AMD FirePro™ W9000

Be Limitless, When Every Detail Counts.

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 ultra-high-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.[1,4]

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.[1,4]

→ AMD Eyefinity technology — a revolutionary multi-display 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.[1,5]

→ Support for industry standards — DirectX® 11.1, OpenCL™ 1.1 and OpenGL® 4.2— Enables advanced features and optimal performance in leading applications using hardware acceleration.

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 card[1].

→ **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.

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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® 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.

AMD FirePro™ W9000 Graphics Display Port

PRODUCT DETAILS

Features
→ GPU with Graphics Core Next (GCN) technology
→ 6GB GDDR5 graphics memory
→ ECC memory support
→ AMD Eyefinity technology[1]
→ 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® 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 support[1]
→ Independent multi-monitor resolution and refresh rate selection
→ VGA analog support[1]

AMD Warranty and Support
→ Three year limited product repair / replacement warranty
→ Direct toll free phone and email access to dedicated workstation technical support team[6]
→ Advanced parts replacement option

API and OS Support
→ OpenGL® 4.2 with OpenGL Shading Language
→ OpenCL 1.1
→ Microsoft® DirectX® 11.1
→ Windows® 7, Windows XP, Windows XP64, Windows Vista and Windows Vista64
→ Linux® 32 and Linux 64

FEATURES	BENEFITS
Partially Resident Textures (PRT)	Graphics memory behaves as a hardware-managed cache. Data can be streamed in on demand.
Discrete Digital Multi-Point Audio (DDMA)	Simultaneously output multiple, independent audio streams using DisplayPort 1.2.
Video Codec Engine (VCE)	Multi-stream hardware H.264 HD Encoder. Power efficient & faster than real-time 1080p @60fps.
GeometryBoost	Utilizes the unique new hardware architecture that features dual graphics engines, allowing the GPU to process two primitives per clock cycle and provide ultra-high geometry processing performance. Allows users to unleash their creativity by ensuring ultra-high geometry performance and smooth handling of complex models.
DirectGMA Support	DirectGMA enables low latency peer to peer data transfers between devices on the bus and AMD FirePro GPUs. Devices supporting DirectGMA can write directly into the local memory of the GPU and vice versa the GPU can directly access the memory of a peer device.
Framelock/Genlock	Enables high end video production when used with industry standard video production hardware.
D.O.P.P.	By enabling application access to the frame buffer before content reaches the display engine, we empower ISVs to create new, exciting and innovative solutions.
Error Correcting Code (ECC) Memory	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 written to it, even if a single bit actually stored, or more in some cases, has been flipped to the wrong state. Some non-ECC memory with parity support allows errors to be detected, but not corrected; otherwise errors that may occur are not detected.
AutoDetect Technology	As a user moves between applications, or opens new ones, the graphics driver settings are automatically configured for maximum performance.
Full 30-bit Display Pipeline	Enables four times more color values than 24-bit products for more accurate color reproduction and superior visual fidelity.
HydraVision	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. > 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 1.1	Industry standard API - Open, multiplatform development platform for enabling broad adoption of heterogeneous computing.

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

OpenGL
OpenCL™
Microsoft® DIRECTX
Windows®7
CERTIFIED FOR Windows Vista™
Designed for Microsoft® Windows®XP, Windows®XP x64 Edition
AMD Eyefinity MULTI-DISPLAY TECHNOLOGY
Linux

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