



AMD FirePro[®] W9000

WORKSTATION GRAPHICS

Be Limitless, When Every Detail Counts.

Key Features:

- → Up to 3.9 times as fast as competitive solutions in single precision compute performance.³
- → Massive 6GB GDDR5 memory running at 264 GB/s bandwidth.
- → Error Correcting Code (ECC) Memory means accuracy of your computations
- → Partially Resident Textures (PRT) allows for the utilization of enormous texture files, up to 32 terabytes large
- → AMD ZeroCore Power Technology enables your GPU to power down when your monitor is off.
- → GeometryBoost the GPU processes geometry data at a rate of twice per clock cycle, doubling the rate of primitive and vertex processing.
- → AMD Eyefinity Technology Industry-leading, multi-display technology enabling highly immersive and unrivaled multi-tasking experience across up to six displays, powered by a single AMD FirePro[™] W9000 card¹.
- → DisplayPort 1.2 compliant allowing for display of content at resolutions beyond standard HD⁴.
- Energy Efficient Design AMD
 PowerTune technology dynamically
 optimizes GPU power usage and AMD
 ZeroCore Power technology significantly
 reduces power consumption at idle.
- Framelock/Genlock Facilitates synchronization to external sources
 (Genlock) or synchronizes 3D rendering across multiple GPUs in different systems (Framelock).²
- → Video Codec Engine (VCE) A multi-stream hardware H.264 HD encoder, for power efficient and quick video encoding.

Industry's most powerful professional graphics card.

The AMD FirePro[™] W9000 is the industry's most powerful workstation graphics card available for CAD/CAE and Media and Entertainment professionals.³ This ultrahigh-end workstation solution is designed for professionals who require the ultimate in computational power and performance. It's up to 3.9X as fast as competitive solutions in single precision compute performance due in part to its innovative all-new Graphics Core Next (GCN) architecture allowing it to effortlessly process challenging compute workloads.³ In addition, its 3D primitive graphics performance is up to 1.5X as fast as other competitors'⁷ offerings delivering better interactivity when working with large, complex models and faster render times.

Equipped with a massive 6GB GDDR5 frame buffer, AMD FirePro[™] W9000 delivers 1.8X the memory bandwidth of competitive solutions.³ With high performance computing (HPC) features like error correcting code (ECC) memory, it's the ideal choice for HPC workflows. Its six mini DisplayPort outputs can drive up to six independent displays at a resolution 12X standard HD using AMD Eyefinity multi-display technology, allowing designers unparalleled productivity and flexibility.¹⁴

This class-leading product offers:

- → Optimized and certified for Major CAD and M&E applications delivering 3.99 TFLOPs of single precision and 1 TFLOP of double precision performance with outstanding reliability for the most demanding professional tasks.
- → Using a revolutionary 28nm architecture, the AMD FirePro[™] W9000 uses Graphics Core Next (GCN) to efficiency balance compute tasks with 3D workloads enabling multi-tasking that is designed to optimize utilization and maximize performance.



- → The use of AMD Partially Resident Textures (PRT) and Improved Anisotropic Filtering (AF) enables both streaming of ultra-high resolution datasets and razor sharp image quality, even at a distance from the display.
- → The AMD FirePro[™] W9000 includes AMD PowerTune and AMD ZeroCore Power technologies that allow for dynamic power management and higher engine clock speeds delivering improved performance and efficient power management.
- → GeometryBoost delivers real-time rendering of complex, realistic images at high tessellation speeds, while a Full 30-bit Display Pipeline enables a palette of more than 1.07 billion color values for more accurate color reproduction and superior visual fidelity.¹⁴
- → AMD Eyefinity technology a revolutionary multidisplay technology and six mini DisplayPort 1.2 outputs, W9000 delivers the most immersive graphics/computing. Supporting massive desktop workspaces, for superior productivity, digital signage, and much more, it can drive up to 6 independent 30" displays — a massive 16.4 million pixels using DisplayPort 1.2.¹⁵
- → Support for industry standards DirectX[®] 11.1, OpenGL 4.2 and OpenCL[™] 1.2— Enables advanced features and optimal performance in leading applications using hardware acceleration.



The AMD FirePro[™] workstation graphics cards have been engineered to deliver innovation and reliability for a wide range of professional operating environments, including Microsoft® Windows® 7, Windows 8, Windows® XP, Windows Vista® and Linux.® The unified driver, which supports all AMD FirePro[™] products, helps reduce the total cost of ownership by simplifying installation, deployment and maintenance.



Features six Mini DisplayPort outputs

→ Independent multi-monitor resolution

and refresh rate selection

AMD Warranty and Support

→ Three year limited product repair /

→ Direct toll free phone and email access

to dedicated workstation technical

→ Advanced parts replacement option

→ Windows® 7, Windows 8, Windows XP,

Windows XP64, Windows Vista and

→ VGA analog support¹

replacement warranty

API and OS Support

Shading Language

Windows Vista64

→ Linux[®] 32 and Linux 64

→ OpenCL[™] 1.2

→ OpenGL 4.2 with OpenGL

→ Microsoft® DirectX® 11.1

support team6

PRODUCT DETAILS

Features

- → GPU with Graphics Core Next (GCN) technology
- → 6GB GDDR5 graphics memory
- → ECC memory support
- → AMD Eyefinity technology¹
- → PCI Express (PCIe) 3.0 compliant → 32GB/sec bi-directional bandwidth
- Full 30-bit precision display pipeline
- → Advanced support for 8-bit, 10-bit, and 16-bit per RGB color component

System Requirements

- → 1 x PCI® Express x16 (dual slot)
- → 1 x PCIe AUX power connector
- (8-pin) + 1 x PCIe AUX power connector (6-pin) → Windows[®] 7 / XP / Windows Vista[®],
- Windows 8, or Linux® (32-bit or 64-bit) → 512MB of system memory
- → Internet connection for driver installation Display Capabilities
- → 6 x Mini DisplayPort 1.2 outputs
- → DVI (single link and dual link) display support¹

For more information, visit www.amd.com/firepro



1 AMD Eyefinity technology supports up to six DisplayPortTM monitors on an enabled graphics card. Supported display quantity,type and resolution vary by model and board design; confirm specifications with manufacturer before purchase. To enable more than two displays, or multiple displays from a single output, additional hardware such as DisplayPort-ready monitors or DisplayPort 1.2 MST-enabled hubs may be required. Maximum two active adapters supported. See www.amd.com/evefinityfag for full details

2 Requires ATI FirePro[™] S400 synchronization module.

3 AMD FirePro[™] W9000 delivers 3.9936 TFLOPS of single precision and 998.4 GFLOP of double precision floating point performance, features a 384-bit memory interface and delivers 264 GB/s memory bandwidth, and can power up to six displays simultaneously from a single card. Compared to Nvidia Quadro 6000 with 1.03 TFLOPs single precision and 515.2 GFLOPs double precision floating point performance, a 384-bit interface and 144 GB/s memory bandwidth, and is only capable of powering two displays simultaneously from a single card. Visit http://www.nvidia.com/object/product-quadro-6000-us. html for Nvidia product specs. FP-29

4 Full HD resolution is considered 1080p (1920x1080 = ~2.1 megapixels). One AMD FirePro W9000 graphics card with AMD Eyefinity technology supports up to 2560x1600x6 = ~24.6 megapixels

for 12 x full HD resolution.

5 W9000 (6xmDP) supports a maximum of 6 x 2560x1600 DP1.1 displays. Based off DP1.2 bandwidth availability for MST supports up to: 4 x 1920x1200 @24bpp 60Hz displays, 2 x 2560x1600 @24bpp 60Hz displays, 1 x 4096x2160 @24bpp 60Hz displays

6 Toll free hotline available in United States and Canada.

- 7 AMD FirePro[™] W9000 can support 1.95 billion triangles per second, compared to Nvidia Quadro 6000 supporting 1.3 billion triangles per second. See http://www.nvidia.com/object/product-quadro-6000-us.html FP-44

© Copyright 2013 Advanced Micro Devices, Inc. All rights reserved. AMD, the AMD Arrow logo, FirePro, the FirePro logo and combinations thereof are trademarks of Advanced Micro Devices, Inc. Microsoft, Windows vista are registered trademarks of Microsoft Corporation in the United States and other jurisdictions. Other names are for informational purposes only and may be trademarks of their respective owners. Features, performance and specifications may vary by operating environment and are subject to change without notice. Linux Penguin image courtesy of Larry Ewing, lewing@isc.tamu.edu. PID# 52356C

FEATURES BENEFITS Graphics memory behaves as a hardware-managed cache. Data can be streamed in on demand. Partially Resident Textures (PRT) Discrete Digital Multi-Point Simultaneously output multiple, independent audio Audio (DDMA) streams using DisplayPort 1.2 Multi-stream hardware H.264 HD Encoder. Power Video Codec Engine (VCE) efficient & faster than real-time 1080p @60fps. Utilizes the unique new hardware architecture that features dual graphics engines, allowing the GPU to process two primitives per clock cycle and provide Allows users to unleash their creativity by ensuring GeometryBoost ultra-high geometry performance and smooth handling of complex models. DirectGMA enables low latency peer to peer data transfers between devices on the bus and AMD FirePro GPUs. Devices supporting DirectGMA can DirectGMA Support write directly into the local memory of the GPU and vice versa the GPU can directly access the memory of a peer device. Enables high end video production when used with industry standard video production hardware. Framelock/Genlock By enabling application access to the frame buffer before content reaches the display engine, we empower ISVs to create new, exciting and D.O.P.P. innovative solutions. Correct single bit memory errors in hardware ECC memory maintains a memory system virtually free from single-bit errors: the data read from each word is always the same as the data that had been Error Correcting Code (ECC) written to it, even if a single bit actually stored, or more in some cases, has been flipped to the wrong Memory state. Some non-ECC memory with parity support allows errors to be detected, but not corrected; otherwise errors that may occur are not detected. As a user moves between applications, or opens new ones, the graphics driver settings are AutoDetect Technology automatically configured for maximum performance. Enables four times more color values than 24-bit products for more accurate color reproduction and Full 30-bit Display Pipeline superior visual fidelity. Use HydraVision to manage desktop displays and workspaces in multi-display environments: → Explicitly set the behavior of pop-up windows and dialogs in different applications though Desktop Manager. HydraVision Provide multiple layers of the desktop workspace through Multi Desktop. Restrict application window placement across multiple desktops through HydraGrid. Certification There is a high level of assurance when purchasing a configuration that is reliable, provides the performance necessary for professional 3D graphic needs and expands to include integrated AMD expert support. DirectX 11.1 and OpenGL 4.2 Support for industry standards. OpenCL[™] 1.2 Industry standard API - Open, multiplatform development platform for enabling broad adoption of heterogeneous computing.

