

# Market-Ready AMD Torrenza Solutions Push Accelerated Computing into Mainstream

# AMD Direct Connect Architecture Fosters Innovation in Co-Processing and Acceleration Technology

NEW YORK--(BUSINESS WIRE)--

AMD (NYSE: AMD) today announced expanded industry support and customer adoption of AMD "Torrenza", the company's accelerated computing initiative designed to help technology partners deliver open, flexible and scalable silicon designs. Torrenza solutions significantly boost performance in compute-intensive applications designed for industries like securities and life sciences, as demonstrated today at the HPC on Wall Street Event in New York.

Industry-leading AMD technology partners including HP, ACTIV Financial, and RapidMind, among many others, are delivering market-ready "Torrenza" solutions today in which discrete accelerators and customer-specific silicon enhancements combine to create energy-efficient, high-performing and scalable solutions for accelerated computing environments. These Torrenza-enabled solutions are currently available for the Second-Generation AMD Opteron(TM) processor platform, which offers a seamless upgrade path to Quad-core AMD Opteron processor-based systems, ensuring investment protection for these accelerated solutions.

"ACTIV Financial's customers include the leading Wall Street institutions and for these customers, microseconds of time lost in algorithmic trading can have serious financial impact," said Frank Piasecki, president, ACTIV Financial. "The AMD Torrenza initiative has formed a tremendous ecosystem of hardware vendors offering leading edge co-processing technologies. We've found our customers are exceedingly happy with the benefits that a hardware-accelerated solution such as our ActivFeed MPU can offer to improve critical software performance. Hardware acceleration is a technology that's fairly new to financial services, but the benefits are clear, and it's definitely in play."

Said Randy Allen, corporate vice president, Server and Workstation Division, AMD: "The number of technology partners building on the AMD Opteron processor ecosystem by capitalizing on Direct Connect Architecture with their own solutions demonstrates that the industry recognizes the potential of accelerated computing. As computing demands exponentially grow, the keys to success are new models of increased computational performance that simultaneously alleviate cross-industry pain points like power consumption and infrastructure complexity. AMD is dedicated to enabling these cutting-edge performance models by arming Torrenza partners with a superior processor architecture and stable platform that is the basis for accelerated computing advancement."

"Power efficiency continues to be one of the key drivers in IT decision making," said Crawford Del Prete, senior vice president, International Data Corporation. "AMD is delivering impressive performance benchmarks with Quad-Core AMD Opteron processors and its Torrenza-enabled solutions, such as design-specific FPGA-based systems, can offer additional power efficiency. Those combined technologies present wide-ranging possibilities for the industry, and will serve key roles in the advancement of accelerated computing technology as a whole."

AMD initiated Torrenza to enable dynamic development on a stable platform, enabling technological differentiation that is not economically disruptive at a time when accelerated computing is moving from research centers to the mainstream. Utilizing Direct Connect Architecture and trusted AMD64 technology, AMD's technology partners are building upon its existing infrastructure to deliver forward-looking solutions to market faster and more cost-effectively. AMD's technology leadership positions customers to take advantage of accelerated computing in their data centers today.

"We clearly see the technology benefits - both in application performance and server consolidation - that AMD's Torrenza initiative offers our customers," said Mike Gill, vice president of ProLiant Servers, Storage and Networking in the Industry Standard Server Division at HP. "Select next-generation HP ProLiant Servers with the Quad-core AMD Opteron processor will support HTX cards, enabling end users to deploy customized acceleration solutions within their current or future data center infrastructure."

AMD's Torrenza initiative further drives innovation by serving as a key building block in AMD's long-term accelerated computing strategy. For instance, AMD's collaboration with RapidMind represents the next step in processor-level, and ultimately silicon-level, integration.

"The RapidMind software platform lets software organizations leverage multi-core processors with minimal impact on their development costs and timelines. The resulting applications can harness the full potential of the latest multi-core processors from AMD, seamlessly taking advantage of acceleration technology available with Torrenza solutions," said Ray DePaul, president and CEO of RapidMind Inc. "By leveraging the RapidMind platform, organizations can run more complex and therefore more accurate computational models up to 30 times faster."

For more information about the AMD Torrenza initiative, visit <a href="http://enterprise.amd.com/us-en/AMD-Business/Technology-Home/">http://enterprise.amd.com/us-en/AMD-Business/Technology-Home/</a> Torrenza.aspx. (Due to its length, this URL may need to be copied/pasted into your Internet browser's address field. Remove the extra space if one exists.)

Industry Support
Altera:

"As compute intensive applications further evolve co-processing solutions can help keep pace with application demand. AMD's Torrenza initiative enables these solutions to be readily available and designed to fit existing AMD system designs," said Dr. Misha Burich, Senior Vice President of Research and Development at Altera Corporation. "Partner solutions, such as FPGA-based acceleration co-processing modules enable existing AMD processor-based systems to be accelerated while delivering significant power savings. These modules are installed into commercial off-the-shelf CPU platforms and the algorithmic parts of applications can be substantially accelerated via parallelization and pipelining, thus

adding processing performance and providing infrastructure flexibility for today and the future."

### Celoxica:

"Celoxica is enabling dramatic application acceleration in the Financial Services Industry using its FPGA-based co-processors, enabling design tools and IP coupled with AMD's high speed interconnect technology. Companies need accelerators that improve performance of their trading and analysis applications without increasing space or power requirements," said Jeff Jussel, Vice President, Worldwide Marketing and Strategic Alliances, Celoxica. "AMD's open innovation strategy allows us at Celoxica to develop much greater performing systems for our customers such as a recently announced Tier 1 US investment bank who realized 30 times better performance."

# Cray:

"AMD's Torrenza program has brought several tangible benefits to Cray including the open socket specification that allows Cray customers to use AMD Opteron processors, Cray custom multithreaded processors or FPGAs in the same high-performance fabric," said Jan C. Silverman, Cray's senior vice president of corporate strategy and business development. "The flexible, high-throughput Direct Connect Architecture plays a significant role in implementing our Adaptive Supercomputing vision which will provide an integrated hybrid system architecture that matches applications to the optimal processor technologies."

#### Xilinx:

"Initiatives like Torrenza have enabled new innovations in algorithmic acceleration with FPGAs, offering improved system performance while minimizing the impact on total cost of ownership and power consumption in the IT industry," said Ivo Bolsens, Chief Technology Officer at Xilinx. "In the year since the Torrenza initiative was introduced, many of our customers and partners have delivered high performance computing solutions to IT managers on AMD processor-based platforms that successfully exploit the potential of Xilinx FPGAs."

#### XtremeData:

"Our accelerated computing appliances gain remarkable memory latency improvements by taking advantage of Direct Connect Architecture offered by AMD through its Torrenza initiative," said Ravi Chandran, Chief Executive Officer, XtremeData. "At XtremeData, we can boost application performance while reducing power consumption with our XD1000 & XD2000 modules, making it especially attractive for the extremely intense, high-precision computational requirements of our customers in the financial services industry."

## About AMD

Advanced Micro Devices (NYSE: AMD) is a leading global provider of innovative processing solutions in the computing, graphics and consumer electronics markets. AMD is dedicated to driving open innovation, choice and industry growth by delivering superior customer-centric solutions that empower consumers and businesses worldwide. For more information, visit <a href="https://www.amd.com">www.amd.com</a>.

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