVEL SHADER LANGUAGES

> Optimized compiler for Cg and Microsoft HLSL
> OpenGL 2.1 and DirectX 10 support
> Open source compiler

HIGH-RESOLUTION ANTIALIASING

> Rotated Grid Full-Scene Antialiasing (RG FSAA)
> 16x FSAA dramatically reduces visual aliasing artifacts or "jaggies", resulting in highly realistic scenes

DISPLAY RESOLUTION SUPPORT

> Two dual-link DVI-I outputs drive digital displays at resolutions up to 2560 x 1600 @ 60Hz
> Internal 400 MHz DACs – Two analog displays up to 2048 x 1536 @ 85Hz

NVIEW MULTI-DISPLAY TECHNOLOGY

> The NVIDIA® nView® hardware and software technology combination delivers maximum flexibility for multi-display options, and provides unprecedented end-user control of the desktop experience. NVIDIA GPUs are designed to support multi-displays.

Where to Buy | **www.nvidia.com/quadro**

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