NVIDIA QUADRO4 XGL
THE STANDARD FOR WORKSTATION GRAPHICS

The **NVIDIA Quadro®4 XGL** series sets the standard for workstation graphics by delivering breakthrough application performance, graphics programmability, and multi-display productivity. No other graphics vendor is able to deliver a top-to-bottom suite of workstation products, all certified by more professional applications than any other workstation graphics solution in the industry. Every NVIDIA Quadro4 product also features nView™—multi-display technology that offers improved productivity for every workstation professional.

The NVIDIA Quadro4 XGL series also introduces AGP 8X solutions (NVIDIA Quadro4 380/580/980 XGL). These products offer twice the bus bandwidth between the processor and the graphics card, increasing data throughput for graphically intense applications as compared to AGP 4X solutions.

UNBEATABLE PERFORMANCE FOR EVERY USER

The NVIDIA Quadro4 XGL series of workstation solutions deliver performance that far surpasses the industry's latest graphics hardware. This is achieved through a combination of dynamic memory management, performance-optimized OpenGL® and DirectX® drivers, and an architecture that delivers an astonishing 60 million lit, shaded, and trilinear-textured triangles/sec. Such raw power results in unprecedented performance from even the most resource-intensive professional workstation applications.

The **NVIDIA Quadro4 380/550/580 XGL** boards provide the fastest entry 3D graphics performance. These low-profile and full-height ATX configurations combine the performance of 64MB of memory and the flexibility of dual-analog, dual-digital, or digital and analog plus TV (380 XGL) displays for maximum on-screen real estate and productivity.

- 64MB high-speed DDR-SDRAM
- nView multi-display solution (VGA+VGA, Digital+Digital), (VGA+Digital+TV-out)
- Small form factor (550/580 XGL)

The **NVIDIA Quadro4 750 XGL** offers high-end features at a more aggressive price for outstanding performance. Features include the programmability of the second-generation NVIDIA nfiniteFX™II Engine and 128MB of fast DDR memory.

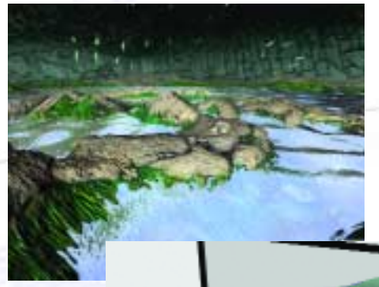
- 128MB DDR-SDRAM
- nfiniteFX II programmable graphics pipeline
- nView multi-display solution (VGA+VGA, VGA+Digital)
- Stereo sync connector

The **NVIDIA Quadro4 900/980 XGL** boards are the industry's most powerful and robust workstation graphics solutions, easily surpassing the latest products on the market. The first product ever to exceed 100 in ProCDRS-03 and 20 in UGS-02, the 900/980 XGL represent a revolutionary combination of performance and features.

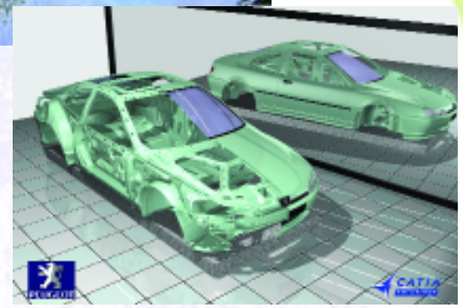
- 128MB DDR-SDRAM
- nfiniteFX II programmable graphics pipeline
- nView multi-display solution (VGA+VGA, Digital+Digital, VGA+Digital)
- Stereo sync connector

AGP 8X	**380/580 XGL**		**980 XGL**
AGP 4X	**550 XGL**	**750 XGL**	**900 XGL**

EXCEPTIONAL FEATURES FOR EVERY APPLICATION



NVIDIA is the pioneer in programmable OpenGL and DirectX shaders, enabling procedural effects made possible in real time by the NVIDIA nfiniteFX II Engine. The latest workstation applications rely heavily on the programmability of the NVIDIA Quadro4 750/900/980 XGL products in order to fully enable the most advanced features and effects. Exploiting these advanced application features allows workstation users to create more compelling designs with higher image quality, resulting in improved productivity.



All NVIDIA Quadro4 XGL products feature a unified memory architecture, which dynamically allocates memory between graphics subsystems. NVIDIA Quadro4 products also feature the second-generation NVIDIA Lightspeed Memory Architecture™ (LMA) II, which optimally load-balances across the patented NVIDIA crossbar memory controller. This results in maximum memory bandwidth utilization.

In addition to pure application and raw graphics performance, the NVIDIA Quadro Application Utilities add features and performance enhancements for key workstation applications (AutoCAD®, 3ds max™ and more). This popular suite of utilities includes POWERDraft, MAXtreme, and NVIDIA QuadroView.

NVIDIA nView—DEFINING MULTI-DISPLAY PRODUCTIVITY FOR 3D WORKSTATION APPLICATIONS

The NVIDIA Quadro4 family sets a new standard for productivity by supporting multiple displays for every product in the family. Our commitment to multi-display productivity is exemplified by the patented nView multi-display software—the most intuitive multi-display user interface on the market.

THE INDUSTRY'S MOST ROBUST CERTIFIED WORKSTATION GRAPHICS

NVIDIA Quadro products are the world's most successful workstation graphics brand, relied upon to drive critical applications by the largest installed base of professionals in the industry. This success is a testament to the quality of NVIDIA Quadro products. In fact, NVIDIA Quadro products are certified by more applications than any other workstation graphics in the industry. Also, the patented NVIDIA Unified Driver Architecture (UDA) allows every generation of NVIDIA Quadro products to use any certified NVIDIA driver, resulting in improved performance over the life of every NVIDIA Quadro product. UDA's continuous development impacts all NVIDIA GPUs, improving performance throughout the life of each product. Finally, the UDA model allows a single graphics driver update to be applied across a mixed installation of NVIDIA products, reducing the burden on IT resources.

The NVIDIA Quadro4 XGL series provides engineers, designers and animators the premier workstation graphics solution they've been looking for. No other workstation graphics vendor delivers so much power and so many features.

FEATURES	BENEFITS
WORKSTATION GRAPHICS ARCHITECTURE	The NVIDIA Quadro4 XGL architecture integrates workstation-specific functionality to accelerate OpenGL® and DirectX® professional applications. This results in the industry's fastest application performance and highest image quality.
NVIDIA nfiniteFX™ II ENGINE – APPLICATION PROGRAMMABILITY	The latest workstation applications rely heavily on the programmability of the NVIDIA Quadro4 750/900/980 XGL in order to fully enable the most advanced features and effects. Exploiting these application features increases image quality, realism and productivity.
LIGHTSPEED MEMORY ARCHITECTURE (LMA) II – PERFORMANCE MEMORY MANAGEMENT	NVIDIA Quadro4 XGL products support up to 128MB DDR unified graphics memory. This memory is dynamically allocated between graphics subsystems for maximum memory utilization. Furthermore, LMA II intelligently optimizes data transfer across the patented NVIDIA crossbar memory controller, delivering blistering sustained data rates.
NVIDIA nView– MULTI-DISPLAY SOFTWARE	The NVIDIA nView solution sets a new standard in workstation productivity by delivering unprecedented stability, image quality and performance. No other solution features rock-solid stability with productivity-enhancing functionality, all seamlessly integrated into the Windows® environment.
WORKSTATION SOFTWARE ARCHITECTURE	NVIDIA Quadro workstation graphics are certified by more professional applications than any other product in the industry. The NVIDIA Unified Driver Architecture ensures that certifications, feature enhancements and performance tuning automatically benefit past and present NVIDIA Quadro products, resulting in performance enhancements throughout the life of the product.
AGP 8X – HIGH-SPEED GRAPHICS BANDWIDTH*	Double the AGP bandwidth for increased application performance.

*AGP 8X available for NVIDIA Quadro4 380/580/980 XGL. All other NVIDIA Quadro4 XGL products support up to AGP 4X.

PERFORMANCE**	MEMORY	proe-01	ugs-01	3dsmax-01
NVIDIA QUADRO 980 XGL	128MB DDR	21.6	20.2	17.3
NVIDIA QUADRO 900 XGL	128MB DDR	17.0	17.3	16.5
NVIDIA QUADRO 750 XGL	128MB DDR	16.8	15.7	15.7
NVIDIA QUADRO 580 XGL	64MB DDR	14.4	8.9	10.9
NVIDIA QUADRO 380 XGL	64MB DDR	13.6	8.5	10.2
NVIDIA QUADRO 550 XGL	64MB DDR	12.7	7.9	9.4

** SPECviewperf® 7.0: for more information, visit www.spec.org. Note: Tested on 2.8 GHz Pentium4 Granite Bay, 512MB RAM, Driver version 41.03. Source: NVIDIA Performance Labs

NVIDIA QUADRO4 XGL FEATURES

- Hardware overlay planes
- Hardware antialiased lines
- Two-sided lighting
- Full-scene antialiasing (up to 2048x1536 per display)
- 2nd-generation occlusion culling
- NVIDIA Lightspeed Memory Architecture (LMA) II
- Dual 350MHz RAMDACs (2048x1536 per display)
- Optimized and certified for OpenGL 1.4 and DirectX 8 applications
- OpenGL quad-buffered stereo
- VESA 3-pin stereo synch connector

HIGH-LEVEL SHADING LANGUAGES

- Optimized compiler for Cg and Microsoft HLSL
- Full OpenGL 1.4 and DirectX support
- Architected for future APIs (eg., OpenGL 2.0)
- Open source compiler

NVIDIA QUADRO APPLICATION UTILITIES

- POWERdraft (AutoCAD®)
- MAXtreme (3ds max)
- NVIDIA QuadroView (CAD viewer)

OPERATING SYSTEMS

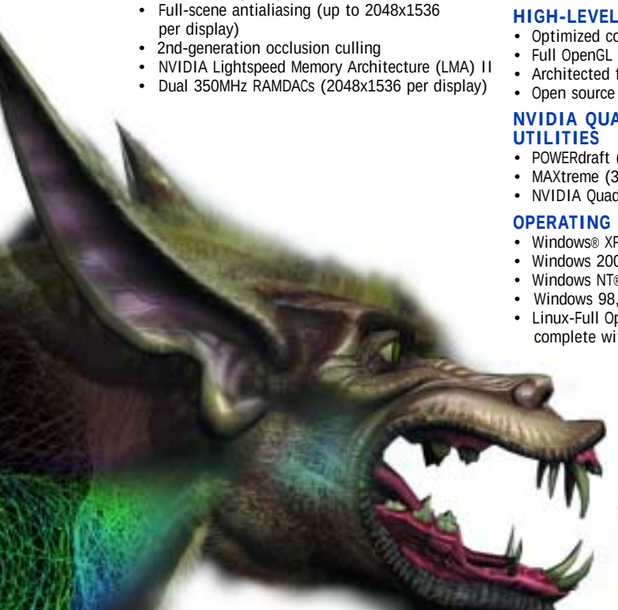
- Windows® XP (WHQL Certified)
- Windows 2000 (WHQL Certified)
- Windows NT® (WHQL Certified)
- Windows 98, Windows 95
- Linux-Full OpenGL 1.4 implementation, complete with NVIDIA and ARB extensions

PROFESSIONAL CERTIFICATIONS: CAD

- Ansys®
- Autodesk AutoCAD
- Autodesk Inventor
- Bentley Microstation®
- Co|Create™ SolidDesigner
- Dassault CATIA®
- ESRI ArcInfo
- Helix
- MSC Nastran/Patran
- Plant Designer/Imagineer
- PTC® Pro/Engineer™
- PTC 3Dpaint™
- SDRC I-DEAS® Master Series
- SolidWorks®
- UGS Solid Edge™
- Unigraphics®
- and many more…

PROFESSIONAL CERTIFICATIONS: DCC

- Alias|Wavefront™ Maya®
- Alias|Wavefront StudioTools®
- Discreet® 3ds max
- Newtek Lightwave 3D™
- Side Effects Houdini™
- SOFTIMAGE®|3D
- SOFTIMAGE|XSI
- and many more…



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