

See Convey at SC13-Emerging Technologies Booth #3547

Convey Computer Announces New Hybrid-Core Coprocessor to Accelerate Data-Intensive Applications

—Available in Convey's new WX Series, as an OEM product, and as part of Convey's recently announced memcached appliance—

Richardson, Texas–November 18, 2013–Convey Computer, the leader in hybrid-core computing, today announced the Wolverine® family of coprocessors, a powerful line of application accelerators that provide application-specific hardware acceleration for key algorithms. The products' PCI Express form factor is ideal for accelerating applications in life sciences, big data, security, and other industries involved in high-performance computing (HPC). Wolverine is currently available in three deployment models: in Convey's new WX Series of hybrid-core (HC) servers, as an original equipment manufacturer (OEM) product, and in the recently announced Convey Memcached Appliance.

Convey delivers accelerated hybrid-core solutions to customers who need powerful platforms that reduce time-to-solution, lower operating costs, and shrink data center footprints. Wolverine provides all of the benefits of existing Convey hybrid-core solutions in a form factor that delivers additional options for fast and easy acceleration of a greater number of applications.

Higher Performance, Lower Energy Consumption

"Like our existing line of hybrid-core, reconfigurable coprocessors, Convey's new Wolverine accelerator coupled with the latest x86 servers provides higher absolute performance and improved efficiency," explained Bruce Toal, CEO of Convey. "Additionally, Wolverine's easy to deploy form factor gives customers more options to address their application performance requirements. Because Wolverine is available in three deployment models, customers are now able to implement the innovative accelerator technology in a hardware configuration that best meets their needs."

Wolverine Key Benefits

Ideal for applications requiring extremely high compute capability and large, high bandwidth memory, Wolverine incorporates the latest high density Xilinx® Virtex7 field programmable gate arrays (FPGAs) into an easy to use form factor. FPGAs provide substantially better performance per watt than conventional servers, dramatically accelerating applications while lowering power and heat requirements.

- Accelerates raw performance—High capacity, high-bandwidth memory subsystem dramatically increases performance.
- Reduces cost of ownership—Energy efficient, Wolverine can reduce space, power, and cooling requirements up to 90% over racks of commodity servers.
- Eases integration—The standard PCI Express form factor means the accelerator can be quickly deployed in industry-standard servers.
- Simplifies development environment—Convey's unique Globally Shared Virtual Memory (GSVM) allows the commodity host x86 processors and the on-board FPGAs to share the same virtual address space, simplifying application development efforts.

WX Series

Along with Wolverine, Convey is also announcing the latest addition to their HC architecture—the WX Series. Like the HC Series, the WX Series provides application-specific performance for HPC and data-intensive applications. The WX Series features the latest industry-standard multiprocessor x86 servers tightly integrated with FPGA-based Convey Wolverine accelerator cards.

OEM Product

Because the Wolverine application accelerator is based on the industry standard PCIe 3.0 interface and form factor, it can be deployed in industry-standard servers or embedded in special purpose instruments. Integrating the Wolverine accelerator into turnkey solutions, OEMs can transparently provide greatly increased application performance to their customers. "The Wolverine technology is an ideal way of deploying application-specific acceleration within industry standard servers to minimize power and space requirements," stated Toal. "Our goal is to collaborate with OEM manufacturers to deliver highly accelerated solutions."

Convey's Memcached Appliance

One of the higher volume areas where the HC architecture provides substantial acceleration is the memcached application. Memcached is an open source, high-performance, distributed memory caching system used by eighty-five percent of top web sites (such as Wikipedia, Flickr, Twitter, YouTube, and Facebook), approximately fifty percent of the top 5,000 sites, numerous public/private cloud providers, and datacenters worldwide.

Today's ever-increasing network traffic and rapidly growing datasets are presenting throughput and scalability challenges for the memcached technology. The Wolverine-based memcached appliance solves these problems by accelerating performance-critical portions of the memcached algorithms, dramatically increasing throughput and reducing latency. Wolverine provides five to ten times the throughput of a contemporary multi-core server while maintaining sub-millisecond response time.

Convey will continue to offer their recently announced Convey Memcached appliance. This server provides an order of magnitude higher throughput than commodity servers while maintaining sub-millisecond response time. Additionally, the Convey Memcached server dramatically reduces cost of ownership by slashing power, cooling, and maintenance costs.

Visit Convey at SC13 in the Emerging Technologies booth #3547, November 18-21 in Denver, Colorado.

About Convey Computer Corporation

Convey breaks power, performance and programmability barriers with the world's first hybrid-core computer—a system that marries the low cost and simple programming model of a commodity system with the performance of a customized hardware architecture. Using Convey hybrid-core systems, customers worldwide in industries such as life sciences, research, big data, and the government/military are enjoying order of magnitude performance increases. http://www.conveycomputer.com/

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