



AMD FirePro™ S-Series for Virtualization Pure Virtualized Graphics



Solution Brief: AMD Multiuser GPU for AEC

Easy Collaboration and Version Control with Full GPU Performance and Data Security

VDI powered by AMD Multiuser GPU (MxGPU) technology empowers GPU-accelerated collaboration while simplifying version control and safeguarding sensitive data.

Architecture, Engineering, and Construction (AEC) firms rely on demanding 3D CAD, CAE, and BIM applications that require high-end GPU acceleration to deliver adequate performance while processing ever-larger datasets. Collaboration among geographically diverse internal and external teams moving between remote offices, client locations, and/or job sites is essential for large projects. These users need rapid provisioning and reliable access to applications and data, making version control and management crucial for project success. Security is another concern... and adding third parties such as clients or vendors makes protecting sensitive data even more important.

AMD Multiuser GPU (MxGPU) technology offers the following key benefits to manufacturers:

- **Seamless Mobility & Collaboration:** Users in all areas and phases of the project can freely move from location to location, such as between offices and job locations virtually anywhere, while retaining full access to their applications and data from virtually any device on almost any broadband connection.
- **Full Workstation Acceleration:** Hardware-based virtualization enables full AMD FirePro™ 2D/3D graphics acceleration using the Single Root I/O Virtualization (SR-IOV) PCIe® virtualization standard. This eliminates proprietary and complex software from the hypervisor while providing a dedicated frame buffer for consistent performance. Each VM uses native AMD drivers with 100% compatibility and access to all GPU graphics and compute functions on the server, with no profiles needed.
- **Effective Version Control:** All compute and graphics functions occur on the server. Users receive only fully-rendered pixels and transmit only commands. The data itself remains in the datacenter, with no need to transfer large files between locations and reconcile changes. Hosting environments in the data center also ensures standardization among all users, further reducing the need to control versions.

- **Data Security:** Traditional workstations 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 while simultaneously simplifying version control. This also allows fast, easy 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 thin and zero clients. Giving every user the same OS and application environment ensures compatibility.

Users transmit commands to the virtual machines and receive fully rendered pixels at full resolution and with full graphics performance in return. Storing and processing data in the datacenter reduces the need for lengthy transfers and tracking multiple copies and versions across multiple devices.

Delivers full AMD FirePro™ 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 FirePro drivers in each VM guarantees both compatibility





and the full range of GPU compute and rendering functionality. Each GPU supports 1 to 16 users with no need for profiles or installing performance-robbing management software on the hypervisor. Each user receives consistent performance from the GPU, without worrying about losing performance to someone working on a more complex project.

Simplifies Version 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 also boost productivity because users no longer need to wait for data uploads or downloads.

Protects Sensitive 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. End users access the VDI environment using a portal and access credentials, with no need for VPN or other onerous security precautions. The IT department always retains full control over who can access which applications and data.

The AMD FirePro S7150 GPU can support 1-16 users.
The AMD FirePro S7150x2 GPU can support 1-32 users

For more information, please visit <http://www.amd.com/mxgpu>

AMD FirePro S7150 and S7150x2 Specifications

- **Max. Power:** 150W (S7150), 265W (S7150x2)
- **Form Factor:** Full height/full length PCIe x16
- **Cooling:** Passive (active available for S7150)
- **RAM:** 8GB (S7150) or 16GB GDDR5 (S7150x2)
- **Interface:** 256-bit
- **Performance:** 3.77 TFLOPS single-precision and 250 GFLOPS double-precision peak floating-point performance (S7150). 7.54 TFLOPS single-precision and 500 GFLOPS double-precision peak floating-point performance (S7150 x2).
- **ECC Memory:** supported
- **API Support:** DirectX® 11.1, OpenGL® 4.4 and OpenCL™ 2.0
- **OS Support:** Microsoft® Windows 8.1, Windows® 7, and Linux® (32- or 64-bit)
- **Virtualization:** VMware® ESXi™ 6.0 Hypervisors, VMware View and Horizon View

Warranty and Support

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

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