AMD

AMD FirePro™ S-Series for Virtualization

Pure Virtualized Graphics

Solution Brief: AMD Multiuser GPU for GIS

Real-Time Access to Crucial Mapping Data, Enhanced Services, and Low TCO

VDI powered by AMD Multiuser GPU (MxGPU) technology allows real-time access to up-to-date mapping data from remote locations on virtually any device.

Geographic Information System (GIS) applications are playing increasingly important roles as entities from chain retailers to utilities, government agencies, and more leverage the power of location-dependent data for a variety of activities that include planning, design, maintenance, and responding to emergencies. These applications require high-end 2D and 3D GPU acceleration for usable performance, especially when processing large datasets. The ability to access real-time data from remote locations can help improve services and speed responses to situations; however, the need for powerful workstations can limit access to this crucial functionality.

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

- **Real-Time Remote Access:** Replacing an individual workstation with an access portal gives users full access to the GIS at virtually any time from virtually any location on virtually any device. Users transmit commands and receive fully-rendered pixels, with all compute and graphics processing taking place on the server and all data remaining in the datacenter. Updates made by one user are instantly visible to all users with appropriate access privileges.
- **Enhanced Services:** Real-time remote access to current data allows organizations to enhance services by reducing the time between receiving and being able to act on information, such as responding to rapidly-changing conditions.
- **Cost Effectiveness:** Issuing each GIS user a high-end workstation is a costly proposition, especially because most users need only sporadic access to the application. Virtualized environments allow multiple users to share resources, thus increasing hardware utilization while reducing the need to purchase, maintain, repair, and upgrade individual workstations.
- **Security and Flexibility:** Centralized data storage helps prevent unauthorized access while simplifying backups and archiving. Also, virtualized environments with GPU acceleration are not limited to GIS applications, which further reduces the need for individual workstations.

Real-Time Remote Access

AMD Multiuser GPU technology allows users to access individual or pooled virtual desktops from virtually any location at virtually any time on virtually any desktop, laptop, or mobile device. For example, field users can use hand-held tablets over a broadband wireless or cellular connection to view and upload data in real time. Other users with access to the same dataset can see and respond to changes, also in real time, and also directly from the field.

Enhanced Services

Real-time access to data allows better, more streamlined services. For example, a utility can view incident photos and immediately dispatch just the appropriate resources to handle the specific problem. Rangers and police officers can take and file reports from the field, complete with photos and other supporting data. Businesses can leverage many types of location-dependent data to plan locations, optimize supply chains, and more.

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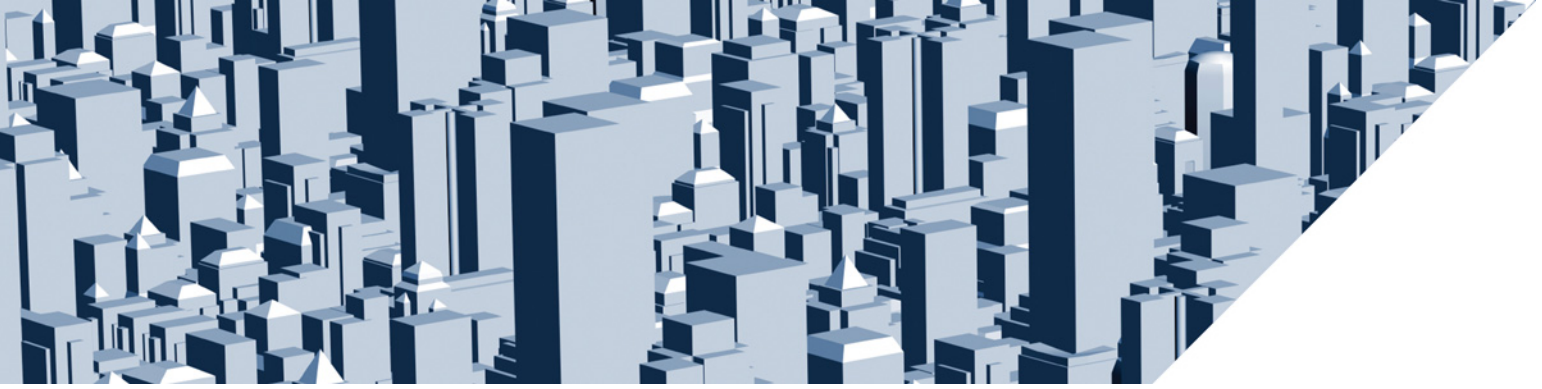

Cost Effectiveness

Virtual Desktop Infrastructure (VDI) deployments powered by AMD Multiuser GPU technology replace costly, underutilized workstations with a pool of resources that is available to all authorized users. Users needing access to the same environment can receive personalized desktops, while other users can access pooled virtual desktops on a time-shared basis. Hardware-based virtualization delivers consistent performance with enhanced application performance. Virtualization can also streamline IT operations by reducing the need to maintain separate devices, particularly across multiple locations.

Security and Flexibility

Server-based compute and graphics processing facilitates data migration from individual devices and hard drives to the datacenter and helps protect against unauthorized access or loss. Further, a virtualized environment that includes AMD Multiuser GPU technology can serve graphics-acceleration needs beyond GIS. For example, a fire department can stream training videos using the same devices and logins used to update incident information. This flexibility helps lower TCO by maximizing resource usage.

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

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