

**FIREGL WORKSTATION
GRAPHICS ACCELERATORS**

- ▶ NATIVE PCI EXPRESS SUPPORT
- ▶ OPTIMIZED AND CERTIFIED FOR INVENTOR® AND AUTOCAD®
- ▶ REAL-TIME REALISTIC RENDERING
- ▶ HARDWARE ACCELERATION OF ALL OPENGL® AND MICROSOFT® DIRECTX® 9-BASED APPLICATIONS
- ▶ UP TO 256 MB DDR UNIFIED GRAPHICS MEMORY
- ▶ DUAL DISPLAY OUTPUT INCLUDING DUAL DVI-I
- ▶ UNIFIED DRIVER FOR DESKTOP AND MOBILE WORKSTATIONS
- ▶ SUPPORT FOR WINDOWS® XP AND WINDOWS 2000



IMAGE COURTESY OF MASTENBROEK LTD.

Whether you're creating complex assemblies in AutoCAD®, or prototyping new parts for manufacturing in Inventor®, ATI's FireGL™ workstation graphics accelerators have the power and advanced features to tackle your demanding design and engineering projects; while boosting your productivity.

Based on a high-bandwidth, parallel pipeline geometry and rendering architecture, the proven FireGL accelerator family delivers fast geometry processing of 2D and 3D datasets, precision rendering and dual display output. Featuring a unified driver and full certification, FireGL is the choice for design professionals working with AutoCAD and Inventor on Microsoft® Windows® XP or Windows 2000 platforms.

The combination of Autodesk software and FireGL hardware can unleash your creativity, resulting in better, more attractive, more marketable designs in a fraction of the time. To create life-like designs, textures can be used with the realistic rendering capability within Inventor. ATI has worked with Autodesk to optimize the drivers to enable you to manipulate realistic rendered and styled models in real-time using FireGL graphics accelerators.

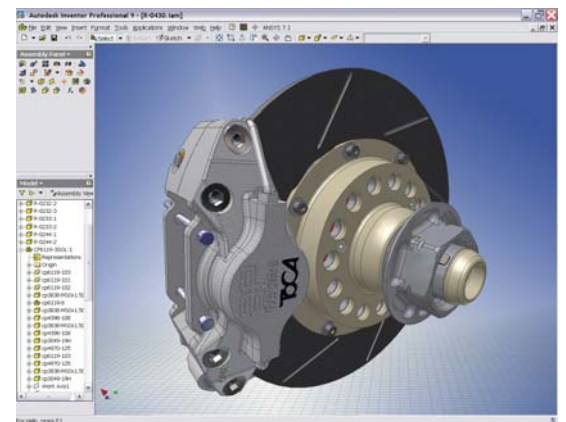


IMAGE COURTESY OF TRIPLE EIGHT RACE ENGINEERING

ATI's FireGL family of leading price-performance AGP 8X and PCI Express x16 lane solutions are designed to fit a wide range of budgets, and are available worldwide from desktop and mobile workstation OEMs, system integrators and ATI channel partners. For more information on how to accelerate your AutoCAD and Inventor design projects, please visit www.atl.com/FireGL

"Inventor users can see great improvement in speed and reliability with the use of FireGL professional graphics cards from ATI. Designed to handle complex geometry with ease, performance bottlenecks are eliminated. Very large models containing many textures and individual parts are no trouble. Drivers are released only after intensive testing in Inventor and therefore they remain current for longer periods."

STEPHEN HOOPER—
TECH LEAD, NORTH EUROPE,
AUTODESK LTD

► **ATI FIREGL™ WORKSTATION GRAPHICS ACCELERATORS**

PCI EXPRESS™	MEMORY			VPU		OUTPUT			3D PERFORMANCE	
	SIZE	INTERFACE	BANDWIDTH	GEOMETRY ENGINES	PIXEL PIPELINES	DUAL SCREEN	DUAL LINK	STEREO 3D	VERTICES PER SEC.	PIXELS PER SEC.
FIREGL V3100	128MB	128-bit	6.4GB/sec	2	4	DVI + VGA	-	-	200M	1.6G
FIREGL V3200	128MB	128-bit	12.8GB/sec	2	4	DVI + DVI	-	Yes	250M	2.0G
FIREGL V5100	128MB	256-bit	22.4GB/sec	6	12	DVI + DVI	-	Yes	675M	5.4G
FIREGL V7100	256MB	256-bit	28.8GB/sec	6	16	DVI + DVI	Yes	Yes	750M	8.0G
AGP ACCELERATED GRAPHICS PORT	MEMORY			VPU		OUTPUT			3D PERFORMANCE	
	SIZE	INTERFACE	BANDWIDTH	GEOMETRY ENGINES	PIXEL PIPELINES	DUAL SCREEN	DUAL LINK	STEREO 3D	VERTICES PER SEC.	PIXELS PER SEC.
FIREGL T2-128	128MB	128-bit	10.2GB/sec	2	4	DVI + VGA	-	-	200M	1.6G
FIREGL Z1-128	128MB	256-bit	19.8GB/sec	4	4	DVI + DVI	-	-	300M	1.3G
FIREGL X1-128	128MB	256-bit	19.8GB/sec	4	8	DVI + DVI	-	-	300M	2.6G
FIREGL X2-256T	256MB	256-bit	22.0GB/sec	4	8	DVI + DVI	-	-	412M	3.3G
FIREGL X3-256	256MB	256-bit	28.8GB/sec	6	12	DVI + DVI	Yes	Yes	750M	5.4G

FIREGL GRAPHICS TECHNOLOGY

- Powered by ATI's scalable FireGL workstation Visual Processing Units (VPU)
- Up to 256-bit high bandwidth memory architecture
- Up to 6 parallel geometry engines
- Up to 16 parallel pixel pipelines
- 128-bit full floating point precision
- 32-bits per RGBA component displays beyond 16.7M colors

BUS TECHNOLOGY

- PCI Express x16 native support¹
- AGP 8X support²

APIs AND OPERATING SYSTEMS

- OpenGL® 1.5 + extensions
- OpenGL Shading Language
- Microsoft® DirectX® 9.0
- DX9 HLSL
- Windows® XP/Windows XP64/Windows 2000
- Linux® 32/Linux 64

DISPLAY SUPPORT

- Dual DVI-I supports any combination of digital and analog displays³
- Maximum resolution of 2048x1536 per display (dual display mode)
- 3840 x 2400 support (dual link⁴)
- Independent resolution and refresh rate selection for any two connected displays
- Dual integrated 10-bit per channel 400 MHz DACs

- Integrated 165 MHz TMDS transmitter (DVI & HDCP compliant)

GRAPHICS FEATURES

- Hardware acceleration of the following:
- Anti-aliased points and lines or full scene anti-aliasing (2X, 4X, 6X)
 - 3D lines and triangles
 - Stipple points
 - Two-sided lighting
 - Up to 8 light sources
 - Directional and local lighting
 - OpenGL overlay planes
 - Occlusion culling
 - 6 user defined clip planes
 - OpenGL polymode functions
 - 32-bit (24+8-bit stencil) Z Buffer
 - Fast Z and color clears
 - Full DX9 vertex shader support with 4 vertex units
 - Quad-buffered stereo 3D support⁵

SYSTEM REQUIREMENTS

- Intel® Pentium® 4/Xeon™, AMD Athlon™/Opteron™ or compatible
- PCI Express bus¹
- AGP 8X/4X bus²
- 128MB of system memory (256MB or more recommended)
- Installation software requires CD-ROM drive
- 300 watt or greater power supply (recommended)

SMARTSHADER™ TECHNOLOGY

- Programmable pixel and vertex shaders
- 16 textures per pass
- Pixel shaders up to 160 instructions with 32-bit floating point precision for each RGBA component
- Multiple render target support
- Shadow volume rendering acceleration
- High precision 10-bit per channel frame buffer support

HYPER Z™

- 3-level Hierarchical Z-Buffer with early Z test
- Lossless Z-Buffer compression (up to 24:1)
- Fast Z-Buffer Clear

SMOOTHVISION™ TECHNOLOGY

- 2X/4X/6X anti-aliasing modes
- High performance adaptive algorithm with programmable sample patterns
- 2X/4X/8X/16X anisotropic filtering modes
- Adaptive algorithm with bi-linear (performance) and tri-linear (quality) options

WARRANTY AND SUPPORT

- 3-year limited product repair/replacement warranty
- Dedicated Workstation level technical support via email and toll free hotline
- Advanced parts replacement option

► **LEARN MORE:**

Visit: www.ati.com/FireGL

ATI FireGL. Proven graphics solutions for today's and tomorrow's high-performance workstations.

1 FireGL Visualization series supports PCI Express x16 lane bus.
 2 FireGL T2-128, FireGL Z1-128, FireGL X1-128, FireGL X2-256T and FireGL X3-256 support AGP 8X bus.
 3 All FireGL boards have dual DVI-I connectors except FireGL T2-128 and FireGL V3100 which have one DVI-I and one VGA connector.
 4 Dual link available on FireGL X3-256 and FireGL V7100 only.
 5 Stereo 3D available on FireGL X3-256, FireGL V3200, FireGL V5100 and FireGL V7100.

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