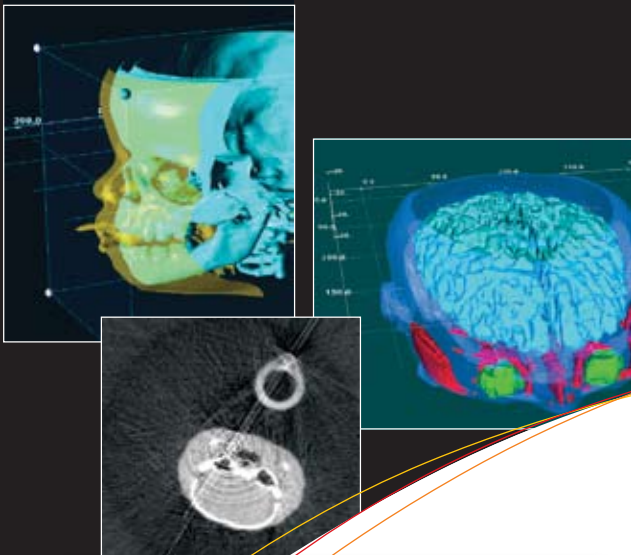


BREAKING THE 1 TERAFL0P BARRIER



Top Technology Needs

1. Double Precision Floating Point
2. High Performance per Watt
3. Open Systems
4. Scalable Solutions

AMD Stream Computing— Raising the Bar in HPC

AMD's next-generation stream processor, the AMD FireStream™ 9250 is specifically designed to accelerate critical algorithms in high performance computing (HPC), mainstream, and consumer applications.

The single PCI slot, one TeraFLOP, AMD FireStream 9250 includes 1GB GDDR3 memory enabling developers to handle large, complex problems; deliver performance of up to eight GigaFLOPS per watt in single-precision, and more than 200 gigaflops raw double-precision performance.

The AMD FireStream 9250 stream processor includes a second-generation double-precision floating point hardware implementation, building on the capabilities of the earlier AMD FireStream™ 9170, the industry's first GP-GPU with double-precision floating point support.

The AMD FireStream 9250's compact size makes it ideal for small 1U servers as well as most desktop systems, workstations and larger servers.

How AMD Stream Computing Helps

AMD Stream Computing provides industry-leading performance to handle the hardest HPC Applications.

- **Up to 8 GFLOPs per watt!** One teraFLOP of raw performance at under 150 watts
- **Commodity GPU technology:** Affordable teraFLOP performance
- **Multiple software development paths** from high level languages and libraries to low level inter-block communications
- **Solution scalability** through combinations of CPUs and GPUs to match specific problem needs
- **Support from AMD engineers and partners** throughout your development process

Technology Need	AMD Stream Computing Solution
Double precision floating point	• Second generation AMD GPU with DP-FP in hardware
Performance per watt	• Industry-leading single slot solution
Open systems	• Familiar 32 and 64 bit Linux and Windows environments • High level tools from multiple third party developers
Scalable solutions	• Stream software supports multiple GPUs per system



AMD FireStream 9250

Second generation
Stream Computing GPU from AMD

Highest performance
GPU compute engine
available today

- Double precision floating point in hardware
- 1GB GDDR3 memory
- Compact single slot form factor
- Under 150 watts

The next generation Stream Computing PCIe board from AMD breaks new ground by surpassing the 1 teraFLOP barrier*.

AMD Stream utilizes mainstream GPU technology developed for the gaming community and repurposes it for high performance computing needs. The result is a standard PCIe plug-in board using established commodity components for a low cost, reliable compute engine for the HPC community.

Learn more by visiting www.amd.com/stream

AMD 
Smarter Choice

BREAKING THE 1 TERAFLUP BARRIER

AMD FireStream 9250

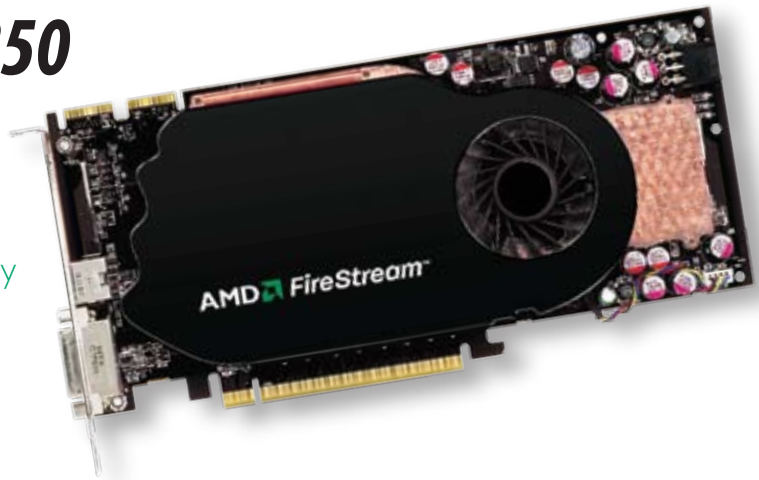
Second generation

Stream Computing GPU from AMD

Highest performance

GPU compute engine available today

- Double precision floating point in hardware
- 1GB GDDR3 memory
- Compact single slot form factor
- Under 150 watts



AMD Stream SDK

An open systems approach

AMD Stream SDK leverages open source technology and software technology partners to provide a robust, open, multi-layer development environment on 32/64 bit Linux and 32/64 bit Windows.

Developers can begin with Brook+, an AMD-enhanced and supported implementation of Brook, the popular open-source C-level language and compiler. Math functions can be implemented using a new release of AMD Core Math Library for the GPU (ACML-GPU). Tools like GPU Shader Analyzer and AMD Code Analyst help identify and correct performance issues.

AMD's Compute Abstraction Layer (CAL) provides low level access to the GPU for development and performance tuning. AMD's open systems approach allows developers access to all key APIs and specifications, enabling performance tuning at the lowest level and development of third party tools.

AMD Stream SDK supports 32/64-bit RHEL 5.1 and 32/64-bit SUSE 10 SP1 as well as 32/64-bit Windows XP.

Industries and Applications

Financial Analytics

Increase Black-Scholes speed-to-results through the highly parallel architecture of the Stream process

Energy, Oil and Gas

Seismic analysis on larger or more granular geographies to quickly identify regions of high discovery probability

Life Sciences

Protein folding, sequencing and alignment investigations, combinatorial chemistry, Hidden Markov Models and more are ideal problems for the highly parallel Stream Computing architecture

Computer Aided Engineering (CFD, FEA, etc.)

Faster results with existing model DoF or higher number of variables (finer mesh) within existing calculation time frames

Consumer

High definition video and gaming benefit from the integration of GPU and CPU from AMD

AMD System Solutions



HP DL385 SERVER

HP reliability and AMD Opteron™ processor performance combine in a 2U server for simplified management and powerful computing.



HP xw8600 WORKSTATION

Delivering extreme performance for massive compute and visual capacity.

*Single precision
Imagery courtesy of ScienceGL

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