Solution Brief: AMD Multiuser GPU for Media and Entertainment

Cutting-Edge Performance with Scalability and Flexibility to Meet Shifting Needs

VDI powered by AMD Multiuser GPU (MxGPU) technology delivers the consistent performance required by fluctuating project teams while optimizing resource usage.

The media and entertainment industry is on the forefront of delivering innovative, visually compelling still images and video for a variety of purposes from print production to game and interface design, photography, CGI, movies, and much more. These place a premium on performance to allow faster iteration and shorter rendering/processing cycles among teams of internal and/or third-party users that often vary by project and include members in varying locations. The need to deliver high-end GPU acceleration to geographically diverse, project-specific teams poses unique challenges for deploying and managing IT resources.

AMD Multiuser GPU (MxGPU) technology offers the following key benefits to the media and entertainment industry:

- **Mobility & Collaboration:** Users can access their virtual desktops and allotted GPU resources on virtually any device and have full OpenCL™ and GPU acceleration from virtually any location. Migrating data to the datacenter simplifies version control, helps boost productivity, and can foster collaboration among local and remote teams.

- **Scalability and Flexibility:** Adding and removing users is as easy as creating or removing accounts and allocating resources. Users needing access to different applications and/or GPU performance when shifting projects can receive the resources they need within minutes.

- **Performance:** Hardware-based virtualization brings workstation-grade 2D/3D graphics acceleration to the datacenter using the Single Root I/O Virtualization (SR-IOV) PCIE® virtualization standard. This eliminates proprietary and complex software from the hypervisor and allows each VM to use native AMD FirePro drivers with 100% compatibility and access to all GPU graphics and compute functions on the server. Each GPU can support 1 to 16 users and requires no profiles. The consistent performance ensured by hardware-based virtualization also simplifies resource allocation and planning.

- **Cost Effectiveness:** IT departments no longer need to procure, support, repair and upgrade individual workstations with multiple hardware, OS, and application configurations, especially among ever-shifting project teams. Users simply log in to their virtual desktops at virtually any time from virtually any device and receive full workstation performance, GPU acceleration, and application/data access based on their credentials and assigned resources. Persistent desktops can be used for internal parties with consistent needs, while third parties or users with widely varying needs can access pooled desktops.

Empowers Mobility and Collaboration

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. Each user accesses only the applications and data they need, enhancing security and optimizing resource utilization.

Users transmit commands to the virtual machines and receive fully rendered pixels at full resolution and with full graphics performance. Centralized data storage and processing reduces the need for time-consuming file transfers and version control among multiple devices.

Allows Scalable, Flexible Resource Usage

Adding a new user is as fast and easy as assigning a virtual desktop with appropriate application and access privileges. The user is productive in minutes on any device, with no need to purchase and

maintain an expensive workstation. Persistent desktops allow users to pick up where they left off at any time, while pooled desktops maximize user density by sharing resources, such as among different shifts.

The hardware virtualization implemented in AMD MxGPU enables workstation-grade 2D/3D graphics performance and provides fast, accurate resource monitoring and metrics to facilitate planning to meet future needs.

Performance at the Speed of Creativity

AMD Multiuser GPU technology enables consistent AMD FirePro GPU acceleration that can meet or exceed traditional workstation graphics cards, allowing modelers, designers, animators, and others to run everything from standard office applications to streaming video and high-end 3D applications with complete fidelity. Hardware-based virtualization assures performance through dedicated frame buffers while helping ensure total compatibility by using native drivers. This helps shorten iterations between drafts and speed final renderings.

Lowers TCO and Maximizes ROI

AMD Multiuser GPU technology can help lower costs across the board compared to traditional workstations or laptops. Initial deployment is fast and easy, and future upgrades are as easy as purchasing additional servers and access points. Firms can assign resources to internal and third-party users within minutes, thereby optimizing resource usage. Further, there are no additional hardware costs to use AMD Multiuser GPU technology beyond purchasing the hardware itself.

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

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 technical support team

- Advanced parts replacement option

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