AMD RADEON PRO
Pure Datacenter Graphics

SOLUTION BRIEF | AMD MULTIUSER GPU

Image courtesy of www.glass-canvas.co.uk

USE YOUR FAVORITE AEC APPLICATIONS ANYWHERE WITH FULL PERFORMANCE AND DATA SECURITY

The AEC industry is increasingly adopting Virtual Desktop Infrastructure (VDI), which allows remote access while delivering all the performance of a high-end workstation.

Architecture, Engineering, and Construction (AEC) firms rely on demanding 3D design, CAE visualization, and BIM applications that require high-end GPU acceleration to deliver enhanced viewing performance while processing ever-larger datasets. Collaboration among geographically diverse internal and external teams moving between remote offices, client locations, and project sites is essential for large projects. Users need rapid provisioning and reliable access to applications and data, making version control and management crucial for project success. Security remains a key concern for many AEC projects, particularly when adding third parties such as clients or project vendors. This necessary step makes protecting wider sensitive data even more critical, without impacting productivity.

AMD Multiuser GPU (MxGPU) technology answers these requirements by offering the following key benefits to AEC firms and IT managers:

1. **Reduce Project Downtime:** Users in all areas and phases of an AEC project can freely move from location to location, such as between offices and job locations, while retaining full access to their applications and data from virtually any device on almost any broadband connection or 3G+ cellular technology. This reduces project downtime while improving design delivery. Virtually all software that can run on a desktop can run in a virtualized environment, greatly reducing project downtime while enhancing design delivery.

2. **Up to 32 Virtual Users per GPU:** Hardware-based virtualization enables full AMD Radeon™ Pro 2D/3D graphics acceleration using the Single Root I/O Virtualization (SR-IOV) PCIe® virtualization standard. This eliminates proprietary, complex, and costly software from the hypervisor while providing a dedicated frame buffer for consistent performance. Each virtual machine (VM) uses native AMD drivers with 100% compatibility and access to all GPU graphics and compute functions on the server, with no additional profile setup needed.

3. **Effective Version Control:** All compute and graphics functions occur on the server. The data itself remains in a centralized datacenter, with no need to transfer large files between locations and reconcile changes. Hosting environments in the data center also ensures software standardization among all users.

4. **Efficient IT Management:** Traditional AEC workflows often use locally-stored working copies of data, which exposes that data to potential loss or theft. Moving all data processing and graphics rendering to the datacenter and only transmitting pixel and audio data helps reduce these risks. This also allows efficient IT management and maintenance from a single location.

Fosters Mobility and Collaboration

Replacing an individual workstation with an access portal means that users have full access to applications and data at virtually any time, from virtually any location, on virtually any device, including low-cost thin and zero clients. Giving every user the same OS and application environment ensures compatibility while also reducing IT overhead.

Users simply transmit commands to the VMs and receive fully rendered pixels at full resolution and with full graphics performance in return, thereby providing a traditional workstation experience.

MxGPU Delivers Full, Predictable AMD Radeon™ Pro Acceleration

True hardware virtualization with assured resource availability delivers the consistent 2D and 3D graphics acceleration performance needed to run even the most demanding AEC applications. The use of native AMD professional and certified drivers in each VM guarantees both compatibility and the full range of GPU compute and rendering functionality. Each physical GPU supports 1 to 32 virtual users with no need for profiles or installing performance-robbing management software on the hypervisor. Each user receives predictable performance without having to worry about losing performance to another user working on a more complex project.

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⬇ Simplifies Software Management

Migrating data to the datacenter helps ensure full access to all users while avoiding time-consuming file transfers and change merges. The consistent processing environment helps prevent potential compatibility issues that can arise from working in multiple environments, such as varying application versions, custom plug-ins, or data conversion tools. Reducing the need to transfer large files can boost productivity because users no longer need to wait for data.

🔒 Protects Your Sensitive Data

End users access the VDI environment using their individual account credentials over their normal VPN or network. The IT department always retains full control over who can access which applications and data.

All compute and graphics processing functions occur in the datacenter, with end users receiving fully-rendered pixels. This virtually eliminates the risk of loss, theft, or failure inherent in traditional deployments that store data on individual workstations or laptops. Further, the hardware-based virtualization implemented in AMD MxGPU technology eliminates the need for potentially vulnerable software abstraction layers.

👍 Peace of Mind

- Three-year limited product repair/replacement warranty
- Direct toll-free phone (US, Canada) and global email access to dedicated technical support team
- Advanced parts replacement option

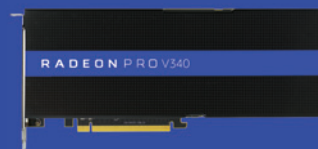*For more information, please visit www.amd.com/mxgpu*

Specifications

	S7100X	S7150X2	V340
Max. Virtual Machines	16	16	32
Max. Power	100W	265W	<300W
Form Factor	PCIe® 3 MXM 3.1	Full height & length PCIe® 3x16	Full height & length PCIe® 3x16
Cooling	Passive	Passive	Passive
Interface	256 bit	256 bit	256 bit
Memory	8GB GDDR5	16GB GDDR5	32GB HBM2
ECC Memory	supported	supported	supported
API Support	DirectX® 11.1, OpenGL® 4.4 and OpenCL™ 2.0		
OS Support	Microsoft® Windows 10, Windows® 7, Windows® Server 2016, Windows® Server 2008 R2 (64-bit only)		
Hypervisor Supt.	VMware® ESXi™ 6.5, 6.0, Citrix® XenServer® 7.4+		
Remote Vis. Supt.	VMware® Horizon® View 7.0+, Citrix® XenDesktop® 7.15+, Citrix® XenApp® 7.15+		

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