*Overview*

# ATI FireGL X1-256p

## Models

HP Itanium series Workstations A9653A

## Introduction

The ATI FireGL X1 graphics card is positioned as a High End 3D graphics product and provides leadership performance while being the first graphics product to provide 256 MB of unified graphics memory. The FireGL X1 is an AGP 8X graphics product and provides the ability of driving any combination of dual Analog/Digital displays.

## Key Benefits

- 256 MB of unified graphics memory
- Dual DVI-I connectors providing connection to dual Analog or dual Digital displays
- Stereo output
- Complete set of professional ISV certifications

## Performance

The ATI FireGL X1 is optimized for professional High End 3D graphics configurations.

## Compatibility

The ATI FireGL X1 is compatible with HP Workstations zx2000, zx6000, and c8000.

## Service and Support

The ATI FireGL X1 has a one-year limited warranty or the remainder of the warranty of the HP product in which it is installed. Technical support is available seven days a week, 24 hours a day by phone, as well as online support forums. Parts and labor are available on-site within the next business day. Telephone support is available for parts diagnosis and installation. Certain restrictions and exclusions apply.

*Technical Specifications*

| | |
|---|---|
| **Form Factor** | ATX |
| **Graphics Controllers** | ATI FGL 9700 GPU |
| **Bus Type** | AGP-Pro50 1x/2x/4x/8x Version 3.0 compliant |
| **RAMDAC** | Dual 400MHz/30-bit |
| **Memory** | 256MB DDR SDRAM unified frame buffer, Z-buffer and Texture storage |
| **Connectors** | Dual DVI-I analog/digital monitor outputs |
| **Slots required** | Occupies 2 physical slots in the system |
| **Dimensions** | Single AGP/ATX card. 230.28mm x 107.96 mm |
| **Multi-monitor support** | Dual Screen output for resolutions up to 2x2048x1536x32 bit |
| **Additional product features** | 256MB DDR SDRAM unified frame buffer, Z-buffer and Texture storage |
| | 64-KB BIOS Serial Flash ROM, reprogrammable by SW, 3.3V only, no Jumpers |
| | 2D and 3D acceleration provided for 16-bit and 32-bit RGB modes |
| | Hardware cursor with full color alpha channel |
| | 16/32 bit Z buffer, 16/32 bit W-buffer, 8-bit stored alpha and 8-bit Stencil planes |
| | Bus mastering support for 2D/3D display lists and local memory vertex list execution |
| | Hardware lighting support for up to 8 lights |
| | Bilinear, Trilinear and Anisotropic texturing |
| | Cubic Environment and Perturbation Bump Mapping |
| | Projective Texture, 3D Texture and Video Texture support |
| | Full Scene Anti-Aliasing (FSAA) support with up to 6 subsamples |
| | Video Engine supports YCrCb (4:2:2, 4:1:0, 4:2:0) to RGB conversion |
| | Video scaling and up to 4x4 tap filtering supported for all YUV and RGB16/32 formats |
| | Per pixel quad buffering on all screen resolutions |
| | VESA compliant Stereoscopic Interface on MiniDin Connector |
| | Compliant with Microsoft®/Intel® PC2001 Workstation requirements |
| | Video Timings compliant with VESA DMT 1.0 and VESA GTF 1.0 specifications |
| | DDC2B+ Monitor support on all OS platforms |
| | ACPI Version 1.0b Power Management support (all modes) |
| **AGP1x/2x/4x/8x Version 3.0 compliant including** | Sideband Addressing |
| | AGP Texturing (Execute Mode) |
| | AGP Read and AGP Write Support |
| | 8X Fast write support |
| **FGL 9700 GPU featuring:** | VGA controller supporting full standard feature set |
| | 2D Engine with 128-bit datapath processing multiple pixels per clock |
| | PIXEL TAPESTRY III, 3D rendering engine utilizing 2 parallel pipelines with two texture blending units each capable, of handling up to 8 texels in a single pass, delivering 2.4 Gigatexels/s fill rate |
| | CHARISMA ENGINE III, geometry unit utilizing 4 vertex processing engines, capable of executing two instructions per clock cycle each, thus yielding up to 200 million transformed, clipped and lit triangles per second |
| | VIDEO IMMERSION III, industry leading video technology supporting MPEG 2 encode/decode |
| | Dual independent display controllers with 4K x 4K address space each |
| | 256-bit external frame buffer interface providing memory bandwidth of up to 20 GB per second |
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| **Supported graphics APIs** | OpenGL 1.3 ICD with immediate mode support for all OGL primitive types<br>DirectX 8.1 |

*Technical Specifications*

**Available graphics drivers**

Microsoft XP 64-Bit Edition Version 2003
Linux: version 7.3, Advanced Workstation 2.1 for Itanium
HP-UX 11i: v11.23
HP qualified drivers may be preloaded or available from the HP support Web site:
See: http://www.hp.com/support/workstation_drivers

**ATI FireGL X1-256p Graphics Card display, resolutions & refresh rates**

**CRT DISPLAY (SINGLE OR DUAL)**

| Resolution | Maximum Refresh Rate | Bits Per Pixel |
|---|---|---|
| 640x480 | 100Hz | 16, 24, 32 |
| 800x600 | 100Hz | 16, 24, 32 |
| 1024x768 | 100Hz | 16, 24, 32 |
| 1152x864 | 100Hz | 16, 24, 32 |
| 1280x960 | 100Hz | 16, 24, 32 |
| 1280x1024 | 100Hz | 16, 24, 32 |
| 1600x1000 | 100Hz | 16, 24, 32 |
| 1600x1024 | 76Hz | 16, 24, 32 |
| 1600x1200 | 100Hz | 16, 24, 32 |
| 1792x1344 | 100Hz | 16, 24, 32 |
| 1920x1200 | 100Hz | 16, 24, 32 |
| 2048x1536 | 85Hz | 16, 24, 32 |

**DIGITAL DISPLAY (SINGLE OR DUAL)**

| Resolution | Maximum Refresh Rate | Bits Per Pixel |
|---|---|---|
| 640x480 | 75Hz | 16, 24, 32 |
| 800x600 | 75Hz | 16, 24, 32 |
| 1024x768 | 75Hz | 16, 24, 32 |
| 1280x1024 | 75Hz | 16, 24, 32 |
| 1600x1000 | 60Hz | 16, 24, 32 |
| 1600x1200 | 60Hz | 16, 24, 32 |
| 1920x1080 | 60Hz | 16, 24, 32 |
| 1920x1200 | 60Hz | 16, 24, 32 |

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